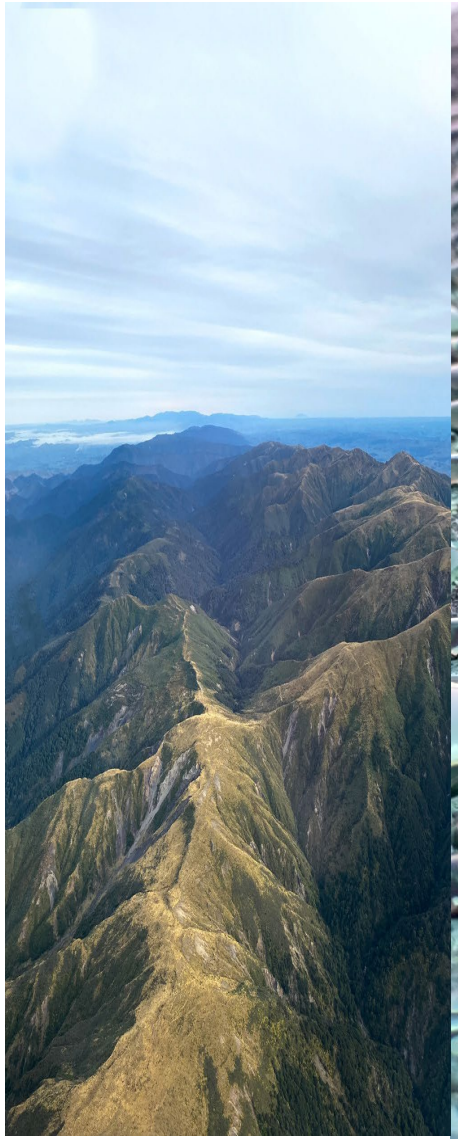
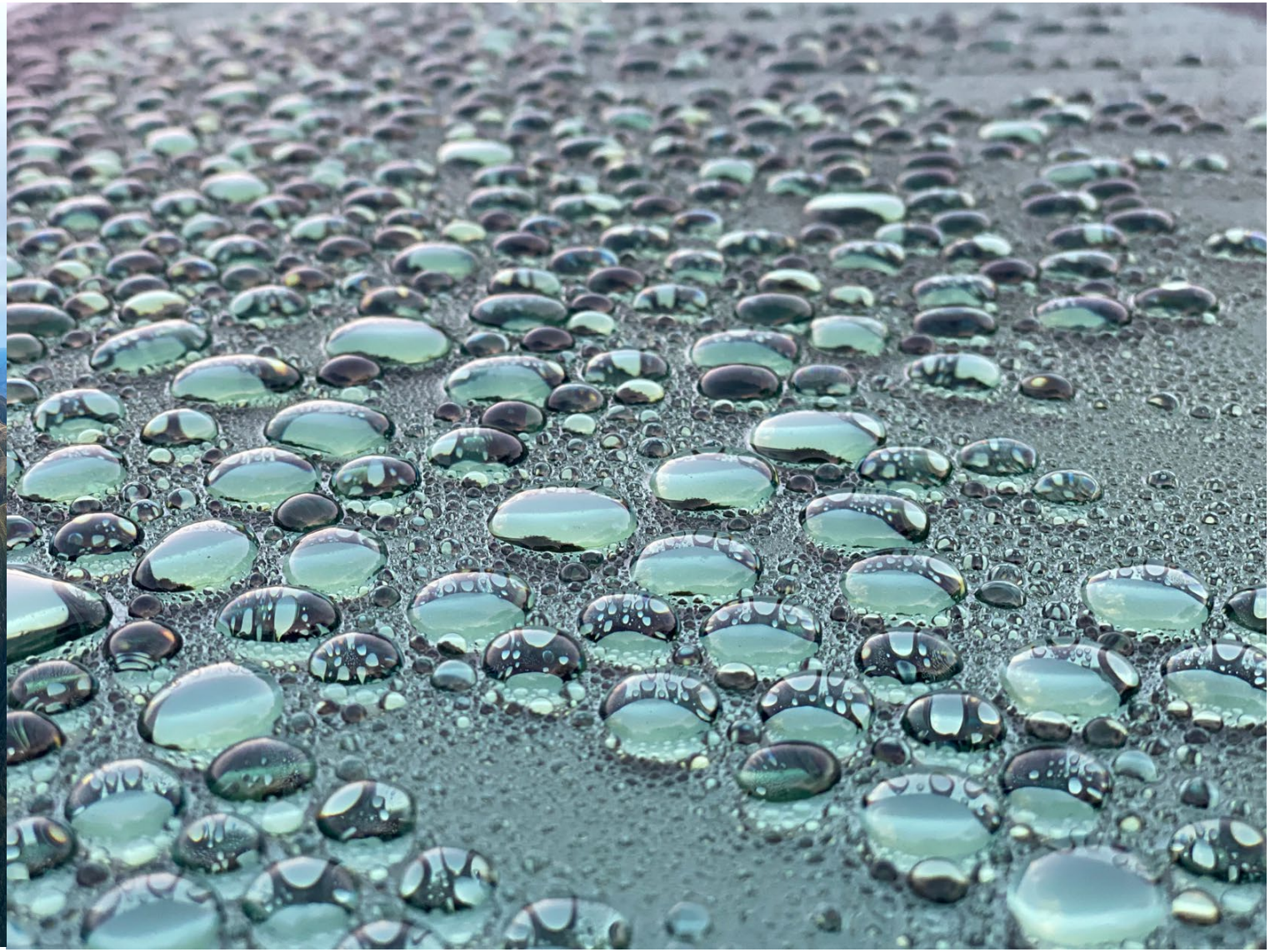
# Tararua District Council

# Asset Management Plan for Water, Wastewater & Stormwater 2024

*Collectively known as the **"Three Waters"***





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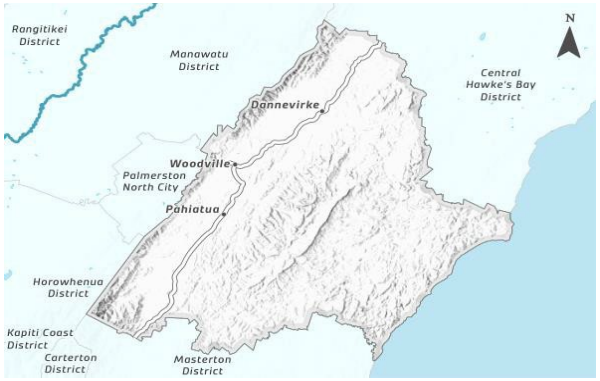
# 1. Introduction

| 1.1. The Tararua District – Overview | 1.2. The Tararua District – Overview | 1.3. The Tararua District – Overview |
|---|---|---|
| The Tararua District is located within the Manawatu-Whanganui region, situated on the southeast coast of the North Island, bound to the west by the Ruahine and Tararua Ranges. Four main towns of Dannevirke, Woodville, Pahiatua, and Eketahuna. The primary industry in Tararua is agriculture with over a third of the district's workers employed in this sector, and most businesses. Tararua has a wealth of resources, the greatest being the farmland that grows top quality stock, producing wool, meat, and dairy products of a particularly high standard.<br>  <br> | • People are thriving, happy, safe and well.<br><br>• Have the capacity, innovation, and adaptability to improve community well-being, while promoting balanced and sustainable growth.<br><br>• Quality community facilities and infrastructure is provided to meet the needs of future generations and support our long-term prosperity.<br><br>• Thriving district - We grow Tararua in a smart and sustainable way that values our identity. We use our resources sustainably and with care, to ensure they are looked after for our future generations.<br><br>• Improving our environment - We celebrate our environment and work together to enhance our local natural resources and minimise our negative impacts on them. Our district is home to a unique and beautiful landscape. | **Three Waters**<br>• Climate Change / Resilience / Growth.<br>• Affordability & funding.<br>• Aging network – Renewals.<br><br>**Water Services**<br>• Improve compliance to meet consents; prepare for new consents.<br>• Compliance with health regulations.<br>• Reduce contamination risk.<br>• Reduce network demand and losses.<br><br>**Wastewater**<br>• Consent compliance and need for land-based disposal.<br>• High Inflow and Infiltration (from storm & ground water)<br>• Point of service -laterals in private ownership and aging.<br><br>**Stormwater**<br>• Implementing appropriate solutions for climate change<br>• Services lack required scale; disjointed.<br>• Growth and infill housing will create more flow from roofs and sealed areas, stressing existing stormwater systems. |
| **Key Natural water bodies–**<br>Water Supply Sources:<br>The waters of the Tamaki (Dannevirke), Mangapapa (Woodville), Mangatainoka (Pahiatua), Mākākahi (Eketahuna) provide sources of water and nourishment for our major towns. These are supplemented by bores in Norsewood and Pahiatua, with springs in Pongaroa and Akitio providing further sources of water. | | |

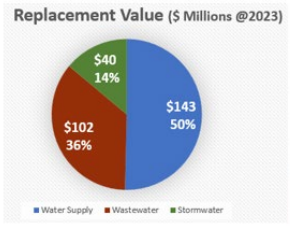
## 1.4. Key Facts & Figures

| | |
|---|---|
| Area | 4,365 Km² |
| Population | 19,050 |
| Residential Properties | 8,117 |
| Residential water connections | 5,085 |
| Non-residential connections | 635 |
| Greenhouse Emission Targets | No target |


Average age of water pipelines (years)

In 2022/23 Council spent 50% more on buying three water assets than was depreciated. Water was responsible for this net spend.

| 2022/23 | Capital Spent | Depreciation | Excess (Spent)/Saved |
|---|---|---|---|
| Water | 5.2 | 1.5 | (3.7) |
| Wastewater | 0.8 | 1.3 | 0.5 |
| Stormwater | 0.2 | 0.3 | 0.1 |
| **Total** | **6.2** | **3.1** | **(3.1)** |




Replacement Value

Combined replacement value as @ 30 June 2023
$284M

## 1.5. Data Confidence and Reliability

- Overall data confidence rating for Tararua District Council in all water measures is medium to high (Having a high confidence is good) – see table below.
- Confidence in the 3-Waters asset data by itself is low to medium, with known gaps and inaccuracies needing to be rectified. Missing or incorrect data influences the accuracy of projected renewals needs.
- For water assets, their condition can be assessed by leak detection, measurement of water loss, demand changes by metered users, customer service requests, plans and physical works. Extensive work on water leak detection has been done since the 2020 drought. Investment in electronic measurement has significantly improved our understanding of the water supply performance and its use.
- The majority of Wastewater and Stormwater pipes have been recorded, reviewed and rated in detail using Council's fibre optic camera inspection system.

It is noted:

- Some data inconsistencies are common in legacy asset database systems where asset ownership has changed or where data has been transferred across different data management systems. Data accuracy is being improved progressively by resolving anomalies as issues are identified. The process can always be speeded up by a more formal data cleansing exercise which can help resolve issues some and highlight inconsistencies that need more active resolution. Council is currently transferring data into a new database (RAMM) and itemising plant components, and this is expected to improve data management and identify deficiencies.
- We could better utilise Customer Request Management data and our response and repair works, to efficiently resolve service requests and identify reoccurring asset failures and provide linkage of data between asset databases.

**Overall data confidence and reliability rating:** *Medium to high*

| Dataset | Asset Register | Asset Valuations | Asset Condition | Asset Criticality | LOS | Performance measures | Resource Consents | Demand Projections | Risk and Resilience | CAPEX Forecast | OP Fore |
|---|---|---|---|---|---|---|---|---|---|---|---|
| WS | C | B | C | C | B | B | A | B | C | A | A |
| WW | C | B | C | C | B | B | A | B | C | A | A |
| SW | C | B | D | C | D | E | A | D | C | D | E |

| A - Very High | B - High | C - Medium | D- Low | E - Very Low |
|---|---|---|---|---|

Council has an overall average score is 71.7.

# 2. Partnerships and Stakeholders

## 2.1. Mana Whenua Engagement

The parties to the Treaty start from a position of mutual respect. Tararua District Council is committed to its role as Tangata Tiriti, to maintain and improve opportunities for Māori to contribute to local government.

The Council acknowledges its relationship with both iwi in the Tararua District, Ngāti Kahungunu ki Tāmaki nui-a-Rua and Rangitāne o Tamaki nuiā-Rua and will continue to act respectfully and reasonably as a Treaty partner for iwi and Māori alike. This will be enacted through the actioning of specific principles and requirements for local authorities that facilitate participation by iwi and Māori in local authority decision-making processes. This is considered at a council activity level while Iwi partners aspire to progress the outcomes now made possible by their respective recent treaty settlements.

Ngāti Kahungunu ki Tāmaki nui-a-Rua and Rangitāne o Tamaki nuiā-Rua meet formally with Council elected members and staff and regular governance and operational meetings. to consider the Long-Term Plan, Annual Plan, regulatory changes as well as other areas of interest. Iwi representatives are invited to attend council workshops on a range of subjects for their input on the matters being discussed.

This has seen positive changes in regulatory matters to benefit Māori – e.g., the review of the District Plan with relevance to urban growth, papakāinga development and other strategic initiatives of mutual interest.

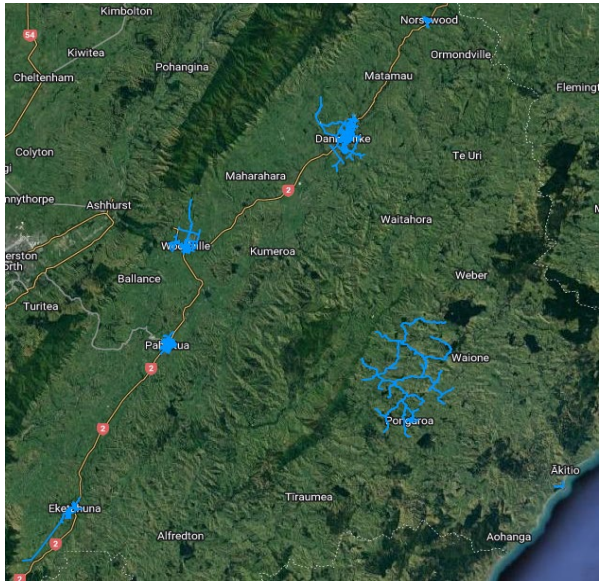
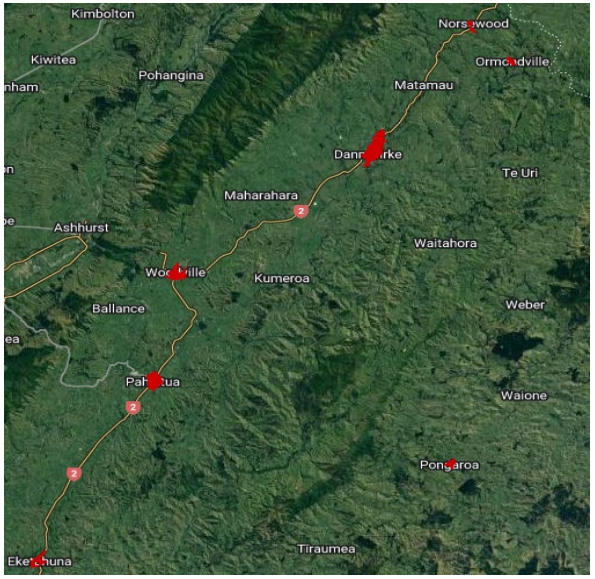
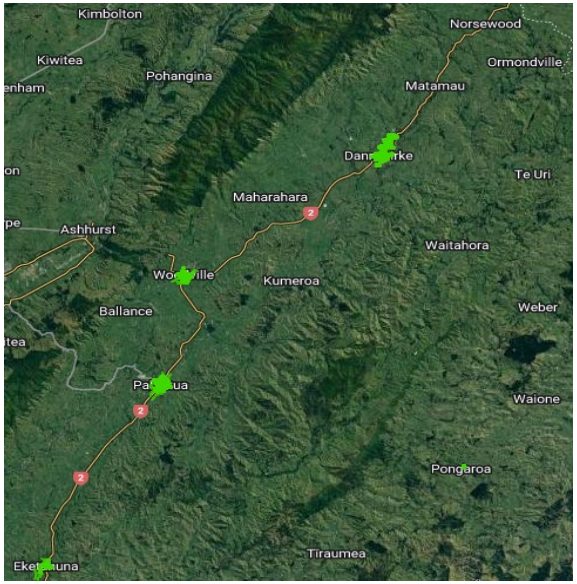
Council staff also meet with Rūnanga representatives on environmental and water matters on a regular basis, generally on an individual basis, specific to Council operations and individual Rūnanga aspirations.

## 2.2. Key Customers and Stakeholders

| Customers / Stakeholders | Area of Interest | Expectations |
|---|---|---|
| Ratepayers<br>Residents<br>Local industries and businesses<br>Health and education institutions<br>Emergency services | Personal and business use of services | Safe, wholesome, reliable and affordable water supply.<br>Safe, effective, reliable and affordable wastewater and stormwater services. |
| Horizons Regional Council | Environmental protection | Quality of receiving environments and compliance with consents for abstraction and discharge. |
| Ngāti Kahungunu ki Tāmaki nui-a-Rua<br>Rangitāne o Tamaki nuiā-Rua | Mana o te wai<br>Iwi and hapu cultural heritage | All water to be respected and mauri of water to be protected and enhanced.<br>Mana whenua to be involved in management of water supply, used water and stormwater issues. |
| Tamata Arowai<br>Ministry of Health, Te Whatu Ora Health NZ – MidCentral | Public health protection | Safe public drinking water supply. |
| Department of Internal Affairs Te Tari Taiwhenua | Legislative setting | Implementation of Government strategy |
| Ministry for the Environment Manatū Mō Te Taiao | Environmental protection | Prevention of contamination of air, land, and water. |
| The Department of Conservation Te Papa Atawhai<br>Ministry for Primary Industries Manatū Ahu Matua | Environmental protection | Prevention of harm to flora and fauna which may be negatively impacted by the operation of three water services. |

# 3. The three-water services & assets we manage.

## 3.1. Summary of Three Waters Services

| 3.1.1. Water Supply | 3.1.2. Wastewater System | 3.1.3. Stormwater System |
|---|---|---|
| Tararua DC manages several Water Supplies schemes throughout the district, supplying water to the towns of Dannevirke, Pahiatua, Woodville, Eketahuna, Norsewood, Akitio and Pongaroa. Treatment varies between schemes, from chlorine, microfiltration, ultraviolet, and combinations of these. Over 5000 residential properties are served through the following individual water supplies:<br>• 8 water intakes including 2 bores.<br>• 7 water treatment plants<br>• 1 pump stations, 14 reservoirs.<br>• 267 kilometres of water supply pipelines<br>• 47 kilometres of laterals | Wastewater reticulation systems are provided in the urban areas of Dannevirke, Pahiatua, Woodville, Eketahuna, Norsewood, Pongaroa and Ormondville. Rural houses manage their own effluent. Primary treatment is done onsite by industries to comply with trade waste discharge limits set by Council before discharging to the public wastewater system, where it is treated and discharged to land and/or water ultimately discharging to the ocean. Tararua District Council's wastewater network includes:<br>• 7 treatment plants<br>• 21 sewer pump stations<br>• 95 kilometres of wastewater pipeline<br>• 1,100 maintenance chambers | Tararua DC manages and maintains an urban network of pipes and open channel drains to safely direct stormwater (SW) to inland streams and to the ocean. Stormwater reticulation infrastructure is provided in the urban townships of Dannevirke, Pahiatua, Woodville and Eketahuna. Tararua District Council's stormwater network includes:<br>• 28 kilometres of stormwater pipelines<br>• 26 kilometres of open channel drains and streams<br>• 1,160 maintenance chambers and sumps |
|  |  |  |

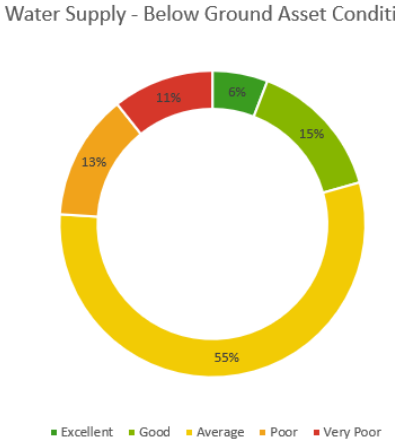
## State of the Assets – Water (Continued)

