2024-34 Investment Planning and Advice

Porirua City Council

Step 3: Council decision on investment level

30 November 2023

Wellington Water

Our water, our future.

Where we are in the process:

Seeking Council direction on DRAFT three waters OPEX and CAPEX budgets

WWL is seeking direction from Council on DRAFT three waters OPEX and CAPEX budgets for the 2024-34 Long Term Plan (LTP) period

- WWL has presented a recommended OPEX budget and a maximum deliverable CAPEX budget to Council. Subsequently, Council has provided direction on baseline budgets for 2024-34 LTP OPEX and CAPEX based on the 2021-31 LTP. WWL has adjusted the three waters OPEX and CAPEX programmes to fit those budgets.
  - The Council directed CAPEX and OPEX budgets are referred to as the 'Council LTP Baseline' budgets throughout this presentation.

- We understand the funding constraints Council is under and appreciate the three waters programme needs to be weighed up against other Council budgets. However, WWL advises that:
  - the Council LTP Baseline OPEX budget will see a reduction in the maintenance of some assets, leading to more failures of Council's assets,
  - the Council LTP Baseline OPEX budget is insufficient to ensure existing levels of service are provided,
  - the Council LTP Baseline CAPEX budget does not deliver on the five regional strategic priorities and there are some significant projects which cannot progress under the Baseline CAPEX budget.

- Due to the significant risks Council will carry, WWL does not recommended the Council LTP Baseline OPEX and CAPEX budgets be adopted as the final three waters budgets for the 2024-34 LTP.

- The key risks of these budgets are detailed throughout this update. Options to mitigate the risks are presented for Council to consider (where possible), and a view is provided of where additional budget should be directed if funding above the Council Baseline budgets is available.

Operating Expenditure

Operating Expenditure (OPEX)

OPEX plays a critical role in maintaining Council's three waters assets and providing three waters service to its communities. Council officers have asked WWL to show various options to incrementally increase OPEX from the Council LTP Baseline level to the WWL recommended level.

	23/24 Budget	WWL Recommended 24/25	Option 1: Council LTP Baseline Budget	Option 2: Baseline + $1M	Option 3: Baseline + $2M	Option 4: Baseline + $3M
Monitoring & Investigations	$2.6M	$4.1M	$2.7M	$2.7M	$2.8M	$3.6M
Operations	$0.2M	$0.2M	$0.2M	$0.2M	$0.2M	$0.2M
Planned Maintenance	$2.1M	$2.4M	$1.4M	$1.8M	$2.3M	$2.4M
Reactive Maintenance	$5.2M	$4.7M	$3.7M	$4.2M	$4.7M	$4.7M
Treatment Plant	$2.2M	$2.9M	$2.9M	$2.9M	$2.9M	$2.9M
Management & Advisory Services	$1.6M	$1.6M	$1.5M	$1.5M	$1.5M	$1.5M
TOTAL	**$13.8M**	**$15.9M**	**$12.3M**	**$13.3M**	**$14.3M**	**$15.3M**

OPEX budget allocated to leak detection and repair:

Budget	$2.8M	$3.2M	$3.1M	$3.2M	$3.2M	$3.2M
Proportion of budget	20%	20%	25%	24%	22%	21%

Council LTP OPEX budget

The Water Services Entities Act 2022 states OPEX budgets for the 2024-34 LTP should ensure the levels of service currently planned to be provided this year [FY2023/24], will at least be maintained. Option 1: Council Baseline Budget is insufficient to meet this requirement.

- Much of the activity within the OPEX budget cannot be avoided or deferred as it is essential for the operation and maintenance of Council's assets. For example, costs required for the day-to-day operation of critical services where the consequence of failure is very high or for maintaining compliance with legislation, regulation, or industry standards.

- The following activity will be prioritised across all OPEX options:
  - Running costs of the Wastewater Treatment Plant Joint Venture with WCC
  - Operations
  - Monitoring including active leakage control
  - Indirect WWL overhead to manage three water assets on behalf of council (aiming for a 5% reduction in costs)
  - Drinking water reactive maintenance

Council LTP Baseline budget + additions

Four options above the council baseline OPEX budget are presented for council consideration, each option incrementally reduces Council risk and works towards meeting expected levels of service. Planned and reactive maintenance below the WWL recommended level is expected to result in an increase in the numbers of service failures, sewage overflows, leaks and flooding.

