Infrastructure, Climate Change and Emergency Management Committee

Notice of Meeting

A meeting of the Infrastructure, Climate Change and Emergency Management Committee will be held in the Council Chamber, 156 High Street, Dannevirke on **Wednesday 18 June 2025** commencing at **1:00 pm**.

Bryan Nicholson
Chief Executive

Agenda

1. Welcome and Meeting Opening

2. Apologies

3. Public Forum

A period of up to 30 minutes shall be set aside for a public forum. Each speaker during the public forum section of a meeting may speak for up to five minutes.

Standing Orders may be suspended on a vote of three-quarters of those present to extend the period of public participation or the period any speaker is allowed to speak.

With the permission of the Chairperson, members may ask questions of speakers during the period reserved for public forum. If permitted by the Chairperson, questions by members are to be confined to obtaining information or clarification on matters raised by the speaker.

4. Notification of Items Not on the Agenda

Major items not on the agenda may be dealt with at this meeting if so resolved by the Committee and the Chairperson explains at the meeting at a time when it is open to the public the reason why the item was not listed on the agenda and

the reason why discussion of the item cannot be delayed until a subsequent meeting.

Minor matters not on the agenda relating to the general business of the Committee may be discussed if the Chairperson explains at the beginning of the meeting, at a time when it is open to the public, that the item will be discussed at that meeting, but no resolution, decision or recommendation may be made in respect of that item except to refer it to a subsequent meeting.

5. Declarations of Conflicts of Interest in Relation to this Meeting's Items of Business

6. Confirmation of Minutes 3

Recommendation

That the minutes of the Council meeting held on 21 May 2025 (as circulated) be confirmed as a true and accurate record of the meeting.

7. Reports

8. Items not on the Agenda Accepted in Accordance with the Procedure Outlined as per Agenda Item 4

9. Closure

Infrastructure, Climate Change and Emergency Management Committee

Minutes of a meeting of the Infrastructure, Climate Change and Emergency Management Committee held in the Council Chamber, 156 High Street, Dannevirke on Wednesday 21 May 2025 commencing at 1:00 pm.

1. Welcome and Meeting Opening

Cr K A Sutherland (Chairperson), Her Worship the Mayor - Mrs T H Collis, Crs E L Peeti-Webber (Deputy Mayor), N L Chase, A K Franklin, S M Gilmore, P A Johns, M F Long, S A Wallace and S M Wards

In Attendance

Mr B Nicholson	-	Chief Executive
Mrs K Tani	-	Group Manager – Strategy and Information
Mr H Featonby	-	Group Manager - Operations
Mr D Watson	-	Manager – Special Projects
Mr M Dunn	-	Manager – Programmes and Projects
Mr D Erard	-	Tararua Alliance Manager
Mr A Desmond	-	Network Manager – Tararua Alliance
Ms M Watson	-	Stakeholder & Communications Manager – Tararua Alliance
Ms J Smith	-	Legal Counsel and Procurement Manager
Mrs A Dunn	-	Manager – Democracy Services

2. Apologies

There were no apologies.

3. Public Forum

3.1 Celebration of Winning of Apopo Award by the Tararua Alliance Team

The Apopo Award, “Kōmata o Te Rangi” was formerly brought into the Council Chamber with karanga, accompanied by honoured guests. The Chairperson passed the meeting over to Her Worship the Mayor to welcome everyone to the

meeting. Her Worship the Mayor spoke about the Award ceremony, and the history of the project, expressing gratitude for the Provincial Growth Fund that allowed the project to be funded. She spoke about the creation of the Award Kaupopo o te Rangi which represents the pinnacle of achievement.

Andrew Desmond, Tararua Alliance Network Manager, showed the presentation that they gave on the project at the Awards, which covered the following:

- The funding of the project through $14.6 million of Provincial Growth funding, with an additional $2 million of funding added post Cyclone Gabrielle;
- The Community Partnerships;
- The improvements needed to the road ;
- The upgrade's purpose to lift the economy and community, improve safety and create a resilient connection;
- Created the equivalent of full time work for 230 people with 91% local, as well as locally sourced materials;
- Dealing with historic infrastructure, finding root causes of problems being experienced;
- Safety improvements they made;
- Addressed slope stability and upgraded the pavement;
- Upskilled people through the project;
- How they dealt with three cyclones and ten storms through the project.

Representatives from Kanoa (Provincial Growth Fund), Contractors HES and Alabaster Contracting, and Apopo, the association of infrastructure asset management professionals, also spoke about the award, with the contractors thanking the Tararua Alliance and Tararua District Council for the opportunity to work on the project. Her Worship the Mayor acknowledged and thanked Council's iwi partners for their partnership through the project.

The meeting adjourned at 1:49pm and resumed at 2:05pm

4. Notification of Items Not on the Agenda

Nil

5. Declarations of Conflicts of Interest in Relation to this Meeting's Items of Business

Nil

6. Confirmation of Minutes

6.1 ***That the minutes of the Infrastructure, Climate Change and Emergency Management Committee meeting held on 16 April 2025 (as circulated) be confirmed as a true and accurate record of the meeting.***

Wallace/Johns ***Carried***

7. Reports

7.1 Portfolio Programme Project Report

The Infrastructure, Climate Change and Emergency Management Committee considered the report of the Three Waters Manager dated 16 May 2025 that provided an update on the key portfolios, programmes and project statuses.

With regard to the Carnegie building in Dannevirke, and a request for a timeframe for reporting back to the Council, it was noted that officers were looking to present at the earliest possible opportunity.

That the report from the Three Waters Manager dated 30 April 2025 concerning the Portfolio Programme Project Report be received.

Wallace/Chase ***Carried***

7.2 Infrastructure Management Report

The Infrastructure, Climate Change and Emergency Management Committee considered the report of the Group Manager - Infrastructure dated 16 May 2025 that provided an update on key activities and items of interest over the period 12 April 2025 to 10 May 2025.

With regard to the visit signalled in the report to Roadscience, an organisation who do innovative work around preventative treatments to roads, and provide advice on how to carry out resealing work in different weather conditions, officers reported that they would be trialling some of their products in pavement works.

Officers noted that the Gorge Road and detour routes (Saddle Road and Pahiatua Track) hand-back conversations were underway with NZTA. Work was needed on funding for these, and will be proposing that the road speed limits revert to the previous 80km speed limit. With regard to the State

Highway 3 revocation, they noted that NZTA were keen to transfer the Manawatu Gorge bridge to Council and this was under negotiation.

Clarification was sought on whether an audit had been undertaken to ensure properties in Akitio had water tanks installed as per the requirements of the bylaw. In response it was noted that a letter had been sent to residents reminding them of the requirement and thanking those that were already compliant.

Concern was expressed on the impact on Council's operations from boil water notices being imposed when water testing showed there was no contamination. It was suggested that these should be a subject of a case study that could be passed up to central government to highlight the impacts of these notices.

With regard to the Norsewood recycling drop off centre, officers provided a verbal update that some alternative locations were being investigated. A paper would be brought to this committee and the community would be consulted.

That the report from the Group Manager - Infrastructure dated 05 May 2025 concerning the Infrastructure Management Report be received.

Peeti-Webber/Franklin ***Carried***

8. Items not on the Agenda

8.1 Nil

There being no further business the Chairperson thanked those present for their attendance and contributions, and declared the meeting closed at 3:38pm

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Chairperson

Report

Date : 11 June 2025

To : Chairperson and Committee Members
Infrastructure, Climate Change and Emergency Management Committee

From : Hamish Featonby
Group Manager - Infrastructure

Subject : **Infrastructure Management Report**

Item No : **7.1**

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1. Recommendation

1.1 ***That the report from the Group Manager - Infrastructure dated 09 June 2025 concerning the Infrastructure Management Report be received.***

2. Reason for the Report

2.1 This report is to update the Infrastructure, Climate Change and Emergency Management Committee on key activities and items of interest over the period 11 May to 6 June 2025

3. Transport

3.1 **Alliance Management Overview**

NZTA have confirmed the bespoke FAR subsidy of 97.5% has been approved for the remaining $12 million of Cyclone Gabrielle emergency works to be completed in 2025/26. This is welcome news for ratepayers as this rate is higher than in other regions and gives us certainty for progressing these sites.

We have had funding of $250,000 approved for the Lindauer trail on the condition we can provide more information requested by NZTA as detailed further in the report.

With the end of the financial year approaching, we are closing out the current year and planning budgets and programmes for the 2025-26 year.

Good progress is being made across the current emergency works sites, with a bridge deck laid on the new bridge on Otanga Road. This road serves as a detour route for highway traffic.

To celebrate and acknowledge the role of local subcontractors who worked on Route 52, the teams from HES and Alabaster Contracting were invited to the Alliance on Friday 30 May for the Āpōpō Asset Management Excellence Awards Supreme Award, Kōmata o Te Rangi, to be shared with these teams who were critical to the project's success.

The submission the Alliance put forward to the CCNZ Awards in the $1m-$2m category for the Marainanga Gorge road rebuild after Cyclone Gabrielle, has made the shortlist. A CCNZ judge visited the Alliance team to find out more about the project. We will hear if the project is a finalist by 20 June.

3.2 **Transportation Network Management Overview**

SH3 and Gorge Revocation and detour routes hand-back

By the time this meeting is held, the new Manawatu-Tararua Highway will have opened, with traffic volumes on the detour routes expected to drop to close to pre-Gorge closure levels.

In preparation of the understanding the "new normal" The Tararua Alliance have installed Traffic Counters across the detour roads at the locations used for the Toll Assessment Consultation. These will stay out for a minimum of 3 months to allow us to assess the changes to traffic over time.

A meeting with NZTA representatives was held on the 26th of May to discuss both the Gorge Revocation and Detour Routes Hand-back. The following is a summary of the key points of current discussion.

Road Revocation – NZTA are considering the Road Revocation between the new Roundabout and the Upper Manawatu Gorge Bridge, and through the Gorge itself as one process, however, from a TDC Road Network point of view, we are not considering the road through the Gorge, and the Upper Gorge Bridge as outside of the scope of our discussions, as it will not form part of the utilised TDC road network and its future use and potential stakeholders is broader than TDC. We have advised NZTA that our discussions need to focus on the sections of road between Ferry Reserve and the new Roundabout.

Of the section of SH3 under consideration, we accept that the road itself will become part of the Local Road network, with the main topic of discussion being around the bridge, and the financial liability we will be taking on-board. All bridges have been assessed to have a useful life of 30+ years, with NZTA providing structural reports that identify the current repair needs.

We have also identified the need to improve the visibility across the Ballance Bridge, as this is now considered the priority route. We are yet to discuss any

funding associated with the Revocation works with NZTA, as the focus currently is the Detour Routes.

Detour Routes – Discussions about the return of the Detour Routes to TDC are progressing well. It is anticipated that TDC will retake operational responsibility of the detour roads on 30 June 2025. Setting a firm date provides certainty over the management of CRMs and event response, as well as allowing us time to review the required repairs on the Saddle Road (currently there is too much traffic to allow a thorough assessment of the faults to occur safely.)

We have verbally agreed with NZTA that the repairs to the Detour routes will be managed by the Tararua Alliance. A tentative budget has been shared by NZTA to us. We have assessed this, with it deemed suitable for the repairs required, however no agreement has yet been made over the final amount.

At time of writing, we are yet to confirm the final details for both the Revocation and Hand-back of the detour routes, and the development of a MOU is progressing.

Lindauer Trail

We have received conditional approval of funding for the Lindauer Trail from NZTA. We have responded to the request for information to satisfy the final approval requirements – these are related to further design information and approvals from the various Asset owners (currently Kiwirail and NZTA)

Subject to final approval we have tentatively set a programme to deliver Stage 1 of the works (new Roundabout to the Cemeteries) by Easter 2026, and Stage 2 and Stage 3 (Cemeteries to Ferry Reserve) by Easter 2027. Progress on Stage 2 and 3 are subject to SH3 Revocation details and additional funding requirements.

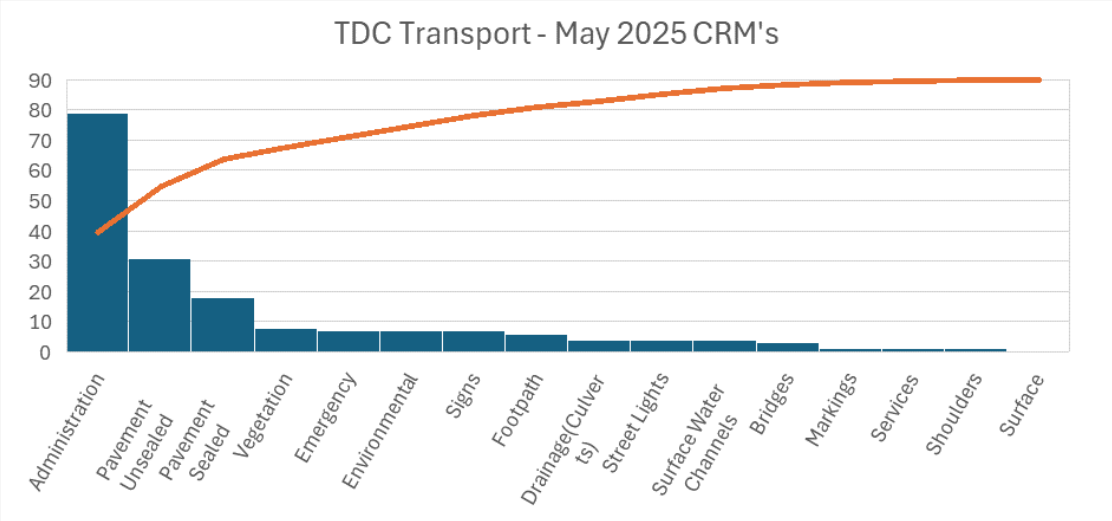
As we have developed the application we have identified the opportunity to utilise the Kiwirail corridor between Franklin Road rail crossing and the Napier Road Rail overbridge. We are rapidly progressing discussions with Kiwirail as to the feasibility of this option, with Kiwirail needing to assess the current and future impacts to the rail corridor (verbally identified by Kiwirail to be minimal), an existing lease on the land in question, and the potential need to upgrade the Rail Crossing of Franklin Road – also considered viable by Kiwirail, but may require additional funding if a full upgrade is deemed necessary. We are progressing development of the project on the basis that we may not gain approval in time to progress the Kiwirail corridor option, but if we do we can rapidly change tack and improve the outcomes of the project.

If the Kiwirail corridor is utilised, an ongoing lease agreement with Kiwirail will be required. There is an upfront cost of $3,450 to obtain approval in Principle and costs associated with detailed design and construction (dependant on the input required from Kiwirail staff)

The ongoing use of the Kiwirail corridor will also incur ongoing annual costs, which must be considered. This is expected to initially by $1,500 and increasing at a rate of 3% per annum. The maximum term of occupancy is 9 years, with the agreement rolling over month-by-month until a negotiated agreement on further use is agreed upon.

3.3 Transport Operational Delivery Management Overview

Customer Requests

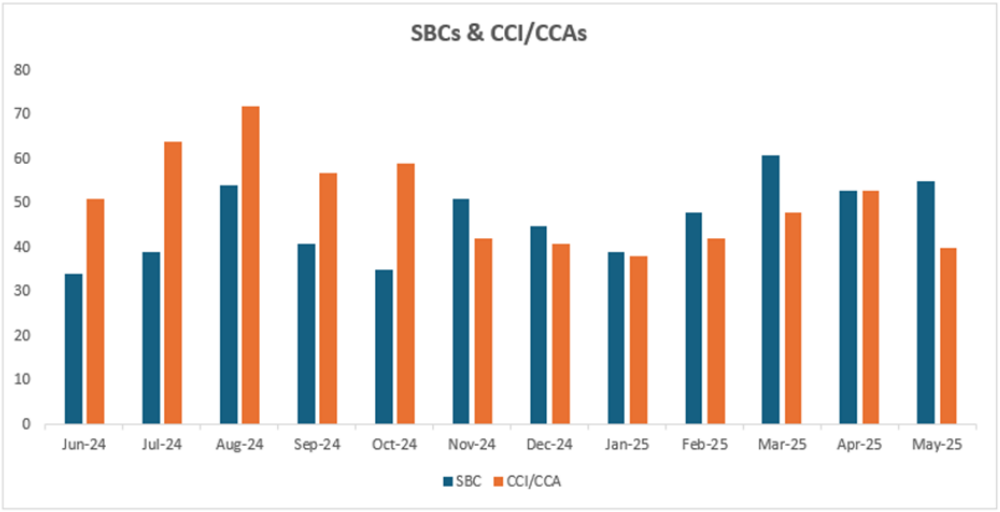


181 CRMs were received for the month of May with 17 resolved. 25 of CRMs required no action. The remaining CRMs have been programmed to be completed.

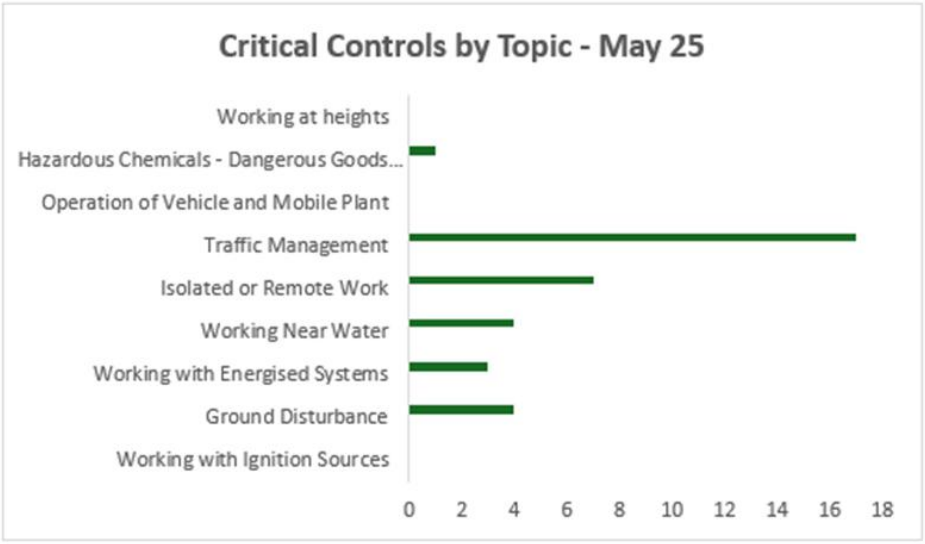
Tararua Alliance Zero Harm Performance Summary

Item	May 2025	FYTD
Total Incidents Reported	8	25
Near Misses	1	2
HiPo/Serious Harm	0	1
TRIFR	0	-
Recordable Injuries	0	0
Cardinal Rule Breaches	0	1
Incidents Involving a Critical Risk	2	19
Working Hours	41839	514002

The Alliance continues its positive trend relating to zero harm. Of the eight incidents reported in May five were vehicle related and three were first aid cases. Near miss reporting continues to be an area for improvement. There has only been one near miss reported in May.



SBC = Safety Behaviour Conversations
CCI/CCA = Critical Control Inspection/Audit



In May, the Tararua Alliance achieved 93% of the target safety behaviour conversations (SBCs) and Critical Control Inspection/Audit (CCI/CCAs). The focus of the month's inspections and audits was traffic management and remote work due to the numbers of teams working in isolated areas of the network.

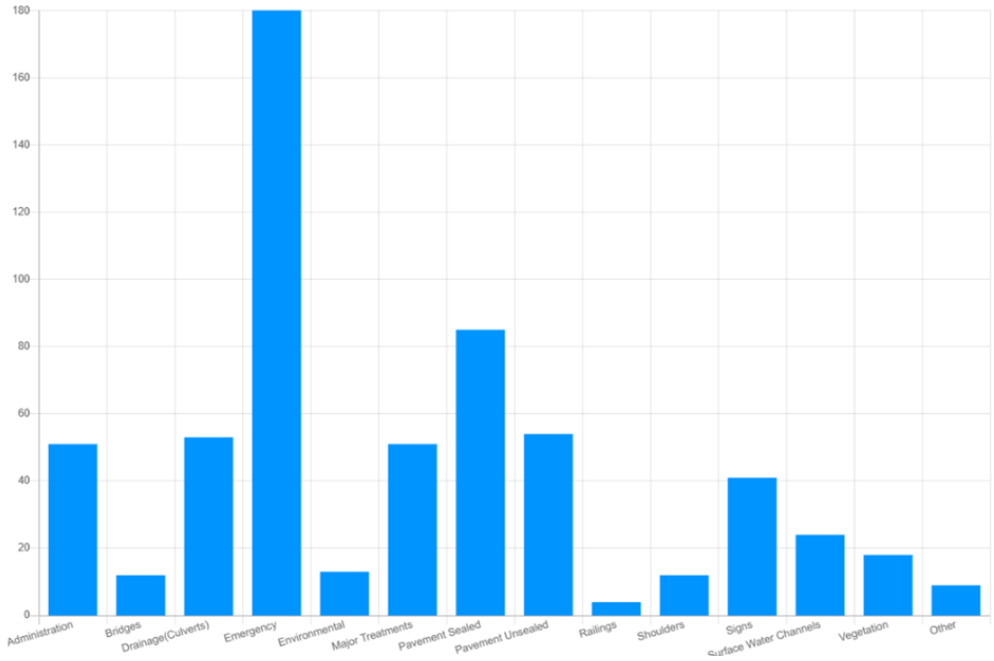
3.4 Maintenance Overview

Maintenance Delivery Overview

The maintenance teams are currently working on network safety priorities which includes pavement defects, safety signage and any emergency notifications that need immediate attention.

The rest of the maintenance resource are split between emergency work recovery teams where we are continuing with the cyclone recovery damage.

All Works – Dispatches Completed May 2025 – By Asset type.



Routine Maintenance

- 21 culverts jetted out mainly on River Road Akitio
- 88 sealed potholes repaired
- 694 cubic meters maintenance metal
- 118km of grading unsealed roads

3.5 Renewals Overview

Reseal Delivery

The reseal sites have been driven over with NZTA and confirmed for 25-26 construction season. The 25-26 reseal programme length is 90kms of the sealed road network which is 7.6% of the sealed road network length. Designs and material procurement are now underway.

Rehabilitations

2024/25 Programme			
Road	**Start RP -End RP**	**Length**	**Phase**
Maunga Road	7439 - 7839	400m	Complete
Aerodrome Road	361 - 1650	1289m	Sealing completed, minor work to driveway entrance and roadside furniture. Planned to try and get completed before the end of June
Maharahara Road	3256 - 3657	401m	Complete
52-0063	16333 - 17066	733m	Complete
	Total	2,823m	

Rehabilitation Planning

The rehabilitation sites have been driven over with NZTA and confirmed for the 25-26 construction season, the rehabilitation length is 4.56kms of sealed pavement which is a total of 0.4% of the sealed road network length.

Now that these are confirmed we can start developing designs to facilitate the delivery in conjunction with developing schedules to make TCE's to tension delivery.

Enabling works is planned to commence in July where we will be undertaking culvert replacements and drainage works, this will dry out the subgrade so when we return in summer the conditions will be more favourable to pavement related activities.

Rehabilitation Delivery

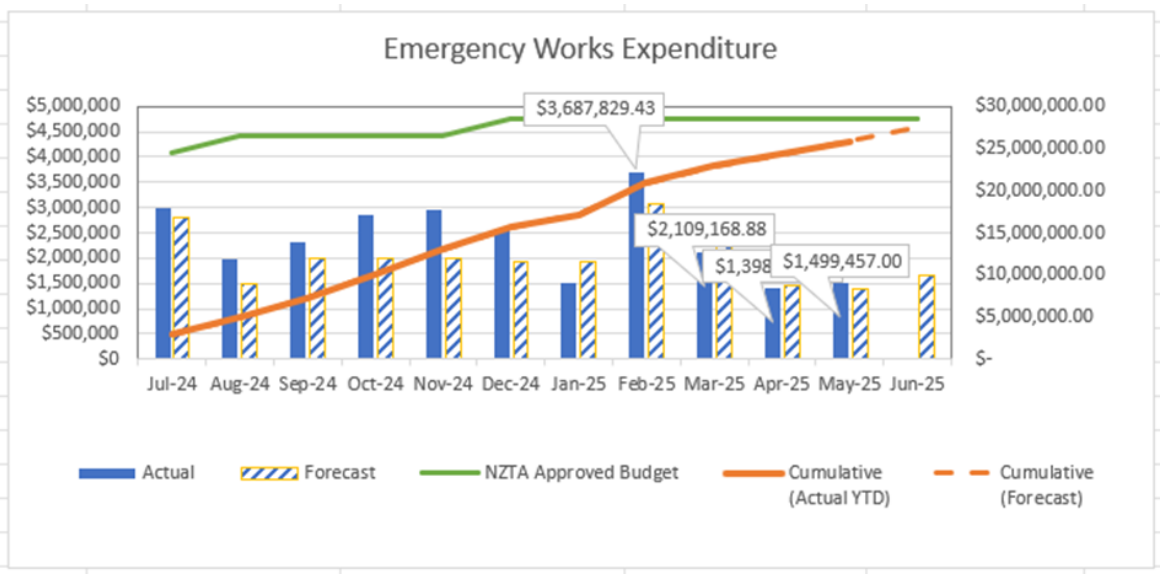
An overlay and stabilisation works took place on Maharahara Road encompassing 401 meters of sealed pavement outside the Ruahine School. This has now been sealed with a polymer modified emulsion blend and sealed off with a weather barrier treatment due to being sealed so late in the season.

The rehabilitation pavement team have been split into two are currently working on emergency work recovery projects including Otanga Road, where approaches to a new bridge are being built. The second team are on Coast Road Akitio where they are building a mechanically stabilised earth wall and upgrading a culvert from a 600 diameter to a 900mm diameter.

3.6 **Emergency Works Recovery**

2024/25 FY - Emergency Works Forecast Expenditure

With a planned estimate of $1.5 million for the month ending June, at the end of the financial year this will bring the 2024/25 total expenditure to $27.6 million.

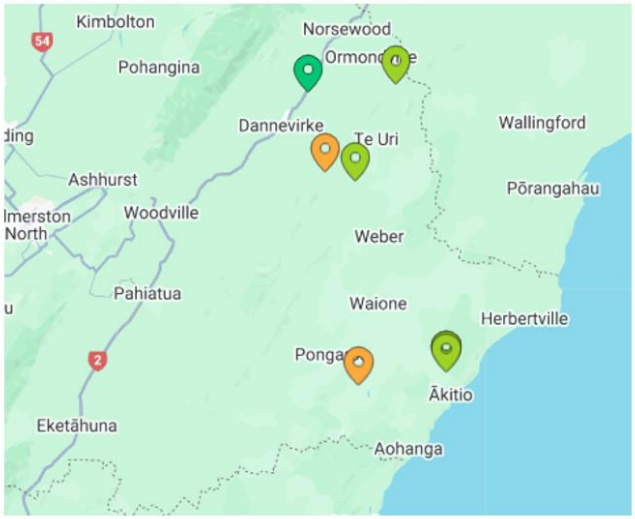


Total Approved Emergency Works Funding (2024/25) (NZTA Work Category 141)	$28,423,502
2024/25 Spend to Date (end of May 2025)	$26,163,689
Expenditure in May	$1,499,457

Emergency Works Delivery

High Complexity Works

Picture: Current active worksites depicted with green and orange tags.



River Road, Akitio, RP 20km Wakawahine

The Eco Reef retaining structure has been successfully installed with zero environmental impact, thanks to stringent environmental controls, best-practice construction methods, and a favourable stretch of good weather. This project reflects a strong commitment to both infrastructure resilience and environmental stewardship.

The pavement above the retaining structure has been completed and now the safety guard railing is being installed, vegetation is starting to grow, and natural stabilisation is progressively occurring.

Coast Road, RP 8.5km Timber Tie Back Retaining Wall

Construction is currently underway on a 32-metre-long, 3-metre-high timber tie-back retaining wall on Coast Road RP 8.5km. This work is part of the recovery efforts to repair a significant downslope dropout caused by Cyclone Gabrielle.