### 3.2.1. Assets & Values

| Item | Quantity |
|---|---|
| Intakes and Bores | 8 |
| Trunk Mains (Treatment to Reservoir) | 7 |
| Water Treatment Plant | 7 |
| Reservoir | 14 |
| Fire Hydrants, Valves, Connections | 6,520 km |
| Reticulation Pipeline | 314 km |
| Pump Station/Booster | 1 |

| Water | Values $M |
|---|---|
| Replacement Cost | $ 143.3 |
| Depreciated Replacement Cost | $ 75.3 |
| Annual Depreciation | $ 2.1 |

### 3.2.2. Asset Condition

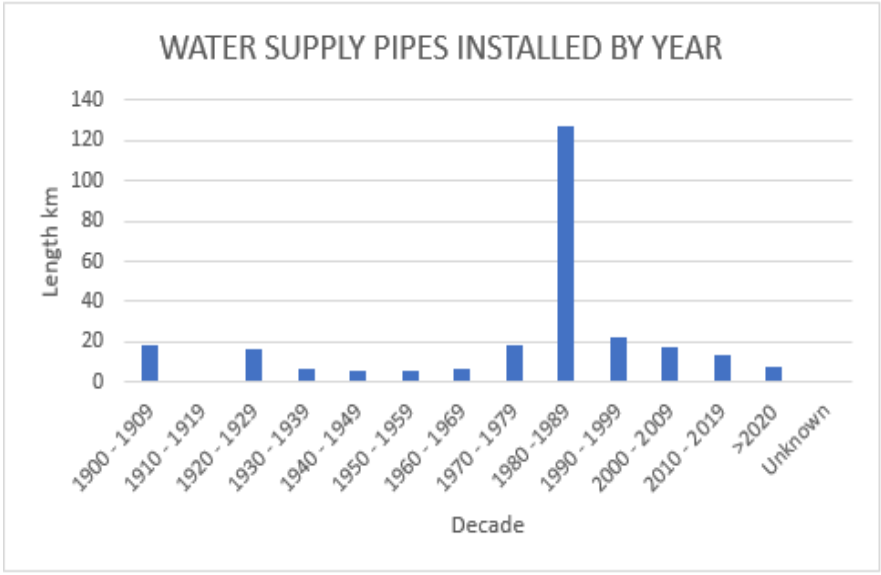



### 3.2.3. Critical Assets

Council has a critical asset register for the Dannevirke, Woodville, Norsewood and Eketahuna water treatment plants that have been identified as critical. These assets are managed in a more pro-active manner including scheduled inspections, monitoring and servicing, and prioritised repairs or other actions taken, for the reticulation network as defined in the Tararua Alliance Operations and Maintenance contract.

| Critical Assets | Critical Asset Risk | Consequence of Failure |
|---|---|---|
| Water Supply Intake | High Risk | No water for treatment plant means no water available to customers. |
| Water Supply Treatment Plant | High Risk | Failed treatment plant would mean no water available or only non-potable water available. |
| Water Supply Trunk Main Supply & Pipeline | High Risk | Failure prevents water reaching the reticulation and customers. |
| Water Supply Storage Tanks / Reservoirs | High Risk | Insufficient storage reduces resilience of system |
| Water Supply Reticulation | Medium Risk | Failure of reticulation means some customers do not get water |

### 3.2.4. Asset Age Profile



| 3.2.5. Condition of Critical Assets | 3.2.6. Commentary |
|---|---|
| Treatment Plants have received significant investment over the last four years to meet Drinking Water Standards, increased focus on maintenance schedules is improving asset resilience. Dannevirke Impound dam, being a critical asset, has been assessed at risk, requiring significant investment in 2024 through 2026 to address risk of failure.<br><br>There are a significant number of ageing reservoirs across the district approaching end of life and assessed at risk against resilience and natural disasters.<br><br>Transmission mains are at risk due to lack of service mains and vulnerable to backflow contamination.<br><br>Climate Change is also a crucial element of the performance of Critical Assets requiring additional resilience built into each scheme.<br><br>Reticulation has a significant backlog of renewals increasing vulnerability to failure and will be addressed by a planned schedule of upgrades and renewals to manage criticality and population growth projections where a different approach may be required to increase resilience of these assets but also fit-for-purpose for future. needs of the district. | The condition of assets is largely based on asset age and vulnerability according to material type. Regular pipeline and lateral failures on the same length of pipe are physically investigated to determine overall condition and extrapolated to comparable surrounding assets. Non-intrusive and non-destructive technology has been used to determine pipe wall thickness loss where vulnerable types or older materials have been identified. It is important to note that there is historic uncertainty on actual installation date due to legacy data losses.<br><br>For below-ground reticulation assets, 11% of all assets are currently assessed to be in very poor condition, 13% in poor condition, 55% in average condition with 15% in excellent condition.<br><br>For treatment plants, physical inspections are undertaken to assess the condition of treatment plants and associated components. |

## 3.3. State of the Assets – Wastewater

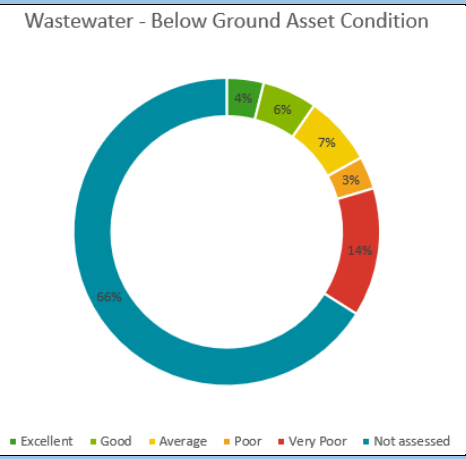
### 3.3.1. Assets & Values

| | |
|---|---|
| Largest Wastewater scheme | Dannevirke |
| Treatment Plants | 7 |
| Reservoirs | 14 |
| Wastewater reticulation Pipe | 100 km |
| Pumping stations | 21 |
| Manholes | 1089 |

7

| Wastewater | Values $M |
|---|---|
| Replacement Cost | $ 101.5 |
| Depreciated Replacement Cost | $ 52.8 |
| Annual Depreciation | $ 1.8 |

### 3.3.2. Asset Condition

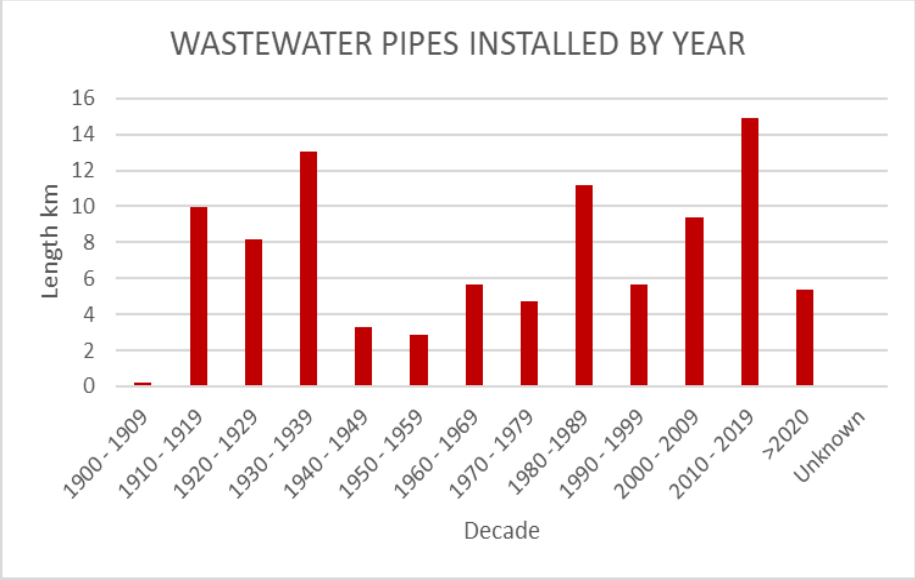



### 3.3.3. Critical Assets

Dannevirke, Woodville, Pahiatua, Eketahuna, Norsewood, Ormondville, and Pongaroa wastewater treatment plants have been identified as critical. These assets are managed in a more pro-active manner including scheduled inspections, monitoring and servicing, and prioritised repairs or other actions taken, reticulation network as defined in the Tararua Alliance Operations and Maintenance contract.

| CRITICAL ASSETS | CRITICAL ASSET RISK | CONSEQUENCE OF FAILURE |
|---|---|---|
| Wastewater Treatment Plants | High | Failure of the treatment plant will lead to a build-up of wastewater in the ponds and possible discharge over the emergency spillway without full treatment and outside permitted hours |
| Wastewater Disposal system (planned) | High | Failure of the disposal systems may breach consents, damage receiving environments and cause cultural offence |
| Wastewater Underground Network | Medium | Failure of these means some waste cannot be transferred to the treatment plant |
| Wastewater Pump Stations | Medium | Failure of these means some waste cannot be transferred to the treatment plant |

### 3.3.4. Asset Age Profile



| 3.3.5. Condition of Critical Assets | 3.3.6. Commentary |
|---|---|
| Many of the Treatment Plants are reaching end of lifecycle with new consents due for renewal or recently granted with additional conditions, placing the plants at risk of not being able to treat wastewater to the standards required. This is mainly due to the age of the plants and treatment processes not keeping pace with modern requirements. Significant investment is required to bring these plants to fit-for-purpose condition and resilience for the future needs of the community.<br><br>In reticulation there is a significant backlog of renewals increasing vulnerability to failure, with a scheduled programme of planned upgrades and renewals to address criticality but also population growth projections where a different approach may be required to increase resilience of assets and making them fit-for-purpose to the future needs of the district.<br><br>Infiltration and Inflow is placing significant strain in terms of network capacity but also significant negative impact in the treatment processes risking breach of consent conditions and detrimental harm to the receiving environment. | The condition of assets is based on asset age and vulnerability according to material type and verified through CCTV surveys, where accessible, and prioritised based on condition grading. It is important to note that there is historic uncertainty on actual installation date due to legacy data losses.<br><br>For below-ground reticulation assets, 14% of all assets are currently assessed to be in very poor condition, 3% in poor condition, 7% in average condition with 4% in excellent condition, 66% have not been assessed for a variety of reasons such as accessibility issues, age and material related not requiring assessment and resources.<br><br>For treatment plants, physical inspections are undertaken to assess the condition of treatment plants and associated components. |

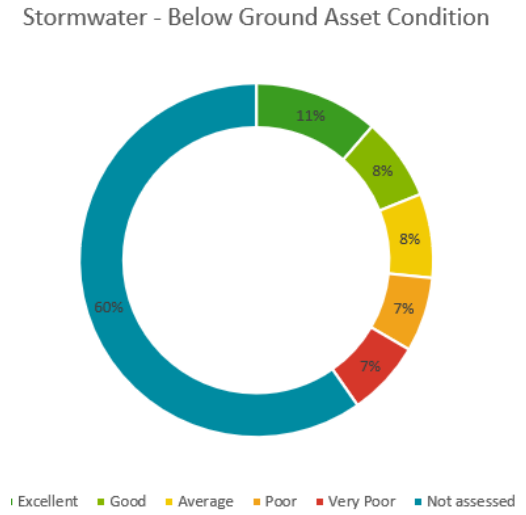
## 3.4. State of the Assets – Stormwater

### 3.4.1. Assets & Values

| Stormwater Pipes | Length (metres) | Average Age (Years) |
|---|---|---|
| Asbestos Cement | 94 | 46 |
| Concrete | 20,236 | 35 |
| Glazed Earthenware | 812 | 50 |
| Novaflow | 34 | 19 |
| Polyvinylchloride | 451 | 23 |
| Reline Fibreglass | 444 | 5 |
| Steel | 406 | 60 |
| Unknown | 1,879 | 43 |
| Un-plasticised PVC | 3,942 | 17 |
| Vitreous Clay (or Earthen | 91 | 113 |
| **Total** | **28,390** | **32** |

| Stormwater | Values $M | |
|---|---|---|
| Replacement Cost | $ | 39.6 |
| Depreciated Replacement Cost | $ | 23.1 |
| Annual Depreciation | $ | 0.5 |

### 3.4.2. Asset Condition



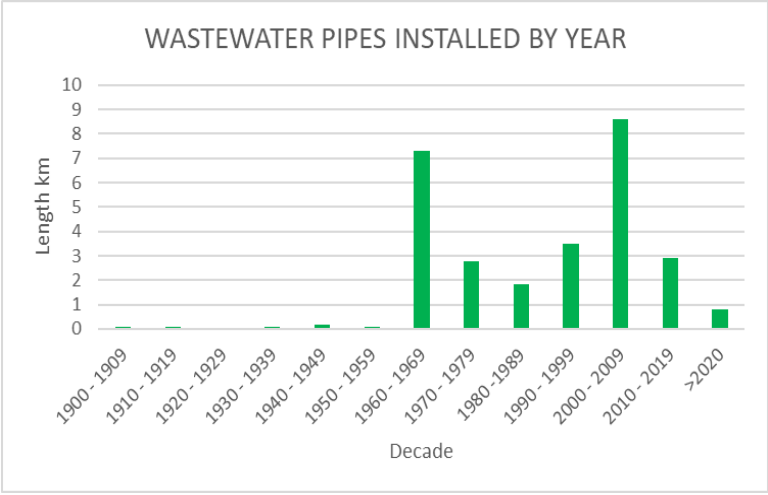

### 3.4.3. Critical Assets

Although a formalised criticality assessment has not been undertaken, the following assets have been identified as critical:

- Dannevirke culvert – this is a large diameter brick culvert that runs under buildings and the State Highway and through private property and there are limited entry points.
- Pahiatua, Town Creek culverts – in various places along the channel's route it runs under buildings and through private properties and there are limited entry points to maintain.

In both cases, access is either reliant on private landowners or safe access is not practical to arrange. They are therefore difficult to inspect, and the condition is unknown and would also be difficult to access in the event of a failure with potential for significant damage to surrounding infrastructure.

### 3.4.4. Asset Age Profile



## State of the Assets – Stormwater (Continued)

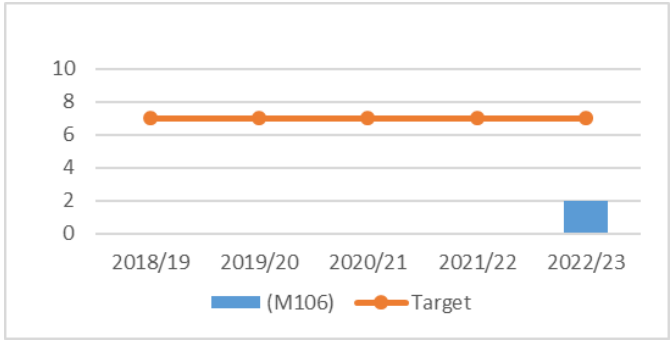
| 3.4.5. Condition of Critical Assets | 3.4.6. Commentary |
|---|---|
| Currently there is no formal critical asset register. It is deemed most of the stormwater network is immature in terms of infrastructure layout and design. The network relies on natural water courses and limited connected pipe infrastructure.<br>The overall system is not deemed fit-for-purpose for the future needs of the district, population growth projections and climate change.<br>.<br>Overall system design will be re-assessed against future requirements which may require a complete overhaul and re-design to ensure system capacity will accommodate growth and a changing climate with predictions of greater intense rainfall events fit-for-purpose for future needs of the district. This may lead to assets being abandoned, re-purposed or diverted at which time is an ideal opportunity to eliminate critical at-risk assets or address criticality.<br><br>For purposes of resilience this may require the introduction of pumping stations and a full re-evaluation will take place to register Critical assets. | The condition of assets is based on asset age and vulnerability according to material type and verified through CCTV surveys, where accessible, and would normally be prioritised based on condition grading. A significant proportion of the network is open-channel natural water courses for conveying stormwater from the towns, these are maintained through weed spraying and manual clearance. It is important to note that there is historic uncertainty on actual installation date due to legacy data losses.<br><br>For below-ground reticulation assets, 7% of all assets are currently assessed to be in very poor condition, 3% in poor condition, 7% in average condition with 4% in excellent condition, 66% have not been assessed for a variety of reasons such as accessibility issues, age and material related not requiring assessment and resources.<br><br>There are currently no treatment processes or pump station assets in the district.<br>. |

# 4. Service and Performance - Dashboards

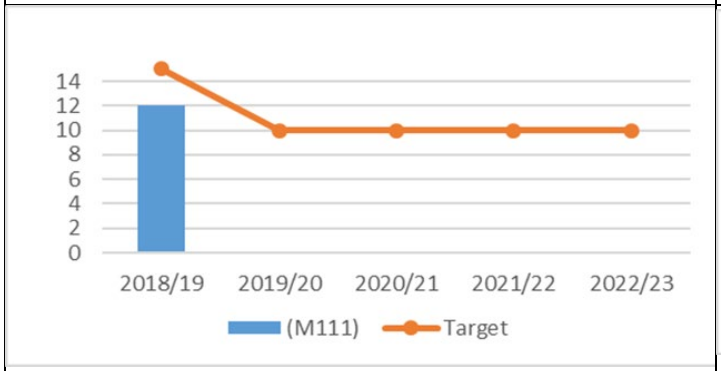
## 4.1. Water - Current Level of Service and Performance

### 4.1.1. Water - Safety of Drinking Water

Number of schemes that comply with Part 4 (bacteria compliance criteria) of the NZ Drinking Water standards

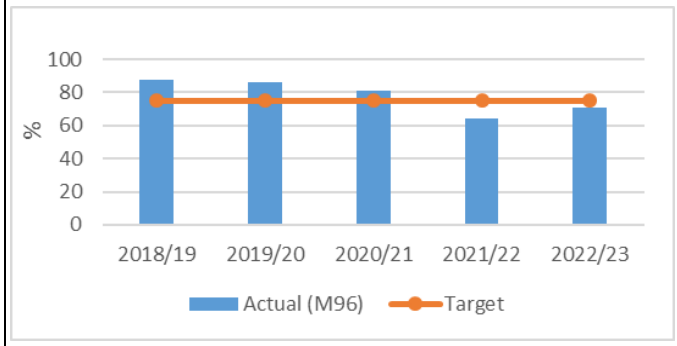



Number of schemes that comply with Part 5 (protozoal compliance criteria) of the NZ Drinking Water standards

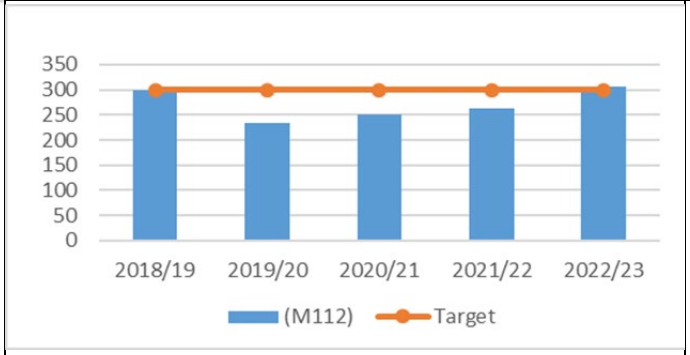



### 4.1.2. Water - Demand Management

The percentage of real water loss from the Council's networked reticulation schemes based on the minimum night flow (MNF) analysis

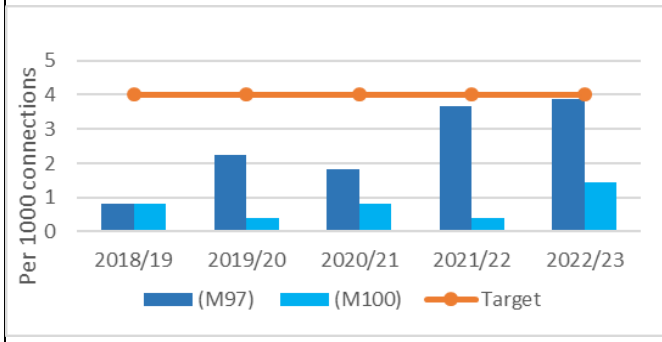



Average consumption of drinking water per day per resident connected to a Council scheme



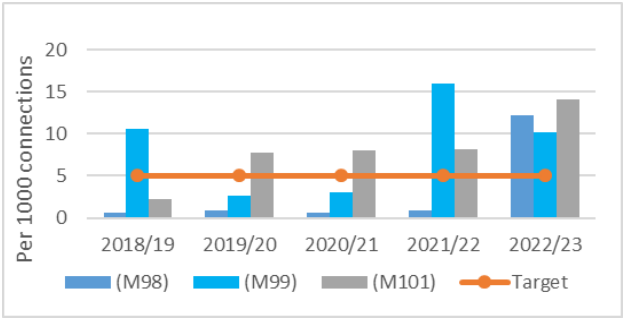

### 4.1.3. Water - Customer Satisfaction

Percentage of customers rating water management as "fairly satisfactory" or "very satisfactory" in the community survey