Option 2: Baseline budget + $1M

- Additional budget prioritised to planned and reactive maintenance in the following areas:
  - Reservoirs, flushing wastewater pipes and pump stations, Joint venture pumpstation
  - Reinstatements, stormwater network maintenance, wastewater network maintenance and wastewater pumpstations

Option 3: Baseline budget + $2M

- Additional budget prioritised to planned and reactive maintenance, and a small amount to monitoring and investigations in the following areas:
  - Drinking water network maintenance, pump stations and reservoirs, flushing stormwater pipes
  - Stormwater network maintenance, wastewater network maintenance and pumpstations
  - Wastewater roving team inflow and infiltration investigation

Option 4: Baseline budget + $3M

- Additional budget prioritised to monitoring and investigations with a small amount to planned and reactive maintenance in the following areas:
  - Growth planning, critical asset condition assessments, pump station and reservoir facility management plans, growth modelling, climate change investigations, inflow and infiltration investigations, biosolids management, pump and blow assessments
  - Flushing stormwater pipes
  - Joint venture wastewater pump maintenance

WWL Recommended option: Baseline budget + $3.6M

- Additional budget prioritised to monitoring and investigations with a small amount to planned maintenance in the following areas:
  - Sustainable water supply investigations, asset register, growth modelling, inflow and infiltration investigations, carbon monitoring
  - Drinking water integrated meter management
  - Management and advisory services

Capital Expenditure

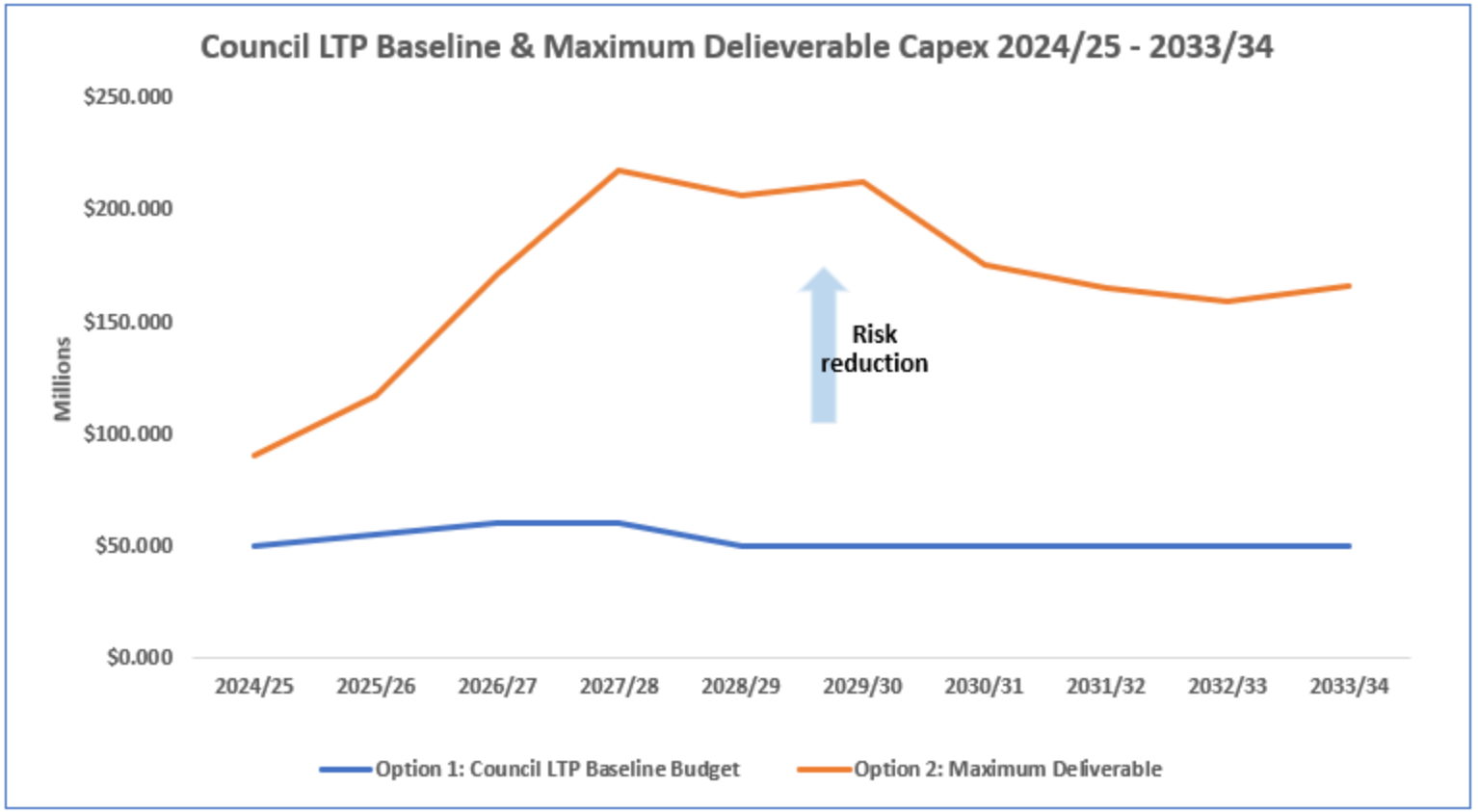
FY2023/24 CAPEX Forecast

Council's FY2023/24 budget is $66.51M. Council has asked WWL to consider any cost savings that could be made to bring the full year spend down by up to $15M

