

Form 16 – Submission to the Otago Regional Council on Consent Applications

This is a Submission on (a) limited notified/publicly notified resource consent application/s pursuant to the Resource Management Act 1991.

Submitter Details:

(please print clearly)

Full Name/s: N [REDACTED] Macfarlane on behalf of Queenstown lakes Community Action (QLCA)

Postal Address:

[REDACTED]

[REDACTED]

Post Code:

[REDACTED]

Email address:

[REDACTED]

I/ we wish to **SUPPORT** / **OPPOSE** / submit a **NEUTRAL** submission on (circle one) the application of:

Applicant's Name: Queenstown Lakes District Council

Location: Shotover River/Kimiākau delta

Application Number: RM25.177

Purpose: To construct and operate a diversion channel within the bed of the Shotover River/Kimiākau to ensure the discharge of treated wastewater sought to be authorised under RM25.206 is always to flowing water.

Application Number: RM25.206

Purpose: Disposal of treated wastewater to water from a wastewater treatment plant and to construct a riprap outfall structure in the bed of the Shotover River/Kimiākau

Select one of the following options that applies:

- ☐ I am submitting on consent application RM25.177 **only**.
- ☐ I am submitting on consent application RM25.206 **only**.
- ☒ I am submitting on **both** consent applications.

The specific parts of the application/s that my submission relates to are: *(Give details)*

Please refer to the attached document “Submission to Otago Regional Council” prepared by QLCA and dated November 3rd 2025.

My/Our submission is *(include: whether you support or oppose the application or specific parts of it, whether you are neutral regarding the application or specific parts of it and the reasons for your views).*

Please refer to the attached document “Submission to Otago Regional Council” prepared by QLCA and dated November 3rd 2025.

I/We seek the following decision from the consent authority *(give precise details, including the general nature of any conditions sought)*

Please refer to the attached document “Submission to Otago Regional Council” prepared by QLCA and dated November 3rd 2025.

I/we:

- ☒ Wish to be heard in support of our/my submission
☐ Not wish to be heard in support of our/my submission

I, **am/am not** (choose one) a trade competitor* of the applicant (for the purposes of Section 308B of the Resource Management Act 1991).

****If trade competitor chosen, please complete the next statement, otherwise leave blank.***

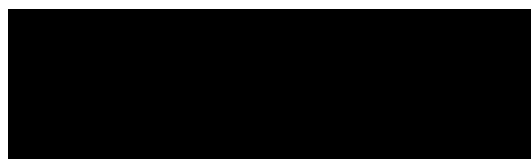
I, **am/am not** (choose one) directly affected by an effect as a result of the proposed activity in the application that:

- a) adversely affects the environment; and
- b) does not relate to trade competition or the effects of trade competition.

I, **do/do not** (choose one) wish to be involved in any pre-hearing meeting that may be held for this application.

I **have**/have not served a copy of my submission on the applicant.

Please be advised that this application will be directly referred to the Environment Court for a decision.



submitter/s)

3 November 2025

(Date)

Notes to the submitter

If you are making a submission to the Environmental Protection Authority, you should use [form 16B](#).

The closing date for serving submissions on the consent authority is 3 November 2025.

You must serve a copy of your submission on the applicant as soon as is reasonably practicable after you have served your submission on the consent authority.

Privacy: Please note that submissions are public. Your name and submission will be included in papers that are available to the media and the public, including publication on the Council website. Your submission will only be used for the purpose of the notified resource consent process.

If you are a trade competitor, your right to make a submission may be limited by the trade competition provisions in [Part 11A](#) of the Resource Management Act 1991.

If you make a request under [section 100A](#) of the Resource Management Act 1991, you must do so in writing no later than 5 working days after the close of submissions and you may be liable to meet or contribute to the costs of the hearings commissioner or commissioners.

You may not make a request under section 100A of the Resource Management Act 1991 in relation to an application for a coastal permit to carry out an activity that a regional coastal plan describes as a restricted coastal activity.

Please note that your submission (or part of your submission) may be struck out if the authority is satisfied that at least 1 of the following applies to the submission (or part of the submission):

- it is frivolous or vexatious:
- it discloses no reasonable or relevant case:
- it would be an abuse of the hearing process to allow the submission (or the part) to be taken further:
- it contains offensive language:
- it is supported only by material that purports to be independent expert evidence, but has been prepared by a person who is not independent or who does not have sufficient specialised knowledge or skill to give expert advice on the matter.

The address for service for the Consent Authority is:

Otago Regional Council, Private Bag 1954, Dunedin, 9054

or by email to submissions@orc.govt.nz

Submission to Otago Regional Council

CC: Queenstown Lakes District Council (QLDC)

Re: Applications RM25.177 and RM25.206 - Shotover Wastewater Treatment Plant

Topic: Discharge of Treated Wastewater to the Kimi-ākau/Shotover River and Associated Works (final version)

Submitted by: Queenstown Lakes Community Action (QLCA)

Date: 3 November 2025

Contact:

Contact Person: N. Macfarlane

1. Introduction

Queenstown Lakes Community Action (QLCA) welcomes the opportunity to provide feedback on QLDC's applications to discharge treated wastewater from the Shotover Wastewater Treatment Plant (WWTP) to the Kimi-ākau/Shotover River (RM25.206) and to construct and operate a diversion channel within the riverbed (RM25.177).

These applications seek to retrospectively authorise activities commenced under section 330 of the Resource Management Act 1991 (RMA), following QLDC's declaration of an "emergency" due to bird strike risk at Queenstown Airport.

QLCA strongly opposes the granting of these consents as currently proposed.

The discharges are continuing without a comprehensive environmental assessment, credible exploration of improved treatment options, democratic process, or public accountability.

This submission addresses both the **environmental deficiencies** in the applications and the **governance and regulatory failures** that have allowed this situation to arise. QLCA participates in this process to uphold the public interest in sustainable management under section 5 of the RMA.¹

All referenced documents have been stored in Dropbox for ease of access and are linked in the footnotes throughout this document.

2. About Queenstown Lakes Community Action (QLCA)

QLCA is a community-based group established in March 2025 in direct response to Queenstown Lakes District Council's (QLDC) decision to discharge treated effluent from the Shotover Wastewater Treatment Plant (WWTP) into the Kimi-ākau/Shotover River.

We are local residents and ratepayers united by a shared commitment to protecting the unique natural environment and freshwater ecosystems of the Queenstown Lakes District. QLCA was formed to give voice to the community, to advocate for transparent, evidence-based decision-making, and to ensure that public institutions are held accountable for their environmental performance and governance responsibilities.

