

INFRASTRUCTURE STRATEGY – 2021 - 2051

MASTERTON DISTRICT COUNCIL **DRAFT**



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INTRODUCTION

Purpose

Purpose of the Infrastructure Strategy

This Infrastructure Strategy outlines how we intend to manage our infrastructure assets over the next 30 years.

Infrastructure is an important community asset accounting for 88% of operating expenditure and 98% of capital expenditure, with assets grouped within the following activity areas:

- Water supply
- Wastewater
- Stormwater
- Solid waste
- Transport (roads, streets, footpaths and parking areas)
- Parks, Open Spaces and Community Facilities

Good infrastructure enables businesses and communities to flourish. It is essential to health, safety and transport and has a significant impact on the physical environment. Planning and programming infrastructure spending right is a pre-requisite to determining how much we can spend on services that enhance the quality of life of our residents and attract people to live in Masterton.

This strategy sets out the significant issues and risks relating to our infrastructure assets over the next 30 years and:

- our main options for dealing with those issues;

- cost and service delivery implications for residents and businesses of those options; and
- The Council's current preferred scenario for infrastructure provision

Context

The place - Masterton (Whakaoriori) - Wairarapa

Wairarapa is said to have been named by the Māori explorer Haunui as he stood on a peak in the Remutaka Range, looking down over the extensive valley. As he looked, the sun sparkled on the waters of the rivers and lakes, and he called the area Wairarapa-Glistening Waters.

The land was settled by successive waves of Māori. By the time Captain Cook became the first European to see Wairarapa in 1770, members of the Rangitāne and Kahungunu iwi were the tangata whenua of Wairarapa.

During the disruption caused by the Musket Wars many Wairarapa Māori left the district for sanctuary of Hawkes Bay and the East Coast, returning in 1841, following 10 years exile. They set about rebuilding their villages and re-establishing cultivations on their traditional sites. Sites near Masterton included Kaikokirikiri near today's Mahunga golf course, Mangaakuta at Homebush, and Kaitekateka at Te Ore-Ore.

In 1841 the first European explorers were also making their way through the interior of the valley, searching for grazing areas for the recently arrived Wellington settlers. By the late 1840s the first large run holders were established, leasing their substantial holdings from local Māori, grazing their stock on largely unaltered pasture.

In 1853, a group of Wellington and Hutt Valley workingmen, led by cooper Joseph Masters, formed the Small Farms Association, and petitioned Governor Grey for land upon which to establish their settlement. Following negotiations with local chief Te Retimana Te Korou, a piece of land on the banks of the Waipoua River was purchased, and on May 21, 1854, the first settlers from the Association arrived on the site of the new township of Masterton. The town grew slowly but as the rural areas surrounding it were more intensively farmed, Masterton grew to be the major town in the valley. It was declared a borough in 1877.

The rural areas were first administered as part of Wairarapa East and Wairarapa West Counties, then as part of Wairarapa North County. In 1899 the Mauriceville County was formed, then in 1900 Masterton and Castlepoint Counties were established. Masterton and Castlepoint Counties amalgamated in 1958 and were joined by Mauriceville County in 1966. Masterton County and Masterton Borough united, and following minor boundary adjustments, the current Masterton District was constituted on 1 November 1989, as part of a nation-wide reorganisation of local government.

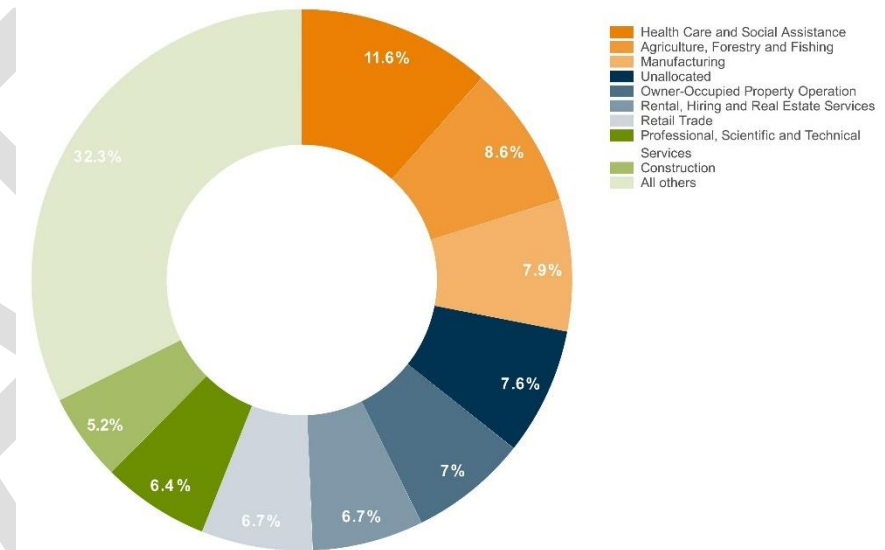
Masterton is the largest township in the Masterton district and the Wairarapa region. Ninety minutes north of Wellington city, Masterton offers an escape from the hustle and bustle. The Wairarapa region is becoming famous for its wine, historical aircraft, and as one of the earliest inland European settlements the area has many historical sites to discover.

The Wairarapa railway line allows many residents easy commuting access to work in the cities of Wellington, Lower Hutt and Upper Hutt.

Local industries are predominantly service industries for the surrounding farming community, with industrial development growing in new industrial parks being developed at Waingawa (a services

agreement with Carterton District), Solway and Upper Plain. The four largest industry sectors in the district are Health Care and Social Assistance (11.6%), Agriculture, Forestry and Fisheries (8.6%) Manufacturing (7.9%) and Owner-Occupied Property operation (7%)*

Infometrics eco profile



The town is the headquarters of the annual Golden Shears sheep-shearing competition, and the "Wings over Wairarapa" Air Show.

Masterton has Sister City relationships with Hatsukaichi in Hiroshima, Japan; Changchun, China; and Armidale in New South Wales, Australia.

Masterton District Council governs the Masterton district territorial authority. It is made up of an elected mayor, a deputy mayor/councilors, and nine additional councilors. They are elected

under the 'First Past the Post' system in triennial elections, with the last election being held in October 2019.

The Mayor of Masterton and all ten of the councilors are elected 'at large'. Iwi representatives from our two Iwi (Kahungunu ki Wairarapa Iwi and Rangitāne o Wairarapa Iwi) are appointed to the Council and have speaking rights at all meetings but not voting rights.

Geography

The Masterton district comprises of 229,500ha of land located between the Tararua Range to the west and the Pacific Ocean to the east. The main urban area is Masterton located on the Wairarapa valley between the Ruamāhanga, Waipoua and Waingawa Rivers. The Masterton district has 206km of water pipes, 190km of sewer pipes, 48km of stormwater pipes and 808km of roads. It has two water treatment plants and four sewerage treatment plants.

Masterton District

Population

The population of the district increased slightly during the 1980s, rising from about 22,000 in 1981 to about 22,600 in 1991. The population has been relatively stable since, however the most recent 2018 census data does show an increase to 25,557. The 2020 population estimate is 27,500. (stats NZ*)

There are 19,810 urban and 5,747 rural and semi-rural residents (2018 census). – Note: mesh blocks have changed after 2018 (SA2)

The Masterton district includes the following census area units:

Rural and semi-rural: Homebush-Te Ore Ore; Opaki (part); Upper Plain (part) Kopuaranga and Whareama.

Urban: Masterton Central; Kuripuni; Cameron & Soldiers Park; McJorow Park; Solway North; Solway South; Ngaumutawa (part); Douglas Park and Lansdowne West and East.

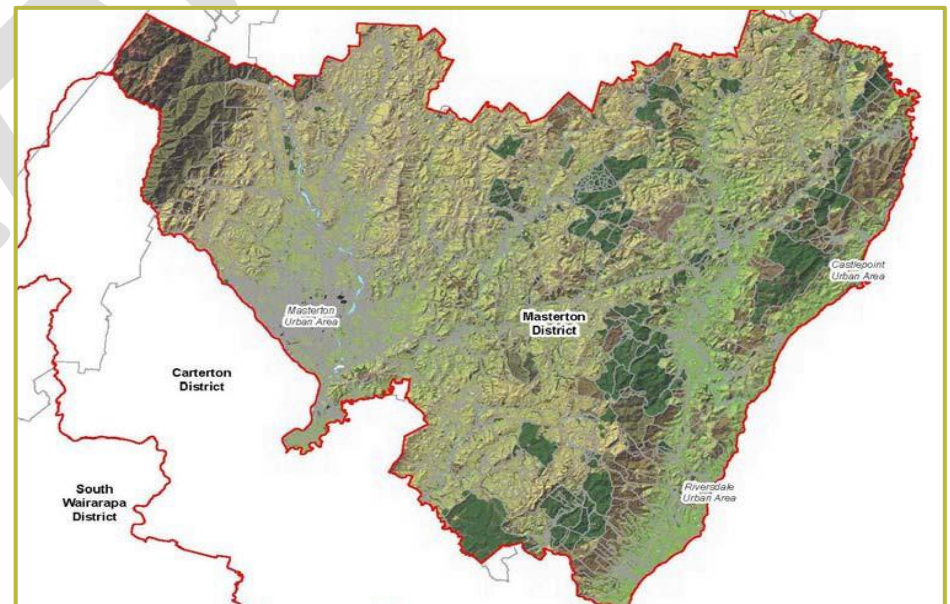
Key characteristics of this population base include:

77% of the population lives in the urban area of Masterton.

Those of Māori identification represent approximately 21.3% (compared with the national average of 16.2%).

Overall, 25.7% of the population was aged under 19, and 27% were aged 60 years and over, compared with 24.6% and 19.8% respectively for New Zealand.

As illustrated by the table below, the total population in Masterton is almost unchanged over the last 15 years, but the proportion of people aged over 60 years has increased by approximately 1-2% at each

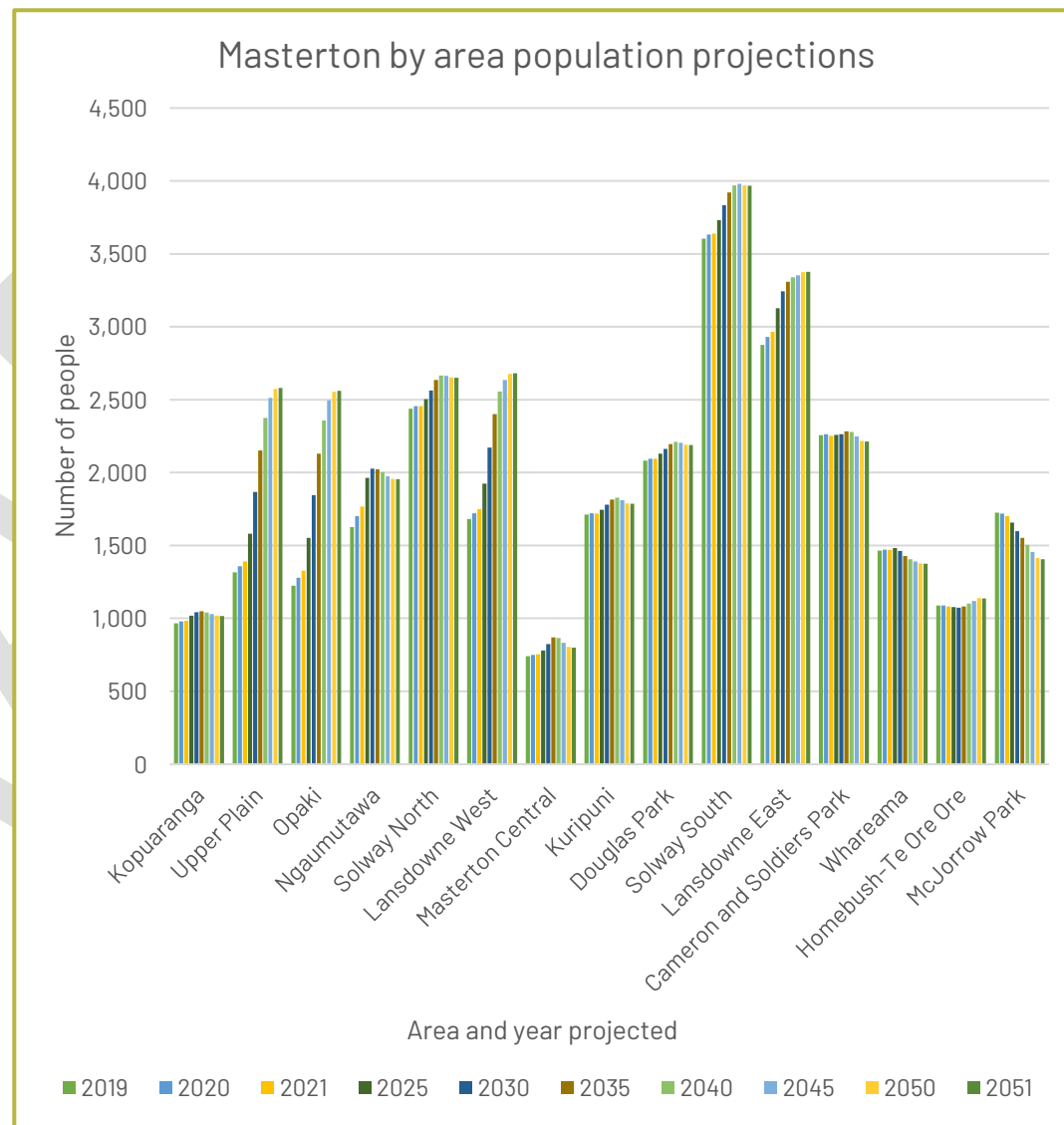


census count since 1991. The number/proportion of single occupant houses is steadily increasing and is now at 28.5%

Masterton population aged over 60					
	1991	1996	2006	2013	2018
Total population	22,556	22,758	22,617	22,623	25,557
Population aged 60+	3,636	4,179	4,593	5,019	6,900
% of population aged 60+	(16%)	(18%)	(20%)	(22%)	(27%)

Future growth

In Masterton district, the majority of population growth is expected to take place in the Masterton urban area, with urban expansion on the north and west fringes and light intensification around railway stations and in Masterton central. The strongest growth is expected to take place in Upper Plain (population increase of 1,265 over 2019-2051), Opaki (1,336), Lansdowne west (1,001), and Lansdowne east (502). Moderate growth is expected in Solway north (213), Solway south (363) and Ngaumutawa (330). Ngaumutawa growth is expected to take place in the near term as the last greenfield land in the area is developed. Small population declines are projected in McJorrow Park, Whareama, and Cameron and Soldiers Park, however it is important to note that this is due to a decreasing household size rather than a decrease in the number of households. **Source- Infometrics Population**

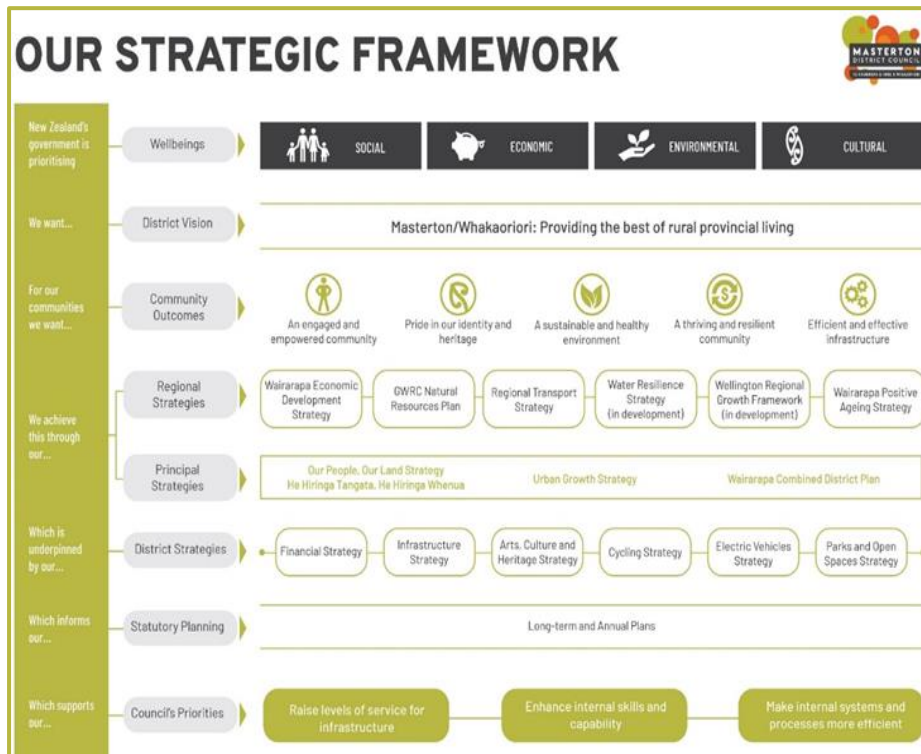


STRATEGIC ALIGNMENT

Alignment with other documents

This Infrastructure Strategy has been developed in alignment with other key documents, including Asset Management Plans for each group of assets and the 2021-31 Financial Strategy.