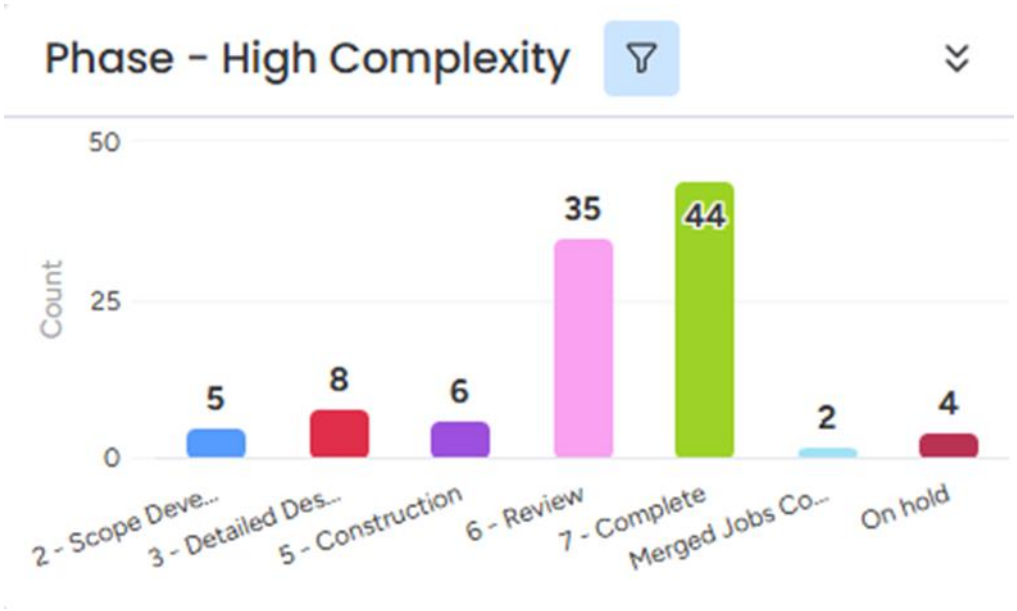
The wall incorporates drilled and grouted tiebacks embedded eight metres into the underlying papa (mudstone) bank, ensuring a durable and resilient structure that will safeguard the road corridor into the future.

The wall has now been built and work on the concrete nib, pavement work and fencing are underway to close out this job before the end of June.

Otanga Road Bridge

Otanga bridge has now been built by Lattey contracting which is a great milestone and achievement to the project. The Downer construction team are now working on aligning the pavement into the new bridge. Depending on the weather and site conditions will further determine the opening of the road.

Current High Complexity Work Phase for 2024-2025 Programme



Progress since May 2025 is depicted below (snapshot taken 6 June 2025). There were no jobs in approval startup during the month of May.

Phase	April Number	May Number	Change
Scope development	4	5	1
Detailed design	8	8	0
Approval/startup	0	0	0
Construction	9	6	-3
Review	37	35	-2
Complete	39	44	5
On hold	5	4	-1

4. 3-Waters

4.1 Dannevirke Impounded Supply

Monitoring

The ROV issue was identified as the sonar unit was not working as expected and had a manufacturing fault. The failed sonar motherboard is being repaired by the manufacturer under warranty. Once the repair is completed - the sonar will be reattached to the ROV, tested and returned. The sonar manufacturer is UK based.

Currently, we are waiting to confirm a return shipping date so we can schedule the next ROV inspection of the impound.

Infiltration gallery and Alternative Water Infrastructure

Infiltration gallery bank clearance scheduled. It appears the river has moved away from a section of the gallery. Discussion with Horizons on this is ongoing.

Operationally, we will be conducting an integrity assessment of the existing infiltration gallery pipework using a camera inspection. This will confirm that the entire length of the pipe is intact and functioning efficiently. In parallel, we are investigating the feasibility of pressurising the perforated pipe system to scour any accumulated silt or fine metal particles within and around the filtration zone. This action aims to enhance the efficiency of water collection and ensure maximum availability from the infiltration gallery.

In preparation for the upcoming water take consent application, there is an opportunity to consider both the surface water take and the river take as a combined abstraction. It is important to clarify that this approach does not seek an increase in allocation, but rather integrates existing sources under a unified consent.

Engagement with Horizons Regional Council will be essential to determine the operational parameters of such a combined take. This includes understanding whether simultaneous abstraction from both sources will be permitted, or whether management through alternating use, metering, or other conditions will be required.

With respect to the bore source, there is uncertainty surrounding the sustainable yield and recharge rate of the aquifer—particularly if abstraction rates reach 60–80 litres per second over extended periods. There is also a need to assess the potential impact on river levels at that location, which will be a key consideration for Horizons.

While the installation of a new infiltration gallery at this site could theoretically provide a more secure water supply, the associated costs would be significant. At this stage, optimising the performance of the existing infrastructure appears to be the most practical and cost-effective solution.

It is also important to discuss with the regulator that the new consent is not expected to increase the overall volume of water taken. In fact, it may include tighter restrictions, particularly during low-flow periods. Our objective is to ensure that we can reliably abstract the full volume of our existing allocation under all conditions.

Submersible pumps

Working through scope and installation schedules. Effectively, we have been working to reduce the initial cost while ensuring the configuration for <6m depth of extraction is achieved.

Woodville WTP

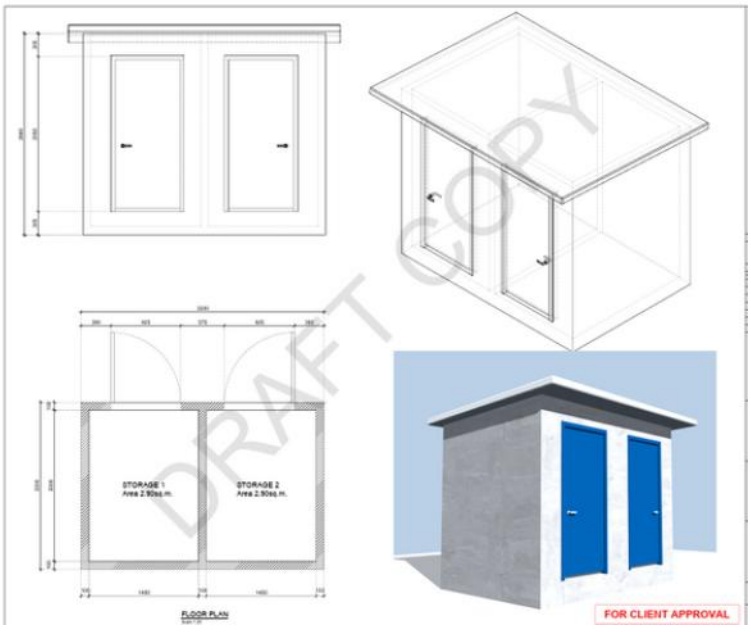
Following our recent discussions with Taumata Arowai, we're pleased to confirm that a resolution has been reached. Their requirements have now been satisfied, allowing us to refocus our attention on priority projects and core operations.

Pahiatua WTP

Chemical Relocation

Pahiatua Water Treatment Plant chemical tank relocation has taken considerably longer than expected mainly due to need for engineered foundation to be designed and built. Will not be completed prior to end of June.

Permastore Shed has been ordered (there is a 6-week build/delivery time therefore scheduled for mid-July).



4.2 Wastewater

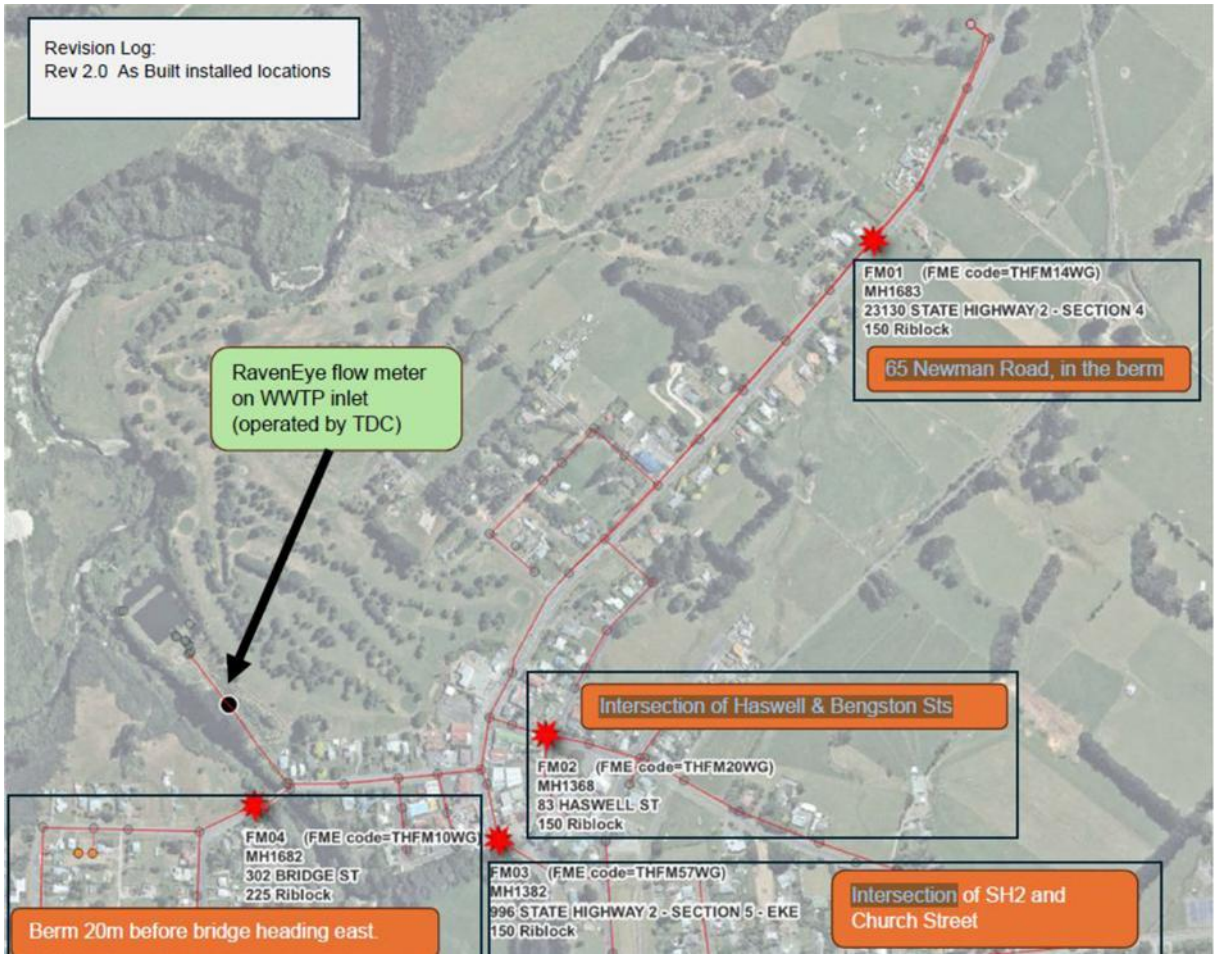
Wastewater Treatment Programme Upgrades

Key upgrade projects are discussed within the project sheets.

Inflow and Infiltration

In order to highlight the work to date and accompany the project sheet. The following are excerpts of the reports that we have received/generated to date on Eketahuna.

The four temporary flow meter sensors were installed in the week ending the 4th of October 2024. The temporary flow meters were ADS Triton Plus flow monitors with Peak Combo sensors. The Peak Combo sensors have an upward facing depth sensor, a pressure depth sensor, and an ultrasonic Doppler velocity sensor. The sensors were located in the invert of the inlet pipe using a non-destructive adjustable stainless-steel ring. Flow data for the Eketāhuna WWTP inlet was provided by TDC. The flow monitor locations shown on the map were selected in consultation with TDC.



Eketāhuna's population is circa. 573 consisting of 290 dwellings and 244 wastewater connections.

Table A1 Catchment Characteristics

Sub-Catchment	Percentage of WW connections	Area serviced by wastewater network (ha)	% of catchment area
FM01 Newman Road	16%	7.3	13%
FM02 Haswell Street	9%	4.7	8%
FM03 Church Street/SH2	25%	11.6	20%
FM04 Bridge Street	31%	23.3	40%
Downstream of temporary flow meters	19%	9.6	17%
Total	100%	57.9	100%

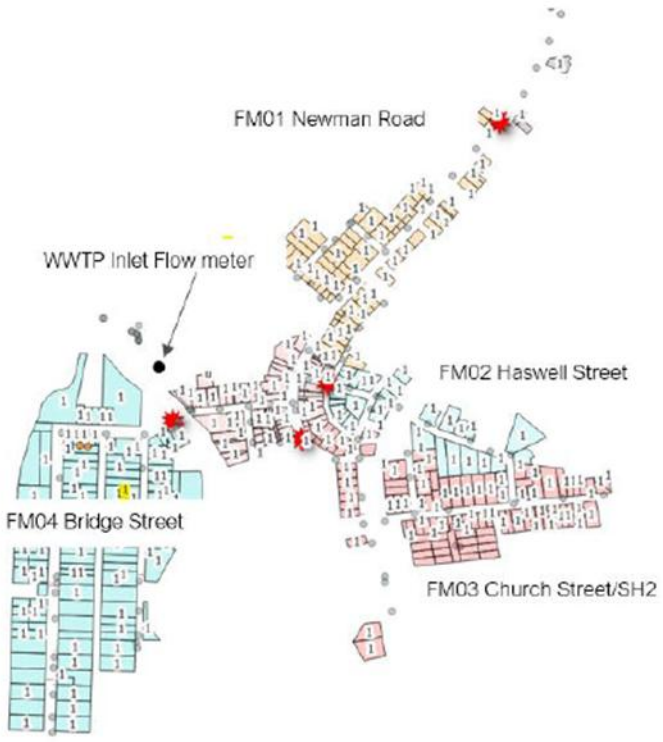


Figure 2 Map showing count of properties identified as connected to the wastewater network

WaterNZ Key Performance Indicators

The key parameters requested by TDC are the five KPIs described in the WaterNZ 2015 Infiltration & Inflow Control Manuals Volume One and Two, second edition. For the flow data obtained, the calculated WaterNZ KPIs are presented in Table 2.

Table 2 WaterNZ KPIs

Catchment	Units	Newman Road	Haswell Street	Church St – SH2	Bridge Street	Eketāhuna WWTP Inlet	Typical ranges[1,2]	Threshold values for pursuing an I&I reduction programme[2]
Flow meter	-	FM01	FM02	FM03	FM04	RavenEye	-	-
$GWI_{1\ \%}$	%	45	44[4]	45	69	56	<20	20
GWI_2	L/p/d	523	266[4]	523	1,162	432	>170 & <270	280
GWI_3	#	1.2	0.6[4]	1.2	2.6	1.0	0.5 – 1.1	n.a.
SWI_1	#	6.5 5.8 2.6[3]	6.0[4]	11 4.9 3.4[3]	3.7	5.6	<5	8
$RDII_1$	%	14 26 9[3]	<1[4]	15 13 6[3]	15	10	<20	10

Notes:

1. Typical ranges for a wastewater network with little or no infiltration2.
2. Typical and threshold values from WaterNZ, 2015, Table 6-1 and 6-2. Values exceeding the thresholds are indicated with a grey highlight.
3. Multiple SWI1 and RDII1 values for Newman Rd and Church St/SH2 relate to analyses of multiple inflow events each for these sites. Additional data is presented in the Table A3 in Appendix 3.
4. Flow data from Haswell Street monitor was poor quality and caution should be applied when interpreting the data or basing decisions on the data.

Description of WaterNZ KPIs

The key parameters requested by TDC are the five KPIs described in the WaterNZ 2015 Infiltration & Inflow Control Manuals Volume One and Two, second edition.

Average dry weather flow data is part of the calculation for all three GWI KPIs. The SWI1 inflow KPI uses ADWF in the numerator. The RDII1 KPI uses the ADWF data subtracted from the Wet Weather Flow (WWF) data. Therefore, robust ADWF data is critical to ALL WaterNZ KPIs.

GWI1 compares the flow of ground water infiltration to the average flow on a dry weather day. Typically, this is less than 20%. High values indicate that ground water infiltration is higher than it should be for a wastewater network in good condition.

GWI2 compares the daily total wastewater flow on a dry day to the population count. Where there is little infiltration, this would be expected to be in the range of 170 to 270 per person per day. If the value is higher than this, it indicates that ground water infiltration is higher than it should be for a wastewater network in good condition.

GWI3 compares the daily total wastewater flow to the water supply flow. A value less than 0.5 indicates overall exfiltration (wastewater leaking out of the network into the environment). If the value is higher than 1.1 it indicates unwanted infiltration (groundwater leaking into the wastewater network).

SWI1 compares the peak wastewater flowrate during a wet weather event to the average dry weather wastewater flow rate. It is a measure of the intensity or short-term peaking impacts of rain dependent inflow. This has implications for pumping capacity, and instantaneous capacity of wastewater treatment plant units.

RDII1 calculates the ratio of the volume of inflow due to rain compared to the volume of rainfall that fell on the wastewater catchment. It is a measure of the long-term sustained impact of rain dependent inflow. This is a measure of the impact on treatment plant performance and the impact on long term/average treated wastewater discharge volumes.

Some analysis:

- The Bridge Street sub-catchment contributes the most significant groundwater flows = highest exceedance of GWI2 threshold.

- The Church Street-SH2- sub-catchment contributes high short term storm water inflow rates4 = highest exceedance of SWI1 threshold.

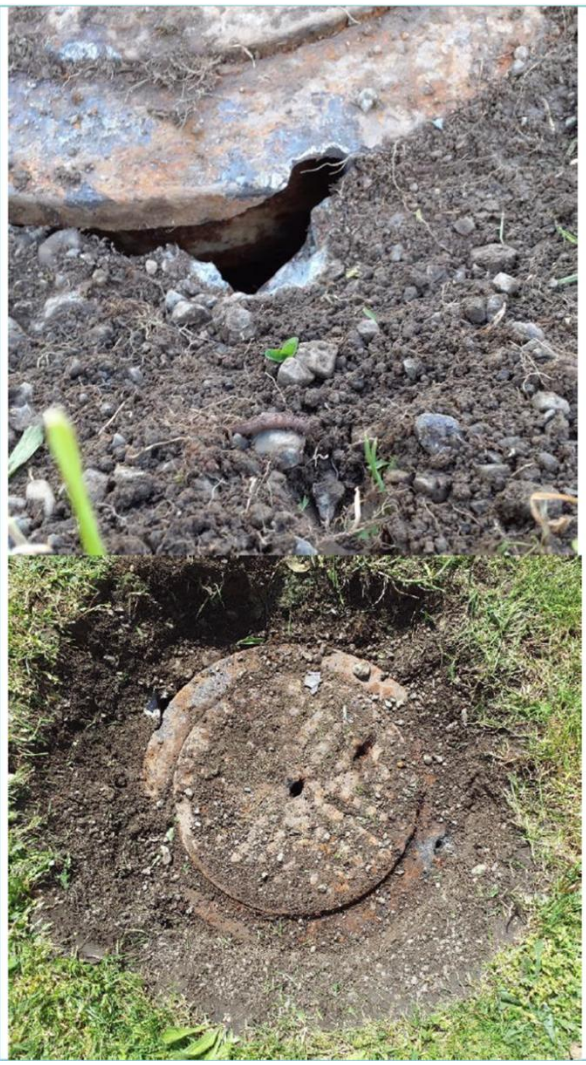
- The Newman Road sub-catchment contributes significant long term storm water inflow volumes = has the single highest exceedance of RDII1 threshold, although Newman, Church St/SH2, and Haswell also exceed the threshold.

We are advancing the development of a remediation program aimed at achieving percentage-based reduction targets across the network. A final report is currently in progress, which will provide options for analysing the extent of repair work required relative to the reductions that can be achieved.

In addition, as noted in the project sheet, we are actively addressing the manholes that have been identified. Below are a few images illustrating the range of issues encountered.

WW Chamber 1389- Infiltration through the steps.	

WW Chamber 1683- Infiltration through manhole riser joint	

WW Chamber 2570- Damaged manhole lid, and lid is seized	

4.3 **Trade Waste**

We are continuing to work through the review of fees and charges and are finalising the report for council with key input from our internal departments.

4.4 **Sludge Management**

We are coordinating the removal of sludge from Woodville WTP. The Woodville WTP backwash waste is discharged into a Clip tank, which facilitates solid-liquid separation. Due to the number of years in service, the sludge level in the tank has reached a point where it requires removal.

Scheduled for mid-June.

4.5 Consenting and Compliance

All Water Safety Plans for our Water Supplies have been finalised.

Last month we reported on the below abatement notice, work is well underway to meet this requirement. We have previously discussed with Horizons our schedule for installation and are working through our delivery.

- Abatement Notice 1495 to undertake flow meter verifications at the water abstractions that relate to the Pahiatua Municipal Water Treatment Plant, Eketāhuna Municipal Water Treatment Plant, and Dannevirke Municipal Water Treatment Plant.
- This Abatement notice relates to the installation and verification of flow monitors. Pahiatua flow meters were installed last reporting period.
- Eketahuna is now installed.
- Dannevirke is under planning and scheduled in the LTP.

Compliance reports from Horizons for Norsewood and Pahiatua.

Horizons carried out site inspections for Norsewood and Pahiatua.

Norsewood Wastewater consent expired on 1 July 2018 and is currently operating under Section 124 Existing Use protection rights of the Resource Management Act 1991 (RMA). We received Full-Compliance for Discharge (Mangarangiora Stream Tributary) and Processing Emissions and a Significant Non-Compliance in relation to not utilising Tephra Beds as part of the treatment process. We have until 30 June 2025 to provide them with a formal update.

Pahiatua Wastewater has been given an overall Moderate Risk Non-Compliance.
Two minor actions are required to meet compliance i.e. Provide evidence that there is signage 500m downstream of the confluence of the Town creek and Mangatainoka River. Pond Overflow alarm levels need to be changed so that alarming can occur for the 500mm below setpoint can be achieved.

A note to a part of the consent related to the wetlands, it has been identified that we need to continue progressing the development of the Pahiatua Wetlands and the associated wastewater treatment plant upgrades.

CONDITION G9B | NON-COMPLIANCE (MODERATE RISK)

"The construction of the Wetland has not yet commenced as required by Condition GB9, however it is expected this will take place at the commencement of the new earthworks season, commencing 1 October 2025."

"Wetland construction of this has not commenced and therefore there is no discharge through an operational wetland. Currently TDC has submitted an ESCP for certification to enable these construction works."

4.6 **Water Permits**

Following previous report we have had no significant changes to report to the following.

The Section 92 information for the Eketahuna (expired 2019) and Pahiatua (expired 2022) water permits were submitted.

We are currently awaiting the final Section 92 information for Woodville (expired 2021) from WSP consultants who are finalising the flow gauge work. When complete Woodville will be submitted.

Traverse Environmental have been contracted for the Dannevirke Water Permit renewal.

WSP have been engaged to prepare and lodge Norsewood water supply resource consent application. The Norsewood bore is used for public water supply and has not required resource consent to date due to 50m3/day being a permitted activity, TDC wishes to apply for a volume of 90m3/day.

4.7 **Administration**

An update on our staffing considerations as relayed at the last management update.

Hiring positions:

- Water Treatment Trainee – Position offered and starting soon.
- Water Treatment Operator – Recruitment through our Tararua Alliance is out for recruitment internationally and we are shortlisting applicants.
- 3 Waters Field Technician (Sampler) – position is to be offered.
- Information Technician – Role hired through the Better Off Funding and has started with the team
- Trade waste and Backflow Officer role position description is drafted and being reviewed. Was originally identified as part of the Better Off Funding.

As previously communicated, our Water Treatment Team Leader is currently on a well-earned period of extended leave. While we fully support this much-deserved break, it has meant our already small team has been temporarily operating with just one Water Treatment Operator to cover the entire district.

To ensure continuity of service and maintain our commitment to safe, compliant operations, we put our mitigation plan in place. This includes direct support from

our Operations Manager and the involvement of two team members from Wastewater Treatment who have previous experience with Water Treatment Plant operations.

We're pleased to report that this mitigation plan has been effective to date. However, it has not been without its challenges. The team remains under some operational strain, particularly with increased seasonal sickness, project requirements, and general operational complexity. Despite these pressures, our team has continued to deliver a high standard of service, and we appreciate everyone's flexibility and dedication during this period.

We'll continue to monitor the situation closely and adjust our approach as needed to maintain safe and reliable operations across the district. Again, we will provide regular updates on any significant changes or developments through our Executive Leadership Team and/or ICCEM as time permits.

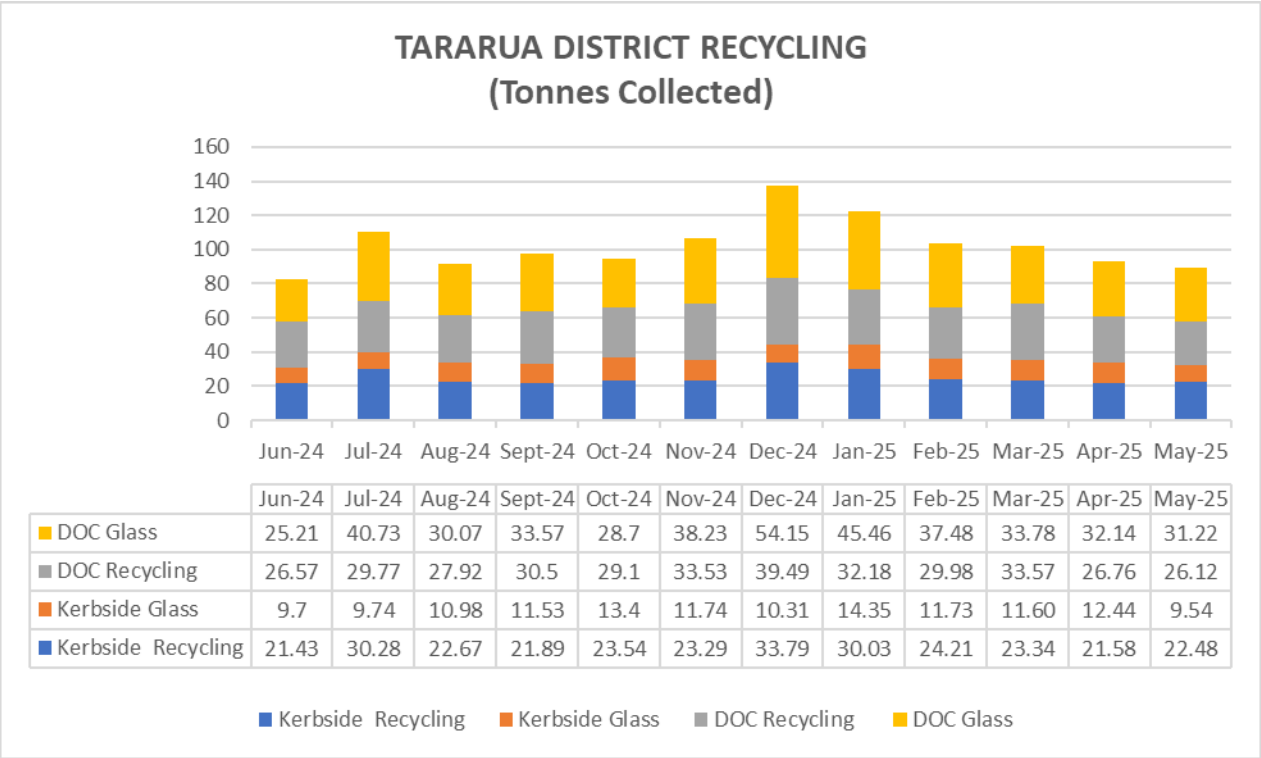
5. Solid Waste

5.1 Operational Activities

Budget/Activity	
Refuse Transfer Stations (RTS Sites)	Dannevirke Transfer Station is operating well. With the loss of daylight savings and now winter upon us, we have just installed flood lights on the recycle shed to assist staff when sorting through incoming loads to remove contamination late in the afternoon. Commingle Recycle loads continue to be transported to the Material Recovery Facility for processing in New Plymouth, but during the off-peak months (*Only May to September*), we can send some loads to the Palmerston North Facility, which generates savings on our transport costs. Break ins – Woodville Transfer Station has had its gate cut to gain access. *(see photo below)* There was no other noticeable damage or theft to report on. This is obviously due to replacing the previously cut padlock with a chain and lock that couldn't be cut. Pahiatua Transfer Station also had the gate cut again and people appear to be helping themselves to items in the steel pile. Unfortunately, the camera's onsite are not giving us the information required to act on. Eketahuna Transfer Station has had no activity, due to the neighbour having a very vocal dog if anyone is nearby. **<u>May 2025:</u>** Waste diverted from landfill 5.44 Tonne Contaminated recycling to Landfill 3.81 Tonne
Recycle Drop-off Centres (DOC Sites)	We are still experiencing contamination in the town drop off bins. Pahiatua recycle bin had its back door deliberately opened on Sunday 6th May, an hour before our operator arrived to exchange the full bin. This caused the load to start coming out when our operator began lifting the bin onto the truck. *(see photo below)* This was unexpected as this has not occurred at a DOC site before. Happy to report that we were able to identify the culprit on the camera footage, and he has since been fined $400.00 for littering.