Since its formation, QLCA has compiled detailed timelines, analysed technical and legal documents, and engaged directly with elected representatives and regulatory authorities. Through this work, we seek to improve transparency, encourage robust environmental stewardship, and ensure that decision-making reflects the community's long-term interests rather than short-term expediency.

Our work is guided by the principles of democracy, transparency, and accountability, and by the belief that communities must be actively involved in decisions that affect the health of our rivers, our ecosystems, and our future.

This submission reflects QLCA's ongoing commitment to protecting the Kimi-ākau/Shotover and Kawarau Rivers, to ensuring that decisions are based on sound and independently verified evidence, and to upholding the community's right to be heard in environmental governance.

This submission has been prepared by Queenstown Lakes Community Action (QLCA) with the assistance of artificial intelligence (AI) drafting tools to support clarity and structure. All information, analysis, and positions expressed are those of QLCA.

3. Summary of Position

QLCA submits that the applications cannot be granted in their current form because:

1. No independent, field-based ecological or environmental assessment of the Kimi-ākau/Shotover or Kawarau Rivers has been completed to determine potential harm to the ecosystem and how any harm will be mitigated.
2. There is no independent assessment of the potential effects on downstream drinking-water sources, including cumulative impacts on groundwater, the Kawarau River, and connected aquifers.

3. The decision to continue to discharge to river for five years and surrender the discharge to land consent has not been agreed by the elected members and is not aligned with the statutory documents QLDC Infrastructure Plan 2024-2054 and QLDC Significance and Engagement Policy (2024).
4. The decision to surrender the land discharge consent removes the option to discharge to the disposal field in case of a catastrophic failure of the wastewater treatment plant and is not aligned with QLDC's focus on resilience in the QLDC Infrastructure Plan 2024-2054.
5. No credible assessment or costing of alternatives to improve treatment of effluent prior to river discharge and the alternatives have not been presented to elected members to decide on.
6. There is no contingency plan proposed in case of a failure within the plant.
7. There are no enforceable milestones or reporting requirements to demonstrate progress toward a long-term solution.
8. There is no provision for expanded contaminant testing, such as heavy metals, microplastics, pharmaceuticals, antibiotics, pesticides or fertilisers, despite the potential for these to persist and accumulate downstream.
9. There is a persistent pattern of testing non-compliance, delayed reporting, and lack of transparency from QLDC.
10. The proposed consent conditions contain no enforceable mechanisms for accountability, independent oversight, or public disclosure.

For these reasons, it is our view that the outcome of the applications should not be determined until independent assessments and robust conditions are in place.

4. Background

The Shotover WWTP serves the wider Whakatipu Basin. Prior to 2019, treated effluent was being discharged directly to the Kimi-ākau/Shotover River. As part of the WWTP upgrades (Stage 2), a land discharge was planned. Initially, QLDC had obtained consents to construct a large gravel platform to enable land discharge. However, the gravel intended for this was used on another project which increased the estimated costs (from \$7.7 million to \$19 million). As an alternative, a dose and drain system was proposed which significantly reduced costs (down to \$4.3 million).² QLDC then sought variations to the consents allowing them to construct the disposal field using the dose and drain system which was significantly smaller (2.8 hectares) than the initial design. In assessing the application, Otago Regional Council

² [DAD - an Innovative Dose and Drain Land Dispersal System](#)

(ORC) raised concerns about the loading rates and the potential for groundwater mounding and surface ponding.³ The intention was for the field to be expanded as required if the field was not performing as modelled. Conditions were included in the consent to require a five-year mounding trial period and for QLDC to advise ORC of any changes to the extent of the operational disposal area.

The original discharge to the Kimi-ākau/Shotover River ceased in 2019 when the dose and drain disposal field was commissioned. This system failed repeatedly from 2021 onwards due to poor design, periods of heavy rain or flooding, management and operational failures allowing solids into the effluent, a lack of maintenance, and solids coming from the oxidation ponds. These factors negatively impacted the quality of the effluent reaching the disposal field, leading to ponding, discharge of untreated or partially treated effluent into the publicly accessible Shotover Delta, and breaches of consent conditions.

From 2021, multiple infringement and abatement notices were issued to QLDC by ORC as the regulator, requiring QLDC to prevent ponding in the disposal field, meet effluent quality conditions, and prevent discharge beyond the perimeter fence. In July 2023, QLDC commissioned Beca to produce a report on the feasibility of expanding the field to increase its capacity. This report is referenced in a more recent report from GHD.⁴ In their report, Beca investigated an “all-in” solution which was costed at \$57 million +/- 50% cost accuracy. In September 2023, QLDC commissioned Beca to investigate the issues with the disposal field, and propose short-term mitigations and long-term solutions.⁵ Beca concluded that the size of the field was too small, had a shallow groundwater table, and became clogged which was believed to have come primarily from the oxidation ponds.

In 2024, the ORC referred the ongoing non-compliances to the Environment Court. Mott MacDonald (2024), commissioned by the ORC, had completed a technical review of the plant’s performance, identifying multiple operational and maintenance deficiencies that had contributed to the non-compliances.⁶ In its evidence to the Court it outlined a number of alternatives for improving the efficacy of the disposal field. In June 2025, the Environment Court issued an enforcement order requiring QLDC to comply with a number of requirements to improve the operations of the plant.

Independent bird count reports are carried out monthly as required by the Sewage Treatment Works Designation. These reports are forwarded to QLDC. As the disposal field filled with water during 2023-2024, birds began to settle and nest on the disposal field. On 31 March 2025, QLDC commenced a direct discharge to the Kimi-ākau/Shotover River, claiming an emergency under s330 of the RMA related to the increased risk of bird strike at Queenstown Airport.

³ [ORC Staff Recommending Report](#)

⁴ [Shotover WWTP: Project Inception, Basis of Design and Gap Analysis Report](#)

⁵ Ibid.

⁶ [Mott MacDonald Technical Assessment](#)

A timeline, prepared by QLCA, has been included in the dropbox for reference. This was compiled over the last eight months, from publicly available documentation.⁷

5. Inappropriate Use of Section 330 and 330A

Section 330 of the RMA allows councils to take immediate action in an emergency to prevent or mitigate injury, loss of life, serious property damage, or an adverse effect on the environment. It is intended for short-term, unforeseen events, not foreseeable operational or maintenance failures. Once the immediate risk has passed, the council must apply for proper consent “as soon as practicable” and return to normal statutory and governance processes.