The diagram below illustrates the relationship between the strategy and other documents.



Vision

This strategy recognises the Council's vision: Providing the best of rural provincial living. It also acknowledges the community outcomes that flow from our My Masterton: Our People Our Land strategy (He Hiringa Tangata, He Hiringa Whenua) and aims to deliver efficient and effective infrastructure that:

- supports a social engaged and empowered community.
- recognises cultural pride in our identity and heritage.
- is environmentally sustainable and healthy; and
- is economically thriving and resilient.

Evolving community expectations

Community expectations change and evolve over time and future generations want to see current thinking challenged and debated. More and more people are environmentally aware and readily embrace technological advancement. The Council recognises the following community expectations within this strategy:

- greening of expectation with the community.
- increased Iwi representation.
- resilient networks.
- recognising future generations.
- urban growth; and
- technological impacts.

Regional Spatial Planning

The Wellington Regional Growth Framework (<https://wrgf.co.nz/wp-content/uploads/2020/10/1246-GWRC-DRAFT-FRAMEWORK-REPORT-SEPT-2020-14.pdf>) is a 30-year spatial plan for the Wellington-Wairarapa-Horowhenua region.

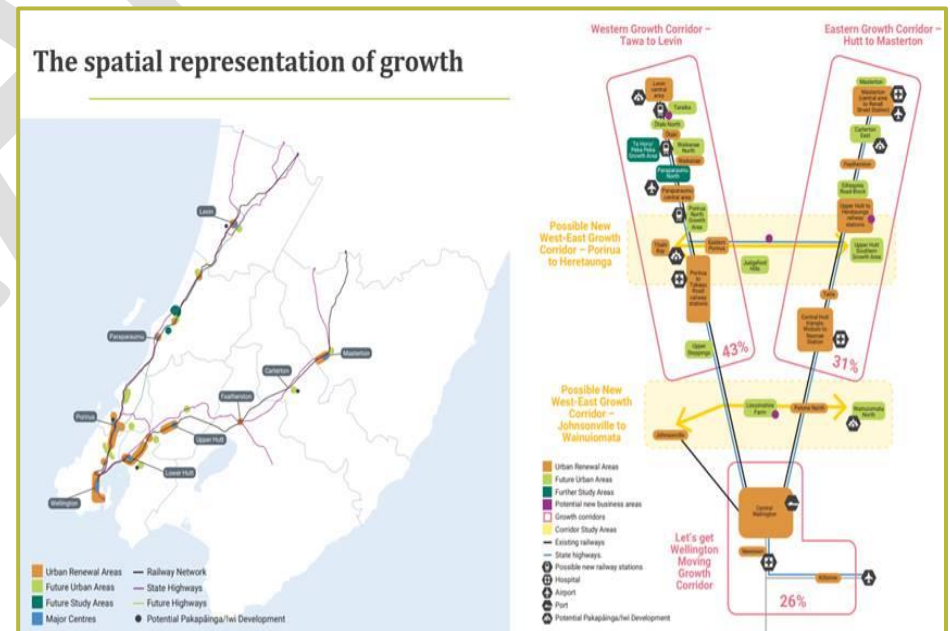
The Framework outlines how the region can accommodate additional people and jobs and meet the Framework's objectives, which requires the region to:

- Enable more housing development around transport nodes (i.e., train stations and bus hubs) and support transformational change in key locations across the region - where there is good access to public transport that supports mode-shift.
- Develop more well-located greenfield housing development, ensure that it is higher density than most current greenfield (i.e., townhouses and apartments), and that it is connected to public transport.
- Increase housing capacity in our major centres (including Masterton CBD) by expanding the housing footprint and permitting higher densities than are currently enabled in many places.

The Framework was endorsed by Masterton District Council in December 2020. It signals a number of potentially significant infrastructure issues for councils and central government over the 30-year period. The Framework includes the following key initiatives that will impact on future infrastructure requirements:

- Develop a regional approach to climate change impacts including coastal protection, longer term development areas and areas to stop developing. This will include a programme to consider management of three waters, rail and road assets at risk and how to protect taonga

- Develop a 50- to 100-year regional three waters strategy to support anticipated growth, including upgrades to infrastructure (including bulk infrastructure) that supports growth in key development areas and improves environmental outcomes. This has already largely been taken into account in Masterton's water infrastructure projects.
- Increase rapid transit rail/bus network accessibility, capacity and frequency including inter-regional connectivity to address overcrowding, provide for future growth and enable higher service frequencies including inter-regional connectivity
- Significantly improve multi-modal connections to rapid transit stops as part of master planning and delivery of higher density urban development in major centres and at nodes.



- Establish a connected regional cycling network by eliminating pinch points on the network and delivering transformational projects to improve access.

It takes into account work planned by the Council (through its District Planning process) and by other councils in the region. The Framework has been developed to deliver on the Urban Growth Agenda (UGA) objectives of the Government, which includes improving environmental, employment, transport, and housing outcomes for communities. Similar objectives and challenges exist at both a local level (through Council and at a regional level through the Wellington Regional Growth Framework).

The Framework takes account of the requirements of the National Policy Statement on Urban Development. Going forward it will also need to consider government policy work such as the RMA review and the three waters review. The Framework provides for a scenario for the Wellington region of accommodating an additional 200,000 people and 100,000 jobs over the 30-year period, of which Masterton population is a subset.

Three Waters Reform

The Three Waters Reform is a process that central government is leading to consider the future of the three water services councils currently deliver – drinking water supply, wastewater and stormwater – and who is best placed to provide these in future.

The Council has signed a Memorandum of Understanding (MoU) with central government agreeing to take part in exploring options for the future. The work we are doing with central government is to identify approaches that could benefit the future delivery of these services.

We expect to have more information on the proposal for Three Waters in May 2021. Once we know what central government is suggesting, we will assess what that means for our community and come back to the community before we decide whether to continue to participate in the reform process or opt out.

We expect to have to make that decision later in 2021. If we choose to participate, the proposal is likely to be implemented during the 2023/24 financial year.

Regardless of the outcome of the reform process, we know communities will need drinking water and wastewater services, whether they are delivered by the Council or another organisation.

The Three Waters activities are included in our financial strategy and the infrastructure strategy. These strategies, along with other supporting information like our forecasting assumptions and disclosures, give a complete and accurate set of information on the medium-term and long-term financial situation for these services.

More information on the Government’s reform strategy and timeline is available at <https://www.dia.govt.nz/Three-Waters-Reform-Programme>

National Policy Statement for Freshwater Management

The National Policy Statement (NPS) for Freshwater Management provides direction to local authorities on managing the activities that affect the health of freshwater.

Council has reviewed the 2020 changes outlined in the Freshwater NPS along with the Natural Resource Plan (NRP) and Waitua chapters relevant to Masterton District Council and we have captured the NPS requirements for planning our work and upgrading works. Information the Natural Resource Plan and

Whaitua Chapters can be found in Masterton District Councils 3 Water asset management plans.

More information on the Government's Freshwater National policy statement is available at <https://www.mfe.govt.nz/fresh-water/freshwater-acts-and-regulations/national-policy-statement-freshwater-management>

AIMS OF THE INFRASTRUCTURE STRATEGY

Understanding Level of Services

This strategy intends to match the level of service the asset provides with the expectations of customers given financial, technical and legislative constraints. We use formal asset management systems and practices, which provide the Council with key benefits, such as:

- improved understanding of service level options and requirements;
- minimum life cycle (long term) costs for an agreed level of service;
- better understanding and forecasting of asset related management options and costs;
- managed risk of asset failure;
- improved decision making based on costs and benefits of alternatives;
- clear justification for forward works programmes and funding requirements;
- improved accountability over the use of public resources; and
- improved customer satisfaction.

This strategy enables the Council, as owners of a comprehensive range of assets, to demonstrate to our customers and other stakeholders that services are being delivered in the most effective manner over at least a 30-year time period.

Catering for growth and demand

This strategy aims to create, operate, maintain, rehabilitate and replace assets at the required level of service for present and future customers and residents in a cost-effective and sustainable manner. Therefore, we must forecast the needs and demands of the community now and in the future, and outline strategies to develop the assets to meet those needs.

The following factors have been considered in order to predict future demand:

- demographics and population;
- economic development and commercial influences;
- climate and environmental changes; and
- demand for improvements in levels of service from other various sources including:
 - advances in available technology;
 - improving standards of living;
 - a greater understanding of customers' perceptions and expectations;
 - changing legislative requirements;
 - changes in the Council's strategic asset management; and
 - changing customer expectations.

Population growth, including changes in our demographics, is considered the key factor for predicting the future demand for

services and assets. Population growth is strongly aligned with economic development.

Minimising the risk, increasing the resilience

Risk management is as much about identifying opportunities as avoiding or mitigating losses. Risk management in asset management planning is a requirement of the Local Government Act 2002 (LGA). Risk management will be used when there are:

- large potential damages/losses;
- changing economic conditions;
- varying levels of demand for services;
- investments that lie outside the ability to fund;
- important political, economic or financial aspects;
- environmental or safety issues; or
- threats or changes to service levels.

The range and complexity of issues addressed in this section are a clear indication of the increasing challenges facing our communities. We are not alone in facing these challenges. Many of these issues are national or global in their scope and impact. However, many of the most difficult challenges to resolve are new to us all, resource and energy constraints, – and good models of how to deal with them are lacking.

Local government has a role and responsibility in addressing these issues as many of their impacts will be felt locally. Vital infrastructure, which underpins the daily functioning of our communities, is often wholly or partly provided by councils e.g., pipes and roads. The community's ability to deal with increased flooding risk or possible

transport fuel shortages is critically dependent on how the council manages the stormwater and roading networks.

These issues could mean that there will be a periods of uncertainty and change for the district. The Masterton district is particularly vulnerable to the impacts of global economic pressures given its high proportion of people on low, fixed incomes and high number of young people on low wages. Possibly correlated is the higher incidence of single occupant households, many of whom are over 65. As a result, many people's range of choices is restricted which in turn limits their resilience to change.

There is a need for communities to cope with these multiple pressures and be able to adapt to new technologies and ways of life – in other words, to be resilient. We acknowledge that the Council has a role in helping to build local resilience to potential shocks. How we plan to manage and maintain our assets is one of the ways we fulfil this role.

We do this through:

- trying to anticipate risks;
- engaging with the community as early as possible to develop options; and
- making decisions about infrastructure systems and design in such a way that possible improvements are included and choices are kept open as much as possible – adaptability is built in.

The strategy considers how to respond to these significant global issues and pressures to enable us to build resilient communities.

Managing the life of our assets

Managing the life of our assets to ensure our assets are fit for purpose. All assets will eventually reach the end of their useful life and need to be replaced or retired. We manage each asset to ensure it's working at its optimum level. Our assets are measured on:

- what the asset is and what is its purpose (description);
- asset capacity and performance;
- asset condition (including age);
- asset current valuation; and
- asset maintenance.

The activity of asset management is a continual, cyclic process that incorporates the concept of continual improvement. Over time it is intended that the asset management plans and processes will be improved with better information, better management systems and a more holistic, lifecycle approach to the long-term management of the infrastructural assets.

WATER INFRASTRUCTURE ASSETS

Water assets are grouped by each population centre in the Masterton district into water aggregated communities for analysis. The different water communities identified are:

- Urban fully served. Masterton is the only community in this group to date.
- Semi-served (water only). Tinui is the only community in this group to date.
- Bores and unserved (roof water). Includes Whakataki, Mataikona, rural schools (e.g. Mauriceville, Rathkeale and Whareama), rural halls, and private rural facilities (e.g. Ararangi Camp, Camp Anderson, Riversdale Motor Camp).
- Industrial communities with Building Act requirements for water and wastewater.
- Private water supplies. This includes Castlepoint, Fernridge, Upper Plain, Mauriceville, Opaki and Taueru (Tauweru), and lastly the Wainuioru scheme which is owned by the Council but operated by a User Committee.

Total water assets optimised replacement valuation as at 2020 was \$101,273,948 (Source - WSP/Opus valuations Nov 2020)

Critical assets

The critical assets that are identified in the asset management plan are:

- the Kaituna Water Treatment Plant;
- the trunk main from Kaituna to the Masterton urban area; and

- urban storage reservoirs, Upper Plain, Titoki Street, Tinui, and Manuka Street.

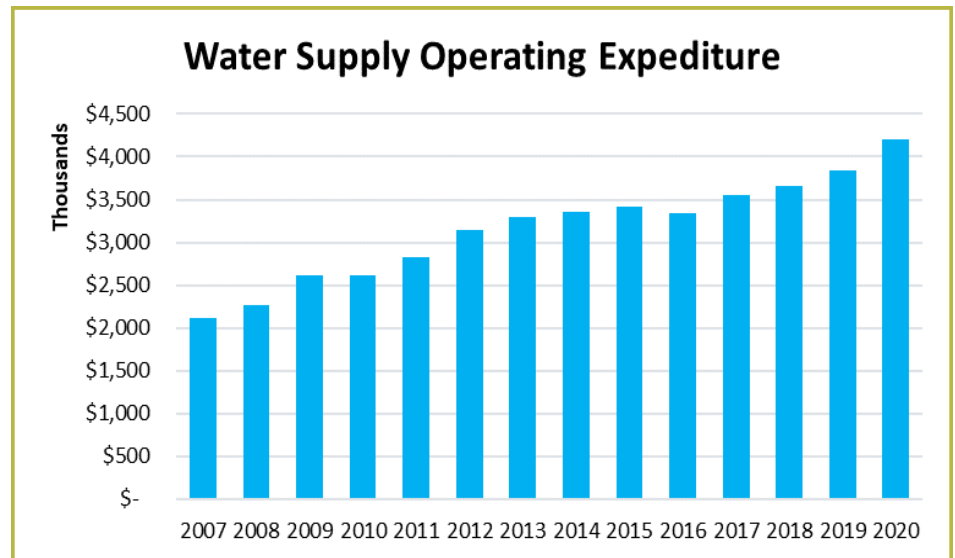
Levels of service

Water supply levels of service are summarised as:

- providing an efficient and effective water supply systems;
- providing water supply services in a way that is acceptable, safe and has minimal environmental impact; and
- applying restrictions to accessing urban water in times of low river flow eg sprinkler bans; alternate days.

