CLUTHA DISTRICT COUNCIL

Notice is hereby given that a Meeting of the Infrastructure Strategy & Operations Committee will be held in the Council Chambers, 1 Rosebank Terrace, Balclutha on Thursday 10 October 2024, following the Corporate & Property Committee meeting.

Steve Hill
CHIEF EXECUTIVE OFFICER

Committee Members

Councillor Bruce Graham (Chairman)
Councillor Kevin Barron
Councillor Dane Catherwood
Councillor Wayne Felts
Councillor Gaynor Finch
Councillor John Herbert
Councillor Michele Kennedy
Councillor Alison Ludemann
Mayor Bryan Cadogan
Councillor Simon McAtamney
Councillor Dean McCrostie
Councillor Brent Mackie
Councillor Jock Martin
Councillor Ken Payne
Councillor Bruce Vollweiler

INFRASTRUCTURE STRATEGY & OPERATIONS COMMITTEE

10 October 2024

APOLOGIES
Mayor Bryan Cadogan

DECLARATIONS OF INTEREST
No declarations of interest advised at the time of publishing this agenda.

Infrastructure Strategy & Operations Committee

Item for DECISION

Report	Stock Underpass Exemptions – Waitago Farms Ltd – Gorge Road, West Otago
Meeting Date	10 October 2024
Item Number	1
Prepared By	Leo Michie – Contracts Supervisor
File Reference	916054

REPORT SUMMARY

The report advises of a request received for stock crossing permits on Gorge Road and recommends the granting of new stock underpass exemption.

RECOMMENDATIONS

1 **That the Infrastructure Strategy & Operations Committee receives the 'Stock Underpass Exemptions – Waitago Farms Ltd – Gorge Road report.**

2 **That the Infrastructure Strategy & Operations Committee grants/does not grant a Stock Underpass Exemption for Waitago Farms Ltd farming operation on Gorge Road to be reviewed together with the balance of all the other Stock Underpass Exemptions which expire on 1 December 2025.**

REPORT

1 Background

Council's Roading Bylaw and Policy on Stock Crossing, Races on Road Reserve and Stock Underpasses were adopted in 2008. Since then, new dairy conversions and expansions operating on opposite sides of a road have been required to install stock underpasses.

The Infrastructure Strategy & Operations Committee can grant exemptions from this requirement on roads where the Annual Average Daily Traffic (AADT) is less than 500 vehicles.

Re-assessment of exemptions are done on a three-yearly basis, however if the stock crossings continue to be operated in accordance with the permit conditions this could be extended to a five-yearly basis so that good operators have more security. Where there are repeat complaints or breaches of the permit conditions these permits will be reviewed as soon as practicable through the Service Delivery Committee and exemptions may be revoked within the exemption period.

2 New Stock Underpass Exemption – Gorge Road

A request has been received from Waitago Farms Limited applying for a stock crossing on Gorge Road. Gorge Road is a local sealed road and has an average daily traffic count of 64. The crossing is required to make a connection between the property on either side of the road.

Waitago Farms Ltd would like to operate the stock crossing in accordance with councils Policy on Stock Crossings 02-01-013 Roading Bylaw 2008 Part 2 Stock Movement. The site will be operated with 2x Stock Signs (TW-6A cattle). The property has mats, and these are to be stored on the farm side of the fence. Waitago Farms currently have existing crossings on Sims Road, these have been operated appropriately and have never been subject of complaint.

In view of the low traffic volumes (AADT 64) and taking Council policies into consideration, it is recommended that a Stock Underpass Exemption be granted to Waitago Farms Limited expiring on 1 December 2025, and that a Stock Crossing permit be issued for the same period.

3 Strategic Goals and Outcomes

This report contributes towards the following Community Outcome:

Roading infrastructure that sustainably supports the community and economy.

4 Assessment of Options

Options for Council to consider include:

1. Approval of a Stock Underpass Exemption expiring on 1 December 2025 in line with all other stock underpass exemptions; or

2. Refusal of the request for exemption

If a crossing site is not operated appropriately then it can come back to the Service Delivery Committee for review at any stage.

5 Consultation

This matter has a low level of significance other than those in the immediate vicinity. Council already has a sound understanding of the views and preferences of those likely to be affected or interested in the matter.

6 Policy Considerations

Roading Bylaw 2008 part 2 “Stock Movement”, 02-01-013 “Policy on Stock Crossings, Races on Road Reserve and Stock Underpasses.

7 Legal Considerations

Not applicable.

8 Financial Impact

If the exemption is not granted and a stock underpass is required to be installed, then under the current policies Council may contribute a portion of the cost of an underpass from Roading budget towards this. This has historically been funded from Low-Cost Low Risk Funding Improvements but this has been slashed by 85% by NZTA for next three year cycle and as such we would need to consider another roading budget area for Council's contribution.

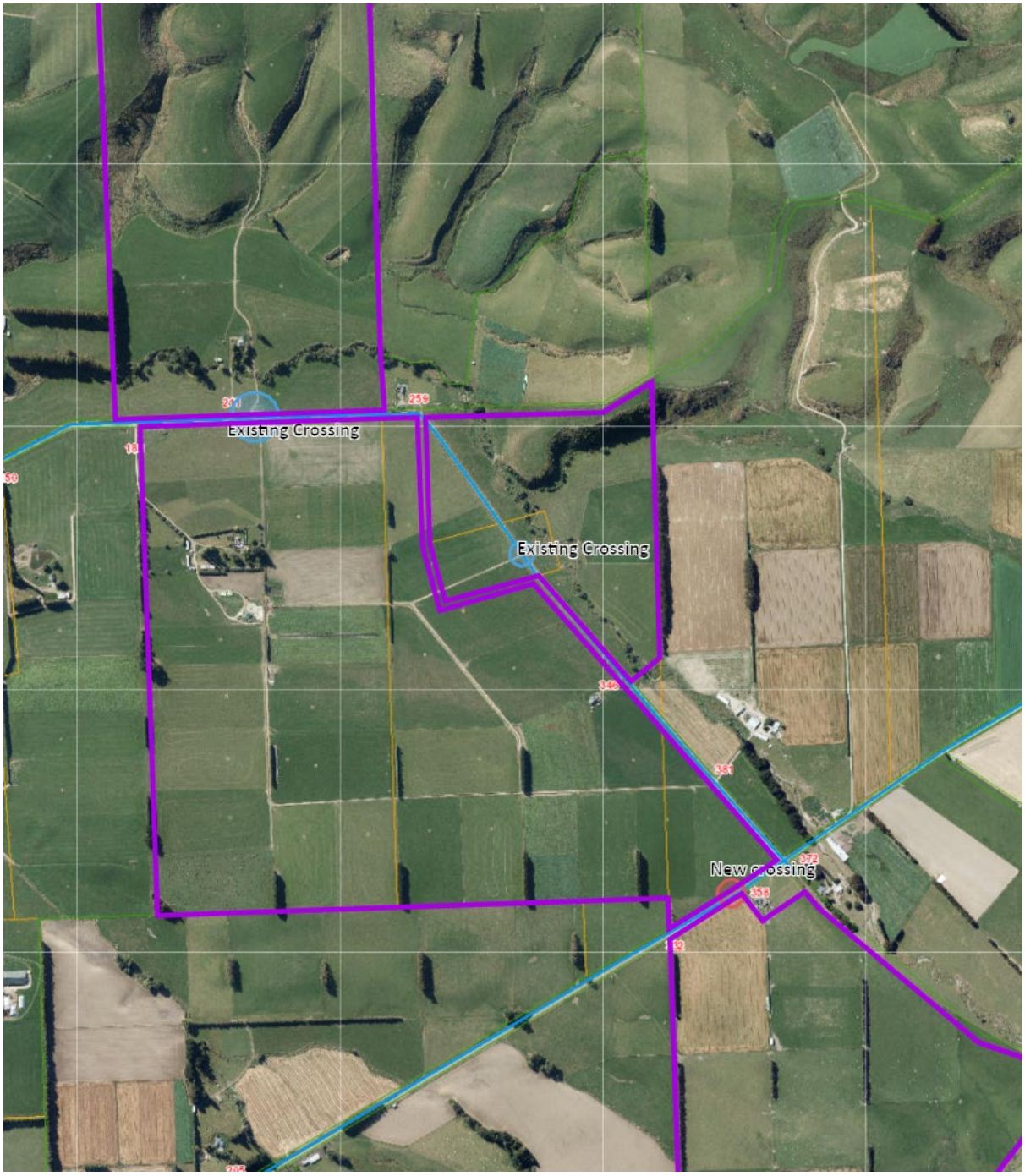
Structure cost approx. $200,000 - $250,000 based on this and the AADT of 64 the subsidy for this would be $6,400 (3.2% of $200,000) - $8,000 (3.2% of $250,000) (0.05 x 64 (AADT) to get the Controlling Authority Share (CAS) percentage (3.2%) Formulae under Section 3 in 02-01-013 Policy on Stock Crossings). Funding at this indicative level should be able to be supported from existing budgets.

9 References – Tabled/Agenda Attachments

Maps, photos and applications are appended to this report.

Plan of Stock Crossing

Existing Stock Crossings



Application for Stock Crossing

Waitago Farms

188 Sims Road

Crookston

Tapanui 9587

Attention: Angela Ferguson

To the Clutha District Council

We are writing in support of an application for a stock crossing for our farm on Gorge Road at Crookston.

Waitago Farms milks approximately 600 cows on 235 ha which borders Gorge Road. We purchased an 80 ha runoff on Gorge Road opposite the dairy farm. The purpose of the runoff is to winter part of the herd, plus harvesting feed as supplementary feed to support the dairy farm.

Under ORC regulations, we are able to milk 10 ha without requiring a consent. This would mean an occasional crossing with the herd to graze the front 10 ha. This means that they will access the 10 ha for 2-3 day feeds each round of the milking season (which is usually a 30 day round, but with a minimum of a 20 day round).

The other access using the crossing would be for contractors making supplements and crop establishment.

The preparation of the crossing area to make it suitable for use have been to put in culverts, gates and a removable mat to keep the road clean. Signage will be purchased and installed.

Thank you for your consideration of this application.

Harry van Woerden

Waitago Farms

Application for creation of a Stock Crossing on Road Reserve

Clutha District Council

Date: 7 - 5 - 2024 Permit no:

Applicant's Details:
Name: HARRY VAN WOERDEN
Address: 346 SIMS ROAD
Email: waitago farms @ gmail . com
Phone: 0274 67 6758

Permit Fee attached (Refer to the Schedule of Fees & Charges on Website) Yes ☑ No ☐

Stock Crossing to be located on FORGE Road

150 metres from the intersection with FORGE ROAD - SIMS ROAD

Road connecting my property(s), described as DAIRY FARM ON SIMS ROAD. and

runoff across road at forge road.

Signature: H van Woerden **Date:** 7-5-2024

Definition: A Stock Crossing is a surface installation at a specific site approved by Council for the purpose of moving stock across a road or road reserve. It is not a Stock Underpass.

Note: The applicant must complete and return with the permit the attached indemnity form, a site plan showing the location of the crossing and signs with dimensions.
Conditions for cleaning of the stock crossing may be imposed upon the applicant under this permit. Council may give permission for the crossing to be constructed of concrete to allow cleaning or allow the use of a removable cover to keep the roadway clean.

Attached: Map / Plan / Photos (These must be attached for the permit to be considered)

Office use only

Application	APPROVED	NOT APPROVED
Date		
Signed		

Clutha District Council, 1 Rosebank Terrace, PO Box 25, Balclutha 9240
P: 03 419 0200; F: 03 418 3185; E: help.desk@cluthadc.govt.nz
www.cluthadc.govt.nz

Updated July 2019

Form - 231833

Form of Indemnity

Clutha District Council

The Chief Executive
Clutha District Council
PO Box 25,
BALCLUTHA 9240

In consideration of you permitting me to create a stock crossing on

SIMS ROAD. road joining my property(s), described as

FORGE ROAD and

I AGREE AS FOLLOWS:

1. THAT the stock crossing be constructed as per Council specification.

2. THAT unless approved by Council, any deviation in construction from the specifications referred to in Clause 1 hereof, however slight the deviation, will make inoperative any Permit granted to me until referred back to Council for confirmation.

3. THAT I will indemnify and keep indemnified the Council against any liability for all or any claims arising through or related in any way to the crossing for so long as the stock crossing shall be on the road reserve adjoining my property and that this indemnity is to bind my executors.

4. THAT I will clean and keep clear all detritus deposited on or about the stock crossing in the road reserve.

5. THAT the stock crossing will remain in position until MAY 2034 * or the sale of the property.

6. I undertake that on any sale or disposition of my property I shall give Council one month's prior notice and advise details of any new owner.

7. THAT I shall completely remove the said stock crossing without any claim on the Council, if at any time not withstanding the provisions of Clause 5 hereof, the Council so requests ad including Council's not approving any new owner or a new owner not requiring the crossing.

Signature:	R van Woerden	**Date:**	7-5-2024
Applicant's Address:	346 SIMS ROAD RD 2		
	TAPANUI		

* to be inspected by Northern/Southern Roading Supervisor

Clutha District Council, 1 Rosebank Terrace, PO Box 25, Balclutha 9240
P: 03 419 0200; F: 03 418 3185; E: help.desk@cluthadc.govt.nz
www.cluthadc.govt.nz

Updated 13 October 2010

Site Photos

Infrastructure Strategy & Operations Committee

Item for DECISION

Report	Taylor Park Dog Park Proposal
Meeting Date	10 October 2024
Item Number	2
Prepared By	Mike Goldsmith – Project Manager, Community Plan Implementation
File Reference	915047

REPORT SUMMARY

Approval is sought to consult on and allow the development of a dog park at Taylor Park in Milton.

RECOMMENDATIONS

1. **That the Infrastructure Strategy & Operations Committee receives the Taylor Park Dog Park Proposal report.**

2. **That the Infrastructure Strategy & Operations Committee:**
   a. **Does/does not approve the development of a dog park at Taylor Park**
   b. **Does/does not approve a limited consultation process for a dog park at Taylor.**

REPORT

1 Background

A report to Council's Long Term Plan Decisions meeting on 12 June 2024 included a request to allocate existing funding towards the development of a dog park at Taylor Park. The decision was:

"That Council funds $30,000 of the funding previously allocated to improving Milton reserves for the development of a Dog Park at Taylor Park in the 2024/25 financial year."

This item outlines plans to implement this work, estimated costs, and proposes a limited consultation process.

2 Strategic Goals and Outcomes

2.1 Living and Working in Clutha Strategy

- Relevant Community Outcome: Vibrant Rural Towns and Communities

2.2 Our Place Milton Community Plan (2018)

Improving Taylor Park is included as a priority project in the community plan, with a potential work item included: "Removing tennis club and integrate space for Dog Park and further planting".

2.3 Milton Reserve Management Plan (2024)

The Milton Reserve Management Plan was updated in 2024 following extensive consultation. There were seven submissions which supported the development of a Dog Park on the old tennis courts and no submissions against. The RMP notes that Council will support this activity, through partnerships with community groups, businesses, other agencies and individuals.

The RMP also provides for a cycle trail link to the Clutha Gold Trail, or re-routing of the Clutha Gold Trail through the reserve at some stage in the future. If such a trail extension was to occur, it would likely pass close to the proposed dog park.

3 Environment setting

The old tennis court is located in the northern corner of Taylor Park, which is a gazetted Recreation Reserve (Figure 1). The asphalt courts remain, but the tennis court pavilion has been removed. Vegetation in this part of the reserve includes grassed areas and several significant trees. Council maintains the reserve under its greenspace contract and has recently trimmed the low branches on trees adjoining the courts.

The proposed dog park is located on flat ground, elevated approximately two metres above the flood channel of Salmonds Creek, which bisects the reserve.

4 Proposal

A proposal has been received from Milton Area Promotions (MAPS) to lead the development of a dog park at Taylor Park. The park would be approximately 2,200 m^2, which is about half the size of the Balclutha Dog Park.

MAPS have obtained initial quotes for major items of work such as the fence. Council Greenspace and Community Facilities staff have had input into the development of the plan and the estimated budget shown in section 5.

The proposed layout of the dog park is shown in Figure 1, and a description of the work required is provided below.

MAPS propose that once the dog park has been completed to a satisfactory standard, it will be handed over to Council.

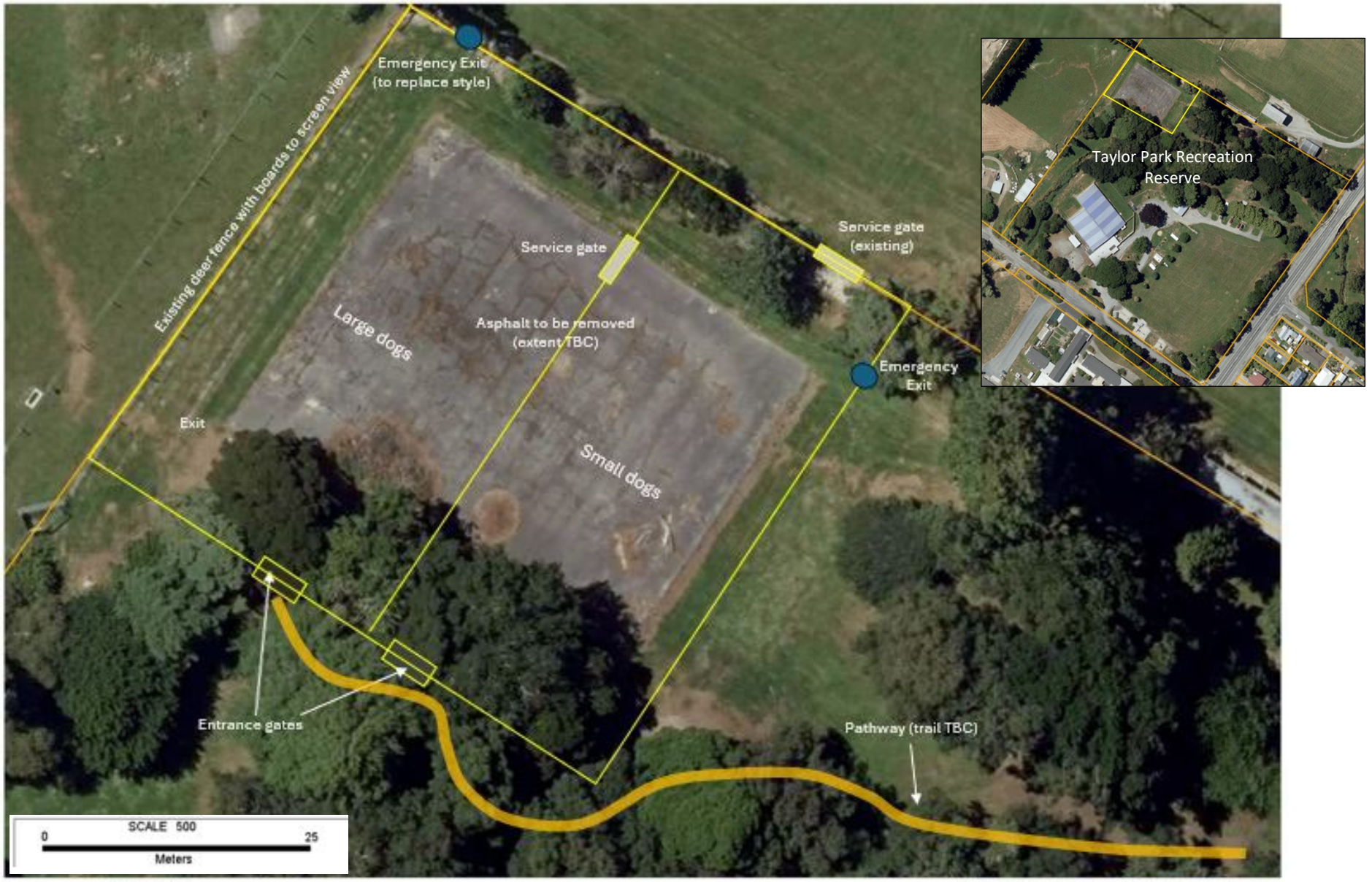


Figure 1 Proposed dog park at Taylor Park, showing extent and key elements to be developed. Inset – location of the dog park within the reserve.

