

Item 1: QLDC Infrastructure Compliance Update

SESSION TYPE: Briefing

PURPOSE/DESIRED OUTCOME:

The purpose of this briefing is to update the Asset & Infrastructure Committee on the Council's compliance status across its core infrastructure activities.

DATE/START TIME:

Thursday, 5 March 2026 at 11:15am

TIME BREAKDOWN:

Presentation: 40 min

Questions: 20 min

PRESENTERS:

Gavin Flynn - Senior Infrastructure Compliance Advisor

Simon Mason - Infrastructure Operations Manager

Prepared by:



Name: Gavin Flynn

Title: Senior Infrastructure Compliance
Advisor

18 February 2026

Reviewed and Authorised by:



Name: Tony Avery

Title: GM - Property & Infrastructure

18 February 2026

ATTACHMENTS:

A	QLDC Infrastructure Compliance Update Presentation
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Infrastructure Compliance Update

Infrastructure and Asset Committee Workshop – 5 March 2026

Contents

1. Drinking Water – Quality & Quantity
2. Wastewater Treatment
3. Stormwater Management
4. Waste Management

1. Drinking Water – Quality

Status of Infrastructure			
SCHEME	TREATMENT BARRIERS PRESENT		
	PROTOZOA	BACTERIA	RESIDUAL
ARROWTOWN	UV	UV	CHLORINE
ARTHUR'S POINT	UV	UV	CHLORINE
CORBRIDGE (T1)	DUE APR 2025	CHLORINE (UV FROM FEB 2026) <i>*Insufficient Contact Time</i>	CHLORINE
GLENORCHY	UV	UV	CHLORINE
CARDRONA	MEMBRANE	CHLORINE	CHLORINE
HĀWEA	UV	UV	CHLORINE
LUGGATE	UV	UV	CHLORINE
QUEENSTOWN - SHOTOVER BORES	UV	UV	CHLORINE
QUEENSTOWN – TWO MILE	UV	UV	CHLORINE
LAKE HAYES	UV	UV	CHLORINE
WĀNAKA – BEACON POINT	UV	UV	CHLORINE
WĀNAKA - WESTERN	UV	UV	CHLORINE
WĀNAKA AIRPORT	UV	UV	CHLORINE

Planned Treatment Upgrades:

- New Luggate WTP construction (incl. protozoa barrier) operational **3rd February 2026**.
- Corbridge to be connected to Luggate scheme in the next three months.
- Pre-UV filtration project commencing this Financial Year.

**Insufficient Chlorine (Cl) contact time at Corbridge scheme only applies for first user, which is the Wānaka WWTP.*

1. Drinking Water – Quality

Drinking Water Compliance YTD

SCHEME	COMPLIANCE PERFORMANCE (MONTHLY RULES)					
	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	JANUARY
ARROWTOWN				Data loss One day		
ARTHUR'S POINT						
CORBRIDGE (T1)	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER
GLENORCHY	Data loss One day			Data loss One day		
CARDRONA	Technical noncompliance Four days	Technical noncompliance Three days	Technical noncompliance One day			
HĀWEA	Data error One day					
LUGGATE	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER	NO PROTOZOA BARRIER
QUEENSTOWN - SHOTOVER BORES	UVT instrument fail. One day					
QUEENSTOWN – TWO MILE						
LAKE HAYES					Data integrity One day	Data integrity Eight days
WĀNAKA – BEACON POINT						
WĀNAKA - WESTERN						UV Dose Two days
WĀNAKA AIRPORT						

Non-Compliances:

All non-compliances noted (excluding Luggate and Corbridge which lack a protozoa barrier) are short duration, technical in nature and did not result in a risk to water safety but rather impacted on the ability to **demonstrate** compliance in accordance with the Drinking Water Quality Assurance Rules.

The key themes of non-compliance are as follows:

- Missing data (lost through communications network outages – notable outage in January)
- Instrumentation faults
- Scheduling of membrane integrity tests
- Lake Hayes. Issue with data locked showing UV value open continually but value operated on/off .
- Wānaka –Western UV Dose reported to Taumata Arowai. 33 minutes of operation without UV disinfection. Investigation ongoing.

1. Drinking Water – Quantity

SCHEME	MAXIMUM ABSTRACTION (PER YEAR)	2025 PERFORMANCE	COMMENTS
ARROWTOWN (RM19.410.01)	1,274,200 m ³	1,331,793 m ³	2025 water usage exceeded annual limit. Water loss targeted in distribution area. Currently tracking within allocation for 2026
ARTHUR'S POINT (2005.762)	823,200 m ³	293,616 m ³	Fully compliant with abstraction limits
CORBRIDGE (RM11.177.01)	167,900 m ³	114,839 m ³	Fully compliant with abstraction limits
GLENORCHY (2009.158)	599,184 m ³	130,092 m ³	Fully compliant with abstraction limits
HAWEA (RM.14.278.01.V1)	1,202,100 m ³	676,503 m ³	Fully compliant with abstraction limits
LAKE HAYES (2001.822)	800,800 m ^{3*}	451,819 m ³	Daily abstraction limits exceeded through January 2025 (4 days) & February 2025 (16 days), and weekly volume exceeded in February (14 days) where rolling mean exceeded 15,400 m ³ /week. No compliance issues associated with this summer period to date.
LUGGATE (RM19.413.01)	187,307 m ³	130,338 m ³	Fully compliant with abstraction limits
QUEENSTOWN – TWO MILE (2007.665)	10,950,000 m ^{3*}	2,750,844 m ³	Fully compliant with abstraction limits
QUEENSTOWN – SHOTOVER (RM16.142.01)	6,223,165 m ³	3,864,349 m ³	Fully compliant with abstraction limits
WANAKA AIRPORT (RM19.097.01)	26,941 m ³	16,892 m ³	Instantaneous abstraction rate exceeded (NMT 2.8 l/s). Pump operation being explored to remove short duration spikes on start up.
WANAKA – WESTERN (2008.459)	3,888,000 m ^{3*}	481,461 m ³	Fully compliant with abstraction limits
WANAKA – BEACON POINT (2008.46)	8,164,800 m ^{3*}	3,494,066 m ³	Fully compliant with abstraction limits

*No annual limit in consent. Annual allocation extrapolated from other limits in water permit.