The “emergency” relied upon by QLDC, that there was an elevated risk of bird strike, does not meet the intent of s330. Evidence indicates that the situation arose from long-running operational problems that were foreseeable and manageable, rather than from a sudden, unpredictable event.

- QLDC has received monthly bird-count reports for several years under its Sewage Treatment Works Designation (#46), which requires the facility to be managed so as not to attract birds hazardous to aircraft.⁸
- Ponding on the disposal field - which can attract birds - was well known and had been discussed in council and consultant reports from 2021 onwards.
- The Veolia incident report (Nov 2023 - Apr 2024) documented multiple operational failures (centrifuge, polymer dosing, and aeration systems) that caused sludge accumulation and surface ponding, creating conditions conducive to bird activity.
- Bird count reports commissioned by QLDC and sent to them monthly, highlighted concerns about increasing numbers of birds settling and nesting on the disposal field multiple times throughout 2023 and through to January 2025. The related quotes from these reports can be found in Appendix A.⁹
- Despite this, Queenstown Airport Corporation (QAC) were not made aware of an increase in birds settling on the disposal field until July 2024.¹⁰
- We were advised by QAC that they spoke several times with QLDC about the increase in birds and the increased risk of bird strike in late 2024.¹¹ However, these were mostly in telephone conversations and any meetings that did take place were not minuted. Additionally, QAC advised us that a meeting did take place in January 2025 between

⁷ [QLCA Draft Timeline](#)

⁸ [QLDC Designations, page 95](#)

⁹ Bird Count Reports 2023-2025

¹⁰ Personal communication in meeting between QAC and QLCA

¹¹ Ibid.

the General Managers of QAC and QLDC (in a quarterly scheduled meeting) where the concerns about birds was placed on the agenda. However, minutes are not taken for this meeting and upon requesting QAC staff who were present at that meeting if they had any recollections or if notes were taken, none were available.

- On 9 December 2024, GHD provided a report that included a risk register in the appendices. They highlighted the risk status as:¹²
 - **Risk Issue:** Bird strike due to WWTP location being next to the Queenstown airport
 - **Risk Description:** Design may include components that bring more birds to the area i.e. open water and surface water wetlands
 - **Impact/Consequence:** Bird strike on planes, increase of likelihood
 - **Risk Rating:** High

The possibility of discharging directly to the river and diverting away from the disposal field because of ongoing problems was first raised on June 15, 2023. In an affidavit, an ORC officer describes a site visit to the WWTP where this was discussed in a meeting between themselves, an ORC Team Leader Consents Planner and QLDC.¹³

During this meeting QLDC stated that they cannot manage the field as it is throughout winter, and that ratepayer's money would be better spent on the longer-term solution. There was a discussion for a 2-year short term consent to discharge to the Shotover River directly via the previously consented outfall as an 'alternative and interim discharge' whilst the disposal field is repaired, modified or relocated entirely (possibly occupying the footprint of one of the oxidation ponds which are to be decommissioned earlier than planned). QLDC plan to line the flow channel with rip rap to create as much land contact as possible during this time. IWI is attending the site next week to discuss this proposal. QLDC are hopeful that consent application can be expected by ORC consents in a matter of months.

We were unable to find any evidence to confirm that the proposal was discussed with iwi partners or any subsequent decisions made.

In a memo to councillors dated 27 January 2025, General Manager of Property and Infrastructure Tony Avery, stated that, following reports from Mott MacDonald and GHD:

As a result of these factors and given the need for timely implementation and surety of outcomes, sole reliance on land application as an option for managing excess wastewater flow was not considered a viable option.

¹² [Shotover WWTP: Project Inception, Basis of Design and Gap Analysis Report](#)

¹³ [Affidavit of S L Reed, page 11](#)

The recommended approach was therefore to pursue a full or partial return to a direct to water discharge, utilising the historical discharge channel. Such an approach would require a new, short term, discharge consent to be obtained.

Doing so would achieve an immediate improvement in the control and management of the treated water on the delta, and also enable the existing field to be dried out and maintenance more effectively undertaken. However, we are cognisant of Iwi concerns around this approach and are looking to gauge the ORC's and Iwi reaction to such a step well before any consent application is lodged.

This memo demonstrates that the decision to discharge to the Shotover River was a strategic management choice, not a reactive emergency response, and was a solution that had been considered for several years as evidenced by the previously noted meeting by the ORC officer.

The record shows that the risks were foreseeable, mitigation measures were available (including netting, desludging, and improved solids handling). The “emergency” rationale is unconvincing and addresses a foreseeable risk from long-running operational failures, together with knowledge of the growing concern of birds settling on the disposal field over an 18 month period. This was not an immediate, unforeseen event as intended under s330 of the RMA. On this evidence, QLDC’s reliance on s330 was inconsistent with the statutory purpose of emergency powers and effectively bypassed consultation with iwi partners, governance from elected members, and community consultation.

6. Key Concerns

6.1 Lack of Environmental Assessment and Verification

No new ecological fieldwork, hydrological modelling, or site-based surveys have been undertaken. Multiple documents explicitly state that findings rely on desktop analysis, photographs, and unverified data:

- **ORC Notification Recommendation Report:** “A site visit was not carried out as there was considered to be sufficient photographic evidence, plans and aerial mapping information to understand the nature of the site at this stage of the process.”¹⁴
- **QLDC Application:** “There is no recent information available with regards to terrestrial ecology, however the following photos have been taken of the proposed river diversion alignment and disturbance area. The photos show that there are no obvious visible signs of terrestrial ecology within this proposed riverbed disturbance area.”¹⁵

¹⁴ [ORC Notification Recommendation Report, page 31](#)

¹⁵ [QLDC Resource Consent Application, page 37](#)

- **GHD Surface Water & Groundwater Assessment (Apr 2025):** “GHD has not independently verified or checked beyond the agreed scope... assumed information is correct.”¹⁶
- **Landpro S92 Response (Aug 2025):** “We have relied on reports and information provided by others; we have not collected any freshwater ecology information ourselves or visited the site.”¹⁷

This falls well short of Schedule 4(3)(c) of the RMA, which requires “*such detail as corresponds with the scale and significance of the effects that the activity may have on the environment.*”¹⁸ Additionally, Schedule 4(7)(c) requires there must be an assessment of the effect on the environment if there is “*any effect on ecosystems, including effects on plants or animals and any physical disturbance of habitats in the vicinity.*” Further, Schedule 4(6) states that (a) “*if it is likely that the activity will result in any significant adverse effect on the environment, a description of any possible alternative locations or methods for undertaking the activity*” and (b) “*an assessment of the actual or potential effect on the environment of the activity*”.