The key items of work required to develop the dog park are listed below in approximate chronological order.

1. *Site preparation:* remove piles of dirt, remove/edge a section of asphalt & re-grass, clean remaining asphalt, improve drain along south-east side, trim trees on north-east boundary.
2. *Install supporting infrastructure:* extend carpark beside grandstand, install a gate and access path, water connection.
3. *Develop dog park*: install new fencing and gates, erect a visual barrier along west side, build play equipment.
4. *Finishing*: design and erect signs, install water fountain, install lighting, mural on the concrete block wall.

The benefits of the proposed approach include the use of existing fencing, and the creation of a formal dog park space in a relatively un-used corner of the reserve which is well away from the road and other traffic.

Potential risks are listed in Table 1, along with proposed mitigation steps.

Table 1 Potential risks associated with developing a dog park at Taylor Park, and proposed mitigation

Risk	Mitigation
1. A smaller space[1] may result in overcrowding - so more chance for fights between dogs.	More space is allocated to the 'Large dog' part of the park. Each section to be divided into different activity areas – e.g., tree area / dirt mound.
2. Total cost may exceed available budget.	Council funding confirmed. MAPS developing proposals for potential private funders (see section 5).
3. Tree fall may damage fence – higher maintenance costs.	Unsafe branches recently removed. Proactive maintenance recommended.
4. Potential community dissatisfaction with the approach.	A limited consultation process recommended.

5 Financial impact

There is no financial impact for Council. As noted above, Council previously approved[2] $30,000 of existing funding from the *Milton Parks – RMP Additional Work* project for the development of a dog park at Taylor Park.

As of 2024/25, the *Milton Parks – RMP Additional Work* project has had $181,000 allocated to it.[3] Table 2 shows the total cost of work already completed, and work which has been approved through this project. Once the work listed in Table 2 has been completed, about $40,000 will remain in the *Milton Parks* project.

[1] compared to Balclutha Dog Park

[2] At the 2024/34 Long Term Plan Decisions meeting on 12 June 2024

[3] Note that the remaining $3,000 allocated to this project will become available between 2025/26 and 2027/28

Table 2 Cost summary for items to be funded through the *Milton Parks – RMP Additional Work* project (* = estimate, ✞ = accepted quote, invoiced/paid or confirmed funding)

Reserve	Project	Item	Cost (excl. GST)
Taylor Park	Perimeter fence 1	Repairs & maintenance	$6,675 ✞
	Perimeter fence 2	Replace Park Road fence	$19,578 ✞
	Dog Park	Council contribution	$30,000 ✞
Moore Park	Playground	Replace retaining wall	$4,500 ✞
	Basketball court	Stormwater improvements	$50,000 *
		Total	**$140,753**

The estimated funding split between Council and the community is shown in Figure 2. The total cost of the development is estimated at $66,720, noting that prices for some components are yet to be confirmed.

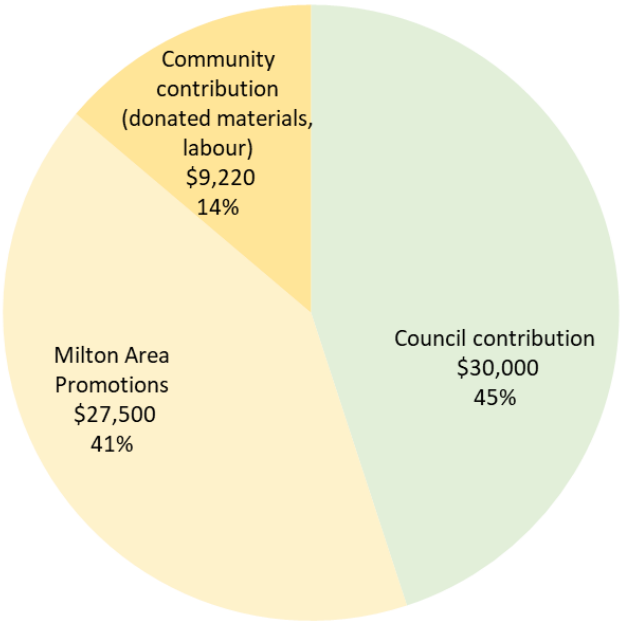


Figure 2 Council and estimated community funding for Taylor Park dog park project

6 Consultation

Although not required under the Reserves Act 1977,[4] a limited consultation process is recommended. This would help to raise awareness of what is proposed and provide an opportunity for people to raise any concerns about the development, or to indicate their support.

The proposed method is to place a public notice in the Genesis newsletter, describing the proposal, and providing a two-week period for people to make a submission. Information will also be made available at the Milton Library. It is proposed that the consultation period starts after the current consultation for the Bruce Community Facility finishes on 23 October.

[4] As a dog park is already provided for in the Milton Reserve Management Plan.

7 Assessment of Options

The options available are:

a. To approve/not approve the development of a dog park at Taylor Park as described above.
b. To approve/not approve the proposed consultation process described above.

Infrastructure Strategy & Operations Committee

Item for INFORMATION

Report	Operations Update – Transportation
Meeting Date	10 October 2024
Item Number	3
Prepared By	James Allison – Transportation Operations Manager
File Reference	913122

REPORT SUMMARY

The report details items from the Operations Transportation Team that are for information only.

RECOMMENDATIONS

1. **That the Infrastructure Strategy & Operations Committee receives the 'Operations Update – Transportation' report date 10 October 2024.**

REPORT

1. Health and Safety

14 Near hits have been reported by our road maintenance contractor for August. Sunstrike is still an issue, but most reports were observations of other drivers doing unsafe acts. The only incident reported was for the grader damaging the seal on a bridge approach.

2. Roading

During August the metalling trucks were mostly working out of the Milton quarry, placing 9,800 tonnes of metal on the roads. During September they were working out of the Heriot quarry before moving to Lyders.

Digger crews completed 12.9 kms of water tabling and installed 11 culverts (96m).

Routine crews placed 43 tonnes of metal into unsealed potholes. 67 potholes were repaired on sealed roads and 123 metres of edge breaks were repaired. These crews continued to focus on improving visibility and safety on the network – cutting back vegetation around road signs, sweeping intersections, and cleaning and reinstating signs.

The Routine crews were also kept busy with 42 Signs and posts receiving routine maintenance, 31 Road signs and posts reinstated after being displaced, 36 Road signs

upgraded or replaced (missing ones) and 19 Posts replaced after being removed or broken. Also 503 Edge Marker Pegs were installed or replaced.

Police dealt with a member of the public who damaged 5 signs in the Catlins area. This person will be paying reparation of $825.93.

The Culvert Jetting Crew cleared 53 culverts across the network.

The four graders on the network completed 579 km of grading during August. This is a good achievement for this time of year as our target is an average 550 km per month. This target is normally hard to achieve over winter and early spring due to the lack of drying.

3. Streetlight Maintenance Contract

Infill lighting has been completed in Owaka and has now started in Milton. This infill lighting work is now the only budgeted work we can undertake under our Low Cost Low Risk work category due to the funding level approved by the NZTA – which was a reduction of approximately 85% in this work category.

4. Staffing update.

Vivek Arun has secured the role as Contracts Supervisor for the South. He has transferred to the Transportation team from his role as Waste Contract Supervisor.

5. CCTV Update.

CCTV cameras were used 25 times in the period from 17 June 2024 through to 21 September 2024. Incidents included 7 dishonesty incidents, 7 vehicle incidents, 1 assault, property damage, and for monitoring anti-social behaviour.

CCTV cameras will be installed in the new destination toilets in Balclutha and Milton and linked to the current NZ Police network. The cost of this is around $4,800+GST installed per site, however one incident involving damage at Balclutha Toilets this year cost approx. $2,400+GST so these cameras are a valuable addition to monitor the toilets and reduce damage costs.

Transportation Team Visit to Lyders Quarry to check condition of metal.

Infrastructure Strategy & Operations Committee

Item for INFORMATION

Report	Operations Update – Greenspace, Waste and Compliance
Meeting Date	10 October 2024
Item Number	4
Prepared By	Jason Foster – Head of Infrastructure Operations
File Reference	913118

REPORT SUMMARY

The report details items from the Operations Greenspace. Waste and Compliance Teams that are for information only.

RECOMMENDATIONS

1. **That the Infrastructure Strategy & Operations Committee receives the 'Operations Update – Greenspace & Waste and Compliance' report dated 10 October 2024.**

REPORT

2. **Health and Safety**

Greenspace: -

There have been two minor incidents and two near misses this reporting period.

- **Near Miss: -** Contractor arrived on-site to remove a fallen branch, which they subsequently found out was caught up in a tree. Recognising the potential hazard, the contractor wisely sought assistance instead of proceeding alone.
- **Near Miss: -** A two-wheel-drive vehicle experienced traction loss while towing a mower on wet ground.
- **Incident:** A contractor encountered black ice on Hillend Road, causing a minor vehicle skid.
- **Incident: -** A mower operator identified a freshly dug grave and assessed it as a low risk for continued mowing. However, the mower subsequently became stuck.

Our Greenspace Supervisor conducted internal audits of our contractor. Several positive observations were noted. For instance, the team working on the Balclutha bridge fence delivered an outstanding site induction, proactively addressing most of the audit criteria before the formal assessment even commenced.

Waste: -

There has been one minor incident and one near miss for our waste team.

- **Near Miss –** Close by the Tapanui transfer station a 3rd party vehicle turned on the road in front of our collection vehicle, the driver pre-empted the manoeuvre and slowed down to avoid a collision.
- **Incident –** While checking the oil level, an operator slipped from the back of the compactor. The incident was investigated and to prevent similar incidents, a platform will be provided to safely access areas that need to be checked.

Our contractor reported undertaking several "Tailgate" meetings. These safety discussions for this round were on, Tips for driving in wintery conditions, parts 1 and 2 as well as preventing falls from vehicles.

3. Greenspace

Service Delivery and Quality Management:

The greenspace services contractor has maintained a consistent level of performance since the last update report, effectively meeting contract outcomes. In addition, over this period we received the following service request numbers:

Toilets (8) - Hygiene concerns, including overflowing and blocked toilets, missing and stolen consumables as well as maintenance issues like malfunctioning hand driers, missing locks on events only toilets and lack of water.

Cemeteries (2) – Slumping of a burial site and winter ground conditions (Moisture)

Parks and Greenspace (19) - Requests include concerns about trees falling onto parks, degraded signs, drainage, leaves, muddy grass areas, request for more bins, graffiti in playgrounds, adding berms to mowing programs, hollows in berms and general park upkeep such as filling holes and removing unwanted items.

Community Engagement:

The team met with the following groups

- **Milton Promotions:** Proposed dog park development at Taylor Park.
- **Taieri Mouth Amenities Society:** Potential improvements for Knarston Park.
- **Waihola Looking Forward & Te Nukuroa O Matamata:** Collaborative initiative to plant 450 native plants along the Lake Waihola domain shoreline. This project aims to enhance the area's aesthetics and mitigate erosion.
- **Denise Ng (Otago Southland Chinese Association) & Lawrence Tuapeka Community Board:** Meeting conducted to discuss the planned restoration of the lower area of the Chinese section in Lawrence Cemetery. The project scope and potential impact of the site's topography on the outcome were also addressed.

4. Greenspace Area Updates

General:

With the rapid escalation of spring's impacts on greenspace, our contractors are working diligently to manage the increased vegetation growth and challenges posed by weather conditions.

Lawrence:

Cemetery: The cemetery extension is progressing. Our contractor is awaiting drier conditions for the installation of the first beam.

Market Reserve: Our contractors have removed hazardous trees from the bank behind the Market Reserve. Clean-up of loose material and stump tidying remain. The Otago Regional Council approved the removal, provided the stumps remain in place due to their location on a water-related bank.

Colonsay Street Vandalism: Repairs are underway on the tables at the lower end of Colonsay Street following reported vandalism.

Balclutha:

Clyde Street: Clyde Street replanting project nears completion. However, material and labour costs have impacted the Balclutha non-routine budget. This impact on the budget will need to be managed internally.

Balclutha Bridge Fence: The overdue replacement of the Balclutha bridge fence is progressing well. While this project represents a significant expenditure within the current Balclutha non-routine budget, we have strategically extended the project timeline to capitalise on reduced traffic management costs and minimise disruptions. This approach primarily affects pedestrians but has resulted in notable cost savings.

The new fence has an expected lifespan of at least 30 years, and its installation addresses critical safety concerns, replaces a deteriorating asset, and significantly enhances the visual appeal of the area surrounding the bridge and TPOMA building.

While the project is currently funded through our revenue budgets, we are recommending capitalising these costs during the upcoming budget review in the new year. This project can be funded from the Balclutha Parks and Reserves Depreciation funds. This is the only community that currently has a depreciation reserve.

Balclutha Showgrounds Coring: Coring has been completed on the showring and a section of the football pitches with poor turf growth. The affected football pitch area will be seeded in the coming weeks to enhance turf quality while minimising disruption to its use.

Balclutha Grandstand Perspex Replacement: We are currently obtaining quotes to replace a large perspex panel in the Balclutha Grandstand that was dislodged and damaged during strong winds.

Milton:

Moore Park: Our contractors have completed the first stage of new edging at Moore Park playground to prevent the pea gravel safety surface from spilling onto grass areas and footpaths. This will reduce the need for continued cleanup.

Taylor Park Trees: Works have recently been completed to crown lift the Beech trees at Taylor Park by the tennis courts. Removing the lower branches of these trees helps to reduce the risk of damage to the trees and opens the area up to be more inviting.

After recent storms, a large tree branch fell, causing damage and requiring the removal of a tree. Another tree was also removed due to internal rot, which was not evident before, apart from signs of poor pruning. We are reviewing the need for an arborist to assess the condition of all trees in Taylor Park, especially those near Salmond Creek, as the last assessment focused on the campground area. However, this may represent a large expenditure of current and future non-routine budgets. This work will also require a resource consent from CDC as the trees in Taylor Park are protected under our District Plan.

These two images show the wind damage at Taylor Park

Internal rot within the base of the fallen Silver Birch

Toko Showgrounds Hedge: We are currently exploring options to substantially reduce the height of the conifer hedge at the Toko Showgrounds. This would involve a significant reduction, aiming for a height of around 12-15 meters. The goal is to lower long-term maintenance costs and reduce risk to both assets and the public due to the current height of the hedge. As we are not sure of the total costs, we have opted for an arboricultural day rate, anticipating a clearer understanding of the project timeline and budgetary implications after the initial first day of work. It may be that we undertake a program that lasts several years.

Waihola:

We have completed the initial phase of planting along the domain shoreline. This aims to enhance the area's aesthetics and reduce erosion. We are grateful to Te Nukuroa O Matamata and Waihola Looking Forward for their generous contribution of plants and labour, which significantly reduced the project's cost.

Kaitangata:

Victoria Park Trees: Following the strong winds that impacted Taylor Park, a tree at Victoria Park also sustained significant damage when a heavy branch broke off, causing the tree to collapse. This also damaged another mature tree nearby. The first tree was healthy, with some signs of rot starting but considered normal for its age. The tree's failure was primarily due to the sudden additional weight on lower branches during already stressful wind and rain conditions

Storm Damaged Arbutus at Victoria Park.

Toilets:

Across the district there have been several replacements of broken or missing toilet roll holders, as well as small repairs being carried out ranging from blockages, and plumbing repairs.

5. Waste

Service Delivery and Quality Management

We are pleased to confirm that our waste management contractor is performing well across the Clutha district. They are maintaining timely collection schedules, providing good customer service to visitors and landfill users, conducting thorough landfill monitoring, and efficiently managing recycling collections and processing.

Between August 8 and September 25, a total of 49 service requests were received. Key themes identified from these requests highlight a strong emphasis on bin-related services, including:

- **Delivery/Replacement:** Requests for new or replacement bins due to various reasons such as damage, theft, or new dwellings.
- **Removal: Requests** to remove extra sets or due to changes in service needs.
- **Repairs:** Addressing issues like broken wheels or split bins.
- Additionally, some requests pertained to missed collections, general inquiries, and other concerns like illegal dumping.

Collection Vehicle updates

The acquisition of two new refuse trucks, expected to be delivered in late November or early December, represents a significant investment in enhancing our waste management services. Once operational, these new vehicles will enable us to provide more efficient and consistent collection services throughout the district.

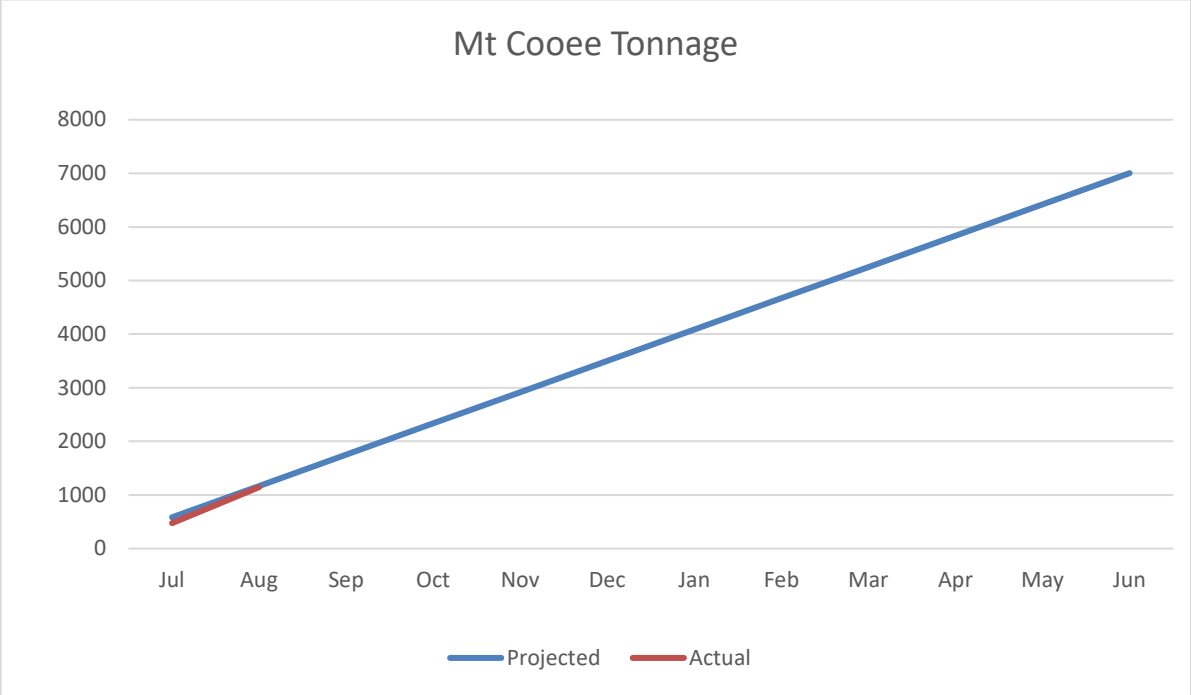
Landfill/Transfer Station Operations

Mt Cooee:

Performance to Budget

To meet operational and sales targets for August, Mt Cooee should have received approximately 1170 tons of commercial sales volume since July. However, as of August 31st, actual sales were slightly less at 1150 tons, resulting in a 20-ton deficit.