2. Wastewater Treatment

SHOTOVER WWTP					
RM13.215.03.V2 Discharge to Land - Compliance Status (as at April ORC Audit)		Significant Non-Compliance. Enforcement order in place. Plant now operating under emergency discharge direct to Shotover River.			
RM13.215.01 Discharge to Air - Compliance Status (as at April ORC Audit)		Low Risk Non-Compliance.			
Parameter	February 2026 Result	12-Month Rolling Mean**	12-Month Rolling Mean Limit	12-Month Rolling 95th %ile **	12-Month Rolling 95th %ile Limit
TotalBOD ₅ (mg/l)	3	15	30/10*	21.9	50/20*
TSS (mg/l)	10	18.4	30/10*	46.8	50/20*
TN (mg/l)	5.97	10.8	23/10*	16.8	35/15*
TP (mg/l)	2.43	2.5	8*	4.2	10*
E. Coli (cfu/100ml)	10	26	260/10*	1270	260/100*

* Indicates limit under 2008.238.V2 consent which applies from 1 January 2026. This consent also introduces limits for Total Phosphorous
 ** Annual performance assessed against RM13.215.03.V2

CARDRONA WWTP			
2009.348 Discharge to Land - Compliance Status (as at April ORC Audit)		Full compliance	
Parameter	January 2026 Result	12-Month Rolling Mean	12-Month Rolling Mean Limit
cBOD ₅ (mg/l)	5.7	6.5	20
TSS (mg/l)	9.0	12.6	30
TN (mg/l)	3.91	13.2	30
TP (mg/l)	1.98	3.8	8
E. Coli (cfu/100ml)	56	5.1	1,000

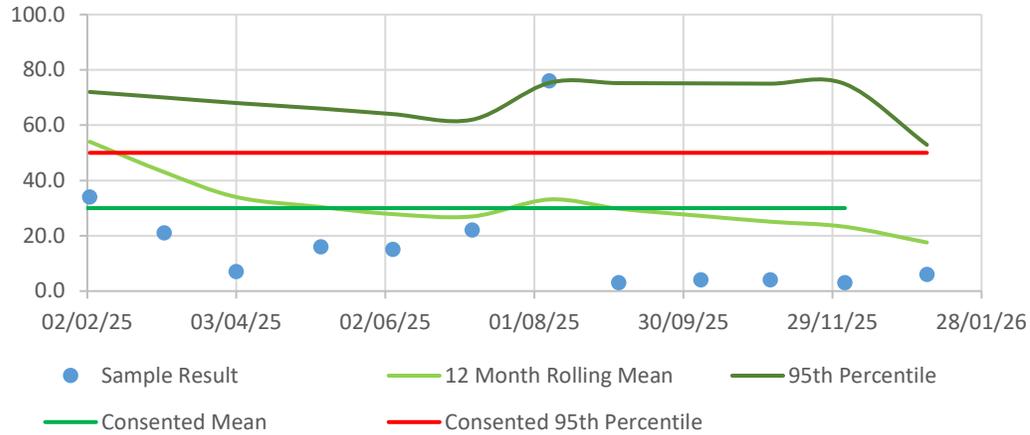
WĀNAKA (PURE) WWTP			
2205.484.V1 Discharge to Land - Compliance Status (as at April ORC Audit)		Significant Non- Compliance. Abatement notice in place.	
2005.485 Discharge to Air - Compliance Status (as at April ORC Audit)		Full compliance	
Parameter	February 2026 Result	12-Month Rolling 80th %ile	12-Month Rolling 80 %ile Limit
BOD ₅ (mg/l)	8	20.8	35
TSS (mg/l)	13.6	24.3	35
TN (mg/l)	8.97	26.5	12
E.Coli (cfu/100ml)	<u>5</u> (<10)	430	1,000

HĀWEA WWTP			
RM22.178.02 Discharge to Land - Compliance Status		Significant Non-Conformance. Abatement notice in place.	
RM22.178.01 Discharge to Air - Compliance Status		Full Compliance	
Parameter	January 2026 Result	12-Month Rolling Mean	12-Month Rolling Mean Limit
TN (mg/l)	34.7	37.4	35
NH ₄ -N (mg/l)	9.6	14.5	20
TP (mg/l)	4.2	4.8	10
E.Coli* (cfu/100ml)	14000	60572.6	250,000