QLDC’s 30 Year Infrastructure Strategy 2024–2054 commits the Council to “*protect human and environmental health*” and to “*maintain levels of service.*”¹⁹ Proceeding with a discharge consent supported only by desktop analysis conflicts with those commitments and undermines Council’s stated objectives of evidence-based environmental management.

The absence of any current environmental or ecological fieldwork is inconsistent with the National Policy Statement for Freshwater Management 2024 (NPS-FM) which prioritises the health of well-being of freshwater ecosystems. The concepts outlined in the NPS-FM emphasise the principles of not just sustaining the health of freshwater bodies but also enhancing them for future generations.²⁰ This is reinforced in the Otago Regional Policy Statement which states that all decision making should prioritise “*an integrated approach that is consistent with tikaka and kawa, that: sustains and, to the greatest extent practicable, restores or improves: (a) the natural connections and interactions between water bodies, the natural connections and interactions between land and water, from the mountains to the sea, the habitats of mahika kai and indigenous species, including taoka species associated with the water bodies.*”²¹

Additionally, the Otago Regional Policy Statement (2021)²² emphasises that decisions have “*regard to cumulative effects,*” and “*applies a precautionary approach where there is limited available information or uncertainty about potential adverse effects.*” A precautionary approach when scientific data is absent or there is insufficient information was established by

¹⁶ [GHD Surface Water and Groundwater Assessment, page 7](#)

¹⁷ [S92 Landpro Response, page 82](#)

¹⁸ [Resource Management Act \(1991\)](#)

¹⁹ [QLDC 30 Year Infrastructure Strategy 2024-2054](#)

²⁰ [National Policy Statement for Freshwater Management \(2024\)](#)

²¹ [Otago Regional Policy Statement \(2021\)](#)

²² Ibid.

the Supreme Court in *Sustain Our Sounds Inc v NZ King Salmon Co Ltd* [2014] NZSC 40, stating “a precautionary approach to the use and development of resources” will be taken “to ensure there are no adverse effects on the environment”.²³

The lack of an up to date environmental assessment is of particular concern given the Kimi-ākau/Shotover River is home to longfin eels and kōaro, both of which are species at risk and declining.²⁴ Without an independent and current environmental assessment, it is not possible to understand any potential impacts on the environment, especially given QLDC are proposing that the river discharge continues for a period of five years.

6.2 Lack of Independent Assessment of Downstream Drinking Water Sources

There is no independent assessment of the potential effects of this discharge on downstream drinking-water sources, including cumulative impacts on groundwater, the Kawarau River, and connected aquifers.

While groundwater samples were taken by the applicant, we believe there are numerous reasons why these are inadequate in determining the potential effects on drinking-water sources and aquifers downstream, including:

- A single round of groundwater samples taken a week after commissioning cannot characterise transport, attenuation, seasonality, or cumulative effects for a 5-year discharge.
- A single, initial snapshot is not representative of seasonal variability, river stage changes, travel times, or cumulative effects expected over a five-year term.
- Schedule 4 (RMA) requires information “to the degree commensurate with the scale and significance of effects.”²⁵ A five-year discharge to a major river warrants multi-season field data, not a one-off sample.
- The applicant confirms the bores from where samples were taken are 500 m upstream, on the opposite bank (‘true left bank’) of the river to the discharge channel. These bores cannot inform downstream risk in the Kawarau confluence reach or connected aquifers, particularly over multiple years.
- The influence of treated wastewater is evident downgradient. Detectable wastewater influence this early indicates a plausible pathway for contaminants. Without transport modelling and multi-season monitoring, the magnitude and extent of this influence over five years remains unknown.

²³ [Sustain Our Sounds Inc v NZ King Salmon Co Ltd \[2014\] NZSC 40](#)

²⁴ [ORC Notification Recommendation Report, page 26](#)

²⁵ [Resource Management Act \(1991\)](#)

- While the application says higher ammoniacal-N at BH04 is “*likely due to longer-term discharges*” from historic infrastructure, this is an acknowledgement that existing contamination exists which increases the need to determine legacy impacts from new impacts resulting from the current discharge to river.

This omission breaches several key requirements:

- The RMA requires that:²⁶
 - “*any actual and potential effects on the environment of allowing the activity*” (section 104(1)) are identified,
 - there must be “*an assessment of the actual or potential effect on the environment of the activity*” (Schedule 4(6)(b)),
 - “*if the activity includes the discharge of any contaminant, a description of the nature of the discharge and the sensitivity of the receiving environment to adverse effects*” (Schedule 4(6)(d)),
 - and an assessment of “*any effect on those in the neighbourhood and, where relevant, the wider community, including any social, economic, or cultural effects*” (Schedule 4(7)(1)).
- The National Environmental Standards for Sources of Human Drinking Water (2007), Regulations 7–10, require that discharge consents cannot be granted where there is a risk to registered drinking-water supplies or where effects on those supplies have not been adequately assessed.²⁷
- The National Policy Statement for Freshwater Management (2020), under Te Mana o te Wai, requires that the health needs of people - such as access to safe drinking water - are prioritised ahead of other water uses.²⁸
- Otago Regional Council requires that consent applications identifies:²⁹
 - all components of the local freshwater system and how they are connected
 - nearby water users and sensitive receptors
 - downstream and downgradient receiving environments and the extent to which they might be affected by the proposal.

No part of QLDC’s application demonstrates that these obligations have been met.

²⁶ Ibid.

²⁷ [National Environmental Standards for Sources of Human Drinking Water \(2007\)](#)

²⁸ [National Policy Statement for Freshwater Management](#)

²⁹ [Otago Regional Council Technical Requirements... Contaminants](#)

The Kimi-ākau/Shotover River flows into the Kawarau River, which then joins the Clutha/Mata-Au near Cromwell. The Clutha/Mata-Au system continues downstream toward Lake Dunstan, Clyde, and Alexandra. The Shotover discharge therefore contributes to the cumulative contaminant load entering Lake Dunstan.

Even highly treated effluent contains residual nutrients. Over time, cumulative nutrient loads from multiple discharges increase nutrient accumulation. This has the potential to increase the risk of eutrophication in Lake Dunstan, increase the risk of algal blooms, and degradation of the water quality. Additionally, pathogens, trace contaminants (e.g., microplastics or pharmaceuticals), heavy metals, and sediment could all build up at Dunstan. Nutrient-rich discharge can affect the temperature of water bodies and increase stress on native aquatic species. Without a full assessment and analysis looking at the long-term impacts of cumulative loads downstream of Queenstown, it is not possible to determine how a five-year discharge could impact the downstream ecosystem and communities.