While the full impact of this shortfall is still unclear, a continued reduction in waste volumes will impact operational budgets long term as well as the viability of the landfill overall. We will closely monitor incoming waste tonnage and assess the potential implications.



Landfill Feasibility

We have commenced a feasibility report for the Mt Cooee landfill. The report will compare the current operational expenses of on-site landfilling against the potential costs associated with bulking waste and transporting it to larger, more distant landfills. The primary driver of this analysis is the increasing financial burden of landfilling such as landfill tax, emissions trading etc...

The report considers the costs and socioeconomic impact of: -

- Upgrading and maintaining Mt Cooee
- Closing the landfill and transferring waste outside of Clutha.

Outcomes will be presented to the Council in a report containing recommendations on the most cost-effective waste management strategy for Mt Cooee.

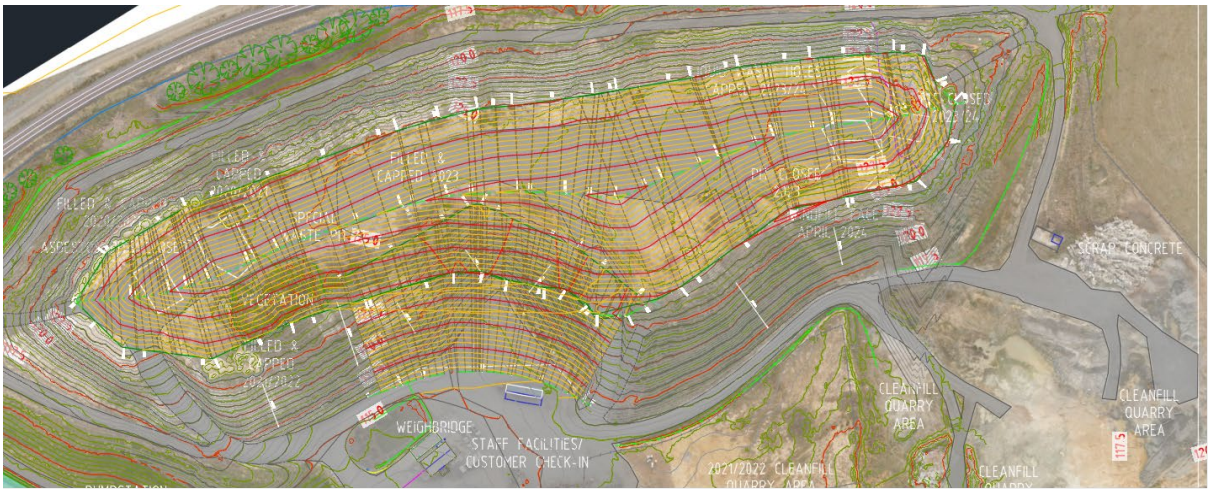
Landfill Space Update

With the August 2025 deadline looming, our team is actively exploring various solutions, including potential landfill expansions either 'side fill' or 'up and out,' to address the impending challenges.

- **Option one.**

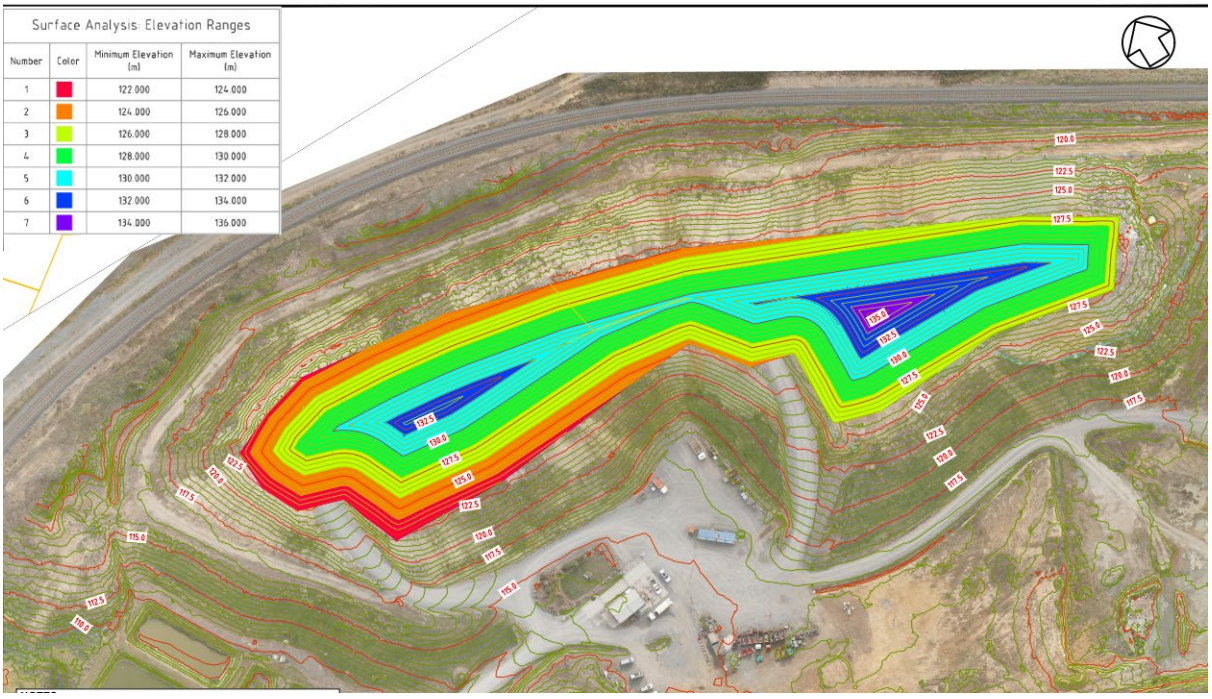
By filling in the lower portion of the landfill, as shown in the image, we can create additional space. Think of the landfill's current shape as a kidney bean – we're proposing to fill in the bottom curve of that bean. This straightforward solution could potentially give us an extra 6 months of capacity but would require investment in

extending the draining system. It would also increase the costs of landfill given the need to regularly extend access roads, and poor compacting ability.



- **Option Two**

Expand the landfill upwards and outwards. This approach also offers the potential for additional capacity. However, it's important to note that this expansion will exceed the dimensions outlined in our current closure plan. This could necessitate a review of our existing consent application. Additionally, we would need to conduct a thorough assessment to ensure the stability and safety of moving upwards and outwards. However, it's the most cost-effective method of operation given the infrastructure is already in place.



Tirewise

As part of our ongoing commitment to the NZ Tirewise scheme, the MT Cooee landfill has been actively participating since its inception. Initial data indicates a significant increase in tire drop-offs, with approximately 300 tires received in September. This

contrasts sharply with the pre-scheme average of 25 tires per month. While it is premature to determine whether this represents a high or low volume for the scheme, the committee remains vigilant in monitoring tire drop-off patterns. In line with our obligations to the scheme, we diligently track tire disposal for regular users. Should any instances of commercial tire disposal be identified, appropriate action will be taken to address the issue.

Transfer stations:

The Transfer/Collection points are currently under review for effectiveness, but in the meantime to meet welfare requirements we've recently approved the temporary location of portable toilets at our transfer/collection points across the district. Our waste contractor will deliver and regularly service these facilities. This will make things more comfortable and convenient for both staff and community members using these points.

Closed Landfill Updates

We continue to manage closed landfills across the district. These sites might require new permits or potentially be under new ownership. Consultants are reviewing the current permits, determining if new ones are necessary, and gathering environmental data. So far, we've received two of nine closed landfill reports, and these indicate a need to apply for consent due to ongoing discharge. Our deadline for submitting the consent applications is October 31st

Recycling Markets

Due to changes in Dunedin's waste management strategy, finding cost-effective solutions for recycling sorting has become challenging. Increased fees have forced us to explore alternative options like transporting the recycling to Invercargill or Timaru for sorting, which significantly increases the costs.

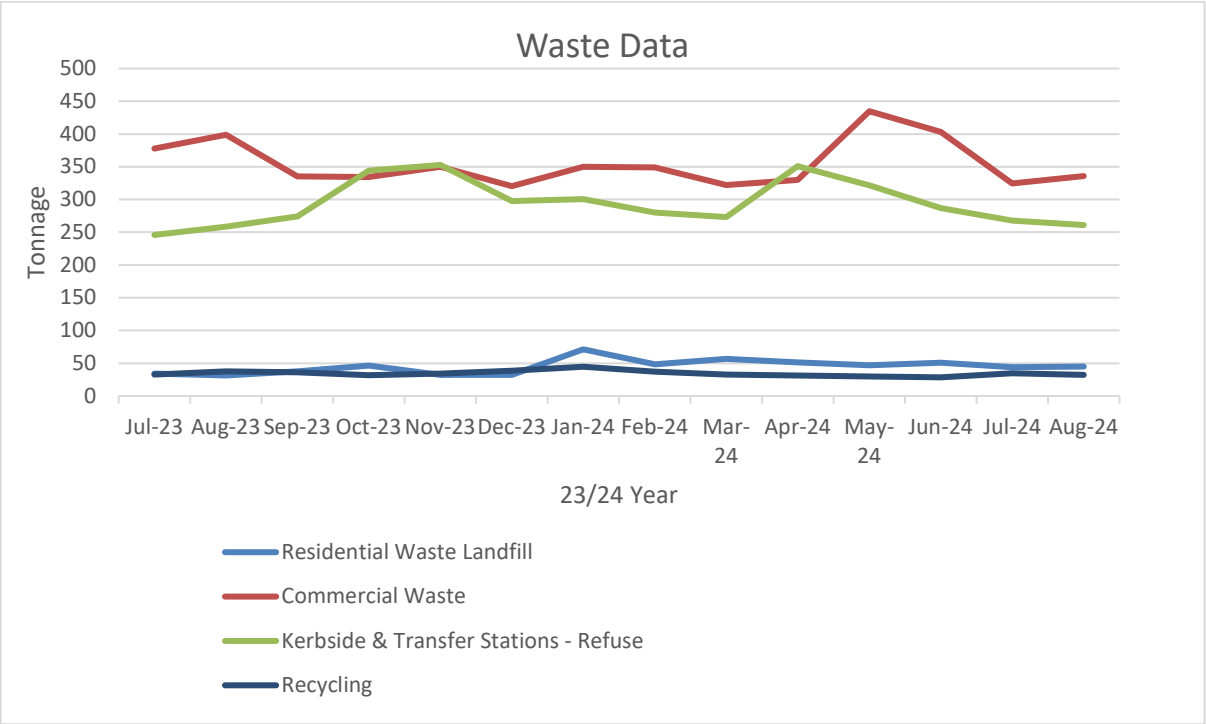
The situation is further complicated by the lack of transport capacity and the reluctance of potential partners to invest in new equipment due to the upcoming construction of a new sorting facility in Dunedin.

The team reported these challenges in an earlier council report, setting increases in waste charges within the Long-Term Plan process. However, they have continued to increase beyond our estimations.

Waste and Recycling Rates

Waste volumes are showing mixed trends overall, Residential and commercial waste experienced fluctuations, potentially due to seasonal factors or changes in economic activity. Kerbside and transfer station refuse remained relatively stable.

Recycling rates remain consistently low, highlighting the need for improved recycling efforts and implementation of our Waste AMP.



Staff Movements

Congratulations to our Contract Supervisor on his successful transition to the roading team! We appreciate his significant contributions and hard work during his time in waste. We are actively seeking a replacement to fill his role and continue the excellent work within our infrastructure operations team.

6. Compliance

Ian our freedom camping officer continues to provide an influence in our community, through providing advice, enforcing our bylaws and directing people who need a little support to the right areas. The following are the highlights since our last report.

Education and Outreach: Campers were actively engaged and educated about responsible camping practices and local campgrounds.

Environmental Protection: Various environmental concerns were addressed, including dumped rubbish, abandoned vehicles, and animal welfare issues.

Community Support: Assistance was provided to individuals experiencing homelessness, connecting them with resources and demonstrating compassion.

Proactive Problem-Solving: A range of issues were tackled, from noise complaints to road obstructions.

Innovation and Collaboration: New technology was embraced with the implementation of a mobile ticketing system, and collaboration occurred on improved signage and informational materials.

Ranger Stats 03.06.24 – 18.08.24

Camper/Vehicle Interactions: 235

Vehicle Relocations: 31

Tent Campers: 2

Abandoned Vehicles: 1

Animal Encounters: 7

Dumped Rubbish: 12

Homelessness Cases: 4 (2 new, 2 ongoing)

Noise Control Incidents: 1

Obstructions Removed from Roads: 5

Parking Issues: 1

Repairs or Maintenance: 6

Reports: 16 (10 Antenno, 6 Other)

Site Visits or Monitoring: 11

Vehicles on Beaches: 1

Miscellaneous: 5

Health & Safety Incidents: 1

Kilometres Travelled: 9817

.

Infrastructure Strategy & Operations Committee

Item for INFORMATION

Report	Operations Update – Water
Meeting Date	10 October 2024
Item Number	5
Prepared By	Linda Till – Head of Three Waters
File Reference	913119

REPORT SUMMARY

The report provides updates from the Operations Water Team that are for information only.

RECOMMENDATIONS

1. **That the Infrastructure Strategy & Operations Committee receives the 'Operations Update – Water' report dated 10 October 2024.**

REPORT

1. Water

Staffing

As indicated in the last report, recent resignations in the management team have triggered a review of the current structure. A change proposal is in the consultation phase with a decision due to be made in early October.

Several staff attended the annual Water New Zealand Conference held in Hamilton from 25 – 27 September.

A paper entitled "It's not (just) about the book" presented at the conference by Ian Macbeth from Beca (seconded to CDC), and co-authored by Ian Evans, Operations Manager Three Waters and Peter Falconer, Wastewater Treatment Supervisor received the runner up award for the Hynds Paper of the Year at the Water NZ Excellence Awards 2024.

Aside from the accolade as an award winner it was pleasing to share with others in the industry how operational and equipment-related issues at our Biofiltro plants were solved for a relatively small amount, without the need to spend the millions of dollars of improvements recommended by consultants.

The image below, from the announcement about the award pictures Ian Macbeth with Gillian Blythe, CEO Water New Zealand and a Hynds representative.

The Water New Zealand Excellence Award Winners 2024

Hynds Paper of the Year - runner up

It's not (just) about the book
Authors: Ian McBeth, Ian Evans and Peter Falconer.

Phoenix Dam

Phoenix Dam has been fully decommissioned. The bypass around the dam is still in operation, although there is some groundwater and run-off flowing through the decommissioned dam.

Remediation of the Bungtown Race is also complete. The siphon was commissioned and the race fully operational on 3 September. Following recent rainfall events inspections have shown that the newly restored race has suffered no damage. Further inspections will be planned to follow any further weather events. At the time of writing the siphon has been shut off as there is currently sufficient water available within the Bluejacket Creek catchment but is expected to be needed as the warmer weather approaches.

Milton

The new Drinking Water Safety Plan was submitted to Taumata Arowai on June 27th. This satisfies Section A(i) of the Milton Compliance Order issued by Taumata Arowai in November 2023. An updated Source Water Risk Management Plan was also submitted on June 27th. To date there has been no further feedback from Taumata Arowai. A recent review of the actions coming out of the Water Safety Plan has shown that actions due for completion by the end of the year are either well under way or complete.

Moa Flat & North Bruce

Moa Flat and North Bruce water treatment plants have been the subject of boil water notices for the past eighteen months. During that time staff and consultants have been trying a range of solutions to ensure that the plants can consistently comply with the appropriate Drinking Water Quality Assurance Rules. This includes altering chemical dosing, chemicals changes, dose rates and locations, validation of the UV disinfection plant to achieve more log credits and considering modifications to the clarifiers to encourage settlement. The water team is actively engaging with the supplier (Filtec) to produce appropriate longer-term solutions that will allow these boil water notices to be permanently lifted.

Taumata Arowai Reviews and Audits

Taumata Arowai has requested a meeting with Clutha District Council about the Balmoral/Tuapeka (Greenfields) supply to discuss the project plan in early October. The topics they want to focus on include milestones, current or emerging risks, project objectives and risk assessments, and contingency plans for the next three months.

A draft version of the Glenkenich Drinking Water Safety Plan (DWSP) has been developed and is in review by the Compliance and Operations teams. The next three supplies to have their DWSPs updated are Balclutha, Kaitangata, and Tapanui. An external consultant was onsite at each of the three supplies with CDC Three Waters staff during the week of September 30 to assess the risks at each of the water treatment plants.

Reticulation Contract

Progress on finalising the last details for the contract have been hampered by the activity head being on leave. It is expected that the contract will be executed by end of October.

Crown Street Capacity

Following our order of Portacoms for use at Crown Street, Geotech investigations to ensure ground conditions are adequate to meeting footing designs is underway. Building consent for the ground conditions are required ahead of construction commencing, with a 10 week build period planned. Code of Compliance sign-off is required ahead of trucking the buildings to Balclutha for placement.

Wastewater and Stormwater Biofiltro sites

As noted in last month's report, the planned bed material replacement at the Tapanui WWTP has now been completed and back to full operating capacity. It is pleasing to note that there have been no overflows from the plant during recent rainfall events. All Biofiltro plants are now working well, producing a much-improved effluent. Completely revised Operations and Maintenance (O&M) manuals have now been issued to the WWTP operators produced for all five sites, with a comprehension review undertaken on 10

September.

"Before" – Tapanui BioFiltro bed on 23 July

"After" – Tapanui BioFiltro bed on 9 Sept.

Other Wastewater Treatment Plants and General

Upgrades to the Balclutha, Clinton and Waihola WWTPs, reported in recent months, are nearing completion. The Clinton ultraviolet (UV) light disinfection reactor was commissioned in the first week of September, with an operator training day on 5 September. Required 'Activity Management Plans (AMPs)' as specified in the respective discharge permits for these sites have now been re-drafted for issue to Otago Regional Council (ORC). Previously prepared AMPs had been rejected by ORC as inadequately addressing on-going discharge improvement requirements, particularly around investigating land-based discharge options. A request has been made to ORC for a time extension to allow for effective engagement with Tangata whenua in the discharge improvements.

2. I&I Inspection Programme

Focus on this activity has continued, albeit with a slowdown of resolution owing to resignation from our Trade Waste officer. A replacement to this position has been internally appointed and activity will continue once they commence in mid-October.

Our reticulation contractors have indicated availability for completion of remediation where property owners have not showed a willingness to act. To date, no instructions to them have been issued by us.