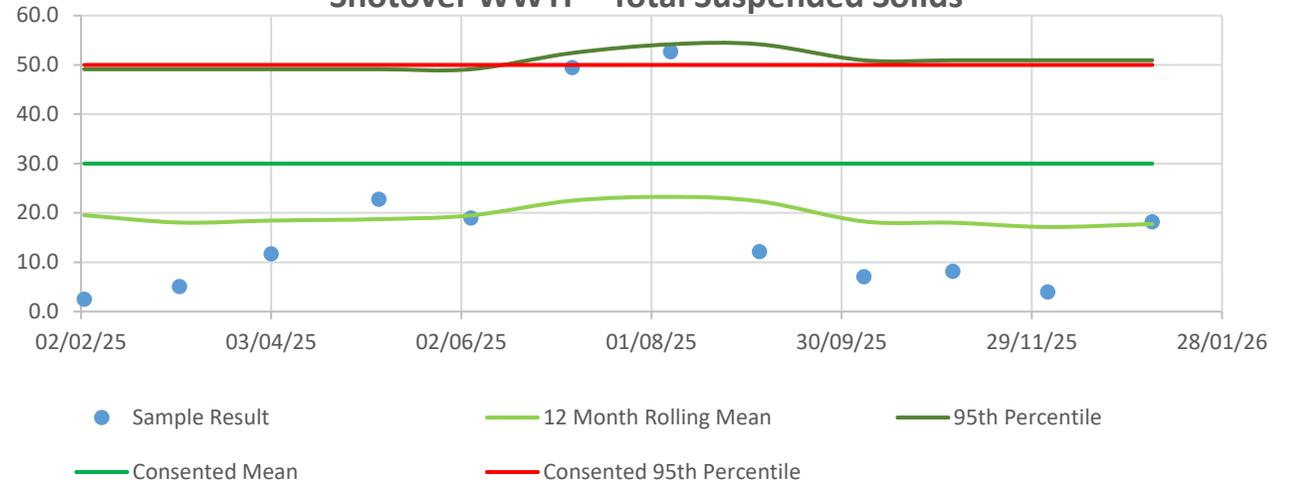
*E.Coli is assessed against as a 12-month Geomean

2. Shotover WWTP – Current Performance

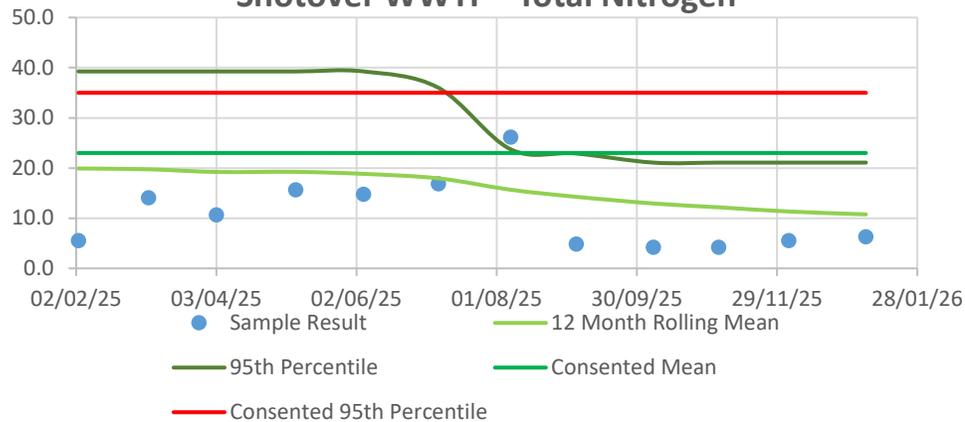
Shotover WWTP - Total BOD₅



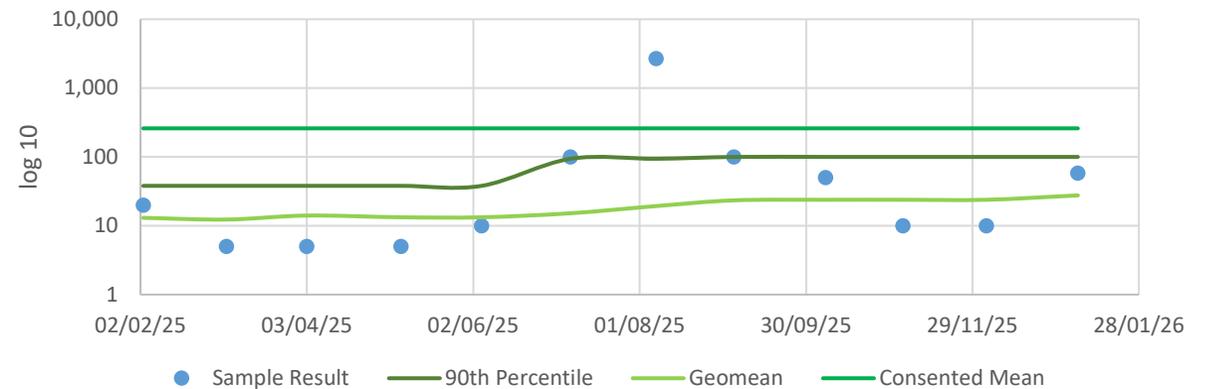
Shotover WWTP - Total Suspended Solids



Shotover WWTP - Total Nitrogen



Shotover WWTP - E.coli log 10 scale



2. Shotover WWTP – Key Updates

- > Disposal field out of service since 31 March 2025. Largely drained with isolated pockets of shallow ponding in some cells.
- > Monthly surveys of wildlife continue. No issues have been reported from the ecologist and negligible numbers of birds remain at the disposal field.
- > **Earthworks and Diversion within Shotover Riverbed Consent (RM25.177)** - Consent lodged 10/04/25 and proceeding with direct referral to the Environment Court. Mediation currently being scheduled.
- > **Discharge of Treated Wastewater to Shotover River Consent (RM25.206)** - Consent lodged on 1/5/25 and proceeding with direct referral to the Environment Court. Mediation currently being scheduled.
- > Stage 3 project (Second MLE & clarifier) fully operational with material improvements in treated wastewater quality evident.