- Council has asked WWL to consider any cost savings that could be made in FY2023/24 to bring expenditure below the FY2023/24 budget of $66.51M and requested a target figure of $50M be investigated.
- WWL is working with Council officers to look at options to bring the FY2023/24 forecast below budget. The following activity is being considered for deferral to later in the LTP period or beyond the 10-year period:
  - Karehana Catchment Stormwater Improvements
  - Aotea Low Level Reservoir
  - Smaller projects underway but not yet contractually committed
- These changes will reduce the FY2023/24 forecast, however, WWL is currently forecasting the full year expenditure to be in the range of $60M - $66.51M.
- The primary reason WWL is tracking to budget is the Central City Storage Tank increasing in total cost, with the greatest cost increases seen in FY2023/24 and FY2024/25.

Capital Expenditure (CAPEX)

The Council LTP Baseline Budget and the WWL Recommended Maximum Deliverable budget illustrate each possible end of Council's CAPEX budget spectrum. The gap between the Council LTP Baseline Budget and Maximum Deliverable budget includes risks and opportunities that could be addressed if a budget above the baseline were made available



- Council LTP Baseline Budget:
  - This is a high-risk option below the current FY2023/24 level of CAPEX for Council's three waters assets. Some major projects will need to be deferred, and network renewals not delivered at a rate WWL recommends under this budget.
- WWL Recommended Maximum Deliverable:
  - A level of CAPEX WWL is confident it could deliver for Council.
  - This is a step up in CAPEX for the city to work towards meeting expected levels of service but is still insufficient to address all CAPEX needs. The investment need for the City exceeds this budget level.

Programme to fit Council Baseline LTP Budget

The capital programme to fit the Council Baseline LTP Budget will be built to make best use of the budget and ensure existing commitments continue to be delivered

The following underlying principles have been applied to build Option 1 and Option 2 capital programmes, to fit within the Council LTP Baseline budget:

- Continuing with contractually committed projects already in the delivery phase to ensure continuity of activity underway
- Prioritise the following core activity before starting anything new:
  - All compliance / consenting work, for example resource consent renewals and progressing the global stormwater and network overflow consents.
  - Control systems and modelling – these programmes that are considered essential activity to manage assets and support other investment
  - Reactive renewal budget for all asset types
  - Minimum levels of budget for planned renewals across all asset types
  - Addressing most urgent renewal activities at Treatment Plants to ensure operational compliance

- Growth projects have been deferred under this approach
  - Note, externally funded and delivered programmes such as Eastern Porirua and the Plimmerton Farms development are not considered part of the WWL delivered three waters programme.

Options for investment within the Council Baseline LTP Budget

The Council Baseline LTP Baseline Budget is insufficient to deliver a balanced three waters capital programme

- Due to the cost profile of the Central City Storage Tank, it is not possible to balance the capital programme against the Council Baseline LTP Budget on an annual basis.
- Two capital programme options that fit within Council's 10-year Baseline LTP Budget are presented for Council consideration:
  - Option 1: Council Baseline budget including Universal Residential Smart Meters
  - Option 2: Council Baseline budget excluding Universal Residential Smart Meters

- To ensure continuity of this major project, the capital programme will be built to balance over the first three years (from FY2023/24 to FY2026/27), and over the full 10 years of the LTP.

CAPEX Options	Year 1 24/25	Year 2 25/26	Year 3 26/27	10-year total
Council Baseline LTP Budget	$50.0M	$55.0M	$60.0M	**$525.0M**
Option 1: Council Baseline budget including universal residential smart meters	$76.1M	$53.6M	$35.4M	**$551.3M**
Option 2: Council Baseline budget excluding universal residential smart meters	$75.4M	$54.8M	$34.7M	**$538.6M**
Maximum Deliverable	$90.9M	$117.0M	$171.8M	**$1,686.0M**

Options for investment within the Council Baseline LTP Budget

The Council Baseline LTP budget is insufficient to deliver a balanced three waters capital programme

- Over the 2024-34 LTP period, the Council Baseline LTP Budget is largely consumed by existing commitments, ongoing programmes of core activity, and work required to meet consent compliance.

- A core part of the Wellington Region's Water Supply and Demand Strategy is to deliver Universal Residential Smart Meters within the first half of the 2024-34 period. To do this in Porirua within the Council Baseline LTP Budget will the require network renewals to be delivered at a rate much slower than recommended by WWL.