Table1: I&I Inspection Programme

Community	Contacted Council	Total non-compliant (September 2024)	Non-compliant gully trap(s) (initial)	Non-compliant gully trap(s) (September 2024)	Stormwater pipe or drain (Initial) directly connected to the sewerage system.	Stormwater pipe or drain directly connected to the sewerage system (September 2024)	Some of the downpipe terminations are still unknown. (Initial)	Some of the downpipe terminations are still unknown. (September 2024)
Balclutha	318	38	413	20	160	22	241	12
Stirling	24	15	28	11	18	12	45	1
Tapanui	131	55	164	47	48	11	94	7
Clinton	38	6	39	13	28	6	21	0
Heriot	14	14	21	8	12	10	8	1
Kaitangata	64	52	61	27	67	35	100	4
Kaka Point	45	26	35	14	28	10	35	2
Lawrence	64	26	62	18	36	11	62	3
Owaka	42	31	66	21	25	15	29	0
Milton	227	151	311	133	67	35	169	10
Waihola	36	18	46	17	7	2	13	0
Grand Total	1003	432	1246	329	496	169	817	41

**Note - each property could have more than one gully trap(s), down pipes, and unknown downpipe terminations.*

3. Trade Waste

Following several queries regarding Trade Waste compliance staff have implemented a change in the way that inspections are undertaken at a number of premises. Inspections of grease traps in cafes and restaurants will now be undertaken by the Environmental Health team who will pass on the appropriate details to our newly appointed Trade Waste Officer.

Infrastructure Strategy & Operations Committee

Item for INFORMATION

Report	Compliance Update Report
Meeting Date	10 October 2024
Item Number	6
Prepared By	Daniel Sutherland – Operations Assistant Daniel Pickup – Team Leader Compliance and Reporting
File Reference	913121

REPORT SUMMARY

This report provides an update on all compliance-related issues across the Three Waters Operations department. It includes information that was previously provided in both the Operations and Infrastructure Strategy reports as well as additional specific information on compliance activities.

RECOMMENDATIONS

1 That the Infrastructure Strategy & Operations Committee receives the 'Compliance Update' report dated 10 October 2024.

REPORT

1 Water Treatment Plant (WTP) Compliance Focus

1.1 Drinking Water Quality Assurance Rules (DWQAR) Compliance Summary

Since the implementation of the DWQARs in November 2022, several of the Councils WTPs and distribution networks were identified, through routine sample analysis and monitoring, as having inadequate treatment processes, resulting in the supply of non-compliant drinking water to those consumers. Refer to Appendix A for an overview of the DWQARs that are not currently met by the WTPs and distribution networks subject to a Boil Water Notice (BWN) or Advisory Notice.

Monthly Compliance achieved / anticipated	Technical Non-compliance	Moderate Non-compliance	Significant Non-compliance

Balclutha WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.4 UV Treatment	100%	100%	94%	100%	100%	100%
T3 Proto: 4.10.2.5 Filters T3 Proto: 4.10.2.13 UV Treatment	100%	93%	100%	100%	94%	94%
D3 Bacto Balclutha: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
Compliance Comments	T3 Proto: The UVT was not consistently maintained for the required period to achieve full compliance and the turbidity in the filtered water exceeded the maximum allowable NTU.					

Milton WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.1 FAC Disinfection	94%	100%	100%	97%	97%	97%
T3 Proto: 4.10.2.11 Membranes	97%	100%	97%	97%	100%	100%
D3 Bacto Milton: 4.11.4 Residual Disinfection	100%	100%	100%	72%	100%	77%
D3 Bacto OCF: 4.11.4 Residual Disinfection	100%	100%	100%	100%	88%	96%
Compliance Comments	D3 Bacto: FAC results detected in the Milton and OCF network were below 0.2 mg/l.					

Stirling WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.4 UV Treatment	97%	100%	100%	93%	100%	100%
T3 Proto: 4.10.2.5 Filters T3 Proto: 4.10.2.13 UV Treatment	100%	100%	100%	100%	100%	100%
D3 Bacto Stirling: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
D3 Bacto South Bruce: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
Compliance Comments	NA					

Kaitangata WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.1 FAC Disinfection	100%	100%	97%	90%	97%	100%
T3 Bacto: 4.10.1.4 UV Treatment	100%	100%	100%	100%	94%	100%
T3 Proto: 4.10.2.5 Filters T3 Proto: 4.10.2.13 UV Treatment	100%	100%	100%	100%	94%	100%
D3 Bacto Kaitangata: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
D3 Bacto Wangaloa: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
Compliance Comments	NA					

Whitelea Rd WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.1 FAC Disinfection	39%	43%	23%	20%	94%	68%
T3 Proto: 4.10.2.11 Membranes	100%	100%	71%	73%	97%	100%
D3 Bacto North Richardson: 4.11.4 Residual Disinfection	100%	100%	88%	100%	100%	100%
Compliance Comments	T3 Bacto: The chlorine dose rate and contact time were not maintained for the required period to achieve full compliance.					

Puerua WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.4 UV Treatment	97%	100%	94%	97%	94%	94%
T3 Proto: 4.10.2.13 UV Treatment	97%	100%	94%	93%	90%	90%
D3 Bacto Richardson South: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
D3 Bacto Kaka Point: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
Compliance Comments	The UV Dose was not maintained for the required period to achieve full compliance.					

Owaka WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.4 UV Treatment	94%	100%	100%	97%	94%	100%
T3 Proto: 4.10.2.13 UV Treatment	87%	100%	100%	97%	100%	100%
D3 Bacto Owaka: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
Compliance Comments	NA					

Clydevale-Pomahaka WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.4 UV Treatment	100%	100%	100%	100%	100%	100%
T3 Proto: 4.10.2.13 UV Treatment	97%	93%	100%	100%	87%	100%
D3 Bacto Clydevale: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
D3 Bacto Clinton: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
Compliance Comments	NA					

Glenkenich WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.1 FAC Disinfection	97%	100%	100%	100%	100%	94%
T3 Proto: 4.10.2.11 Membranes	71%	70%	97%	93%	90%	97%
D3 Bacto Glenkenich: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
Compliance Comments	T3 Bacto: The chlorine dose rate and contact time were not maintained for the required period to achieve full compliance.					

Lawrence WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T2 Bacto: UV Disinfection	77%	80%	84%	100%	100%	100%
T3 Proto: UV Disinfection	77%	10%	68%	100%	100%	97%
T3 Proto: Filters	81%	63%	94%	83%	100%	94%
D2 Bacto Lawrence	86%	91%	87%	88%	100%	100%
Compliance Comments	T3 Proto: The turbidity in the treated water exceeded the maximum allowable NTU.					

Tapanui WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.1 FAC Disinfection	100%	80%	97%	80%	77%	97%
T3 Proto: 4.10.2.5 Filters	52%	70%	84%	23%	39%	71%
D3 Bacto Tapanui: 4.11.4 Residual Disinfection	100%	87%	100%	100%	100%	100%
Compliance Comments	T3 Proto: The turbidity in the treated water exceeded the maximum allowable NTU.					

Tuapeka West WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T2 Bacto: FAC Disinfection	89%	100%	58%	93%	48%	7%
T2 Proto: Filters	0%	0%	0%	0%	0%	0%
D2 Bacto Tuapeka West	88%	89%	89%	75%	100%	67%
Compliance Comments	D2 Bacto non-compliance when FAC levels in the distribution are <0.1mg/L.					
	There is no protozoal treatment at this site.					

North Bruce WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.4 UV Treatment	68%	63%	97%	63%	42%	36%
T3 Proto: 4.10.2.13 UV Treatment	52%	50%	90%	47%	36%	10%
D3 Bacto North Bruce: 4.11.4 Residual Disinfection	100%	100%	100%	100%	93%	100%
D3 Bacto Waihola: 4.11.4 Residual Disinfection	93%	93%	100%	83%	91%	93%
Compliance Comments	The turbidity in the treated water exceeded the maximum allowable NTU.					
	D3 Bacto: FAC results detected in the Waihola network were below <0.1 mg/l.					
	The UV dose and UVT was not sufficient to achieve compliance.					

Moa Flat WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.4 UV Treatment	87%	73%	74%	60%	3%	55%
T3 Proto: 4.10.2.13 UV Treatment	68%	63%	42%	17%	10%	61%
D3 Bacto Moa Flat: 4.11.4 Residual Disinfection	100%	100%	100%	100%	100%	100%
Compliance Comments	The UV dose and UVT was not sufficient to achieve compliance.					

Waitahuna WTP	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
T3 Bacto: 4.10.1.1 FAC Disinfection	0%	0%	0%	0%	0%	0%
T3 Proto: 4.10.2.5 Filters	0%	0%	0%	0%	0%	0%
D3 Bacto Balmoral 1: 4.11.4 Residual Disinfection	94%	92%	100%	77%	80%	100%
D3 Bacto Balmoral 2: 4.11.4 Residual Disinfection	0%	78%	100%	57%	69%	80%
D3 Bacto Tuapeka East: 4.11.4 Residual Disinfection	90%	72%	100%	46%	73%	67%
Compliance Comments	The turbidity in the treated water exceeded the maximum allowable NTU.					
	The chlorine dose rate and contact time was not maintained for the required period to achieve compliance.					

1.2 Boil Water and Conserve Water Notices

Tuapeka West remains on a BWN due to inadequate treatment at the plant and inconsistent chlorine levels in the reticulation. The BWN will not be lifted without considerable upgrades as there is currently no protozoal treatment at this site. This is the only site that has no protozoal treatment. The Greenfield Rural Water Scheme will replace the Tuapeka West WTP at the end of 2024.

1.3 Boil Water and Aluminium Advisory Notices

The Lawrence BWN was lifted on 12 August 2024 after the successful commissioning of a UV disinfection unit validated to 4-log credits and the receipt of compliant FAC and *E. coli* sample results. The council was satisfied that the Lawrence supply demonstrated compliance with the DWQARs at the treatment plant and in the distribution.

A BWN was issued for Milton on 1 August 2024 after a bacteriological sample taken within the Milton distribution network on 31 July returned a positive *E. coli* result of 80 cfu/100mL. This result, combined with two low chlorine results from the same day led to the BWN being issued. All corrective samples returned results of <1 cfu/100mL for *E. coli*, demonstrating compliance with the MAV. The BWN remained in place while staff investigated the cause of the low chlorine results collected from Constitution Avenue and Tokoiti Road in the Milton township. Extensive flushing at these and other locations saw the chlorine levels increase, demonstrating compliance the DWQARs. The BWN was lifted on 9 August 2024. For the duration of the notice, bottled water was supplied to the Milton residents from the Service Centre.

1.4 Moa Flat and North Bruce WTP DWS Compliance Issues

Staff are currently waiting on legal feedback regarding our contracts for upgrading these treatment plants as they contained a guarantee to meet the previous DWS. This is happening in parallel with a number of work items that include the contractor and our independent water treatment specialist to develop programmes to move both of these plants to full compliance. An update will be provided at the meeting and we also intend to arrange meetings at the plants with the scheme committees to go over the current issues and proposed solutions.

North Bruce and Waihola will remain on a BWN until the treatment plant demonstrates compliance with Sections 4.10.1.4, and 4.10.2.13 and the distribution networks demonstrate compliance with the D3 Rules. The plant does not demonstrate the consistent compliance required to lift the BWN.

- The treatment plant struggles to consistently achieve the required UV Dose to provide assurance that the bacteria in the water has been adequately disinfected with UV light.

- The treatment plant struggles to achieve the required UV Dose and UVT required to provide assurance that protozoa in the water has been adequately disinfected by the UV treatment process.

- Low levels of residual chlorine detected in the distribution network prevents compliance with the D3 Rules.

E. coli was not detected in the North Bruce distribution zone during the past seven weeks of monitoring, demonstrating compliance with Rule D3.29. All FAC results analysed were above the minimum requirement of 0.2 mg/L during the past seven weeks of monitoring, demonstrating compliance with Rule D3.19 (100% Compliance).

E. coli was not detected in the Waihola distribution zone during the past seven weeks of monitoring, demonstrating compliance with Rule D3.29. Two FAC result analysed were below the required 0.2 mg/L (<0.1 mg/L) during the past seven weeks of monitoring, failing to comply with Rule D3.19.

One aluminium result analysed from the Waihola distribution network was above the MAV of 1 mg/L during the past seven weeks of monitoring, the most recent non-compliant residual was detected on 26 July 2024.

Three aluminium results analysed from the North Bruce distribution network were above the MAV of 1 mg/L during the past seven weeks of monitoring, the most recent non-compliant residual was detected on 26 August 2024.

An elevated sampling programme will remain in place for the distribution while the analysed results are above the MAV.

North Bruce WTP	Total Aluminium[1]	*E. coli*	FAC
Samples Collected in the past seven weeks	2	0	0
Compliant Samples collected in the past seven weeks	1	0	0

Waihola Distribution Network	Total Aluminium	*E. coli*	FAC
Samples Collected in the past seven weeks	12	14	23
Compliant Samples collected in the past seven weeks	11	14	21

North Bruce Distribution Network	Total Aluminium	*E. coli*	FAC
Samples Collected in the past seven weeks	6	6	20
Compliant Samples collected in the past seven weeks	3	6	20

[1] Includes results received up to 13 September 2024.

Water Treatment - North Bruce WTP

Treated Water Compliance Report for August 2024

		Section 4.10.1.4: Bacterial Rules - Water Disinfected with Ultraviolet Light					Section 4.10.2.13: Protozoal Rules - Ultraviolet Light					
Rule:			**T3.15**	**T3.16**	**T3.17**	**T3.18**	**T3.85**	**T3.86**	**T3.87**	**T3.88**	**T3.89**	**T3.90**
	Requirement: **Plant Run Time**	**UV Reactor 1 Run Time**	% of day flow ratewithin validated range	% of the day where a Reduction Equivalent Dose (RED) of at least 40mJ/cm² (or equivalent) was achieved	<40 mJ/cm² for 15 consecutive minutes or more (total time)	>5.0 NTU for 15 consecutive minutes or more (total time)	% of the day flow rate within validated range	% of day UV dose met log credit requirement	< log credit requirement for 15 consecutive minutes or more (total time)	>5.0 NTU for 15 consecutive minutes or more (total time)	% of day where UVT is ≥ 95% of lowest UVT validated	<80% of lowest validated UVT for 15 consecutive minutes or more (total time)
Date	**min/day**	**min/day**	**95%**	**95%**	**0**	**0**	**95%**	**95%**	**0**	**0**	**95%**	**0**
1/08/2024	1419	1397	100.0%	77.4%	191	0	100.0%	65.6%	191	0	63.8%	0
2/08/2024	1429	1365	100.0%	83.7%	110	0	100.0%	71.1%	110	0	71.9%	0
3/08/2024	1440	1412	100.0%	23.7%	1062	0	100.0%	16.3%	1062	0	100.0%	0
4/08/2024	1440	1440	100.0%	0.0%	1440	0	100.0%	0.0%	1440	0	100.0%	0
5/08/2024	1440	1440	100.0%	0.0%	1440	0	100.0%	0.0%	1440	0	100.0%	0
6/08/2024	1433	1402	100.0%	56.7%	607	0	100.0%	56.6%	607	0	100.0%	0
7/08/2024	1440	1350	100.0%	95.7%	24	0	100.0%	95.3%	24	0	99.1%	0
8/08/2024	1440	1401	100.0%	99.8%	0	0	100.0%	80.0%	0	0	100.0%	0
9/08/2024	1440	1369	100.0%	98.8%	0	0	100.0%	86.0%	0	0	100.0%	0
10/08/2024	1440	1413	100.0%	100.0%	0	0	100.0%	54.8%	0	0	100.0%	0
11/08/2024	1440	1392	100.0%	94.0%	33	0	100.0%	66.4%	33	0	87.8%	0
12/08/2024	1440	1255	100.0%	93.9%	37	0	100.0%	87.8%	37	0	97.9%	0
13/08/2024	1419	1371	100.0%	99.9%	0	0	100.0%	73.7%	0	0	59.5%	0
14/08/2024	1440	1413	100.0%	99.8%	0	0	100.0%	83.1%	0	0	88.0%	0
15/08/2024	1395	1146	100.0%	93.2%	59	0	100.0%	81.6%	59	0	74.3%	0
16/08/2024	1429	1418	100.0%	99.7%	0	0	100.0%	95.8%	0	0	99.9%	0
17/08/2024	1440	1284	100.0%	74.7%	270	0	100.0%	55.1%	270	0	90.0%	0
18/08/2024	1440	1273	100.0%	58.5%	442	0	100.0%	53.4%	442	0	64.9%	0
19/08/2024	1437	1269	100.0%	87.8%	106	0	100.0%	80.5%	106	0	95.5%	0
20/08/2024	1440	1391	100.0%	98.3%	0	0	100.0%	82.0%	0	0	98.4%	0
21/08/2024	1440	1278	100.0%	98.7%	0	0	100.0%	82.7%	0	0	100.0%	0
22/08/2024	1440	1288	100.0%	100.0%	0	0	100.0%	95.5%	0	0	100.0%	0
23/08/2024	1440	1259	100.0%	98.4%	0	0	100.0%	98.4%	0	0	100.0%	0
24/08/2024	1440	1264	100.0%	98.6%	2	0	100.0%	85.2%	2	0	100.0%	0
25/08/2024	1440	1298	100.0%	93.9%	36	0	100.0%	13.9%	36	0	4.5%	0
26/08/2024	1440	1355	100.0%	87.4%	106	0	100.0%	56.1%	106	0	51.9%	0
27/08/2024	1440	1297	100.0%	98.4%	1	0	100.0%	82.7%	1	0	100.0%	0
28/08/2024	1440	1380	100.0%	95.1%	11	0	100.0%	59.0%	11	0	66.7%	0
29/08/2024	1440	1310	100.0%	86.6%	140	0	100.0%	68.9%	140	0	100.0%	0
30/08/2024	1440	1334	100.0%	74.2%	265	0	100.0%	64.8%	265	0	95.3%	0
31/08/2024	1440	1298	100.0%	100.0%	0	0	100.0%	68.0%	0	0	100.0%	0
Number of Days that were Compliant:			31	15	11	31	31	4	11	31	20	31
		Operator / Supplier Comments:					**Operator / Supplier Comments:**					

Moa Flat will remain on a BWN until the treatment plant demonstrates compliance with Sections 4.10.1.4, and 4.10.2.13 and the distribution network demonstrates compliance with the D3 Rules. The plant does not demonstrate the consistent compliance required to lift the BWN.

- The treatment plant does not consistently achieve the required UV Dose to provide assurance that the bacteria in the water has been adequately disinfected with chlorine and UV light.

- The treatment plant struggles to achieve the required UV Dose and UVT required to provide assurance that protozoa in the water has been adequately disinfected by the UV treatment process.

E. coli was not detected in the Moa Flat distribution network during the past seven weeks of monitoring, demonstrating compliance with Rule D3.29. All FAC results analysed were above the minimum requirement of 0.2 mg/L during the past seven weeks of monitoring, demonstrating compliance with Rule D3.19.

Two aluminium results analysed from the Moa Flat distribution network were above the MAV of 1 mg/L during the past seven weeks of monitoring, the most recent non-compliant residual was detected on 7 August 2024.

An elevated sampling programme will remain in place while the analysed results remain inconsistently high.

Moa Flat WTP	Total Aluminium	*E. coli*	FAC
Samples Collected in the past seven weeks	2	0	0
Compliant Samples collected in the past seven weeks	2	0	0

Moa Flat Distribution Network	Total Aluminium[2]	*E. coli*	FAC
Samples Collected in the past seven weeks	6	8	20
Compliant Samples collected in the past seven weeks	4	8	20

[2] Includes results received up to 13 September 2024.