2. Wanaka 'Pure' WWTP – Abatement Notices

Key Updates

- > The plant recently completed a renewal upgrade with new aeration grids for Sequencing Batch Reactors (SPR) 1 & 2.
- > During the upgrade works the plant was operating on reduced capacity which contributed to suboptimal treatment performance and degraded effluent quality.
- > ORC issued two abatement notices on 17 November 2025 due to the treated effluent not meeting the 80-percentile consent condition for Total Nitrogen (TN) and the other for ponding and surface run-off of treated wastewater and discharge of sludge at the disposal fields.
- > The treatment plant is now running normally and achieving effluent quality consistent with the requirements of the Resource Consent. However, due to the consent being based on a rolling 12-month 80th percentile, full compliance will not be achieved until approx. October 2026.
- > Temporary soakage trenches have been constructed within the disposal field to enable management of peak flows over the summer period and support remediation efforts. Permanent remediation works will commence in early 2026.



Pooled effluent at field 2 cut off drain



Example of remedial trench

2. Hāwea WWTP – Abatement Notice

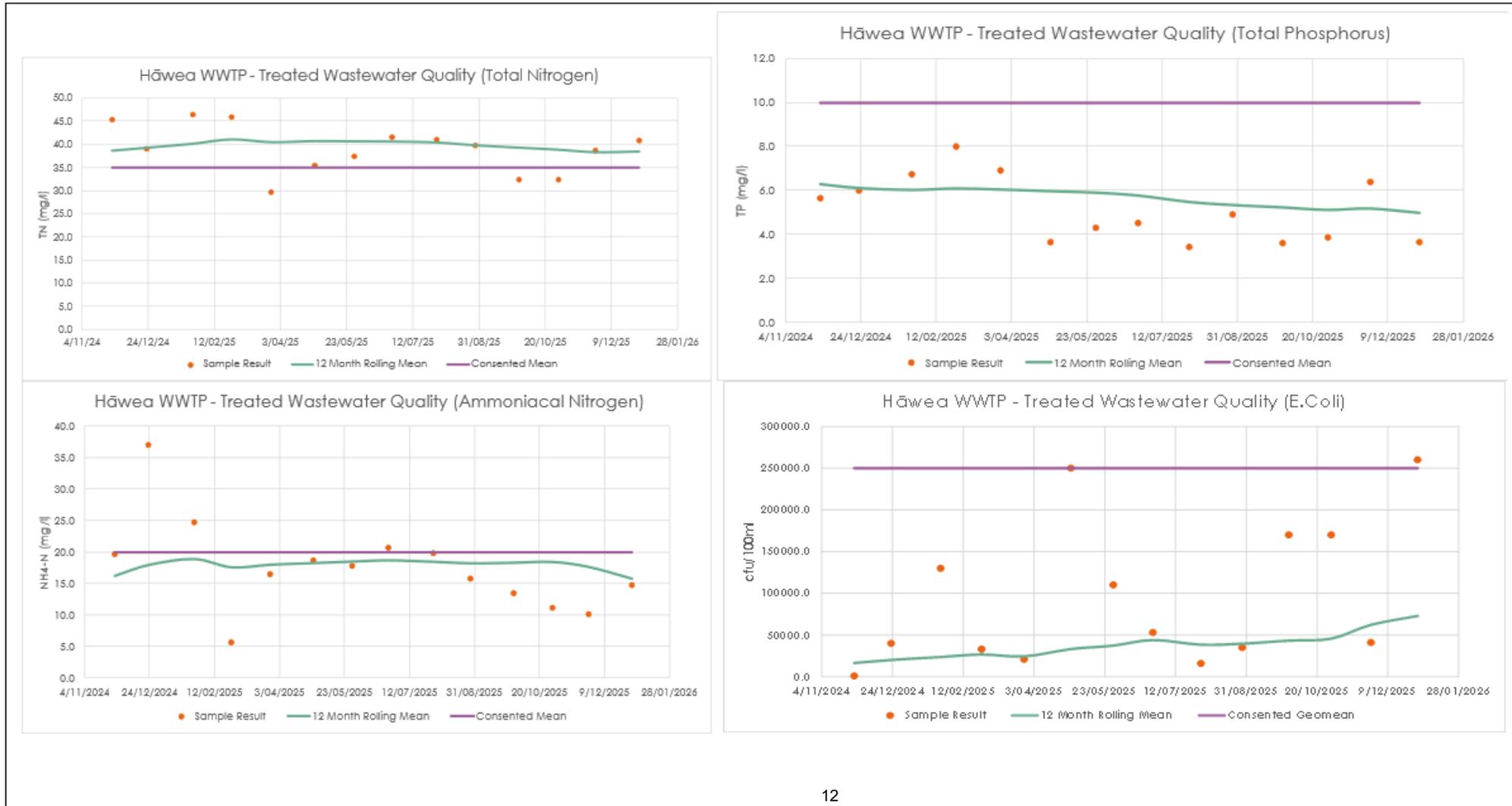
Key Updates

- > Abatement notice issued April 2025 as a result of exceedances of both the mean 12-month Total Nitrogen concentration and the total mass of Nitrogen discharged.
- > Monitoring undertaken upstream and downstream in the Hāwea River, and third-party ecological assessments, reflect that the non-compliance is not leading to adverse effects in the receiving environment.
- > QLDC are pursuing multiple avenues to optimise performance, including:
 - > Trialing an ultrasonic technology designed to disrupt algae cells, reducing quantity of algae in the discharge and supporting a reduction in Total Nitrogen (as N is bound up in the algae)
 - > Optimisation of network operation to ‘smooth’ the feed into the WWTP
 - > Reducing additional load on treatment plant through delaying new connections where possible
- > QLDC is required to report to ORC quarterly to provide updates around steps being undertaken to achieve compliance with the consent.