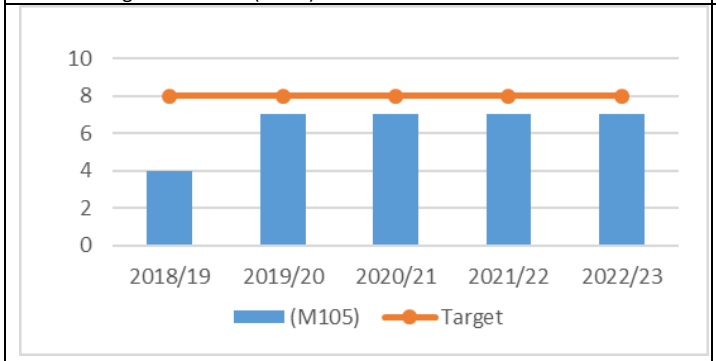

Number of complaints over 1,000 connections to Council's networked reticulation system for:

- Drinking water taste (M98)
- Drinking water clarity (M99)
- Drinking water Continuity of supply (M101)

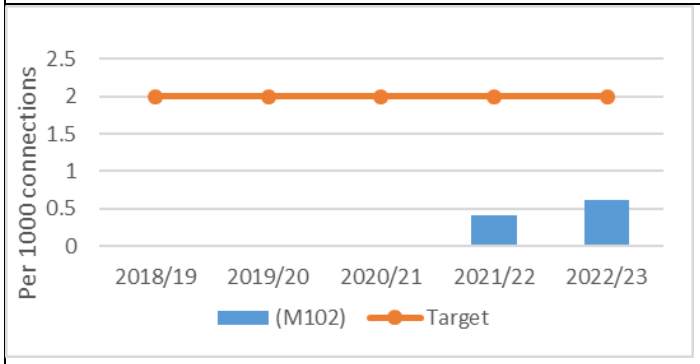


## 4.1.4. Water - Customer Satisfaction

Number of complaints over 1,000 connections to Council's networked reticulation system for:
- Drinking water pressure or flow (M97)
- Drinking water odour (M100)

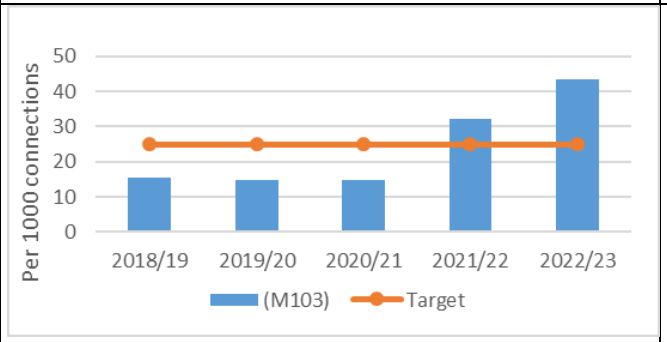



Number of complaints over 1,000 connections to Council's networked reticulation system for: Council's response to the issues



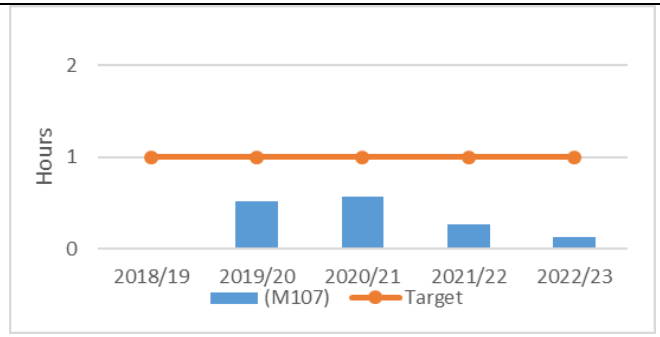

## 4.1.5. Water - Customer Satisfaction

Number of complaints over 1,000 connections to Council's networked reticulation system for: Total number of recorded complaints

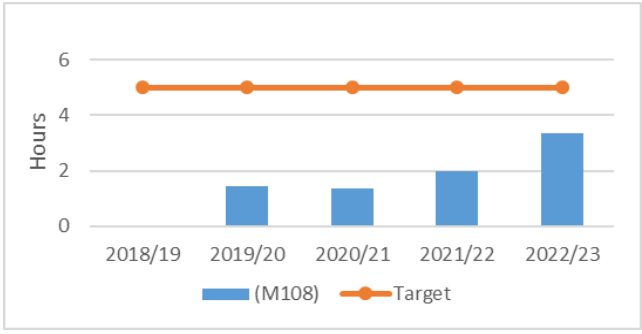



## 4.1.6. Water - Fault Response Times

Median response time to attend an urgent call out, measured from the time Council receives notification to the time that service personnel reach

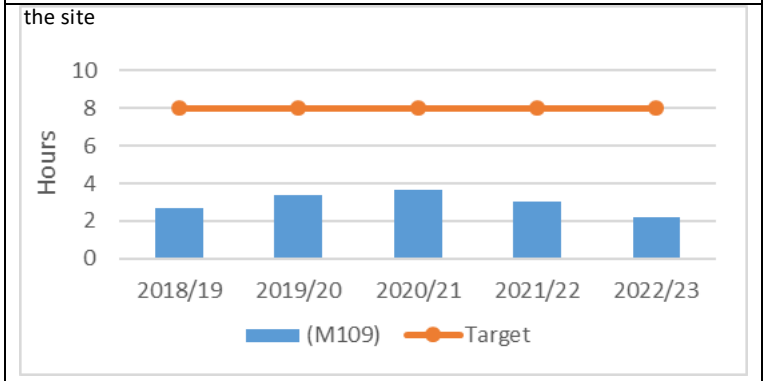



Median time to resolve an urgent callout, measured from the time Council receives notification to the time that service personnel confirm he resolution of the fault

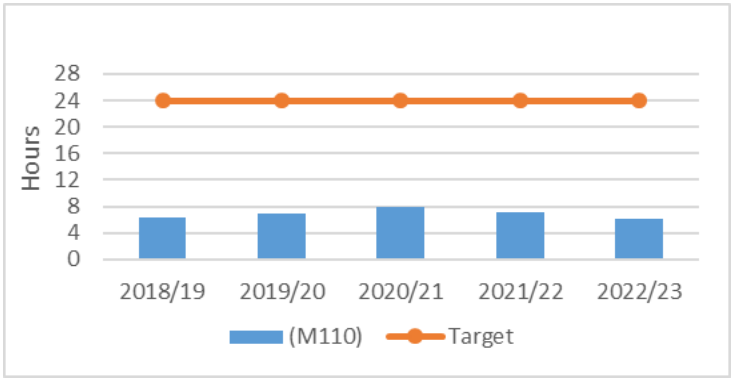


## 4.1.7. Water - Fault Response Times

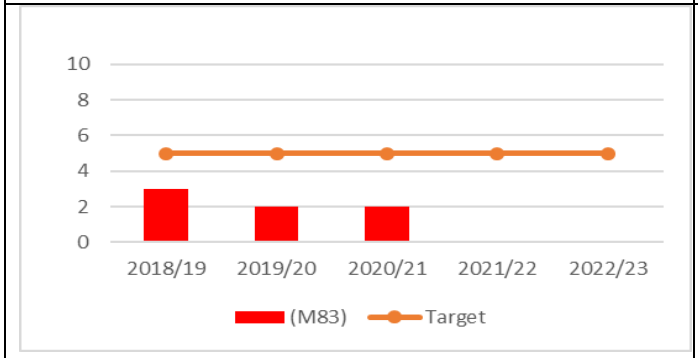
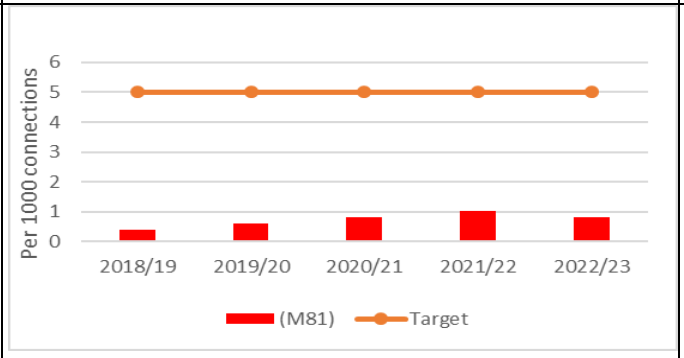
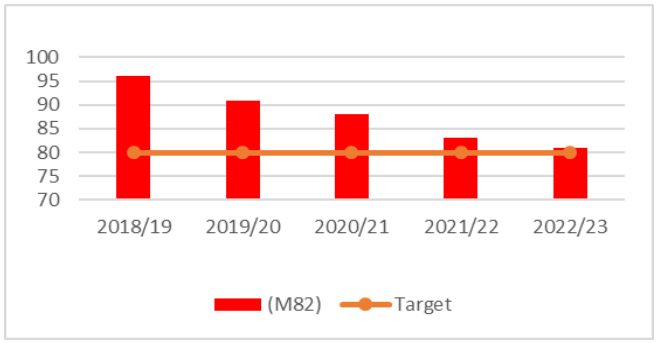
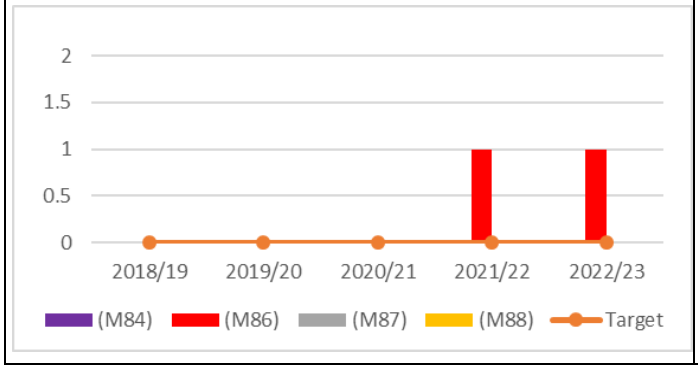
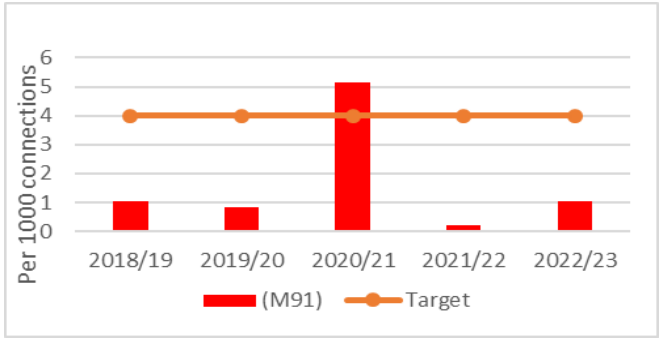
Median response time to attend a non-urgent call out, measured from the time Council receives notification to the time that service personnel reach the site




Median time to resolve a non- urgent callout, measured from the time Council receives notification to the time that service personnel confirm the resolution of the fault

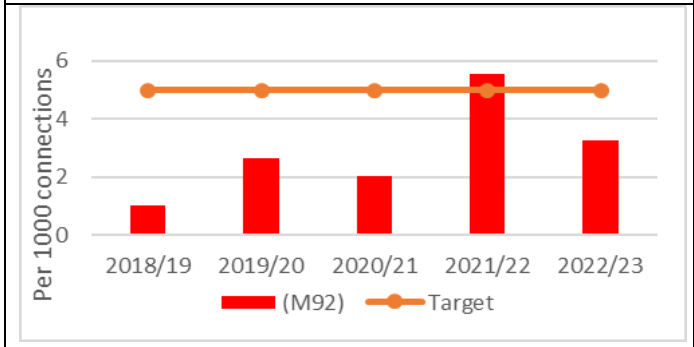


## 4.2. Wastewater- Current Level of Service and Performance

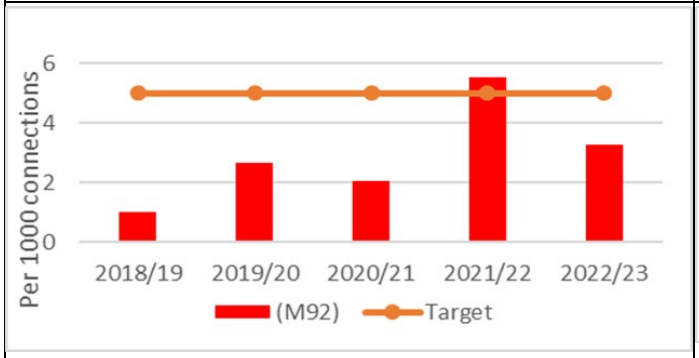
| 4.2.1. Wastewater- Compliance | 4.2.2. Wastewater – System Performance | 4.2.3. Wastewater Supply - Customer Satisfaction |
|---|---|---|
| Number of schemes that are current | The number of dry weather sewerage overflows from the wastewater system per 1,000 connections | Percentage of residents rating wastewater management as "fairly satisfactory" or "very satisfactory" in the community survey. |
|  |  |  |
| Number of enforcement actions against Council for not meeting resource consent conditions sewage schemes relating to:<br>- Abatement Notices(M84)<br>- Infringement Notices (M85)<br>- Enforcement Notices (M86)<br>- Convictions (M87) | | Number of complaint received about wastewater per 1,000 connections for: Sewerage odour |
|  | |  |

### 4.2.4. Wastewater Supply - Customer Satisfaction

Number of complaint received about wastewater per 1,000 connections for: Sewerage system faults

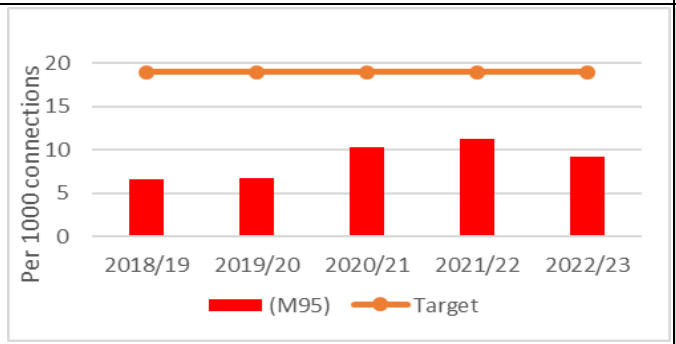



Number of complaint received about wastewater per 1,000 connections for: Sewerage system blockages

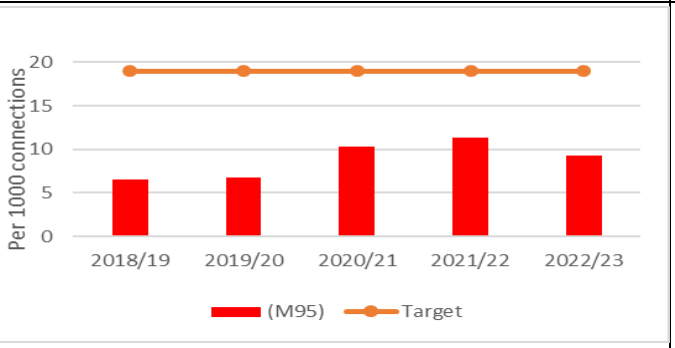



### 4.2.5. Wastewater Supply - Customer Satisfaction

Number of complaint received about wastewater per 1,000 connections for: Councils response to Odour, system faults and Blockages

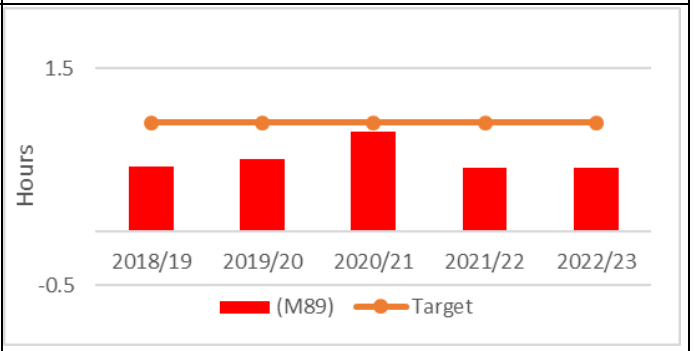



Number of complaint received about wastewater per 1,000 connections for: Total Number of recorded complaints

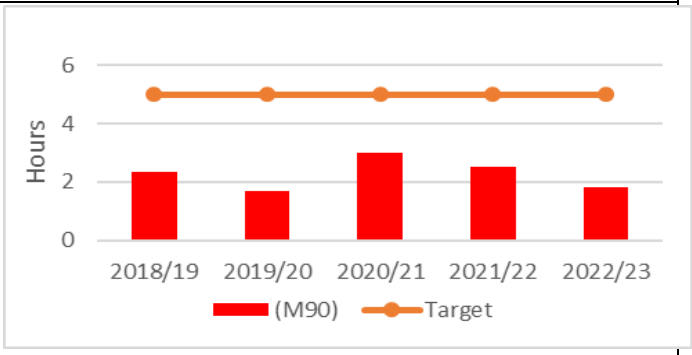



### 4.2.6. Wastewater Supply - Fault Response Times

Median time to attend a sewage fault, measured from the time Council receives notification to the time that service personnel reach the site



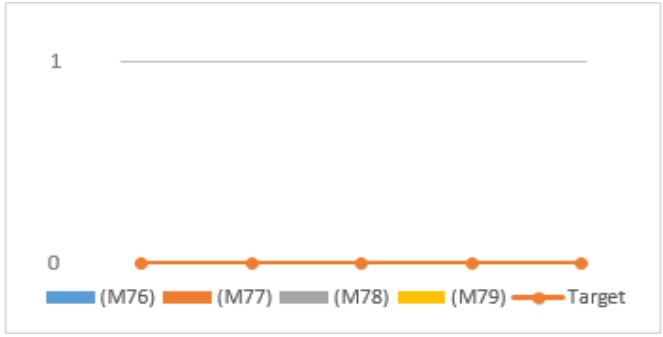

Median time to resolve a sewage fault, measured from the time Council receives notification to the time that service personnel confirm resolution of



## 4.3. Stormwater- Current Level of Service and Performance

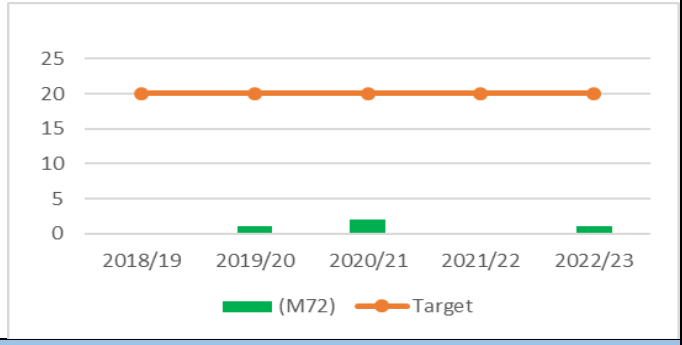
### 4.3.1.Stormwater- Compliance

Number of enforcement actions against Council for not meeting resource consent conditions for discharge from the stormwater system relating to:
Infringement notices
Enforcement orders
Convictions



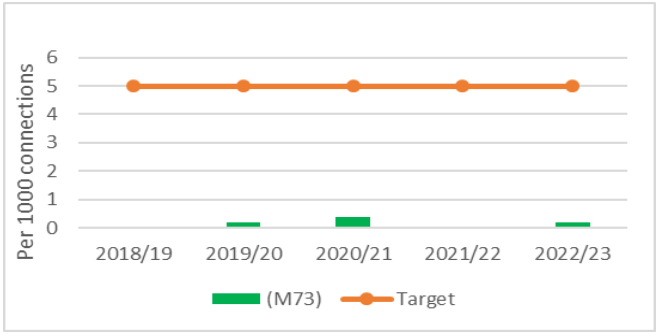

### 4.3.2. Stormwater – System Performance

The number of flooding events where an overflow of stormwater had entered a habitable floor.