There is no field-based data, details on what contaminants are present or how they might be transported, or groundwater analysis to determine whether contaminants from the discharge could enter the shallow aquifers that feed downstream water.

As noted in section 6.1 of this document, a precautionary approach when scientific data is absent or there is insufficient information was established by the Supreme Court in *Sustain Our Sounds Inc v NZ King Salmon Co Ltd* [2014] NZSC 40, stating “a precautionary approach to the use and development of resources” will be taken “to ensure there are no adverse effects on the environment”.³⁰ Also noted in section 6.1, the Otago Regional Policy Statement (2021)³¹ emphasises that in making decisions, ORC “applies a precautionary approach where there is limited available information or uncertainty about potential adverse effects.”

Reliance on desktop mapping and aerial photography, as noted in QLDC’s application, falls well short of the requirement for assessments to be based on independent and scientifically robust field analysis.

In the absence of verified data, the consent authority cannot be confident that the discharge will not adversely affect downstream drinking-water quality or public health. Because of this, we believe the consent should therefore be declined or limited in duration until adequate, independently verified investigations have been undertaken.

6.3 Surrender of Land Discharge Consent

The Otago Regional Council’s Notification Recommendation Report states:³²

³⁰ [Sustain Our Sounds Inc v NZ King Salmon Co Ltd \[2014\] NZSC 40](#)

³¹ [Otago Regional Policy Statement \(2021\)](#)

³² [ORC Notification Recommendation report, page 7-8](#)

“The Applicant proposes that if the resource consents sought as part of this proposal are granted, then the existing resource consent that authorises the discharge of treated wastewater to land will be surrendered.”

This proposal is not a routine operational adjustment. It represents a permanent, strategic change to how QLDC delivers one of its core public services - wastewater management.

Surrendering the land discharge consent would eliminate an entire disposal method, reduce system resilience, and remove the ability to divert flows to land in the event of treatment failure or high inflows. It therefore triggers statutory obligations under both the Resource Management Act 1991 (RMA) and the Local Government Act 2002 (LGA).

Under the LGA (ss 76–82) and QLDC’s Significance and Engagement Policy (2024), a decision is “significant” when it materially affects:³³

- the level of service for a core activity;
- the environmental, cultural, social or economic well-being of the community; or
- consistency with existing Council strategies and policies.

The proposed surrender meets all three tests. It is irreversible, reduces resilience, and conflicts with the Infrastructure Strategy 2024-2054, which commits Council to maintaining service levels and protecting environmental health. It also affects community and cultural wellbeing by removing environmental safeguards and constraining future options for wastewater management.

Because of these effects, the decision cannot be treated as an operational matter delegated to staff. Significant service changes under the LGA must follow a defined governance process that includes:

1. identification and assessment of practicable options (s77 LGA);
2. consideration of community and mana whenua views;
3. a formal determination of significance by elected members; and
4. genuine consultation proportionate to that significance.

There is no public record that elected members have undertaken or approved this process. If that has not occurred, the decision-making obligations under the LGA remain incomplete. Proceeding without a formal significance assessment or consultation risks non-compliance, loss of transparency and accountability, and exposure to legal and reputational challenge.

³³ [Local Government Act \(2002\)](#)

While invoking s330 of the RMA to authorise a temporary emergency discharge may have been an operational decision, the proposed surrender of the land discharge consent converts that emergency response into a permanent service change.

Such a change requires full democratic oversight and consultation through elected members - not staff delegation - to ensure compliance with both the LGA and the RMA.

6.4 Failure to Explore Interim Treatment Improvements

While the application and supporting reports briefly discuss long-term alternatives for wastewater disposal (including potential land-based options outlined by Beca, 2023³⁴ and Mott MacDonald, 2024³⁵), there has been no assessment of practical, short-term treatment improvements that could be implemented during the proposed five-year period of river discharge.

The emergency discharge under s330 of the RMA was enacted in March 2025 to address the immediate failure of the disposal field and the elevated risk of bird strike at Queenstown Airport. Eight months later, that emergency phase has ended. Decisions made now are no longer emergency responses - they are deliberate, planned decisions that must comply with normal statutory decision-making processes.

Despite this, QLDC has not brought forward to elected members or the public any assessment of feasible interim improvements such as:

- Enhanced filtration or polishing following the UV treatment stage;
- Nutrient reduction technologies (e.g., denitrification filters or wetland polishing);
- Upgrades to aeration or solids management systems to improve effluent quality; or
- Real-time monitoring and adaptive control systems to reduce non-compliance risk.

Each of these measures could materially reduce the contaminant load entering the Kimi-ākau/Shotover River and improve operational resilience while longer-term solutions are identified. The omission of such analysis represents a missed opportunity to minimise environmental effects and uphold the intent of the RMA's sustainable management purpose (section 5(1)(c)) by "*avoiding, remedying, or mitigating any adverse effects of activities on the environment*" and effects-based assessment requirement (section 104(1)).³⁶

Under Schedule 4 of the RMA, every application must include an assessment of "*alternative locations or methods for undertaking the activity*" where the activity is likely to have significant

³⁴ [Shotover WWTP: Project Inception, Basis of Design and Gap Analysis Report](#)

³⁵ [Mott MacDonald Technical Assessment](#)

³⁶ [Resource Management Act \(1991\)](#)

adverse effects.³⁷ The failure to evaluate reasonably practicable interim methods - particularly those involving improved treatment - does not meet this obligation.

This also conflicts with sections 77–79 of the Local Government Act 2002, which require councils to identify and assess all reasonably practicable options before making significant decisions, and to consider community views proportionate to the decision’s importance.³⁸ No such assessment has been reported to elected members prior to QLDC staff making the decision to apply for resource consent retrospectively.

QLDC’s own 30 Year Infrastructure Strategy 2024–2054 identifies “*protecting human and environmental health*” and “*maintaining levels of service*” as key objectives, and notes the need for adaptive, staged investment in infrastructure to meet environmental standards.³⁹ Proceeding with a five-year discharge without investigating achievable interim improvements contradicts these commitments.

6.5 Lack of Contingency Plans

The WWTP has experienced two major operational failures in recent years, each resulting in partial or complete loss of treatment capacity and subsequent non-compliance with consent conditions. Given this history, it is entirely foreseeable that further failures could occur.

Despite this, no comprehensive contingency plan has been presented to ensure service continuity or environmental protection in the event of another plant failure.