Ultrasonic unit, powered by solar panels and supplied by Mason Engineers



2. Hāwea WWTP – Current Performance



3. Stormwater Management

STORMWATER CONSENTS/ENFORCEMENT ACTIONS	
Shotover Wetland SW Discharge (RM15.277) - Compliance Status (as at 2023 ORC Audit)	Significant Non-Compliance. Infiltration ponds inconsistent with consented plans (forebay design, extent of vegetation). 10 year review report signals that design of ponds are inconsistent with discharge consent conditions. Action plan to remedy pond non-compliance due with ORC by 12 March 2026.
SW Discharge to Clutha River at Northlake (Permitted Activity)	Abatement Notice in place. Design work associated with improvement project ongoing and progressing toward resource consent applications shortly.
SW Discharge to Bullock Creek at Alpha Series (Permitted Activity)	Abatement Notice in place. An interim solution has been agreed with Fish & Game (the landowner) and a contractor to deliver the improvement works is currently being procured. The works are scheduled for completion prior to Autumn 2026.

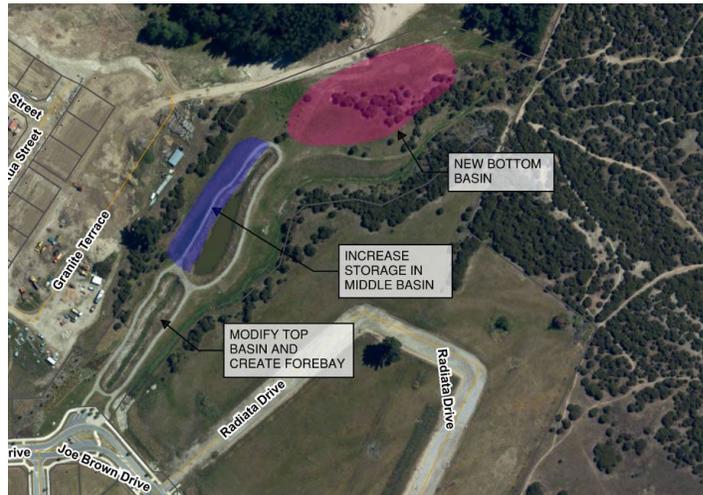


Fig 2. Sketch of proposed basin modifications at Northlake



Fig 3. Alpha Series modifications to mitigate downstream effects of stormwater flow

4. Waste Management

WASTE MANGEMENT CONSENTS	
Victoria Flats Discharge of Mixed Waste to Land (97163_V1) – Compliance Status	Low Risk Non-Compliance. Administrative matters associated with operational manual and plans, subsequently resolved. Reconsenting process now commenced, initially focusing on design of future landfill development stages.
Victoria Flats Discharge to Air (97164_V4) – Compliance Status	Low Risk Non-Compliance. Administrative matters associated with operational manual and plans, subsequently resolved. Reconsenting process now commenced, initially focusing on design of future landfill development stages.
Victoria Flats Discharge to Leachate Land (97165) Victoria Flats Groundwater Take (97166.V1)	Full Compliance.
Tucker Beach Closed Landfill Discharge to Land (2004.290) – Compliance Status	Moderate Non-Compliance. Approx 50m of waste exposed at toe of embankment. Works are underway to cart clean fill to site and place into the slope. Works are scheduled to be completed in Autumn 2026, with native planting programme to be completed after.



Fig 4. Remediation works at Tucker Beach Closed Landfill

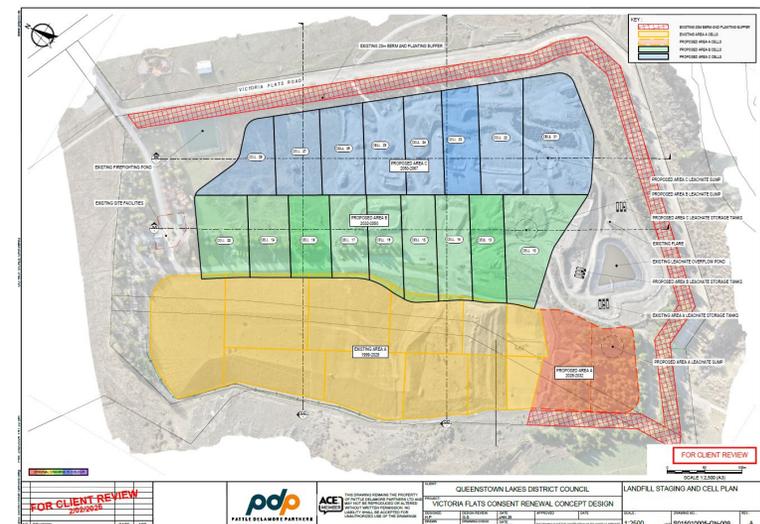


Fig 5. Victoria Flats future development concept design

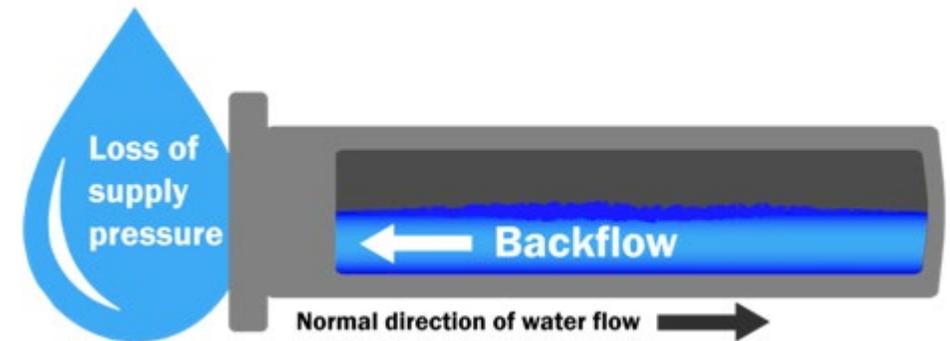
Backflow prevention basics

What is backflow ?