Budget/Activity	
Kerbside Recycling Services	Kerbside collections are going well. We have now implemented our system to record the bin auditing data with the ability to measure performance, identify problem areas, and report success and statistics to council from next month onwards.

5.2 Waste Minimisation



	Jun-24	Jul-24	Aug-24	Sept-24	Oct-24	Nov-24	Dec-24	Jan-25	Feb-25	Mar-25	Apr-25	May-25
DOC Glass	25.21	40.73	30.07	33.57	28.7	38.23	54.15	45.46	37.48	33.78	32.14	31.22
DOC Recycling	26.57	29.77	27.92	30.5	29.1	33.53	39.49	32.18	29.98	33.57	26.76	26.12
Kerbside Glass	9.7	9.74	10.98	11.53	13.4	11.74	10.31	14.35	11.73	11.60	12.44	9.54
Kerbside Recycling	21.43	30.28	22.67	21.89	23.54	23.29	33.79	30.03	24.21	23.34	21.58	22.48

Woodville Transfer Station Gate

Pahiatua Recycle Bin

Attachments

Nil.

Report

Date : 11 June 2025

To : Chairperson and Committee Members
Infrastructure, Climate Change and Emergency Management Committee

From : Priscilla O'Neale-Searancke
Project Manager

Subject : **Universal Water Metering**

Item No : **7.2**

1. Recommendation

That the report from the Project Manager dated 23 April 2025 concerning the Universal Water Metering

2. Reason for the Report

2.1 This report presents the case for implementing Universal Water Metering (UWM) across the Tararua District, outlines the project scope, and provides information regarding the delivery and procurement approach. It supports the Council's long-term strategy to manage water demand, reduce wastage, and ensure sustainable infrastructure investment.

3. Business Case Document Summary

3.1 **Background**

Tararua District Council operates seven water supply schemes with approximately 5,000 connections. The district faces:

- Frequent and severe droughts
- Over-allocated or nearly allocated water sources
- High levels of non-revenue water (up to 56% losses in some towns)
- Increasing population and demand pressure

3.2 **Key Issues**

- Infrastructure capacity will be exceeded without intervention.
- Lack of data to monitor and manage consumption or leakage.
- Demonstrating financial sustainability, efficiency and effectiveness of water infrastructure and fair pricing for water services under government reforms ("Local Water Done Well") requires targeted revenue mechanisms.

3.3 **Project Objectives**

1. **Reduce peak water demand** by 30% by 2030.
2. **Enable targeted investment** through ringfenced revenue.
3. **Promote behavioural change** through consumption awareness.
4. **Support broader demand management** and leak detection.

3.4 **Project Benefits**

- **Reduced operational and capital expenditure** by managing water demand and offsetting infrastructure costs and capital upgrades.
- **More equitable and efficient** billing system.
- **Enhanced ability to detect leaks** and monitor network health.
- **Better alignment with national** and local policies.

3.5 **Metering System**

After evaluating three options:

- **Advanced Metering Infrastructure (AMI**) was identified as the preferred solution due to:
  - Real-time data collection
  - Mitigating the need for front line staff interaction with the public and
  - Strong support for demand management goals
- **Automated Meter Reading (AMR)** is a secondary option if AMI proves unviable.
- **Manual Water Meter Reading** is the least sophisticated option for capturing limited water consumption data and involves the use of field staff to physically

read meters, record this information and log it. This option does not meet the project objectives.

Based on the analysis presented in the business case documentation, officers will progress as follows:

- Seek supplier input through a procurement process on the track record, capability and capacity of suppliers to provide cost effective IoT (internet of things) networks and compatible meters that would support Advanced Meter Infrastructure (AMI) as the preferred option. Previous market analysis undertaken by New Plymouth District Council, albeit 5 – 6 years ago, identified that AMI technology was emerging, and that a certified AMI meter was not yet available in the New Zealand market. However, with the rapid advances in this technology since this analysis was completed, it is anticipated that improved technology may now be available and should be tested via market engagement.

- If the AMI solution cannot be achieved in the Tararua District due to budget or integration restraints, that Automated Meter Reading (AMR) will be reserved as a fallback solution, noting that the types of meters installed for Option 1 and 2 are likely to be AMI or AMR compatible in any case.

3.6 **Complex Property Solutions**

Officers have completed analysis of the district's network and identified challenges that might arise in the implementation of water metering. As part of this analysis, officers have identified that while the majority of properties will enable a straightforward installation process, there will be complex properties which require a different approach. This includes where multiple properties are serviced by one lateral, the current manifolds are located on private property and require moving the manifold to the property boundary for ease of access for maintenance. Based on feedback from other councils who have completed similar projects and faced similar challenges, six options have been identified, as follows:

Option 1: **Only install meters on existing point of supply where one lateral serves one SUIP. Grouped SUIP's (separately used or inhabited part of a rating unit) would be billed by a uniform annual charge.**

Under this option, a meter would be installed where a relationship of one meter to one SUIP can be maintained.

Do not install a meter on any connection points that feed multiple SUIPs (i.e. a 1:1 relationship cannot be maintained). In these cases, bill using a uniform annual charge.

Option 2: **Meter at existing point of supply – uniform annual charge for grouped SUIP's. This differs from Option 1 as every connection has a meter regardless of approach to billing.**

- Install a meter on each rider main or lateral where council ownership currently ends.
- Where a relationship of one meter to one SUIP cannot be maintained,

bill using a uniform annual charge.

Option 3: Meter at existing point of supply – split bill for grouped SUIPs.

- Install a meter on each rider main or lateral where council ownership currently ends.
- Where a relationship of one meter to one SUIP cannot be maintained, share the volumetric component of the bill equally between each SUIP connected to the meter.

Option 4: Meter at point of supply with ratepayer option to move point of supply where practical.

- This is an adaptation of Option 3, where property owners on grouped SUIP's are given the option to either:
  - Vest ownership of the rider main with council to enable the point of supply to be shifted to the lateral. This mainly applies to right of ways.
  - Connect to a specific point of supply provided by council (usually requiring modification of private plumbing by the homeowner). This mainly applies to cross leases.
  - Install a meter on the existing point of supply, and a sub-meter on individual laterals to each SUIP provided that private property access provisions can be met.

Option 5: Dedicated meter per SUIP.

- This option involves installing a meter per SUIP whilst minimising changes to the existing pipework.
- Ownership of pipework and where the point of supply is, would need further consideration.
- This requires Council to modify private plumbing in many cases. Under this option all SUIP's would be directly billed for their use (i.e. no uniform annual charges or split bills).

Option 6: Dedicated private pipe and meter.

- Install a meter and a dedicated private pipe to each SUIP. This requires council to modify private plumbing.
- Under this option all SUIP's would be directly billed for their use (i.e. no uniform annual charges or split bills).

Among the six options considered, Option 4 was recommended:

- Install meters at the point of supply.
- Provide ratepayers the option to shift or sub-meter connections.
- This approach balances demand management goals with legal, cost, and implementation considerations.

3.7 **Project Phasing**

The rollout is structured into six stages:

1. **Detailed Planning.** We are currently working through this phase of the project and have made some great progress through data collection and engagement with other councils that have outlined some key risks and mitigations for consideration.

2. **Mobilisation.** Through data collection undertaken by the 3 Waters Team we have found that some 80% of our current infrastructure is water meter device ready. This will speed up the mobilisation and installation of water meters significantly and reduce the original phasing by removing the testing period.

3. **Phase 1 in Dannevirke**

   Dannevirke has been selected as the starting point based upon the below criteria:

   1. Dannevirke has an estimated 56% water lost to non-revenue water including leakage across public and private water supply infrastructure and unknown rural water connections.
   2. Dannevirke has the largest number of connections and provides the largest opportunity to reduce water loss and provide community influence on water monitoring data.

   Dannevirke has varying connection upgrades that will provide lessons learnt to create efficiencies in other towns as the programme evolves

4. **Town-by-town Rollout.** The project team will work with the field team to identify street-by-street those properties that require new manifold installation.

   1. Concurrently a team will undertake the installation of the manifolds, then roll out water meter devices ensuring asset information is correctly collected.
   2. Water Charging Consultation will be undertaken with the community.
   3. System interface and mock billing

5. Mop-up installations

The “Mop-up” will include several groupings of manifold installations.

1. Complex installs i.e. multiple properties on the same connection line.
2. Commercial properties that require larger than standard backflow prevention manifold.
3. Wrap up of the remaining meters and system integration to be undertaken.

6. **Project Close-out and Transition to Operations.** Project handover will include, final invoicing, data interface, asset handover and project closure.

Target: Install 80% of straightforward meters by 2029.

3.8 **Risk Summary**

Key risks include:

- Public resistance to metering or volumetric charges
- Inequities in billing
- Implementation delays or cost overruns
- Budget Risk
    - As a result of the planning work and detailed data collection undertaken by the project team and the wider 3 waters team it has been determined that the scope of works required has reduced significantly from what was assumed, this has enabled the project to advance more quickly and the acceleration of the project schedule.
    - The risk to accelerating the programme is the budget restraints and the council's ability to bring forward initially budgeted across a 10-year period, to across a 3–5-year period.
    - The Project Manager will work closely with finance and Alliance teams to mitigate project delays to budget restraints and will look to create some efficiencies in staging of product purchasing and workflow management.

Mitigation measures: Early community engagement, policy alignment, clear communication, cost management and legal preparedness.

3.9 **Community Engagement**

The following objectives should guide the engagement process for implementing water meters across the district:

- Ensure the community understands why meters are being installed, the benefits expected and the cost.
- Clearly outline the process for the roll out, when they will be installed and any disruptions this might cause.

- Clearly articulate how and when changes to water charges will occur, and on what basis.
- Reach as many residents as possible, using a wide array of methods and channels.

Phase 1: Awareness and education

Proactive, educational communications around the water network and the project including:

- Size of the network (km of pipes, number of connections, amount of water used per household etc)
- "Why water meters?" – long-term benefits, fairness, and futureproofing
- The expected benefits
- How the meters work
- Use simple visuals, infographics, short videos
- Publish stories of water loss, leaks, and usage today (make the invisible visible)
- Backflow prevention – what this is, what the Backflow Prevention Policy will include, how this will affect people (particularly commercial property owners), targeted engagement with those affected

This is an opportunity to raise awareness of the fact that Council is looking at a range of solutions to make the water network more efficient, including water meters.

Phase 2: What's happening and when

- Expected roll-out process
- Timeline for installations and when charging starts
- What people can expect (notice periods, how meters will be installed)
- Who to contact for help or concerns

Phase 3: Engagement and feedback

- Public consultation on water charge options

- Public Q&As, pop-up stalls at markets, Facebook Lives
- Community drop-in sessions and a dedicated info line/email
- Myth-busting campaign

Ensure community support for the programme and the outcomes Council is seeking to achieve.

3.10 **Procurement**

- The project team issued a request for information (RFI) to understand the market and supplier capability and capacity, and whether our preferred option (AMI) can be integrated with existing infrastructure. The team has analysed the responses.
- The manifold installation work will not be publicly tendered and will be delivered by our reticulation team under the existing Alliance contract between TDC and Downer.
- All other work streams will be publicly tendered including the parts and end to end delivery including the IOT connectivity, data management and reporting for billing. The selected supplier will work with the Alliance for the install.

Attachments

1⇩. TDC Water Charge Analysis - Summary Report (Final)
2⇩. TDC District Universal Water Metering Report (003)

TARARUA
DISTRICT COUNCIL

Water Charge Analysis Summary Report

1.0

30 April 2025

Document Title:

Water Charge Analysis Summary Report

Prepared for:

Tararua District Council

Quality Assurance Statement

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Approved for issue by:	Chris Bowie
Job number:	J001712

Document Control History

Rev No.	Date	Revision Details	Prepared by	Reviewed by	Approved by
1.0	30/04/25	Final	CM, AL	CB	CB

1 Background

1.1 Water Metering Project

Tararua District Council (TDC) is seeking analysis and recommendations to support the introduction of volumetric charging and smart metering for all Council-owned water supplies. A key driver for volumetric charging is to encourage end-user behaviour change and reduce water demand, promoting a fairer funding model by linking charges to actual water use.

This change will address the current inequity where high-usage properties are significantly subsidised by others under TDC's existing funding model. A volumetric approach will create a fairer system, with users paying a share relative to their actual water use, while keeping charges low for low-volume users and promoting more sustainable water consumption practices across the Tararua district.

1.2 Existing Water Pricing Structures

A variety of pricing structures for water are applied across New Zealand, and these offer different benefits and challenges. Historically, most councils have generally used a uniform annual general charge (or targeted rate) to charge businesses and households for water services. These charges are simple to administer but do not account for variance in actual use between individual households and businesses, and do not encourage conservation of water by placing a more direct value on water use.

The installation of water meters, particularly modern smart meters, has opened up improved opportunity for councils to implement alternative pricing structures, such as volumetric charging.

Generally, pricing structures fit within one or a combination of:

Pricing Structure	Description
Fixed Charge (including uniform annual general charges or targeted rates).	Apply uniform charges to every property. Fixed charges can be applied in conjunction with one of the volumetric based charging schemes below.
Uniform volumetric charges	Apply a consistent price for every cubic metre (m3) of water consumed. Encourages conservation and allows small, low-income households to lower their bills.
Increasing tiered charges	Apply higher volumetric charges when pre-set thresholds are reached. High water-users pay a higher rate than low water-users. Further encourages conservation but may lead to higher costs for households with many people.
Decreasing tiered charges	Apply lower volumetric charges when pre-set thresholds are reached. Advantageous for bulk users but discourages conservation and limits savings opportunities for low users. Use of this scheme is in decline.
Seasonal Charges	Apply higher volumetric charges based on consumption in peak demand periods.

2 Purpose

The purpose of this project was to develop a range of water charging options, informed by examples from across New Zealand, and to undertake financial analysis using TDC's available data and Rationale's prior experience. This work will culminate in a recommended approach for Council adoption. The project aligns with TDC's broader business case initiative to install water meters across all connected properties, with a phased implementation planned between 2025 and 2030.

This summary report provides high-level information of the process for evaluating the options, the recommended option and some of the modelling outputs completed by Rationale against the final short-listed options.

3 Optioneering

3.1 Evaluation Process

Rationale, based on previous work and knowledge of volumetric charging approaches elsewhere in New Zealand, developed a range of charging options for consideration. This long-list of options included a mix of fixed user charges and volumetric charges, with regular and high user charges included.

These options were then evaluated using the Multi-Criteria Analysis (MCA) framework to evaluate and ultimately reduce this to a short list of options for further analysis / modelling. The MCA framework provides a robust, transparent, and structured method for comparing shortlisted options. The short-listed options were presented to the TDC project team (remotely) on 10 April to confirm our assumptions and scoring before proceeding with further analysis.

The shortlist is assessed against:

- Investment Logic Map benefit statements (investment objectives identified in the previous Three Waters Strategy and Implementation work Rationale supported).
- Business Needs including economic efficiency; fairness to consumers; social orientation; cost-recovery; financial stability; and resource conservation of water)[1]
- Risks (technical, operational, financial, legal, political, economic, stakeholder, public) which will include those that are sourced from the Baseline Report and Gap Analysis.

[1] Business needs criteria is based on the key principles of water tariffs: https://www.branz.co.nz/pubs/research-reports/sr413/

3.2 Options Considered

These shorted-listed options included (final MCA scoring below each option):

Option 1	Option 2	Option 3	Option 4	Option 5
Fixed Charge Only (status quo)	**Fixed Charges + Universal Volumetric Charge**	**Fixed Charges + Universal Volumetric Charge with a free water threshold**	**Fixed Charges + increasing tiered volumetric charge**	**Fixed Charges + increasing tiered charge with a free water allocation**
All unmetered properties pay a fixed charge. **All metered properties pay a fixed charge plus a volumetric charge applied in excess of 80m3 of water consumed per quarter. Large water users >2,000m3 per quarter are charged at a discounted volumetric rate.**	All properties pay a fixed charge which is generally set to cover annual depreciation / renewal expenditure. A universal volumetric charge is levied on all water users (e.g., consistent price for every cubic metre of water). Encourages some conservation and allows small, low-income households to lower their bills.	As for Option 2, but with a free water threshold. Customers only pay volumetric charges above this threshold. The cost of this free allocation is included in the fixed charge.	As for Option 2, but with increasing volumetric charges above pre-set thresholds meaning high water users pay a higher average cost per unit compared with low water users. Encourages water conservation but may lead to high costs, particularly for high commercial users.	As for Option 4, but with a free water threshold.
5	**2**	**4**	**1**	**3**

These options are based on a 'one method for all' approach, where the pricing is consistent for all users. This also includes commercial uses as well. The split between residential and commercial was considered in the options analysis, though was discounted due to the perceived increased administration and effort, as well as uncertainty around future revenue fluctuations.

4 Recommended Option

Rationale recommends Council proceed with **Option 4: Fixed Charges + an increasing tiered volumetric charge**. The fixed charge combined with an increasing tiered price structure provides a balanced, principled approach to water pricing, aligning with key objectives of economic efficiency, fairness, social orientation, cost recovery, financial stability, and resource conservation. The fixed charge ensures that the essential costs of operating and maintaining the water system are recovered (such as funding depreciation of the assets).

The increasing tiered price structure, where the unit price rises with higher levels of water use, directly incentivises water conservation by making excessive consumption progressively more expensive, strongly supporting the resource conservation objective. This model drives economic efficiency by encouraging more environmentally responsible water use, thereby reducing demand pressures and associated costs on infrastructure and supply. Importantly, the structure promotes fairness by ensuring that all consumers pay equitably: low and essential water users are protected with lower charges, while high-volume users, who place greater strain on the system, contribute a proportionate share of costs, minimising the need for cross-subsidisation.

5 Indicative Modelling Outputs

Based on the final options, Rationale has developed a tool where the user can input potential volumetric charges and assess the indicative cost to individuals, as well as Council's funding streams.

NOTE: The tool is high-level and intended to promote discussion around charging options. It contains placeholder inputs, including those from other councils. The final volumetric charges will be different to those presented in the tool, and the following tables and charts. As universal water meters are installed across the district Council will have improved data on actual usage to update this model to ensure prices are accurately set and sufficient revenue is collected.

5.1 Example pricing structures

While Option 4 is evaluated as the recommended option, the model also includes a fixed charge only and a fixed charge + universal volumetric charge option for comparative purposes. An example of what the pricing structures might look like can be seen below, with a regular user charge set to $1.50 per m³ and a high user charge set to $2.00 per m³:

	Recommended	Comparator 1	Comparator 2
Option	**Option 4** **Fixed Charge + Increasing Tiered Volumetric**	**Option 1** **Fixed Charge Only (status quo)**	**Option 2** **Fixed Charges + Universal Volumetric Charge**
UAC	$381	$865	$434
Regular Use Charge ($/m³)	$1.50	-	$1.50
High Use Charge* ($/m³)	$2.00	-	-

**High water users have been defined as those who use more than 365 m³ of water, per year (this can be adjusted in the model).*

5.2 Example annual charge breakdown

5.2.1 HIGH WATER USER CHARGES (1,000 M3/ANNUM)

Based on the pricing structures above, Rationale has modelled how these options would directly impact individual users that have a metered water connection within the Tararua District.

For a high water user consuming 1,000 m^3 per year a volumetric pricing approach will result in substantially higher annual costs compared to the status quo, with the recommended increasing tiered volumetric pricing resulting in the highest total cost to the customer due to the $2.00 per m^3 cost for water used more than 365 m^3.

This approach encourages a fairer pricing structure, with these high users paying a share that is more

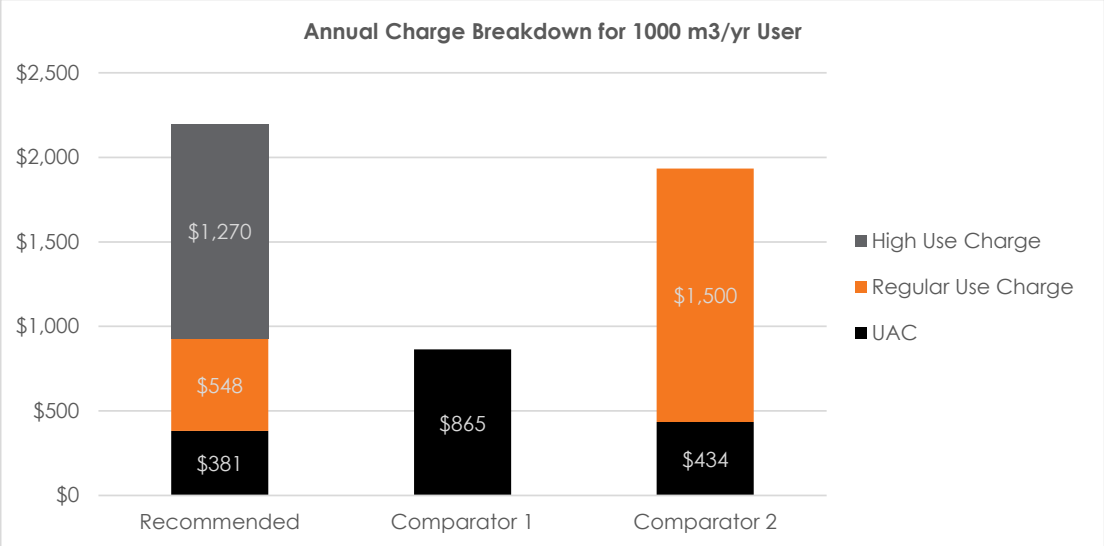

Figure 1: Modelled annual charges for high water users (1,000 m3/yr)

reflective of their actual usage, it is also expected to encourage water reductions.

5.2.2 LOW WATER USER CHARGES (200 M3/ANNUM)

In contrast, a relatively low water user consuming 200 m^3 per year is expected to have a reduction in annual cost relative to the status quo, with the recommended increasing tiered volumetric pricing resulting in the lowest cost due to the slightly lower annual fixed charge.

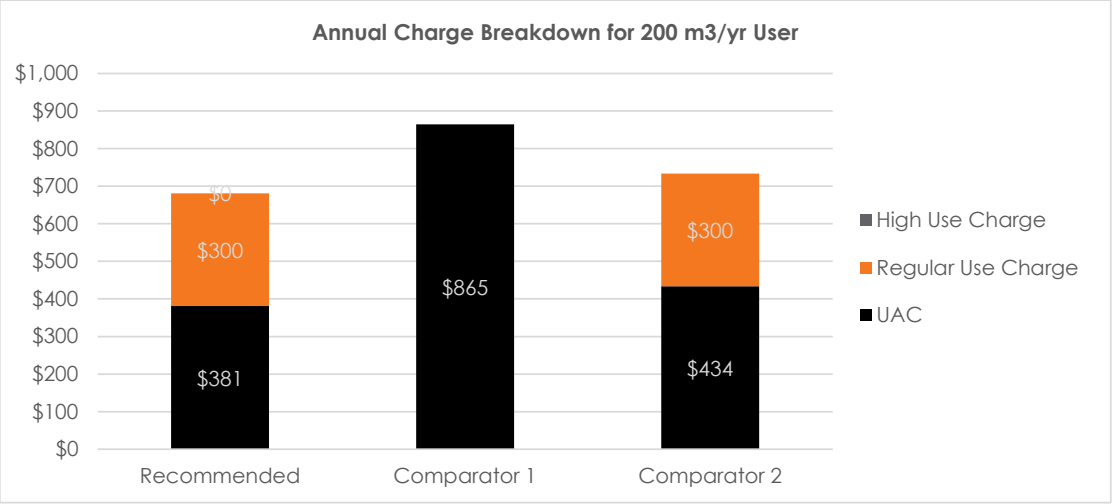

Figure 2: Modelled annual charges for low water users (200 m3/yr)

5.3Sources of Council revenue

Figure 3 below shows where Council's total revenue is collected from under each option. Revenue has been modelled based off the 2023/24 Annual Plan for Urban and Metered Water Supply Rates ($4.4m).

While individual high-water users are charged more under the recommended option, ultimately a large portion of the rates revenue is still collected from the regular user and fixed charges. The volumetric pricing approach does introduce some risk to Council if demand reduction is greater than anticipated (e.g. due to behaviour change or leakage reduction wrongly factored into consumption). This would result in less revenue being collected via metered connections, and ultimately less revenue that is needed to fund water service delivery.

TDC's proposed approach of first introducing a period of 'dummy billing' will help to mitigate this as Council will have a much stronger understanding of actual use and should expect to see some behaviour change occur already as a result.

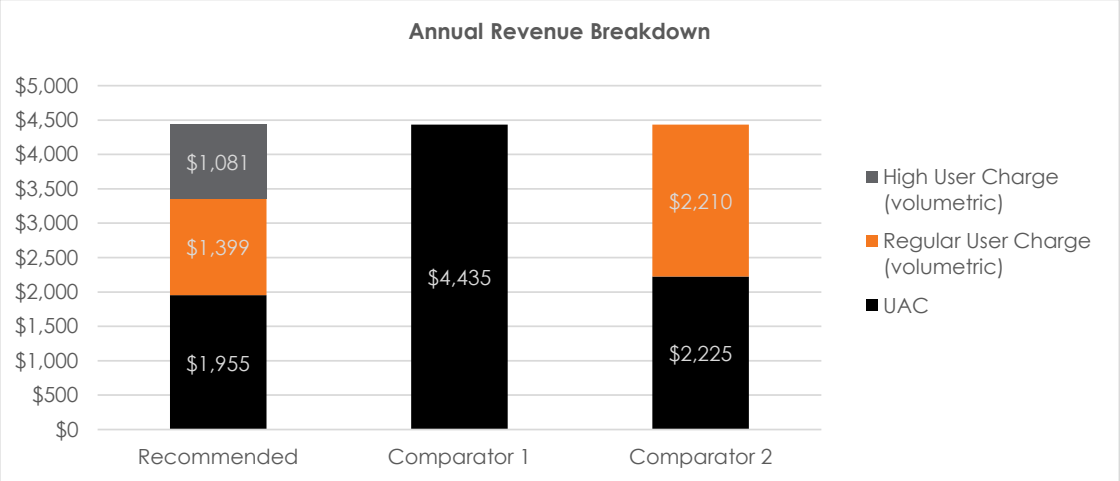

Figure 3: Modelled sources of annual Council revenue

TARARUA
DISTRICT COUNCIL

The Case for Universal Water Meters in the Tararua District

April 2025

Document Control History

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Table of Contents

1 Contents

2 Introduction

2.1 Background

2.1.1 Our Water Supply Schemes

Tararua District Council currently owns, manages and operates six water supply schemes, supplying water to over 5,000 residential properties across the towns of Dannevirke, Pahiatua, Woodville, Eketāhuna, Norsewood and Ākitio. A seventh scheme, in Pongaroa, is owned under a rural water scheme structure and operated by Tararua District Council.