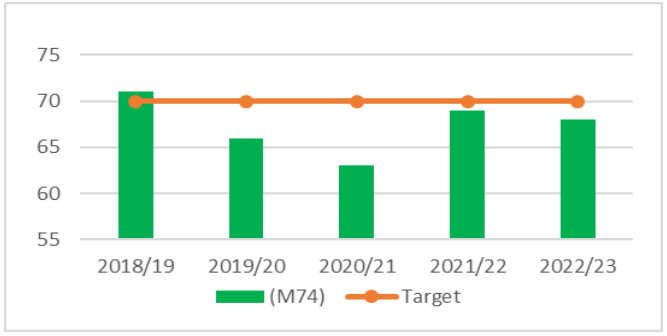

### 4.3.3. Stormwater - Customer Satisfaction

For each flooding event, the number of habitable floors affected, expressed per 1,000 properties connected to the stormwater system



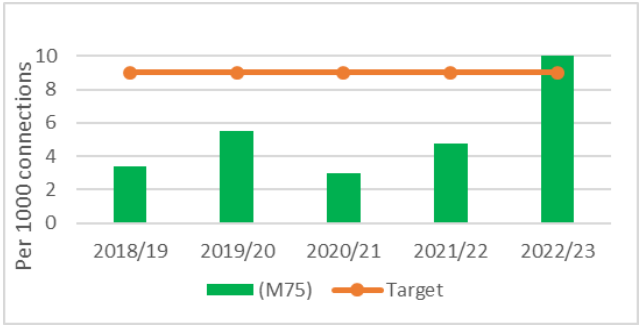

### 4.3.4. Stormwater - Customer Satisfaction

Percentage of residents rating stormwater management as “fairly satisfactory” or “very satisfactory” in the community survey.




### 4.3.5. Stormwater - Customer Satisfaction

Number of complaints received by Council about the performance of its stormwater system, expressed per 1,000 properties connected to the system



# 5. Current Level of Service and Performance

## 5.1. Three Water - Areas of concern and mitigation options

Following the Havelock water supply contamination, there have been significant changes driven by national bodies to improve water quality for New Zealand, including the establishment of Taumata Arowai who regulate drinking water supplies and oversee wastewater and stormwater. Increased focus will be on:

- Holistic view of water by giving effect to Te Mana o te Wai
- Compliance of drinking water supplies and wastewater and stormwater discharges
- Proactive risk management and demonstrate that all practical steps have been taken to avoid risks.
- Implementation of Water Safety Plans
- Source water protection and monitoring
- Distribution system compliance. e.g., backflow prevention, hygiene procedures and management of disinfection by-products.

## 5.2. Water - Areas of concern and mitigation options

The overall satisfaction of urban water supply is increasing steadily with improvement to the quality and security of water due to tightening of the Drinking Water Standards. The two main concerns for urban water supply are the quality and availability of sufficient quantities of source water either during prolonged dry weather or wet weather events causing surface water to become turbid and difficult to treat. These issues vary between towns.

Dannevirke impounded supply dam remains of concern with significant interventions required to ensure this key critical asset is maintained operational. There are several Service Reservoirs that are currently nearing end-of-life and have been assessed as vulnerable.

Current water Demand is high across the main towns during summer months including significant unexplained water losses placing additional stress on source water supplies. With projected growth adding to consumer demand, there is a strong driver to increase efficiency in the reticulation network and in treatment Processes to ensure resource consents are met and prevent the need for emergency measures needed to immediately reduce demand by operating in comfortable zones of operational good practice.

- Mitigation options include:
- Increased potable storage.
- Enhanced pre-treatment
- Investigating alternative sources e.g., bore
- Water Restrictions
- Enhanced leak detection investigations
- Pressure Management to reduce network losses.
- Enhanced monitoring of flows to the reticulation network
- Further development and fine tuning of the Masterplan

## 5.3. Wastewater - Areas of concern and mitigation options

The overall satisfaction for wastewater service remains the same as previous years. TDC has remained compliant with wastewater levels of service in the last 5 years. However, the number of customer complaints have not decreased at the desired level over the years. Wastewater Treatment Plant has had infringement notices in 2020/21 2022/23 with potential for more due to failing to meet consent conditions.

Inflow and Infiltration (I&I) remains a key issue in the network increasing flows beyond design capacity of the network also posing high risk to delivery of upgrades at Wastewater Treatment Plants caused by significant high volumes of stormwater entering the sewerage system which complicates design and significantly increases investment of which there are upgrades required at all wastewater sites in the coming LTP which will be a challenge to meet all conditions.

Sludge disposal is also a high priority area that needs to be addressed, caused by a backlog of sludge in wastewater ponds and new processes that require sludge storage and disposal. Lack of storage locations and ability to reduce volumes through drying or dewatering increases cost of disposal to current landfill outlets.

Mitigation options include:

- Increased focus on early engagement for consents
- Sludge Disposal Strategy and storage investigations
- Treatment Plant design optioneering
- Inflow and infiltration reduction strategy investigation
- Increased focus for Treatment Plant operation
- Further development and fine tuning of the Masterplan

## 5.4. Stormwater - Areas of concern and mitigation options

Stormwater management customer satisfaction is the lowest during periods of significant rainfall events. During heavy rainfall events, there is surface flooding in both public (road reserve and land) and private property, with one habitable floor affected in 2022/23 and some previous incidents in receding years.

The stormwater network lacks maturity with limited options for property owners to connect to a robust and resilient network due to limited infrastructure.
Mitigation response/key projects include:

- Increased maintenance of open channels
- Further development and fine tuning of the Masterplan to include enhancing infrastructure and resilience.

Further development and fine tuning of the Masterplan

# 6. Planning for the Future

## 6.1. Relevant Strategic Documents

There are several district strategies and plans that are related to this asset management plan:

**District Strategy**– The Tararua District Council Strategy 2050 provides the direction to progress forward, adapting to environmental and social changes over the next 30 years. Through all these changes, we want our infrastructure, our whenua (land) and our people of Tararua to thrive together.

**Urban Growth Strategy** (2023/24) – This strategy purpose is to provide an outline of how the District is projected to grow over the next 30 years, factoring in suitability within central government constraints.

**District Plan** – This plan sets out the framework for the sustainable management of natural and physical resources in the district. It gives guidance on land use, changes, and effects, as well as natural resource management impacting on land transport considerations. The current plan is under review, with a new draft plan expected to be available for consultation mid-2024.

**Housing Strategy** which sets out Council's approach to housing development and the extent of its involvement as an active facilitator

**Long-Term Plan** (LTP 2024-2034): The LTP lays out the council's intentions for the next 10 years. The plan includes details on three water projects which the Council has chosen to invest in, what level of service the community can expect and how the infrastructure and service will be funded. The LTP describes how Council will fulfil its responsibilities under the Local Government Act 2002 to promote the well-being of the district and enable democratic decision making. It sets out funding mechanisms along with development of financial contributions.

## 6.2. Demand Drivers

The following are the main drivers of demand on and for water services

**Population** – Modest to high growth is predicted over the next few years through to 2053 is projected because of:

**International migration** giving rise to land cost rises, lack of available land in other districts and availability of affordable homes and land in Tararua.

New gorge replacement highway opening better travel and commuting options between east and west of Tararua.

**Changes in users and user behaviour**

Serviced areas – services extended to areas not currently serviced.

**Economic activities**

Increase demand for affordable rural lifestyles.

Increasing demand for low-cost housing in commuting distance to Hastings and Palmerston North

Increasing shortage of available infrastructure for industry in the major cities

Continued profitability in rural incomes

**Changing customer expectations**

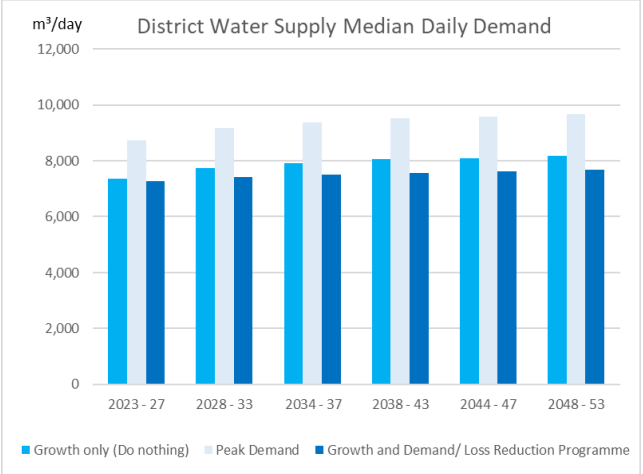
Over the years, customer expectations regarding the level of service provided for three waters supplies has increased. However, this needs to be balanced against the cost and affordability of services.

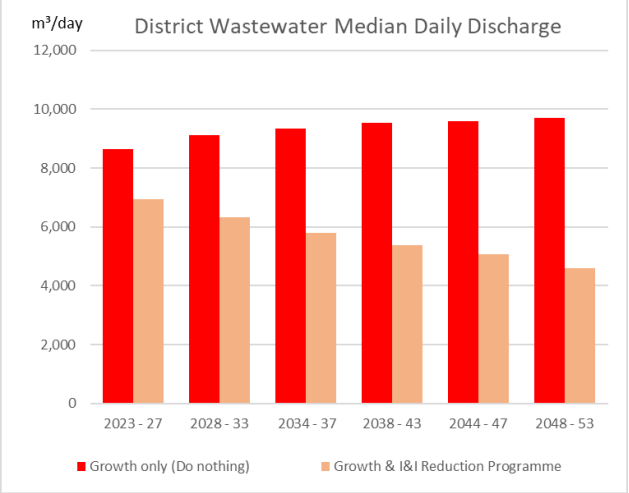
**Climate Change and Environmental Challenges**

The effect of climate change and other environmental stresses are likely to make the future challenging. The direct impacts on climate mean more intense rainfall events and conversely prolonged dry weather and drought. There will be environment that will have cascading effects impacting

## 6.3. Demand Projections

Growth in demand for services will be likely partly offset by both improved asset and demand management



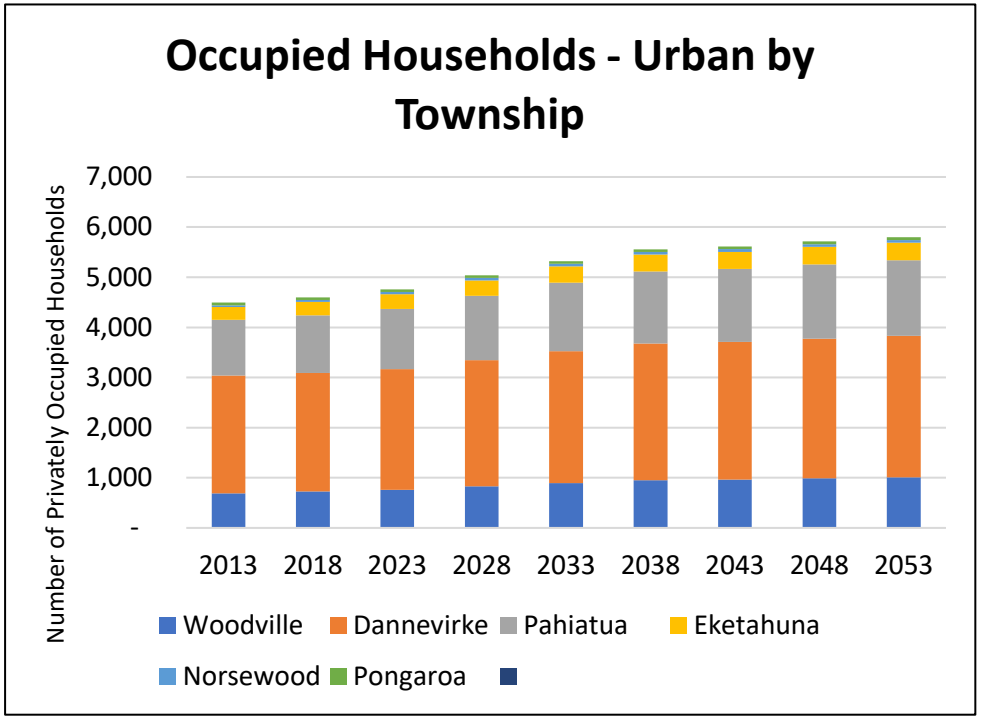



| 6.1. Relevant Strategic Documents | 6.2. Demand Drivers | 6.3. Demand Projections |
|---|---|---|
| **Annual Plan** – This plan provides details on the current year's financial predictions and budgets, according to the current LTP.<br><br>**Infrastructure Strategy** (2021-2051): The 30-year strategy describes how the Council will meet the requirements the Local Government Act. It identifies significant infrastructure issues that Council will face and their management and response to these issues.<br><br>**Water Supply Bylaw** 2019: The water supply bylaw ensures a safe and efficient public water supply, manage, and regulate the council's water supply and protect public water supply infrastructure. There are upcoming reviews for secondary water supply on properties, this could be short term measure to alleviate the demand on the system and use environmental resources more efficiently.<br><br>**Wastewater Drainage Bylaw** 2018: The wastewater bylaw regulates activities for wastewater drainage from both domestic and trade premises.<br><br>**Water Safety Plans**– these aim to assess and manage risks to the safety of drinking water associated with drinking water supply. Water Safety Plans are in place for all Council water supply schemes. | on social, cultural, political as well as economic. Climate driven net migration to New Zealand is likely to place extra demands on local government and the private sector.<br><br>**Changes in technology**<br><br>Technological change can significantly impact on demand for a service, particularly water supply and give new opportunity to treat and manage all three-water activities. | |

## 6.4. Population

### Forecast Household Growth

(No allowance has been made for climate induced net migration gains)




### Forecast Household Growth

| June years | Actuals and Estimates (Stats NZ) | 2021 LTP Assumption | 2024 LTP Assumption | Stats NZ released Dec 2022 | |
|---|---|---|---|---|---|
| | | | High growth Scenario | Medium growth Scenario | High growth Scenario |
| 2018 | 18,450 | 18,450 | | 18,450 | |
| 2022 | 19,100 | 19,358 | | 19,050 | |
| 2023 | 19,200 | 19,593 | 19,153 | 19,100 | 19,550 |
| 2028 | | 20,302 | 19,961 | 19,350 | 20,300 |
| 2033 | | 20,531 | 20,803 | 19,500 | 20,900 |
| 2053 | | 20,226 | 22,350 | 19,350* | 22,400* |

*2023 Census results **start** to be released May 2024

# 7. Managing Demand (Mitigation Measures)

| | 7.1. Water | 7.2. Wastewater | 7.3. Stormwater |
|---|---|---|---|
| Meeting Existing Demand | Existing Water supply demand management challenges include:<br>• Source water resource consents – available water to treat.<br>• Consumer demand<br>• Water losses<br>• Pre-treatment<br>Council currently has the following demand management strategies in place:<br>• Water conservation and scheme-based restrictions – a four-step process is used to manage demand:<br>  • Alternative hosing day<br>  • Hand-held watering on alternate days between 7 – 9pm<br>  • No outdoor use<br>  • Essential use only<br>• Water conservation and public education<br>• Water metering and pricing<br>• Water leakage control, detection, and repairs | Existing Wastewater demand management challenges include:<br>• Infiltration and inflow<br>• Tighter consent conditions<br>• Trade Waste monitoring<br>• Capacity<br><br>Council currently has the following demand management strategies in place:<br>• Trade waste charges<br>• Education<br>• Storm water infiltration reduction<br>• Partnerships with iwi to build understanding – engaging at the beginning of the process to avoid conflict. | Existing Stormwater management challenges include:<br>• Immature network<br>• Infill building around assets<br>• No supporting Bylaw<br>• Flooding<br><br>Council currently has the following demand management strategies in place:<br>• Maintaining open channels<br>• CCTV inspection of stormwater pipes<br>• Flushing and root cutting<br>• Proactive and reactive repairs as required.<br>• Relining |
| Meeting Future Demand | In addition to the existing WS demand management challenges that are expected to continue, additional future challenges may include:<br>• Population growth<br>• Service Standards<br>• Climate Change<br>To meet these future management challenges, Council intends to:<br>• Increased focus on strategic planning, fiscal responsibility, user pay principles, service level reviews.<br>• Improve network understanding and performance modelling.<br>• Universal metering<br>• Reduce peak-demand and average demand, seeking to modify both the peak and base demand.<br>• Pressure Management | Future Wastewater challenges may include:<br>• Population growth<br>• Service Standards<br>• Climate Change<br>• Increasing treatment and discharge standards (consents to discharge) driven by societal expectations and Freshwater reforms<br>To meet these future management challenges, Council intends to:<br>• Undertake I&I Reduction Programme<br>• Increase focus on strategic planning, fiscal responsibility, user pay principles, service level reviews.<br>• Improve network understanding and performance modelling.<br>• Respectful of iwi partnerships to build understanding – engaging early and at the beginning of the process. | Additional future Stormwater challenges may include:<br>• Population growth<br>• Increase in service standards.<br>• Climate change, vulnerable areas to surge events.<br>• To meet these future SW management challenges, Tararua DC intends to:<br>• Increase focus on strategic planning, fiscal responsibility, user pay principles, service level reviews.<br>• Improve network understanding and performance.<br>• Modelling to better understand the catchments and flows.<br>• Discussions with Horizons Regional Council on potential future new assets to avoid conflict.<br>• Introducing a Stormwater Bylaw |

# 8. Risk Management

| Key Risks | Caused by | Consequences | Controls and Mitigation | Likelihood | Consequences | Risk Score |
|---|---|---|---|---|---|---|
| Significant unexpected disruption to essential services | Natural disaster or another unexpected event such as a critical asset failure, significantly disrupts Council's ability to provide essential 3waters services.<br><br>Note: we have assumed in the LTP that there will not be a catastrophic disaster in the next 10 years and that Council will have the capacity to mount an effective response to any that do occur. | Impacts on essential 3waters service delivery with resulting impacts on consumers' health from lack of clean drinking water, and/or the safe disposal and treatment of wastewater or Stormwater disruptions flooding or entering properties.<br><br>As well as the immediate loss of service the consequences for Council and consumer may well stretch into a long recovery from a disaster. | > Develop Business Continuity plan (BCP) (and Water Safety Plans (WSP)where these are not already in place.<br><br>> Critical services and critical assets are detailed as part of BCP above. The AMP details work to determine critical assets and services.<br><br>> Maintain emergency management response capability through the Manawatu-Whanganui Civil Defence Emergency Management Group<br><br>> Complete project to improve SCADA adding resilience<br><br>> Ensure insurance strategy considers critical infrastructure and business continuity.<br><br>> Ascertain asset life and condition assessments | Based on 1/20 year event: Unlikely | Very High<br>Loss or overrun of >$5m | High Risk |

| Key Risks | Caused by | Consequences | Controls and Mitigation | Likelihood | Consequences | Risk Score |
|---|---|---|---|---|---|---|
| Climate Change | The impacts of climate change will be changes to weather patterns including longer dry periods, more intense rainfall, more temperature extremes, and stronger winds. There is significant uncertainty about the extent of change for the Tararua and the risk is that climate change impacts are different to those assumed. | Impact ability to maintain levels of service. | > Ensure most up to date climate change models are utilised for 3waters planning<br>> Ensure climate change resilience is built into 3waters projects. | Possible (25-60%) | Very High (LoS significant reduction over multiple years) | High Risk |
| Infrastructure compliance cost increases | The risk is that compliance costs could increase significantly due to penalties for not meeting compliance requirements, from new infrastructure projects not meeting compliance requirements on completion, or from increases in compliance standards imposed by government or regulators. | The consequences are direct financial costs or requirements to improve assets | > Capital projects to remedy current non-compliance have been reviewed to ensure they will meet compliance requirements<br>> Council maintains a close relationship with regulators to manage compliance issued in a collaborative manner. | Possible (25-60%) | High ($1-5m) | High Risk |
| Population Growth | Risk significant growth before infrastructure is upgraded to cater for growth. | Could slowly degrade levels of Service where resources could be stressed or infrastructure is unable to cope with demand needs | > Planning for growth through review and updating the Masterplan<br>> Planning adequate funding to allow necessary and timely upgrades and new service areas<br>> Planning and design to permit timely and efficient construction timeframes | Possible (25-60%) | High ($1-5m) (Levels of service significantly below expectations) | High Risk |