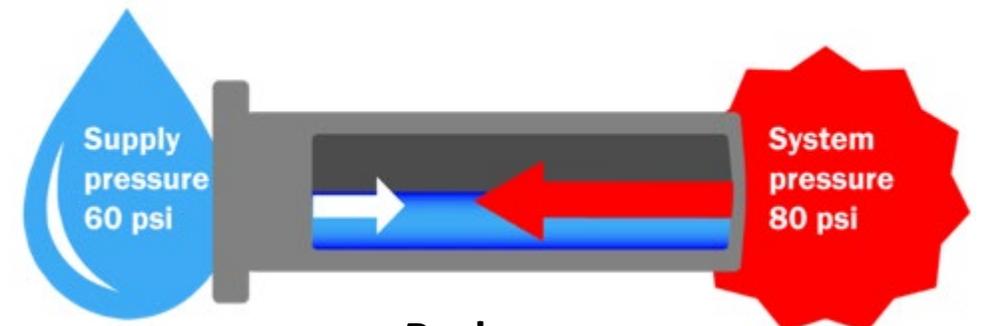
- Reverse water flow in water supply system
- Creates pathway for contamination



Types of backflow



Backsiphonage
[Suction]

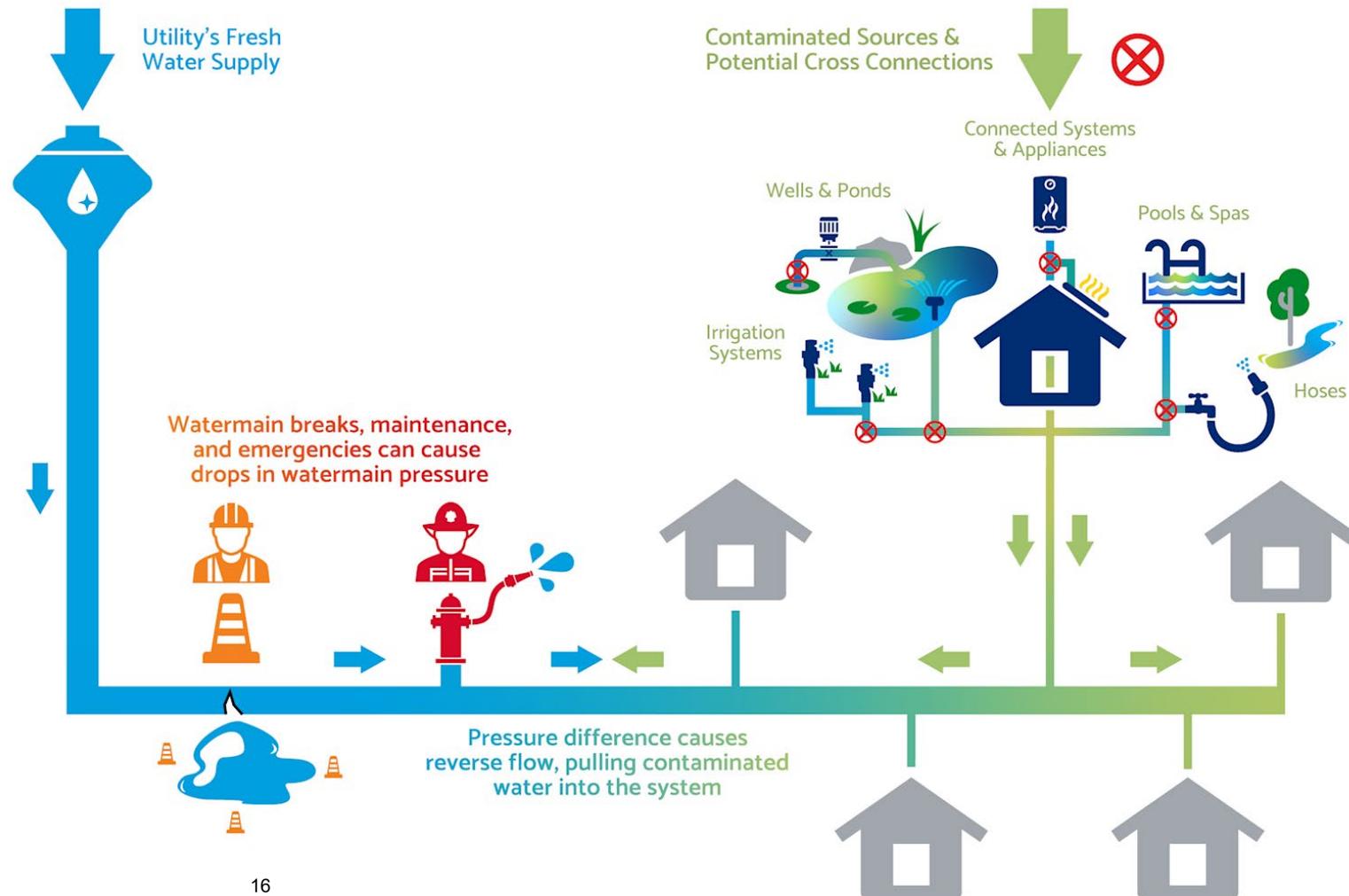


Backpressure
[Pushing]

Backflow prevention basics

How can it occur ?