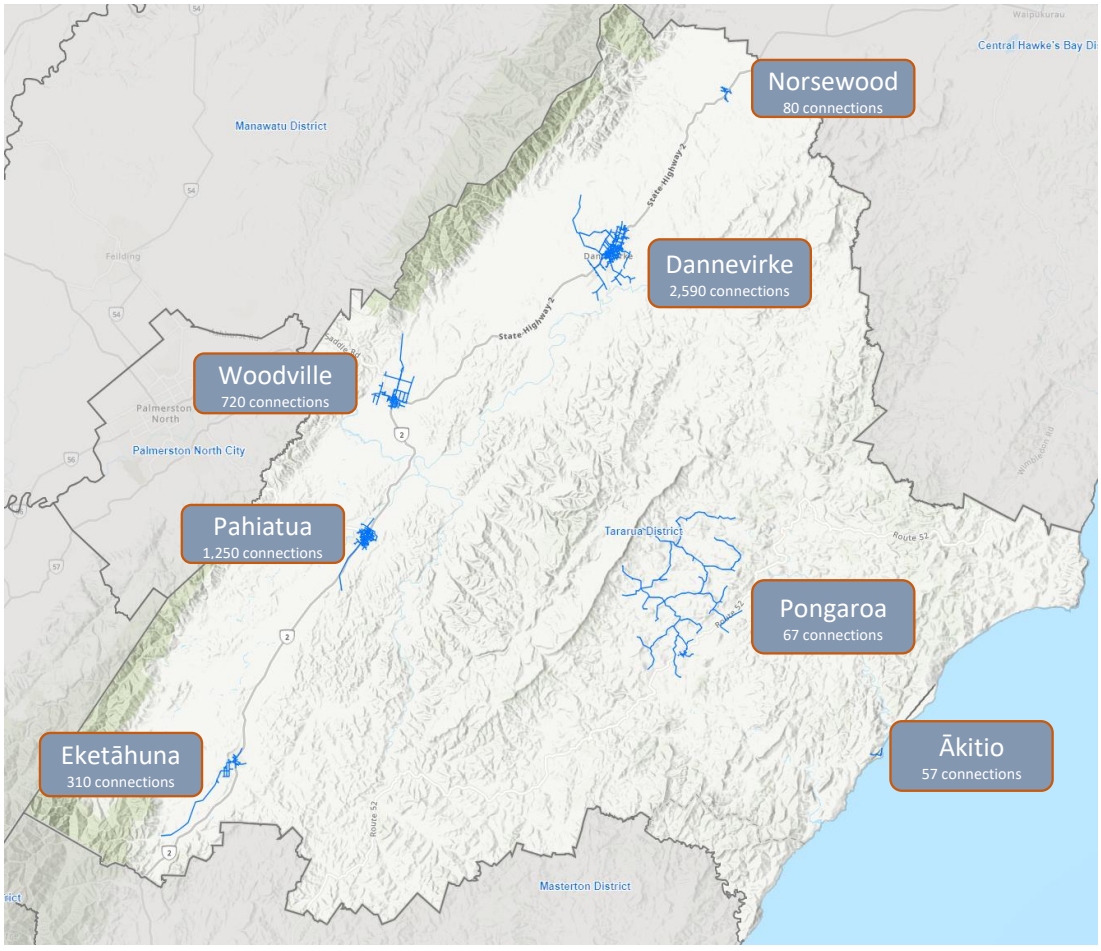


Figure 2-1: Tararua District Water Supply Schemes.

Water is primarily sourced via surface water takes from local rivers (with some ground-source bores) and then stored in raw water storage reservoirs before it is treated and supplied to communities. Water takes are managed through resource consent from the Horizons Regional Council.

2.1.2 Our Current Challenges

As further explored in Section 3.1.1, the Tararua District is a relatively water scarce area. One of the most significant natural hazards for the district is drought, which is expected to become more frequent and severe with climate change. Some of our surface water supplies are within over-allocated zones, and alternative water sources are not reliable or even available in many cases. To meet the future needs of our existing and growing populations, we need a strategy to better manage the water we take in a more efficient, effective manner. This will also help to offset potential future infrastructure upgrade costs.

We have identified the need for a demand management strategy across all the water supplies we own. A core component of this, which is widely recognised nationally and globally, is to install universal water meters so that we better understand water usage, target inefficient water use and drive behavioural change from our connected users.

2.2 Scope and Purpose

The purpose of this report is to outline the case for universal water metering and its role in the wider demand management strategy for the Tararua District. We then identify how the water metering project will be implemented. This report broadly follows a business case approach, and is structured into five key sections, as follows:

- **The Case for Change** – why universal water metering is needed in the context of a wider District wide demand management strategy.
- **Options to be Considered** – specific considerations and options for the implementation of water metering, such as the type of meter, connectivity, and how to address specific challenges.
- **Project Delivery Approach** – required workstreams for a successful project and our approach to procuring the right resources for successful delivery.
- **Project Management** – managing programme, cost, risk and public engagement.
- **Funding and affordability** – including long term financial implications for our community.

3 The Case for Change

3.1 Challenges and Opportunities

3.1.1 District-wide Challenges and Opportunities

In September 2024, Tararua District Council published a Demand Management and Water Conservation Plan as a requirement of its resource consents to extract surface water for the purposes of several water supplies across the district. It provided a comprehensive strategy to manage water demand and promote conservation across the main townships of Dannevirke, Woodville, Pahiatua, and Eketāhuna. The plan collated information on current water supply challenges that are a driving force for demand management and have been summarised below.

Regional Water Management Challenges

The Manawatū Freshwater Management Unit (FMU) has been split into 49 surface water management sub-zones, each with an allocation limit. As of June 2023:

- Four of these are over allocated.
- Two are fully allocated.
- 17 are between 95-100% allocation, and
- 26 are under the allocation limit.

Two of the water supplies for major towns in the Tararua District – Eketāhuna and Dannevirke – lie within over-allocated sub-zones. Further, the Pahiatua surface water supply is within a nearly allocated zone.

Drought as a Natural Hazard

One of the most significant natural hazards in the Tararua District is drought, which is expected to become more frequent and severe with climate change. Resource consents for surface (river / stream) water takes to most of TDC's water supplies are restricted to 'low flow limits' during low river flows.

Meeting the Demands of Growth

According to Tararua District Council's Urban Growth Strategy (2024) the district has grown from a population of 17,500 in 2013 to 19,000 in 2023, an increase of 8.6%. The population is expected to increase by another 8.9% over the next 10 years, and 17% over the next 30 years. Without measures to address demand, substantial investment will be required in infrastructure in some towns to provide water for the growing population at adequate levels of service. Demand management is therefore seen as a growth enabler to ensure that the

district has the headroom in its water supplies to support growth, which is critical to the ongoing economic success of the District.

3.1.2 Specific Supply Challenges and Opportunities

In addition to the Demand Management and Water Conservation Plan of September 2024, Tararua District Council facilitated a workshop with iwi representatives in December 2024 to identify specific challenges in the delivery of water and wastewater services across the district.

The following table provides a summary of critical issues for each water supply.

Table 3-1: Critical Challenges with Tararua District's Water Supply Schemes.

Water Supply Scheme	Critical Challenges
Dannevirke	• 56% of the water supply is estimated to be lost to non-revenue water, including leakage across the public and private water supply infrastructure and unknown rural water connections. • During low river flows, demand can exceed the permitted abstraction rate from the Tamaki River. Alternative sources or additional storage may be required to address this, at significant cost. • The Dannevirke water supply lies within an over-allocated water supply zone. • The impounded water storage facility for storing raw water requires repairs and ongoing maintenance and is a single point of failure in the supply network • Without measures to curb water demand, the capacity of the existing water treatment plant will be reached by 2028. • There is insufficient treated water reservoir capacity.
Woodville	• 33% of the water supply is estimated to be lost to non-revenue water, including leakage across the public and private water supply infrastructure and unknown rural water connections. • During low river flows, demand can exceed the permitted abstraction rate from the Mangapapa River. An abatement notice has been issued by Horizons Regional Council in this regard. Alternative sources or additional storage may be required to address this, at significant cost. • With projected growth and current losses, headroom in the water treatment plant is expected to rapidly deplete and will be exceeded in the foreseeable future.

Water Supply Scheme	Critical Challenges
	• 6km (42%) of the total pipe network is undersized to meet capacity needs. • Additional, resilient reservoir storage is required regardless of non-revenue water improvements.
Pahiatua	• 36% of the water supply is estimated to be lost to non-revenue water, including leakage across the public and private water supply infrastructure and unknown rural water connections. • The Pahiatua water supply lies within nearly allocated water supply zone. • During low river flows, demand will get very close to the permitted abstraction rate from the Mangatainoka River and Pahiatua bore. • There are some areas of the township where the pipes are significantly undersized to meet future growth • No significant impact on water treatment plant because it has been upgraded to meet future demands.
Eketāhuna	• 49% of the water supply is estimated to be lost to non-revenue water, including leakage across the public and private water supply infrastructure and unknown rural water connections. • There is insufficient water treatment plant capacity to meet future growth with current NRW levels.
Norsewood	• No reported issues
Ākitio	• The water supply is from a spring on private land which is limited to a take of 50m³ per day and relies to some extent on the goodwill of the landowner to continue to provide the necessary supply. • In peak summer periods, when the township experiences extremely high population, water shortages are experienced. • Leaks from existing infrastructure (such as the water tanks) contribute to water shortages.

3.1.3 Key Problem Statements

Based on the investigations identified above and further evidence from Tararua District Council's three waters operations and asset management teams, the following key problem statements have been identified:

1. ***While the Tararua District faces significant drought risk and pressure on water allocation to public water supplies, the existing water extracted from these sources is not efficiently used.***

   Water leakage and unknown connections in Tararua District's major networks typically account for one third to one half of all water demand across major townships. There is no data on water losses in the district's smaller water supplies.

   These losses are higher than New Zealand's nationally estimated leakage from public water networks, which is estimated to be 22% of all water supply[1]. New Zealand is identified as a poor performer among OECD countries.

2. ***Without urgent action to address demand, upgrades to water storage, water treatment and/or distribution infrastructure are required in the foreseeable future to address capacity issues.***

   The costs of addressing this are significant in the context of Tararua District's relatively small ratepayer base.

3. ***At present, TDC does not have access to reliable or sufficient data sources to support targeted demand management with the limited resources it has.***

   For example, it is thought that some water supply networks have extensive (but unknown) rural connections that supply commercial / farming operations, but the extent to which these contribute to non-revenue water loss cannot be readily quantified. Further, leak detection relies on highly manual and labour-intensive methods to target network leakage.

3.2 The Role of Universal Water Metering

3.2.1 Demand Management Initiatives

TDC's Demand Management and Water Conservation Plan (2024) identifies a range of possible demand management initiatives, which are summarised in the table below.

[1] https://www.phcc.org.nz/briefing/plugging-gap-aotearoas-piped-water-loss-far-worse-global-leaders

Table 3-2: Demand Management Initiatives.

Water Conservation Initiative	Summary	Degree of Expected Impact
Metering extraordinary users	TDC's Water Supply Bylaw (2019), classifies extraordinary supplies as a "category of on demand supply including all purposes for which water is supplied other than ordinary supply and which may be subject to specific conditions and limitations". It includes users such as fixed garden irrigation systems. Commercial and industrial businesses, agricultural users, lifestyle blocks and fire protection systems. Clause 17.2 of the bylaw states that extraordinary water supplies will normally be metered and charged, other than in circumstances where the extraordinary supply is for fire protection only. However, it is understood that metering has not been consistently adopted across the district.	Moderate to High
Universal water metering and charging	Install meters on all supply connection points and charge for water on a volumetric basis. This is expected to drive behavioural changes in water use and target leaks early.	High
Conservation awareness programmes	Undertake public engagement initiatives and campaigns that provide education on water conservation.	Low to moderate
Water audits	Undertake audits of extraordinary users to benchmark efficiency and identify opportunities for savings.	Low
Water restrictions	As is undertaken at present, place water restrictions on use (such as hose bans) during dry periods.	Low
Infrastructure management, including:		

Water Conservation Initiative	Summary	Degree of Expected Impact
Leak detection and reduction	Undertake leak detection progressively across networks to identify major targets for leak reduction, and then undertake network repairs accordingly.	Moderate (without universal metering) to High
Restrictor checks	Flow restrictors installed on water connections to properties are subject to wear and tear which will gradually increase water consumption. TDC's bylaw stipulates that Council may install restrictors and retains ownership and responsibility for maintenance of these. Clause 33.7 of the bylaw states that restrictors shall be tested by measuring the flow through it under minimum operating pressure requirements. However, there are no restrictors in the network at present.	Moderate to high (if applied across all connections)
Pressure management	Analyse network pressures and install pressure control devices. Doing so reduces leakage by reducing the force through which water passes through holes / cracks in pipes.	Low to moderate
Use of water efficient technologies	Support the public to install water efficient devices, such as water efficient faucets.	Low
Water capture, reuse and recycling	Support the public to install rainwater tanks for non-potable water uses, and/or require developers to install grey water systems.	Low

3.2.2 The Role of Universal Water Metering

Universal water metering is a widely accepted approach to managing water usage and is now adopted in over 50% of water connections in New Zealand. It forms a critical part of demand management programmes.

Water New Zealand's National Performance Review for 2018/19 illustrates a strong correlation between metering and low domestic per capita water consumption. Examples include Western Bay of Plenty, Auckland and Whangarei, all of whom have water use of 120 – 180 l/person/day. This is lower than typically expected demand of 180 – 220 l/person/day for unmetered, well managed networks, and significantly lower than the reported 500 l/person/day or greater across Tararua District's networks.

Therefore, given the large discrepancy between Tararua District's estimated per capita consumption, and that of metered networks, it confirms that universal water metering should form a critical part of TDC's demand management strategy.

3.3 Project Objectives

Based on the problem statement and challenges described above, four key project objectives have been defined as presented below.

Objective 1: By 2030, deliver at least 30% reduction in peak water demand across Tararua District Council's water supply schemes to defer or eliminate capital expenditure in capacity upgrades to these schemes.

A 30% target has been proposed as this aligns to the expected or realised savings from volumetric water charging once universal water metering were installed in other locations New Zealand.

Establishing volumetric charging following the implementation of universal water metering in and of itself will only go so far to achieving this reduction target – by changing behaviours in water demand. Other initiatives, such as a network leak reduction programme, will be required to achieve this target, and this is outside the scope of this universal water metering project. However, universal water metering will make leak detection and management easier in the future.

Objective 2: Enable Tararua District Council to more effectively ringfence and target water revenue to support investment in water services and assets, in line with national policy expectations.

As noted above, legislation relating to Local Water Done Well brings greater focus on sustainable funding of water services using three mechanisms:

- Ensuring water services must generate sufficient revenue, either directly from users or through rates, to cover the costs of maintenance and depreciation of water infrastructure.
- Separating water services' financial requirements from other council operations to prevent cross-subsidisation.
- Water services should have the ability to access borrowing for infrastructure investments, supported by user willingness to pay for the services.

All these mechanisms can be supported by universal water metering and volumetric charging by enabling a direct link between water usage, revenue and water service delivery.

Objective 3: Leverage universal water metering to increase awareness of water consumption and maximise behavioural change in the way that water resources are utilised across the district.

Through effective and ongoing community and wider stakeholder engagement, as described later in this plan, there is a unique opportunity to educate water users on water efficiency and responsible consumption.

Objective 4: Leverage universal water metering to support wider demand management initiatives.

Universal water metering will pinpoint network leaks which will enable TDC to rapidly address water losses in its networks.

3.4 Project Benefits

Related to the project objectives defined above, the following key project benefits have been identified.

Table 3-3: Project Benefit Definition and Measures.

Project Benefit	Description	Key Measure(s)
Water consumption reduction	Water metering, including volumetric billing, has been proven to significantly reduce water demand, particularly peak demand, which is a major driver for new water infrastructure development.	Percentage drop in seasonal peak water demand, year on year, per catchment
Water loss reduction	Water metering helps to identify leaks and benchmark water consumption. By measuring and	Rolling water loss, per catchment, against a

	charging for water use, meters provide essential data that supports various water conservation measures and helps in detecting leaks early. The information provided by water meters is crucial for the Council's water conservation efforts, enabling targeted and effective water-saving initiatives.	baseline flow (which will be defined per catchment)
CAPEX offset	By managing demand and offsetting infrastructure costs, universal metering may help mitigate rate increases. A volumetric-based rate structure reduces overall consumption, deferring capital upgrades to the water supply network, and decreasing operation and maintenance costs for existing infrastructure.	Deference of capital projects relating to water supply schemes when compared to baseline LTP

3.5 Alignment to Strategic, Legislative and Policy Requirements

3.5.1 Local Priorities

Tararua District Council Long Term Plan 2024-34

TDC's Long Term Plan (LTP) 2024-2034 outlines a vision of vibrant, connected communities where land and waters are nurtured, and people flourish. The infrastructure strategy and financial strategy are the enablers that allow the district to plan.

The LTP proposes a conservative approach to investment in three waters to lessen the impacts on rates, while ensuring capacity for future growth. 41% of the total capital projects are in the three waters space, which includes $83.2 million of investment over the next 10 years earmarked for water treatment and supply. This level of investment is intended to address ongoing maintenance and renewal programmes to meet levels of services, extend the life of existing infrastructure (where possible), building understanding of existing infrastructure and address existing deficiencies in key areas such as meeting New Zealand Drinking Water Standards.

Implementing universal water metering aligns strategically with the Council's goals by ensuring revenue sufficiency for maintenance and upgrades and meeting future regulatory requirements. This approach supports informed decision-making, enhances the understanding of the infrastructure's condition, and helps manage growth and environmental impacts.

Tararua Infrastructure Strategy (2021-2051)

The Infrastructure Strategy for Tararua District Council 2021-2051[2] sets out Council's strategic direction for delivery of its key services and the infrastructure assets that support them, over the next 30 years.

Implementing universal water metering aligns strategically with the following key principles for the district's infrastructure:

- **Lifecycle management:** Universal water metering enables precise monitoring of water usage, which can identify inefficiencies and potential leaks within the system. This data assists in planning and prioritising maintenance and renewal activities, which in turn can potentially extend the life of water infrastructure and reducing unexpected failures and maintenance costs. By providing accurate information on water consumption patterns, metering supports evidence-based decision-making for asset management.
- **Demand management:** Water metering is a critical tool for demand management as it promotes water conservation by making users aware of their consumption levels. This awareness can lead to behavioural changes that reduce overall water use, especially during peak periods. By managing demand more effectively, the Council can defer costly infrastructure expansions and reduce the stress on existing water resources.
- **Levels of Service management:** Implementing universal water metering helps maintain high levels of service by ensuring a reliable supply of water. It allows the Council to monitor and manage water distribution more effectively, identifying areas with high usage or potential issues.
- **Risk management:** Water metering mitigates several risks associated with water supply systems. It helps in early detection of leaks and high usage patterns, which may indicate infrastructure issues. By addressing these issues promptly, the Council can prevent major disruptions and reduce the risk of water loss. Data recoded by water metering can better support emergency works, which is less reactive and more proactive response planning.

Urban Growth Strategy 2024-34

[2] https://www.tararuadc.govt.nz/__data/assets/pdf_file/0027/5976/Tararua-District-Council-Long-Term-Plan-2021-2031-Volume-2-Infrastructure-Strategy.pdf

Tararua District Council's Urban Growth Strategy[3] sets out to establish clear, effective direction for the management of projected residential, commercial and industrial growth within the district over the next 30 years. The strategy was developed in response to increased population growth and increased demand for land for development.

With predicted growth expected to have significant impacts on existing infrastructure and expected levels of service, the strategy provides a holistic assessment of core infrastructure and identify key infrastructure deficiencies, supporting effective prioritisation of investment.

As the evidence for growth suggests, water metering supports managing anticipated growth by providing detailed data on water usage, which can inform infrastructure planning and ensure that the existing water supply networks can handle increased demand without overloading the system.

This will ensure that infrastructure development keeps pace with urban growth, promoting sustainable use of resources, supporting evidence-based decision-making, and effectively managing demand. This alignment helps to create resilient, efficient, and sustainable urban environments that can accommodate future growth while maintaining high levels of service and community wellbeing.

Rangitane-o-Manawatu Environmental Management Plan

The Rangitane-o-Manawatu Environmental Management Plan[4] outlines the environmental management framework and cultural values of the Rangitāne o Manawatū iwi. Key elements of the plan include:

1. **Cultural and Environmental Values**: The plan sets out the cultural values and principles of Rangitāne o Manawatū, emphasizing the importance of Te Mana o te Wai, which focuses on the health and well-being of water bodies. This principle is central to their environmental management and decision-making processes.
2. **Holistic Approach**: The plan adopts a Whānau Ora (holistic) approach, integrating environmental sustainability with broader objectives such as whānau cohesion, healthy lifestyles, economic security, and active participation in society. This approach ensures that environmental outcomes are linked to the overall well-being of the community.

Regarding water metering in the district, it is essential to consider the principles and associations outlined in the 'Cultural and Environmental Management Plan' by Rangitāne o Tamaki nui-ā-Rua. This plan documents the cultural values and guides decision-making in resource and environmental management processes. Aligning water metering policies with

[3] https://www.tararuadc.govt.nz/publications/consultation/previous-consultation/district-growth-strategy
[4] https://www.horizons.govt.nz/HRC/media/Media/General/Rangitane-o-Manawatu-Environmental-Management-Plan_1.pdf

these cultural considerations will help ensure sustainable and respectful water management practices. Additionally, consulting with local iwi, including Rangitāne o Manawatū, is crucial for a holistic approach to water management in the region.

3.5.2 National Priorities

Local Water Done Well

Introduced in early-2024, Local Water Done Well[5] is the Government's revised approach to Three Waters Reform. The primary aim of the Local Water Done Well initiative is to ensure that water services are both financially sustainable and compliant with regulatory standards. Councils must develop and present a water service delivery model that meets these criteria, with flexibility in how they generate revenue.

TDC are in the process of developing an integrated strategic plan for their three waters services. This work will form the basis of the required service delivery plan for Local Water Done Well.

The Local Water Done Well plan emphasises the importance of financial sustainability, transparency, and flexibility in water service delivery. Implementing water metering is signalled in the plan to achieving these goals, ensuring that water services are both efficient and equitable for all water users and stakeholders.

Key components of the plan to introduce financial sustainability include:

- **Revenue sufficiency:** Water services must generate sufficient revenue, either directly from users or through rates, to cover the costs of maintenance and depreciation of water infrastructure.
- **Ringfencing:** Financial practices must ensure that water services are self-sufficient, with dedicated funding that does not impact other council services. This involves separating the water services' financials from other council operations to prevent cross-subsidisation.
- **Funding for growth:** Water services should have the ability to access borrowing for infrastructure investments, supported by user willingness to pay for the services. This ensures that necessary upgrades and expansions can be funded as needed.

The success of water service delivery, as highlighted by the Minister of Local Government, has been strongly linked to the effective use of water meters. Metering allows for precise tracking of water usage, enabling councils to implement fair and transparent charging mechanisms. This not only promotes responsible water use but also ensures that the revenue generated is

[5] https://www.dia.govt.nz/Water-Services-Policy-and-Legislation

adequate to sustain and improve water infrastructure, aligning with the broader objectives of the Local Water Done Well approach.

National Policy Statement (NPS) for Freshwater Management 2020

The National Policy Statement for Freshwater Management (NPS-FM)[6] provides direction on how freshwater resources should be managed in New Zealand. It emphasises the concept of Te Mana o te Wai, which prioritises the health and wellbeing of water bodies, followed by the essential needs of people, and then other uses.

Key requirements include involving tangata whenua in decision-making, setting long-term visions, improving degraded water bodies, maintaining or improving water quality, and expanding the national objectives framework to include additional values and attributes for ecosystem health.

The NPS-FM mandates the avoidance of further loss or degradation of wetlands and streams, restoration efforts, addressing fish passage barriers, and regular monitoring and reporting on freshwater quality.

Universal water metering aligns with this concept by setting realistic long-term visions by providing a clear picture of water usage patterns, which is crucial for sustainable planning and prioritising water body health and essential human needs.

Water metering will also enable the identification of excessive water use, allowing for targeted measures to reduce demand and prevent over-extraction, in turn helping to maintain or improve water quality.

3.6 Key Risks

A workshop was undertaken by TDC in January 2025 to identify project risks, which are presented in Section 6.3. The greatest risks identified primarily relate to the potential implications of implementing a water charging regime, which is a critical component in driving water consumption behaviour (i.e. it cannot be achieved by water metering alone). These risks include:

- Erosion of public trust from charging for water, because there is a current precedent to supply water at relatively low cost under a rates-based regime.
- Uncertainty in the future of the water charging regime may cause concerns for the public, especially in an environment of water reform.
- Creating of inequality from the water charging regime, primarily because it might lead to higher per capita costs for smaller households.

[6] https://environment.govt.nz/acts-and-regulations/national-policy-statements/national-policy-statement-freshwater-management/

- The risk of accelerating the programme will be subject to the budget restraints and the council's ability to bring forward funding initially budgeted across a 10-year period, to across a 3–5-year period.

The Project Manager will work closely with finance and Alliance teams to mitigate project delays to budget restraints and will look to create some efficient by staging of product purchasing and workflow management.

TDC has undertaken water charge analysis so that elected members are informed and adopt an appropriate regime for the Tararua District in recognition of its specific challenges and opportunities. Furthermore, early and ongoing community engagement is seen as critical to the success of the programme and is explored later in this document.

The other key risk identified is that the digital meters use a significant portion of their life before the end of the installation programme. This will be considered in project execution planning.

4 Options to be Considered

4.1 Introduction

The purpose of this section is to present the options considered for meter infrastructure and the establishment of a universal water metering system across the Tararua District. Options have then been developed against the investment objectives (as defined in the previous section) and critical success factors (as defined below).

There are two key considerations for which options identification and analysis has been completed, including:

- **Overall universal water metering system type** – this includes consideration of the integrated system of equipment, communications and information management systems for utilities to collect customer water usage (and potentially other information).
- **Complex meter installations**, including those where water is supplied to multiple dwellings / properties through a single connection point at present.

4.2 Consideration 1: Overall Universal Water Metering System Type

The overall system type refers to the integrated system of equipment, communications and information management systems that will be used to collect customer water usage, and potentially other information. Three types of systems are used in universal water metering applications, including:

- AMI (Advanced Meter Infrastructure),
- AMR (Automated Meter Reading), or
- Manual systems.

A brief overview of each is provided below.

4.2.1 Advanced Meter Infrastructure (AMI)

AMI is an integrated system of water meters, communication networks and data management systems infrastructure. This infrastructure facilitates the collection of meter telemetry (e.g. readings, alerts, warnings), over the air via a fixed network, into a cloud data repository system or similar without any human involvement in data collection. The data can then be used to improve operational efficiencies and sustainability by effectively monitoring water usage and system efficiency, detecting malfunctions and recognising irregularities in water use.

A schematic of an AMI system is provided below.

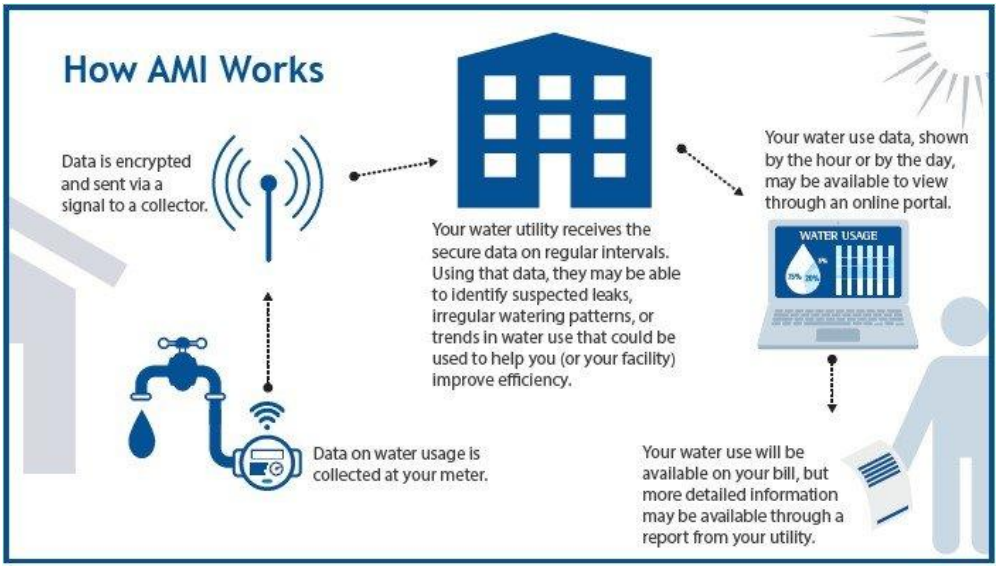


Figure 4-1: Schematic of an Advanced Metering Infrastructure (AMI) System as Applied to Water Metering. Source: Advanced Metering Infrastructure, United States Environmental Protection Agency. https://www.epa.gov/watersense/advanced-metering-infrastructure

As new meter technology has developed rapidly, and systems with advanced features are becoming increasingly available, AMI has emerged as a way to provide real time information to customers to potentially enhance water consumer behaviours to reduce water use. However, determining how to manage the data collected and how to make that data available

in a useful way to customers can be challenging. The American Water Works Association (AWWA) has therefore developed guidelines to support enhanced implementation of AMI in a way that maximises benefits for demand management.