Historical operating expenditure

The graph below shows the historical operating expenditure on water assets.



WASTEWATER INFRASTRUCTURE ASSETS

The main wastewater systems in the Masterton district are located in Masterton, Riversdale, Castlepoint and Tinui. They comprise the following:

- Masterton – utilises an urban wastewater reticulation network and a treatment plant with waste stabilisation ponds that dispose primarily to border strips and supporting infrastructure and then to the Ruamāhanga River.
- Riversdale – a wastewater reticulation system and a treatment plant with land disposal via an irrigation scheme.
- Castlepoint – a wastewater reticulation system and a waste stabilisation pond followed by three wetland cells.
- Tinui – a wastewater reticulation system, then discharge to constructed wetland.

Total wastewater assets optimised replacement valuation as at 2020 was \$163,055,288 – including resource consent valuations (Source - WSP/Opus valuations Nov 2020)

• Critical assets

The critical assets that are identified in the asset management plan are:

- the Colombo Road siphon;
- Homebush wastewater treatment facility;
- the wastewater trunk mains network; and
- pump stations.

Levels of service

Wastewater levels of service are summarised as:

- providing efficient and effective wastewater systems for the collection, transfer and disposal of wastewater;
- providing wastewater disposal that is acceptable, safe and has minimal impact on the environment; and
- delivering inspection, monitoring and enforcement services of trade waste disposal to protect community health and safety.

Historical operating expenditure

The graph below shows the historical operating expenditure on wastewater assets.



Note: Includes costs associated with Homebush Wastewater treatment plant.

STORMWATER INFRASTRUCTURE ASSETS

The stormwater system consists of 48km of pipes and approximately 800 manholes and 4km of river stop banks along the Waipoua and Ruamāhanga rivers. There are also some retention embankments for high flow management. The Council also contributes to designated stop bank protection works on the Waingawa and Ruamāhanga Rivers.

Total stormwater (including rural) assets optimised replacement valuation as at 2020 was \$42,684,387 Source - **WSP/Opus valuations Nov 2020**)

Critical assets

The critical assets that are identified in the asset management plan are:

- the Chapel Street (Town) drain; and
- Waipoua stop bank.

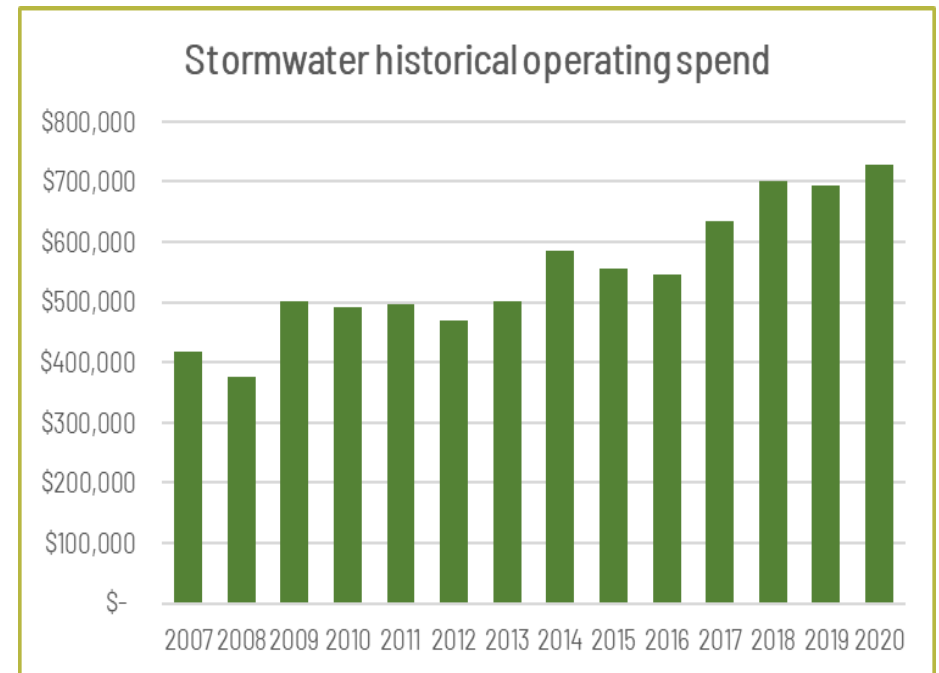
Levels of service

Stormwater waste levels of service are summarised as:

- providing an efficient and effective stormwater system to minimise the impact of heavy rainfall and reduce flooding risk; and
- delivering stormwater services in a manner that is acceptable, safe and where possible enhances the environment.

Historical operating expenditure

The graph below shows the historical operating expenditure on stormwater assets.



SOLID WASTE INFRASTRUCTURE ASSETS

Solid waste assets facilitate the collection and transportation of solid waste. Assets are located at the following locations:

- Nursery Road Transfer Station (inclusive of the recycling centre), residual waste transfer station, closed landfill and associated amenities.
- There are monitored closed landfills situated at Hastwell, Tinui, Castlepoint, Riversdale and Mauriceville.

Total solid waste assets optimised replacement valuation as at 2020 was \$1,595,590 **Source - WSP/Opus valuations Nov 2020**)

Critical assets

There are no critical assets identified in the asset management plan.

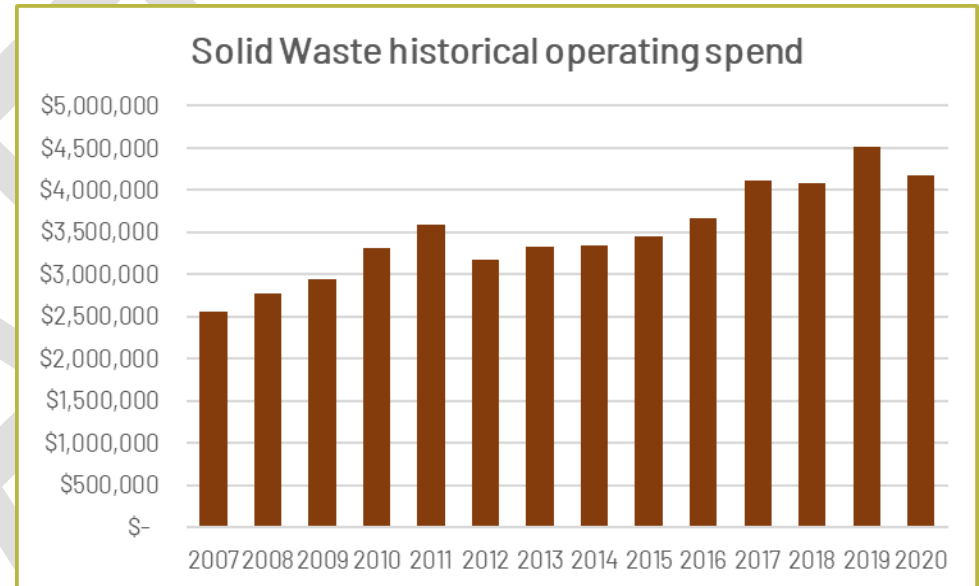
Levels of service

Solid waste levels of service are summarised as:

- providing efficient and effective solid waste management facilities and solutions across the district; and
- operating the rural and urban transfer, composting and recycling operations in a safe and environmentally-sensitive manner

Historical operating expenditure

The graph below shows the historical operating expenditure on solid waste assets.



TRANSPORT (ROADING) INFRASTRUCTURE ASSETS

There are approximately 279km unsealed and 529km of sealed carriageway in the roading network. The network also includes approximately 208km of footpaths, 2800 streetlamps, 4832 signs, 40km of drainage culverts as well as 202 km of kerbing, channels and associated drainage structures. Hood Aerodrome has a 1250m sealed runway, three grass runways, a terminal and multiple privately-owned hangers and buildings. There are 5,87km of cycle lanes and shared paths and 267 bridges.

The roading assets optimised replacement valuation as at 2020 was \$714,343,325 Source - WSP/Opus valuations Nov 2020)

Critical assets

The critical roads that are identified in the asset management plan and the Wairarapa Lifelines project as being the important routes on those roads that are vulnerable to natural hazards:

- Masterton – Martinborough (Te Whiti Road)
- Opaki – Kaiparoro Road
- Whangaehu Valley Road
- Te Ore Ore – Bideford Road
- Masterton – Castlepoint Road
- Blairlogie – Langdale Road
- Riversdale Road
- Homewood Road
- Upper Plain Road
- Masterton Stronvar Road

- Manawa Road
- Mataikona Road

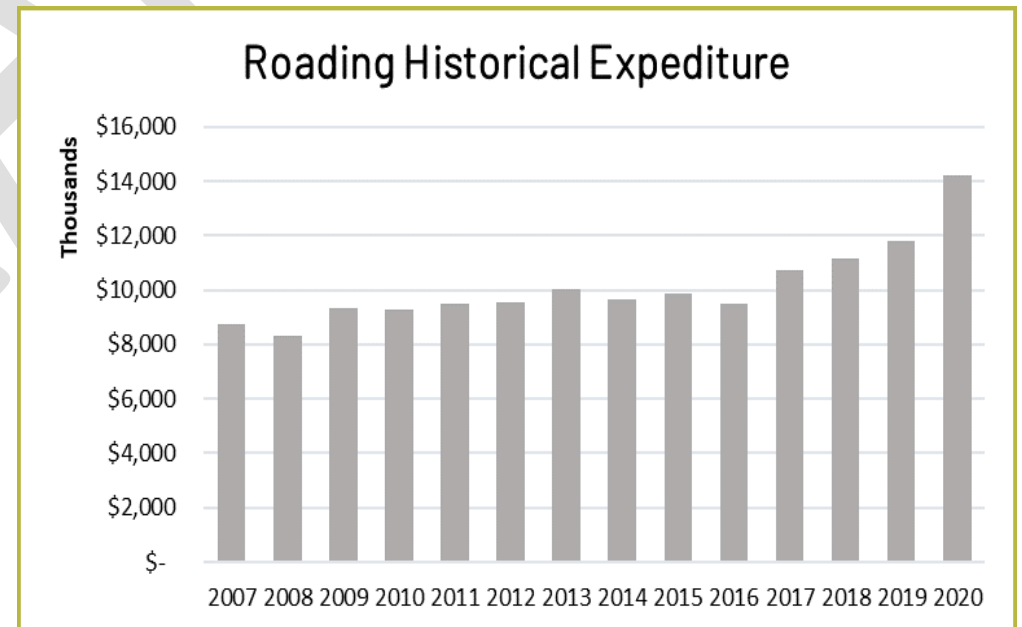
Levels of service

Roading levels of Service are summarised as:

- roads and urban streets are provided to ensure a safe and well maintained roading network;
- footpaths are safe, well maintained and accessible; and
- a range of on and off street parking opportunities is provided.

Historical operating expenditure

The graph below shows the historical operating expenditure on roading assets.



PARKS, OPEN SPACES AND COMMUNITY FACILITIES INFRASTRUCTURE ASSETS

The Council's community facilities include the library, town hall, rural halls, community housing, cemeteries, reserves, the swimming pool, the aerodrome, Mawley Park camping grounds, sport facilities and fields.

Parks and Open Spaces assets optimised replacement valuation as of 2020 was \$21,000,000.

Total community building assets optimised replacement valuation as at 2020 was \$36,300,000.

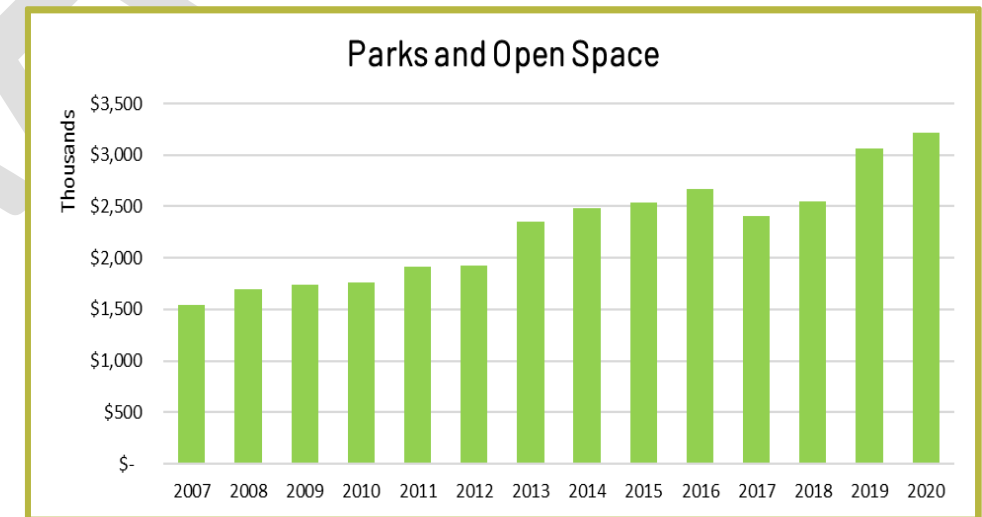
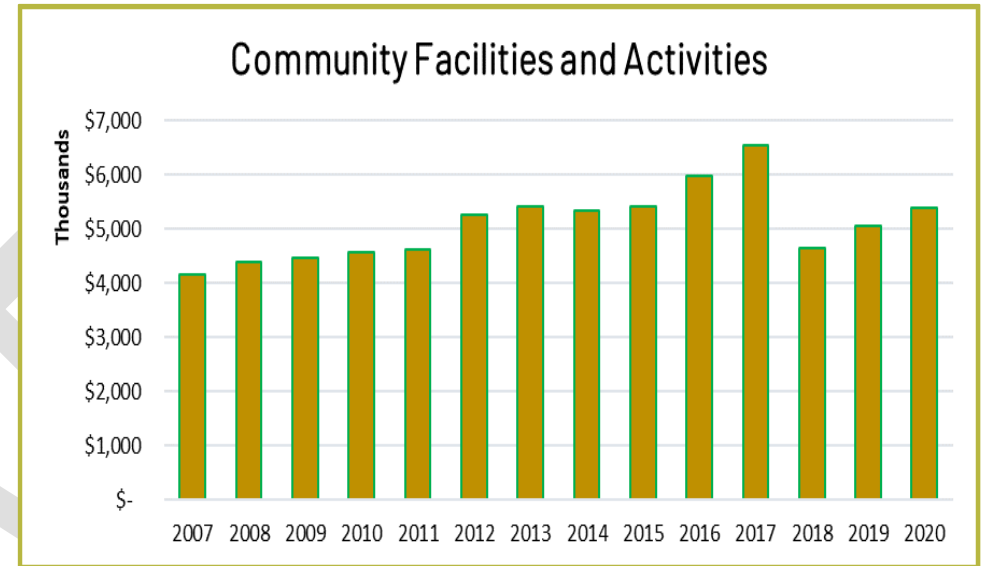
Hood Aerodrome runway assets optimised replacement valuation as of 2020 was \$4,264,992. *Source - WSP/Opus valuations Nov 2020*

Critical assets

There are no critical assets identified in the asset management plan. We acknowledge that some assets that may not meet our definition of critical are considered to be of significant value to the community.