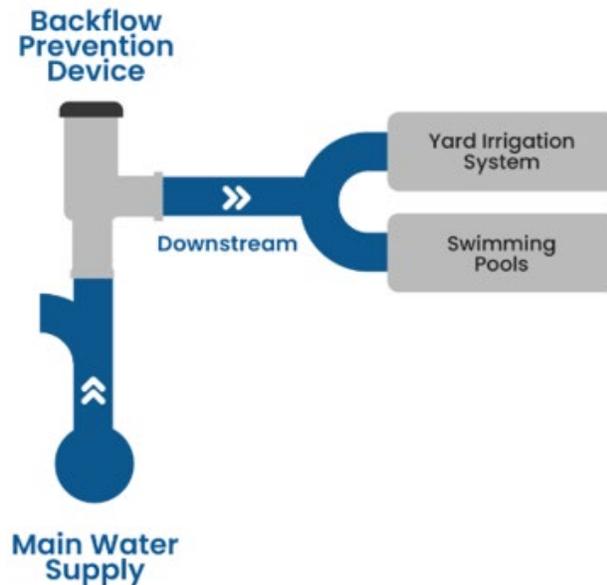
- Pressure event on water supply line
- Connections to contamination sources & Cross connections
- Contaminated water flows into supply



How do we stop backflow

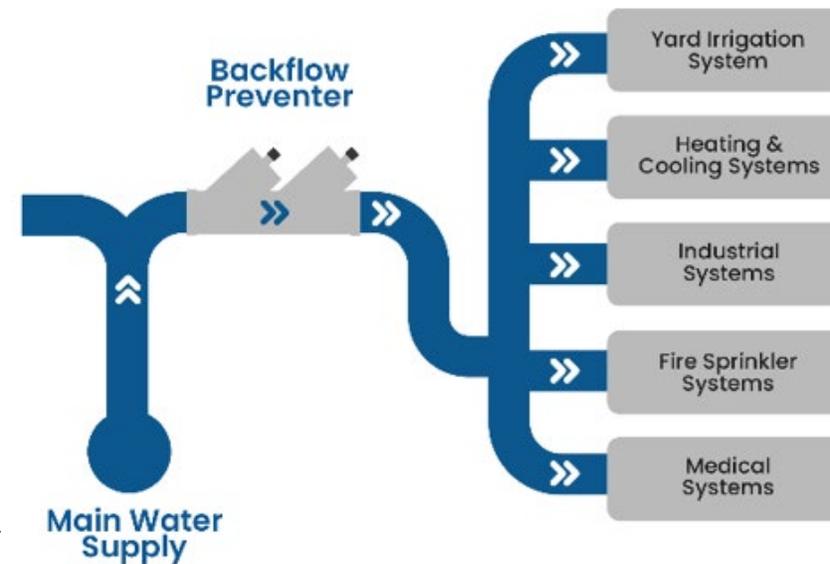
- Install & maintain backflow prevention devices [Valves] at source & boundary
- Risk is determined by activity = type of backflow preventor

Residential



17

Commercial



16

Backflow prevention programme

Problem Statement:

- Limited visibility of backflow compliance
- No comprehensive monitoring system in place
- Reduced ability to assess compliance and protect the water supply

Approach

- Deliver a structured backflow prevention programme
- Build a practical, fit-for-purpose compliance system
- Translate policy and industry best practice into clear, effective processes



Backflow Prevention Policy

Document Revision History			
Rev	Responsible Officer	Issue Date	Review Date
1.0	Infrastructure Operations Manager – Property & Infrastructure	4 April 2022	4 April 2025
1.1	Infrastructure Compliance Officer – Property & Infrastructure	3 December 2025	4 April 2028