- Therefore, the two capital programme options that fit within Council's Baseline LTP Budget need to be considered with an understanding of the associated risks.
  - Option 1: Council Baseline budget including Universal Residential Smart Meters – reduced planned network renewals
  - Option 2: Council Baseline budget excluding Universal Residential Smart Meters – increased planned network renewals

- To fit within the Baseline LTP Budget, the following projects will be deferred to start beyond the 10-year LTP period in both Option 1 and Option 2:
  - Low Level (Aotea) Reservoir (prev Elsdon)
  - Karehana Stream Stormwater Improvements
  - WWTP JV Sludge Reduction (Dryer)
  - Paremata Wastewater Trunk Upgrade Stage 2
  - Network renewals at WWL recommended rate

Major projects

Several high-cost projects account for the majority of Council's CAPEX programme in the early years of the 2024-35 LTP Period. There are also a number of priority projects which are unfunded in the Council LTP Baseline Budget. Deferring these carries risk.

	Years 1	Years 2	Years 3	LTP 2024-34
Baseline Budget	**$50.0M**	**$55.0M**	**$60.0M**	**$525.0M**
Projects within Baseline Budget that contribute to overspend in Year 1:				
Central City Wastewater Storage Tank (contractually committed)	$38.0M	$14.0M	$2.0M	**$54.0M**
WWTP JV Odour Treatment (compliance related)	$7.2M	$0.8M		**$8.0M**
WWTP JV Solids Handling upgrade (compliance risk related)	$7.0M	$15.0M	$3.3M	**$25.3M**
Universal Residential Smart Metering (In Option 1 programme)	$0.7M	$1.2M	$2.9M	**$33.5M**
Unfunded projects WWL recommends Council progress within the 2024-34 LTP period (not in order of priority):				
Karehana Catchment Stormwater Improvements - Minimum Project Scope (Airlie Rd Inlet & Outlet)	$3.88M	-	-	**$3.88M**
PCC Low Level (Aotea) Reservoir (prev Elsdon)	$15.5M	$12.0M	-	**$27.5M**
Paremata WW Trunk Update	$3.0M	$12.0M	$15.0M	**$70.0M**
WWTP JV Sludge Reduction (Dryer)	$0.7M	$2.6M	$19.5M	**$65.0M**
Network Renewals at WWL recommended rate (additional budget required is dependent on which programme Council decides on)	Up to $14.1M	Up to $13.1M	Up to $14.1M	**Up to $237.3M**

Council Baseline LTP budget – Key activity delivered

Outside the ongoing core programmes of work, the following are the key projects that are expected to be delivered in the first three years under Option 1 and Option 2.

Continuing delivery of the following contractually committed projects

- Central City Wastewater Storage Tank
- Mana Avenue Watermain renewal
- Spinnaker Drive Ridermain renewals

Porirua Wastewater Treatment Plant

- Solid Handling Upgrade project
- Odour Control Management project
- Emergency power back-up for UV system

Other – close out costs for projects in delivery

- Karehana Catchment Stormwater Improvements

Network renewals across all waters

Activity to support Sustainable Water Supply and Demand

- Pressure Management (reduced budget below WWL recommendation)
- Reactive renewal of existing water meters

Improving Environmental Water Quality

- Modelling activities and catchment management plans to respond to Global waster water overflow and stormwater quality consents
- Pilot sub catchment interventions for storm and wastewater

Resource consent compliance requirements

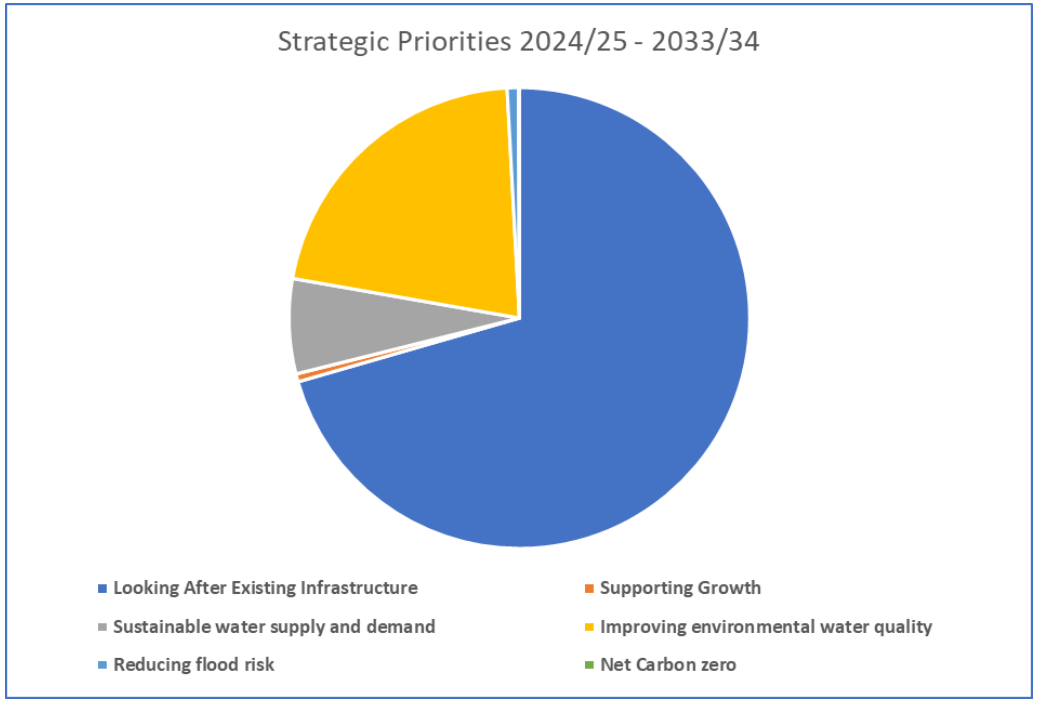
- Solid Handling Upgrade project
- Odour Control Management project
- Emergency power back-up for UV system