Water Treatment - Moa Flat WTP

Treated Water Compliance Report for August 2024

		Section 4.10.1.4: Bacterial Rules - Water Disinfected with Ultraviolet Light					Section 4.10.2.13: Protozoal Rules - Ultraviolet Light					
Rule:			T3.15	T3.16	T3.17	T3.18	T3.85	T3.86	T3.87	T3.88	T3.89	T3.90
	Requirement: Plant Run Time	UV Reactor 1 Run Time	% of day flow ratewithin validated range	% of the day where a Reduction Equivalent Dose (RED) of at least 40mJ/cm² (or equivalent) was achieved	<40 mJ/cm² for 15 consecutive minutes or more (total time)	>5.0 NTU for 15 consecutive minutes or more (total time)	% of the day flow rate within validated range	% of day UV dose met log credit requirement	< log credit requirement for 15 consecutive minutes or more (total time)	>5.0 NTU for 15 consecutive minutes or more (total time)	% of day where UVT is ≥ 95% of lowest UVT validated	<80% of lowest validated UVT for 15 consecutive minutes or more (total time)
Date	min/day	min/day	95%	95%	0	0	95%	95%	0	0	95%	0
1/08/2024	970	970	96.9%	98.8%	0	0	96.9%	96.3%	0	0	100.0%	0
2/08/2024	1303	1303	98.8%	100.0%	0	0	98.8%	100.0%	0	0	100.0%	0
3/08/2024	1327	1327	100.0%	98.9%	0	0	100.0%	98.9%	0	0	100.0%	0
4/08/2024	1395	1395	100.0%	100.0%	0	0	100.0%	100.0%	0	0	100.0%	0
5/08/2024	1397	1397	100.0%	100.0%	0	0	100.0%	96.2%	0	0	100.0%	0
6/08/2024	1303	1303	100.0%	98.6%	0	0	100.0%	87.6%	0	0	99.9%	0
7/08/2024	1345	1345	100.0%	91.3%	97	0	100.0%	86.1%	97	0	95.7%	0
8/08/2024	1329	1329	98.9%	99.8%	0	0	98.9%	98.9%	0	0	100.0%	0
9/08/2024	1322	1322	100.0%	100.0%	0	0	100.0%	100.0%	0	0	100.0%	0
10/08/2024	1391	1391	100.0%	100.0%	0	0	100.0%	99.5%	0	0	100.0%	0
11/08/2024	1395	1395	100.0%	100.0%	0	0	100.0%	99.9%	0	0	100.0%	0
12/08/2024	1318	1318	98.9%	100.0%	0	0	98.9%	98.7%	0	0	100.0%	0
13/08/2024	1396	1396	100.0%	100.0%	0	0	100.0%	100.0%	0	0	100.0%	0
14/08/2024	1369	1369	100.0%	99.9%	0	0	100.0%	98.1%	0	0	100.0%	0
15/08/2024	1396	1396	100.0%	100.0%	0	0	100.0%	98.6%	0	0	100.0%	0
16/08/2024	1395	1395	97.8%	100.0%	0	0	97.8%	99.1%	0	0	100.0%	0
17/08/2024	1380	1380	100.0%	95.5%	34	0	100.0%	85.2%	34	0	100.0%	0
18/08/2024	1391	1391	100.0%	91.5%	62	0	100.0%	83.0%	62	0	100.0%	0
19/08/2024	1176	1176	100.0%	98.0%	0	0	100.0%	79.8%	0	0	100.0%	0
20/08/2024	1410	1410	100.0%	100.0%	0	0	100.0%	99.4%	0	0	100.0%	0
21/08/2024	1280	1280	100.0%	99.8%	0	0	100.0%	87.7%	0	0	100.0%	0
22/08/2024	1410	1410	100.0%	100.0%	0	0	100.0%	100.0%	0	0	100.0%	0
23/08/2024	1410	1410	100.0%	98.7%	5	0	100.0%	98.7%	5	0	100.0%	0
24/08/2024	1397	1397	100.0%	100.0%	0	0	100.0%	100.0%	0	0	100.0%	0
25/08/2024	1360	1360	100.0%	97.9%	1	0	100.0%	93.5%	1	0	100.0%	0
26/08/2024	1410	1410	100.0%	100.0%	0	0	100.0%	100.0%	0	0	100.0%	0
27/08/2024	1345	1345	100.0%	98.8%	2	0	100.0%	96.9%	2	0	100.0%	0
28/08/2024	1282	1282	98.8%	97.3%	20	0	98.8%	94.6%	20	0	100.0%	0
29/08/2024	1325	1325	100.0%	100.0%	0	0	100.0%	98.1%	0	0	100.0%	0
30/08/2024	1363	1363	100.0%	98.5%	7	0	100.0%	98.5%	7	0	100.0%	0
31/08/2024	1389	1389	100.0%	97.5%	21	0	100.0%	92.9%	21	0	100.0%	0
Number of Days that were Compliant:			31	29	22	31	31	22	22	31	31	31
							Notes					

Waitahuna will remain on a BWN until the treatment plant demonstrates compliance with Sections 4.10.1.1, and 4.10.2.5 and the distribution networks demonstrate compliance with the D3 Rules. The plant does not demonstrate the consistent compliance required to lift the BWN.

- The treatment plant struggles to achieve the required contact time, and turbidity levels to provide assurance that the bacteria in the water has been adequately disinfected with chlorine.

- The treatment plant struggles to achieve the required turbidity levels to provide assurance that protozoa in the water has been adequately removed by the coagulation, flocculation, sedimentation, and filtration process.

- Low levels of residual chlorine detected in two of the three distribution networks limits compliance with Rule D3.19.

E. coli was not detected in any of the distribution networks during the past seven weeks of monitoring, demonstrating compliance with Rule D3.29.

Of the 22 FAC samples analysed from the Balmoral 1 distribution all samples were above the minimum requirement of 0.2 mg/L during the past seven weeks of monitoring, demonstrating compliance with Rule D3.19.

Of the 22 FAC samples analysed from the Balmoral 2 distribution three were below the minimum requirement of 0.2 mg/L (<0.1 mg/L) during the past seven weeks of monitoring, failing to comply with Rule D3.19.

Of the 22 FAC samples analysed from the Tuapeka East distribution five were below the minimum requirement of 0.2 mg/L (<0.1 mg/L) during the past seven weeks of monitoring, failing to comply with Rule D3.19.

All aluminium results analysed from the Balmoral 1 distribution network were below the MAV of 1 mg/L during the past seven weeks of monitoring.

All aluminium results analysed from the Balmoral 2 distribution network were below the MAV of 1 mg/L during the past seven weeks of monitoring.

All aluminium result analysed from the Tuapeka East distribution network were below the MAV of 1 mg/L during the past seven weeks of monitoring.

Waitahuna WTP	Total Aluminium	*E. coli*	FAC
Samples Collected in the past seven weeks	2	0	0
Compliant Samples collected in the past seven weeks	2	0	0

Balmoral 1 Distribution Network	Total Aluminium	*E. coli*	FAC
Samples Collected in the past seven weeks	7	7	22
Compliant Samples collected in the past seven weeks	7	7	22

Balmoral 2 Distribution Network	Total Aluminium	*E. coli*	FAC
Samples Collected in the past seven weeks	8	10	22
Compliant Samples collected in the past seven weeks	8	10	19

Tuapeka East Distribution Network	Total Aluminium	*E. coli*	FAC
Samples Collected in the past seven weeks	8	9	22
Compliant Samples collected in the past seven weeks	8	9	17

Water Treatment - Waitahuna WTP

Treated Water Compliance Report for August 2024

		Section 4.10.1.1: Bacterial Rules - Water Disinfected with Chlorine				
	Rule:	T3.2	T3.3	T3.4	T3.5	T3.6
	Requirement: Plant Run Time	% of day C.t value is at least 15 min.mg/L	% of day FACe is ≥ 0.2mg/L	Minimum T[10] contact time	% of day where the turbidity of water leaving WTP is < 1.0 NTU	# consecutive 15 min periods where the turbidity of water leaving WTP is > 2.0 NTU
Date	min/day	95%	100%	5	95%	0
1/08/2024	588	43.0%	100%	2	15.8%	379
2/08/2024	703	38.5%	100%	2	26.2%	223
3/08/2024	857	6.4%	100%	2	5.4%	457
4/08/2024	599	6.0%	100%	2	0.0%	249
5/08/2024	783	6.5%	100%	2	0.0%	382
6/08/2024	723	5.9%	100%	2	0.0%	482
7/08/2024	809	24.4%	100%	2	54.1%	0
8/08/2024	648	1.5%	100%	2	11.6%	0
9/08/2024	858	3.3%	100%	2	3.1%	461
10/08/2024	673	3.7%	100%	2	11.3%	28
11/08/2024	877	5.1%	100%	2	1.4%	390
12/08/2024	506	2.4%	100%	2	18.4%	240
13/08/2024	883	0.3%	59%	2	0.0%	762
14/08/2024	973	21.1%	100%	2	0.0%	768
15/08/2024	839	28.7%	96%	2	0.0%	674
16/08/2024	571	21.2%	100%	2	0.0%	198
17/08/2024	694	6.3%	100%	2	0.0%	411
18/08/2024	604	4.8%	100%	2	0.0%	193
19/08/2024	693	5.2%	100%	2	0.0%	271
20/08/2024	601	7.5%	100%	2	0.0%	265
21/08/2024	859	25.6%	100%	2	0.0%	481
22/08/2024	830	8.3%	100%	2	0.0%	514
23/08/2024	676	7.4%	100%	2	0.0%	321
24/08/2024	942	22.4%	100%	2	5.5%	438
25/08/2024	619	15.8%	100%	2	10.2%	267
26/08/2024	449	0.9%	58%	2	0.0%	127
27/08/2024	951	1.9%	97%	2	0.0%	783
28/08/2024	647	30.3%	100%	1	0.0%	326
29/08/2024	1011	3.1%	84%	2	0.0%	846
30/08/2024	844	6.3%	100%	2	0.0%	376
31/08/2024	828	6%	100%	2	0.0%	405
Number of Days that were Compliant:		0	26	0	0	2
Operator / Supplier Comments:						

Water Treatment - Waitahuna WTP

Treated Water Compliance Report for August 2024

Section 4.10.2.5: Protozoal Rules - Coagulation, Flocculation, Sedimentation, and Filtration

		Filter 1						
Rule:			T3.39	T3.40	T3.43	T3.44	T3.47	T3.48
	Plant Run Time	Filter 1 Run Time	% of day where turbidity was <= 0.3 NTU	# consecutive 15 min periods where turbidity was > 0.5 NTU	% of day where turbidity was <= 0.15 NTU	# consecutive 15 min periods where turbidity was > 0.5 NTU	% of day where turbidity was <= 0.1 NTU	# consecutive 15 min periods where turbidity was > 0.3 NTU
Date	min/day	min/day	95%	0	95%	0	95%	0
1/08/2024	588	588	0.0%	421	0.0%	421	0.0%	462
2/08/2024	703	703	0.0%	362	0.0%	362	0.0%	465
3/08/2024	857	857	0.0%	465	0.0%	465	0.0%	465
4/08/2024	599	599	0.0%	249	0.0%	249	0.0%	249
5/08/2024	783	783	0.0%	388	0.0%	388	0.0%	388
6/08/2024	723	723	0.0%	482	0.0%	482	0.0%	482
7/08/2024	809	809	0.4%	290	0.0%	290	0.0%	542
8/08/2024	648	648	0.0%	321	0.0%	321	0.0%	337
9/08/2024	858	858	0.0%	491	0.0%	491	0.0%	491
10/08/2024	673	673	0.0%	281	0.0%	281	0.0%	295
11/08/2024	877	877	0.0%	527	0.0%	527	0.0%	527
12/08/2024	506	506	0.0%	321	0.0%	321	0.0%	321
13/08/2024	883	883	0.0%	771	0.0%	771	0.0%	771
14/08/2024	973	973	0.0%	889	0.0%	889	0.0%	889
15/08/2024	839	839	0.0%	769	0.0%	769	0.0%	769
16/08/2024	571	571	0.0%	347	0.0%	347	0.0%	347
17/08/2024	694	694	0.0%	411	0.0%	411	0.0%	411
18/08/2024	604	604	0.0%	195	0.0%	195	0.0%	195
19/08/2024	693	693	0.0%	271	0.0%	271	0.0%	271
20/08/2024	601	601	0.0%	265	0.0%	265	0.0%	265
21/08/2024	859	859	0.0%	579	0.0%	579	0.0%	579
22/08/2024	830	830	0.0%	578	0.0%	578	0.0%	578
23/08/2024	676	676	0.0%	410	0.0%	410	0.0%	410
24/08/2024	942	942	0.0%	732	0.0%	732	0.0%	732
25/08/2024	619	619	0.0%	395	0.0%	395	0.0%	395
26/08/2024	449	449	0.0%	127	0.0%	127	0.0%	127
27/08/2024	951	951	0.0%	783	0.0%	783	0.0%	783
28/08/2024	647	647	0.0%	476	0.0%	476	0.0%	476
29/08/2024	1011	1011	0.0%	913	0.0%	913	0.0%	913
30/08/2024	844	844	0.0%	379	0.0%	379	0.0%	379
31/08/2024	828	828	0.0%	405	0.0%	405	0.0%	405
Number of Days that were Compliant			0	0	0	0	0	0
Operator / Supplier Comments:								

1.5 Water Treatment Abatement Notices and Compliance Orders

The Whitelea Rd WTP was assessed as Significantly Non-compliant due to the ongoing breaches of the weekly backwash discharge volume. In response to this assessment, an application is underway to vary the existing consent to make allowance for the additional volume that continuously discharges from the treatment plant.

1.6 Disinfection By-products

Disinfection by-products (DBP) are formed when disinfectants like chlorine interact with natural organic matter in the source water. The pH of the water, length of time chlorine is in contact with the organic matter, temperature, and cleanliness of the distribution network all contribute to the formation of DBPs. The increased concentration of chlorine in the water causes an increase in DBP formation.

The formation of DBPs is impacted by increased temperatures, so it would be expected that there will be more DBPs formed in spring and summer.

The type of DBP formed depends on the pH. The types found in the Waitahuna and Milton distribution networks are associated with lower water pH (6.5 – 7.5).

Waitahuna Supply				
~~Date~~	~~Location~~	Dichloroacetic acid (MAV 0.05 mg/L)	Trichloroacetic Acid (MAV 0.2 mg/L)	FAC (mg/L)
1/8/2024	Waitahuna WTP	0.026	<0.05	
7/8/2024	Balmoral 1	0.049	0.12	1.41
	Balmoral 2	0.049	0.10	0.60
	Tuapeka East	0.064	0.18	0.85
21/8/2024	Balmoral 2	0.055	0.15	0.45
	Balmoral 1	0.050	0.14	0.78
	Balmoral 2	0.065	0.16	0.30
	Tuapeka East	0.049	0.14	0.48
2/9/2024	Waitahuna WTP	0.019	<0.05	
4/9/2024	Balmoral 2	0.040	0.16	0.62

Milton Supply				
Date	Location	Dichloroacetic acid (MAV 0.05 mg/L)	Trichloroacetic Acid (MAV 0.2 mg/L)	FAC (mg/L)
1/8/2024	Milton WTP	0.012	<0.05	
7/8/2024	Milton OCF	0.028	0.06	1.74
	Milton Town	0.036	0.08	1.28
2/9/2024	Milton WTP	<0.005	<0.05	
4/9/2024	Milton OCF	0.006	<0.05	2.20
	Milton Town	0.093	0.11	1.98

Public health advice regarding DBPs, and water treatment is that the microbiological quality of the water should not be compromised to minimise DBP formation. Reducing the concentration of chlorine in the treated water to prevent DBP formation could result in increased levels of *E. coli.* Adverse health effects from DBPs are based upon long-term continuous exposures.

Improvement: Monthly Compliance achieved / anticipated	No Change (may be a non-compliance if continues)	Consent non-compliance

Balclutha WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit Compliant								
Discharge Parameters: Non-compliant results.								
Dissolved Oxygen: Compliant average.								
HSE access: Concerns for samplers and operators – existing workarounds are in place.								

Balclutha Wastewater Treatment Plant								
Resource Consent Compliance Report								
RM17.328.01								
Final Discharge Results								
Plant Effluent Sample Results (YTD) Monthly								
ORC Site Name	Parameter	CBOD5	TSS	E. Coli	NH $_3$ -N	TP	DO	pH
		g/m^3	g/m^3	cfu/100 mL	g/m^3	g/m^3	g/m^3	
	8 out of 12	40	70	55000	20	7.2	2	9
	2 out of 12	85	150	350000	25	8.9		6.5
Balclutha Wastewater Treatment Plant	5/09/2023	31	40	110000	31.4	2.59	0.4	7.5
Balclutha Wastewater Treatment Plant	6/10/2023	19	37	10000	27.9	2.17	0.0	7.3
Balclutha Wastewater Treatment Plant	2/11/2023	23	29	10000	28.5	1.47	0.8	7.5
Balclutha Wastewater Treatment Plant	4/12/2023	33	26	1600	33.5	2.62	2.6	7.8
Balclutha Wastewater Treatment Plant	4/01/2024	37	49	1000	31.1	2.97	5.5	7.6
Balclutha Wastewater Treatment Plant	8/02/2024	39	66	2200	28.9	2.74	6.2	8.0
Balclutha Wastewater Treatment Plant	6/03/2024	24	53	800	29.2	2.54	11.8	7.6
Balclutha Wastewater Treatment Plant	3/04/2024	24	36	5700	32.7	3.26	0.8	7.6
Balclutha Wastewater Treatment Plant	6/05/2024	30	30	210000	33.3	2.92	0.6	7.5
Balclutha Wastewater Treatment Plant	6/06/2024	32	61	20000	42.7	3.58	1.0	7.4
Balclutha Wastewater Treatment Plant	3/07/2024	22	23	10000	31.7	2.73	7.0	7.7
Balclutha Wastewater Treatment Plant	2/08/2024	17	28	35000	28.3	2.12	6.0	7.4
Number of Samples		12	12	12	12	12		
8 out of 12 consecutive samples	Limit of non-compliant samples	8	8	8	8	8		
	Actual	0	0	2	12	0		
Median Compliant?		Yes	Yes	Yes	No	Yes		
2 out of 12 consecutive samples	Limit of non-compliant samples	2	2	2	2	2		
	Actual	0	0	0	12	0		
95th Compliant?		Yes	Yes	Yes	No	Yes		

Balclutha WWTP Site Upgrades include:

- Segregation of the existing pond into two linked cells. Two aerators will impart both dissolved oxygen and circulation pattern around the cell.
- Installation in the downstream cell of 85 BioShell units, intended to reduce BOD, TSS and NH_3. This includes new building to house blowers and recirculation pumps, along with a curtain wall in the BioShell zone which will contain floating hexagonal plates to eliminate sunlight. The BioShell installation will be fully commissioned once the power connection is established.
- Revised programming to control daily discharge volumes will prevent the exceedance of the daily discharge limit.
- Alum dosing to reduce suspended solids and reduce organic matter should improve TSS and TP to be installed.

Clinton WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit: One Non-compliance								
Discharge Parameters: Non-compliant results.								
Dissolved Oxygen: Compliant average.								
HSE access: Concerns for samplers and operators – existing workarounds are in place.								