It is unknown to what extent AMI has been implemented in New Zealand. Pilot trials have been undertaken internationally[7] however through early supplier engagement we are aware of "Internet of Things" (IOT) network providers who support investment in IOT networks to manage data for infrastructure, including but not limited to water meters.

4.2.2 Automated Meter Reading (AMR)

In the context of universal water metering, AMR is used to collect water consumption and status data from water meters using a walk-by or drive-by data collector. Water flow and alarm data is captured at the meter. As indicated in the schematic below, A handheld or vehicle mounted data receiver passing in proximity to a registered meter collects data points. Tis data is uploaded to a centralised system where it can be used for billing and to provide customer information that may change water consumption behaviours.

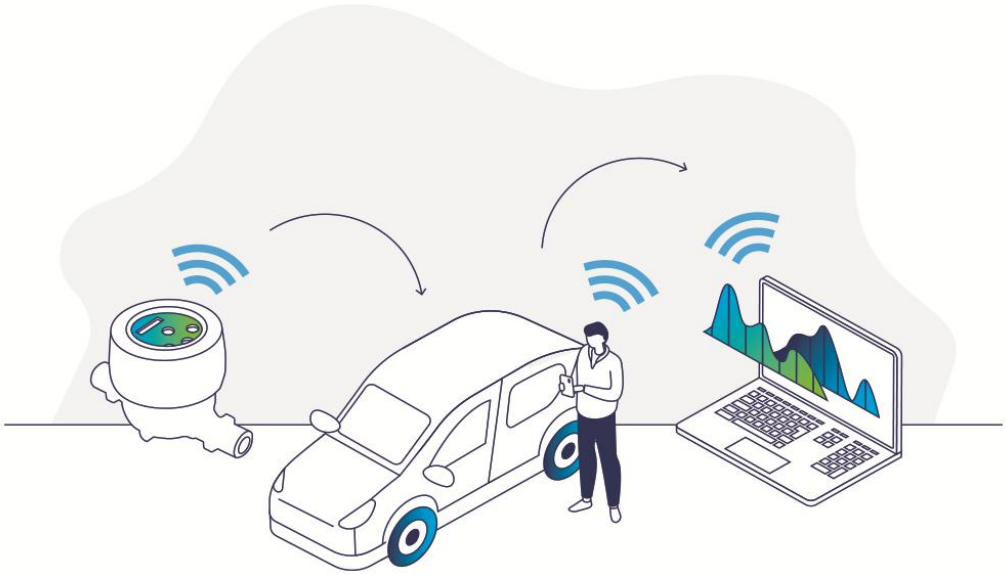


Figure 4-2: Schematic of an Automated Meter Reading (AMR) System as Applied to Water Metering. Source: https://arad.co.il/amr-ami/drive-by-walk-by/.

Aside from manual meter reading, AMR is the common method for "smart" water meter data collection and is commonly being implemented in New Zealand (for example, New Plymouth

[7] Skowron, E. (2018). *Using AMI Technology to Reduce Non-Revenue Water and Enhance Customer Satisfaction.* Water New Zealand Conference Proceedings, September 2018.

District Council have opted for AMR implementation as part of their universal water metering project roll-out). It requires less infrastructure investment to establish a fixed network and potentially complex data management infrastructure but requires greater investment in resources to routinely monitor systems. However, efficiencies can be gained by integrating automated meter reading to other Council operations, such as rubbish collection, given that these operations involve driving past properties on a regular basis, although this may not be applicable to very remote locations who do not receive such services.

While AMR systems are less sophisticated than AMI systems, they do present less opportunity to change water use behaviour through the provision of real-time data. This is because AMR systems provide customer data on a semi-regular basis which can disconnect the behaviour of water consumption from data and be less empowering to consumers to change behaviour without seeing instant results. In terms of leak management, the time delay between capturing data and acting upon it *can* increase costs to repair owing to collateral damage caused by water leaks if not addressed immediately.

4.2.3 Manual Water Meter Reading

Manual water meter reading is the least sophisticated option for capturing limited water consumption data and involves the use of field staff to physically read meters, record this information and log it. Typically, data collection is limited to volumetric use of water. Unusual water usage (leading to leak detection) will only likely be picked up through repetitive meter reading over a long period or through visible identification of leaks, which has the potential to cause collateral damage to infrastructure.

4.2.4 Evaluation of Options

A two-stage evaluation process was used to evaluate the options for water metering system type.

The first stage included an assessment of each option against the key objectives, to identify whether any of the options should be discounted on the basis that they do not materially contribute to the objectives, leaving only “shortlisted options”. This evaluation is shown in **Error! Reference source not found.**.

As indicated in in **Error! Reference source not found.**, of the three options considered, Option 3 (manual metering) is unlikely to support or meet all the project objectives and has therefore been discounted from further consideration. This is because the amount of data and timing of its collection will unlikely achieve the level of behavioural change, or response to leak management, required to meet the objectives. Option 1 (Advanced Metering Infrastructure) and Option 2 (Automated Meter Reading) have both been taken forward, however Option 1 is likely to chieve the objective to the greatest extent owing to the timing of availability of data for both Council staff and water consumers.

The shortlisted options were then assessed against critical success factors, which are the essential elements that must be successfully addressed in this case to demonstrate value.

The critical success factors defined for this options assessment are:

- **Whole of life cost**
- **Health and Safety** – especially speed, ease and safety of collecting the reading data
- **Capability to support improved network operation and resilience**, via alert and diagnostics information such as leaks, tampering, pipe bursts, and backflow.
- **Accuracy** of the readings taken
- **Operational efficiency** – time and effort required to process and bill the readings
- **Meter life**
- **Maturity** – how widely installed and well developed is the option

As shown in Table 4-2, weightings have been placed on each critical success factor. Higher weighting has been placed on the critical success factors that we consider to be most important, including whole of life cost (25%), health and safety (20%), and the ability of the option to contribute to operational efficiency and resilience across the networks (20%).

Each critical success factor has been assigned a score from 1 (does not address at all) to 10 (entirely addresses)

Table 4-1: Assessment of Long List Options for Universal Water Metering System for Tararua District.

Objective	Option 1: Advanced Metering Infrastructure (AMI)	Option 2: Automated Meter Reading (AMR)	Option 3: Manual Metering
1. By 2030, deliver at least 30% reduction in peak water demand across Tararua District Council's water supply schemes to defer or eliminate capital expenditure in capacity upgrades to these schemes.	Fully supports	Fully supports	Partially supports
2. Enable Tararua District Council to more effectively ringfence and target water revenue to support investment in water services and assets, in line with national policy expectations.	Fully supports	Fully supports	Fully supports
3. Leverage universal water metering to increase awareness of water consumption and maximise behavioural change in the way that water resources are utilised across the district.	Fully supports	Fully supports	Partially supports
4. Leverage universal water metering to support wider demand management initiatives.	Fully supports	Partially supports	Does not support
Conclusion:	**Option taken forward for further evaluation**	**Option taken forward for further evaluation**	**Option discounted**
Remarks:	Option 1 provides the highest chance to meet all objectives provided that the data can be collected and managed in a way to support these objectives.	Option 2 is likely to meet the objectives but may not be as effective at doing so due to the lag between receiving data and responding to it (for example, to manage leaks).	The lack of data available means that this option is unlikely to achieve

Table 4-2: Assessment of Short List Options for Universal Water Metering System for Tararua District.

Critical Success Factors	Factor Score		Factor Weighting	Weighted Score	
	Option 1: AMI	Option 2: AMR		Option 1: AMI	Option 2: AMR
Whole of life cost	9	10	25%	2.25	2.5
Health and Safety	10	8	20%	2	1.6
Capability to support improved network operation and resilience	10	8	20%	2	1.6
Accuracy of the readings taken	5	5	5%	0.25	0.25
Operational efficiency – time and effort required to process and bill the readings	5	5	15%	0.75	0.75
Meter life	7	5	5%	0.35	0.25
Maturity – how widely installed and well developed is the option	6	9	10%	0.6	0.9
			Total:	**8.2**	**7.85**
			Rank:	**1**	**2**

As shown in Table 4-2, while both options generally performed well, Option 1 (Advanced Metering Infrastructure) provides distinct advantages in terms of:

- Health and safety, because it does not require the deployment of field staff to undertake routine meter reading.
- The ability to support TDC with improved network resilience.

On the other hand, Option 2 (Automated Meter Reading) scored slightly better in terms of whole of life cost, based on our understanding of the potential costs to establish the network, noting that this will be dependent on the procurement model taken (discussed later). If IOT network providers can be found who can support a fixed network cost effectively, this is likely to further favour Option 1.

4.2.5 Evaluation Outcome

Based on the analysis presented above, we recommend that TDC proceed as follows:

- That they seek supplier input via a procurement process on the track record, capability and capacity of suppliers to provide cost effective IoT networks and compatible meters that would support Advanced Meter Infrastructure (AMI) as the preferred option. Previous analysis undertaken by New Plymouth District Council, albeit 5 – 6 years ago, identified that AMI technology was emerging, and that a certified AMI meter was not yet available in the New Zealand market. However, with the rapid advances in this technology and the time conceded since, it is anticipated that technology is available now and should be tested via supplier engagement.
- That if this cannot be achieved, that Option 2 be reserved as a secondary choice, noting that the types of meters installed for Option 1 and 2 are likely to be AMI or AMR compatible in any case.

4.3 Consideration 2: Addressing Complex Properties

4.3.1 Introduction

In some instances, the existing water reticulation to some properties is not optimal for providing water metering to separately used or inhabited part (SUIP) of rating units. We define these as complex properties, and they include:

- There is no single Council water supply point per SUIP – i.e., the water supply point is shared by neighbours.
- TDC does not own or have legal access to the connecting pipe from the Council water main to each SUIP.

These situations can be typically found where properties have right of ways, cross-leases or blocks of units / flats.

A survey of the district's three largest towns (Dannevirke, Woodville and Pahiatua) has identified that 5% of all water connection points in these towns supply multiple properties. 6% of all existing connection points are on private property, although it is unlikely that all these present a "complex property" situation (i.e., the connection point can be readily moved to provide TDC access).

Based on feedback from other Councils who have faced similar challenges, six options have been identified, as follows:

Option 1: **Only install meters on existing point of supply where one lateral serve one SUIP. Grouped SUIP's would be billed by a uniform annual charge.**

- Under this option, a meter would be installed where a relationship of one meter to one SUIP can be maintained.
- Do not install a meter on any connection points that feed multiple SUIPs (i.e. a 1:1 relationship cannot be maintained). In these cases, bill using a uniform annual charge.

Option 2: **Meter at existing point of supply – uniform annual charge for grouped SUIP's. This differs from Option 1 as every connection has a meter regardless of approach to billing.**

- Install a meter on each rider main or lateral where council ownership currently ends.
- Where a relationship of one meter to one SUIP cannot be maintained, bill using a uniform annual charge.

Option 3: **Meter at existing point of supply – split bill for grouped SUIPs.**

- Install a meter on each rider main or lateral where council ownership currently ends.
- Where a relationship of one meter to one SUIP cannot be maintained, share the volumetric component of the bill equally between each SUIP connected to the meter.

Option 4: **Meter at point of supply with ratepayer option to move point of supply where practical.**

- This is an adaptation of Option 3, where property owners on grouped SUIP's are given the option to either:
  - Vest ownership of the rider main with council to enable the point of supply to be shifted to the lateral. This mainly applies to right of ways.
  - Connect to a specific point of supply provided by council (usually requiring modification of private plumbing by the homeowner). This mainly applies to cross leases.
  - Install a meter on the existing point of supply, and a sub-meter on individual laterals to each SUIP provided that private property access provisions can be met.

Option 5: **Dedicated meter per SUIP.**

- This option involves installing a meter per SUIP whilst minimising changes to the existing pipework.
- Ownership of pipework and where the point of supply is, would need further consideration.
- This requires Council to modify private plumbing in many cases10. Under this option all SUIP's would be directly billed for their use (ie. no uniform annual charges or split bills).

Option 6: **Dedicated private pipe and meter.**

- Install a meter and a dedicated private pipe to each SUIP. This requires council to modify private plumbing.
- Under this option all SUIP's would be directly billed for their use (ie. no uniform annual charges or split bills).

4.3.2 Evaluation of Options

A single stage evaluation process was used to evaluate the options for addressing complex properties, because the decision less influences the overall project objectives (so negates the need for a two-stage process) and can be readily incorporated into a single stage process.

The options have been assessed against critical success factors, which are the essential elements that must be successfully addressed in this case to demonstrate value.

The critical success factors defined for this options assessment are:

- **Consistency and upholding community values.** This considers if the option provides a consistent approach to billing and if the option will support the development of a sense of community or cause social friction.
  A consistent approach to billing is preferred as it promotes a sense of "fairness", in that all usage for all consumers is treated in the same way.
  This is an important consideration because Universal Water Metering is a significant change for the community and will be received in various ways. There will be neighbours willing to embrace the communal aspects of shared billing while for others it may be a cause of social friction. They may not want to split the bill due to existing strained relationships or substantially different usage profiles (large families, swimming pools, lush gardens etc.). Offering the user options, enhances their sense of engagement in the change process.
- **(Potential) legal complexity.** This considers how legally complex is the option to implement, based on feedback from other Councils.
- **Ownership of infrastructure.** This considers if the option requires TDC to work on private infrastructure or to take ownership of infrastructure that is currently private.

Working on private infrastructure is not preferred due to the potential liability incurred by consequential loss or damage.
Taking ownership of private infrastructure is not preferred as it places an additional financial burden on Council to maintain and renew that infrastructure.

- **Implementation complexity.** This considers the degree of complexity that each option presents to physically implement, and how complex the result is for the consumer to understand. Considerations include:
  - Property and asset data – Different options require a different amounts and accuracy of asset and property data. This data may not be currently available.
  - Administration - offering choice to SUIP owners creates a substantial effort to manage including explanation of the options, risks and benefits, negotiations and associated paperwork.
  - Challenges with accessing private property.
- **Capital cost burden to Council.** This considers the capital costs for installing meters under complex property scenarios.
- **Contribution to demand management.** This considers to what extent the option supports the demand management objectives of universal water metering.

It is difficult to fully qualify or quantify the degree to which each option will support each criteria. Therefore, the evaluation approach taken has been to determine whether the option supports, partially supports or does not support each criteria. Options that do not support one or more criteria should be discounted. Options that more fully support a range of criteria are then considered of higher value and ranked higher.

The assessment of these options against the criteria is shown in Table 4-3.

Table 4-3: Assessment of Options for Addressing Complex Properties Under the Universal Water Metering Programme for Tararua District.

Critical Success Factors	**Option 1:** Only install meters on existing point of supply where one lateral serve one SUIP. Grouped SUIP's billed by UAC	**Option 2:** Install meters on all existing points of supply. Bill volumetrically where one lateral serve one SUIP.	**Option 3:** Install meters on all existing points of supply. Bill volumetrically where one lateral serve one SUIP. Grouped SUIP's split their shared usage.	**Option 4:** Meter at point of supply with ratepayer option to move point of supply or sub-meter where practical.	**Option 5:** Dedicated meter per SUIP	**Option 6:** Dedicated private pipe and meter
Consistency and upholding community values	Does not support	Does not support	Does not support	Supports to some degree	Fully supports	Fully supports
Potential legal complexity	Fully supports	Fully supports	Supports to some degree	Supports to some degree	Does not support	Does not support
Ownership of infrastructure	Fully supports	Fully supports	Fully supports	Fully supports	Does not support	Does not support
Implementation complexity	Fully supports	Fully supports	Fully supports	Supports to some degree	Supports to some degree	Does not support
Capital cost burden to Council	Fully supports	Fully supports	Fully supports	Supports to some degree	Does not support	Does not support
Contribution to demand management	Does not support	Does not support	Supports to some degree	Supports to some degree	Fully supports	Fully supports
Conclusion	**Discounted from further consideration**	**Discounted from further consideration**	**Discounted from further consideration**	**Preferred option**	**Discounted from further consideration**	**Discounted from further consideration**

5 Project Delivery Approach

5.1 Workstreams and Workflow Structure

- Engineering and technical development
- Data management and integration
- Field installation
- Communications and engagement
- Project management
- Other project support services (procurement, administration etc)

5.2 Procurement Strategy

This procurement plan outlines the process in which TDC will engage with suppliers and contractors throughout the Universal Water Metering Program.

TDC intend to engage the Alliance team for the installation of the manifolds and meters, using the current Alliance partnership, unless they are unable to provide the necessary resource and workforce to act as the main contractor. This work will not be publicly tendered and will be delivered by our reticulation team under the existing Alliance contract between TDC and Downer.

The procurement of the meters themselves will be subject to the main contractor engagement and cost efficiencies in purchasing power.

Tararua District Council (TDC) went to market via GETS with a Request for Information (RFI) for market research on potential delivery partners, IoT infrastructure vendors and end-to-end service (Metering as a Service) providers who have had experience with universal water metering programs.

The RFI had a high response rate from a range of metering providers, contractors and IoT infrastructure service providers. This produced much valuable insights and information into AMI and AMR solutions and approaches to implementing a programme here in the Tararua district.

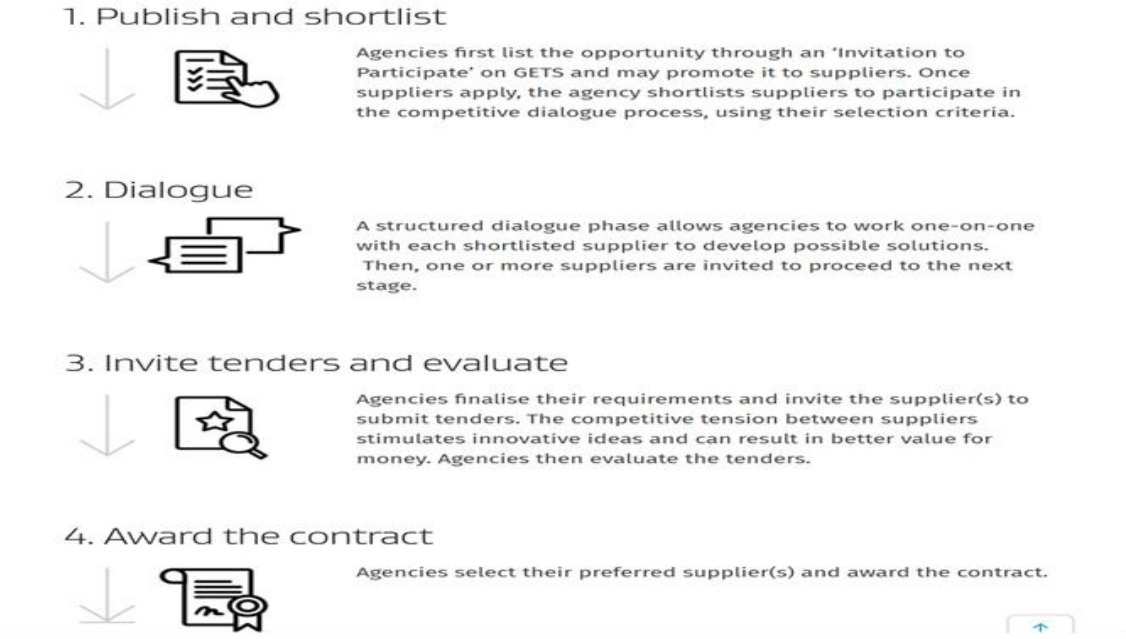
Based on this, the proposed procurement strategy to support the delivery of work is –

- Tararua District Council will issue a closed ITR (Invitation to Register) to ask IoT (Internet of Things) infrastructure service providers into a Competitive Dialogue process.
- These IoT vendors will separately liaise and collaborate with TDC under competitive tension to design a solution and network architecture fit for purpose and to TDC's specifications and requirements.
- Once concluded the IoT vendors will submit their solutions and final pricing for TDC's evaluation. This will involve a proof of concept, including recommendations for sourcing AMI compatible part and components.

Once an IoT vendor is selected, and a contract is awarded -

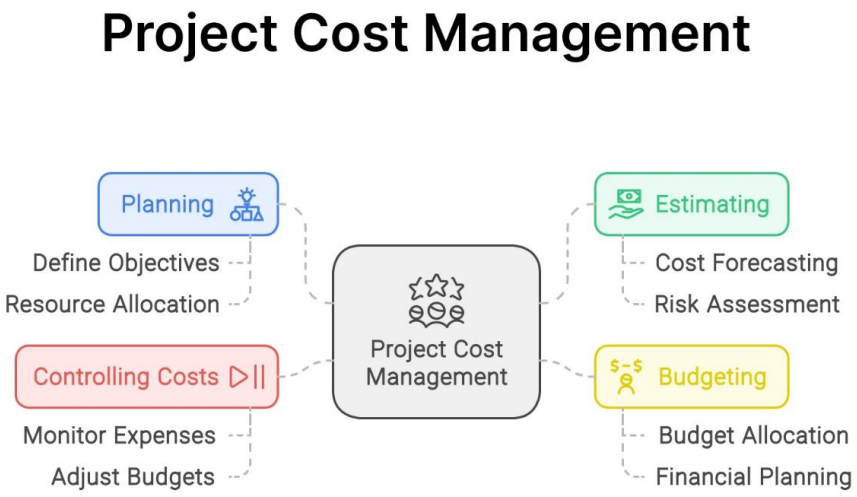
- The IoT vendor will use the Tararua Alliance for the programme implementation and installation in work teams across the network but starting in Dannevirke.
- The IoT vendor will establish network connectivity for data collection and management o support billing and charging. This may adopt, adapt or leverage existing IoT capability where it already exists.
- The IoT vendor will make recommendations (based on their experience) as part of their proposed solution to source water meters and manifolds, taking into consideration the age, quality, materials and inventory of existing water network assets.
- TDC for its part will ensure that they have adopted a backflow prevention policy, including an approach to engaging with high intensity and low intensity water users (commercial and residential), and endorsed and approved a methodology for water rates billing and charging.

Given this procurement strategy, the New Zealand market has 2-3 major IoT network and infrastructure service providers available with end-to-end experience. These providers are SPARK, CHORUS and a third operator from the RFI called Shape Tech. Because of this oligopoly environment the market is limited and concentrated to a few providers, this was the rationale for going for a closed Invitation to Register (ITR).



6 Project Management

6.1 Project Cost Control



Project costs will be managed through PSoda and tracked by the Project Manager. Each workstream will be split to budget allocation managed via an excel workbook to ensure that actuals and forecasted budgets align.

The Project Manager will also work close with the finance team to ensure budget and expenditure is current and accurate.

6.2 Programme

A staged work programme has been developed to guide the detailed establishment of project controls, including cost, time and quality requirements. The table below provides an overview of the stages, and the key tasks and timeframe allocated to each.

The key objective of the work programme is to have rolled out the bulk (at least 80%) of flowmeters, being those that can be rolled out efficiently, within the first four years of the LTP (by

end of 2028/2029). Taking this approach will enable water loss management initiatives to commence and will allow the bulk of meter installations to be undertaken within the years of available budget. It is anticipated that the less straightforward water meters identified in each town will add a substantial 'tail' to the programme.

For further programme timeframe and scheduling we have included a project schedule (attached) these timings are subject to resource and product availability and only provides an estimated timeframe and period for this programme.

Table 6-1: Key Stages of the Tararua District Universal Water Meter Project.

Stage	Key Outcomes
1 – Detailed Planning	• Establish project controls • Confirm project budget • Undertake detailed communications and engagement planning, and undertake early messaging with the community • Make any key technical decisions • Plan procurement for external resources / materials • Current infrastructure data gathering
2 – Mobilisation	• Procure resources • Commence a detailed programme of field inspections and upload into a central data capture system • Identify key tasks for concurrent activity
3 – Roll-out of Straightforward Meters	• Undertake a rolling programme of detailed planning, community engagement and then meter roll-out, town by town, In the order of Dannevirke, Woodville, Pahiatua, Eketāhuna, Norsewood, Pongaroa and Ākitio
4 – Mop-up	• Establish a mock billing regime to familiarise the community with water charging expectations in future years.

The duration and timing of the roll-out programme has been developed to align with funding available in the LTP and based on a maximum meter installation rate of 80 meters per week. This

is at the lower end of the installation rate experienced by other Councils but incorporates a level of conservatism into the programme.

In the following pages a summary table describing the key tasks in each stage is provided.

6.2.1 Stage 1: Detailed Planning

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
1.1	Establish Leadership Team	Implement the project leadership structure including the Project Manager (and assistance as required) and Project Governance Role. Develop the Terms of Reference for the Governance Group to provide clarity on roles and responsibilities. Confirm frequency of project leadership meetings.	• Project organisation structure • Terms of Reference	• Terms of Reference for Project Governance Group Agreed	Project Manager	-
1.2	Establish project controls	Establish detailed project plans and project controls in accordance with TDC PMO processes and commensurate with the project complexity, including but not limited to: • Quality Management Plan • Health and Safety Management Plan • Change (cost and time) control requirements • Baseline project schedule • Baseline project budget • Detailed project plan	• Quality Management Plan • Health and Safety Management Plan • Change (cost and time) control requirements • Baseline project schedule • Baseline project budget • Detailed project plan	• All project plans approved by Project Governance Group • Project Budget approved by Project Governance Group • Approval to proceed from ICCEM	Project Manager	1.1

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
1.3	Communications and Engagement Plan	Develop detailed Communications and Engagement Plan as further described in Section **Error! Reference source not found.**, including: • Detailed timeline • Key messages • Q&As • Collateral required • In person engagement requirements (such as drop-in sessions) • Identified spokespeople • Any promotional material and advertising required (incl. paid social media promotion) • Risks and mitigations • Stakeholders	• Communications and Engagement Plan	• Plan approved by Project Governance Group	Comms and Engagement Lead	1.2
1.4	Water Charge Analysis	Establish key goals regarding billing and the rate structure for water; what the council is trying to achieve through volumetric water charging, how this aligns with the overall project objectives and what is important to the district. A well-thought-out billing and rate structure will be critical and that these are communicated to the public early.	• Water Charge Analysis Report	• Report Approved by Governance Group for Council Ratification • Council Approval	Technical Lead (in conjunction with Project Finance Team)	1.2

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
		In accordance with guidance from the American Water Works Association (AWWA), the following three categories of analysis as the generally accepted method for setting rates for water[8]: 1. **Revenue requirement analysis:** analysis of the district's operating and capital costs (covering all costs associated with operating and maintaining the district's water supply system including infrastructure, treatment process, labour and all other costs related to providing water services) to determine the total revenue requirements to deliver water services and the adequacy of existing rates in meeting these costs. 2. **Cost of service analysis:** to determine what cost differences, if any, exist between serving different types of customers (e.g. commercial, residential). The purpose of this analysis is to help inform how the revenue requirements for delivering water				

[8] https://www.awwa.org/portals/0/files/publications/documents/m1lookinside.pdf

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
		services should be equitably distributed between the various customer types. 3. **Rate design analysis** uses the results from the revenue requirement analysis and the cost-of-service analysis to determine how to recover the appropriate level of costs from each customer type. Depending on the goals regarding charging for water, the rate structure could allow full or partial cost recovery and include considerations such as applying a flat rate, a tiered rate based on use, or a combination of both. It is suggested trying to link the timing of setting the rates for water with council's rates review undertaken as part of its Long-Term Plan processes to ensure alignment.				
1.5	Technical Options Development	Undertake options assessments on the following key technical decisions that are required early in the project lifecycle: • Type of water meter. • Type of water meter reading technology.	• Options assessment paper – water meter type • Options assessment paper – water meter reading technology.	• Project Governance Group approval of papers.	Technical Lead	1.4

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
		For each of these, the following needs to be understood: • Scope. • User requirements. • Functional and performance requirements. • Specific options that meet the user and functional requirements. • Selection of a preferred option. Each will be presented in an options assessment paper for endorsement by the Project Governance Group.				
1.6	Procurement Planning	Procurement plans will need to be developed in accordance with TDC procurement plan requirements for the following packages: • Supply of water meters. • Supply of water meter reading technology and software. • Water toby installation services.	• Procurement plan – supply of water meters. • Procurement plan – supply of water meter reading technology and software. • Procurement plan – water toby installation services.	• Project Governance Group approves the procurement plans	Procurement Lead	1.5

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
1.7	Initial Community Engagement	Create awareness with the community on the water metering project including the following topics: • Why the decision has been made (reinforcing the points in Phase two) • The expected benefits • Any decisions around immediate or future use-based charges for water – this needs to be done clearly and honestly. • Q&As • Expected roll-out process, including how they will be installed, where and when • What residents can expect • How the meters will work – how water flows will be measured and how data will be collected • How residents can access their water use	• Fact sheets and resources to support engagement	• TDC standard protocols for approvals before media / social media releases.	Comms and Engagement Lead	

6.2.2 Stage 2: Mobilisation

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
2.1	Contractor procurement	Prepare tender documents and undertake tendering for the provision of flow meter installation services. Undertake tendering, evaluation and selection in accordance with Procurement Plan.	• Tender documents for provision of flowmeter installation services. • Tender evaluation report.	• Approval of Tender evaluation report by the Project Governance Group.	Procurement Lead	1.6
2.2	Flowmeter procurement	Prepare tender documents and undertake tendering for the provision of flow meters and meter reading technology. Undertake tendering, evaluation and selection in accordance with Procurement Plan.	• Tender documents for supply of flowmeter and meter reading technology. • Tender evaluation report.	• Approval of Tender evaluation report by the Project Governance Group.	Procurement Lead	1.6
2.3	Field inspections and data gathering	An app-based platform for use on tablets for field collection of water meters will need to be developed. Upon development and testing, field inspections can commence to: • Pinpoint locations of flowmeters. • Take photographic records of current toby installation.	• Tested field inspection application. • Records of each flowmeter.	• Application tested and certified for release.	Technical Lead	1.5

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
		• Take photographic records of current condition of surrounding areas (for example, condition of driveway) • Record critical information relating to installation such as existing lateral material • Screen the degree of difficulty of information for prioritisation during roll-out. A centralised platform for importing sorting and visualising data will also be required.				
2.4	Detailed planning – Dannevirke Roll-out	Detailed planning of the specific roll-out across Dannevirke is required. This includes: • Plan out street by street prioritisation and order. • Detailed health and safety planning based on specific risks. • Fabrication of tobies and stocking of materials. • Inspection and test plan.	• Detailed roll out plan. • Site specific health and safety plan and hazard registers. • Inspection and test plans.	• Approval of the detailed planning documents. • Materials in stock.	Construction Manager	2.1, 2.2, 2.3
2.5	Community Engagement – Dannevirke	Targeted communication will be undertaken directly with residents as the physical works of installation begins in Dannevirke.	• Communications materials (letters, videos, social media posts etc)	-	Construction Manager	2.4

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
		Specific information will be supplied to each property providing the following: • Maps showing how the roll out will be staged – where/when • Videos from contractors explaining how the meters work/how they will be installed • Information about how long installation takes and any disruptions to water supply • Information on who to contact for those with questions/concerns				

6.2.3 Stage 3: Roll-out of Straightforward Meters

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies

Each of the activities will be undertaken for each water supply network according to the following order: Dannevirke, Woodville, Pahiatua, Eketāhuna, Pangaroa and Ākitio.