## Risk Management (Continued)

| Key Risks | Caused by | Consequences | Controls and Mitigation | Likelihood | Consequences | Risk Score |
|---|---|---|---|---|---|---|
| Non-compliance with statutory requirements | The risk is that Council continues to be non-complaint with statutory requirements and/or there are further significant breaches of statutory requirements | The consequences are around level of service delivery and impacts on community wellbeing, potential financial costs and prosecution, and loss of confidence.<br><br>Examples would be Eketahuna WWTP, Dannevirke WWTP Land dispersal and Woodville WWTP | > Capital projects to remedy current non-compliance have been reviewed to ensure they will meet compliance requirements.<br>> Council maintains a close relationship with regulators to manage compliance issued in a collaborative manner.<br>> Council has established additional compliance positions to proactively manage compliance requirements and consent renewals.<br>> Insurance<br>> Council keeps the public informed including the use of communications plans. | Highly Probable (we are already non-complaint and likely to remain so during the term of the LTP) | Very High<br>Loss or overrun of >$5m | Severe Risk |
| Government 3waters Reform | There is uncertainty about the direction government will take with 3waters reform. Decisions are due later in 2024 and legislation in 2025. Issues are around ownership, balance sheet separation, ability to borrow etc. | The consequences are that it is difficult to plan and make decisions about the timing of expenditure etc.<br><br>There will be direct costs associated with any change in ownership or structure that may not be funded by government. | > Council has budgeted as if retaining 3waters for the term of the LTP (There will be a better financial position if it is removed) | Highly Probable (that there will be additional costs associated with reform) | Medium (up to $1m additional unbudgeted cost – as we are proceeding as if we retain ownership at present) | High Risk |
| 3Waters renewals | The risk is that there will be a shortfall in funds available to replace 3waters assets if asset lives are shorter than forecast.<br><br>The cause is that there is insufficient data on asset condition. | The consequences are shortfalls in depreciation reserves or budgets for the renewal programme and also potential for a reduction in level of service. | > Updating the risk register for this so far based gathering and improving asset data and planning based on criticality, risk and performance | Possible (25-60%) | Medium (up to $1M) | Moderate Risk |

| Key Risks | Caused by | Consequences | Controls and Mitigation | Likelihood | Consequences | Risk Score |
|---|---|---|---|---|---|---|
| Capital works programme | A number of large capital projects have been budgeted to meet compliance and level of service requirements.<br><br>There have been and likely to continue to be constraints in specialist staff, supply chain, and industry capacity that may impact on the do-ability of the capital works programme. Also other economic impacts such as interest rate and inflation forecasts being too low.<br><br>There remains significant uncertainty around the Dannevirke impounded supply programme requirements and costs and design programme requirements for key WWTP's and land disposal<br><br>The Masterplan stage one has been completed however it is yet to account for growth, climate change impacts, and District Plan review, and this could impact on the scope of planned projects and renewals programme. | The consequences are in terms of the timely delivery of projects, the potential for significant cost overruns or additional budget requirements, and for projects to not deliver to meet climate change, growth, or District Plan requirements. | > Projects are tracked and escalated to the Infrastructure, Climate Change, and Emergency Management Committee for high value and/or higher risk projects.<br><br>> Steering committees are in place for larger projects in line with the Project Management Framework.<br><br>> Council works collaboratively with supply partners<br><br>> Masterplan phase 2 is underway in response to the Urban Growth Strategy | Highly Probable (based on history) | Very High ($5m plus based on history) | Severe Risk |
| Wastewater Private lateral connections | Currently council own water supply laterals from the main to the boundary of the serviced property, wastewater is in reverse where the lateral is the responsibility of the serviced property owner making control over assets in public corridors difficult to manage and control and unmaintainable. | Renewals or upgrades of council's sewer mains means laterals in old and very poor condition will be reconnected to the new main and could be at risk of failing within council's reserve due to age and condition despite mains renewal.<br><br>Any benefit from renewing a council owned sewer main to resolve inflow may be counteracted by Inflow generated from the lateral connection but outside council's potentially necessitating enforcement through the Bylaw. Owners also face significant on-costs to conduct lateral repairs or renewals. | > Including risk management in the Infiltration & inflow strategy to include mitigation measures<br><br>> Bylaw enforcement to force owners to repair/ replace lateral<br><br>> Council considers ownership of the lateral from the Main to the property boundary | Highly Probable (based on history) | Very High (LoS significant reduction over multiple years) | Severe Risk |

## Risk Management (Continued)

| Key Risks | Caused by | Consequences | Controls and Mitigation | Likelihood | Consequences | Risk Score |
|---|---|---|---|---|---|---|
| Māori and iwi relationships | The risk is that Council fails to maintain and strengthen iwi and Māori partnerships. | The 3waters activity has particular significance to iwi and Māori and maintaining strong partnerships is important for good outcomes including consent applications. | > Council has partnership agreements with Rangitāne o Tamaki nui-ā-Rua and Ngati Kahungunu ki Tāmaki-nui-a-Rua.<br>> Iwi are invited to governance decision making meetings.<br>> There are regular operations meetings between iwi and Council.<br>> Council is developing internal cultural competency. | Possible based on history | Medium (financial implications regards consents and confidence) | Moderate Risk |
| Other stakeholder and community engagement risks | The risk is that Council does not sufficiently engage with or inform the community about decisions and information involving 3waters | As a result there could be a loss of confidence and reputation and/or inappropriate decision making. | > Decisions are made in accordance with the Significance and Engagement Policy.<br>> Communications Plans are in place for 3waters decisions, projects, and issues | Possible (based on history | Medium (some impact in confidence, media interest etc) | Moderate Risk |

# 9. Asset Operations and Maintenance

TDC assets are operated in compliance with the AMP, WSPs and defined processes and procedures, resource consents and statutory requirements.

Council short-term maintenance strategy is intended to retain current LoS with respect to asset condition and functionality while minimising costs. Longer-term maintenance activity will be modified as necessary to reflect the age of assets relative to expected economic life cycle, the risk of critical assets, changes in the desired level of service, and the nature and timing of asset upgrading/development works. We intend to scope the viability of water metering to reduce demand and undertake studies and address stormwater infiltration inflow into wastewater networks.

## 9.1. Operations and Maintenance Requirements (Why)

**Operations – Objectives**

- Achieve LOS service targets.
- Efficient performance of assets
- Long term utilisation.
- Balance performance against running cost.
- Efficient use of resources.
- Safety.

**Maintenance – Objectives**

- Keep assets in serviceable condition and optimizing performance of existing assets (plant and pipes).
- Prolong asset lifecycle.
- Aging infrastructure means more reactive maintenance, inspections, attending to unplanned interruptions (breaks, leaks)
- Different asset types, asset criticality requires different approaches.
- Maintaining customer service levels
- Achieve LOS targets (fault attendance, fault resolution) and minimising failure.
- Decreasing downtime.

## 9.2. Key Operational Processes and Asset Maintenance (What)

**Operations**

- Routine control and monitoring of processes at treatment plants, pump stations.
- Identify need for maintenance and repair work to ensure continuity of process.
- Quality monitoring
- Outage management
- Minimising consumption of power, chemicals etc
- Cleaning
- Lubrication
- Optimising

**Maintenance**

- Blockage clearance, flushing, inspections.
- Sewer/stormwater pipe CCTV & cleaning
- Repairs to pipe failures and leaks
- Preventive tasks i.e., reduce Inflow and infiltration.
- Predictive tasks such as assessment of treatment plant and pump station condition and performance including visual inspections, structural reviews, thermal imaging, vibration analysis.
- Routine servicing of mechanical equipment, such as pump sets
- Removal of screenings to landfill
- Repairs to structural and buildings assets
- Stop bank inspections and maintenance.
- Rock wall maintenance
- Grounds maintenance

## 9.3. Operations and Maintenance Plan (How)

- Network Operations and Maintenance is carried out by Council's in-house team for Treatment and Reticulation services in a collaboration between Tararua District Council and Downer, Tararua Alliance.

- Asset information and Planning is completed within the in-house Asset Management team who monitor asset performance and analyze data about the assets to ascertain the lifecycle of assets, performance, and costs.

- Information is captured in the Asset Management Database (RAMM), Data and information (Water Outlook) and reporting systems (SCADA). The information captured is used to make informed decisions for renewals, replacement, planning upgrades and planning and adjusting maintenance regimes based on asset performance information.

- Larger scale infrastructure projects e.g., upgrades or Treatment plants include the requirement to supply Operations and Maintenance documentation detailing operating parameters and routines as well as maintenance requirements and schedules.

# 10. Asset Renewals

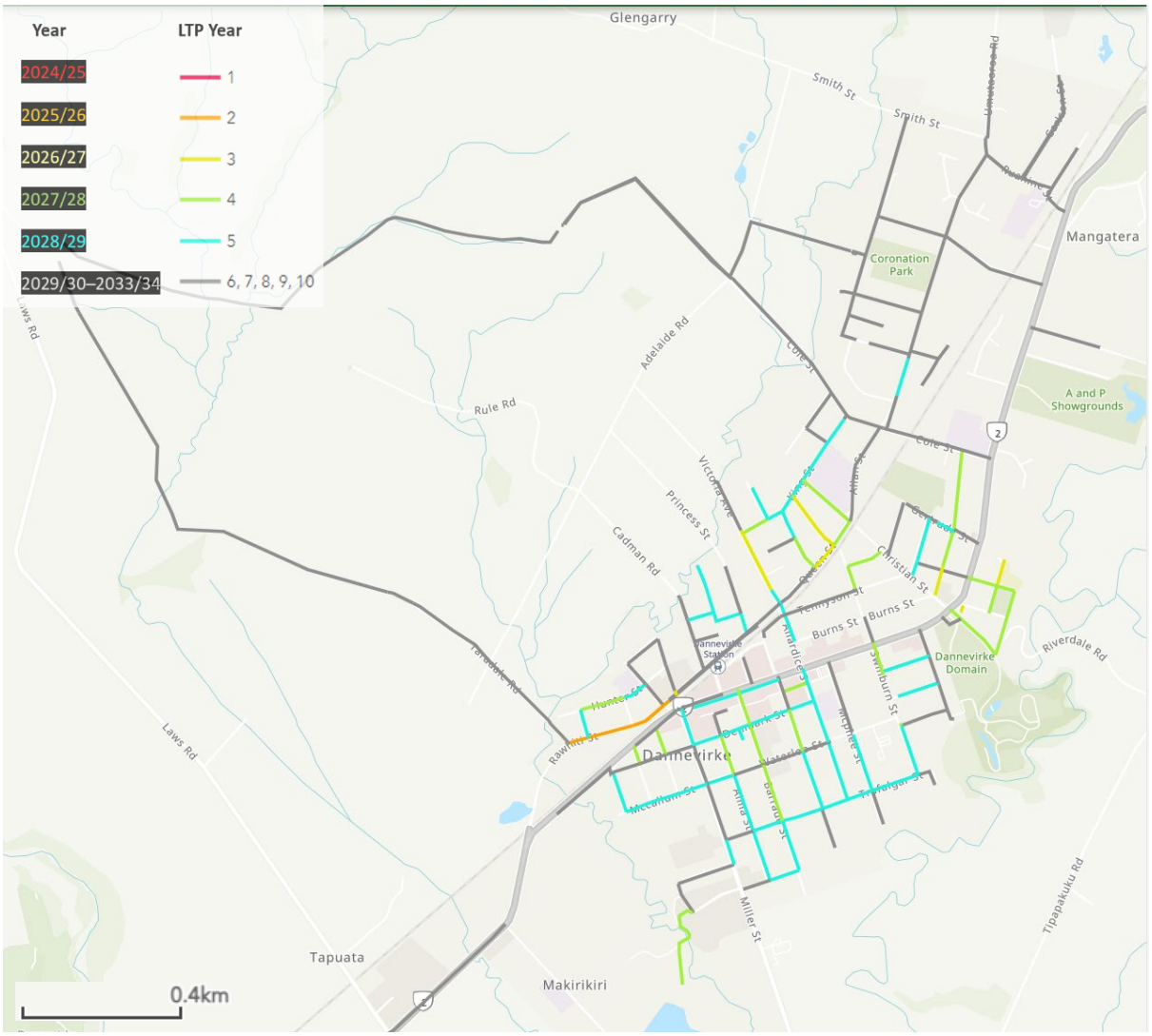
## 10.1. Water Renewals

| Summary | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|
| 1 Dannevirke | 39,767 | $ 29,108,541 | $ 33,415,720 |
| 2 Woodville | 17,452 | $ 6,759,811 | $ 7,343,519 |
| 3 Pahiatua | 4,044 | $ 1,411,205 | $ 1,649,143 |
| 4 Eketahuna | 1,674 | $ 743,109 | $ 890,236 |
| 5 Norsewood | 102 | $ 16,188 | $ 20,157 |
| **Total Water Renewals** | **63,039** | **$ 38,038,854** | **$ 43,318,775** |

Proposed summary of all renewals of water over the ten years of the draft Long-Term Plan commencing the 2024/25 financial year. See the following pages for the planned works by location and year.

## Water Renewals

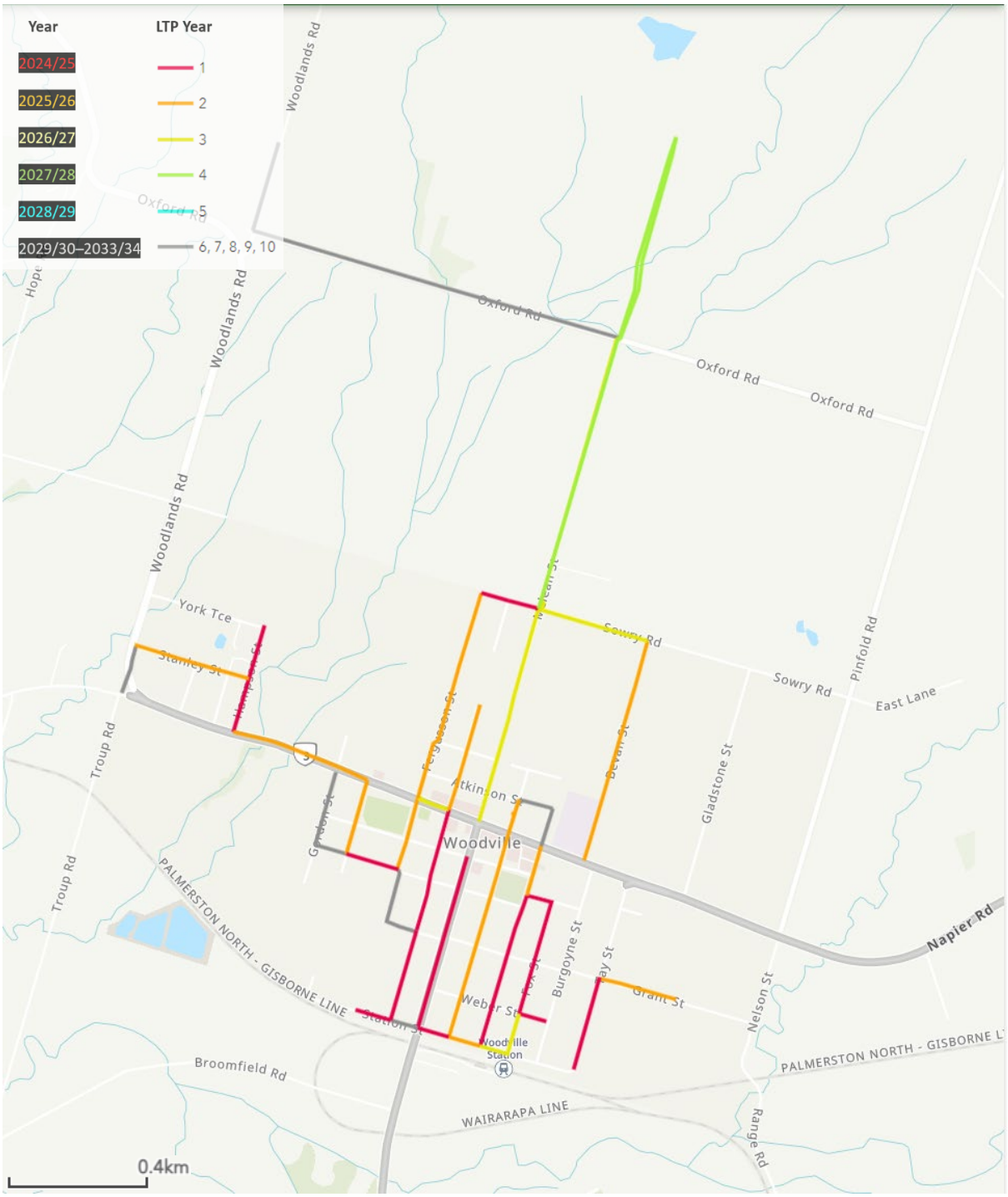
### 1 Dannevirke




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| | | Water Renewals | | |
| 2025/26 | 2 | 473 | $ 411,512 | $ 432,879 |
| 2026/27 | 3 | 1,589 | $ 1,755,828 | $ 1,890,892 |
| 2027/28 | 4 | 6,237 | $ 6,321,239 | $ 6,965,518 |
| 2028/29 | 5 | 9,045 | $ 7,023,259 | $ 7,914,671 |
| 2029/30 | 6 | 8,640 | $ 4,833,267 | $ 5,562,903 |
| 2030/31 | 7 | 3,495 | $ 1,682,691 | $ 1,975,543 |
| 2031/32 | 8 | 2,544 | $ 1,216,542 | $ 1,457,511 |
| 2032/33 | 9 | 5,155 | $ 3,588,314 | $ 4,381,884 |
| 2033/34 | 10 | 2,590 | $ 2,275,889 | $ 2,833,919 |
| | **Total** | **39,767** | **$29,108,541** | **$ 33,415,720** |

## Water Renewals

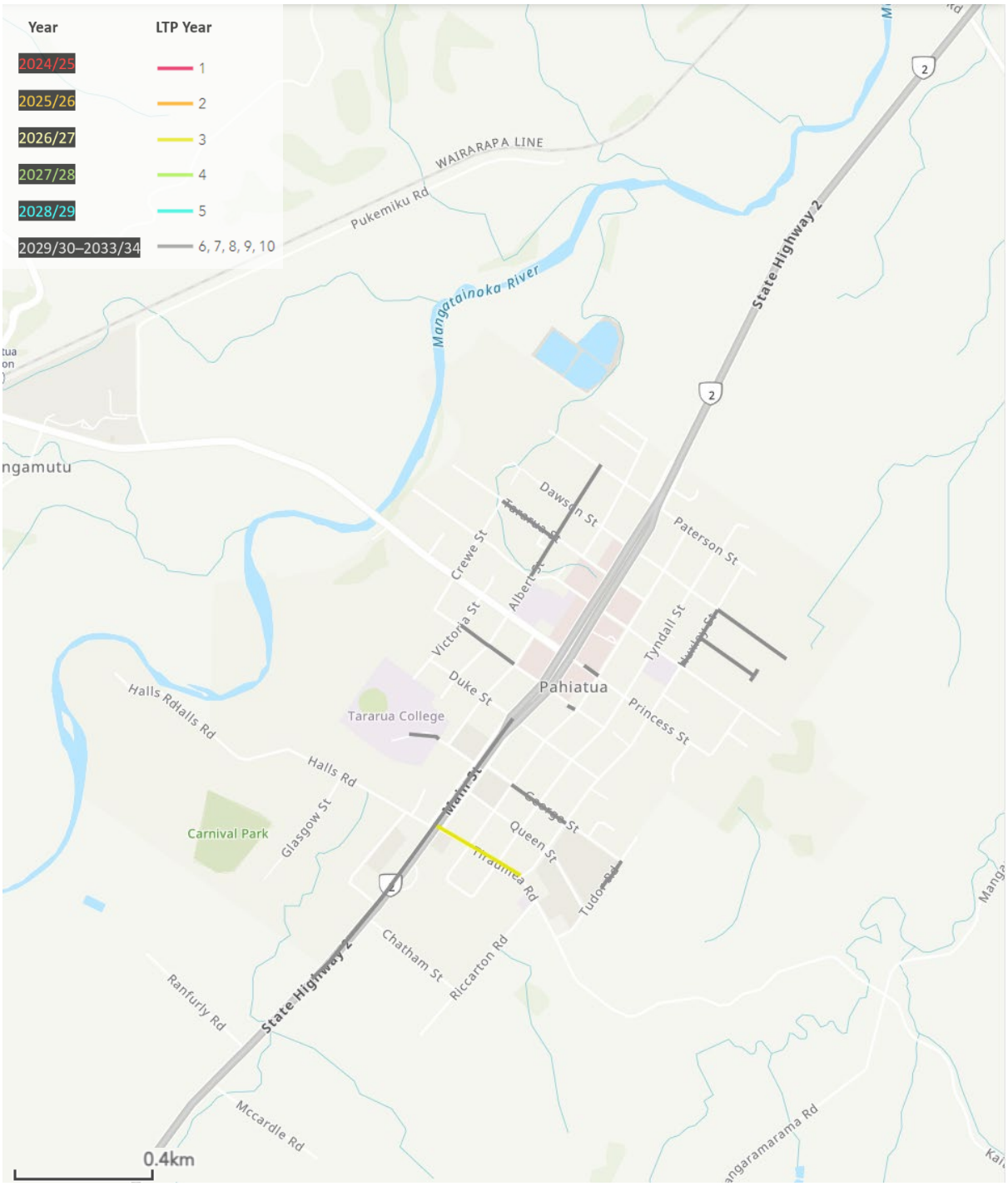
## 2 Woodville




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2024/25 | 1 | 4,088 | $ 1,512,225 | $ 1,557,302 |
| 2025/26 | 2 | 5,092 | $ 1,840,536 | $ 1,936,101 |
| 2026/27 | 3 | 2,659 | $ 1,107,568 | $ 1,192,766 |
| 2027/28 | 4 | 2,590 | $ 1,115,149 | $ 1,228,808 |
| 2030/31 | 7 | 104 | $ 38,619 | $ 45,340 |
| 2031/32 | 8 | 1,683 | $ 688,618 | $ 825,017 |
| 2032/33 | 9 | 1,236 | $ 457,096 | $ 558,185 |
| | **Total** | **17,452** | **$ 6,759,811** | **$ 7,343,519** |