Option 1: Council Baseline budget including Universal Residential Smart Meters

Option 1 includes Universal Residential Smart Metering and reduced network renewals to 42% of the target renewal rate over the 10-year LTP period

- Due to historic under investment in renewals activity, Options 1 still prioritises investment towards activity to looking after existing infrastructure. Improving environmental water quality and sustainable water supply and demand receive some investment.
- Under Option 1 there is minimal activity in council's capital programme to work towards reducing flood risk, supporting growth and achieving net carbon zero.
- The table below illustrates the rate of the WWL target network renewals that will be completed in the first three years of the 2024-34 LTP period, and over the full ten years under Option 1.

	Y1	Y2	Y3	10 year average
Drinking Water Network Renewals	70%	43%	40%	44%
Stormwater Network Renewals	60%	60%	60%	60%
Wastewater Network Renewals	25%	35%	40%	39%

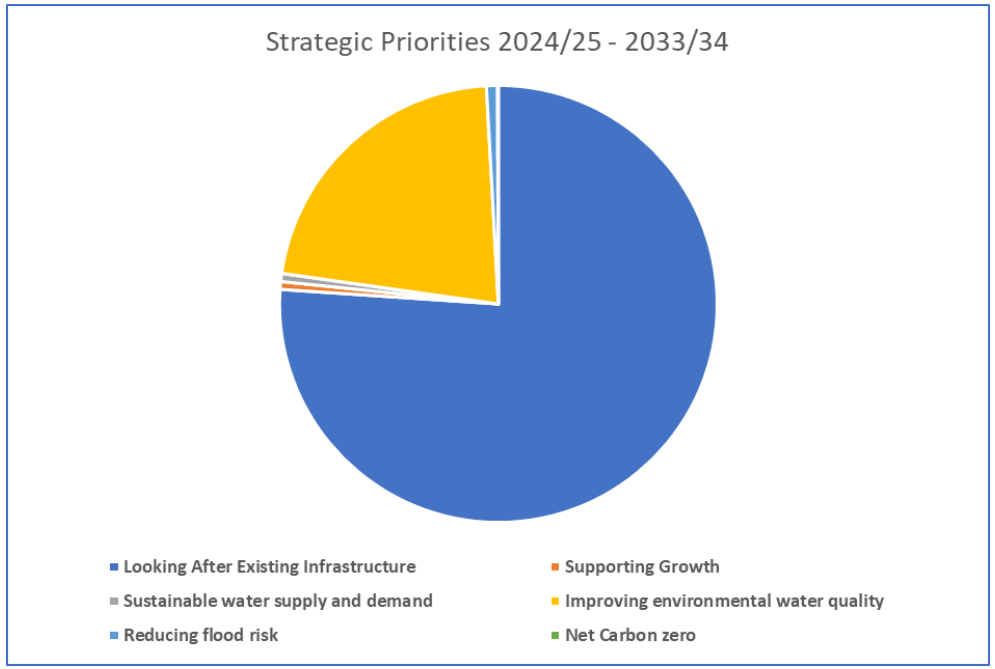


Option 2: Council Baseline budget excluding Universal Residential Smart Meters

Option 2 includes excludes Universal Residential Smart Metering from the 2024-34 LTP and increases investment in network renewals to 47% of the target renewal rate over the 10-year LTP period

- Option 2 prioritises investment on looking after existing infrastructure and sustainable water supply and demand.
- Under Option 2 there is minimal activity in council's capital programme to work towards sustainable water supply and demand, reducing flood risk, supporting growth and achieving net carbon zero.
- The table below illustrates the rate of the WWL target network renewals that will be completed in the first three years of the 2024-34 LTP period, and over the full ten years under Option 1.

	Y1	Y2	Y3	10 year average
Drinking Water Network Renewals	70%	50%	50%	49%
Stormwater Network Renewals	60%	60%	60%	60%
Wastewater Network Renewals	25%	50%	50%	45%



Low Level (Aotea) Reservoir (prev Elsdon)

The Low Level (Aotea) Reservoir will provide an additional water storage for Porirua CBD, Kenepuru, Broken Hill and Titahi Bay to meet forecast operational levels of service and support growth.
This project is deferred outside the 2024-34 period under the Council LTP Baseline budget.