Clinton Wastewater Treatment Plant								
Resource Consent Compliance Report								
RC No.:17.092.01; Expiry Date: 5/5/2027								
Final Discharge Results								
Plant Effluent Sample Results (YTD)								
ORC Site Name		DO	pH	$cBOD_5$	TSS	E. Coli	NH_3-N	TP
		g/m^3	6.5	g/m^3	g/m^3	cfu/100ml	g/m^3	g/m^3
	Lower Limit	2	9					
	Median Limit			24	26	550	13	4
	95th Percentile Limit			37	46	3400	17.5	11
Clinton STP Final Effluent	5/09/2023	9.0	8.3	5	23	140	10.7	2.8
Clinton STP Final Effluent	6/10/2023	9.0	8.2	13	24	180	11.2	3.9
Clinton STP Final Effluent	2/11/2023	5.0	7.3	10	23	2100	12.9	4.7
Clinton STP Final Effluent	7/12/2023	5.0	7.8	12	19	2600	11.4	4.1
Clinton STP Final Effluent	4/01/2024	3.0	7.8	4	13	6000	12.8	5.4
Clinton STP Final Effluent	8/02/2024	9.5	7.8	22	40	2100	6.9	6.2
Clinton STP Final Effluent	4/03/2024	10.3	7.9	20	53	2300	6.8	6.0
Clinton STP Final Effluent	4/04/2024	12.0	7.6	38	40	350	6.5	5.5
Clinton STP Final Effluent	6/05/2024	14.9	7.9	41	39	120	8.3	5.1
Clinton STP Final Effluent	5/06/2024	10.1	7.3	10	21	360	10.4	3.3
Clinton STP Final Effluent	3/07/2024	10.0	7.5	7	26	900	11.9	3.1
Clinton STP Final Effluent	2/08/2024	10.0	7.2	10	18	700	10.4	2.7
Number of Samples				12	12	12	12	12
8 out of 12 consecutive samples	Limit of non-compliant samples			8	8	8	8	8
	Actual			2	4	7	1	7
Median Compliant?				Yes	Yes	Yes	Yes	Yes
2 out of 12 consecutive samples	Limit of non-compliant samples			2	2	2	2	2
	Actual			2	1	1	0	0
95th Compliant?				Yes	Yes	Yes	Yes	Yes

Clinton WWTP Site Upgrades include:

- Segregation of the existing pond into two linked cells by a curtain wall installed across the pond.
- Installation of BioShell units in the downstream portion of the pond, intended to reduce BOD, TSS and NH_3. This includes associated blowers, and floating hexagonal plates in the BioShell zone. The BioShell were commissioned in April 2024.
- Installation of a UV reactor between the pond and the wetland to provide bacterial disinfection; expected to be commissioned once the power connection is established.
- Installation of additional plants in the wetland cells and removal of accumulated sludge.
- Alum dosing to reduce suspended solids and reduce organic matter should improve TSS and TP to be installed.

Waihola WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit: 16 Non-compliances.								
Discharge Parameters: Compliant results.								
Dissolved Oxygen: Compliant average.								
HSE access: No new H&S issues have been identified at this site.								

Waihola Wastewater Treatment Plant Resource Consent Compliance Report RM15.364.01 Expire date May 2028 Final Effluent (YTD)								
ORC Site Name	Date	$CBOD_5$	TSS	E. Coli	NH_3-N	TP	DO	pH
		g/m^3	g/m^3	cfu/100 ml	g/m^3	g/m^3		
	median	75	100	80000	23	5.7	g/m^3	9
	95 percentile	140	175	315000	31	8.2		6.5
Waihola Wastewater Treatment Plant	8/09/2023	10	38	450	28.6	5.87	6.6	7.2
Waihola Wastewater Treatment Plant	11/10/2023	18	35	730	26.2	4.84	6.3	7.1
Waihola Wastewater Treatment Plant	8/11/2023	16	37	5400	27.9	6.64	7.8	7.3
Waihola Wastewater Treatment Plant	6/12/2023	15	122	1600	31.5	9.15	4.2	7.1
Waihola Wastewater Treatment Plant	4/01/2024	12	33	6400	37.5	9.87	10.8	9.3
Waihola Wastewater Treatment Plant	7/02/2024	8	29	780	41.7	11.6	4.6	7.1
Waihola Wastewater Treatment Plant	4/03/2024	14	52	4800	44.3	8.78	0.5	7.5
Waihola Wastewater Treatment Plant	5/04/2024	22	17	10	51.9	8.86	6.6	7.3
Waihola Wastewater Treatment Plant	6/05/2024	16	19	1400	30.3	4.91	6.9	7.5
Waihola Wastewater Treatment Plant	5/06/2024	10	26	10000	26.0	5.27	6.5	7.5
Waihola Wastewater Treatment Plant	3/07/2024	10	22	6500	12.3	4.14	6.9	7.4
Waihola Wastewater Treatment Plant	5/08/2024	10	19	8000	15.9	4.38	3.0	7.4
Number of Samples		12	12	12	12	12		
8 out of 12 consecutive samples	Limit of non-compliant samples	8	8	8	8	8		
	Actual	0	1	0	10	7		
Median Compliant?		Yes	Yes	Yes	No	Yes		
2 out of 12 consecutive samples	Limit of non-compliant samples	2	2	2	2	2		
	Actual	0	0	0	5	5		
95th Compliant?		Yes	Yes	Yes	No	No		

Waihola WWTP Site Upgrades include:

- Inlet screen installed to help reduce TSS and BOD – not yet commissioned.
- New PLC and control philosophy was commissioned in June 2024.
- Installation of BioShell units in the downstream portion of the pond, intended to reduce BOD, TSS and NH_3. This includes associated blowers, and floating hexagonal plates in the BioShell zone. The BioShell were commissioned in June 2024 but take time before noticeable improvements to the final effluent quality can be expected.
- Additional aerator installed during March 2024, imparting both dissolved oxygen and circulation pattern around the cell.
- Alum dosing to reduce suspended solids and reduce organic matter should improve TSS and TP to be installed.

Milton WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit: Six Non-compliances.								
Discharge Parameters: Compliant results.								
Treatment Plant Bypass: Partially treated effluent bypassed the treatment plant twice.								
HSE concerns: Raised by sampling staff, ORC & operators regarding safe access to sample locations and below ground maintenance pits – existing workarounds are in place.								

Milton Wastewater Treatment Plant									
Resource Consent Compliance Report									
RC No.:2007.090_V1; Expiry Date: 20/05/2044									
Effluent Sample Results (YTD) CDCWW-16:									
		pH	CBOD	TSS	NH3-N (Summer)	NH3-N (Winter)	TN	TP	E.coli
			g/m3	g/m3	Nov-Mar	Apri-Oct	g/m3	g/m3	cfu/100mL
Lower Limit		6.5							
Upper Limit		9	30	40	10	19	22	14	2100
ORC Site Name	Sample Date								
Milton STP Final Effluent	8/08/2024	7	7	14		5.83	19.9	3.6	10
Milton STP Final Effluent	3/07/2024	6.9	6	18		5.53	16	2.3	90
Milton STP Final Effluent	5/06/2024	6.9	7	16		12.6	20.8	4.5	10
Milton STP Final Effluent	8/05/2024	7	8	16		11.5	25.3	5.5	10
Milton STP Final Effluent	3/04/2024	7	6	13		8.78	21.6	5.1	2000
Milton STP Final Effluent	4/03/2024	7.2	6	19	9.4		21.1	5.3	70
Milton STP Final Effluent	7/02/2024	7.2	6	21	9.0		20.2	5.2	1100
Milton STP Final Effluent	4/01/2024	7.6	8	17	5.2		21.1	4.5	460
Milton STP Final Effluent	7/12/2023	7.6	8	31	7.0		17.8	5.1	150
Milton STP Final Effluent	9/11/2023	6.8	7	8	9.0		20.3	3.8	1300
Milton STP Final Effluent	6/10/2023	7.4	7	22		8.04	17.9	3.6	360
Milton STP Final Effluent	5/09/2023	7.4	10	8		10.6	20.7	3.9	90
Milton STP Final Effluent	2/08/2023	7	6	10		4.61	13.2	1.9	70
Milton STP Final Effluent	5/07/2023	7.2	6	48		6.35	14.5	3.0	140
Milton STP Final Effluent	7/06/2023	7	15	18		13.7	20.5	4.4	2900
Milton STP Final Effluent	5/05/2023	6.5	14	77		9.03	17	7.0	1200
Milton STP Final Effluent	4/04/2023	7.3	14	19		7.54	15.1	6.6	8000
Milton STP Final Effluent	2/03/2023	7.4	12	23	10.4		22.8	6.1	4800
Milton STP Final Effluent	2/02/2023	7	11	16	11.5		16.6	6.9	4100
Milton STP Final Effluent	6/01/2023	6.8	24	25	9.1		20	6.8	8000
Milton STP Final Effluent	2/10/2022	6.8	13	38	7.4		22.7	5.0	900
Milton STP Final Effluent	3/11/2022				5.4				
90th Percentile Limit			30	40	10	19	22	14	2100
90th Percentile (Last 10 Results)		7.6	8.0	22.0	10.5	12.7	22.0	5.3	1370
95th Percentile Limit						25			
95th Percentile (Last 10 Results)						11.6			
Geometric Mean Limit									400
Geometric Mean (Last 10 Results)									129

Milton WWTP Site Upgrades include:

- Sludge is being removed as expediently as possible from the Imhoff tanks over this summer and dried on the sludge drying beds, then short-term on-site storage before bulk removal to landfill.
- A full set of spare UV lamps have been purchased in January 2024 and are now held on site (along with other UV equipment spares).
- Servicing of the UV system by Xylem (UV equipment manufacturer/supplier) has been completed. This included replacing the UV lamps and replacing the UV light intensity reference sensors.

Kaitangata WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit Compliant.								
Pond Overflow Compliant.								
Discharge Parameters: Compliant.								
HSE access: Concerns for samplers and operators – existing workarounds are in place.								

Kaitangata Wastewater Treatment Plant Resource Consent Compliance Report RC No.: RM14.001.01; Expiry Date: 21/03/2049 Plant Discharge Volume (m^3) Plant Effluent Sample Results (YTD)								
ORC Site Name		pH	BOD	TSS	NH -N	TN	TP	E.coli
			g/m3	g/m3	g/m3	g/m3	g/m3	cfu/100mL
	Lower Limit	6.5						
	Upper Limit	9	20	30	20	35	10	260
Kaitangata Oxidation Pond Final Effluent	7/09/2023	7.9	6	3	17.9	20.6	2.3	10
Kaitangata Oxidation Pond Final Effluent	5/10/2023	7.7	10	6	16.6	18.9	1.8	10
Kaitangata Oxidation Pond Final Effluent	2/11/2023	7.9	8	3	29.0	33.6	1.0	5
Kaitangata Oxidation Pond Final Effluent	4/12/2023	7.8	4	3	31.6	35.3	1.1	5
Kaitangata Oxidation Pond Final Effluent	4/01/2024	8.0	6	3	23.5	28.6	0.9	5
Kaitangata Oxidation Pond Final Effluent	7/02/2024	8.6	3	3	14.0	19.1	1.1	5
Kaitangata Oxidation Pond Final Effluent	6/03/2024	7.5	3	3	23.3	29.7	0.4	20
Kaitangata Oxidation Pond Final Effluent	3/04/2024	7.8	4	3	18.5	27	0.1	5
Kaitangata Oxidation Pond Final Effluent	3/05/2024	8.0	1	6	19.6	22.7	0.1	100
Kaitangata Oxidation Pond Final Effluent	5/06/2024	7.5	3	6	18.3	20.2	0.0	30
Kaitangata Oxidation Pond Final Effluent	3/07/2024	7.9	2	5	14.9	18.3	0.0	10
Kaitangata Oxidation Pond Final Effluent	5/08/2024	7.7	6	6	17.6	24.3	1.6	10
9 out of 10 consecutive samples not to exceed	Non-compliant Samples	0	0	0	4	1	0	0
	Limit of non-compliant samples	1	1	1	1	1	1	1
	Compliant?	Yes	Yes	Yes	No	Yes	Yes	Yes

Kaitangata WWTP Site Upgrades include:

- Inlet screen installed and commissioned in mid-2023. The screen will help reduce TSS and BOD.
- Alteration to existing curtain wall segregations.
- Additional BioShells and aerator installed, along with floating hex covers, intended to reduce BOD, TSS and NH_3. All commissioned in January 2024.
- Full manhole inspection completed during March 2024.
- Trade Waste permits are to be revised to ensure appropriate conditions apply to high-risk trade waste discharges.

Heriot WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit: Compliant.								
Pond Overflow Compliant.								
Discharge Parameters: Non-compliant results.								

Heriot Wastewater Treatment Plant Resource Consent Compliance Report RC No.:RM13.443.01; Expiry Date: 28/02/2049 Final Effluent Sample Results (YTD)								
ORC Site Name		NH -N	BOD	E.coli	pH	TSS	TN	TP
		g/m3	g/m3	cfu/100mL		g/m3	g/m3	g/m3
	Lower Limit				6.5			
	Upper Limit	20	20	260	9	30	35	10
Heriot Oxidation Pond Final Effluent	7/09/2023	23.2	16	10	7.8	6	27.0	3.6
Heriot Oxidation Pond Final Effluent	5/10/2023	20.4	6	10	7.9	6	29.1	3.6
Heriot Oxidation Pond Final Effluent	2/11/2023	22.9	3	10	9.2	6	26.8	3.4
Heriot Oxidation Pond Final Effluent	4/12/2023	19.8	2	10	6.8	3	24.8	4.8
Heriot Oxidation Pond Final Effluent	4/01/2024	19.3	2	5	8.0	3	26.5	5.3
Heriot Oxidation Pond Final Effluent	7/02/2024	7.55	10	5	7.9	3	11.5	4.8
Heriot Oxidation Pond Final Effluent	6/03/2024	11.4	2	10	7.8	3	15.8	5.2
Heriot Oxidation Pond Final Effluent	29/04/2024	34.4	6	50	7.6	3		6.0
Heriot Oxidation Pond Final Effluent	6/05/2024	14.6	6	10	7.6	6	36.0	5.7
Heriot Oxidation Pond Final Effluent	7/06/2024	31.2	4	10	7.8	6	32.6	4.0
Heriot Oxidation Pond Final Effluent	5/07/2024	27.6	5	10	7.7	6	30.3	3.8
Heriot Oxidation Pond Final Effluent	5/08/2024	28.7	9	10	7.4	6	32.6	4.7
9 out of 10 consecutive samples not to exceed	Non-compliant Samples	5	0	0	1	0	1	0
	Limit of non-compliant samples	1	1	1	1	1	1	1
	Compliant?	No	Yes	Yes	Yes	Yes	Yes	Yes

Heriot WWTP Site Upgrades include:

- Installed another five BioShells, supplementing the existing units, along with floating hex covers, intended to reduce BOD, TSS and NH_3. All commissioned in January 2024. It will take time before consistent improvements to the final effluent quality can be expected.
- Trade Waste permits are to be revised to ensure appropriate conditions apply to high-risk trade waste discharges.
- Marshalls addressing short circuiting of the pond the week of 1 July which should help with NH_3-N compliance.

Kaka Point WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit: Compliant.								
Pond Overflow: Compliant.								
Discharge Parameters: Non-compliant results.								
HSE access: Concerns for samplers and operators – existing workarounds are in place.								

Kaka Point Wastewater Treatment Plant								
Resource Consent Compliance Report								
RC No.: 2008.690; Expiry Date: 26/01/2046								
Final Effluent Sample Results (YTD)								
ORC Site Name	Date	NH -N	BOD	Enterecocci	pH	TSS	TN	TP
		g/m^3	g/m^3	cfu/ 100mL		g/m^3	g/m^3	g/m^3
Kaka Point Oxidation Pond	5/09/2023	2.3	13	60	6.6	22	29.1	5.4
Kaka Point Oxidation Pond	6/10/2023	6.2	9	10	7.6	26	28.5	6.1
Kaka Point Oxidation Pond	9/11/2023	5.3	1.5	10	4.3	7	42.8	7.1
Kaka Point Oxidation Pond	7/12/2023	14.2	10	20	6.8	18	42.0	8.4
Kaka Point Oxidation Pond	4/01/2024	7.3	13	5	7.4	19	39.9	10.3
Kaka Point Oxidation Pond	7/02/2023	38.8	14	30	7.5	9	52.0	8.7
Kaka Point Oxidation Pond	6/03/2024	49.9	12	360	7.6	22	49.5	8.9
Kaka Point Oxidation Pond	3/04/2024	7.8	9	20	6.5	7	46.3	8.2
Kaka Point Oxidation Pond	3/05/2024	9.8	5	100	6.4	9	52.2	7.9
Kaka Point Oxidation Pond	5/06/2024	2.7	6	10	6.6	6	49.6	7.9
Kaka Point Oxidation Pond	3/07/2024	6.2	6	10	7.6	11	19.6	5.9
Kaka Point Oxidation Pond	6/08/2024	9.6	6	10	4.4	17	40.3	5.5
Consented Limit		20	12	140	6.5-9	30	30	10
9 out of 10 consecutive samples not to exceed	Non-compliant Samples	2	2	1	3	0	9	1
	Limit of non-compliant samples	1	1	1	1	1	1	1
	Compliant?	No	No	Yes	No	Yes	No	Yes

Kaka Point WWTP Site Upgrades include:

- Inlet screen installed and commissioned in mid-2023. The screen will help reduce TSS and BOD.
- Peripheral drain installed around the Biofiltro bed in early 2024 to capture liquid leaking from walls, directing the captured liquid to the Pond.
- Wood shavings and worms completely replaced during February 2024.
- New PLC and control philosophy was commissioned in April 2024, resulting in missing data for April, May, and June 2024.
- The Regional Council accepted the proposed wording for new compliance monitoring conditions for the Biofiltro sites which simplifies the monitoring requirements at this site. In accordance with the new wording, the consent is non-compliant with NH3-N, BOD5, pH, and TN.

Owaka WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit: Four Non-compliances.								
Pond Overflow: Compliant.								
Discharge Parameters: Compliant results.								
HSE access: Concerns for samplers and operators – existing workarounds are in place.								

Owaka Wastewater Treatment Plant								
Resource Consent Compliance Report								
RC No.:2003.680; Expiry Date: 25/11/2045								
Final Effluent Sample Results 90th Percentile Compliance								
ORC Site Name	Sample Date	NH_3-N g/m^3	BOD_5 g/m^3	E.coli cfu/100mL	pH	TSS g/m^3	TN g/m^3	TP g/m^3
Owaka STP Final Effluent	5/09/2023	4.7	12	10	7.2	11	9.2	3.2
Owaka STP Final Effluent	1/10/2023	2.7	19	10	7.2	26	11.6	1.6
Owaka STP Final Effluent	2/11/2023	11.2	17	110	7.3	46	16.6	4.5
Owaka STP Final Effluent	7/12/2023	6.8	10	5	7.9	17	16.8	4.8
Owaka STP Final Effluent	4/01/2024	5.6	6	30	7.1	8	9.8	6.2
Owaka STP Final Effluent	7/02/2024	5.1	17	170	7.5	45	18.0	7.1
Owaka STP Final Effluent	6/03/2024	0.5	8	10	7.9	3	18.1	6.5
Owaka STP Final Effluent	3/04/2024	15.2	23	20	7.6	33	31.0	8.1
Owaka STP Final Effluent	3/05/2024	10.4	21	60	8.3	54	19.9	3.9
Owaka STP Final Effluent	5/06/2024	1.2	3	120	7.4	6	3.2	0.3
Owaka STP Final Effluent	3/07/2024	0.1	6	440	7.3	22	2.7	0.1
Owaka STP Final Effluent	6/08/2024	0.7	10	10	7.2	23	16.0	2.2
Consented Limit		20	12	260	6.5-9	30	30	10
9 out of 10 consecutive samples not to exceed	Non-compliant Samples	0	4	1	0	4	1	0
	Limit of non-compliant samples	1	1	1	1	1	1	1
	Compliant?	Yes	No	Yes	Yes	No	Yes	Yes

Owaka WWTP Site Upgrades include:

- Inlet screen installed and commissioned in mid-2023. The screen will help reduce TSS and BOD.
- Peripheral drain installed around the Biofiltro bed in early 2024 to capture liquid leaking from walls, directing the captured liquid to Pond 2.
- The new Owaka Pump Station and associated rising main to the WWTP has started construction and will be commissioned within the next three months.
- Work to replace the Biofiltro bed is complete.
- New PLC and control philosophy was commissioned in May 2024, resulting in missing data for 2024.
- The Regional Council accepted the proposed wording for new compliance monitoring conditions for the Biofiltro sites which simplifies the monitoring requirements at this site. In accordance with the new wording, the consent is non-compliant with BOD5, and TSS.