## Water Renewals

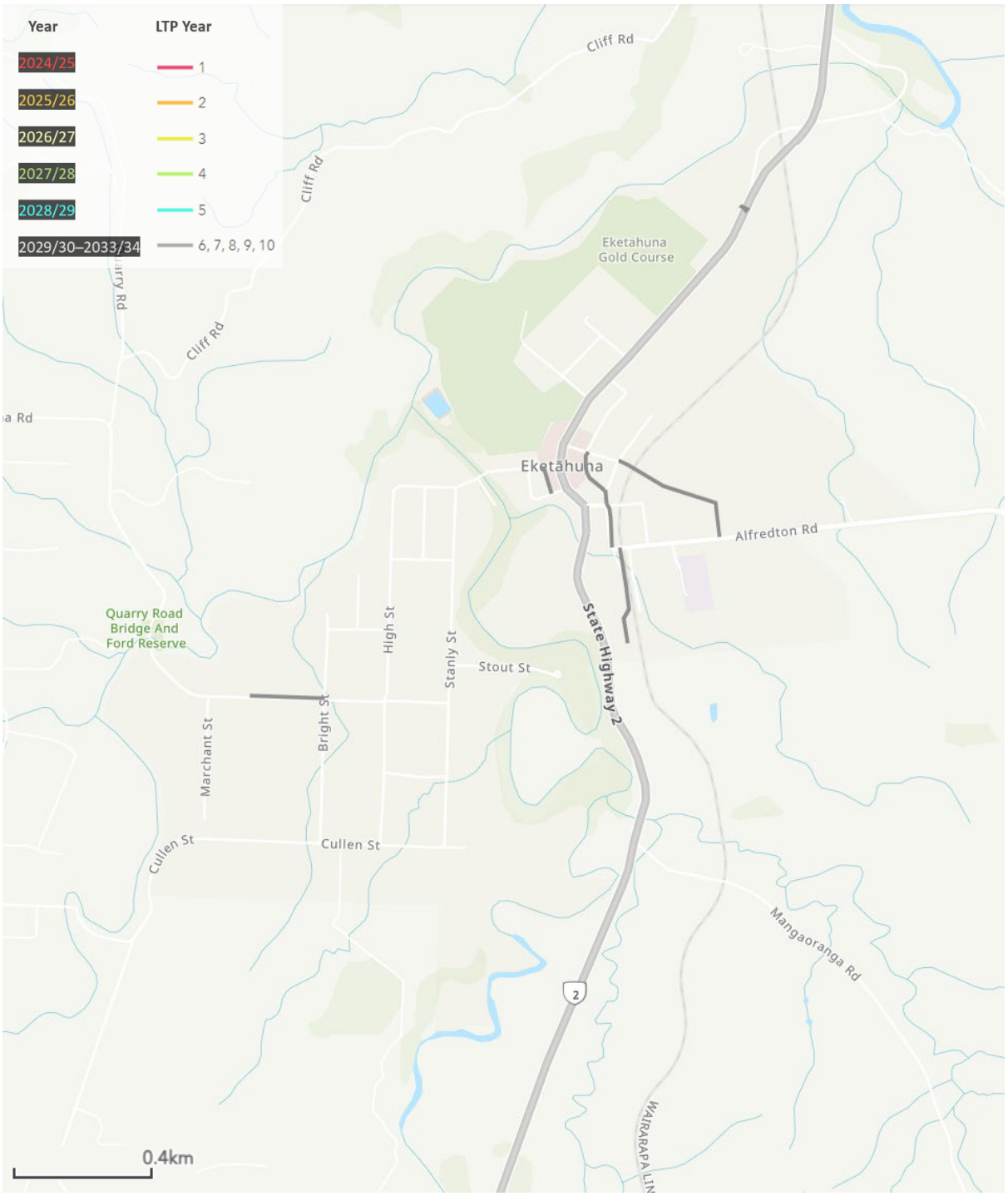
### 3 Pahiatua




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2026/27 | 3 | 367 | $ 135,757 | $ 146,200 |
| 2030/31 | 7 | 3,074 | $ 1,066,120 | $ 1,251,667 |
| 2031/32 | 8 | 538 | $ 199,012 | $ 238,431 |
| 2033/34 | 10 | 65 | $ 10,316 | $ 12,845 |
| | **Total** | **4,044** | **$ 1,411,205** | **$ 1,649,143** |

## Water Renewals

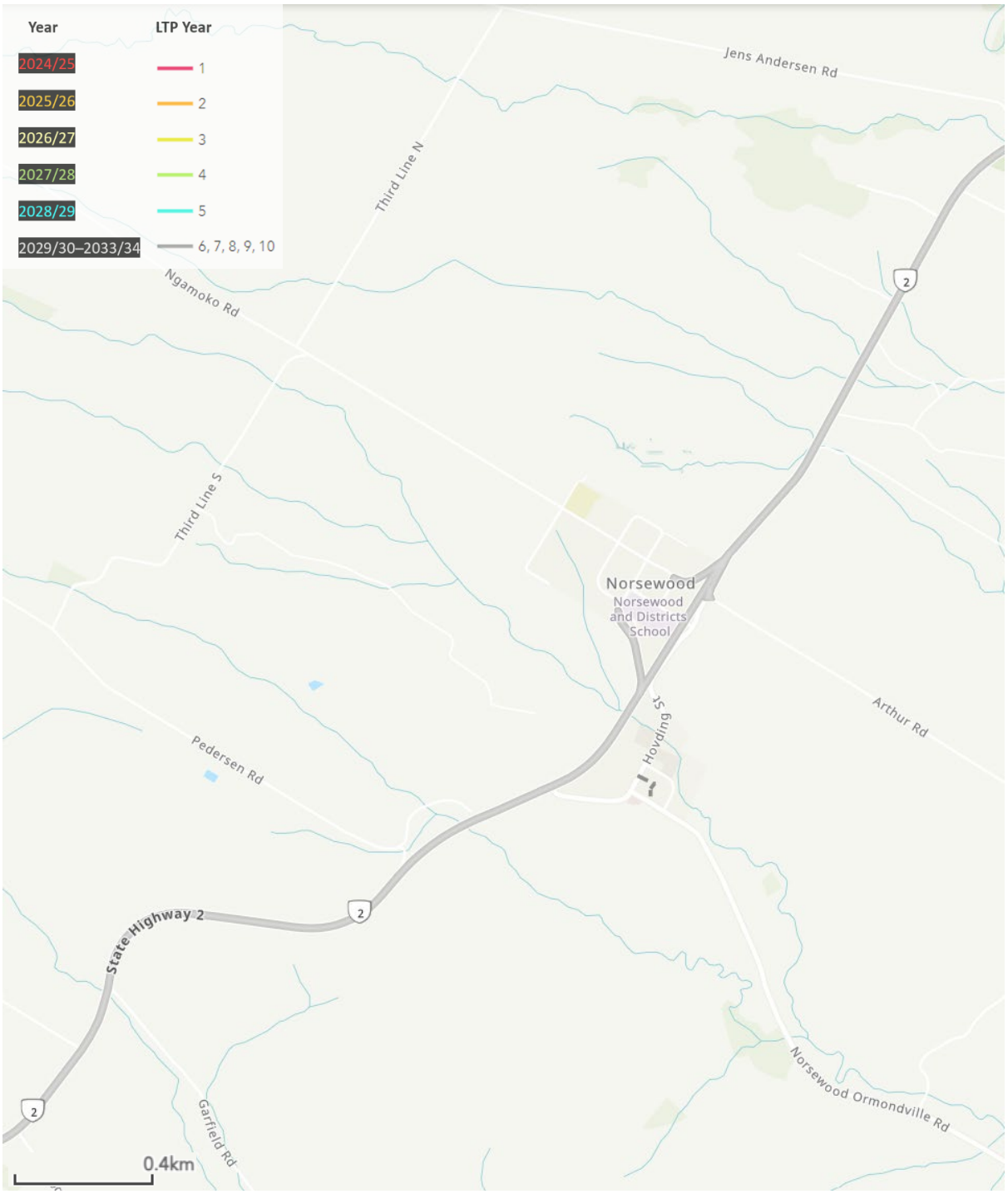
### 4 Eketahuna




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2030/31 | 7 | 100 | $ 15,870 | $ 18,632 |
| 2031/32 | 8 | 1,537 | $ 713,552 | $ 854,890 |
| 2032/33 | 9 | 37 | $ 13,687 | $ 16,714 |
| | **Total** | **1,674** | **$ 743,109** | **$ 890,236** |

## Water Renewals

## 5 Norsewood




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2033/34 | 10 | 102 | $ 16,188 | $ 20,157 |
| | **Total** | **102** | **$ 16,188** | **$ 20,157** |

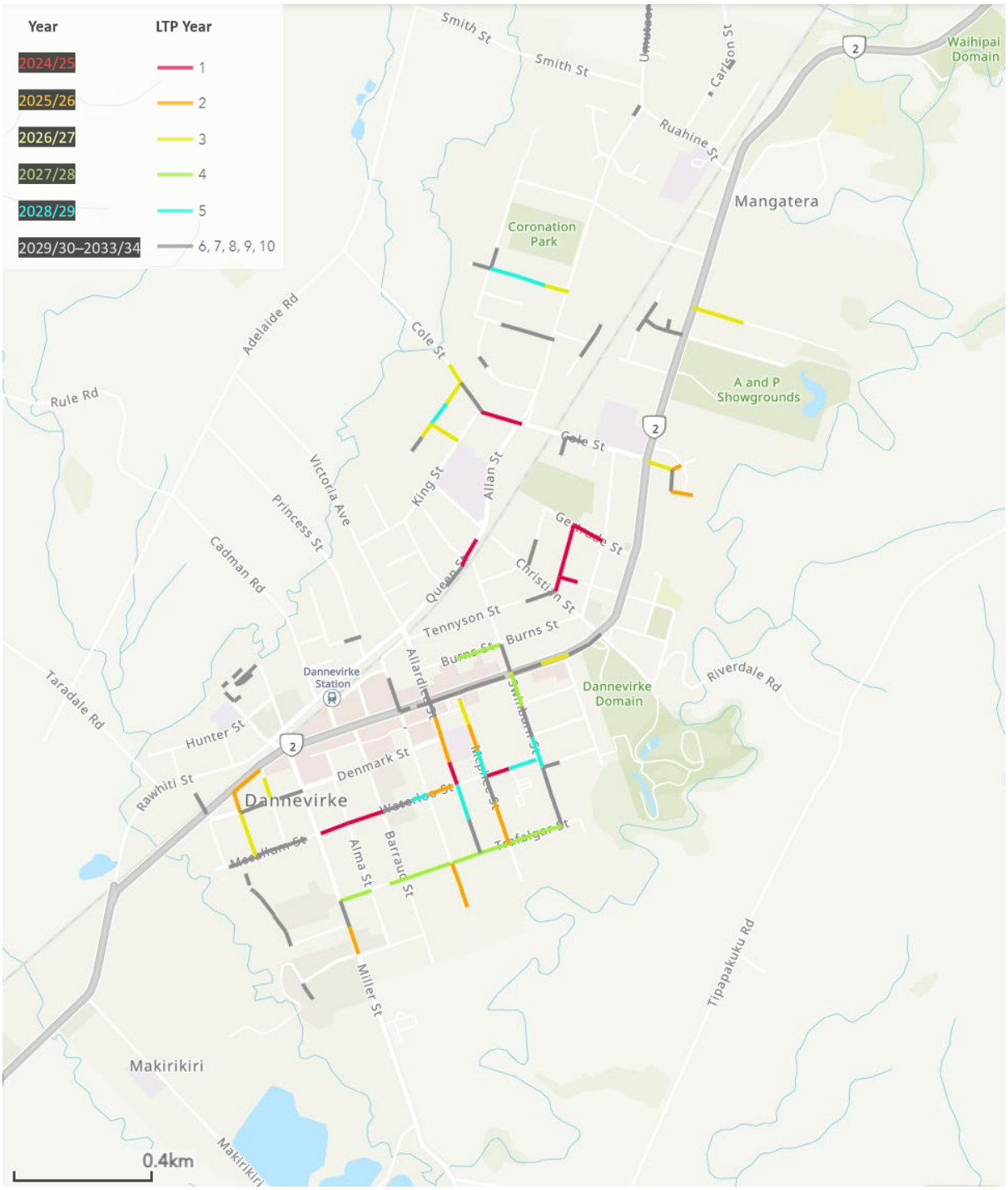
## 10.2. Wastewater Renewals

| Summary | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|
| 1 Dannevirke | 10,513 | $ 10,408,038 | $ 11,781,346 |
| 2 Woodville | 3,772 | $ 3,688,902 | $ 4,425,817 |
| 3 Pahiatua | 3,419 | $ 3,167,321 | $ 3,630,786 |
| 4 Eketahuna | 80 | $ 69,551 | $ 84,933 |
| **Total Wastewater Renewals** | **17,785** | **$17,333,812** | **$ 19,922,882** |

Proposed summary of all renewals of wastewater over the ten years of the draft Long-Term Plan commencing the 2024/25 financial year. See the following pages for the planned works by location and year.

## Wastewater Renewals

## 1 Dannevirke

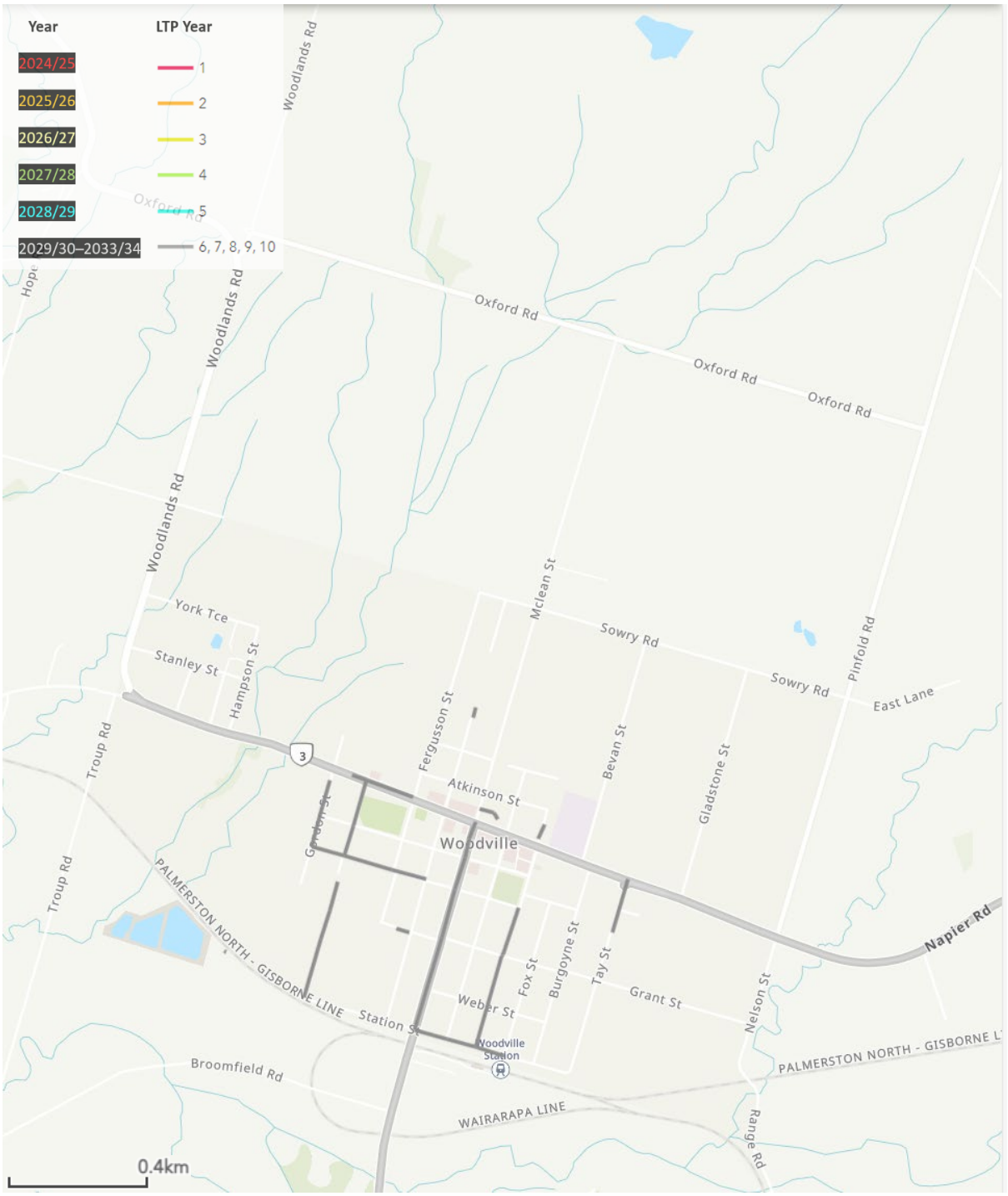



**Wastewater Renewals**

| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2024/25 | 1 | 1,146 | $ 1,142,631 | $ 1,176,689 |
| 2025/26 | 2 | 1,133 | $ 1,182,509 | $ 1,243,909 |
| 2026/27 | 3 | 1,196 | $ 1,195,489 | $ 1,287,450 |
| 2027/28 | 4 | 1,076 | $ 1,295,736 | $ 1,427,802 |
| 2028/29 | 5 | 820 | $ 771,141 | $ 869,018 |
| 2030/31 | 7 | 1,496 | $ 1,520,298 | $ 1,784,887 |
| 2031/32 | 8 | 1,775 | $ 1,668,439 | $ 1,998,917 |
| 2032/33 | 9 | 1,872 | $ 1,631,795 | $ 1,992,674 |
| | **Total** | **10,513** | **$10,408,038** | **$ 11,781,346** |