Outstanding Risks

- Shortfall in drinking water storage in PCC due to planned population growth
- Day-to-day operation of the current network could carry on but with higher risk of loss of supply - in the event of a bulk network outage on peak summer day there would be around 24 hours to resolve the issue before there is a risk of loss of supply.
- For planned works at off-peak times, the existing storage would not support a full two days of supply before loss of supply occurs – existing storage can support around 40 hours of Average Day Demand. This could put constraints on the type of planned works that could be undertaken.
- Should the reservoir be delayed while residential and commercial development continues the risk of loss of supply from a bulk network outage on peak summer day increases, and the flexibility to undertake planned works on the bulk network decreases. The amount of water for survival for each customer will also decrease if there is a large earthquake.
- Loss of resource consent, designation if not started by 2028, would require re-application with potential risk of objection due to proximity of newly built residential properties.
- Changes in seismic design standards outside the LTP period may bring about additional design resulting in increase price over and above cost fluctuation

Proposed Mitigation:
There is no mitigation with deferral of this activity.

Karehana Catchment Stormwater Improvements

A solution to improve the level of service above existing levels is deferred outside the 2024-34 LTP period under the Council LTP Baseline budget. Work is still required to renew the pump to ensure the existing level of service is maintained and WWL crew can safely complete maintenance work on the pipe.

- The Plimmerton area in Porirua has experienced major flooding events over the past five years (2015, 2016 and 2020) with numerous residential properties requiring extensive renovations to make them fit for habitable purposes.
- Catchment level investigations have been completed through to a concept level of design. This has identified that work to lift the level of service and protect the houses affected by flooding in the Karehana Catchment area is now estimated at $32M to $41M.
    - This is approximately $12M to $21M more than budgeted for in the 2021-31 LTP.
- Council has raised concerns about the limited benefits achieved and the high costs of investment at Karehana Catchment. Council officers have therefore asked WWL to stop capital improvements works to lift the level of service and instead direct effort to maintaining the existing level of service.
- Work is required to renew the existing pump in the Karehana catchment to ensure the existing level of service is maintained and WWL can safely complete maintenance work. $0.80M has been allocated within the Baseline Budget, however this is a high-level estimate and the cost to complete this work could be higher.

Outstanding Risks

- Maintaining the existing level of service will leave the community vulnerable to the impacts of flooding.
- Should funding become available detailed design and consenting would be required to be complete before any physical works could commence.
- Approximately $4M has been expended to date to complete investigations and concept design. WWL and Council will need to discuss how these costs are to be treated (kept as CAPEX expense or transferred to OPEX) should works stop.

Proposed Mitigation:

WWL recommends the Airlie Rd inlet and outlet should be upgraded at a minimum as the current maintenance and operational requirements are not sustainable and temporary pump discharge is not consented. Doing this work will:

- Provide protection from overland flow in more frequent lower intensity rainfall events
- Reduce health and safety risks during maintenance and operation
- Reduce health and safety risk to wider Porirua community during intense rainfall events by freeing up resources, normally responsible for operating the temporary pump, to respond in different areas.
- Reduced maintenance of Airlie Rd outlet

~$3.88M above the $0.80M already allocated in the budget.

Porirua Wastewater Treatment Plant Odour Treatment

New Resource Consent requirement to have odour treatment at Porirua Wastewater Treatment Plant by mid 2025.
This has been included in the baseline programme but contributes to the Council Baseline LTP budget being exceeded in Year 1 of the LTP period.

- Odour from the Porirua Wastewater Treatment Plant has been impacting neighbouring properties in recent years.
- A Best Practicable Option study was completed and submitted to Greater Wellington Regional Council as per resource consent condition requirement. The study recommended odour treatment for several process areas on the site.
- The consent condition date for odour control treatment is July 2025, WWL have requested GWRC an allowance to complete by October 2025 as the realistically achievable deadline.

Outstanding risks

- This project is to meet specific resource consent condition requirements. Failing this is very likely to result in non-compliance.

Proposed Mitigation:
No opportunity to mitigate the risk, it is a condition requirement of the newly granted resource consent.

WWL could seek an extension of time from Greater Wellington Regional Council, if Council directs WWL to do so. However, it is expected that significant extension is very unlikely to be granted.

Porirua Wastewater Treatment Plant Solids Handling Upgrade

This project will address current constraints, resolve poor asset condition, prevent potential future non-compliance at the Wastewater Treatment Plant, and ensure the solids handling equipment can meet future population growth (2050 horizon). Solids Handling includes sludge thickening, dewatering and associated infrastructure.
This has been included in the baseline programme but contributes to the Council Baseline LTP budget being exceeded in Year 1 of the LTP period.