Stirling WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit: Compliant.								
Pond Overflow: Compliant.								
Discharge Parameters: Non-compliant results.								
HSE access: Concerns for samplers and operators – existing workarounds are in place.								

Stirling Wastewater Treatment Plant								
Resource Consent Compliance Report								
RC No.: 2005.193; Expiry Date: 25/11/2045								
Final Effluent Sample Results 90th Percentile Compliance								
ORC Site Name	Date	NH -N	BOD	E.coli	pH	TSS	TN	TP
		g/m^3	g/m^3	cfu/100mL		g/m^3	g/m^3	g/m^3
Stirling Oxidation Pond Final Effluent	5/09/2023	2.5	9	10	8.3	24	25.4	5.7
Stirling Oxidation Pond Final Effluent	6/10/2023	0.5	6	10	8.5	5	18.6	4.7
Stirling Oxidation Pond Final Effluent	2/11/2023	1.6	3	5	7.5	21	20.4	6.1
Stirling Oxidation Pond Final Effluent	7/12/2023	0.4	7	5	7.6	18	18.0	6.9
Stirling Oxidation Pond Final Effluent	4/01/2024	1.4	7	10	8.6	18	7.8	7.9
Stirling Oxidation Pond Final Effluent	7/02/2024	6.1	8	10	7.4	11	16.0	8.6
Stirling Oxidation Pond Final Effluent	4/03/2024	9.9	6	140	7.4	14	19.8	7.4
Stirling Oxidation Pond Final Effluent	3/04/2024	7.5	7	10	7.2	19	22.8	6.9
Stirling Oxidation Pond Final Effluent	6/05/2024	7.3	4	10	6.8	6	35.7	5.1
Stirling Oxidation Pond Final Effluent	5/06/2024	31.1	10	10	7.5	16	40.4	5.5
Stirling Oxidation Pond Final Effluent	3/07/2024	7.6	38	10	7.8	26	38.4	5.7
Stirling Oxidation Pond Final Effluent	6/08/2024	12.1	9	20	8.2	22	35.3	5.1
Consented Limit		20	12	260	6.5-9	30	30	10
9 out of 10 consecutive samples not to exceed	Non-compliant Samples	1	1	0	0	0	4	0
	Limit of non-compliant samples	1	1	1	1	1	1	1
	Compliant?	Yes	Yes	Yes	Yes	Yes	No	Yes

Stirling WWTP Site Upgrades include:

- Inlet screen installed and commissioned in mid-2023. The screen will help reduce TSS and BOD.
- New PLC and control philosophy was commissioned in March 2024, resulting in missing data for April 2024.
- Biofiltro bed replaced in May 2024.
- Trade waste Investigations underway due to heightened NH3-N and TN results.
- The Regional Council accepted the proposed wording for new compliance monitoring conditions for the Biofiltro sites which simplifies the monitoring requirements at this site. In accordance with the new wording, the consent is non-compliant with TN.

Lawrence WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit: One Non-compliance.								
Dissolved Oxygen: Compliant average.								
Pond Overflow: Compliant.								
Discharge Parameters: Non-compliant results.								

Lawrence Wastewater Treatment Plant Resource Consent Compliance Report RC No.: 2008.308; Expiry Date: 21/01/2046 Final Effluent Sample Results (YTD)								
ORC Site Name	Sample Date	NH -N	BOD	E.coli	pH	TSS	TN	TP
		g/m³	g/m³	cfu/100mL		g/m³	g/m³	g/m³
Lawrence Oxidation Pond Final Effluent	5/09/2023	13.5	39	100	8.0	76	31.3	6.2
Lawrence Oxidation Pond Final Effluent	6/10/2023	3.4	28	10	6.8	39	35.0	6.4
Lawrence Oxidation Pond Final Effluent	2/11/2023	20.2	38	10	7.2	30	27.3	8.1
Lawrence Oxidation Pond Final Effluent	7/12/2023	18.0	22	10	7.9	14	35.0	8.3
Lawrence Oxidation Pond Final Effluent	4/01/2024	18.1	12	20	7.1	20	36.8	6.9
Lawrence Oxidation Pond Final Effluent	7/02/2024	15.6	19	10	7.4	53	28.1	9.2
Lawrence Oxidation Pond Final Effluent	6/03/2024	1.5	12	10	7.2	16	41.7	7.2
Lawrence Oxidation Pond Final Effluent	4/04/2024	0.9	12	10	7.7	15	32.2	7.2
Lawrence Oxidation Pond Final Effluent	6/05/2024	18.9	8	10	7.2	11	43.0	6.1
Lawrence Oxidation Pond Final Effluent	5/06/2024	10.2	9	10	6.4	6	37.9	5.0
Lawrence Oxidation Pond Final Effluent	3/07/2024	5.5	6	10	9.8	9	22.0	4.8
Lawrence Oxidation Pond Final Effluent	5/08/2024	5.0	9	90	6.9	13	28.7	4.4
Consented Limit		20	12	260	6.5-9	30	30	10
9 out of 10 consecutive samples not to exceed	Non-compliant Samples	1	3	0	2	1	6	0
	Limit of non-compliant samples	1	1	1	1	1	1	1
	Compliant?	Yes	No	Yes	No	Yes	No	Yes

Lawrence WWTP Site Upgrades include:

- Inlet screen installed and commissioned in mid-2023. The screen will help reduce TSS and BOD.
- Wood shavings and worms completely replaced during February 2024.
- New aerator installed during March 2024, imparting both dissolved oxygen and circulation pattern around the cell.
- New PLC and control philosophy was commissioned in April 2024, resulting in missing data for April and May 2024.
- The Regional Council accepted the proposed wording for new compliance monitoring conditions for the Biofiltro sites which simplifies the monitoring requirements at this site. In accordance with the new wording, the consent is non-compliant with BOD5, TSS, and TN.

Tapanui WWTP	Jan-24	Feb-24	Mar-24	Apr-24	May-24	Jun-24	Jul-24	Aug-24
Discharge Volume Limit 17 non-compliances.								
Pond Overflow Compliant.								
Discharge Parameters Non-compliant results.								

Tapanui Wastewater Treatment Plant Resource Consent Compliance Report RC No.2005.246; Expiry Date: 25/11/2045 Final Effluent Sample Results 90th% Compliance (YTD)								
ORC Site Name	Date	NH$_3$-N	BOD$_5$	E.coli	pH	TSS	TN	TP
		g/m3	g/m3	cfu/100mL		g/m3	g/m3	g/m3
Tapanui STP Final Effluent	7/09/2023	0.0	2	230	7.6	20	0.8	0.0
Tapanui STP Final Effluent	6/10/2023	8.2	6	100	6.8	9	18.1	3.8
Tapanui STP Final Effluent	2/11/2023	2.2	9	5	6.7	3	29.1	3.7
Tapanui STP Final Effluent	4/12/2023	4.3	3	5	6.3	3	33.9	3.1
Tapanui STP Final Effluent	4/01/2024	11.1	11	5	6.8	7	25.7	5.3
Tapanui STP Final Effluent	7/02/2024	9.0	10	5	6.9	12	23.4	5.0
Tapanui STP Final Effluent	6/03/2024	12.8	20	90	7.2	15	28.4	4.5
Tapanui STP Final Effluent	5/04/2024	8.0	11	10	6.8	18	20.0	4.5
Tapanui STP Final Effluent	6/05/2024	13.4	10	10	7.6	28	25.1	3.9
Tapanui STP Final Effluent	7/06/2024	3.0	2	10	7.1	6	25.3	2.9
Tapanui STP Final Effluent	5/07/2024	11.7	10	35000	7.2	26	19.5	2.3
Tapanui STP Final Effluent	5/08/2024	10.5	17	60	7.2	40	21.1	2.6
Consented Limit		20	12	260	6.5-9	30	30	10
9 out of 10 consecutive samples not to exceed	Non-compliant Samples	0	2	1	1	0	1	0
	Limit of non-compliant samples	1	1	1	1	1	1	1
	Compliant?	Yes	No	Yes	Yes	Yes	Yes	Yes

Tapanui WWTP Site Upgrades include:

- Inlet screen installed and commissioned in mid-2023. The screen will help reduce TSS and BOD.
- This site suffers from significant I&I flows during winter months. One known problem manhole repaired in March 2024 and CDC staff are discussing a relining programme for other problematic manholes in the town's sewer network.
- New aerator installed during March 2024, imparting both dissolved oxygen and circulation pattern around the cell.
- New PLC and control philosophy was fully commissioned in June 2024, resulting in missing data for May 2024.
- The Regional Council accepted the proposed wording for new compliance monitoring conditions for the Biofiltro sites which simplifies the monitoring requirements at this site. In accordance with the new wording, the consent is non-compliant with pH.

Appendix A: Drinking Water Quality Assurance Rules Technical Details

Section 4.10.1.1 of the DWQARs details the requirements that must be met to provide assurance that bacteria in the water has been adequately disinfected with chlorine. The following rules make up the requirements set out by Section 4.10.1.1:

- Rule T3.2 requires the treated water to achieve a chlorine C.t. value of at least 15 min.mg/L for 95% of the day. The C.t. value is determined by the residual chlorine (mg/L) in the final water and the T10 contact time (Rule T3.4). A low result in either of these values will results in a non-compliant C.t. value.

- Rule T3.4 requires a T_{10} disinfectant contact time of at least 5 minutes to be demonstrated. The T10 contact time is determined by the water level in the contact tanks (%) and the flow rate (l/s) of water through those tanks. A low reservoir level or high flow rate can result in a non-compliant T_{10} contact time. The continuous monitoring report takes the lowest T10 value from each 24-hour period.

- Rule T3.3 requires the residual chlorine in the final water to remain above 0.2 mg/L for 95% of the day.

- Rule T3.5 requires the turbidity in the final water to remain below 1.0 NTU for 95% of the day.

- Rule T3.6 requires the turbidity in the final water to remain below 2.0 NTU.

Section 4.10.1.4 of the DWQARs details the requirements that must be met to provide assurance that bacteria in the water has been adequately disinfected with Ultraviolet (UV) Light. The following rules make up the requirements set out by Section 4.10.1.4:

- Rule T3.16 requires an applied UV dose of greater than 40 mJ/cm^2 be achieved for 95% of the day.

- Rule T3.17 requires an applied UV dose of not less than 40 mJ/cm^2 be achieved for any consecutive 15-minute period.

- A reduction in UV dose is caused by low lamp intensity, fouling of the lamps, poor quality water, and high flow rate (l/s) through the UV unit.

Section 4.10.2.5 to 4.10.2.7 of the DWQARs details the requirements that must be met to provide assurance that protozoa in the water has been adequately removed by the coagulation, flocculation, sedimentation, and filtration process. The following rules make up the requirements set out by Section 4.10.2.5:

- Rule T3.39 requires the turbidity in the final water to remain below 0.3 NTU for 95% of the day.

- Rule T3.40 requires the turbidity in the final water to not exceed 0.5 NTU for any consecutive 15-minute period.

- The maximum credit achieved through compliance with Section 4.10.2.5 is 3-log.

The following rules make up the requirements set out by Section 4.10.2.6:

- Rule T3.43 requires the turbidity in the final water to remain below 0.15 NTU for 95% of the day.

- Rule T3.44 requires the turbidity in the final water to not exceed 0.5 NTU for any consecutive 15-minute period.

- The maximum credit achieved through compliance with Section 4.10.2.6 is 3.5-log.

The following rules make up the requirements set out by Section 4.10.2.7:

- Rule T3.47 requires the turbidity in the final water to remain below 0.1 NTU for 95% of the day.

- Rule T3.48 requires the turbidity in the final water to not exceed 0.3 NTU for any consecutive 15-minute period.

- The maximum credit achieved through compliance with Section 4.10.2.6 is 4-log.

- Turbidity levels are susceptible to weather events that cause changes to the raw water quality, and over or under dosing of the coagulant.

Section 4.10.2.13 of the DWQARs details the requirements that must be met to provide assurance that protozoa in the water has been adequately removed by the UV disinfection. The following rules make up the requirements set out by Section 4.10.2.13:

- Rule T3.86 requires the applied UV dose to meet or exceed that required to achieve the claimed log credit for 95% of the day.

- Rule T3.87 requires an applied UV dose of not less than that required to achieve the claimed log credit for any consecutive 15-minute period.

- A reduction in UV dose is caused by low lamp intensity, fouling of the UV lamps, poor water quality, and high flow rate through the UV unit.

- Rule T3.89 requires the UV Transmission (UVT) to meet or exceed 95% of the UVT for which the reactor has been certified for at least 95% of the day.

- Rule T3.90 requires the UVT of not less than 80% of the lowest UVT for which the reactor has been certified for any consecutive 15-minute period.

- A reduction in UVT is caused by an increase in organics and dissolved compounds in the water passing through the UV unit.

Rules T3.92 and T3.93 requires the monitoring of identified Treatment Chemical Determinands that are introduced into the drinking water supply during the treatment process. Aluminium is used at most WTPs as a coagulant and must be monitored in accordance with Table 33 and Table 34 of the DWQARs.

Distribution Rule D3.19 requires the chlorine residual in the water distributed to the networks to remain above 0.2 mg/L in 85% of the analysed samples. The FAC must remain above 0.1 mg/L in every analysed sample.

Distribution Rule D3.29 requires the monitoring of *E. coli* and total coliforms in the distribution networks according to the frequency set out in Table 39 of the DWQARs. The Maximum Allowable Value (MAV) for *E. coli* is <1 CFU/100ml.

Infrastructure Strategy & Operations Committee

Item for INFORMATION

Report	Infrastructure Strategy & Delivery Update
Meeting Date	10 October 2024
Item Number	7
Prepared By	Donna McArthur – Head of Infrastructure Strategy & Delivery
File Reference	913124

REPORT SUMMARY

The report details items from the Infrastructure Strategy & Delivery Team for information and discussion.

RECOMMENDATIONS

1. **That the Infrastructure Strategy & Operations Committee receives the 'Infrastructure Strategy & Delivery Update' report, dated 10 October 2024.**

REPORT

1. Asset Management - THREE WATERS

1.1 Balclutha Water Treatment Plant Intake Upgrade

In May 2023, the Clutha District Council approached Stantec to request a re-assessment of the structure as part of the health and safety improvement program and renewals program. Considering that the previous assessment took place nearly five years ago and the recommendations have not been implemented, there is a possibility of further deterioration. Therefore, a reassessment of the structure is necessary to identify any issues (existing and new) and provide appropriate recommendations to ensure the safe use of the structure.

Detailed design drawings have been completed with collaboration from the Water Operations team and construction drawings are progressing along with tender documents.

The site is a popular diving spot with locals, and the design team has designed several options to create safe and accessible areas for diving and river activities. Cost estimates have been determined, and a report has been written for consideration within current budgets.

Previous feedback from the Youth Council and Councillors indicated support for a structure to reflect how this site has been used for decades and the expectation is that

this will be included if it can be carried out within existing budgets. If additional funding is required then this will come back to Council for a decision.

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
	351050	Investigation & Design	$150,000	$45,000	$105,000	$105,000	$0
	351050	Physical works	$650,000	$0	$650,000	$650,000	$0
Totals			**$800,000**	**$45,000**	**$755,000**	**$755,000**	

1.2 Wastewater – Initial Land Treatment Investigations and Next Steps

Driven by evolving regulations, rising costs, and a growing focus on environmental protection, the Clutha District Council (CDC) is reviewing its wastewater management practices for various communities. One potential option being explored is land-based discharge.

To evaluate this option, an environmental engineering consultant was engaged in early December 2022 to develop a report on potential disposal options. Building on this initial work, further investigations in 2023 focused on identifying suitable land treatment areas within a 10 km radius of all 11 existing CDC wastewater treatment plants.

This report has been presented to the council and the local Runanga. Recent announcements by the government regarding set discharge standards for small to medium wastewater discharges may significantly alter the direction and cost of this work. However, we intend top continue our engagement process to work through this and refine the potential costs.

Following initial discussions with council and Runanga, the next steps involve comprehensive engagement. This includes:

- Iwi and councillor engagement: Collaborative planning workshops will be held after an initial technical briefing, ensuring cultural considerations are integrated throughout the process.

- Detailed Investigations: Working with consultants, potential land treatment zones will be further refined, with engineering studies and cost estimates developed.

1.3 CDC Development Engineering Code of Practice

To improve efficiency and consistency across the Clutha District and the Otago/Southland regions, CDC is collaborating with neighbouring councils to develop a unified engineering code of practice. This collaborative approach will streamline processes for CDC, service providers, and contractors.

In recent months, CDC has engaged in discussions with neighbouring councils to identify areas for improving efficiency and promoting consistency. These conversations have highlighted shared challenges, areas for improvement, and opportunities for joint efforts.

Currently, CDC is working closely with Dunedin City Council, Invercargill City Council, and Southland District Council, and with their agreement, we aim to adopt their existing documents and make the necessary additions that are relevant to our district. This approach avoids reinventing the wheel and ensures a more efficient process, leading to improved management of the development, construction and regulatory environments for all parties involved.

1.4 Clutha District Water Supply Schemes Strategy

This Strategy is being developed to investigate the feasibility of amalgamating a number of water supplies. The goal is to improve overall water system resilience, and potentially postpone costly upgrades at individual treatment plants and amalgamation which could reduce the number of plants and consents needed.

The proposal focuses on four potential connections:

- Richardson South and North: Connecting these schemes to either the Whitelea Road Water Treatment Plant (with a capacity upgrade) or the Balclutha plant, allowing the Puerua Water Treatment Plant to be decommissioned or operate at a reduced capacity.

- Kaitangata: Connecting Kaitangata to either the Stirling plant (with an upgrade) or routing water through Stirling and then Balclutha (with a Balclutha plant upgrade). This would eliminate the need for a separate, recently tendered (2023) $3,000,000 upgrade to the Kaitangata intake and improve network resilience.

The next steps outlined in the report involve using existing water network models to determine the necessary pipeline upgrades for each connection scenario. Additionally, the report proposes estimating the capacity increase required at the water treatment plants to handle the additional demand. Finally, high-level cost estimates will be developed based on recent CDC water treatment plant upgrade projects.

1.5 Asset Management Information System (AMIS)

The 3-Waters Asset Management Team and IT are exploring alternatives to our existing Asset Management Information System (AMIS) to enhance value and functionality. We are currently using Univerus Assets (formerly AssetFinda/Univerus).

Council staff attended a demonstration of Thinkproject Asset & Work Manager (formerly RAMM) and are consulting with other councils about their experiences with this system. Additionally, the team is evaluating other potential systems as part of the review process.

A cost/benefit analysis and report will be prepared to guide our decision-making.