Historical operating expenditure

The graph below shows the historical operating expenditure on parks and community facilities assets.



MAINTENANCE STRATEGIES

Maintenance strategies have been developed to achieve cost effective maintenance to maintain assets to meet the intended levels of service. We have determined that the most effective way to achieve this objective is to contract out the network maintenance works to commercial contractors.

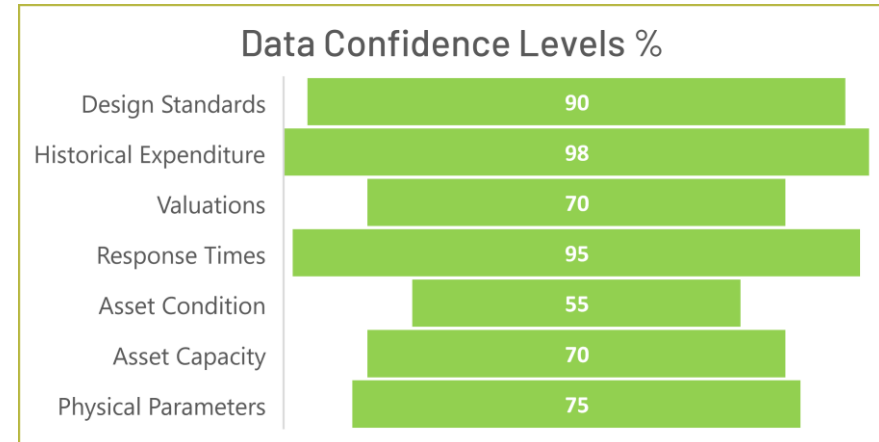
We will review the cost-effectiveness of the current arrangements for meeting the needs of the community within the district for good-quality local infrastructure, local public services, and the performance of regulatory functions according to the LGA (section 17a) in 2020 -21.

Data confidence

Data confidence is rated for all asset streams in the Asset Management Plans and is summarised the table below.

OUR APPROACH TO ASSET MANAGEMENT

The following principles and issues set out the long-term approach used to manage the Council's infrastructure.



Renew or replace assets

The objective of infrastructure asset management is to create, operate, maintain, rehabilitate and replace assets at the required level of service for present and future customers in a cost effective and sustainable manner. Capital investment decisions are determined by the following considerations:

- When existing infrastructure should be replaced?
- When should the Council invest in improving the existing service?
- How much needs to be invested to provide infrastructure for a growing community?

The Asset Management Plans for each infrastructure activity provide the details of the renewal programme.

Response to community growth or decline

Projections suggest that, without intervention, Masterton's population will increase by 1% per annum

Existing Council systems and services (such as Kaituna water supply and the Homebush wastewater treatment plant) have the capacity and capability to accommodate increasing development or demand resulting from economic or population growth demands that are beyond the current projected growth forecasts.

Lifecycle renewals

The Optimised Renewal Decision Making process is the primary basis for making lifecycle renewal decisions. This process is a risk-based methodology which assesses the probability of each failure mode (including structural, capacity, performance, age, operational and performance) and the consequence (or damages) of the failures.

A scoring system of 1 to 5 is employed to quantitatively assess the risk components e.g., structurally failed sections will attract a failure mode probability of 5. The risks of failure (for each failure mode) of each section are assessed and calculated by quantifying the product of their probability and consequence of failure.

Assets with a high risk of failure are then ranked and the top group is included in the priority 1 list. The ongoing programme of collecting further asset information and variation of market prices for asset renewal/replacement, as well as new technology advances in the associated industries, mean that the priority list is provisional and will be subject to change with new information. Lifecycles of renewed assets vary depending on type but are typically 18 years for road reseals, 25 years for footpaths and 60 to 80 years for pipework.

Planned increase or decrease in the levels of service

Levels of service are assumed to be maintained at current levels in this programme, with the exception of the proposal to build a new and expanded library and archive within the Civic Facility. If other level of service changes are made, these will be incorporated in future Long-term Plans (LTP). Key factors in determining any changes to the current levels of service are affordability, user expectations and the willingness of the community to pay.

Maintain or improve public health

Given recent drinking water contamination at Havelock North, our focus is to maintain Masterton's high drinking water quality. Due to nature of our water supply operations, substantial changes are not necessary.

The Ministry of Health has an ongoing programme of improving standards for small and rural drinking water suppliers. Ongoing infrastructure investment is required to achieve compliance with these standards. This will raise affordability challenges for users of small supplies into the future. The Council has acknowledged, within the water supply asset management plan, assistance for rural water schemes to meet future drinking water standard compliance. How this provision will be spent is dependent on any changes to the Drinking Water Standards.

Natural Resources Plan

Greater Wellington Regional Council (GWRC) has released a Natural Resources Plan (to replace the Regional Plan) and will modify this plan further through the Whaitua Process. This sets targets and rules for all activities in the Wellington region that have the potential to affect the natural environment, biodiversity and landscape values.

Demand drivers

It is possible that factors in the future could change the demand on the Council's infrastructure assets. The asset management plans

provide an analysis of these drivers and possible impacts and are summarised in the table below,

Demand drivers		
Demand drivers	Future Impact	Future possible operational demands
Population	Low/Med	Minor impact on demand
Commercial Influences	Low/Med	Demand is expected to increase at the Waingawa Industrial area
Climate	Med/High	Demand likely to increase in hotter/ drier periods and more severe storm events
Tourism	No/Low	Unlikely to impact significantly on demand
Land Use	Low/Med	Demand may increase from large wood processing sites supplied by Kaituna and/or Tinui
Improvement in the level of service	Med	Although demand for quantity is not expected to change, demand for improvement in water quality is anticipated
Changes in customer expectations	Low/moderate	Outcomes from public consultation
Water standards	Moderate/High	More stringent standards applied to water production and to rural water schemes.
Wastewater Volume/ Mix	Low	Negligible
Solid waste Volume/Mix	Low/moderate	Minor impact on demand
Transport traffic volumes	Moderate	Increased maintenance and renewal program
Heavy Class Vehicles	Moderate	Lifting weight restriction from rural bridges

Demand drivers		
Demand drivers	Future Impact	Future possible operational demands
Pastoral Farming practices	Low	Minor impact on demand
Land use (Forestry)	Moderate/High	Construction of an eastern bypass for Masterton was investigated in 2011 and found not economically viable. The report is to be reviewed in 2019.
Footpath's (ageing population)	Moderate	Footpath surfaces and widths will increasingly need to be upgraded to accommodate growing numbers of mobility scooters
The usage of walkways and other passive parks facilities	Medium	Review of the trails network
Parks playing surfaces	Low/Medium	Review the requirements of each park facility

Risk and resilience for infrastructure

The Council carries material damage insurance cover on all its buildings and significant above-ground assets. We are also a member of the Local Authority Protection Programme fund (LAPP) which is a mutual fund scheme designed to cover our 40% contribution to meet the costs to restore underground infrastructure in the event of a disaster. The balance of 60% is expected to be met by central government's Disaster Recovery Fund. Damage to roads and bridge assets in the event of natural disaster events (including flooding) will be funded by way of our annual roading budget, reserve funds and the NZ Transport Agency (NZTA) share of the damage incurred.

The financial resilience of the Council in the face of unexpected costs is also supplemented by having cash reserves of based on having cash reserves of \$16 million. These funds are available to meet immediate

recovery costs and would be expected to be reimbursed once appropriate funding sources are confirmed.

Our asset management practices also need to include a stronger understanding of the resilience of our infrastructure networks, especially key pinch-points and the degree to which different parts of networks are critical to overall performance.

There is a need to increase the sophistication of how we think about resilience, shifting beyond a narrow focus on shock events or infrastructure failure and thinking more about interdependencies, levels of service and community preparedness.

A longer-term view needs to be taken with increased focus on adapting to slower changes over time, including climate change.

Importantly, increased resilience is not necessarily about making things stronger or investing more and is quite often achieved by operational changes. Some key elements of resilience attributes are:

- organisational performance;
- community preparedness;
- service delivery;
- adaptation;
- financial sustainability;
- interdependencies; and
- responsibility.

OPERATIONAL RISKS

The key identified operational risks that would affect the performance of our infrastructure assets are detailed below.

Water Supply Assets

- Contamination to Masterton district drinking supplies. Given recent drinking water contamination in supplies around the country, our focus is to ensure Masterton's drinking water quality remains at the highest possible level. The nature of Masterton water supply operations mean substantial changes are not envisioned and the Council has developed a Water Safety Plan to manage this risk.
- Future "water take" consents from the Waingawa River being reduced. Options for additional water storage and demand management with meters are included in this strategy.

Wastewater Assets

- Wastewater treatment plant capacity. Options to increase treatment capacity at Homebush are included in this strategy
- Pipe capacity and wastewater overflows. Blockages and stormwater inflows can cause overflow. We have an Inflow and Infiltration strategy to minimise these events.

Stormwater Assets

- Blockages to the stormwater network. Blockages can cause localised flooding. Maintaining the network and associated waterways and enforcing bylaws will help us keep the stormwater network performing.

Solid Waste Assets

- Recycling processing and solid waste transportation. Being able to recycle more and having to transport less waste will benefit our community.

Roading Assets

- Slips and flood damage. Work on rural roads and pavement drainage will aid in the prevention of slips and flood damage. This work will also assist out stormwater network.

Parks, Property and Community Facilities Assets

- Earthquakes and water supply to parks. Earthquake strengthening or alternative options for public and council owned buildings has started. The Council is aware that water supply to our parks will be a challenge in future years. Future work may include sewer mining, water harvesting and increased planting of drought-tolerant species.

OTHER RISKS

Climate change and stormwater protection

Climate change will increase the risks from natural hazard events that already occur within the district, particularly as a result of:

- sea level rise, exacerbating the effects of coastal erosion and inundation and of river flooding in low lying areas, especially during storm surge;
- increased frequency and intensity of storm events, adding to the risk from floods, landslides, severe wind, storm surge, coastal erosion and inundation; and
- increased frequency of drought, placing pressure on water resources and increasing the wildfire risk.

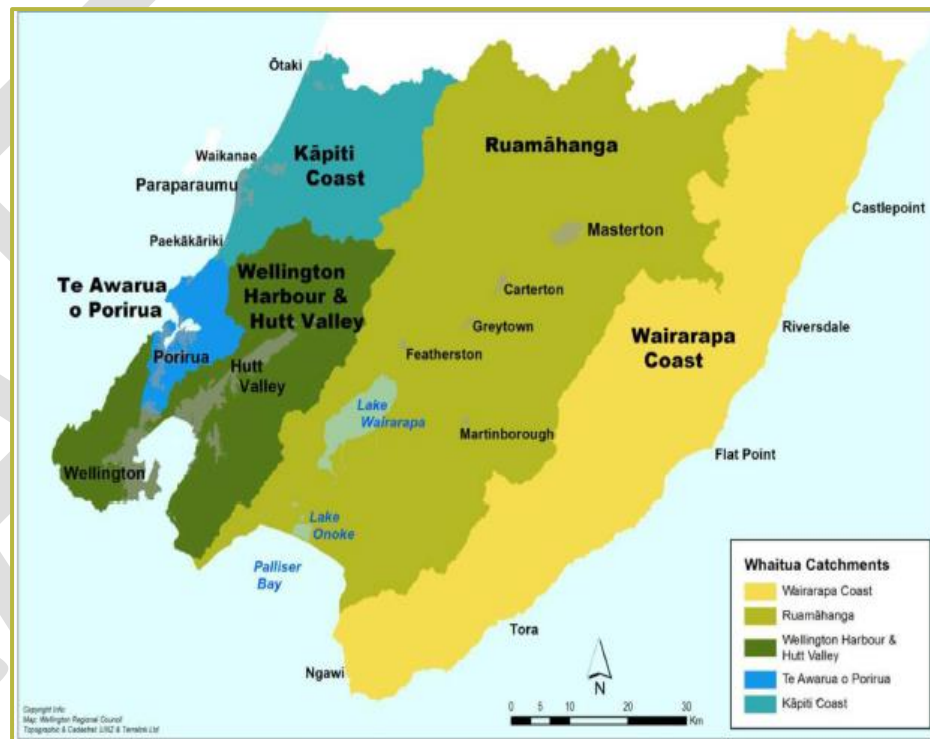
More frequent droughts may also affect the security of water supply. Currently we rely on adequate water flows from the Waingawa River and have no stored water for a prolonged drought.

We therefore reduce the causes and adapt to the effects of climate change. Our policies and responses will need to be robust to a range of possible futures, rather than relying on a single 'forecast'.

Climate change is projected to have the impacts shown in the table below on the Masterton district coast. These are expressed as a range, as there are several scenarios considered when making projections.

We have based our planning on the NIWA modelled regional climate change projections (known as the *Whaitua tables*). The scenarios are expressed as a range, from higher emissions to lower emissions for a number of climate related parameters.

Council is preparing a Climate Change mitigation strategy during 2021/22. Projects from investigations as this strategy to be developed may change current and forecast project, work and maintenance programmes



Notes:

<https://www.gw.govt.nz/assets/Uploads/WhaituaClimateChangeprojectionsMarch2020.pdf>

Rcp4.5 mid-range scenarios where greenhouse gas concentrations stabilise by 2100

Rcp8.5 is a high concentration scenario where the ghg emissions continuing very high. In the light of new technologies and improvements it remains a valid way to test the sensitivity of the climate variables.

Climate Change Wairarapa

By 2040, seasonally the region could expect*:			Impacts	
Ruamahanga	<ul style="list-style-type: none"> 0.7°C to 1°C temperature rise Up to 30 Increased hot days over 25°C 	<ul style="list-style-type: none"> Between 5 % less rain, to 5 % more rainfall 0.12 to 0.24 metres above present 	<ul style="list-style-type: none"> Increased human heat stress and mental health issues, rurally and in urban centres Increased temperatures in urban centres due to human activities, large areas of concrete, buildings and vehicles 	<ul style="list-style-type: none"> Increased prevalence of drought delivering urban and rural water shortages, and increased pressure on water infrastructure, including water storage Saltwater intrusion on groundwater
Wairarapa Coast	<ul style="list-style-type: none"> 0.5°C to 1°C temperature rise Up to 30 Increased hot days over 25°C 	<ul style="list-style-type: none"> Between 0 % less rain, to 5 % more rainfall 0.12 to 0.24 metres above present 	<ul style="list-style-type: none"> Increased risks of pests (such as wasps, rodents and fruit flies) and diseases (including risks to human health) and biodiversity losses Increased air pollution and seasonal allergies Higher demand for drinking water at times when water is likely to be scarcer 	<ul style="list-style-type: none"> Decreased water quality and increased levels of toxic algae which impacts biodiversity, recreation and drinking water sources Increased flooding, slips and landslides affecting land, houses, roads and other assets, public transport and rural productivity
By 2090, seasonally the region could expect*:				
Ruamahanga	<ul style="list-style-type: none"> 1.2°C to 3°C temperature rise Up to 80 Increased hot days over 25°C 	<ul style="list-style-type: none"> Between 0 % less rain, to 10 % more rainfall 0.68 to 1.75 metres above present 	<ul style="list-style-type: none"> Stress on ecosystems and associated impacts on health and economy Range and habitat of native plants and animals will change-extinction of some species Higher temperatures may allow for different crops to be grown. 	<ul style="list-style-type: none"> Flood protection infrastructure Levels of Service reduced overtime Impacted rural community due to reduced agricultural production Reduced soil fertility
Wairarapa Coast	<ul style="list-style-type: none"> 1°C to 3°C temperature rise Up to 60 Increased hot days over 25°C 	<ul style="list-style-type: none"> Between 10 % less rain, to 5 % more rainfall 0.68 to 1.75 metres above present 	<ul style="list-style-type: none"> Timing of seasonal activities such as flowering, breeding and migration will change. •Several fold increase in urban and rural wildfire risk – a particular concern for water supply 	<ul style="list-style-type: none"> Regional parks negatively affected by both drought and flooding Higher stress on indigenous ecosystems, plants and animals, especially with drought Reduced workplace productivity

– Source: MFE , GWRC and NIWA climate change summaries. Updated 2020*Projected changes are relative to 1995 levels. The numbers provided are mid-range estimates of what the change is projected to be and should not be taken as definitive values.