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
4.1	Detailed planning	Detailed planning of the specific roll-out across each network is required. This includes: • Plan out street by street prioritisation and order. • Detailed health and safety planning based on specific risks. • Fabrication of tobies and stocking of materials. • Inspection and test plan.	• Detailed roll out plan. • Site specific health and safety plan and hazard registers. • Inspection and test plans.	• Approval of the detailed planning documents. • Materials in stock.	Construction Manager	3.2
4.2	Network Specific Community Engagement	Targeted communication will be undertaken directly with residents as the physical works of installation begins in Norsewood. Specific information will be supplied to each property providing the following: • Maps showing how the roll out will be staged – where/when • Videos from contractors explaining how the meters work/how they will be installed • Information about how long installation takes and any disruptions to water supply	• Communications materials (letters, videos, social media posts etc)	-	Construction Manager	4.1

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
		• Information on who to contact for those with questions/concerns				
4.3	Roll-out	Roll out in each network will be undertaken in work fronts, phased from each other, as follows: 1. A work front to change out water tobies with new smart meter compatible tobies will commence first. This includes changing out the existing isolation valve assembly, installing a toby box, testing the new pipe fittings, and remediating surrounding areas (for example, driveways). 2. Concurrently with the above, smart meters will be installed at each existing/new toby. The smart tester will be tested in situ. 3. Testing will then be undertaken to confirm that the smart meter signal is received. Each work front will use a common field information environment to record details of work undertaken, condition before and after installation, meter serial number, photographic records and the like.	• Data uploads	-	Construction Manager	4.2

6.2.4 Stage 4: Mop-up

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
5.1	Roll-out	Installation of tobies and meters will be undertaken for any challenging installations identified during field data collection at the same time as the body of the works are undertaken. This will be supplemented with specific communications to these property owners.	• Communications materials (letters, videos, social media posts etc) • Data uploads	• Approval of the detailed planning documents. • Materials in stock.	Construction Manager	
5.2	Mock Billing	Establish a billing system and generate mock bills to be issued with rates notices to demonstrate water consumption and the charges that would occur if water charging were implemented.	• Mock bills	• Approval of mock bill format and deployment by the Project Governance Group • Materials in stock.	Project Manager, in conjunction with Council Finance team	5.1

6.2.5 Stage 6: Close-out

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
6.1	System Acceptance	System acceptance involves verifying that the smart metering system meets all requirements and is fully functional as intended. This includes: • Final testing and validation: conduct thorough testing to validate that all components, including the meters, data collection, and billing systems are reliable and function correctly. • Compliance checks: Ensure that the system complies with all regulatory requirements, industry standards, and contractual obligations. • Collect feedback from the community about the transition to smart meters, what benefits and challenges they have experienced, and address any issues that arise during this phase. • Sign-off: Obtain formal sign-off from relevant stakeholders, including technical teams, project managers, and senior management,	• Final testing and compliance reports • Records of community feedback	• Sign-off received from each Workstream Lead	Construction Manager and Project Manager	5.1

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
		confirming that the system is ready for full-scale operation.				
6.2	Lessons Learnt	• Project review meetings: hold review meetings with the project team, including contractors, to discuss what went well, what challenges were encountered, and how they were addressed. • Gather feedback from all involved parties, including installation contractors, council customer service representatives, and end-users. Feedback collated from the system acceptance phase can be used to inform this. • Produce a written report that summarises the key learnings, outlining what went well, and what didn't go well, from the project. The report should include all stages of the project, from start to finish. These insights can help share learnings and benefit other council teams to enhance organisational learning and make future projects better.	• Lessons learnt register / report	-		5.1
6.3	Transition to Operations	Transitioning to operations involves moving from the implementation phase to ongoing management and maintenance. By carefully	• Operational Readiness Plan	• Approval from Project Governance Group to	Project Manager	6.1

#	Key Task	Description	Deliverable(s)	Gateway(s)	Responsible Lead	Dependencies
		managing the close-out stage, the council can ensure a smooth transition to full-scale operation. This includes: • Develop a clear transition plan that outlines responsibilities, timelines, and handover procedures. • Train operational staff who will be responsible for managing the smart meter system. Ensure they are well-versed in system operation, maintenance, and troubleshooting. Teams responsible for customer support and issue resolution should be provided training on how and when certain issues need be escalated. • Establish communication channels between implementation teams and operational teams. • Implement a monitoring and evaluation framework to track the performance of the smart meter system. Review key performance indicators (KPIs) to ensure the system is meeting desired outcomes and the council's objectives.		transition to operations.		

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6.3 Project Risk Management

6.3.1 Risk Management Objectives

The Tararua District Universal Water Metering project is complex in that it requires a significant number of interfaces between various parties, and a significant interface with the community in a way that has the potential to have a significant impact on Council. As such, strong focus needs to be placed on project risk management, so that:

- We increase the likelihood that we achieve the project objectives.
- We appropriately safeguard assets, people, finances and reputation.
- We improve project delivery performance and maximise resource utilisation.
- We integrate risk management into project management, including using a common language, to promote a risk aware culture across the project team.
- We provide a timely response to escalated risks and actual events when they occur.
- We aid decision-making and encourage innovation.
- We apply an appropriate standard to project risk management (i.e. ISO 31000:2009) and good practices generally.

6.3.2 Early Warnings

The large number of interfaces between parties in this project creates a risk that risks will not be identified, communicated and then managed by the appropriate party to do so accordingly, leading to potential cost, time and quality issues.

To manage this, it is recommended that an early warning system is put in place and utilised to drive day-to-day risk management in a no surprises approach. That way, potential risks can be identified early, and appropriate action taken before they manifest themselves, and those risks that cannot be appropriately managed can be elevated to the project risk register, so that this register maintains focus and relevance to key issues.

The following diagram illustrates the proposed process for raising and then addressing early warnings.

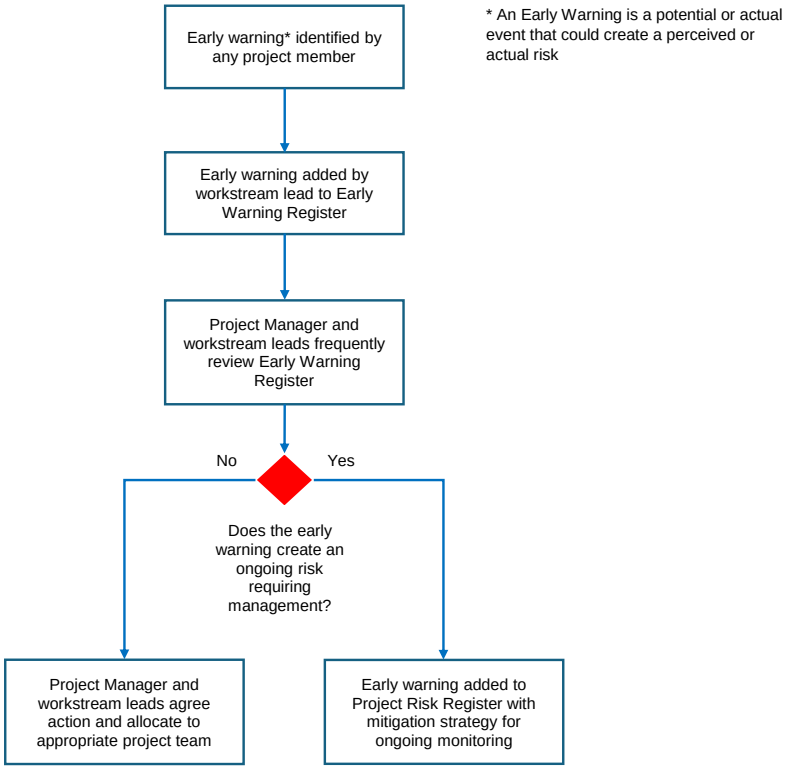


Figure 6-1: Early warning identification and management process.

6.3.3 Key Project Risks

A workshop of key project personnel was held in November 2024 to identify key risks and initial mitigation strategies. A summary of the risks identified, and their initial mitigation strategies is provided below.

Risks are constantly changing due to the evolving nature of the project and Council's operating landscape. Therefore, risks must be monitored, reviewed and reported on a regular basis to ensure that they are current. The minimum requirements for this are shown in Table 6-2.

Table 6-2: Monitoring, Reporting and Review Requirements for Project Risks.

What	Who	When
Review of existing risks on the Project Risk Register	Project Manager with Project Governance Group	Monthly

Review of new risks to confirm proposed treatment strategy / actions	Project Manager and Workstream Leads	For low and medium level risks, review monthly at same time as existing risks For high and extreme risks, review as soon as practicable
Reporting escalated risks to the Project Governance Group	Project Manager	Monthly
Review of escalated risks	Project Governance Group	Monthly, noting additional review for extreme risks below
Review of extreme risks	Executive Leadership Team	As soon as practicable

Table 6-3: Summary of Key Project Risks and Proposed Mitigations.

			Rating With Existing Controls			
Risk	**Consequence of Risk or Opportunity Occurring**	**Current Controls**	**Likelihood**	**Consequence**	**Risk**	**Proposed Mitigations (Beyond Existing Controls)**
There is a risk that the current water structural reform of water entities misaligns with TDC's UVM programme and strategy	Rework at a future date leading to TDC reputational risks and additional costs to TDC ratepayers	-	Likely	Moderate	Medium	To be confirmed later
There is a risk that public trust is eroded by charging for water given precedent of relatively low cost, rates-based charging regime	Project challenges from public or those opposed to UVM leading to delays and potentially additional costs	Early engagement to be undertaken with District ratepayers on needs and benefits of metering.	Possible	Major	High	Ensure communications and community consultation is clear and concise.
There is risk of public antagonism if there is uncertainty in the future water charging regime	Negative press or feedback from public engagement, lack of community trust or faith in project	Undertake early water charging analysis and form key messages for public engagement	Likely	Major	High	Ensure communications and community consultation is clear and concise.
There is a risk that the public do not permit access to property	Additional project delays and costs	Early public engagement. Changes to strengthen water supply bylaw?	Possible	Minor	Low	This will need to be negotiated on a case-by-case bases.
There is a risk that the water charging regime creates inequity	Poor reputation for TDC and public trust damage	Thorough water charging analysis to be undertaken early in the project	Possible	Major	High	Ensure communications and community consultation is clear and concise.

			Rating With Existing Controls			
Risk	**Consequence of Risk or Opportunity Occurring**	**Current Controls**	**Likelihood**	**Consequence**	**Risk**	**Proposed Mitigations (Beyond Existing Controls)**
There is a risk that some existing users face extraordinary and unexpected costs for installation owing to previous TDC decisions	Poor reputation for TDC and public trust damage	Paper to be presented to Councillors on options to address this issue in May 2025.	Possible	Moderate	Medium	Ensure communications and community consultation is clear and concise.
There is a risk that the cost of implementation is greater than anticipated	Cost/benefit predictions are not achieved; project cannot be completed or is delayed until more funding is available	Prepare new cost estimates based on new network data and hardware / installation costs	Likely	Moderate	Medium	Work closely with the project team to ensure that cost saving measures are taken.
There is a risk that there are insufficient resources available to implement the project on top of BAU activities	Project delayed and inefficiencies lead to greater cost	Prepare comprehensive project and resourcing plan	Possible	Moderate	Medium	This project will not be undertaken as BAU.
There is a risk that the public are unsatisfied with the remediation undertaken after toby installation	Rework and additional cost; TDC reputation damaged	-	Possible	Moderate	Medium	This will need to be negotiated on a case-by-case bases and cost implications assessed.
There is a risk that asset management staff unable to deal with large number of new assets	Delays in uploading data	-	Possible	Minor	Low	Early engagement with the Operational team and asset management teams.

			Rating With Existing Controls			
Risk	**Consequence of Risk or Opportunity Occurring**	**Current Controls**	**Likelihood**	**Consequence**	**Risk**	**Proposed Mitigations (Beyond Existing Controls)**
There is a risk of harm to field staff owing to work environment (which is also constantly changing)	Serious harm incident	Health and safety planning to be undertaken. Use of contractor(s) familiar with the conditions and specific risks.	Unlikely	Major	Medium	Strict Health and Safety procedures and staff risk assessment prior to work being undertaken.
There is a risk that connections to very old copper and galvanised pipes are untenable	Additional scope, cost and project delays.	Undertake survey of all existing connections to understand material where possible	Likely	Moderate	Medium	Pre-inspection will identify these connections, and the project team will work closely with the main contractor to identify an appropriate solution.
There is a risk that repeated work is undertaken in the same area through lack of co-ordination between water metering and other programmes of work (e.g. footpath rehabs)	Reputational risk and loss of efficiency / cost saving opportunities		Possible	Minor	Low	Develop GIS or other tool to overlay water meter programme with other key programmes of work
There is a risk that if the digital meters are installed too early, that 33% of their life will be used up before the end of the install programme is reached	Not best use of assets, early replacement costs TDC		Almost Certain	Moderate	High	Do not install digital meters until end of manifold installation programme

			Rating With Existing Controls			
Risk	**Consequence of Risk or Opportunity Occurring**	**Current Controls**	**Likelihood**	**Consequence**	**Risk**	**Proposed Mitigations (Beyond Existing Controls)**
There is a risk of project delays due to budget constraints	Delays to the program roll out and completion.	Working closely with finance and the alliance team to provide best price estimates, that can be used to forecast the budget over the program's life cycle.	Possible	Moderate	Medium	Early warning dialog with contract to ensure that pricing is accurate. 6 monthly review on pricing to capture any program savings i.e workstreams, scope of works, materials etc.

6.4 Communications and Engagement

Engagement is essential to support informed investment decisions and ensure all stakeholders—internal, partners, iwi, and the community—are aligned and aware of the project.

Installing water meters affects all residents with a Council water supply. Other councils have faced concerns about affordability and fairness under user-pays systems.

Early and clear communication about the reasons for metering, along with its benefits, is critical to gaining public support and addressing concerns.

If handled well, strong messaging will help manage the narrative and build understanding. Poor engagement, however, risks backlash, delays, increased costs, or even cancellation of the project.

6.4.1 Engagement Process

The following objectives should guide the engagement process for implementing water meters across the district:

- Ensure the community understands why meters are being installed, the benefits expected and the cost.
- Clearly outline the process for the roll out, when they will be installed and any disruptions this might cause.
- Clearly articulate how and when changes to water charges will occur, and on what basis.
- Reach as many residents as possible, using a wide array of methods and channels.
- Ensure community support for the programme and the outcomes council is seeking to achieve.

6.4.2 Stakeholders

The below table provides a high-level overview of the stakeholders that should be included and their involvement:

Stakeholder	Needs and expectations
Residents and ratepayers – those connected to a TDC water source	Primary audience. Clear information about the project and how this will affect them. A forum to discuss their concerns.
Commercial/retail – those connected to a TDC water source	Businesses will want to understand the impact of meters on their operations. Clear information about the project and how this will affect them. A forum to discuss their concerns.

Elected members	Key community members and representatives for Council. Project updates and key milestone information and reporting
Council staff	Project updates and key milestone information. FAQ information for Customer Services and Communications
Iwi	Iwi are currently being engaged through a 3 Waters Advisory Group on TDC's strategic initiatives, which will include universal water metering. Discussion will be required via this forum to confirm iwi support and modes of engagement.
Contractors/suppliers	Guidelines/requirements to perform their jobs. Clear communication between stakeholders/contractors and out to the public
Horizons Regional Council	Reporting to ensure that the regional consent requirements are being met
Local media	Primary media channel for the local community

6.4.3 Key Engagement Risks

Risk	**Effect**	**Mitigation**
Failure to identify and communicate key changes and the affects this will have on the community	• Community dissatisfaction with Council • Council/contractor reputational damage	• Clear, accurate, timely and transparent communications
Lack of community support	• Negative feedback or lack of feedback	• Ensure information is consistent and clear across all channels • Involve the media by proactive media advisories and key stakeholder groups through direct contact
"Council is just trying to make money from us."	• Residents may feel unfairly targeted or exploited, leading to mistrust and opposition.	• Clearly explain that metering is about fairness — people pay only for what they use • Reassure residents that all revenue will go back into the water network, not into general Council spending. • Emphasise leak detection, waste reduction, and protecting water for future generations.
"I don't understand what this means for me."	• Confusion, anxiety, or disengagement — residents may feel left out of the process or surprised when changes happen.	• Use simple language and relatable examples to explain how meters work, what the rollout looks like, and what changes (if any) to expect in the short and long term

		• Make communications practical and personal, not technical or abstract.
"Will I be hit with a new bill out of the blue?"	• Fear or financial stress if residents think charging is starting immediately or without warning.	• Be honest and clear: no immediate charges. • Share a timeline and explain that there will be plenty of notice and support before any billing begins. • Reinforce that this change won't happen overnight — it's part of a multi-year rollout.
"Is someone tracking what I'm doing with my water?"	• Concerns about surveillance or data privacy may make residents uneasy.	• Explain how water use is measured (volume only, not how it's used) and that data is securely collected for billing and leak detection only. • Be transparent about what information is collected, who has access to it, and how it's protected.
"No one told me this was happening."	• Frustration or resistance if residents feel blindsided when installation begins, or bills change.	• Communicate early and often — using trusted, local channels. Send letters, hold info sessions, post on social media, and engage local community leaders. • Make sure residents in each area know what's happening well before their meters go in.
"Who do I call if I have a problem with my water?"	• Confusion and stress if residents don't know who is responsible, especially as water services shift nationally.	• Acknowledge the bigger water reform picture. Explain that while Council is currently leading the rollout, a new water entity will manage services in the future. • Provide clear, simple contact details and keep residents updated as responsibilities shift.

6.4.4 Approach

A detailed Communications Plan has been developed and will be updated according to changes in the project as it develops. The following stages outline the proposed stages of engagement that are anticipated for consideration and inclusion in detailed planning.

Phase 1: Awareness and education

Proactive, educational communications around the water network and the project including:

- Size of the network (km of pipes, number of connections, amount of water used per household etc)
- "Why water meters?" – long-term benefits, fairness, and futureproofing
- The expected benefits
- How the meters work
- Use simple visuals, infographics, short videos
- Publish stories of water loss, leaks, and usage today (make the invisible visible)
- Backflow prevention – what this is, what the Backflow Prevention Policy will include, how this will affect people (particularly commercial property owners), targeted engagement with those affected

This is an opportunity to raise awareness of the fact that Council is looking at a range of solutions to make the water network more efficient, including water meters.

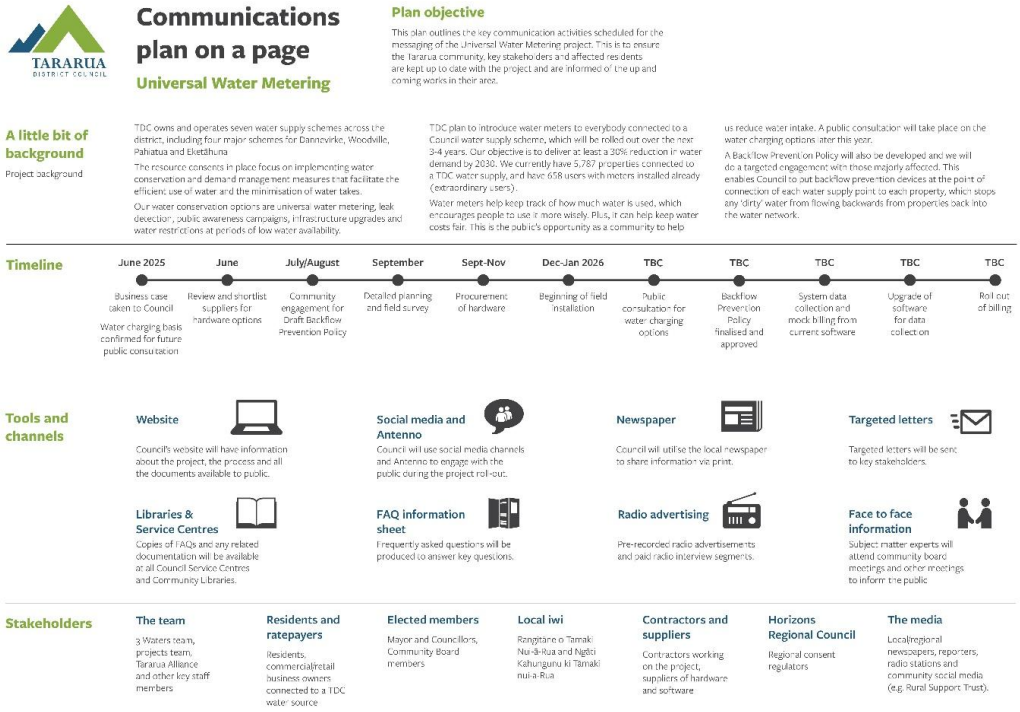
Phase 2: What's happening and when

- Expected roll-out process
- Timeline for installations and when charging starts
- What people can expect (notice periods, how meters will be installed)
- Who to contact for help or concerns

Phase 3: Engagement and feedback

- Public consultation on water charge options
- Public Q&As, pop-up stalls at markets, Facebook Lives
- Community drop-in sessions and a dedicated info line/email
- Myth-busting campaign

6.4.5 Communication Plan at a glance.



7 Project Funding and Affordability

The Tararua District Council (TDC) engaged a third-party consultant (Rationale Limited) to undertake a water charge analysis summary report (Please refer to the attached document for the full report) to provide detailed and informative data, outlining options for the future rate charging strategy and allocation.

The following pricing, evaluation and recommendation have been provided from the Rationale Ltd report, please refer to the full summary attached for further information and breakdown charging examples.

7.1 Existing Water Pricing Structure

A variety of pricing structures for water are applied across New Zealand, and these offer different benefits and challenges. Historically, most councils have generally used a uniform annual general charge (or targeted rate) to charge businesses and households for water services. These charges are simple to administer but do not account for variance in actual use between individual households and businesses, and do not encourage conservation of water by placing a more direct value on water use.

The installation of water meters, particularly modern smart meters, has opened up improved opportunity for councils to implement alternative pricing structures, such as volumetric charging. Generally, pricing structures fit within one or a combination of:

Pricing Structure	Description
Fixed Charge (including uniform annual general charges or targeted rates).	Apply uniform charges to every property. Fixed charges can be applied in conjunction with one of the volumetric based charging schemes below.
Uniform volumetric charges	Apply a consistent price for every cubic metre (m3) of water consumed. Encourages conservation and allows small, low-income households to lower their bills.
Increasing tiered charges	Apply higher volumetric charges when pre-set thresholds are reached. High water-users pay a higher rate than low water-users. Further encourages conservation but may lead to higher costs for households with many people.
Decreasing tiered charges	Apply lower volumetric charges when pre-set thresholds are reached. Advantageous for bulk users but discourages conservation and limits savings opportunities for low users. Use of this scheme is in decline.
Seasonal Charges	Apply higher volumetric charges based on consumption in peak demand periods.

7.2 Evaluation Process

Rationale, based on previous work and knowledge of volumetric charging approaches elsewhere in New Zealand, developed a range of charging options for consideration. This long-list of options included a mix of fixed user charges and volumetric charges, with regular and high user charges included.
These options were then evaluated using the Multi-Criteria Analysis (MCA) framework to evaluate and ultimately reduce this to a short list of options for further analysis / modelling. The MCA framework provides a robust, transparent, and structured method for comparing shortlisted options. The short-listed options were presented to the TDC project team (remotely) on 10 April to confirm our assumptions and scoring before proceeding with further analysis.
The shortlist is assessed against:

- Investment Logic Map benefit statements (investment objectives identified in the previous Three Waters Strategy and Implementation work Rationale supported).

- Business Needs including economic efficiency; fairness to consumers; social orientation; cost-recovery; financial stability; and resource conservation of water)1
- Risks (technical, operational, financial, legal, political, economic, stakeholder, public) which will include those that are sourced from the Baseline Report and Gap Analysis.

7.3 Options Considered

These shorted-listed options included (final MCA scoring below each option):

Option 1	Option 2	Option 3	Option 4	Option 5
Fixed Charge Only (status quo)	**Fixed Charges + Universal Volumetric Charge**	**Fixed Charges + Universal Volumetric Charge with a free water threshold**	**Fixed Charges + increasing tiered volumetric charge**	**Fixed Charges + increasing tiered charge with a free water allocation**
All unmetered properties pay a fixed charge. **All metered properties pay a fixed charge plus a volumetric charge applied in excess of 80m3 of water consumed per quarter. Large water users >2,000m3 per quarter are charged at a discounted volumetric rate.**	All properties pay a fixed charge which is generally set to cover annual depreciation / renewal expenditure. A universal volumetric charge is levied on all water users (e.g., consistent price for every cubic metre of water). Encourages some conservation and allows small, low-income	As for Option 2, but with a free water threshold. Customers only pay volumetric charges above this threshold. The cost of this free allocation is included in the fixed charge.	As for Option 2, but with increasing volumetric charges above pre-set thresholds meaning high water users pay a higher average cost per unit compared with low water users. Encourages water conservation but may lead to high costs, particularly for high commercial users.	As for Option 4, but with a free water threshold.

	households to lower their bills.			
5	**2**	**4**	**1**	**3**

7.4 Recommended Option

Rationale recommends Council proceed with **Option 4: Fixed Charges + an increasing tiered volumetric charge**. The fixed charge combined with an increasing tiered price structure provides a balanced, principled approach to water pricing, aligning with key objectives of economic efficiency, fairness, social orientation, cost recovery, financial stability, and resource conservation. The fixed charge ensures that the essential costs of operating and maintaining the water system are recovered (such as funding depreciation of the assets). The increasing tiered price structure, where the unit price rises with higher levels of water use, directly incentivises water conservation by making excessive consumption progressively more expensive, strongly supporting the resource conservation objective. This model drives economic efficiency by encouraging more environmentally responsible water use, thereby reducing demand pressures and associated costs on infrastructure and supply. Importantly, the structure promotes fairness by ensuring that all consumers pay equitably: low and essential water users are protected with lower charges, while high-volume users, who place greater strain on the system, contribute a proportionate share of costs, minimising the need for cross-subsidisation.