## Wastewater Renewals

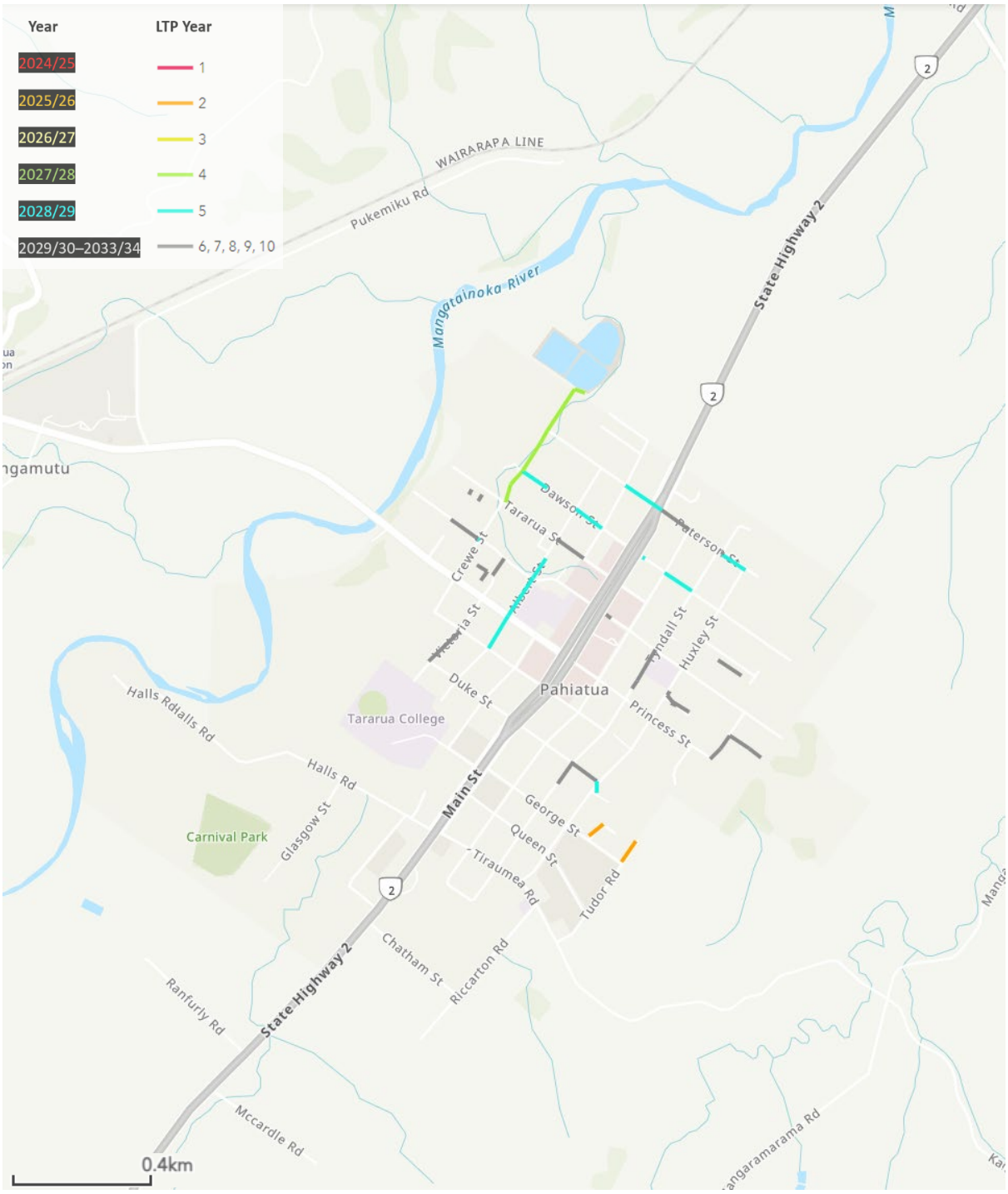
## 2 Woodville




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2029/30 | 6 | 1,239 | $ 1,306,951 | $ 1,504,251 |
| 2030/31 | 7 | 460 | $ 454,645 | $ 533,771 |
| 2032/33 | 9 | 471 | $ 502,198 | $ 613,261 |
| 2033/34 | 10 | 1,603 | $ 1,425,108 | $ 1,774,534 |
| | **Total** | **3,772** | **$ 3,688,902** | **$ 4,425,817** |

## Wastewater Renewals

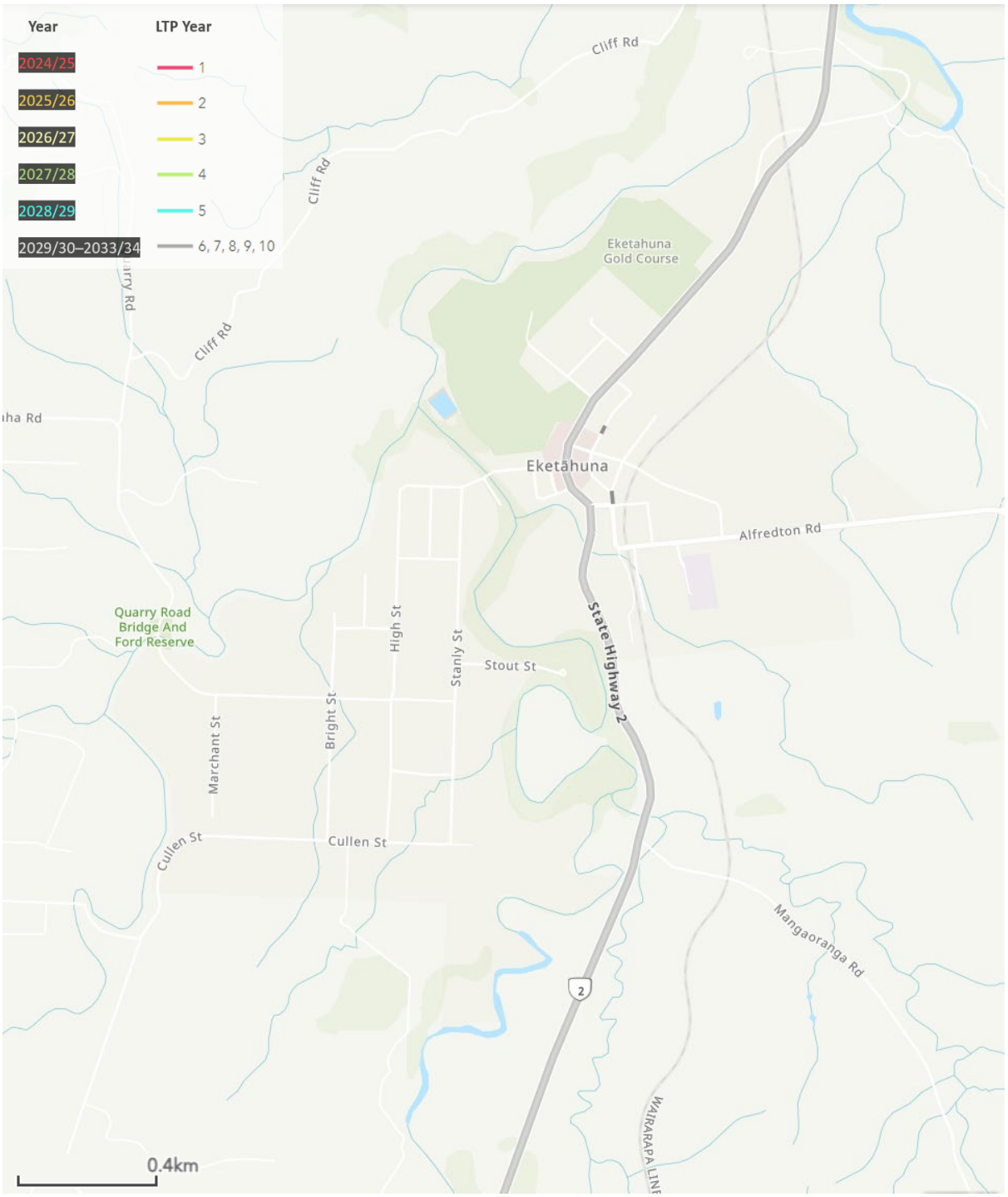
## 3 Pahiatua




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2025/26 | 2 | 158 | $ 155,282 | $ 163,345 |
| 2027/28 | 4 | 539 | $ 503,938 | $ 555,301 |
| 2028/29 | 5 | 1,070 | $ 1,011,047 | $ 1,139,374 |
| 2029/30 | 6 | 1,074 | $ 959,277 | $ 1,104,091 |
| 2032/33 | 9 | 46 | $ 39,993 | $ 48,837 |
| 2033/34 | 10 | 532 | $ 497,784 | $ 619,838 |
| | **Total** | **3,419** | **$ 3,167,321** | **$ 3,630,786** |

## Wastewater Renewals

## 4 Eketahuna




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2032/33 | 9 | 80 | $ 69,551 | $ 84,933 |
| | **Total** | **80** | **$ 69,551** | **$ 84,933** |

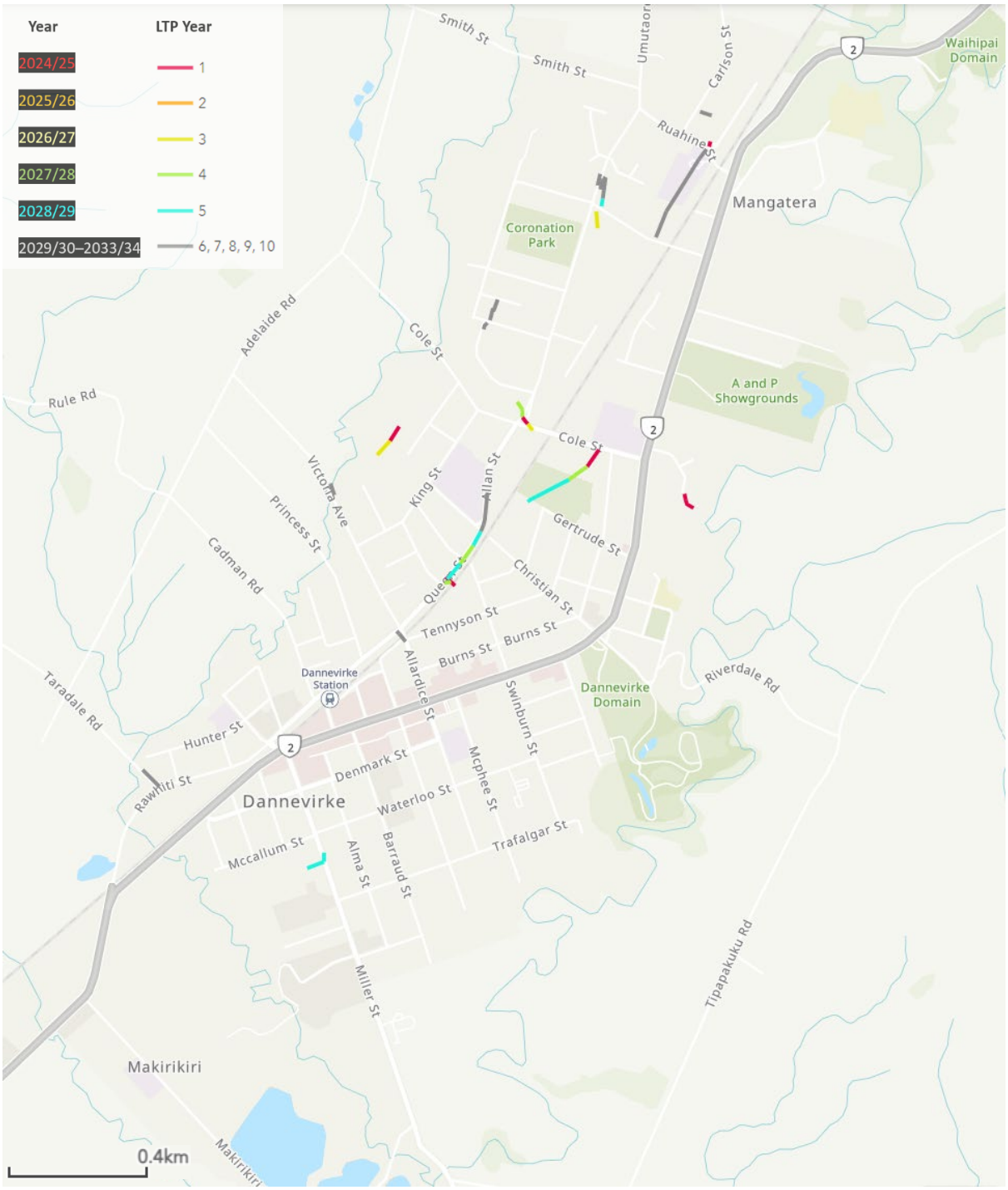
## 10.3. Stormwater Renewals

| Summary | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|
| 1 Dannevirke | 2,180 | $ 3,209,085 | $ 3,591,149 |
| 2 Woodville | 1,196 | $ 1,504,727 | $ 1,770,320 |
| 3 Pahiatua | 1,638 | $ 2,219,466 | $ 2,527,782 |
| 4 Eketahuna | 1,175 | $ 1,352,194 | $ 1,537,809 |
| **Total Stormwater Renewals** | **6,188** | **$ 8,285,472** | **$ 9,427,060** |

Proposed summary of all renewals of stormwater over the ten years of the draft Long-Term Plan commencing the 2024/25 financial year. See the following pages for the planned works by location and year.

## Stormwater Renewals

### 1 Dannevirke

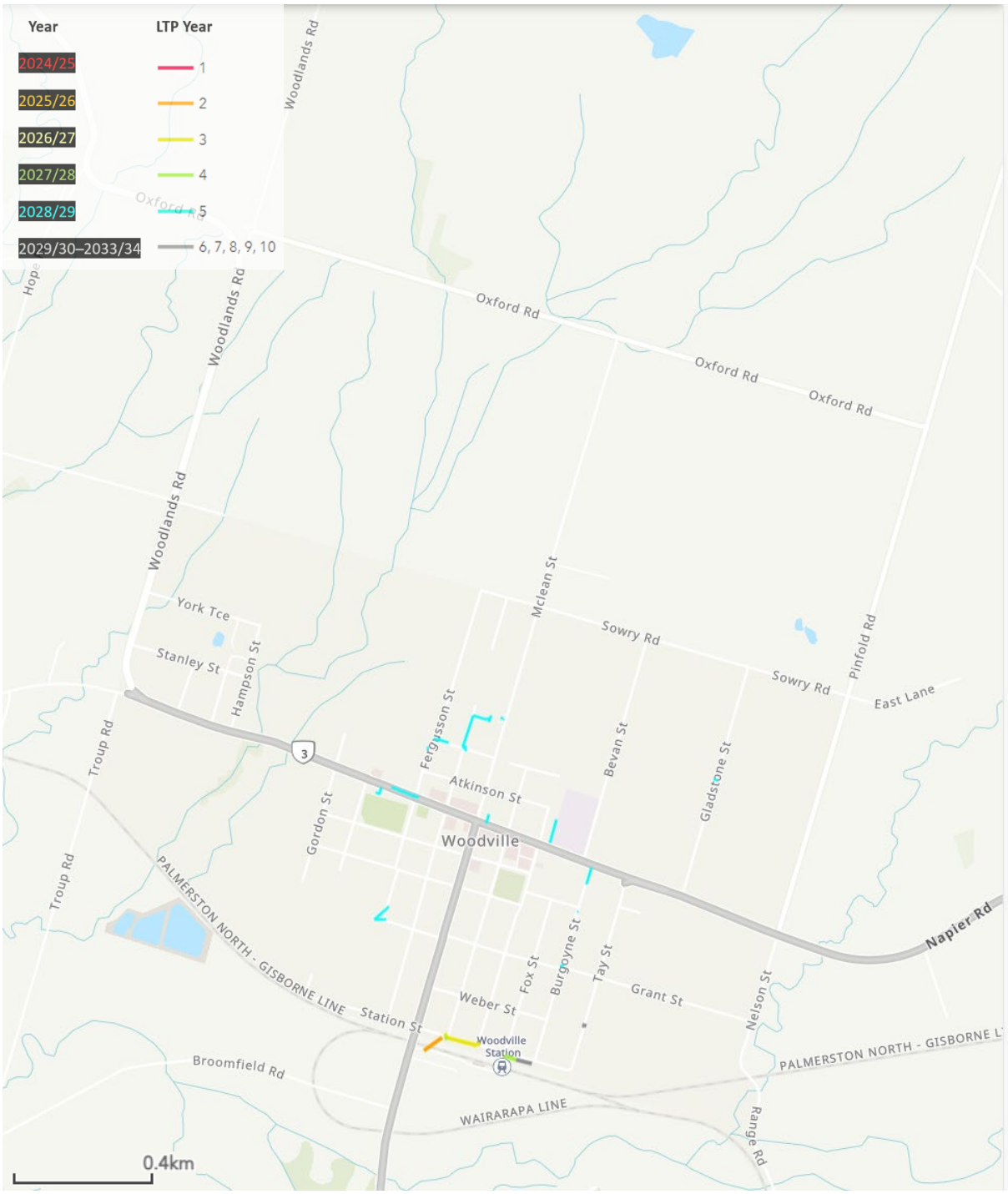



**Stormwater Renewals**

| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2024/25 | 1 | 298 | $ 456,861 | $ 470,479 |
| 2026/27 | 3 | 161 | $ 224,101 | $ 241,340 |
| 2027/28 | 4 | 237 | $ 399,552 | $ 440,275 |
| 2028/29 | 5 | 445 | $ 869,238 | $ 979,563 |
| 2029/30 | 6 | 696 | $ 823,906 | $ 948,285 |
| 2030/31 | 7 | 343 | $ 435,427 | $ 511,207 |
| | **Total** | **2,180** | **$ 3,209,085** | **$ 3,591,149** |

## Stormwater Renewals

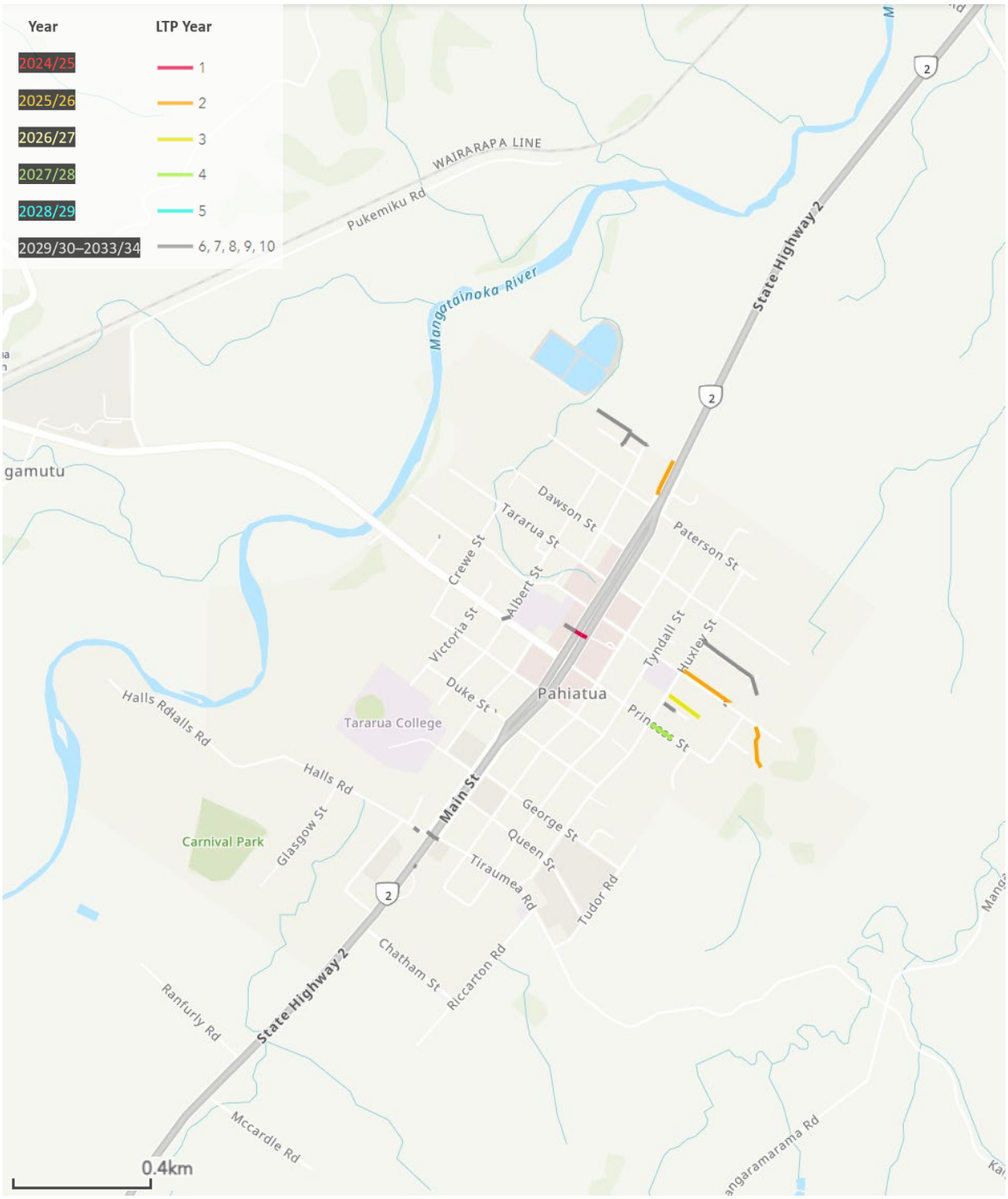
## 2 Woodville




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2025/26 | 2 | 83 | $ 124,562 | $ 131,030 |
| 2026/27 | 3 | 191 | $ 214,271 | $ 230,754 |
| 2027/28 | 4 | 237 | $ 301,714 | $ 332,466 |
| 2033/34 | 10 | 684 | $ 864,180 | $ 1,076,070 |
| | **Total** | **1,196** | **$ 1,504,727** | **$ 1,770,320** |