Increased flood risk

As well as the main township of Masterton, our district has other smaller communities such as Castlepoint, Taueru, Tinui, Mauriceville and Riversdale. Two of these communities are situated along the district's coastal edge. These urban developments are subject to flooding from the many streams and rivers which drop fast out of the ranges and then slow down and spread out on the plain on their way to the sea.

In high rainfall events, the volume and rate of flow of the water coming down the waterways rises quickly and residual ponding, once the waterway levels have dropped, can be significant.

The climate change projections suggest that very heavy rainfall events are likely to become more frequent, especially in the Tararua ranges during north-westerly storms and the Wairarapa during southerly storms. This will present very significant challenges in how we manage our assets.

Stormwater eventually finds its way to the sea. The level of the sea at the time the stormwater is flowing down the rivers influences how fast and how much of the stormwater can drain away. If the sea level is high enough, it can prevent the water flowing away out to sea causing it to back up and overflow inland. The rise in base sea level is caused in part by rising ocean temperatures – heated water expands.

In addition to this effect, rising ocean temperatures mean that storms generated at sea will contain more energy, for example be more intense. This in turn means that storm surges and wave heights will be higher. All these factors combine to significantly increase the risk of inland flooding on the district's coastal plains.

GWRC has recently collated data gathered from 20 years' research and new data using aerial photos, electronic flood mapping tools and

a range of analytical techniques to identify hundreds of Masterton properties as being at potential increased risk of flooding.

We are working with GWRC to confirm predictions for flood events. The overriding issue is to ensure timely protection measures are in place against a 1 in 100-year flood to preserve our community and our economy. Until levels are confirmed, and any mitigation required is in place, there may be implications for any proposed developments in the town centre, the library project and the town's overall economic development.

Earthquake resilience risks

Parts of Masterton are built on old flood plains that could be subject to liquefaction in a major earthquake. Part of the Council's bridge and reticulation renewals programme involves using different construction methods and materials to provide greater earthquake resilience in pipelines.

We do not consider that this risk is so great that the renewals programme should be brought forward. Instead, we will address resilience at the time pipes and bridges are replaced.

WHAT WORK IS PLANNED?

Significant Infrastructure

Significant Council infrastructure is identified in each Asset Management Plan. The expected asset lives are set out in detail in our statement of accounting policies. The asset management programme is focused on the most critical parts of the network servicing large numbers of properties, essential services and businesses.

Work programmes assumptions

The Asset Management Plans also detail the projected work programme associated with the management and renewal of assets. This work programme is based on the following assumptions:

There are no significant proposed changes to current levels of service.

Inflation is based on projections by BERL for the local government cost index.

The lifecycle of assets, demand forecast, resilience and regulatory compliance are based on the principles detailed in this strategy.

Resource consents will be obtained for all proposed major projects. Consent risks have been included in the option assessment and project selection.

The NZTA funding assistance rate remains at 56 - 57% and that NZTA will continue to provide funding to maintain the network at its existing condition.

The current state of engineering technology remains unchanged. The Council has already adopted developments that both lower the cost of replacing pipes, for example by using trenchless construction technologies, and allow pipes to be treated in ways that extend their lives for several decades such as by inserting new linings in existing pipes. Future technological developments have not been factored into this strategy.

No natural hazard events that impact on planned business as usual in a major way have been factored into the work programme. However the Council continues to improve asset resilience and to plan and prepare for hazard events

Treaty of Waitangi settlements will not significantly affect current governance arrangements of infrastructure assets.

Ensure the network renewal programme is adequate to, at a minimum, maintain the asset condition rating and to improve it over 30 years.

These assumptions have all been assessed with a low level of uncertainty based on information collected. Particular risks associated with individual projects are included in the option assessment.

SIGNIFICANT PROJECTS REQUIRED

Significant decisions about capital expenditure will be required over the life of this plan or LTP plan life. The table below provides a summary of these decisions.

Significant Projects						
Significant Infrastructure project	Approximate Date Required	Estimated Cost	Theme or Reason	Options 1 (Preferred)	Option 2	Option 3
Renewals of existing 3 water assets	From 2021	\$4,725,813 p/a	Growth/Renewal	Continue with proactive approach to renewal programme. Targeted older and under performing asset	Reduce renewal plan but this will increase the asset failure risk. Assets will continue to age and deteriorate	Increase renewal spend. Affordability issues for community versus potential asset condition gains
Roading Programme	From 2021	\$8,800,000 p/a (includes subsidised and non-subsidised expenditure Includes Colombo Road south bound bridge replacement (\$2.9m – year 1) Mataikona Road upgrade and resilience work.	LOS/Growth/Risk	Continue with proactive approach to renewal programme. Programme designed to bring Roding asset up to prescribed LOS	Reduce renewal plan but this will increase the asset failure risk. Assets will continue to age and deteriorate	Increase renewal spend. Affordability issues for community versus potential asset condition gains

Significant Projects

Significant Infrastructure project	Approximate Date Required	Estimated Cost	Theme or Reason	Options 1 (Preferred)	Option 2	Option 3
Network Upgrades	Identified areas requiring upgrade to meet demand for new subdivisions	\$4,090,000	Growth	Included within 3 water and roading programmes to enable growth around Masterton urban fringes and infill.	Do nothing and let developers cover all these cost.	
New Civic Facility	Years 1 - 5	\$30.8 million (+/- 30% variance due to the early nature of the budget figures)	LOS	Option includes co-location of library, performing arts flexi-form theatre, meeting rooms, kitchen facilities and information hub including front of house Council services. Acquisition of land assumed.	As part of the decision-making process several options and variations on the preferred option were considered. Options included larger flat-floor event space in addition to the flexi form theatre, large commercial kitchen and extension café space, library remaining separate and co-working space. Following various investigation activities and reports, including a demand analysis, these options were discounted.	
Masterton Revamp (CBD upgrade)	2021 - 2031	\$35.4 million	Growth/LOS	10-year programme: including all stages of the Town Centre Strategy adopted in 2018, including the	Scaled back programme: \$20 million including Queen Street stage 1-3, Charlies Lane,	Do nothing: this option would see no investment made in the Town Centre, Waipoua or town

Significant Projects

Significant Infrastructure project	Approximate Date Required	Estimated Cost	Theme or Reason	Options 1 (Preferred)	Option 2	Option 3
				Waipoua river precinct; and all entry points into Masterton. The Town Centre work is staged to ensure that Council is in a position to capitalize on external NZTA funding opportunities.	the Waipoua river precinct and the North and South entrances only. This programme could be delivered over a short time frame.	entrances. This is deferring a decision on some of the infrastructure in the Town Centre that is end of life and in need of renewal shortly. Money has been spent to date on numerous design packages also.
Water Supply Resilience. Council raw water storage	2024-25	\$7,400,000	Risk/LOS	Increase Masterton urban raw water storage capacity to 40 days.	Partner with Wairarapa Water limited Dam project and use this facility to supply Masterton Urban potable water. Feb 2021 - This project is currently in early consent phase.	Restrict water use to the community to match our current and future water take consent and storage capability
Homebush Wastewater	Before 2034	\$11.90 million implementation		Homebush Wastewater treatment plant upgrade / consent review		

Significant Projects

Significant Infrastructure project	Approximate Date Required	Estimated Cost	Theme or Reason	Options 1 (Preferred)	Option 2	Option 3
treatment plant upgrade / consent review		\$32 million for plant upgrade				
Animal Shelter	2021-2022	\$1.5m	Risk/LOS	This option includes the design and construction of a purpose-built facility to house dogs and livestock while in the care of the Council. The design accommodates growth forecasts for the next 10 years, with the option for modular expansion in the future.	Co-located and co-funded: this option explored the opportunity for both Carterton and South Wairarapa to have co-located services in a new shelter in Masterton. These requirements would be captured in the design and either upfront contribution or a fee arrangement to be agreed. This option was discounted, and Carterton are exploring alternative options.	Do nothing: this option would mean that we are at risk due to the current facilities lack of compliance with the necessary codes and standards.

Significant Projects

Significant Infrastructure project	Approximate Date Required	Estimated Cost	Theme or Reason	Options 1 (Preferred)	Option 2	Option 3
Skate park	2020 - 2022	\$1.3, plus \$300k	LOS/Growth and Risk	This option includes a complete redevelopment of the skatepark complex to bring it up to a modern, national competition level standard. The extensive rejuvenation includes a remodel of the majority of the park, resurfacing of the concrete, and the addition of new skate features. \$1.3m from Central Government funding and \$300k from reserve funds.	The signed contact with the Provincial Development Unit outlines Council and Central Governments obligations to the project and funding sources, based on the application we put forward in 2020.	We are exploring options for additional extras including a pump track and permanent all weather shelter. These can be retrofit at a later stage if the decision is deferred.
Hood Aerodrome	2021- 2025	\$14,900,000	LOS/Growth * Risk	The signed contact with the Provincial Development Unit outlines Council and Central Governments obligations to the project and		

Significant Projects

Significant Infrastructure project	Approximate Date Required	Estimated Cost	Theme or Reason	Options 1 (Preferred)	Option 2	Option 3
				funding sources, based on the application we put forward in 2020.		
Senior Housing	2021 - 22 & 2022 - 23	\$500,000 year 1 \$7,000,000 year 2	LOS	Draft - Our Proposal Council funds and builds 25 units (15 x 1-bedroom units and 10 x 2-bedroom units) on the vacant land at Panama Village and partners with a community housing provider to manage the housing so that tenants can access the government subsidised rent, making it affordable housing.		

More information on each of these projects including most likely scenarios, timings and options is provided below.

Renewals of existing 3 water assets

The proposed scenario for the renewal work programme for the three waters and roading networks has an estimated cost of \$4.7 million per year. These costs do not include any enhancements, maintenance or operational expenditure.

The principle alternative is to reduce or defer the renewal spends resulting in a reduction in asset condition and performance, risking a reduction in the levels of service provided by the three water networks.

Renewals and upgrades of existing roading assets

The proposed scenario for the renewal work programme for the roading network has an estimated cost of \$8.8 million per year rising. These costs do not include any enhancements, maintenance or operational expenditure.

The principal alternative is to reduce or defer the renewal spends resulting in a reduction in asset condition and performance, risking a reduction in the levels of service provided by the Roding networks. It would also have implications for rural roads and bridges with the forecast increased in the forest harvest and the increase in truck capacity currently being implemented by the central government's HMPV and 50 max programmes. The financial impact of deferring renewals is difficult to quantify for an entire network but inevitably

the disruption and renewal costs of a failed asset are greater than if the work was undertaken in a timely manner.

In year 1 work will also start on Colombo Road South bound bridge replacement. The cost of this work is included in the renewal programme but is a significant work item at \$2,900,000.

Network expansion and upgrades

To meet growing demand for more housing project are required to expand or upgrade areas on the urban fringes of Masterton. These upgrades mainly include Roading and 3 Water upgrades to meet the required demand.

Delivering a new Civic facility:

Since the closure of the Town Hall in 2016 there has been much time spent engaging with the community, investigating, and analysing options to help shape what a new Civic facility for Masterton looks like. This facility is one of the most important things we will deliver and will help us to achieve our plan to bring Masterton into the 21st century so it's a home that our tamariki and mokopuna can be proud of.

The decision was made to explore alternative locations within Masterton for the new facility because the current site isn't large enough for us to build what we need, and it's isolated from the Town Centre. A new location will allow us to develop a facility of the size and scale that meets the future needs of our tamariki and mokopuna, will be better connected to the Waipoua and Queen Elizabeth Park, and allow us to develop an arts and cultural heart for Masterton. The new facility will include a flexi-form theatre with seating for 500 people, a new library and archives, information hub with council services and box office, an exhibition space, meeting rooms and kitchen facilities.

The LTP includes an allocation of \$30.8 million dollars spread over the next six years in order to deliver the project.

Masterton Revamp (Town Centre upgrade):

We want people to enjoying spending time in Masterton, and for visitors to want to come back, so we have had discussions with the community to understand the aspirations, desires and requirements to help Masterton thrive. Those discussions led to the development and adoption of a Town Centre Strategy in 2018 which helped shape the objectives for our Town Centre and the areas that we should start to invest in.

The Council has a number of different projects that will all work together to rejuvenate how Masterton looks and feels, and we will get to work delivering those over the next 10 years to create a town that our tamariki and mokopuna can be proud of. The 10-year plan includes redeveloping some of the key streets in our Town Centre to create better linkages within the Town. We are keen to develop our connection to the Waipoua river and will be exploring options for how we improve the accessibility and usability of the river. We will also address the entry points into Masterton, how they can better reflect the character of our community and local residents and encourage people into the Town Centre.

The LTP includes an allocation of \$35.4 million dollars over the 10-year period to deliver the project. This is the total project cost; however external funding will be explored to reduce the financial investment required.

Water supply resilience

Urban 40-day raw water reservoir

We need to be able to store more water in order to meet increased demand from a growing population, provide safeguards against any future changes to resource consent conditions and provide greater resilience in times of drought. To address this, we will investigate options for reservoirs for urban raw water. The LTP includes a provision of \$100,000 in 2021-22 for investigation, and a further \$7.3 million over 2023-25 to complete the work. The consequence of not undertaking projects to increase our water supply resilience is that Masterton will not have a secondary drinking water supply that is separate to our main supply. Causes of using a secondary supply could be a natural event e.g., earthquake, infrastructure failure, or water supply contamination.

Homebush wastewater treatment plant upgrade/consent review

The Natural Resources Plan requires the Council to further reduce treated wastewater discharged into the river. The most likely scenario and timing of this will be subject to further consultation with Iwi, GWRC and the community.

The Council's Wastewater Strategy is outlined with the following objectives:

Objective 1 – Project Plan: Establish an overall project plan with clear timelines.

Objective 2 – Engagement: Have the community understand the importance of, and actively manage, their water and wastewater solutions.

Objective 3 – Land Identification: Identification of land suitable for treated wastewater irrigation (and available for purchase, lease or collaboration with owners).

Objective 4 – Flow and Volume Characteristics: Gather comprehensive data and information on flow and volume characteristics of water to be available to farmers/owners.

Objective 5 – Develop Market: Develop means of on-selling available water.

Objective 6 – Develop Infrastructure: Develop plan and implement infrastructure.

Objective 7 – Reduce River Discharge: Over time reduce river discharges and ideally eliminate and direct river (piped) discharge, particularly during lower flows.

Objective 8 – High Flow Land Passage: Any (reduced) discharge to river is via land passage.