Currently, the only potential short-term option would be to temporarily discharge to the old oxidation ponds, which remain on site but are not expected to be fully decommissioned for another 18–24 months. No plan has been described for how this could be operationalised if a failure occurred, and there are no identified trigger points, risk thresholds, or decision protocols to guide emergency responses.

A more resilient contingency option exists through remediation of the land disposal field, which could provide a functional backup if required. However, QLDC proposes to surrender the existing land discharge consent and has no plans to remediate or retain the disposal field, even as an emergency standby facility. This decision further reduces the district’s wastewater resilience and conflicts with the QLDC Infrastructure Strategy 2024–2054 commitment to maintaining essential services and protecting environmental health.

The absence of a credible contingency plan increases risk to the environment, public health, and compliance with the RMA. A single mechanical or process failure at the main plant would leave no lawful or operational means to manage wastewater, leading to potential uncontrolled discharge or service disruption.

³⁷ Ibid.

³⁸ [Local Government Act \(2002\)](#)

³⁹ [QLDC 30 Year Infrastructure Strategy](#)

6.6 Operational Errors

The problems at the Shotover Wastewater Treatment Plant were not limited to design and environmental factors. Evidence from the Veolia incident report and the Mott MacDonald review indicates a pattern of operational and maintenance failures between 2023 and 2024 that significantly affected treatment performance and compliance.⁴⁰

Both centrifuges failed, sludge removal ceased, and aeration deficiencies led to severely reduced dissolved oxygen levels and odour complaints from the community. Polymer dosing faults and manual intervention compounded the instability. These failures persisted for months before repairs were completed.

Veolia attributed many of these issues to inadequate preventive maintenance by the previous operator, suggesting deeper systemic problems in how the facility was managed and overseen. The recurring mechanical faults and lack of early intervention point to weaknesses in both contractor performance monitoring and QLDC's governance of the plant.

Without clear accountability and robust governance mechanisms, similar operational failures could recur. These findings suggest that any future consent would benefit from clear mechanisms to ensure transparency, defined responsibilities, and independent oversight of operational performance and maintenance practices.

6.7 Insufficient Testing and Public Reporting

Robust and transparent monitoring is essential to assess environmental performance and maintain public confidence in the management of wastewater discharges. QLDC committed publicly in March 2025 that they would ensure test results were provided to help build public trust. However, current testing and reporting practices at the WWTP are inadequate and fall short of community standards for transparency.

QLDC currently reports on a narrow range of parameters, primarily BOD₅, total nitrogen, total phosphorus, total suspended solids, and E. coli. These indicators measure general treatment efficiency but do not reflect the full range of contaminants of concern in treated wastewater. Modern monitoring regimes, consistent with national and international best practice, include additional parameters such as heavy metals, microplastics, pesticides, pharmaceuticals, antibiotics, and fertilisers.

These contaminants are known to persist in aquatic environments, accumulate in sediments and biota, and potentially affect downstream ecosystems and drinking-water sources. Even if tested at lower frequency (e.g., quarterly or biannually), their inclusion is essential to provide a more complete understanding of cumulative and long-term impacts.

⁴⁰ [Mott MacDonald Technical Assessment, page 16-18](#)

- Weekly E. coli results are published only retrospectively at the end of each month, and other parameters are reported once per month for a single day's sampling. This prevents meaningful public scrutiny or timely detection of anomalies.
- The Environment Court Enforcement Order (June 2025) requires that when an "event"⁴¹ occurs, QLDC must undertake daily testing for at least three weeks. These results are not currently published or made available in a timely manner, undermining the intent of that order and preventing public scrutiny in understanding if QLDC are following the Enforcement Order from the Environment Court issued in June 2025.

7. What QLCA is Asking For

Before any decision is made, QLCA requests that the Otago Regional Council and the Environment Court require the following actions.

7.1 Independent Environmental and Drinking Water Assessment

The application by the applicant is insufficient to determine that the environmental effects will not be significant. The lack of a comprehensive environmental assessment does not meet the requirements of Schedule 4 of the RMA, the Otago Regional Policy Statement, and the National Policy Statement for Freshwater Management 2024. It also does not meet QLDC's own standards set out in the statutory document QLDC 30 Year Infrastructure Strategy 2024-2054.

While the addition of the second MLE process is expected to improve the quality of the discharge, there have been at least two occasions in the last two years where "catastrophic" operational failures within the current plant have caused untreated effluent to be discharged and these failures could potentially occur again. If they do, there is no barrier between the plant and the river and currently, no contingency plan for diverting untreated or partially treated effluent, increasing the risk of contaminants entering the ecosystem.

Given only one early sampling round, monitoring points that do not test the downstream Kawarau/aquifer pathway, evidence already showing wastewater influence downgradient, and no independent drinking water assessment, the information is inadequate for a five-year term. Applying s104(6) RMA and the precautionary approach, we believe that any authorisation should be limited to 12 months with conditions requiring robust investigations to assess the impacts on drinking water and aquifers, followed by a fully notified, long-term application based on complete field evidence is needed.

Because the required ecological, hydrological, and cumulative impact assessments have not been undertaken, we believe the information before the Court is inadequate to make a

⁴¹ An "event" is any test result that exceeds consent conditions.

properly informed decision under Schedule 4 of the RMA. The evidence available does not rule out significant effects on the environment, including on the receiving waters of the Kimi-ākau/Shotover River, downstream groundwater, and connected aquifers.

Accordingly, we ask that the Court:

1. Apply the precautionary principle (as affirmed in *Sustain Our Sounds Inc v NZ King Salmon Co Ltd* [2014] NZSC 40 at [133] and in the Otago Regional Policy Statement) and decline the application on the basis of insufficient information; or, if the Court considers some form of authorisation necessary,
2. Limit any consent granted to a term of no more than 12 months, and require that within that period QLDC:
 - Undertake comprehensive, field-based environmental, ecological and hydrological assessments consistent with Schedule 4 RMA and NPS-FM (2020) requirements,
 - Assess potential and cumulative effects on downstream receiving waters, aquifers, and drinking-water sources through to Dunstan, and
 - Report findings publicly and to mana whenua prior to lodging any further or longer-term application.

Only once these investigations are completed and independently verified should a long-term discharge consent be considered.

7.2 Retaining Land Discharge Consent

We are asking that the Environment Court, and the Otago Regional Council as the consent authority, recognise that the decision to surrender the existing land discharge consent is not an operational matter but a material change to the level of wastewater service provided to the community. As such, it must be subject to the full decision-making and consultation requirements of the Local Government Act 2002 (LGA) and QLDC's Significance and Engagement Policy (2024) before any surrender takes effect.