- Effective solids handling is key to producing sludge that meets disposal requirements at the Spicer Landfill. However, poor asset condition means operational failure is possible at any time.
- This project will address the condition and capacity issues identified within the current solids processing train (thickening and dewatering), preventing potential future non-compliant sludge carry-over to the treated effluent discharge, as occurred in 2021.
- The upgrade is also designed to:
  - improve sludge cake quality, therefore potentially reduce ongoing OPEX.
  - Increase capacity to treat sludge for 2050 population projection.

Outstanding risks

- Due to the capacity constraints in the solids handling train, the potential remains for sludge carry-over into the treated effluent discharge (as occurred in 2021) until additional capacity is installed. If another sludge overflow event occurs, Council will be non-compliant with the new treated effluent discharge consent conditions and risks prosecution.
- Poor sludge cake (wetter cake) results in higher OPEX and may create handling and odour challenges at the landfill.
- Continuation of liquid stream operational challenges due to poor performance of the solids processing stream.

Proposed Mitigation:
While the concept design is being finalised, more cost-effective construction methodologies and opportunities to re-use materials from the enabling works are being explored.

Costs could be reduced to only complete detailed design in FY2024/25, with all other works deferred to start in FY2025/26 onwards. This would bring FY2024/25 costs down to approximately $1.5M but would result in inefficiencies of overall project delivery, increased total project costs and prolonged risk of non-compliance. **WWL does not recommend this due to the risks to Council.**

Porirua Wastewater Treatment Plant Sludge Reduction

The current approach to dispose of sludge from the Porirua Wastewater Treatment Plant is unsustainable. This project is deferred outside the 2024-34 period under the Council LTP Baseline budget.

- Currently, dewatered sludge cake from the Porirua Wastewater Treatment Plant is disposed at the Spicer Landfill.
- Continuing growth in the catchment results in increased sludge production rates and dewatered sludge cake disposal at the Spicer Landfill is expected to be constrained from 2027 onwards.
  - Exact timing depends on the success of waste reduction initiatives from Waste Minimisation Management Plan and reconsenting of Spicer Landfill.
- Provision of a sludge volume reduction process (e.g. dryer) for Porirua Wastewater Treatment Plant dewatered sludge cake will mitigate the known disposal constraints.

Outstanding risks

The likelihood of the following risks occurring is high under the Council LTP Baseline budget:

- Excess dewatered sludge cake would need be routed to another landfill, most likely outside the Wellington region. Alternative disposal routes are not readily available.
- If the sludge cake dry solid (DS) percentage is less the 20% DS (as currently produced) then this cake may not be accepted at another landfill site.
- Alternative disposal routes result in higher operating cost (additional haulage).
- A dryer facility is complex and will take approximately 4 - 5 years to commission.

Proposed Mitigation:

Porirua WWTP sludge cake could potentially be sent to another sludge dryer within the Wellington region (e.g. Seaview WWTP) if decision was made to develop a regional facility. This mitigation would address the above risks while reducing Porirua JV CAPEX but would require other Council's agreement and would require a quick directional decision. The Seaview WWTP Dryer Renewal project timeline is 2023-2028; once the concept design size is agreed, this option will disappear due to the urgency to renew this asset.

The marginal cost for additional capacity to treat Porirua WWTP sludge within a regional dryer facility is expected to be significantly less than a stand-alone facility for Porirua. A regional dryer facility would incur higher ongoing OPEX cost (cake transport) than an onsite dryer option but should be less than the current sludge disposal OPEX.

Paremata Wastewater Trunk Upgrade Stage 2

This project will reduce the number of wastewater overflows to Te Awarua o Porirua (the Porirua Harbour) and enable planned growth in northern Porirua.
This project is deferred outside the 2024-34 period under the Council LTP Baseline budget.

- The 2019 Network Improvement Plan identified renewal and upgrade of the Paremata trunk main (in conjunction with the City Centre Wastewater Storage Tank) as a critical step towards reducing network overflows (from ten to two per year) and to increase capacity for planned growth in northern Porirua.
- Condition assessment assessment completed in 2021 assessed 3kms of the 4km very high critical asset pipeline as being very poor (grade 5) condition requiring renewal. Renewal is to occur in two stages:
  - Stage 1 - emergency new 1km pipe to duplicate a section of the grade 5 pipe that failed in 2021 (completed in mid-2022).
  - Stage 2 – duplicate the remaining 3km of pipeline and re-line the grade 5 pipe so it can return into service.
- Duplication will provide redundancy, reduce existing overflows and increase capacity for the planned growth in northern Porirua.

Outstanding risks

- This project is a critical step of a wider network improvement plan – stopping this will mean:
  - Significant risk of the remaining VHCA grade 5 pipe failing. If it fails it will have to be renewed as an emergency project as there is nil redundancy (as happened in 2021).
  - wastewater overflows to Porirua harbour from Paremata pump stations will not be reduced until the network has capacity.
  - the network will not provide the capacity required for planned growth in northern Porirua.