A budget provision of \$11.9 million is allowed for in the work programme for the implementation of the selected option, with a further \$32 million provision allowed for a plant upgrade to stop treated wastewater discharges to the river when the current consent expires in 2034. It is noted that until the Natural Resources Plan is fully implemented, the Homebush upgrade timetable and scope creates significant uncertainty. The impact of not implementing this strategy could potentially incur higher cost in the future.

Hood Aerodrome

Hood Aerodrome is a prized asset in the Wairarapa – home to the world-famous Wings over Wairarapa show and rare vintage aircraft – but it is not meeting current demands or realising its strategic potential as a critical contributor to building and developing the local

economy. To meet current demand for an efficient, connective transport system, and enable further economic growth through business investment, critical infrastructure improvements need to be made. This infrastructure upgrades will transform Hood Aerodrome into a modern, functional airport, with capacity for growth beyond its current usage. An airport with greater capacity, functionality, and enhanced safety will support a high-value economy, facilitate freight, trade, and further business development within New Zealand. Improving the accessibility to the Wairarapa through an air service option made possible by extended and upgraded infrastructure will increase social connectivity and enhance Hood Aerodrome's already strong local, national, and international reputation.

In July 2020, the Government announced it was contributing \$10 million to make the critical investments in our strategic asset. The LTP includes how the \$14.9 million will be spent over Y0 – Y5.

Building a new animal shelter:

The current animal shelter does not fully meet legislative requirements and upgrades are required for the welfare of the staff, the animals under their care, and visiting public. The existing facility is not suitable for renovation and needs to be demolished. A new purpose-built facility will be constructed on Ngaumutawa Road that will accommodate the current and future needs of Masterton in the delivery of a crucial service. The investment will include specialists' areas to care for and protect the animals in the Council's care and will also provide an improved service with the ability for the public to pay for the release of their dogs on site.

The LTP includes \$1.5 million for the purpose-built facility between 2021 and 2022.

Skatepark renewal

Masterton's skatepark is loved by all – teens, parents and grandparents who enjoy watching over young ones. But it was in dire need of an upgrade. The upgrade project received strong support from our community and in July 2020 the Government announced it was contributing \$1.3 million to make the community's vision become a reality. In order to deliver on everything, the community desires and provide Masterton with a venue suitable for holding national level events there is a shortfall of \$300,000 that is included in Y1 of the LTP. The renewed facility will include a pump track, more features for all abilities and an all-weather shelter.

Senior Housing

Draft – Our Proposal

Council funds and builds 25 units (15 x 1-bedroom units and 10 x 2-bedroom units) on the vacant land at Panama village and partners with a community housing provider to manage the housing so that tenants can access the government subsidised rent, making it affordable housing.

The estimated cost for building the 25 units with the required infrastructure (includes water and wastewater pipes, roading and paving, stormwater, power, landscaping) is \$7.5 million. We have estimated an annual income of \$351,000 which accounts for market rent (the government subsidises the eligible tenants) less the cost for the services of the community housing provider to manage the units.

With a 25-year loan on the project cost there is a net cost to our ratepayers of \$143,000 per annum, which equates to \$11 for the average urban residential property from 2023.

FUNDING OF OPERATING AND CAPITAL EXPENDITURE

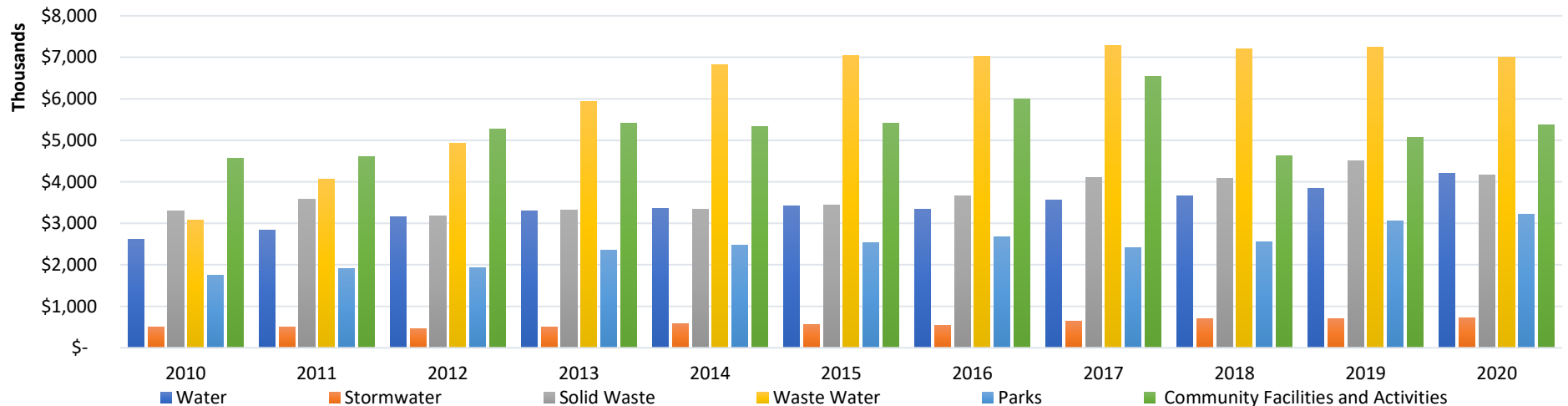
The Council's policy with regard to the funding of capital expenditure is to:

- fund roading renewal expenditure from NZTA subsidies and annual rates.
- fund the replacement programme of other assets from depreciation reserve funds to the extent that those funds are available. Where depreciation reserves are insufficient, loan funding will be used.
- fund assets which increase levels of service with loan funding.
- fund assets needed because of growth, from developers, either by the developer providing the infrastructure or developers making financial contributions at the outset of the development. The early identification of the need for new assets driven by growth allows a long lead time for more developments to contribute and funds to accumulate prior to the upgrade being needed.

The operating expenditure for services can be funded by rates, user charges, subsidies or reserve funds. For the majority we are aiming at sustaining current service levels over the next 10 years however in a number of areas we are investing in improvements and additions to services that will increase operating costs and require additional rates funding.

These policies are further detailed in our financial strategy.

Infrastructure Historical Operating Expenditure 2010 - 20



10 Year Infrastructure Expenditure Forecast

Renewal and maintenance programmes

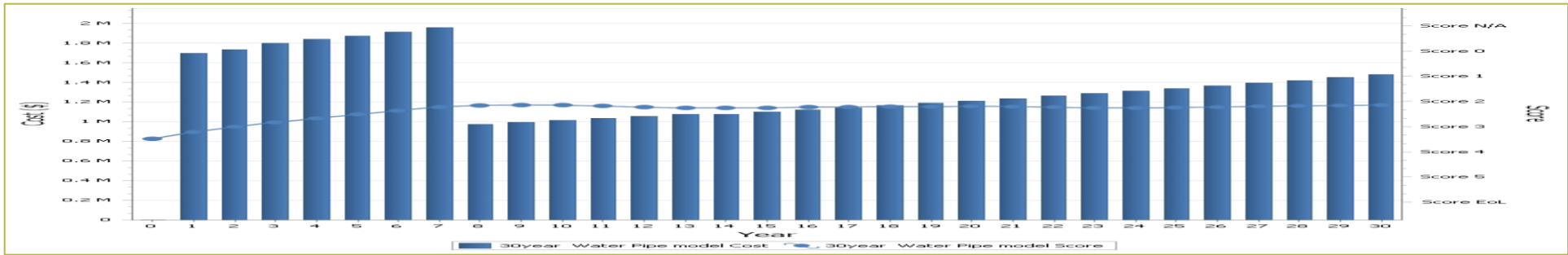
The graphs below show the forecast asset condition for the Council's water, sewer, and stormwater networks, with the proposed network renewal spend over the next 30 years. The performance of the network typically deteriorates gradually over time. Therefore, it is not critical that any particular asset is replaced in the specific year shown.

We will smooth the planned renewal programmes based on the optimised renewal decision process to achieve a balance between

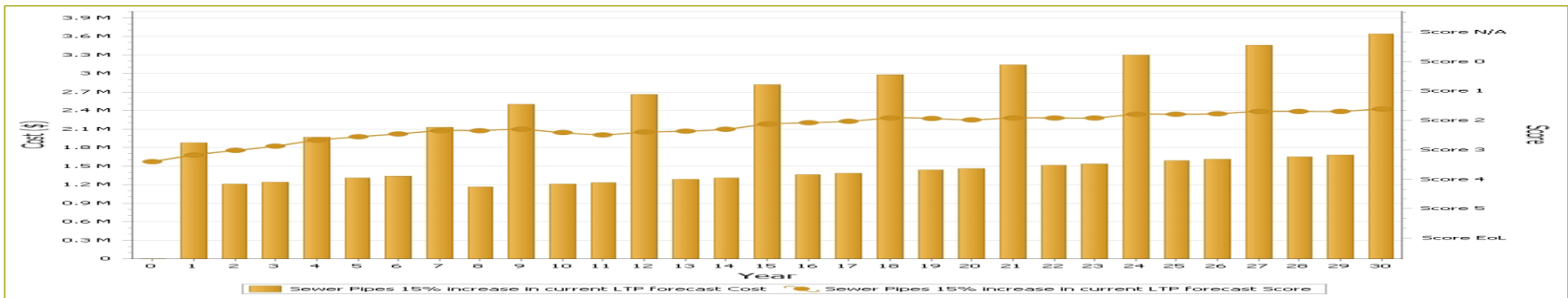
optimal timing of maintenance and replacement, keeping funding demands on ratepayers even, and ensuring that work that affects street surfaces is integrated with our street resealing programme. There are no plans to differ or delay the renewals programme specified in the asset management plans for any infrastructure assets. (NB: All graphs include an assumed inflation rate source BERL mid scenario cost adjustors 2020).

10 and 30-Year Infrastructure 3 Water infrastructure expenditure v condition Forecast

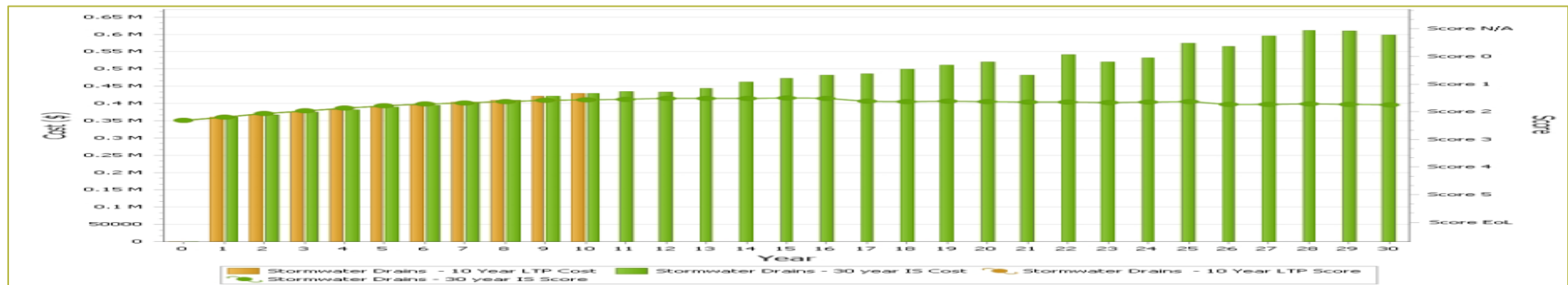
10 and 30-year scenario modelling for Water Supply reticulation pipes. Condition score and spend 2021 – 2031 & 2051



10 and 30-year scenario modelling for Wastewater reticulation pipes. Condition Score and Spend 2021 – 2031 & 2051

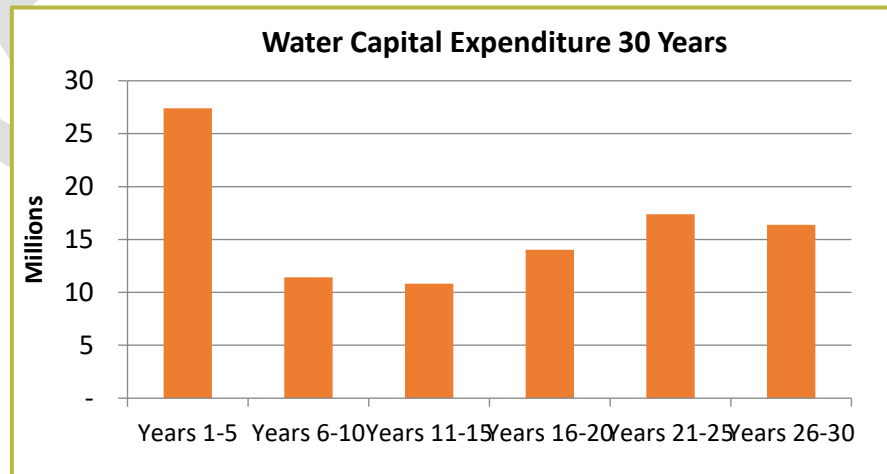
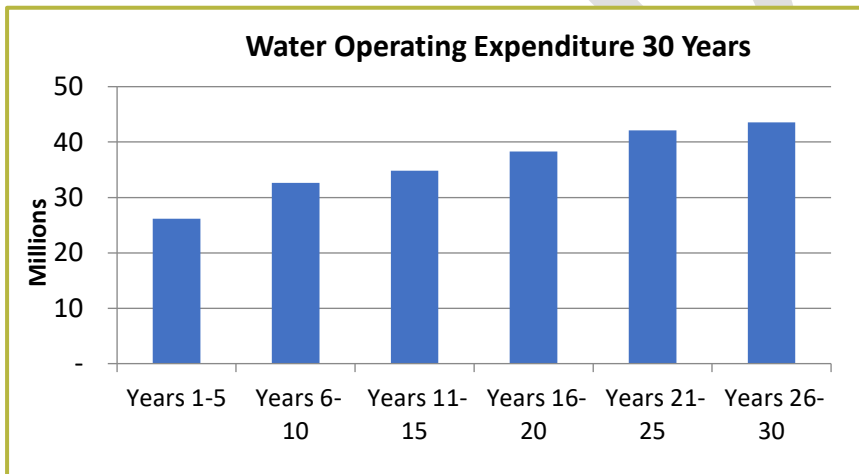
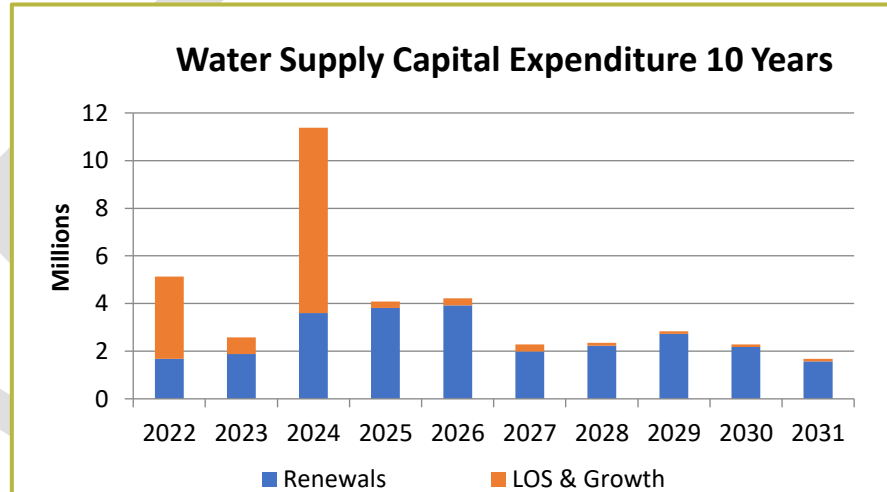
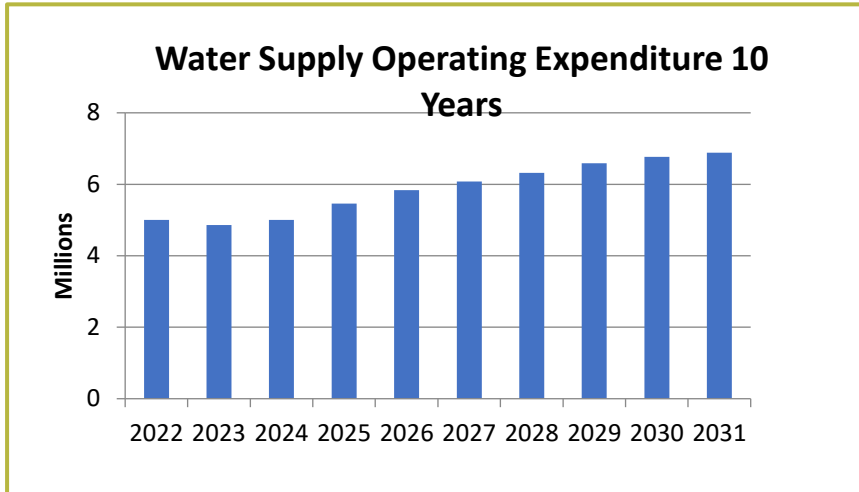