Specifically, we ask that:

1. No surrender of the land discharge consent be accepted or actioned until QLDC has demonstrated that it has complied with the LGA (2002), including:
 - identification and assessment of practicable options (LGA s 77),
 - evaluation of advantages, disadvantages, and costs,
 - assessment of risks to environmental and community wellbeing, and

- genuine consideration of community and mana whenua views.
2. Elected members, not staff, must make the decision. QLDC's elected members should be formally presented with a Significance and Engagement assessment and determine whether the surrender constitutes a significant change in level of service under the council's own policy. This determination must be made transparently in a public meeting, supported by adequate analysis of options and risks.
 3. Community and mana whenua consultation must occur: If the decision is deemed significant - as the evidence clearly indicates - QLDC must undertake formal consultation consistent with the LGA. This should include disclosure of information on costs, environmental effects, and long-term implications for wastewater resilience.
 4. The land discharge consent should be retained as part of QLDC's wastewater service provision until such time as an open, transparent process demonstrates that permanent surrender will not reduce environmental safeguards, service resilience, or public confidence. Retaining the consent provides essential contingency capacity and aligns with QLDC's stated commitment in its Infrastructure Strategy 2024–2054 to maintain service levels and protect human and environmental health.
 5. If the Environment Court grants retrospective consent for river discharge, we would request a condition requiring QLDC to:
 - complete a full governance and consultation process under the LGA before surrendering any existing consents, and
 - require QLDC to demonstrate integration of its RMA and LGA processes, and
 - report publicly on how it has met those statutory obligations.
 6. We would seek the Environment Court and ORC to encourage QLDC to integrate its environmental consenting processes (under the RMA) with its governance and community engagement obligations (under the LGA), so that significant service changes cannot occur without democratic oversight and transparency.

We are not opposing lawful wastewater management - we are seeking good governance and due process with the decision made through our elected council members, not by staff delegation. This ensures that decisions of such lasting environmental, cultural, and service significance are made openly, transparently, and in accordance with the law.

7.3 Proper Assessment of Alternatives for Treatment Improvement

Multiple technical reports, including those by Beca (2023) and Mott MacDonald (2024), have discussed longer-term alternatives for the failed land-disposal system. However, none consider how treatment performance at the existing plant could be improved in the interim to minimise harm while treated effluent is being discharged to the river and future options are

assessed. This gap in the analysis leaves councillors and the public without a full understanding of what could be achieved now to protect the Kimi-ākau/Shotover River.

We ask that the Court:

1. Recognise the absence of any assessment of interim or enhanced treatment options, and either:
2. Decline the five-year term on the basis that the information before it is incomplete under section 104(6) of the RMA; or, if a short-term consent is granted, or,
3. Require QLDC, within the first 12 months of any consent, to:
 - a. Undertake a comparative technical and cost assessment of feasible interim treatment improvements (e.g., filtration, nutrient polishing, or advanced oxidation);
 - b. Report the findings to elected members and the public under the Significance and Engagement Policy (2024);
 - c. Implement any low-impact, high-benefit improvements identified as practicable; and
 - d. Provide the results to the Otago Regional Council and Kāi Tahu for review prior to seeking any longer-term consent.

These steps would align the decision with the RMA, the LGA, and QLDC's own strategic objectives, ensuring that environmental effects are actively reduced rather than simply managed for another five years.

7.4 Contingency Plans

Given the plant's history of operational failures and the absence of a credible backup system, contingency planning is essential to ensure that wastewater treatment can continue safely in the event of another malfunction. Without a lawful or operational fallback, a single equipment or process failure could result in uncontrolled discharges to the environment. To protect service continuity and environmental health, a clear, practical, and publicly available contingency plan must form part of any future consent.

Accordingly, we request the Court to require:

QLCA requests that the Environment Court and Otago Regional Council require QLDC to develop and maintain a robust contingency plan to ensure continuity of wastewater management in the event of plant failure. Specifically, we ask that:

1. A formal contingency plan be prepared, reviewed, and approved as a condition of consent. This plan should identify trigger points, risk thresholds, and response protocols for plant malfunction, equipment failure, or power loss, and outline immediate and medium-term mitigation measures.
2. The land disposal field be remediated and retained under its existing consent (or a limited-duration renewal) to serve as an emergency backup until a long-term solution is operational.
3. The contingency plan be reviewed annually and made publicly available, with clear responsibilities assigned to QLDC, its operators, and contractors for implementation.

These steps would ensure that the community's wastewater system maintains resilience, align with the LGA (s77) requirement to assess options and risks, and meet QLDC's strategic commitment to safeguarding public health and environmental wellbeing.

7.5 Accountability Mechanisms

There has been limited public acknowledgment by QLDC that the long-standing problems with the Shotover Wastewater Treatment Plant and its disposal field were not solely due to environmental factors, but were at least in part the result of operational and maintenance failures.

The clogging of the land-disposal field and subsequent ponding attracting birds, later used to justify emergency river discharge under s330 of the RMA, points to inadequate solids management, system monitoring, and escalation processes.

The Environment Court Enforcement Order (June 2025) required QLDC to implement specific operational improvements, yet there has been no clear public accountability for:

- Repeated breaches of effluent quality conditions,
- The failure of the disposal field, and
- The rapid collapse of the bund wall shortly after construction.

To restore public confidence and ensure that systemic issues are not repeated, there must be transparent investigation and defined lines of accountability for both QLDC and its contractors. These matters are appropriately addressed through consent conditions that ensure robust management systems and compliance oversight.

Accordingly, we ask that the Court require:

1. Independent investigation and reporting
 - a. A full, independently led review of the causes of the disposal-field failure and plant non-compliance, including:

- i. Whether Downer and Veolia maintained equipment according to manufacturers' specifications;
 - ii. Whether staff were adequately trained and operational procedures were followed;
 - iii. Why the bund wall failed shortly after construction; and
 - iv. What corrective or contractual actions have been taken.
 - b. The investigation's findings should be publicly released and reported to elected members and the community.
2. Defined governance and accountability framework
- a. Formal escalation and reporting protocols for all incidents of non-compliance, with thresholds for when elected members must be notified.
 - b. Performance measures for the current operations contractor should be disclosed, including consequences for non-performance.
3. Transparency and communication
- a. QLDC establish a communication protocol setting out how and when information is to be shared with affected communities and stakeholder groups, including the Queenstown Airport Corporation (QAC).
 - b. All operational and compliance meetings related to the WWTP have minutes formally recorded and retained in accordance with LGOIMA 1997, with non-confidential portions made publicly available under the Local Government Official Information and Meetings Act 1997.
 - c. Publicly report a summary of compliance status and any enforcement actions at least quarterly.
4. Ongoing compliance oversight
- a. Impose a consent condition requiring QLDC to commission annual independent compliance audits, with results filed with the Otago Regional Council and made publicly available.
 - b. A review condition under s128 RMA should allow ORC to amend the consent if systemic failures persist.