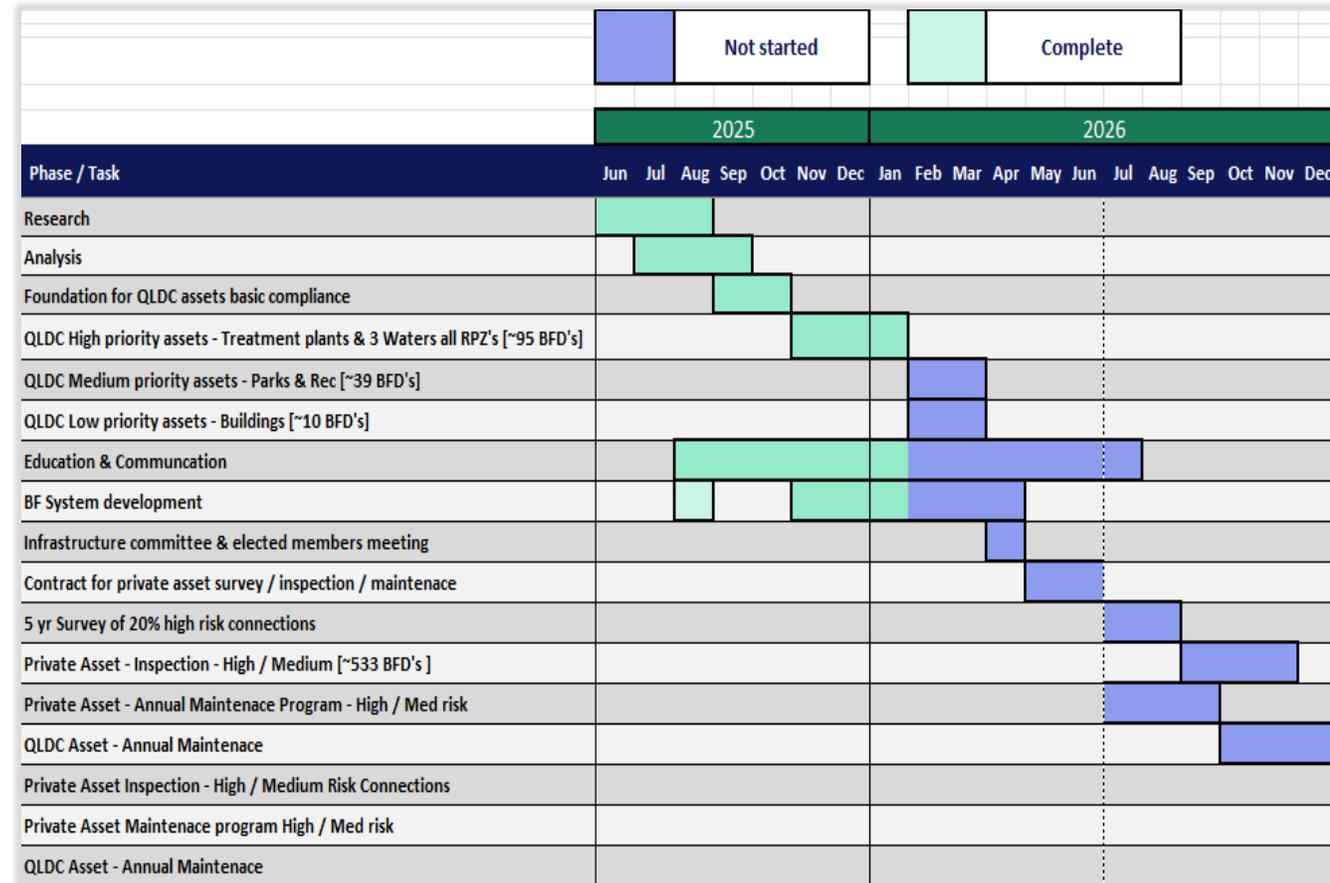
Backflow prevention programme

Where we are now.

- Maintenance of high priority QLDC owned Assets
- Compliant register / fast path [BackflowID]
- GIS system build for comprehensive district register

What's next

- Maintenance of Medium priority QLDC owned assets
- Field test GIS survey 123 [data collection]
- Create digital assets [webpage]



Trade Waste

Outstanding Fees

At the beginning of the previous year, Trade Waste held approximately **\$37,000** in outstanding fees. Through targeted follow-ups and improved monitoring practices, the outstanding balance has been reduced by **67.5%**, bringing current outstanding fees to **\$12,330**, involving **36 businesses**.

Food Truck Operators

Trade Waste has continued engagement with food truck operators across the district to support understanding and compliance with trade waste requirements.

As a result, approximately **60% of expected applications** from this sector have now been received.

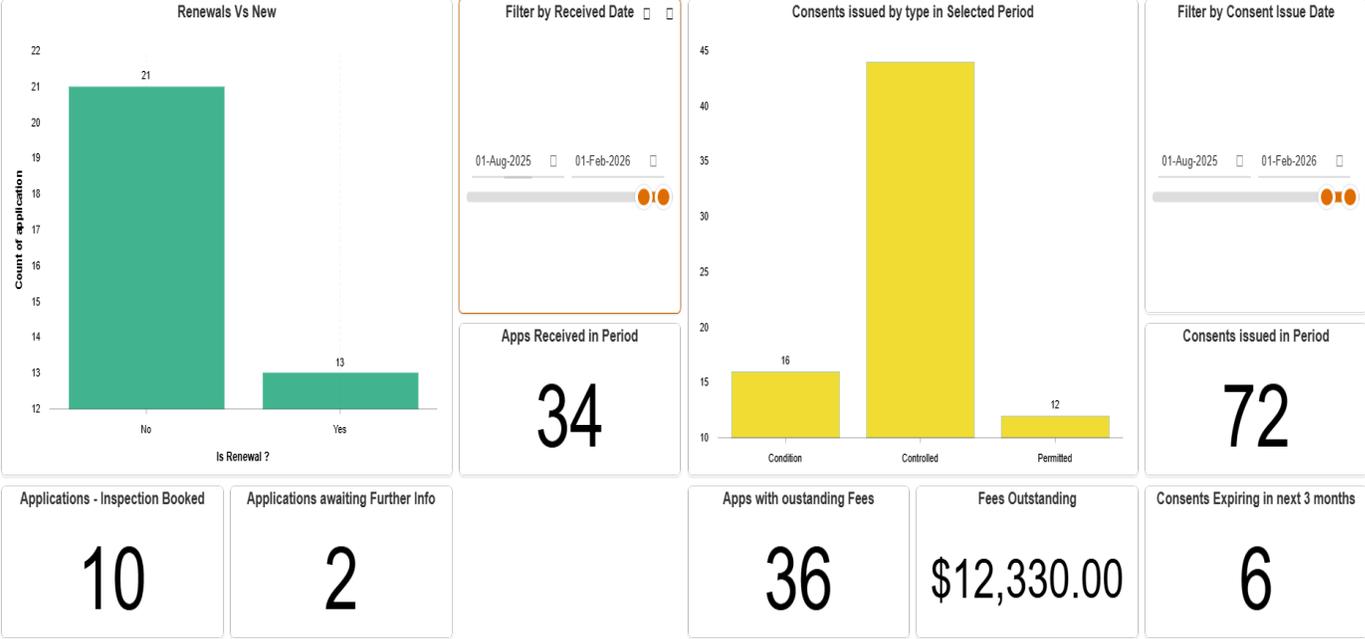
Sucker Truck Operators

Sampling of wastewater from sucker truck operators has continued to improve the understanding of the strength and nature of discharges entering the wastewater network.

This work has identified several issues, including:

- non-compliant disposal behaviors
- solid waste and rubbish found within wastewater loads
- high-strength wastewater indicating septic tanks may not have been serviced for prolonged periods

We are working collaboratively with operators to address these issues and to identify solutions that support both industry needs and the effective operation of the district's wastewater treatment plants.



Please Note

1. Filter by Received Date' only applies to the 'Apps Received in Period' and 'Renewals Vs New' visualisations.
2. 'Filter by Consent Issued Date' only applies to 'Consents issued in Period' and 'Consents issued by type in Selected Period' visualisations.
3. The following visualisations represent the status as of now, independent of filters.
 - Applications - Inspection Booked
 - Applications awaiting Further Info
 - Apps with outstanding Fees
 - Total Fees outstanding
 - Apps Expiring in next 3 months