10 and 30-year scenario modelling for Stormwater reticulation pipes. Condition Score and Spend 2021 – 2031 & 2051



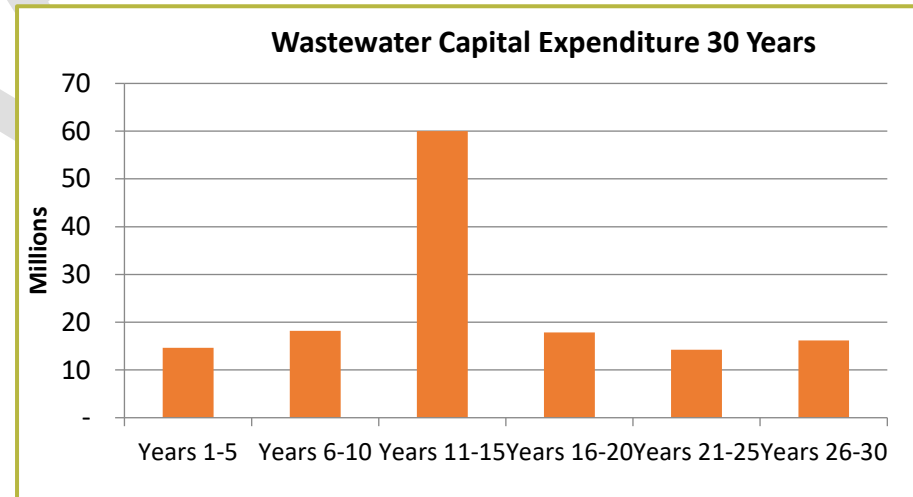
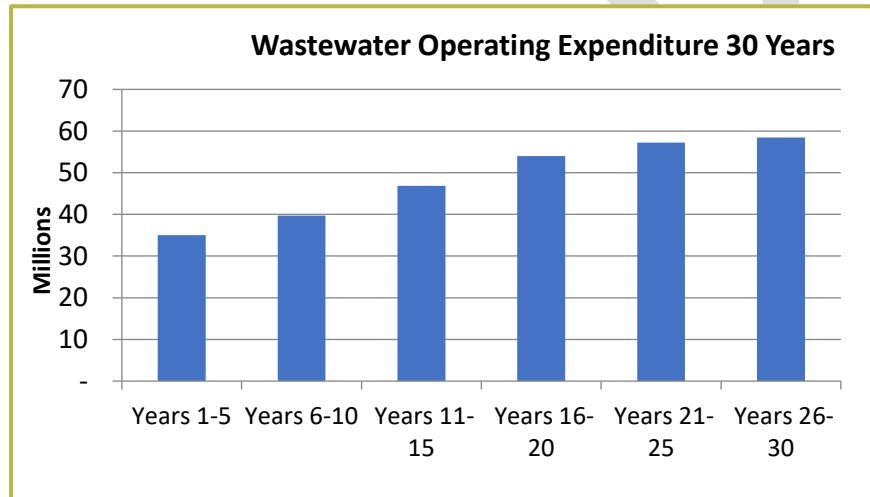
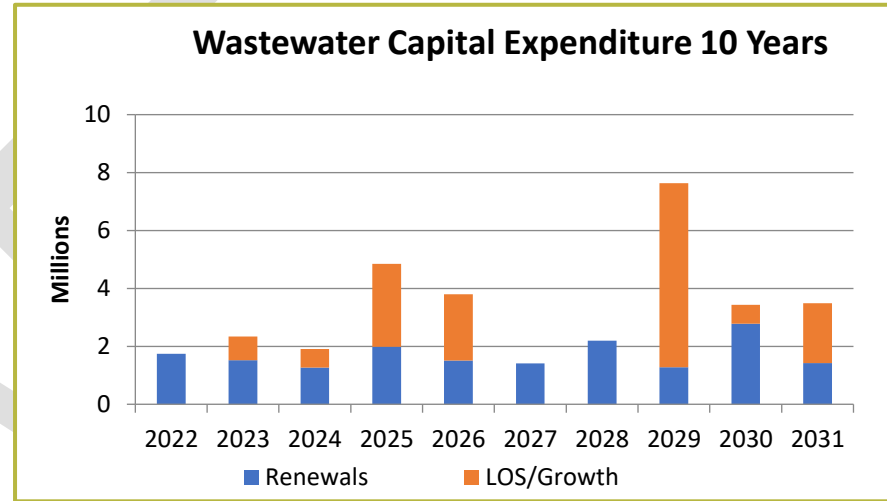
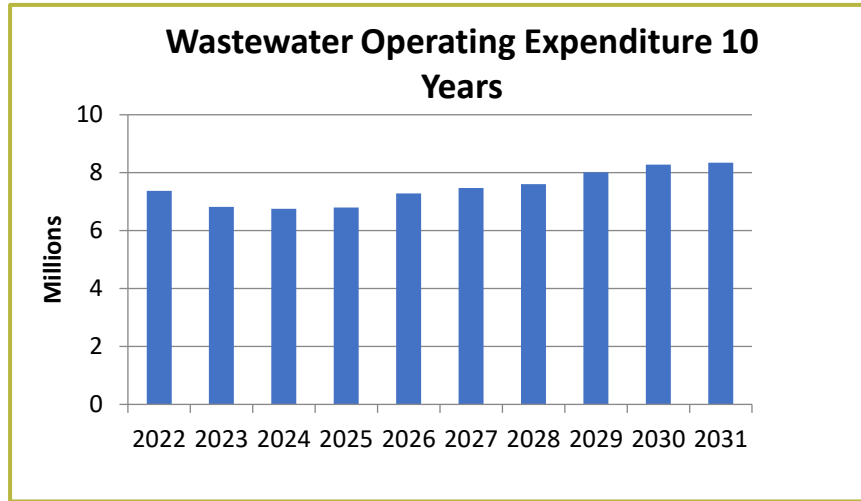
Planned expenditure – water assets

The graphs below show the projected expenditure on water assets over the next 10 to 30 years.



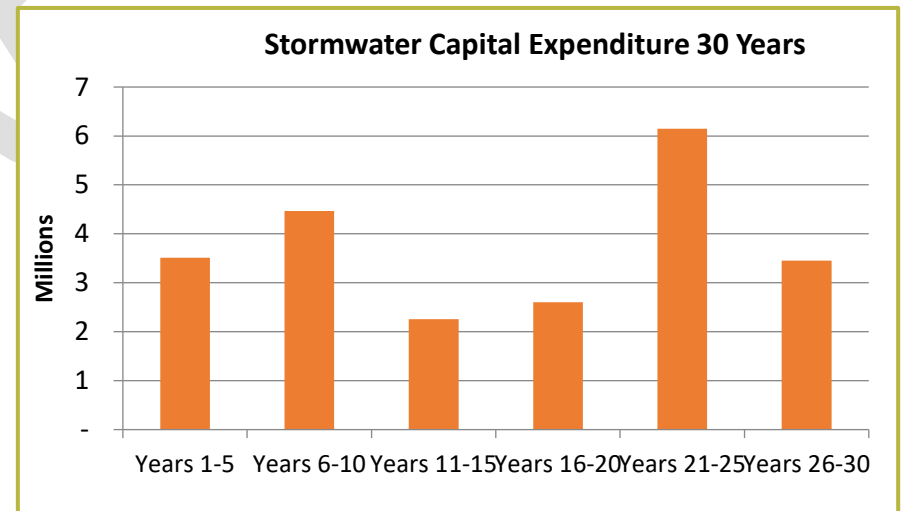
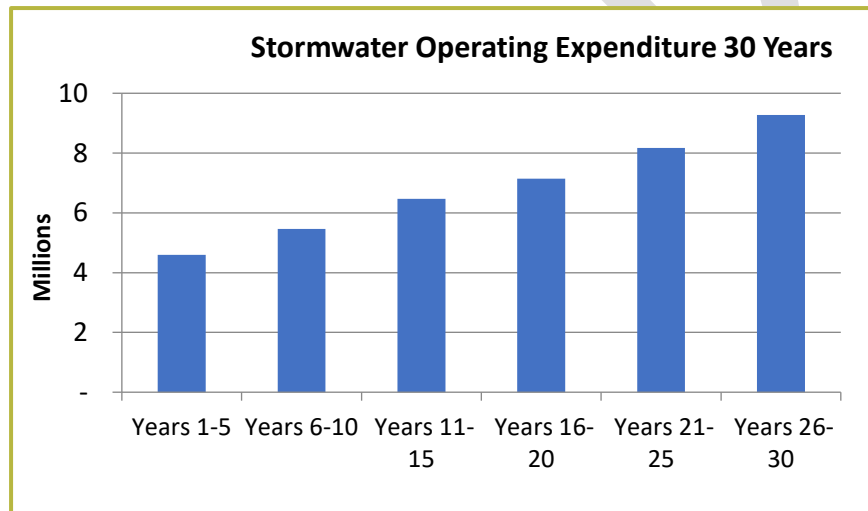
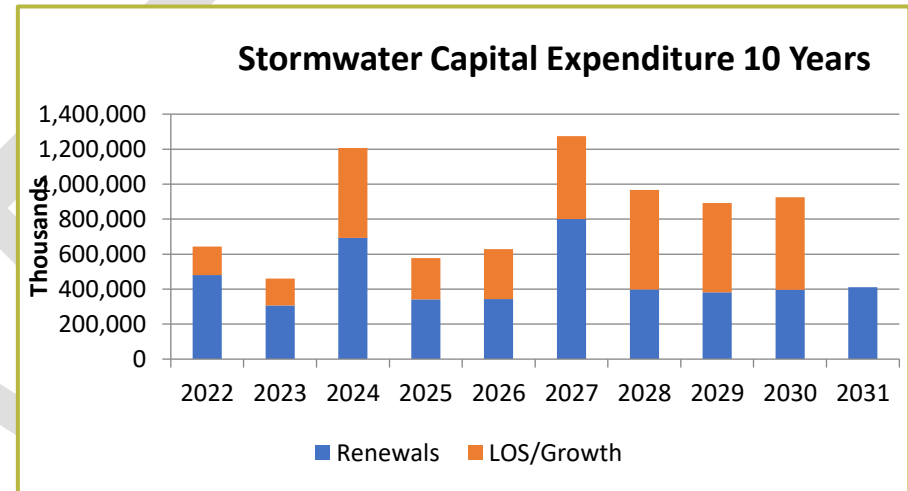
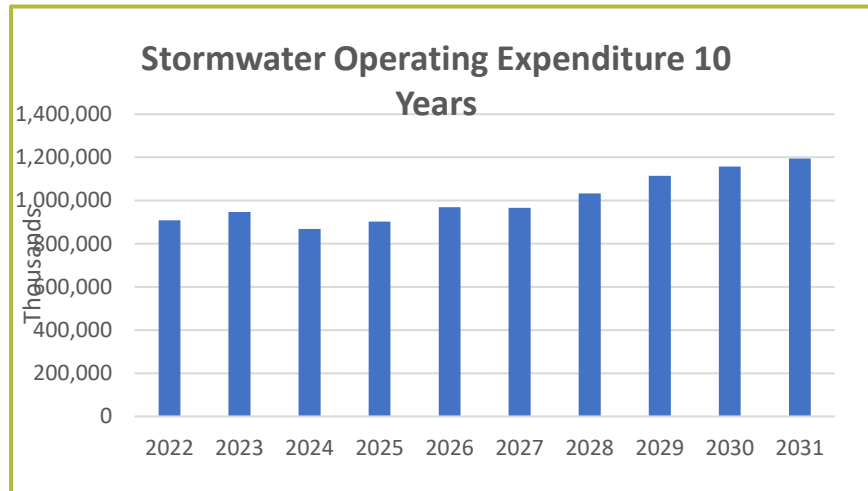
Planned expenditure – wastewater assets

The graphs below show the projected expenditure on wastewater assets over the next 10 to 30 years.