Proposed Mitigation:
Minimum short-term recommendation is $2m (FY25 + FY26) to complete design and $30m (FY27 + FY28) to duplicate the remaining 2km of failing pipeline along SH59.

Sustainable Water Supply and Demand

WWL's future options study demonstrates that attempting to meet PCC and the region's water supply requirements without universal smart metering and increased water loss management will require investment in water supply options that will cost significantly more than the recommended approach, will result in increased carbon emissions, and create worse outcomes for freshwater and the environment.

Option 2: Council LTP Baseline budget excluding Universal Residential Smart Meters is will not deliver on the core activity to achieve sustainable water supply and demand.

The Wellington region has come close to customers not having adequate supply of water in the past. PCC attended the Water Shortage Summit where the following outcomes agreed in principle were:

1. Increase water supply through additional raw water storage lakes (GWRC)
2. Increase water loss management (4 councils)
3. Install smart water meters to support demand and leakage reduction (4 councils)

The following activity will not be delivered as recommended by WWL under the Council LTP Baseline OPEX and CAPEX budgets:

- Sufficient water loss management to address existing high levels of leakage (OPEX)
- Pressure control valves – budget reduced by $1m per year
- Universal residential smart meters – excluded from the 10-year programme under Option 2

Outstanding risks

- Constrained spend on water loss projects goes against Council direction to provide additional investment in leak repair activity; places production pressure on water sources and treatment plants; increases the likelihood of asset failure; and increases the risk of water supply shortages in the summer months.
- Options 1 and 2 do not allow for water network renewals at a rate required to address the backlog in leaks in the long term.
- Pressure control valves contribute to reducing water loss by decreasing water pressure and subsequently the risk of leaks, and the amount of water lost.

Proposed Mitigation:
Together, with the other metro councils fund a detailed business case for universal residential smart meters and defer implementation to start in year four (FY 2027/28).

Additional budget recommendation years 1-3:
$0.475M to roll out pressure control valves at the rate recommended by WWL
$0.55M for PCC's contribution for a $5M Universal Residential Smart Meters Detailed Business Case *(Based on EY estimate for Detailed Business Case cost)*

Network renewals

The programmes built to fit the Council Baseline LTP budget both prioritise investment on looking after existing infrastructure. However, this is still insufficient to meet minimum requirements to deliver reliable, safe and compliant three waters services.

Network Renewals

Network renewal levels need to be increased significantly across all three waters to address the backlog of pipes overdue for renewal and the bow wave of future works. Under both Option 1 and Option 2, the level of network renewals that can be achieved is much lower than recommended by WWL over the 10-year LTP. As a result, Council's network assets will continue to age and deteriorate. This is expected to result in increased:

- bursts, wastewater overflows, seepage, and flooding events
- continued and increasing water loss from leakage
- unavoidable reactive OPEX costs responding to asset failures

There is little mitigation for the impacts of overdue network renewals. Increased investment to enable a greater rate of renewal is required. Any additional funding would be prioritised to the most critical assets.

Major projects - recap

WWL recommends Council consider additional budget above the Council LTP Baseline budget to fund some of the unfunded priority projects below. However, Council should note that these projects alone do not represent all unfunded activity and needs of the three waters network, for example infrastructure to support growth or other level of service driven improvements.

	Years 1	Years 2	Years 3	LTP 2024-34
Baseline Budget	**$50.0M**	**$55.0M**	**$60.0M**	**$525.0M**
Projects within Baseline Budget that contribute to overspend in Year 1:				
Central City Wastewater Storage Tank (contractually committed)	$38.0M	$14.0M	$2.0M	**$54.0M**
WWTP JV Odour Treatment (compliance related)	$7.2M	$0.8M		**$8.0M**
WWTP JV Solids Handling upgrade (compliance risk related)	$7.0M	$15.0M	$3.3M	**$25.3M**
Universal Residential Smart Metering (In Option 1 programme)	$0.7M	$1.2M	$2.9M	**$33.5M**
Unfunded projects WWL recommends Council progress within the 2024-34 LTP period (not in order of priority)**:**				
Karehana Catchment Stormwater Improvements - Minimum Project Scope (Airlie Rd Inlet & Outlet)	$3.88M	-	-	**$3.88M**
PCC Low Level (Aotea) Reservoir (prev Elsdon)	$15.5M	$12.0M	-	**$27.5M**
Paremata WW Trunk Update	$3.0M	$12.0M	$15.0M	**$70.0M**
WWTP JV Sludge Reduction (Dryer)	$0.7M	$2.6M	$19.5M	**$65.0M**
Network Renewals at WWL recommended rate (additional budget required is dependent on which programme Council decides on)	Up to $14.1M	Up to $13.1M	Up to $14.1M	**Up to $237.3M**