TARARUA
DISTRICT COUNCIL

Report

Date : 11 June 2025

To : Chairperson and Committee Members
Infrastructure, Climate Change and Emergency Management Committee

From : Mike Dunn
Three Waters Manager

Subject : **Portfolio Programme Project Report**

Item No : **7.3**

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1. Recommendation

1.1 ***That the report from the Three Waters Manager dated 04 June 2025 concerning the Portfolio Programme Project Report be received.***

2. Reason for the Report

2.1 This report is to update the Infrastructure, Climate Change and Emergency Management Committee on the key portfolios, programmes and project statuses.

3. Capital Portfolio Report

3.1 This report has a new focus to bring in all the projects and programmes into one report and will require some additional adjustments.

Portfolio Health Status	Forecast	General Comment
Green	⇧	Overall, we are closing out key projects and ensuring that our committed projects are well scheduled. Maintaining momentum and the identification and consolidation of carry forwards is key. With internal reviews nearly finished we will be bringing carry forward proposals to council. Following the portfolio changes in Council, we are reorganising our Portfolio, Programme and Project meetings to reflect.

Portfolio Health Status		Forecast	General Comment
Schedule	Green		Schedules have been confirmed with a minor few outstanding. Some resourcing issues have occurred which have meant some reforecasting has been necessary.
Budget	Green		Budget risks are primarily concerning the Dannevirke Impounded Supply works, and Pahiatua Stormwater. Identification of carry forwards is well underway and final reviews are to take place. Alignment with Year 2 projects is critical.
Risk	Green		Project risks to note are the ongoing concern with the Dannevirke Impounded supply, Wastewater programmes and maintain delivery on Woodville Water upgrades. All of these are currently being effectively mitigated.
Resourcing	Amber		Resourcing constraints are still a challenge as we continue to navigate our projects alongside our operational requirements. We are still navigating some resource limitations, continuity issues, specialised skills and contractor availability.

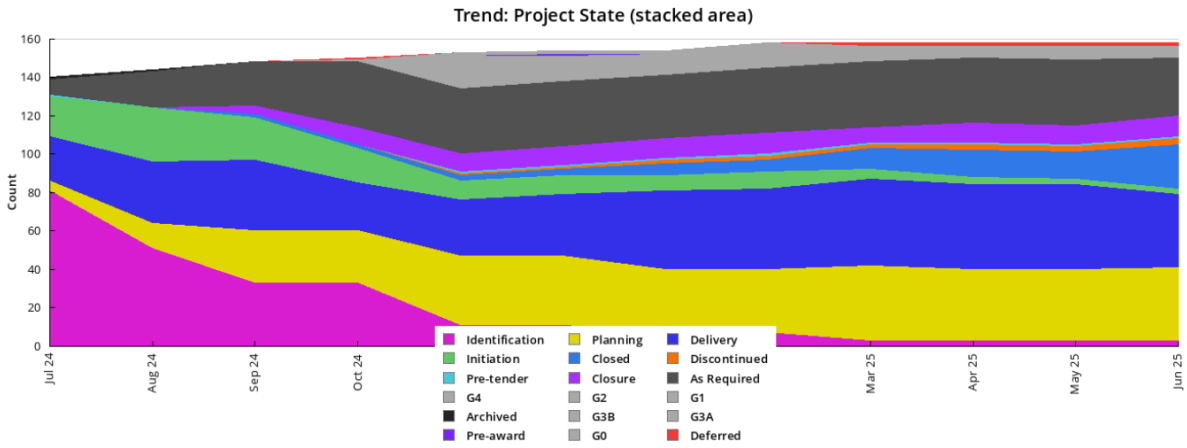
Legend

Status					
On track against baseline plan	Green	Corrective action required	Amber	Critical state - needs urgent attention	Red
Forecast					
Green - the forecast for the next period is that this area will remain in a positive status or will improve from current reported state.					
Red - the forecast for the next period is that this area will remain in a negative status or will deteriorate from current reported state.					
Amber - the forecast for the next period is that the current status may change.					

4. Capital Projects by State

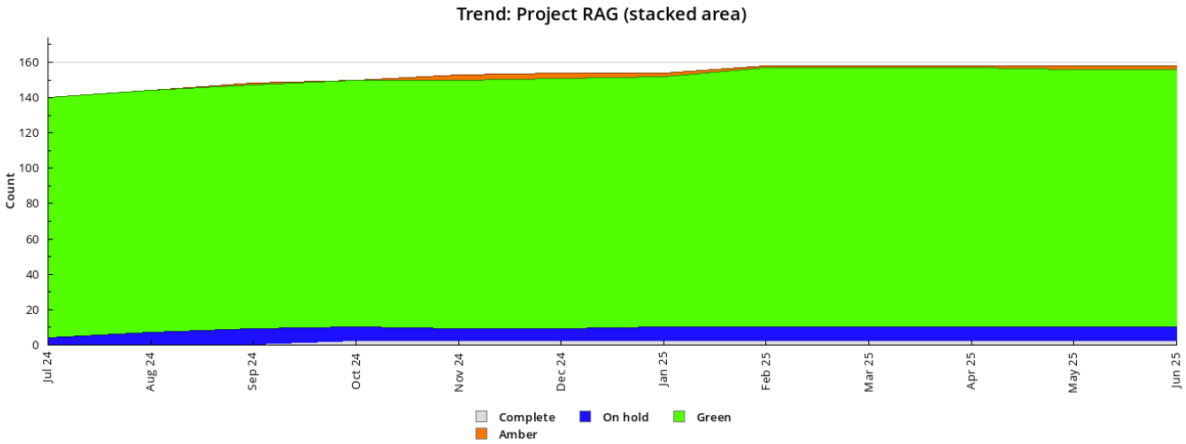
4.1 Our project management framework stipulates Gates for approval processes as depicted by G0, G1 etc. Monitoring the overall inflight project states is crucial as

this enables greater oversight and ensures transparency and accountability throughout the project's lifecycle.



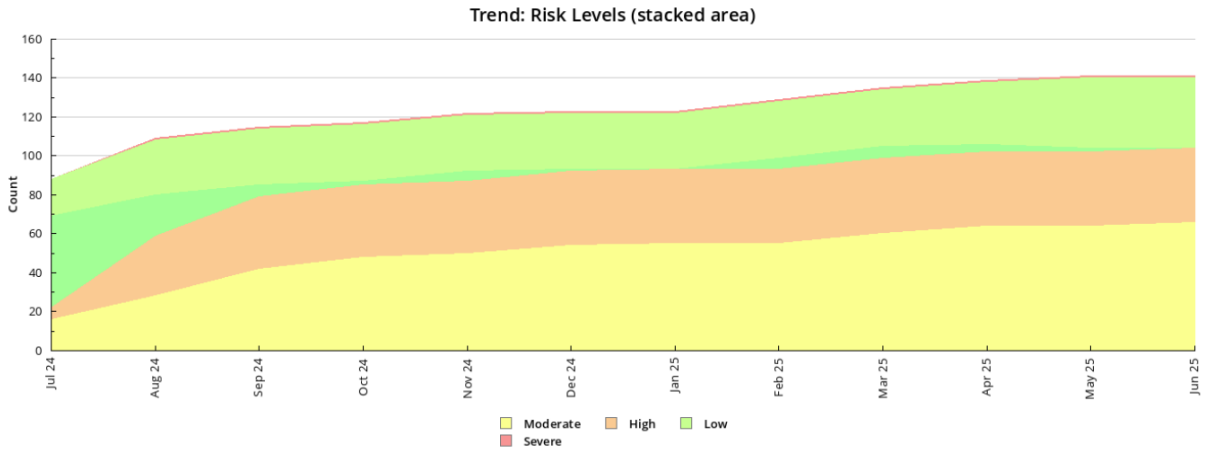
5. Capital Project by Status

5.1 By tracking the above project status indicators over time, stakeholders can identify emerging patterns, assess the portfolio, and proactively address potential issues. A consistent green status indicates progress according to plan, while amber signals caution, suggesting potential risks or delays that require attention. Red status indicates critical issues that demand immediate action to mitigate negative impacts. Regular review of RAG status trends enables leaders to make data-driven decisions, allocate resources strategically and optimise project outcomes.



6. Portfolio – Projects Risk levels

6.1 The below graph displays our efforts to start compiling project risks into our project management software to better mitigate, manage and report on our risk registers at a portfolio level.



7. Project Updates

Complete	On Hold	On Track	Revised but on track	Off Track

Infrastructure

Project	Managed by	Comments	Status
Dannevirke DAF	Sue Lawrence	Project closure.	
Woodville Wetlands	Eugene Priest	Concept design being developed.	
Woodville Reservoir	Priscilla O'Neal-Searancke	Waiting on Structural and Civil specs mid-June. EOI out to market 03/06/2025 for Dannevirke and Woodville.	
Woodville Wastewater Headworks	Eugene Priest	Commissioning mid-May. Closure to occur.	
Woodville Wastewater Pond 2 Liner	Vito Lim	Pond 2 was taken offline in order to walk out the whales releasing the gas build up. An investigation was conducted, and a business case is being developed for future remedial works. There is extensive stretching apparent around the primary whale, this is indicated by the extent of the creasing of the liner around the whale following the reduction in the gas trapped.	
Dannevirke alternate water source investigations	Dave Watson	As part of the overall Dannevirke Water Programme, we must investigate the current infiltration gallery and start engagement regarding our water take consent. This means that we can concurrently undertake an	

Project	Managed by	Comments	Status
		assessment on both the current intake and the assessed alternate area to determine feasibility of water take method and feasibility. Alternate site investigation will determine if worth progressing with bore testing and/or site establishment. Following site investigation a further update is provided in the 3 Waters Management Report.	
Dannevirke Water – Generator	Sue Lawrence	Ordered and scheduling delivery.	
District Town Signs	Ray Cannon	Signs installed. Project Complete.	
Norsewood Water Treatment Plant Upgrade	Eugene Priest	Following installation of last valve and a successful flushing program. Conducted Lessons Learnt and finalising closure.	
Dannevirke Fluoridation	Eugene Priest	Project close out.	

Facilities and Corporate

Project	Managed by	Comments	Status
Carnegie	Sue Lawrence	Report finalised.	
Waihi Falls Toilet	Eugene Priest	Toilets completed.	
Dannevirke Barraud Street	Robert Hood	2x cavity slider doors were installed to enable wheelchairs and prams better access.	
Pahiatua Carnival Park Ablution block and accessible upgrades	Robert Hood	Consent work required after replacement of septic tank upgrade for ablution block renewals, including providing for disability access to kitchen/lounge area. Carnival Park Committee agreed to and have funded the alterations they requested to the build plan (ramp & deck). Designs and concept conditions agreed. Construction progressing very well (deck completed. Block walls, electrical and plumbing lines all installed).	
Dannevirke Town Hall – Canopy	Robert Hood	Canopy removal and renovation has been completed.	
Pahiatua Service Centre heating upgrade	Robert Hood	Completed. Positive feedback from public groups and staff.	
Cemeteries extensions	Robert Hood	1. New berms at Woodville and Mangatainoka and minor finishing still to do and new ashes berm at Mangatera. 2. Work ordered now scheduled for Mangatera Cemetery upgrade.	
MPI Emergency Hub Fund	Mitchell Guile	Community Hub Project has been completed. Final report submitted on 29 June.	
Dannevirke Skate Park – BOF commitment	Sue Lawrence	Design ongoing. Invoicing to be received.	
IOT Door Counters	Chantelle Smit	All sensors are now installed and configured. Data from the libraries and service centres are now being collected in real time.	
Mobile Regulatory Solution	Chantelle Smit	After testing, review and consideration the team have decided to not proceed with the Actus app. The app has limitations that were unknown prior to implementation. Users are unable to perform all the necessary actions they would typically do in the office which was the primary objective. The app does not	

Project	Managed by	Comments	Status
		deliver the expected value. Another option is current being trailed and is under review.	

Attachments

1⇩. Dannevirke Impounded Supply - Treated Reservoir Committee Report June 2025
2⇩. Dannevirke Impounded Supply - Pre-Treatment Committee Report June 2025
3⇩. District Water Universal Water Metering Committee Report June 2025
4⇩. Wastewater I & I Strategy Committee Report June 2025
5⇩. Telemetery and SCADA Upgrade Phase 2 Committee Report June 2025
6⇩. Eketahuna Wastewater Treatment Plant Upgrade Committee Report June 2025
7⇩. Pahiatua Wastewater Treatment Plant Upgrade Committee Report June 2025
8⇩. New Pahiatua Pool Committee Report June 2025
9⇩. Digitisation of Council Records and eServices Committee Report June 2025
10⇩. Future Community Urband Design Committee Report June 2025
11⇩. Building Iwi Capacity Committee Report June 2025

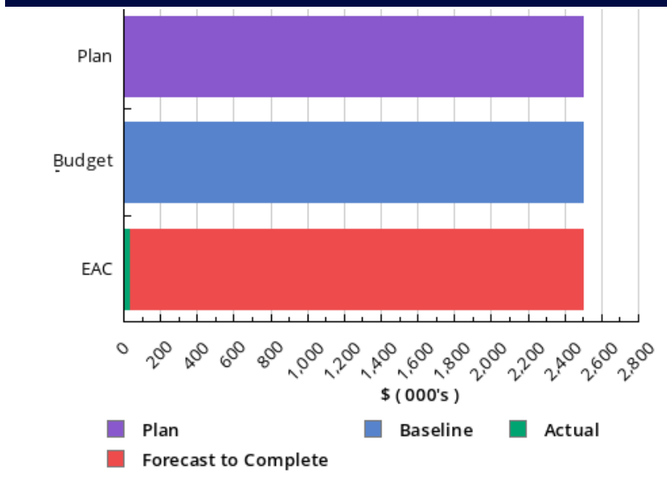
Project name

Dannevirke Impound Supply - Treated Reservoir

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-23	Jun-26	-

Purpose:	Supply and install an additional treated water reservoir for the Dannevirke township.
Project team:	**Sponsor:** Mike Dunn **Project Manager:** Priscilla O'Neale-Searancke
Key stakeholders:	Horizons Regional Council Tararua District Council Dannevirke Community Alliance Group Contractor - TBC Consultants

Project budget:



Whole of Life
Approved budget:
$2,500,000
Actuals:
$37,287
Estimate at completion:
$2,500,000

0%
Over budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	30/05/2025 working with TPG for land purchase. Have requested proposal from Phocus Planning to assist in the applications for land use consent and boundary adjustment. Will be submitting RFI out to market. Procurement will work with specialists to ensure technical spec are relevant to the RFI and will specialist will assist with questions.
Scope:	G	G	Supply and install additional new reservoir for the Dannevirke township. 03/06/2025 Purchase of land for the purpose of building an additional reservoir to supply treated water to the Dannevirke Township.
Time:	G	G	25/02/25 Meet with property own and given approval to undertake Geo-tech and structural investigation. 27/03/25 engaging the specialist services has been slow but we hope to fast track some works to run concurrently to meet timeframes. 03/06/2025 The project is progressing well and timeframes will need to be flexible to allow for the purchase of the property and any consent requirements needed before work can start.
Budget:	G	G	$2,500,000. Current budget allocated to the design, Technical spec and RFP. Once Geo-tech has been completed and suitable land identified a budget forecast can be completed inline with project schedule.27/03/25 Budget is still on track. 03/06/2025 Budget forecasting is still being undertaken and once we engage with contractors we will be in a better position to confirm budget and carry overs required.
Risks:	G	G	There is a financial risk, contractor availability to complete work with in the programmed timeframe. Work may effect water supply when undertaking connections into existing supply lines. Communications need to be clear and concise. 27/03/25 the communications team have provide a brief overview within the water done well communications. There are also other projects being undertaken that will require coordination to ensure that overlapping work areas are managed closely. 03/06/2025 Land purchase and consent requirements may delay the project start date. We are also looking to submit a RFI and this will take time to undertake but hope to progress quickly.
Opportunities:	G	G	Plant and pipeline upgrades.03/06/2025 There are several other projects being undertake con-current with these and there is likely to be some cross over within the project.
Health & Safety:	G	G	03/06/2025 The PM will work closely with the H&S team to ensure H & S requirements are clearly defined in the RFP and throughout the implementation and construction phase.
Resources:	G	G	25/03/25 Have engaged specialist services and am awaiting on design/ reports. 03/06/2025 Have met with the TDC planning team and received guidance on the consent requirements. Have engaged Consultant to provide earthworks documentation and will engage a planner to assist with the land use consent along with either a boundary adjustment application or a designation application.
Comms:	G	G	PM to work closely with the comms team to ensure the community is aware of the work being undertaken. a Comms plan will also be included in the RFP with the contractor to ensure contact information is present. 03/06/2025 Communications Team are working with the team to ensure the public are updated as work progresses.

Next steps:

Working with The Property Group to purchase property. Waiting on Structural and Civil documentation. Working through consent requirements and next steps we will submit an RFI to market through Procurement.

Project timeline:

START	Planning	Specialist Engagement	Testing undertaken/ Property Purchase	Property Purchase /Design and RFQ issued	Property Purchase/ EOI to Market	EOI Received and Evaluated Invitation to Tender. Property Purchase continuing	Invitation to Tender Evaluation/ Contract awarded	pre-start/ implementation	Project Completion	FINISH
	Dec-24	Mar-25	Apr-25	May-25	Jun-25	Aug-25	Sep-25	Oct-25	Oct-26	

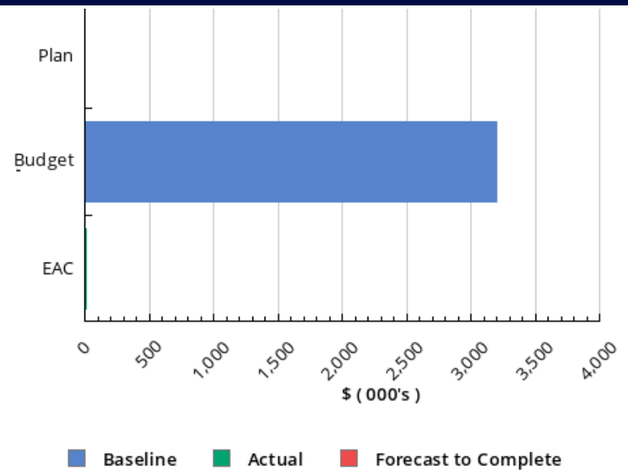
Project name

Dannevirke Impound Supply - Pre-treatment

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-23	-	-

Purpose:	Run of river treatment is required to allow the raw water storage dam to be taken offline for repair works. A permanent pre-treatment solution is required that can treat either run-of-river, or water from the storage reservoir. Turbidity levels of < 10NTU (preferably < 5NTU) must be achieved to ensure that the existing direct filtration process in not overloaded. Based on the jar testing conducted, TDC is progressing installation of coagulation, flocculation and clarification as the pre-treatment option for the Dannevirke WTP
Project team:	**Sponsor:** Hamish Featonby **Project Manager:** Mike Dunn
Key stakeholders:	Tararua District Council Horizons Regional Council Dannevirke Community Contractor - TBC Consultants

Project budget:



Current Financial Year
Approved budget:
$3,200,000
Actuals:
$15,780
Estimate at completion:
$15,780

100%
Under budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	A	G	Following river sample jar testing, we are driving ahead with creation of the Principal Requirements for the Dannevirke Clarifier and residuals management. Together with the Dannevirke Water Alternate infrastructure project we are well placed to continue this into delivery.
Scope:		G	Clarifier and residuals management package of work identified
Time:		G	Progressing to revised schedule
Budget:		G	Rough costings to be further refined.
Quality:		G	Raw water samples continue to be taken and we are researching all the historic samples we can for the site to ensure the developed product will meet our requirements
Risks:		G	Two main risks involve Land purchase timeframe and the Impounded supply stability.
Opportunities:		G	To include a residuals management package of work.
Health & Safety:		G	No concerns
Resources:		G	No concerns
Comms:		G	Communications plan to be drafted

Next steps:

Geotech investigation of the proposed site
Site layout with tie-in
Test market with Expression of Interest
Develop performance-based contract specification

Project timeline:

START	Review and investigation of feasible options developed	Jar Testing	Clarifier requirements defined	Geotech investigations	Delivery and Construction	Project closure and handover	FINISH
	Mar-25	Apr-25	Jun-25	Jul-25	Sep-25	Jun-26	

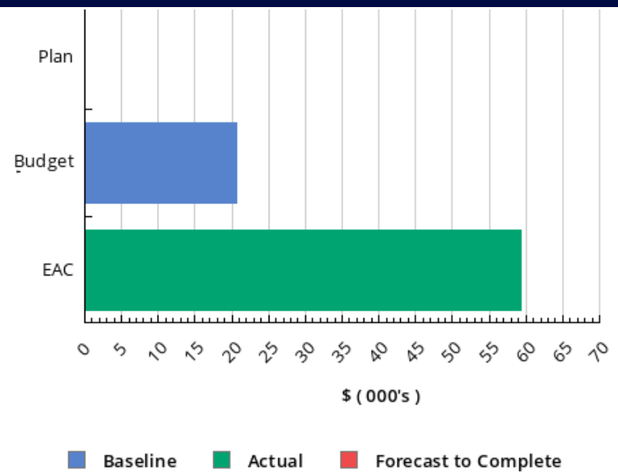
Project name

District Water Network Universal Metering

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-24	Jun-26	-

Purpose:	Supply and install a universal water metering system to provide data to assist in the districts water management program.
Project team:	**Sponsor:** Mike Dunn **Project Manager:** Priscilla O'Neale-Searancke
Key stakeholders:	Horizens Regional Council Tararua Community TDC Alliance Contractor - TBC Consultants

Project budget:



Whole of Life
Approved budget:
$20,560
Actuals:
$59,400
Estimate at completion:
$59,400

189%
Over budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	30/05/2025 report has been submitted to the ELT before going to Elected members. ELT taken on board and the ICCEM report and business case have been updated accordingly. Am working with Finance on the project budget and Alliance team to provide a pricing Schedule. A workshop will be held 25th June to work on the specifications that will be a part of the RFP to contractors for the system and water meter requirements. Working on connection data and need to shortlist requirements to improve pricing schedule. Will update the Project schedule once an understanding of the RFP times are realised.
Scope:	G	G	PM and Consultant work to define scope of works and provide a document package to elected members. 27/03/25 Continuing to define the scope of work and gather information and data.03/06/2025 Scope of works continues to be defined as the planning process progresses and the complexity of the project is being realised as new information evolves.
Time:	G	G	Project team are working towards providing the document package with options to the elected members in May for discussion. 03/06/2025 The project Schedule is still being modified and will continue to change as we progress through the planning and design stage this is due to the complex nature of the project and the many stakeholders that require input into the systems, software and hardware.
Budget:	A	A	Once we have defined the scope of works etc we will be able to better project the program budget.08/05/2025 we are current over budget as the consultancy and investigate costs have been realised. 30/05/25 Working with finance to mitigate the budget over spend and bring year 3 budget forward. Working with the Alliance team to provide a pricing schedule that will better provide budget forecasting for the following years.
Risks:	A	A	Public buy in to the work being undertaken. Cost to undertake the works due to unforeseen additions to the scope due to existing infrastructure. 08/05/2025 Project staging has been accelerated; this could impact public buy in. 30/05/2025 the project acceleration will also affect the project budget which I am working with finance to mitigate.
Opportunities:	G	G	There are opportunities to align aged infrastructure replacement as we progress through the installation phase. 27/03/25 we continue to look at possibly aligning other project works along side this work with may help mitigate some of the project cost. 03/06/2025 This work will affect and be affect by other projects and there maybe opportunities to align work streams to create some efficiencies.
Health & Safety:	G	G	PM to ensure that the contractor work teams are adhering to all health and safety requirements. 03/06/2025 Traffic management will be managed by the Alliance team and contractor will be required to provide health and safety plans when undertaking works.
Resources:	G	G	27/03/25 Currently we have sufficient resources to undertake the work required. 30/05/2025 we have engaged with the alliance team to provide resource to undertake this work.
Comms:	G	G	Comms plan has been supplied to the Comms team for review. 26/03/25 The Comms team have issued an short overview of the program to the public within the water done well update. Further communications will go out as the program progresses. 03/06/2025 Once the agenda for the ICCEM meeting is released and communications team intend to go live with a web page on our Tararua district council web site, this will provide information on what is being undertaken and when we expect to start garden work.

Next steps:

Report submitted to ICCEM. RFP workshop will be held before invitations out to IoT network providers. continue to work with finance and the alliance team of pricing and budget scheduling.

Project timeline:

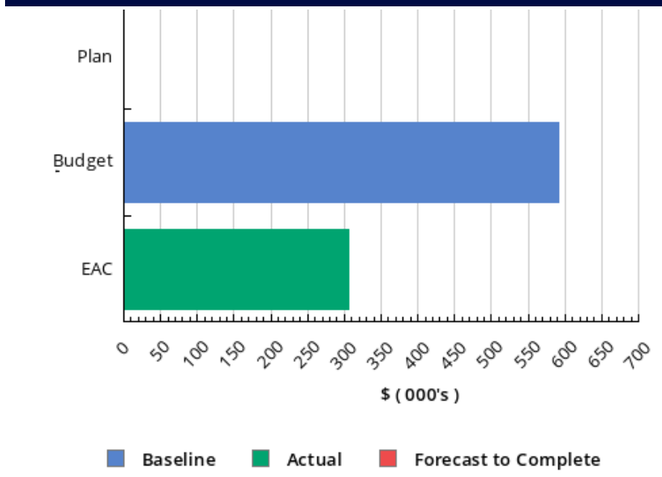
START	Pre-planning	Elected members consultation	Contractor engagement	FINISH
	May-25	Jun-25	Aug-25	

District Wastewater Infiltration and Inflow Strategy Implementation

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-24	Dec-25	Jun-25

Purpose:	To explore, quantify and remediate the districts known Inflow and Infiltration (I & I) issues through a phased programme of investigations, council and public consultations, and targeted remediation works.
Project team:	**Sponsor:** Marcus Clifford **Project Manager:** Eugene Priest
Key stakeholders:	TDC - 3 Waters Tararua Alliance Horizons Regional Council Ngāti Kahungunu ki Tāmaki nui-a-Rua Rangitāne o Tamaki nui-a-Rua

Project budget:



Whole of Life Approved budget: **$592,000**

Actuals: **$306,477**

Estimate at completion: **$306,477**

48% Under budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	A	A	Amended reports received with additional smoke testing carried out. TDC will carry out reviews of new data with external vendor to assess recommendations and to plan a way forward over the next FY 25/26. Vendor will supply an interim proposal to repair med-major manhole chambers fixes highlighted in inspections report. It is believed that the benefits of these repairs could be reasonable in relation to overall I&I. Vendor has finished carrying out minor repairs up to the agreed amount in the Contract within the highest priority catchment as laid out in report.
Scope:	G	G	A targeted investigation into the towns wastewater network utilising technology such as UAV, cameras and Smoke testing coupled with any previous I & I investigation data that TDC can make available. Utilising the data gathered in 1. to design and cost remediation works, and supply a programme of works to target the main areas of concern to be able to realise a greater than 50% reduction in I & I. Delivering the works programme as prioritised by TDC to best suit, or assist, in delivering infrastructure upgrades for growth or consenting purposes.
Time:	A	A	Delays in receiving reports and conducting smoke testing. Smoke testing redo will add some time but will ensure confidence in vendors initial results.
Budget:	G	A	Waiting for chamber repair proposal so TDC can programme remediation (has still not been received). Cost for investigation is confirmed at $197k. Some extra services if required might need to be employed and have been outlined in the Modular Agreement with the vendor
Quality:	G	G	This will be covered off in procurement process and any agreements between TDC and selected vendor. All NZ standards to be adhered to. Concerns that some aspects of the investigation have not followed best practice guidelines as laid out in WNZ I & I Controls Manual. Items to be discussed with vendor to remedy.
Risks:	G	G	Community engagement is critical to the success of this project therefore we need to ensure good communications with the Eketahuna community to ensure they are aware of the investigations. This project poses many risks, through vendor selection, carrying out investigation and remediation, and the public facing private network issues that will arise due to investigation findings. This will require a substantive risk workshop to involve many facets of TDC and community to be able to solve what could potentially be a large net saving to TDC and community.
Opportunities:	G	G	1. Reducing treatment plant upgrade capacities to fit reduced I & I flows. 2. Creating extra capacity in current network to allow for planned district growth. 3. Reducing the need to have to construct larger infrastructure to meet growth expectations.
Health & Safety:	G	G	All TDC requirements to be adhered to by any Vendor/Contractor and their associated sub-contractors
Resources:	G	G	Current resource requirements are low but will need to be increased in due course
Comms:	G	G	Comms plan completed and reviewed. Comms has been pushed out to the community advising them of the upcoming and ongoing works.