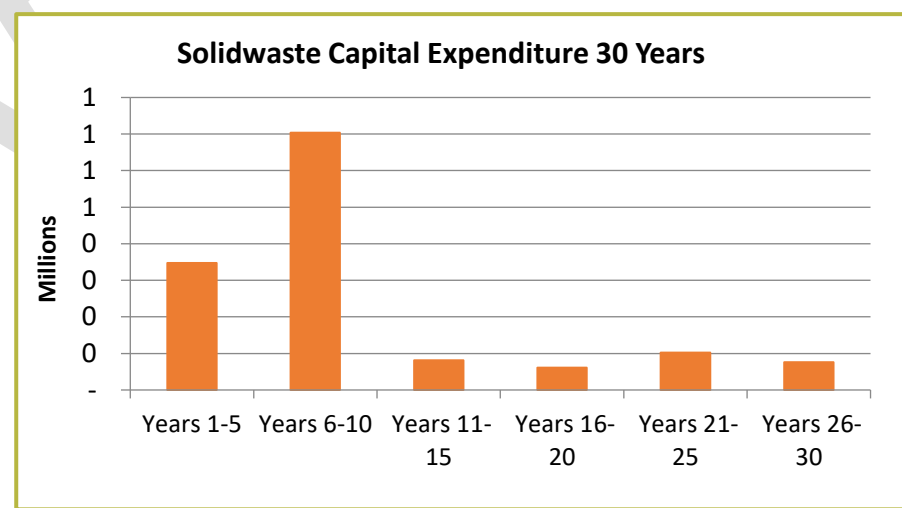
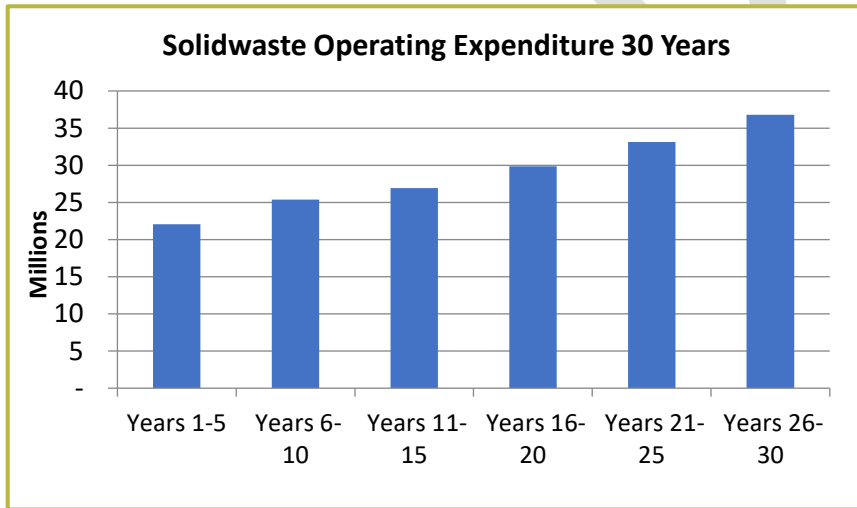
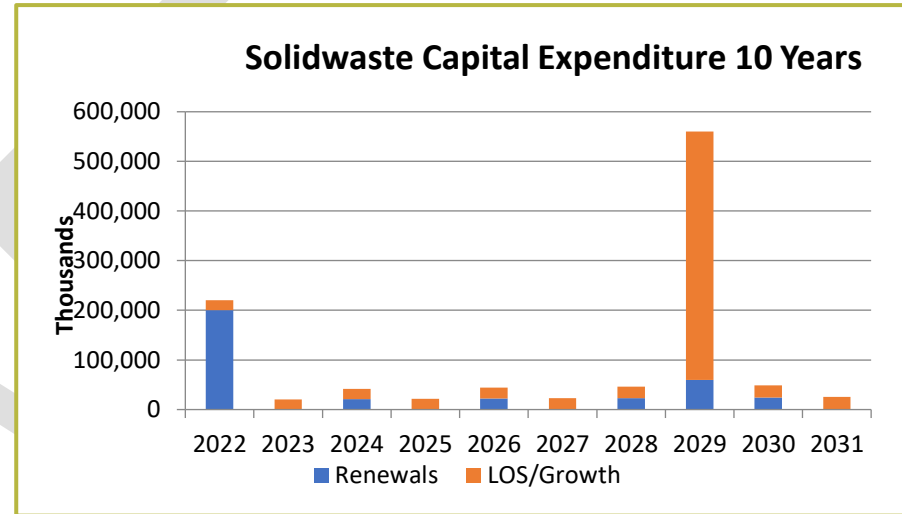
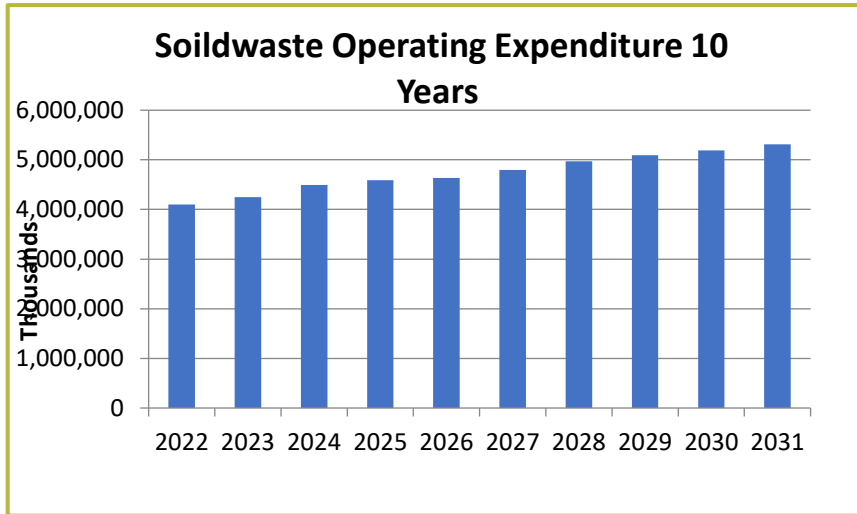
Planned expenditure – stormwater assets

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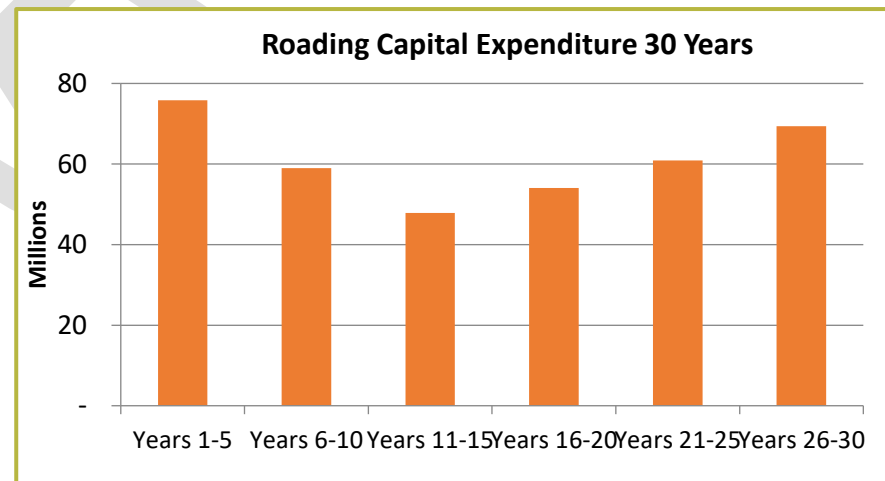
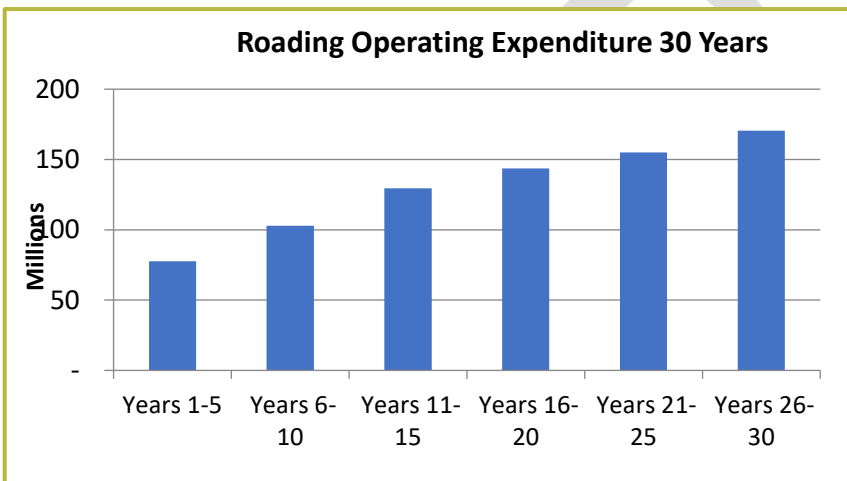
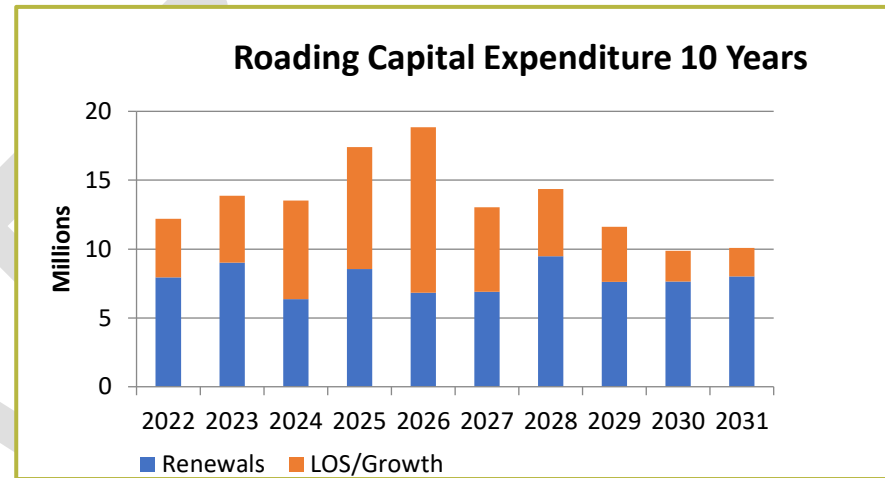
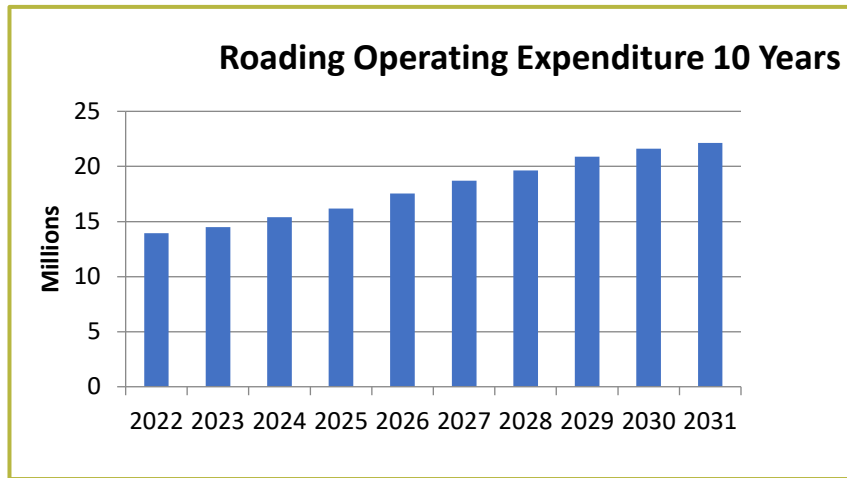
Planned expenditure – solid waste assets

The graphs below show the projected expenditure on solid waste assets over the next 10 to 30 years.



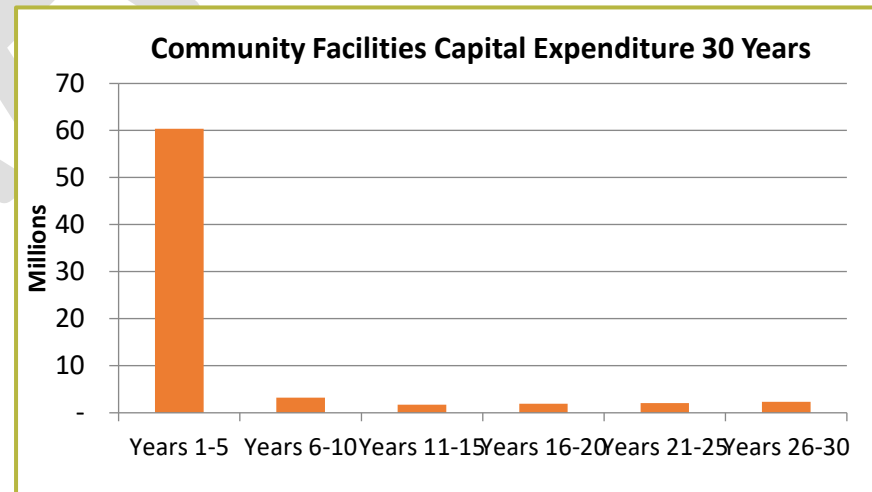
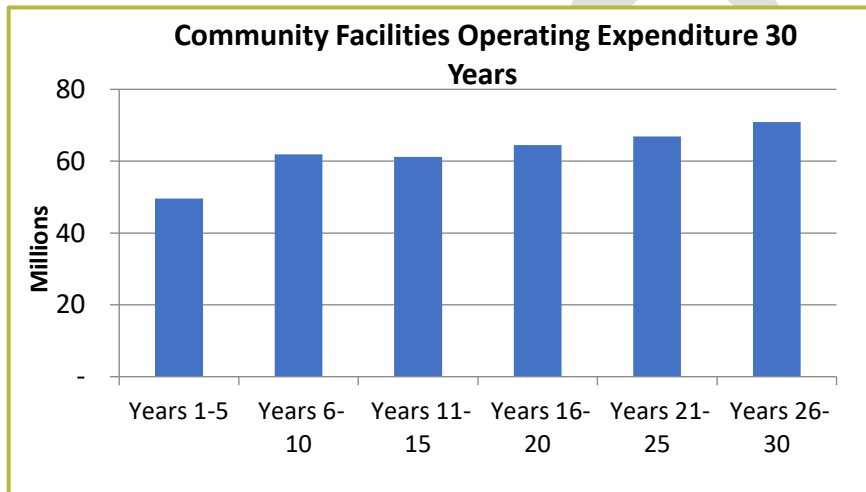
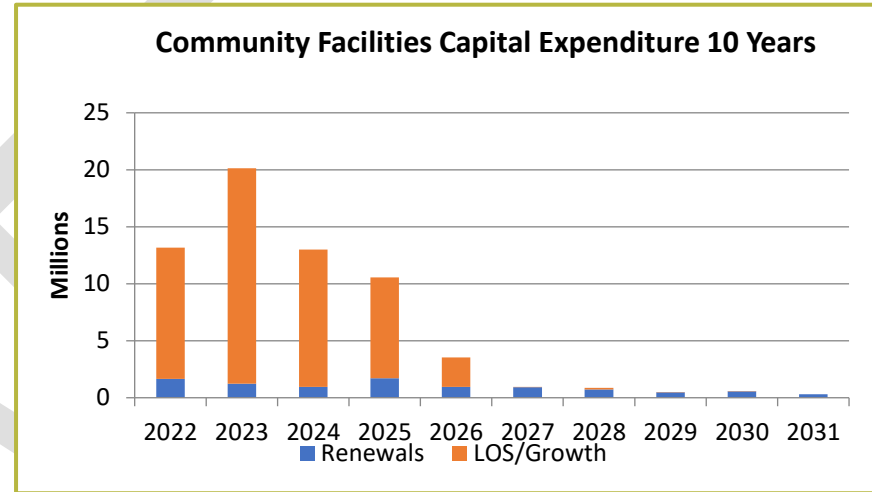
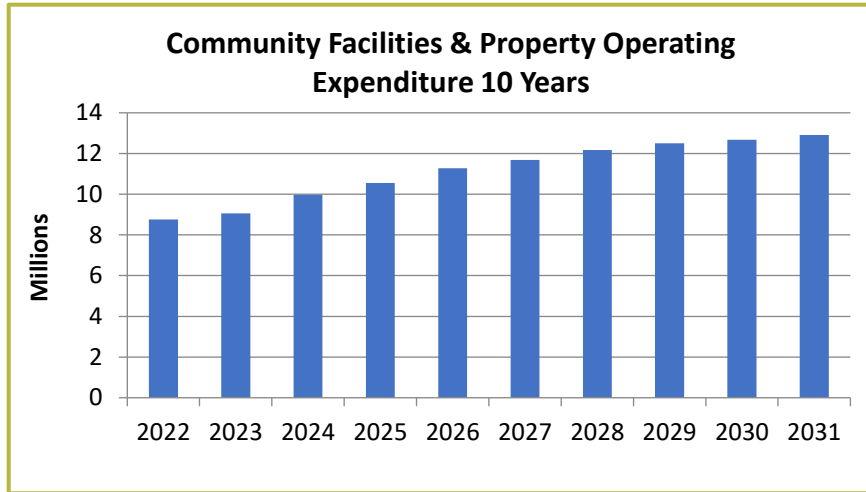
Planned expenditure - roading assets

The graphs below show the projected expenditure on roading assets over the next 10 to 30 years.



Planned expenditure – community facilities and property assets

The graphs below show the projected expenditure on community facilities and property assets over the next 10 to 30 years.



Planned expenditure – parks assets

The graphs below show the projected expenditure on parks assets over the next 10 to 30 years.