1.6 Forestry catchment protection Policy/Strategy

The 3-Waters Asset Management Team is developing a comprehensive Forestry Catchment Protection Strategy/Policy. Currently, our protections are limited to those stated in the bylaw and the district plan, which are not actively enforced. Increased forestry activities can negatively impact the quality of source water, making it more challenging to treat for drinking. This new strategy aims to establish clear and enforceable guidelines to restrict forestry conversion near source water supplies. The policy will be based on specific criteria to ensure the protection and sustainability of our water sources, improving our ability to manage and safeguard these areas effectively. By implementing this strategy, we will proactively address potential risks to our water catchments and promote long-term environmental stewardship.

2. Asset Management – ROADING

2.1 Asset Management Data Standards – Asset and Management (AWM formerly known as RAMM)

The council's database for managing and maintaining its roading assets, RAMM (Roading Asset Maintenance Management) is currently undergoing a standardisation upgrade to stay up to date with NZTA Waka Kotahi's requirements. The project is running smoothly with Beca taking the lead with data mapping. Council staff will take over at the beginning of October to complete data mapping validation before Thinkproject migrates the data to the new format. Data migration will happen during the week of 18 to 22 November 2024.

2.2 Land Transport Programme 2024/2027 – Final NZTA Budget Approvals

Final budget approvals for Clutha's 2024/2027 Land Transport Programme have been released by the NZTA Waka Kotahi, with the Council advised at its meeting on 12 September 2024. A follow-up report is being presented to the Council at its meeting on 23 October 2024 to make decisions on the impact of the $6,000,000 reduction of the 3-year programme, in the context of the Long Term Plan decision to defer $2,700,00 of work from 2024/2025 to 2026/2027.

3. Asset Management – FACILITIES & WASTE

3.1 Facilities Asset Management

3.1.1 Community Housing Asset Management

We have finalised plans for three key Community Housing renewal projects across the district including Owaka, Naish Court and Waihola. We have discussed the scope of work for each location with the project manager to ensure alignment and requirements. After discussing the scope with the project management team, a decision was made

that instead of spreading these 3 projects over three years with a budget of $400,000 each, it would be more efficient to combine them into a single project with a consolidated budget of $1,200,000, where it will be one 3-year project. This approach will be more attractive to contractors, improve efficiency and possibly reduce costs. Additionally, there is a potential fourth project under consideration, involving improvements to the car park and drainage at the Lawrence community housing site, pending further assessment.

Figure 1: Owaka Community Housing

Figure 2: Waihola Community Housing

3.2 Solid Waste Asset Management

3.2.1 Mt Cooee New Landfill and Transfer Station

We engaged Leach and Co. to give advice on the construction and delivery of the planned new cell at Mt Cooee. Their report will provide possible construction methodologies, estimates of timelines, and costs for the new cell. Work is also underway to determine design requirements for the new transfer station at Mt Cooee and resource recovery park. We are consulting with the operations team to provide fitting designs for the new transfer station.

4. Solid Waste

4.1 Project 500022,500023, 500021 Mt Cooee – Upgrades, Construct Cell 1 & Cap Existing Cell

We are working with the Asset Team on the ORC consent application to continue operating a landfill and develop a Refuse Transfer Station and Resource Recovery Park at Mt Cooee (see section 3.3.1). We are also currently working with the support of Leach and Co. for early contractor engagement advice to expedite the process to allow a seamless transition to the new landfill cells and Refuse Transfer Station.

Site Visit with Waste Co, Leach and Co and CDC staff on 16 Sep 24.

5. Roading

5.1 Contract 858 – Reseal and Pre-Seal Repairs

The contract was awarded to Fulton Hogan. Year 2 is off to a great start, with 90% of the pre-seal repair works completed and 10% of the reseal completed to date.

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
300044	300010	Re-seal Year 2	$2,400,000	$0	$2,400,000	$2,400,00	$0
300035	300010	Pre-seal Repair Year 2	$300,000	$265,000	$35,000	$35,000	$0
Totals			**$2,700,000**	**$265,000**	**$2,435,000**	**$2,435,000**	**$0**

6. Three Waters

6.1 Milton WTP – Capacity Increase and Iron and Manganese Removal Options Assessment

- Request has been sent to Beca to complete and submit the final report for their services engagement. Once the report is received, payments for outstanding invoices will be processed, before engagement services via the Purchase Order system are CEASED.

- The scope has been redefined, and the council is seeking second opinions from other consultancy services, with reference to Beca's report. A Request for Proposal (RFP) has been developed and approved for issue.

- The RFP has been issued to Professional Services Panel Consultants Fluent and GHD for offer of services (OOS). A thorough analysis of the recent data to confirm the need for this treatment process is the first objective, a specific assessment of potassium permanganate treatment is the second objective and exploring other alternative treatment processes which can be procured within the specified budget of $1,500,000 is the third objective. The due date for the OOS is 4 October 2024.

- The timeframe for consultancy services work is 4 weeks from the acceptance date, with the estimated time for completion (ETC) 8 November 2024.

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
350118	351064	Milton Mn & Fe Reduction Project	$1,500,000	$780	$1,499,220	$1,500,000	$0
Totals			**$1,500,000**	**$780**	**$1,499,220**	**$1,500,000**	**$0**

6.2 Contract 842 – Hub Pump Station

- The streetlights have been delivered and in NES storage. NES will install the streetlight at the state highway, awaiting the traffic management plan.
- The isolation cabinet has been installed and the old switchboards have been removed.

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
400090	400080	Hub Pump Station / Underground cabling	$1,896,000	$1,737,119	$158,881	$30,000	$0
Totals			**$1,896,000**	**$1,737,119**	**$158,881**	**$30,000**	**$0**

6.3 Contract 846 – Sewerage Treatment Plant Upgrade (Balclutha, Clinton, Waihola, Heriot & Kaitangata) – Contractor: Marshall Projects Ltd

- Heriot/Kaitangata Waste Water Ttreatment Plant: The project is complete and under the defect's liability period.

- Clinton Waste Water Treatment Plant: The UV unit has arrived at the Clinton plant and commissioned by Trojan on 3 September 2024. The plant is also fully comissioned and we are working on a defects list for the contractor to remediate before the issue of the Practical Completion Certificate.

UV at Clinton Waste Water Treatment Plant.

UV lights (already installed within the UV unit)

- Waihola Waste Water Treatment Plant: The main switch board was successfully completed on 10 June 2024 and the bioshells and aerator were switched from temporary power to main power supply. The next stage is working on the screening backwater supply. The plant is 90% comissioned and we are working on a defects list for contractor to remediate before the issue of the Practical Completion Certificate.

Inlet Screen at Waihola Waste Water Treatment Plant

- Balclutha Waste Water Treatment Plant: The main switchboard installation is planned for 19 and 20 September 2024. The inlet switchboard building delivery to the Balclutha plant is also scheduled for 20 September. The next stage is to commence the construction of the inlet screen pipe work (see below).

Inlet Screen at Balclutha Waste Water Treatment Plant

Job Code	Project Code	Description	Total Budget	Cost to Date (work completed)	Available Budget Left (carry forward 24/25)	Forecast Spend (under C846 only)	Variation
400023	400028	Clinton Sewage Treatment Plant Upgrade	$1,154,915	$892,907	$262,008	$107,087	$0
400101	400083	Kaitangata and Heriot Sewerage TP Upgrade	$572,010	$572,010	$0	$0	$0
400024	400029	Waihola Sewage Treatment Plant Upgrade	$1,150,855	$1,043,876	$106,981	$6,287	$0
400022	400027	Balclutha Sewage Treatment Plant Upgrade	$3,162,215	$2,582,505	$579,710	$211,328	$0
Totals			**$5,684,871**	**$4,725,438**	**$959,433**	**$324,702**	$0

Note: The Cost to Date includes contingency.

6.4 Contract 849 - Milton to Waihola Pipeline

- The Milton Waihola Water Supply Scheme is now operational. The remaining work on this project is security fencing and driveway construction for Milburn Pump Station.

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
350061		Milton Waihola Water Supply Scheme	$5,976,882	$5,502,215	$474,666	$474,666	$0
Totals			**$5,976,882**	**$5,502,215**	**$474,666**		**$0**

6.5 Balmoral/Tuapeka Rural Water Scheme & Lawrence New Supply

- This project has been split into 2 contracts:
  1. Contract 850 – Installation of the pipeline; contractor - Southern Trenching Ltd
  2. Contract 865 – Construction of the pump stations, treatment plant and bores; contractor - Cowley Electrical Dairy and Pumps

JOB-STATUS SUMMARY

Progress

1. Contract 850 – Pipe Installation

The remaining works are the pipe section into Lawrence:

- Approx. 200m of DN180 PE pipe to be laid from the top (south end) of Whitehaven Street to Thurso Street in Lawrence; to make the final connection.
- Installation of the Pressure Reducing Valves at the top of Whitehaven Street.
- Completion documentation e.g. as-builts.

The outstanding work can be completed when the Pressure Reducing Valves arrive. Expected construction is October 2024.

2. Contract 865 – Pump Station Installation

Borefield Progress:

- Pipework and ducting are currently being installed between bores. Expect completion by the end of October 2024.
- Pricing received for the borehead and electrical installation. All pricing is now received for the borefield.
- The new borefield will include an extension to the Pomahaka-Clydevale treatment building where the new switchboard will be installed.
- The pumping testing indicated the three Greenfield bores reached the overall scheme target flow of 120 L/s, with each bore reaching 70 L/s during testing, however, 50 L/s peak operational flow for each bore is recommended.
- Water quality results from Well 1 show it is suitable to supply water to the scheme. Water quality results for Wells 2 and 3 were not taken at the correct time (during flow testing) and will have to be re-tested by the drilling contractor.

Photo 1 – Well 1

Treatment Plant:

- Civil works underway.
- Building design underway
- UV units ordered
- Transformer ordered
- Reservoir design received and amendments proposed
- All pricing received

Photo 2 – Work underway on the Water Treatment Plant site

Lower Greenfield Pump Station (Greenfield Road)

- Completed by the end of September
- Tank Installed
- Building constructed
- Switchboard in place
- Transformer installed.
- All underground pipes installed
- Aboveground pipework in progress with 90% completed
- A connection to the transformer from the power poles (including easement) is required before powering up the pump station.

Photo 3 – Lower Greenfield Pump Station – Pumps and pipework installed.

Upper Greenfield Pump Station (Greenfield Road/Cairn Road corner)

- Complete by the end of September
- Tank Installed
- Building Constructed
- Switchboard in place
- Transformer installed
- All underground pipes installed.
- Aboveground pipework in progress (95% complete)

Photo 5 – Upper Greenfield Pump Station – Progress on Pipework

Cairn Road Pump Station (Waitahuna West Road and Cairn Road)

- Building constructed
- Switchboard installed
- Aboveground pipe in progress with 80% completed
- Transformer still to be installed

Photo 7 – Cairn Road Pump Station – Progress on Pipework (beginning of Sept)

Planned Activities for Next Period (to end of October 2024).

- All Pump Stations complete
- Well pipework installed but not wellheads
- WTP building design complete
- Civil works and underground pipework for the treatment plant complete

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
360201	361156	Balmoral/Tuapeka Rural Water Scheme & Lawrence New Supply	$25,243,000	$18,251,562	$6,991,437	$6,991,437	$0
Totals			**$25,243,000**	**$18,251,562**	**$6,991,437**	**$6,991,437**	**$0**

7. Taylor Park Cabins

- The four cabins currently located at Taylor Park are sold and are disconnected from the existing service connections. The Code of Compliance Certificate of the superstructure of four cabins is issued. We are currently working on the reinstatement options for the Taylor Park campground.
- Revenue from the sales of the first 3 cabins (excl. GST) has been received and is reflected in the financial table below.
- A staff report will be prepared for councillors which will provide options for the future of the additional six cabins, four of which are now nearing completion at Otago Corrections Facility.

Job Code	Project Code	Description	Budget	Revenue Received	Cost to Date	Available Budget	Forecast Spend	Variance
670008	670007	Taylor Park Cabins	N/A		$792,184	N/A	$407,815	$1,200,000
670008	670007	Taylor Park Cabins Revenue Received	N/A	$198,261		N/A		$198,261
Totals			**N/A**	**$198,261**	**$792,184**	**N/A**	**$407,815**	**-$1,001,739**

The remaining forecast expenditure is for the outstanding material/construction costs of the remaining 6 cabins

8. Contract 845 - Milton Mainstreet Underground Utilities

- Powernet deployed multiple crews on-site, working efficiently under a strict 10-minute deadline to remove the power poles and vacate the road. We successfully removed 2 poles in just 7 minutes and completed the full power pole removal process by mid-morning. All Stage 1 including undergrounding power cables, removing power poles, and installing new street lighting, have been completed.

Pole removal from Union St

- The undergrounding of power cables for stage two will be completed by the end of September. The power crew finished the work up to the north side of Eden Street. Since the cables were installed, Powernet is completing the installation of the pillar boxes. The trenching went smoothly from Shakespear Street to Eden Street. The crew started work earlier in the morning to get past the chemist, cafe, vape store, bank machine, and $2 shop, ensuring the public had access to all these businesses before they opened.

Installation of the second transformer and ring mains on Gray Street

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
450044	450045*	Stormwater	$3,852,000	$3,750,188	$102,000	$195,000	-$93,188
400107	400084*	Foul Sewer	$580,000	$821,736	-241,736	$104,499	-$346,235
350124	351087*	Water	$556,000	$223,483	$332,517	$425,629	-$93,112
310003	310002**	Streetscape costs including undergrounding	$5,000,000	$1,443,364	$3,556,635	$735,001	$2,821,635
Totals			**$9,988,000**	**$6,238,771**	**$3,749,416**	**$1,460,129**	**$0**

**3 Waters urban budgets will be utilised for job code overspending*
*** Includes undergrounding budget*

9. Contract 880 – Milton Community Pool/Library Hub Project

- The Special Consultation Process began on 23 September 2024 with two Community Meetings on Thursday 26 September 2024. The meetings were constructive with good questions and dialogue. I would like to thank the Mayor, Councillors, Steve and staff, who all attended these meetings, we were able to answer questions clearly and concisely, enabling the community to make sound decisions moving forward. The consultation period finishes on 23 October 2024.

Job Code	Project Code	Description	Total Budget	Cost to Date	Available Budget	Forecast Spend	Variance
570011	570007	Milton Pool	$13,979,690	$568,043	$13,411,647	$14,831,664	-$1,420,017
560010	560019	Milton Library	$4,000,293	$154,982	$3,845,311	$3,845,311	$0.00
Totals			**$17,979,983**	**$723,025**	**$17,256,958**	**$18,676,975**	**-$1,420,017**

10. Contract 863 – Reservoir Civil Construction – North Bruce, Puerua, Lawrence and Moa Flat

- North Bruce – Tasman tank dispatched the prefabricated column from Sydney on 2 September, Mobilisation to the site was on 9 September. The tank modification is scheduled to be completed on 23 September. In parallel, a meeting will be scheduled to align our operational team's cut-in methodology requirements,
  and a date will be scheduled.

- Puerua – Prefabricated pipes have been successfully pressure tested, recorded and chlorinated. The farmer requested we hold on to all works due to the lamb season. We are anticipating recommencing work in the second week of October.
- Lawrence – 1,000kL tank installation completed. The fabrication of inlet, outlet and overflow pipes have been manufactured and the installation is ongoing. The pressure testing and chlorination of the pipe woks to be conclude in the second week of October. Financial are reported under the Balmoral/Tuapeka Rural Water Scheme & Lawrence New Supply
- Moa Flat – 3,000KL Tank installation was successfully constructed. A temporary solution to fill the reservoir by utilizing a 25mm line. Option to fill the tank quicker was presented an onsite meeting arranged with the relevant stakeholders. Chlorination disinfecting to be schedule once the tank is filled.

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
360205	361121	Puerua Reservoir	$ 846,000	$ 524,997	$321,003	$400,000	
360204	361113	North Bruce	$ 787,000	$728,156	$58,844		
360125	361049	Moa Flat	$ 1,157,000	$841,391	315,609	$200,000	
Totals			**$ 2,790,000**	**$ 2,094,544**	**$ 695,456**	**$ 600,000**	

11. Contract 883 – Mt Cooee Leachate Pump Station and Owaka Wastewater Pump Station

Mt Cooee:

- The switchboard was installed and connected on 11 September 2024.
- Isaac's are now working on shaping the leachate pond for the final design and will clean up the site after.

Owaka:

- The emergency storage tank has been installed and backfilled.
- Isaac's have finished the plinths this week and the new switchboard will be connected next week.

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
400091	400082	Owaka Wastewater Pump Station Renewal	$1,669,520	$1,206,692	$462,828	$462,828	$0
500011	500009	Mt Cooee Wastewater Pump Station & Leachate Pond Renewal	$1,940,000	$493,047	$1,241,011	$450,000	$0
Totals			**$3,609,520**	**$1364646.98**	**$2,244873.02**	**$1,033,490**	

12. Balclutha Pool Filter Replacement Project

- The commissioning of the new filters was successfully achieved and in time for the planned re-opening of the pool. The project was executed on time, and within budget and scope. To add to the improvements and efficiency of the filtration system, a vacuum transfer and sodium bisulphate mixing tank was ordered. The equipment is scheduled to arrive in early December. The installation will not affect the day-to-day running of the public pool.

- The remaining budget will be used for other prioritised capital-planned projects within the pool vicinity. This will be communicated once decisions are made.

Job Code	Project Code	Description	Budget	Cost to Date	Available Budget	Forecast Spend	Variance
570015	570011	Balclutha Filter Replacement	$500,000	$210,000	$290,000	$290,000	$0
Totals			**$500,000**	**$210,000**	**$290,000**	**$290,000**	

13. Other Contracts for preparation for the Financial Year 2024/2025

- The engagement of external consultants last month resulted in completing project scoping. Most of the projects are in the design phase, with the next milestone being the requests for tender. These projects would include the following:

Project No.	Project Name	Estimated Tender Date	PM
Various project nos.	Tank Procurement (122 +/- 15%)	Oct-24	Krunal
Various project nos.	Farm tank construction (11 sites)	Oct-24	Krunal
450043	Lawrence SW Renewal	Oct-24	John
310004	Balclutha Streetscape - Clutha Hub Car Park	Oct-24	Dredd
300013	215 - Structures component replacements	Nov-24	Ahmed
351007, 351010, 351068, 351071, 361024, 361165, 362020	Pipeline Renewals (5 tenders for 5 Locations)	Nov-24	Ahmed
400030, 402010	Balclutha Pump station	Nov-24	Ahmed
300037	Footpath Kerb and Channel	Nov-24	Dambar
310002	Milton Main Street/Streetscape Project	Nov-24	Dambar
450035	Kaitangata SW Renewal	Nov-24	John
351085	Milton-Tokoiti Water Network Extension	Nov-24	Kuben
640042	Housing unit maintenance and component replacement programme	Jan 2025	Hebe
300063	216 - Bridges renewals	Feb-25	Ahmed
352007, 352008, 352009	Backwash treatment system (tenders for 3 Locations)	Apr-25	Ahmed
362016	Mt Mistake Pump Station Replacement	Award Oct 2024	Kuben
400064	Connecting Stirling to Balclutha Sewer Network	TBC*	Kuben
500022, 500023, 500021	Projects relating to Mt Cooee	Under review**	Hebe

** Investigation in progress, cost comparison will be done once the investigation is complete to go with an infrastructure upgrade or landfill solution.*

*** Refer to Sections 3.2 and 4.1 for this report*