## Stormwater Renewals

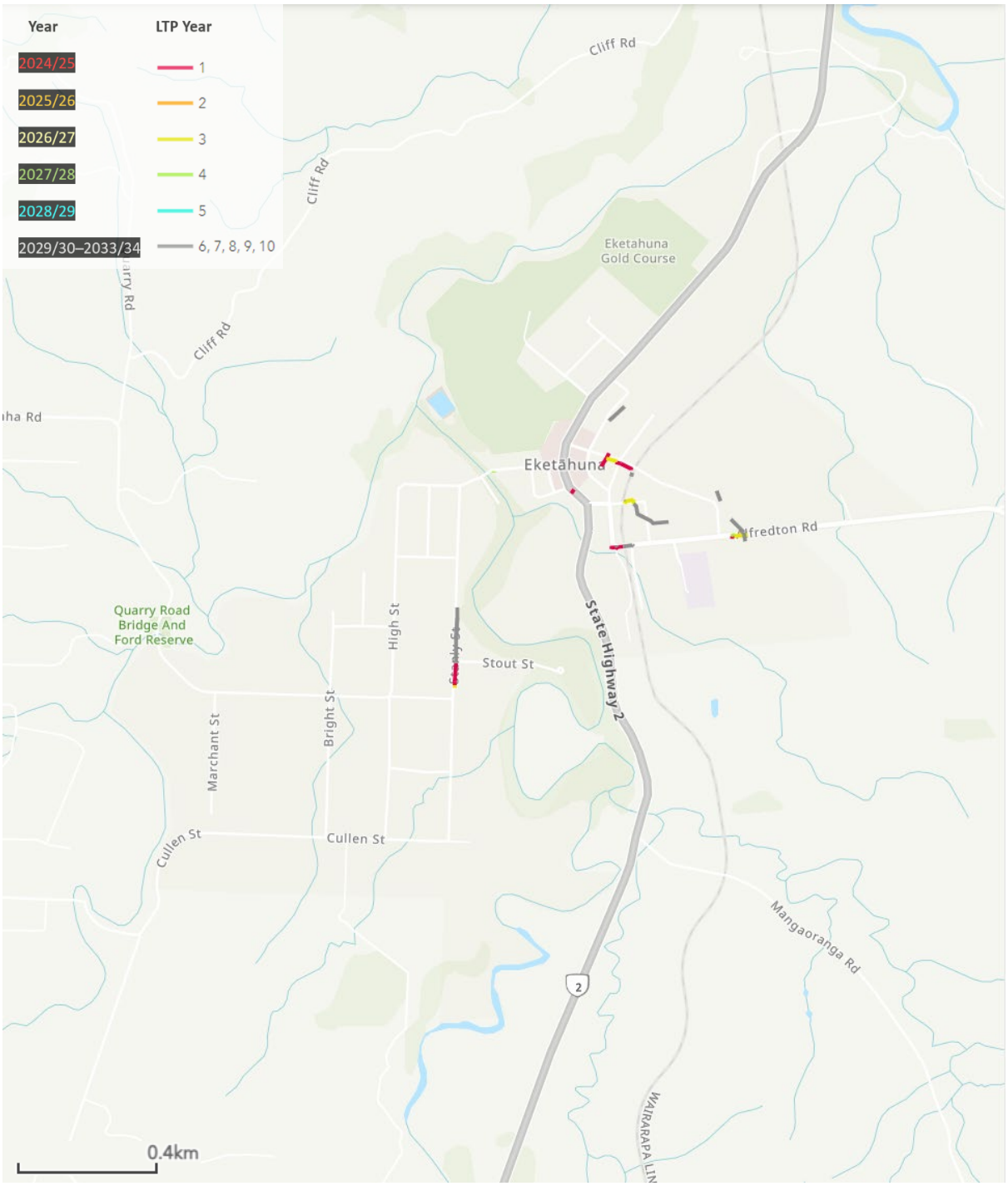
### 3 Pahiatua




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2024/25 | 1 | 49 | $ 62,188 | $ 64,042 |
| 2025/26 | 2 | 477 | $ 733,169 | $ 771,238 |
| 2026/27 | 3 | 138 | $ 207,104 | $ 223,035 |
| 2027/28 | 4 | 95 | $ 78,770 | $ 86,798 |
| 2031/32 | 8 | 200 | $ 315,849 | $ 378,409 |
| 2032/33 | 9 | 679 | $ 822,386 | $ 1,004,260 |
| | **Total** | **1,638** | **$ 2,219,466** | **$ 2,527,782** |

## Stormwater Renewals

### 4 Eketahuna




| Year | LTP Year | Length (metres) | Total Cost $ Un-inflated | Total Cost $ Inflated |
|---|---|---|---|---|
| 2024/25 | 1 | 271 | $ 300,135 | $ 309,080 |
| 2026/27 | 3 | 152 | $ 174,937 | $ 188,394 |
| 2027/28 | 4 | 16 | $ 19,632 | $ 21,633 |
| 2030/31 | 7 | 330 | $ 359,306 | $ 421,840 |
| 2031/32 | 8 | 406 | $ 498,184 | $ 596,862 |
| | **Total** | **1,175** | **$ 1,352,194** | **$ 1,537,809** |

# 11. Asset Improvements and Disposals

## 11.1. Water, Wastewater & Stormwater Assets

### 11.1.1. Asset Improvements

Asset improvements are identified through consideration of:

- Current performance and service level gaps
- Future service level gaps from:
- Increasing demand on the system
- Increased levels of service required, e.g., from increasing community expectations or increased regulatory or legislative requirements.
- Repeated asset failure
- Repeated reticulation leaks
- Ineffective and/or uneconomic operation
- Inefficient energy consumption
- Economics - when no longer economic to continue repairing the asset (i.e., the annual cost of repairs exceeds the annualised cost of its renewal
- Risk of failure and associated environmental, public health, financial and social impact justifies proactive action.
- Water supply (storage/production) or reduction in water leaks reduce demand and renewals reduce leaks and increase asset lifecycle.

Key projects and programmes we have identified over the next three years:

- Enhanced renewals and upgrades programme - water and wastewater reticulation
- Backflow Strategy
- Pressure Management Strategy and implementation
- Eketahuna Wastewater Treatment Plant upgrade
- Norsewood Wastewater treatment Plant upgrade
- Pahiatua Wastewater Treatment Plant upgrade
- Pongaroa Wastewater Treatment Plant upgrade
- Woodville Wastewater Treatment Plant upgrades
- Dannevirke Impound upgrade.
- Dannevirke Transmission main WTP to Service reservoir design and upgrade
- Dannevirke Treated water service reservoir renewal.
- Stormwater Network development strategy
- SCADA upgrades at water and wastewater treatment sites

### 11.1.2. Asset Disposals

Old three-water assets that are replaced are expected to have close to zero value. Surplus assets generally go for scrap, disposed of to landfill or left in-situ were deemed of no risk.

- Decommissioning can have a positive financial benefit, for example, land can be sold, assets can be repurposed (as ducts for cables or other pipelines, wastewater and stormwater lines used to increase storage) or recycled as scrap.
- Decommissioning can also incur a negative financial cost – for example, contaminated sites need to be cleaned up, demolition costs may be incurred, or a site has to be restored to near-original condition.

- In all cases asset disposal processes comply with Council's legal obligations under the Local Government Act 2002 which covers:

- Public notification procedures required prior to sale.
- Restrictions on the minimum value recovered.
- Use of revenue received from asset disposal.

## 11.2. Wastewater Renewals & Laterals

The age profile of renewals for wastewater pipes indicate that many are at end of their life based on their original years of installation. Furthermore, the underground CCTV inspection of stormwater and wastewater pipes has identified $11.3m of renewals of very poor and failed pipes. These are the pipes that should be replaced immediately. However, this is too much work for a single year and the works have been spread over the first six years, making it more achievable and affordable. The replacement of wastewater earthenware pipes is $6.7M*; concrete $2.6M asbestos$0.25M + stormwater $1.75M of the $11.3M.
This is the earthenware pipe profile:

| * Glazed Earthenware Wastewater Renewals – Category "5" Very Poor/Failed | | | | |
|---|---|---|---|---|
| **LTP Replacement Year** | **Average Age** | **Length (m)** | **$ Cost (Inflated)** | **Average $ cost/ per metre** |
| 1 | *99* | 1,114 | 1,012,267 | $909 |
| 2 | *81* | 772 | 770,231 | $997 |
| 3 | *84* | 1,005 | 977,304 | $972 |
| 4 | *73* | 392 | 455,738 | $ 1,163 |
| 5 | *93* | 1,459 | 1,535,939 | $ 1,053 |
| 6 | *99* | 1,71 | 1,955,659 | $ 1,143 |
| **Total** | ***89*** | **6,453** | **$6,707,138** | **$ 1,039** |

The Council cannot "untangle" the likelihood of failed laterals as the works programme is delivered. However, without a policy change, it is presently likely that Council mains will be replaced with no resolution of associated laterals that are likely to also have failed. One approach by Council could be to allow the replacement of private laterals on Council land to the boundaries of private land, as part of this renewal programme. This would be a pragmatic way to address the imminent or actual failure of private laterals that are often in the road corridor. Year 1 of the LTP could allow and fund a pilot study to assess the cost and issues encountered with private laterals as we embark on this major renewal programme for wastewater. Funding would be maintained within the existing capital budget with the potential risk of less work being performed in Year 1, but it will still be fiscally constrained. A policy paper can then be developed for Council during 2024/25 for consideration in the 2025/26 Annual Plan on the appropriate on-going position of Council for private wastewater laterals.

# 12. Investment Forecasts and Impacts on Rates -Requires Update

| 12.1. Total Investment | | 12.2. Capital Investment | 12.3. Operational Investment |
|---|---|---|---|
| **2024/25** | **$23.8M** | **$ 11.3M** | **$12.5M** |

This $2.2M increase represents 33% of the total rates increase of $6.44m in the first draft of the Year One of the LTP (2024/25). This contribution towards large increases in rates continues over much of the ten-year plan.

**To Update**

## Three Waters Masterplan

*The three waters masterplan was an assessment of the requirements for three waters and capital investment over the next thirty years, from 2023, for the four major towns of Dannevirke, Woodville, Pahiatua and Eketahuna. The matters considered were based on engineering information (e.g., optimised hydraulic performance for water systems), and the level of service improvement to deal with risks, meet growth, fresh-water standards and known consent requirements. It did not directly consider renewals, which were done and advised separately to the Department of Internal Affairs three waters reform programme (under the previous Labour-led Government and now repealed). Due to the extraordinary cost, the programme was reduced to reflect a level of affordability, largely by spreading the cost over a longer period of time than suggested by the original reports.*

*The following table compares the initial advice prepared by WSP and their sub-contractor Woods Consultants. The masterplan and its recommendations in GIS data format are a significant reference point for future works, which now have the benefit of flood plain modelling to reduce the likelihood of development (growth) in areas that may become vulnerable to future climate events. The following notes that the full programme of works for the next ten years is 47% less than the Masterplan, although 10% above he more realistic level subsequently advised to DIA in 2023.*

**To Update**

# 13. Key Projects

## 13.1. Water Projects

| Project # | Project | Primary Driver | Year/s | Costs $Millions Before Inflation | Costs $Millions After Inflation | Financial Data Confidence | Description and Objectives of the project | Benefits |
|---|---|---|---|---|---|---|---|---|
| W01 | District Water Reticulation Mains Renewals | Renewal | 2024/25 to 2033/34 | **$26.444m** | $30.383m | Estimate | Programmed renewals at end of lifecycle | Ensure continuity of service & meet level of service needs |
| W02 | Minor Dannevirke Impounded water supply improvements, pre-treatment tanks and alternate water source, once confirmed | LoS | 2024/25 to 2025/26 | **$2.900m** | $3.105m | Estimate | Patch repair undermined dam structure if required, to meet new dam regulations, alternate source from new location to spread risk and take from higher flow location of the Tamaki river, subject to consenting. | Legal compliance, Increase resilience & reduce risk to supply, & to manage climate risk |
| W03.1 | Dannevirke Transmission Main Plant and Reservoir #2 | Renewal | 2026/27 to 2027/28 | **$7.172m** | $7.867m | Estimate | Renew Critical Asset before failure at end of life, anticipate growth, add resilience as a single point of failure.<br>Plan to re-align the route and design for future maintenance | Ensure continuity of service & meet level of service needs |
| W03.2 | Dannevirke Transmission Main Reservoir #2 to Town | Renewal | 2028/29 to 2029/30 | **$6.806m** | $7.706m | Estimate | Renew Critical Asset before failure at end of life, anticipate growth, add resilience as a single point of failure.<br>Plan to re-align the route and design for future maintenance | Ensure continuity of service & meet level of service needs |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| W04 | Dannevirke Additional Tank at #2 Reservoir Site | LoS | 2024/25 to 2024/25 | **$2.500m** | $2.500m | Estimate | Current no.2 reservoir is at end of lifecycle, replacement would maintain the required two days storage and provide resilience to supply needs and greater demand from anticipated growth. | Resilience & growth & to manage climate risk |
| W05 | Woodville Water Treatment Plant Reservoir Replacement | LoS | 2025/26 to 2028/29 | **$3.270m** | $3.626m | Estimate | Replace earthquake prone structures at end of lifecycle, anticipate future growth and provide resilience with minimum two days storage, two new structures would be required to meet these needs and provides opportunity to routinely clean, inspect and service | Growth/ resilience |
| W06 | Woodville Alternative Water Source | LOS | 2024/25 to 2028/29 | **$1.205m** | $1.340m | Estimate | Alternative bore supply to add resilience to current single surface water take. Additional anticipated growth would place stress on the current supply and an alternative is required to service future demand needs | Growth/ resilience & to manage climate risk |
| W07 | District Water Reticulation Upgrades and Extensions | Growth | 2024/25 to 2031/32 | **$7.739m** | $8.667m | Estimate | To anticipate predicted growth needs of the district for upgrades and additional below ground infrastructure to service areas previously not serviced, opening land for urban development, additional housing and industry | Improve level of service and allow for some limited growth |
| W08 | Universal Metering | LoS | 2025/26 to 2033/34 | **$4.306m** | $5.043m | Estimate | Providing all users with a water meter as opposed to selective metering to reduce demand and manage resources more efficiently at source, for supplier and consumers | Maintain c resource co |
| W09 | Eketahuna Reservoir Replacement | Renewal | 2026/27 to 2027/28 | **$0.825m** | $0.907m | Estimate | Eketahuna has two timber clad storage tanks for potable water storage, these are at end of lifecycle and are to be replaced fit-for-purpose infrastructure with sufficient capacity for two days storage | Ensure continuity of service & meet level of service needs |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| W10 | Backflow Prevention | LoS | 2024/25 to 2028/29 | **$0.827m** | $0.893m | Estimate | To develop the strategy and rollout Backflow devices to maintain drinking water standards by reducing risk of cross- contamination to the reticulation network from rural, commercial and industrial | Safety & legal compliance |
| W11 | Reticulation Pressure Management | LoS | 2024/25 to 2026/27 | **$0.535m** | $0.569m | Estimate | As part of the leakage strategy to reduce water losses in the network, Pressure Reducing Devices installed in strategic areas of the reticulation network controls pressure and reduces losses from leaks and bursts where these are above the optimum desired pressure while maintaining optimum pressure for high demand periods and fire-fighting | Reduce wear, increase resilience & flow management |
| W12 | Pahiatua Water Treatment Plant Rising Main to Reservoir - Renewal | LoS | 2025/26 to 2026/27 | **$1.000m** | $1.064m | Estimate | Renewal of 1km section of 200mm Rising Main on the eastern side of SH2 to the reservoirs due to past multiple failures and change alignment route due to potential housing development area | Resilience & growth |
| W13 | Dannevirke Gregg Street booster station | LoS | 2026/27 to 2026/27 | **$0.350m** | $0.377m | Estimate | Review current design against future needs and growth projections, undertake upgrades to improve resilience and capacity | Resilience & growth |

## 13.2. Wastewater Projects

| Project | Project | Primary Driver | Year/s | Costs $Millions Before Inflation | Costs $Millions After Inflation | Financial Data Confidence | Description and Objectives of the project | Benefits |
|---|---|---|---|---|---|---|---|---|
| WW01 | District Wastewater Reticulation Renewals | Renewal | 2024/25 to 2033/34 | **$17.334m** | $19.923m | Estimate | Programmed renewals at end of lifecycle | Ensure continuity of service & meet level of service needs |
| WW02 | District Wastewater Reticulation upgrades and extensions | Growth | 2025/26 to 2029/30 | **$3.704m** | $4.164m | Estimate | To anticipate growth needs of the district for upgrades and additional below ground infrastructure to service areas previously not serviced, opening land for urban development, additional housing and industry; A pilot to establish extent of lateral renewals to private boundary (Years 1-3) | Ensure continuity of service & meet level of service needs |
| WW03 | Dannevirke Wastewater Treatment Plant irrigation discharge to land | LoS | 2026/27 to 2028/29 | **$4.494m** | $4.964m | Estimate | To meet tighter discharge consent conditions, anticipate population and commercial growth with greater discharge volume requirements and tighter regulation | Meet consent conditions |
| WW04 | Dannevirke Wastewater Treatment Plant upgrades | LoS | 2027/28 to 2028/29 | **$5.000m** | $5.628m | Estimate | To meet tighter discharge consent conditions, anticipate growth due to higher receiving /discharge volumes and need for enhanced treatment processes | Meet consent conditions |
| WW05 | Norsewood Wastewater Treatment Plant upgrades | LoS | 2026/27 to 2026/27 | **$0.788m** | $0.849m | Estimate | Enhanced treatment to meet tighter discharge consent conditions requiring additional treatment processes including addition of a wetland | Meet consent conditions |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| WW06 | Ormondville Wastewater Treatment Plant upgrades & Wetland | LoS | 2025/26 to 2028/29 | **$1.057m** | $1.165m | Estimate | Enhanced treatment to meet tighter discharge consent conditions requiring additional treatment processes including addition of a wetland | Meet consent conditions |
| WW07 | Pongaroa Wastewater Treatment Plant – plant upgrades | LoS | 2024/25 to 2028/29 | **$0.859m** | $0.931m | Estimate | Enhanced treatment to meet tighter discharge consent conditions requiring additional treatment process to meet conditions including addition of wetland | Meet consent conditions |
| WW09 | Eketahuna Wastewater Treatment Plant Upgrades | LoS | 2025/26 to 2027/28 | **$3.289m** | $3.495m | Estimate | Enhanced treatment to meet tighter discharge consent conditions requiring additional treatment processes including addition of a wetland | Meet consent conditions |
| WW10 | Pahiatua Wastewater Treatment Plant Upgrades | LoS | 2024/25 to 2025/26 | **$2.300m** | $2.408m | Estimate | Enhanced treatment to meet tighter discharge consent conditions requiring additional treatment process to meet conditions including addition of wetland | Meet consent conditions |
| WW11 | Woodville Wastewater Treatment Plant Upgrade | LoS | 2026/27 to 2027/28 | **$1.120m** | $1.212m | Estimate | Enhanced treatment to meet tighter discharge consent conditions requiring additional treatment processes including addition of a wetland | Meet consent conditions |
| WW12 | Woodville Wetland Development | LoS | 2025/26 to 2027/28 | **$1.123m** | $1.219m | Estimate | Enhanced treatment to meet tighter discharge consent conditions requiring additional treatment processes including addition of a wetland | Meet consent conditions |
| WW08 | District infiltration and Inflow strategy and implementation | LoS | 2024/25 to 2033/34 | **$1.860m** | $2.007m | Estimate | Assess current Situation from data already collected, develop a strategy to reduce levels of I&I followed by | Reduce volume and treatment requirements & increase resilience |
| WW13 | District Sludge Disposal Facility/ Cells | LoS | 2026/27 to 2026/27 | **$3.400m** | $3.689m | Estimate | Remove and treat sludge e.g. utilise digestor technology | Manage waste stream safely, minimise environmental impacts & climate emissions |

## 13.3. Stormwater Projects

| Project | Project | Primary Driver | Year/s | Costs $Millions Before Inflation | Costs $Millions After Inflation | Financial Data Confidence | Description and Objectives of the project | Benefits |
|---|---|---|---|---|---|---|---|---|
| SW01 | District Stormwater Reticulation Renewals | Renewal | 2024/25 to 2033/34 | **$7.421m** | $8.526m | Estimate | Programmed renewals at end of lifecycle | Ensure continuity of service & meet level of service needs |
| SW02 | District Stormwater Development | LoS | 2024/25 to 2026/27 | **$0.750m** | $0.790m | Estimate | Review, plan, design and costing upgrades to the stormwater network to meet future needs within urban areas | Prepare for climate change and improve level of service |