Next steps:

- Receive med-major manhole chamber repair proposal
- Apply TDC procurement policy to sign-up vendor for repair works
- Plan comms and information sessions for private connection issues.

Project timeline:

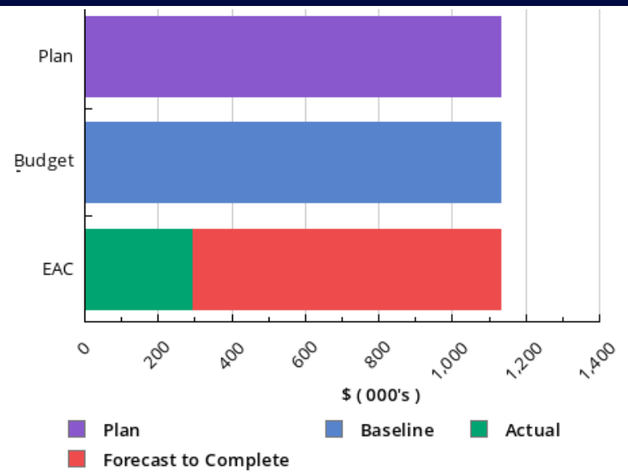
START	Procurement (RFP)	Agreement Negotiated & Signed	Contract Delivery Starts	Flow Monitoring & Investigations	Investigation Findings Released	Remediation Costs Received	Remediation Supplier Determined	Implementation Complete	FINISH
	Jun-24	Aug-24	Oct-24	Dec-24	Feb-25	Jun-25	Jun-25	Dec-25	

Telemetry and SCADA Upgrade Phase 2

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-24	Jun-26	Jun-26

Purpose:	This project has been initiated to align and comply with new requirements for resource consent monitoring for compliance with NZ water standards. This project will pull the different upgrade funding together to develop and rationalise SCADA and Telemetry framework, architecture, software and dashboarding that provides operational visibility across the entire TDC treatment and network systems. Phase 1 is to determine asset and system Stocktake, Framework, Architecture and system implementation to achieve operational visibility across the network. Phase II is the implementation and delivery of agreed recommendations provided by the investigation and report of the Phase I vendor.
Project team:	**Sponsor:** Mike Dunn **Project Manager:** Eugene Priest
Key stakeholders:	Horizons Regional Council TDC 3-Waters Team TDC IS Team Tararua Alliance

Project budget:



Whole of Life
Approved budget:
$1,131,020
Actuals:
$296,486
Estimate at completion:
$1,131,000

0%
Under budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	Agreements have been negotiated and signed by both parties for the main Scada upgrade, Piping &Instrumentation Diagram (P&ID) & asset data collection (Better Off Funding), & Radio Package portions of this project. Sever Infrastructure Upgrade vendor still to be confirmed. A portion of Better Off Funding (BOF) has been allocated to this project to facilitate the necessary work in capturing Asset information, P&ID, plant functional descriptions & asset valuations. This work has started with a site visit to several Water & Wastewater Treatement Plants on 31/01. **Project Kick-Off meeting held 10th March. VPN/Server vendor negotiation ongoing as OPEX costs with licensing costs are a concern.**
Scope:	G	G	Pre-determined scope to be followed in Tender process with detailed solution provided by successful respondent. IS added scope of separate servers to add cyber security resilience
Time:	G	G	Long Term Plan budget has allowed for up to 3 years to deliver this project. It has many complexities that are outlined in the Risk Register
Budget:	G	A	Up to $1.2m has been allocated in the LTP years 1-3. Recommended upgrades exceed current LTP budget. Prioritisation of works will need to be carried out to ensure project stays within LTP budgets. BOF has been allocated to cover asset data collection. .
Quality:	G	G	To follow best practice and all NZ Standards that are applicable.
Risks:	G	A	Risk and prioritisation workshop has been held on 11/7 for Phase II of project Extra cost for physical separation of main servers with OPEX costs possibly being burdensome Licensing costs for Microsoft have come back higher than expected. There is potential that these inflate OPEX costs to a point where VPN/Server upgrade is not viable. **These costs have been confirmed and TDC are happy to proceed with project as it outlined**.
Opportunities:	G	G	Increased cyber security and redundancy due to possible physical server separation
Health & Safety:	G	G	No health and safety items to be reported
Resources:	G	G	Appropriate resources are available and workloads are currently sufficient.
Comms:	G	G	Due to interest in project we will be doing external and internal communications.

Next steps:

Complete negotiation of all agreements with vendors
Start Upgrade at Dvk server
Start Comms upgrade

Project timeline:

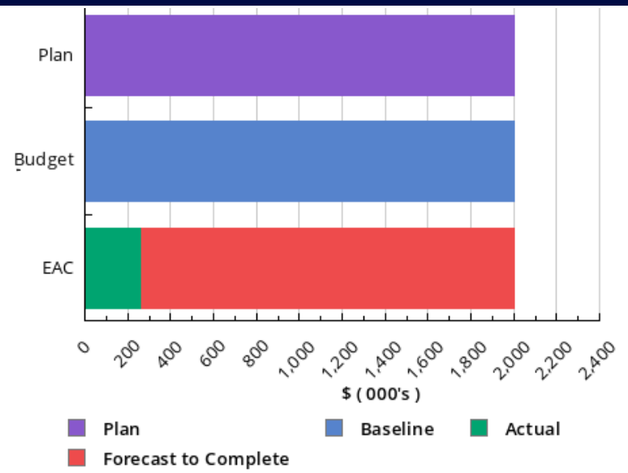
START	Vendor Agreement	Infrastructure Upgrade RFP	Select Infrastructure Vendor	Kick-Off Meeting	Start Communications Infrastructure Upgrade	VPN/Server Upgrade	Complete Infrastructure Upgrade	Prioritised WTP Site Upgrades	Complete Prioritised Comms Infrastructure Upgrade	Prioritised WwTP Site Upgrades	Satellite/Telemetry Sites Upgraded	Wastewater Pumpstation/Flowmeters Upgrades	FINISH
	Nov-24	Nov-24	Jan-25	Mar-25	Jun-25	Jun-25	Aug-25	Aug-25	Oct-25	Jan-26	Apr-26	Jun-26	

Eketahuna Wastewater Treatment Plant Upgrade

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-24	Jun-26	Sep-27

Purpose:	The purpose of this project is threefold: 1. To ensure all treated wastewater indirectly discharged from the plant to the Makakahi River complies with current and future resource consent conditions. 2. To reduce Eketāhuna Inflow & Infiltration (I & I) to allow for a fit for purpose WwTP to reduce cost and prevent unconsented discharges. 3. To ensure collaborative approach with Iwi and Horizons to produce outcomes that align with district and regional wastewater treatment strategies.
Project team:	**Sponsor:** Mike Dunn **Project Manager:** Eugene Priest
Key stakeholders:	Horizons Regional Council Elected Members Ngāti Kahungunu & Rangitāne Rate payers/general public Landowners ELT/PMO Compliance Manager

Project budget:



Whole of Life
Approved budget:
$2,000,000
Actuals:
$267,324
Estimate at completion:
$2,000,204

0%
Over budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	**Pipeline is complete with wetland plants assessment carried out by T&T to determine replacement plants and periphery planting regime.** **Temporary Pumping solution is complete and is ready for commissioning when final planting is complete.** **Easement Survey for Right of Way, Boundary and Pipeline is being completed** **Pipeline to wetland.** This will convey water via a floating pump on Pond 2 to completed wetland to ensure plant life is maintained. The intention is to change the current discharge point so that it is after the wetland. **I & I remediation works**. This is a separate standalone project but as it directly impacts the size and scope of Eketāhuna WwTP it will be considered and reported as part of this project to ensure continuity of works. Reports have been reviewed by external consultant and TDC are to meet with investigating vendor to discuss. **Temporary supply to newly constructed wetland is expected to commence late June.**
Scope:	G	G	All scope will detailed in all separate agreements and will be workshopped to account for possible variables
Time:	A	G	This programme of works is intended to work towards the 2028 consenting periods and account for current consent conditions Construction has unfortunately extended into winter period without permit application. Horizons are aware and TDC have been transparent and are working with HRC to follow all advice by them for completion in May.
Budget:	G	G	**Pipeline** - From Wetland Budget **I & I** - From Infiltration Strategy & Implementation Budget **Temp Pumping Solution** - From Eketahuna WwTP Upgrade Budget Budgets will be closely monitored to ensure overspend does not occur. Change management procedures will be adhered to and stakeholders notified if significant changes are likely
Quality:	G	G	Will be outlined in any separate agreements and to be covered by any NZ Standards that apply
Risks:	A	G	Risk workshops to be held to identify risks and provide mitigation. Risk workshops will support scoping documentation Construction extending into wet weather period without permit. Horizons have been notified and are assisting TDC with completion
Opportunities:	G	G	By following the approach provided TDC will be able to drastically reduce the cost of the WwTP upgrade.
Health & Safety:	G	G	All contractors to adhere to NZ & TDC standards
Resources:	G	G	Currently all resources are available
Comms:	G	G	Comms plan to be drafted

Next steps:

Remedial Planting Completion
Pumping Solution Commissioning
Temp Flow to Wetland

Project timeline:

START	I & I Investigation Procurement	I & I Investigation Starts	Pipeline Detailed Design Received	I & I Investigation Complete	I & I Investigation Report	Pipeline Works Start	Pipeline Works Complete	Temporary Flow to Wetland Commences	Discharge Analysis Period	FINISH
	Jun-24	Oct-24	Nov-24	Feb-25	Mar-25	Mar-25	May-25	Jun-25	Jun-25	

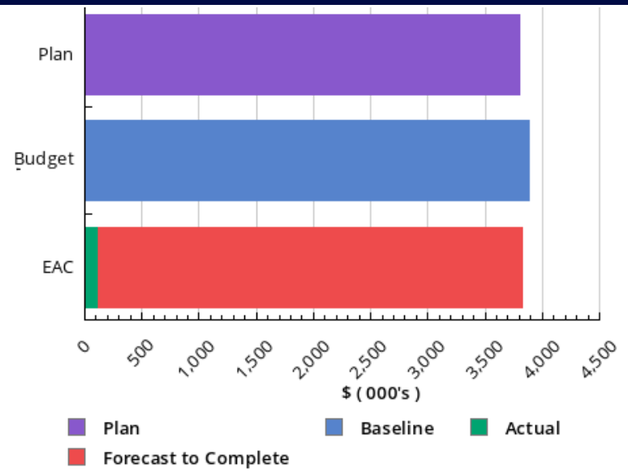
Project name

Pahiatua Wastewater Treatment Plant Upgrade

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-24	Jun-26	Oct-25

Purpose:	To provide an upgrade to the existing Wastewater Treatment plant that will meet current and future consent conditions and align with the design and build of the required wastewater wetlands that will be constructed concurrently with this project.
Project team:	**Sponsor:** Mike Dunn **Project Manager:** Eugene Priest
Key stakeholders:	Horizons Regional Council Elected Members Ngāti Kahungunu & Rangitāne Rate payers/general public Landowners ELT Compliance Manager

Project budget:



Whole of Life
Approved budget:
$3,889,000
Actuals:
$120,018
Estimate at completion:
$3,820,018

2%
Under budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	Detailed design and costs have been reviewed with costs being higher than what was originally forecast. This can be attributed to Geotechnical design of Dissolved Air Flotation (DAF) plant and inflationary and design costs. The extra costs with 4 other options were presented to the PMO Stakeholder Working Group (SWG) for consideration. The SWG unanimously preferred the costed option minus the raised platform. Geotechnical design has been received and DAF foundation slab are in design by engineers. **HAZOP workshop conducted on 7th May.**
Scope:	G	G	A full scope for the WwTP upgrade will be available on release of the detailed design and costs
Time:	G	G	It is expected to have this project completed at the end of 25/26 FY
Budget:	G	G	This will be confirmed on release of detail design and costs. An inform piece has been added to annual plan release.
Quality:	G	G	Will be determined by any agreement with the constructor and SME's assisting with this project. ITP & adherence to NZ standards will be paramount for this project
Risks:	G	G	Risk & Hazops workshop to be held on receipt of design and costs Culvert is inadequate for heavy construction traffic
Opportunities:	G	G	Efficiencies in design with wetland. Collaboration with Stakeholders Culvert replacement
Health & Safety:	G	G	NZ H&S standards to be followed in all instances
Resources:	G	G	Resources are being utilised as expected
Comms:	G	G	Comms plan to be reviewed

Next steps:

Confirm final design iteration and costs
Re-evaluate budgets
Negotiate construction agreements

Project timeline:

START	Detailed Design & Costs	Design & Costs Review	Negotiate Construction Agreement	Replace Treatment Plant Road Culvert	DAF Unit Construction Start	DAF Commissioning	DAF Handover/Project Close	FINISH
	Nov-24	Apr-25	Jun-25	Aug-25	Sep-25	Apr-26	May-26	

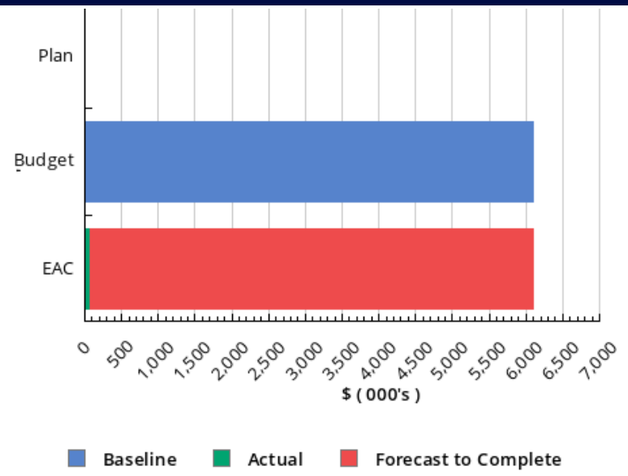
Project name

New Pahiatua Pool

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-23	Jun-26	-

Purpose:	The current Pahiatua outdoor pool is nearing the end of its life cycle, has large maintenance costs, and is limited to a 10-week, weather dependent season. This new project will permit the community to operate for longer over the year and run swimming classes and host events.
Project team:	**Sponsor:** Bryan Nicholson **Project Manager:** Mike Dunn
Key stakeholders:	TDC Bush Aquatic Trust Elected Members Funders - Through B.A.T. Pahiatua Community Ratepayers / General Public

Project budget:



Whole of Life
Approved budget:
$6,101,108
Actuals:
$77,785
Estimate at completion:
$6,100,785

0%
Under budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	Expressions of Interest with contractors have been reviewed and three have been selected for progressing to the next stage. Concurrently, the Detailed Design works continue to ensure that we can still progress a building consent in order to satisfy some of the funders requirements. Unfortunately, we have had some design delays with our Civil elements that we are working through. We are now tracking the start of July for the Detailed Design to be complete.
Scope:	G	G	Minor change accepted in the movement of the HVAC roof mounted air delivery and return units to ground mounted. Minor change presented to remove the wastewater pump station which was in the original design - working through to better understand the implications.
Time:	A	A	Noting various funder requirements we need to make significant progress on this to ensure funding streams remain. Some minor delays in the Design and a letter outlining procurement is being drafted for Funders.
Budget:	A	A	Financial position is deemed currently feasible. Currently working through market engagement to gain certainty.
Quality:	G	G	No current issues with quality.
Risks:	A	A	The main risk is budget and timeframes, amplified by funder requirements. Due to the uncertainty around the outcome of market engagement it is prudent that we continue the fund raising plan to its planned targets.
Opportunities:	G	G	No new opportunities with this project have been currently identified.
Health & Safety:	G	G	No issues presently.
Resources:	A	A	Resourcing for this project to maintain continuity is being reviewed for construction delivery.
Comms:	G	G	To be drafted once we have a confirmed stakeholder direction following initial market engagement

Next steps:

Contractor engagement
Detailed Design to be finalised
Comms plan to be drafted

Project timeline:

START	QS review	EOI - Market engagement	Detailed design	New building consent	Tender, Contract negotiation and finalisation	Delivery and Construction	Project closure and handover	FINISH
	Mar-25	Apr-25	Jul-25	Jul-25	Jul-25	Aug-25	May-26	

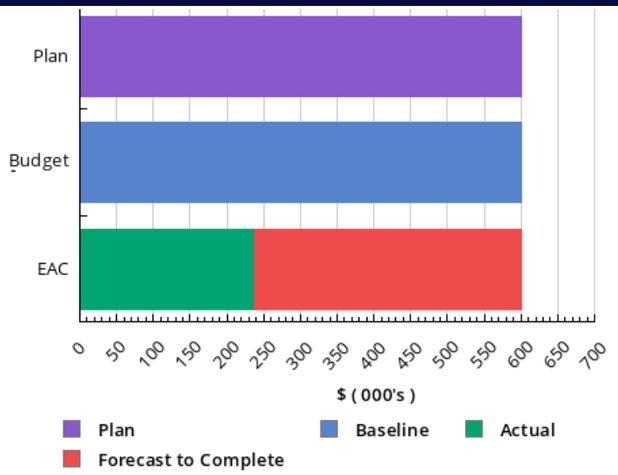
Project name

Digitisation of Council Records and the introduction of E-Services

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-23	Jun-27	Jun-27

Purpose:	The Digitisation of Council Property Records and the introduction of E-Services.
Project team:	**Sponsor:** Mike Dunn **Project Manager:** Sue Lawrence
Key stakeholders:	IS Consultants/Vendors/Developers Procurement Specialists TDC Staff

Project budget:



Whole of Life
Approved budget:
$600,000
Actuals:
$237,924
Estimate at completion:
$600,000

0%
Under budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	The supplier contracted to digitise the TDC property files has returned all hardcopy documents. The project team is currently focused on internal quality assurance, error correction, and uploading final digital files to the Content Management System. Due to other commitments, this work is being completed part-time and is planned to be finished by the end of June. This unanticipated work has delayed the overall project timeline and may result in a budget overrun. As part of the assessment for the Property Files Online e-Service, we are exploring two options for which we will seek feedback. Additional alternatives may need to be considered as part of this process. We are reviewing the scope of records that could potentially be made publicly accessible, with careful consideration of functional, legal, and security requirements. Under the Priority 2 e-Services Programme, the enhancement of the cemeteries page is progressing well. Current efforts are focused on completing the photographing of headstones and generating online forms.
Scope:	G	G	The project's priorities are: **Priority 1** • Digitisation • Publicly accessible digital property records. **Priority 2** • Cemetery management (GIS mapping, then inhouse) • Community Heritage. Database • Dog Registration • Bookings of facilities • Online payments. The criteria for prioritising the E-services are; customer demand, current or similar service available online, regulatory expectations, customer-facing and costs of delivery.
Time:	G	G	The digitisation project was scheduled for completion in early April. All digitised files are now planned to be uploaded into Content Manager by the end of June, subject to the project team's availability. The overall project will conclude by 30 June 2027.
Budget:	G	G	Due to the unplanned internal workload, costs may exceed the original budget. The digitisation project budget continues to be closely monitored. The digitisation and Property Files e-Service is funded under the Priority 1 budget of $395,000, with a further $205,000 allocated under Priority 2 e-Services.
Quality:	G	G	The internal resource assigned to manage and conduct quality control audits, including tracking files for the digitisation project is available part time
Risks:	G	G	The digitisation project and e-services carry their own risks and require individual risk assessment and treatment.
Opportunities:	G	G	With a fixed budget of $205,000 for Priority 2 e-services, the number of e-services introduced will depend on their costs and prioritisation.
Health & Safety:	G	G	As per TDC's Health and Safety
Resources:	G	G	Staff working on the digitisation project are currently available on a part-time basis for a fixed period. The introduction of e-services is dependent on the availability of TDC's IT staff.
Comms:	G	G	A comms plan will be completed as required.

Next steps:

Planning phase for publicly accessible digital property records finalised.
Digitisation of Property files complete.
Prioritising and subsequently scoping the Priority 2 E-services.

Project timeline:

START	Digitisation of Property records underway	E-Services Preliminary overview completed.	Rescoping of Project	Procurement process commences	Contractor for Digitisation Services engaged	Digitisation of Property files commences	Planning Phase for Priority 1 E-service completed	Cemeteries E-service complete	Digitisation of Property Records complete	Scoping the Priority 2 E-services	FINISH

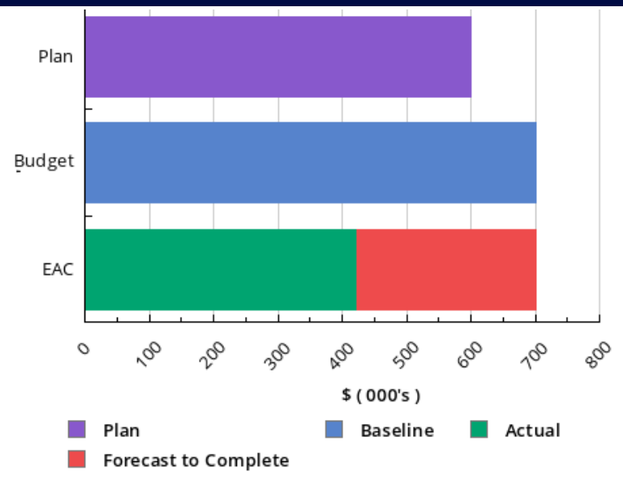
Project name

Future Community Urban Design

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-23	Oct-24	Jul-25

Purpose:	The Future Community Urban Design project aims to ensure the Tararua District is well-positioned to manage and shape future growth in a way that enhances community wellbeing, supports infrastructure planning, and protects the district's character and environment. This project will inform the development of the new District Plan by providing a strategic approach to urban design and land use planning that reflects community aspirations, responds to growth pressures, and promotes sustainable, connected, and liveable communities.
Project team:	**Sponsor:** Mike Dunn **Project Manager:** Sue Lawrence
Key stakeholders:	Community Boards Iwi Community members Horizons Regional Council Waka Kotahi Council members Developers Utility Providers Kainga Ora TDC Staff

Project budget:



Whole of Life
Approved budget:
$700,000
Actuals:
$423,271
Estimate at completion:
$700,000

0%
Under budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	The draft *Urban Enhancement Strategy* (previously referred to as the *Urban Design Strategy*) was approved for public engagement at the May Council meeting. Engagement will take place throughout most of June, with feedback to be incorporated ahead of final Council approval in late July. The ePlan remains on track to be available in July. As part of the ongoing project development, new inputs have been identified. These support the Growth Strategy and will inform land re-zoning considerations under the proposed District Plan review. This work is within the existing project budget and scheduled timeline
Scope:	G	G	Develop an Urban Growth Strategy to plan for the next 30 years. Create spatial plans and urban design guidance for the four main towns and rural villages. Identify areas suitable for new residential, commercial, and industrial development. Assess land suitability, infrastructure capacity, and environmental risks. Recommend design controls and contribute to the District Plan's regulatory framework. Plan for future community facilities and infrastructure investment. Propose enhancements to public spaces that reflect local identity and priorities. Support the rollout of an E-Plan to improve access to planning information. Engage with the community to ensure the Strategy reflects local values and aspirations.
Time:	G	G	All remaining deliverables — including the *Urban Enhancement Strategy*, ePlan, and recently identified tasks are planned for completion within the July 2025 timeframe.
Budget:	G	G	Current expenditure of $423,271 represents 56% of the total project budget of $700,000. While the project had previously been tracking 14% under budget, recently identified tasks—arising from the project's ongoing development—will be delivered using the remaining project funds and will be completed within the approved budget.
Quality:	G	G	Deliverables and timeframes are being monitored.
Risks:	G	G	There is no change to the Risks.
Opportunities:	G	G	N/A
Health & Safety:	G	G	N/A
Resources:	G	G	Expert resources have been engaged to undertake this project.
Comms:	G	G	Ongoing liaison with Comms team as required.

Next steps:

Urban Enhancement Strategy adopted.

Adopted Draft District Plan is available on Eplan

Project timeline:

START	Background and Development Phase	Draft Growth Strategy adopted	Approval of Growth Strategy	Community Engagement for Urban Design Strategy	Development Policy completed for District Plan Review	Feedback on Draft Report finalised	Urban Enhancement Strategy adopted	ePlan for District Plan released	FINISH
	Jun-23	Dec-23	May-24	Dec-24	Feb-25	May-25	Jul-25	Jul-25	

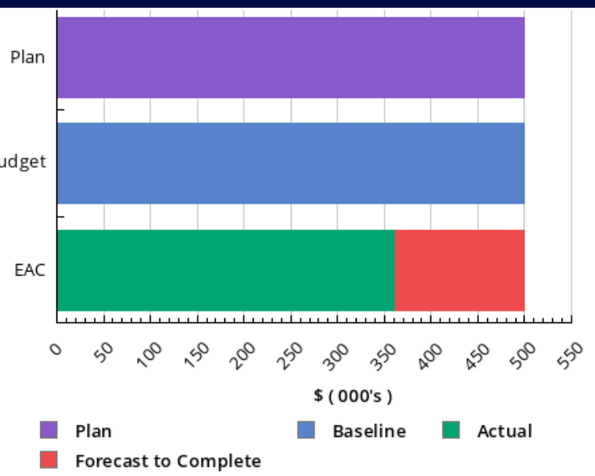
Project name

Building Iwi Capacity

Report date:	Start date:	Approved end date:	Projected end date:
Jun-25	Jul-23	Sep-25	Sep-25

Purpose:	The purpose is to build iwi capacity to foster meaningful collaboration, ensuring that Māori perspectives are integrated into council activities and community projects, leading to improved outcomes.
Project team:	**Sponsor:** Mike Dunn **Project Manager:** Sue Lawrence
Key stakeholders:	Ngāti Kahungunu o Tamaki-nui-ā-Rua Rangitāne o Tamaki-nui-ā-Rua Horizons Regional Council TDC Staff

Project budget:



Whole of Life
Approved budget:
$500,000
Actuals:
$361,976
Estimate at completion:
$500,000

0%
Under budget

Status update:

	PREVIOUS STATUS	CURRENT STATUS	
Overall:	G	G	Regular engagement continues to strengthen communication and collaboration between Iwi and TDC. Monthly reporting and scheduled meetings remain key to maintaining this strong working relationship. While no new initiatives are currently planned beyond business-as-usual (BAU) activities, we are actively engaging with Iwi to identify any outstanding work that may be progressed before the contract concludes in four months.
Scope:	G	G	The following breakdown is the functions that the funding will support: Facilitating and support the ongoing relationship with Tararua District Council to introduce new and improved systems Assess and triage all Council Resource Management Act Consents To build and maintain a strong relationship with Council consenting teams To support the implementation of an improved consenting and charging framework Coordinate site visits especially those of cultural significance during consenting processes Co-ordinate cultural activities associated with consenting Engage with Council in environmental matters that require Iwi input
Time:	G	G	Agreements are in place and the reporting requirements outlined are being met.
Budget:	G	G	The budget is fully allocated with 50% of the funding for each iwi.
Quality:	G	G	N/A
Risks:	G	G	N/A
Opportunities:	G	G	N/A
Health & Safety:	G	G	No issues.
Resources:	G	G	Both Iwi have engaged FTE as per the contract.
Comms:	G	G	To work with the Communications team as required

Next steps:

Continue to work together to further strengthen Iwi capacity and collaboration.

Project timeline:

START	Agreement signed	Monthly meetings and reporting in place	Iwi capacity established to partner with council on various projects	FINISH
	Sep-23	Sep-25	Sep-25	