These measures are necessary not only to meet the statutory purpose of promoting sustainable management under the RMA, but also to rebuild community trust in QLDC's management of essential infrastructure.

Without robust accountability mechanisms, the same operational and governance failures that led to the emergency discharge are likely to recur.

7.6 Improvements in Testing and Publication of Results

The lack of comprehensive and timely reporting means that the community, affected stakeholders, and iwi partners are unable to verify compliance or track environmental trends in real time. This information gap erodes public trust and limits accountability, particularly given the ongoing discharge directly to the Kimi-ākau/Shotover River.

To restore confidence and enable independent review, we request the Court to require QLDC to commit to:

1. Expanding its monitoring programme to include heavy metals, microplastics, pesticides, antibiotics, and fertilisers, with sampling frequency proportionate to the risk of persistence and accumulation.
2. Publishing all weekly test results (including E. coli and other key parameters) within five working days of collection.
3. Publishing event-related daily results required under the Enforcement Order within three working days of testing, with a summary analysis provided at the conclusion of each event.
4. Maintaining an open, publicly accessible online dashboard where all monitoring data, exceedances, and enforcement responses are transparently reported.

Such measures would align with the purpose of the RMA to promote sustainable management, ensure compliance with the Environment Court's Enforcement Order, and meet the principles of transparency and accountability under the Local Government Act 2002.

8. Relief Sought

QLCA respectfully requests that ORC and/or the Environment Court:

1. Decline both applications (RM25.177 and RM25.206) as they fail to meet the requirements of the RMA; or
2. Suspend or adjourn determination pending completion of a full independent environmental assessment; and
3. Impose strict, transparent, and enforceable conditions as outlined in section 7 if any interim consent is contemplated.

The discharge of wastewater into the Kimi-ākau/Shotover River represents not only a local environmental threat but a fundamental governance failure.

For over five years, systemic non-compliance, lack of transparency, and avoidance of accountability have eroded public trust.

Granting retrospective consent without rigorous evidence, clear alternatives, and independent oversight would undermine the intent of the RMA and the integrity of environmental regulation in Central Otago.

QLCA asks that the Council and Court require a **comprehensive, evidence-based, and transparent process** before any authorisation is granted.

Our rivers deserve no less.

9. Supporting Documents

All supporting documents have been made [available in a dropbox](#) for ease of access. These include:

- Affidavit of S L Reed
- Affidavit of Tobias Maximillian Zaegel
- Bird Count Reports 2023-2025
- DAD – an Innovative Dose and Drain Land Dispersal System
- GHD Surface Water and Groundwater Assessment
- Local Government Act 2002
- Memo QLDC to Councillors 27 Jan 2025
- Mott MacDonald Technical Assessment
- National Environmental Standards for Sources of Human Drinking Water
- National Policy Statement for Freshwater Management
- ORC Notification Recommendation Report
- ORC Staff Recommending Report
- ORC Technical requirements to demonstrate no increase in load or concentration of contaminants from land use changes
- Proposed Otago Regional Policy Statement 2021
- QLCA WWTP Timeline
- QLDC 30 Year Infrastructure Strategy 2024-2054
- QLDC Application for Resource Consent
- QLDC Designations
- QLDC Long Term Plan 2024-2034
- QLDC Personal Communication Aug 27 2025
- QLDC Resource Consent Application for Discharge of Treated Effluent
- QLDC Significance and Engagement Policy

- Resource Management Act 1991
- S92 Landpro Response
- Shotover WWTP project Inception Basis of Design and Gap Analysis Report
- Sustain Our Sounds Inc v NZ King Salmon Co Ltd [2014] NZSC 40

Appendix A: Presence of Birds on the Disposal Field

As part of the Sewage Treatment Designation (#46), QLDC are required to engage an independent ecologist to carry out a bird count at the WWTP monthly and submit the report to QLDC. It appears that in 2023 and the earlier part of 2024, these reports were only being sent to a GHD contractor working for QLDC. From July 2024, they were also being sent to a QLDC Infrastructure Manager. QAC advised us that they also began receiving copies of these reports around the same time.

The monthly reports show that the increasing number of birds on the disposal field was being communicated to QLDC. Excerpts from these monthly reports indicating increasing concern from the ecologist and communicated to QLDC can be found below.

August 2023

“Elsewhere stilts and dotterels were heard on the Disposal field. I therefore undertook a survey along the eastern fence line to determine use of that area by those species. There were 12 pied stilts and 2 male banded dotterel behaving territorially, which indicates potential breeding (males build the nest scrape).

Please advise the contractors working in the disposal field that it is an offence under the Wildlife Act to disturb the nesting of these species. Do you know what the work program is in that area? The stilts and dotterels both hatched chicks in there last year. They are obviously still settling in so it would be good to see where they settle and give them space.”

December 2023

“Waterfowl numbers are continuing to increase. Please talk to your contractors about driving slowly around the ponds so as not to flush them into the air.”

May 2024

“Waterfowl numbers continue to diminish, but it also appears that the flocks present are using the disposal field to the south of the ponds as well.”

June 2024

“The disposal field was added to the survey from August 2023 and uses a travelling transect count rather than a 5-minute/ stationery count method. The disposal field is a 4-ha fenced of gravel area and is being maintained free of weeds. It has retained surface water and while this may not have been by design, waterfowl, including grey teal, paradise shelduck, mallards, and scaup, pied stilts and banded dotterel along with welcome swallows have recognised the habitat.

The very high flow (600 cumec) on the Shotover River in September 2023 may have displaced dotterel into the disposal field as it been used in previous years and the dotterel have now identified it as breeding habitat.

Land disposal of treated wastewater – earthworks are underway within the disposal field. There has been some movement of waterfowl onto areas of open water in the disposal field but again, due to the level of activity, those birds are likely to be regularly disturbed. Breeding and use by a range of waders and waterfowl is occurring and the closer proximity to the aerodrome eastern takeoff requires this area to be managed to minimise surface water.”

August 2024

“The data suggests that total waterfowl numbers using the ponds is starting to dip, while there is an uptick in use of the disposal field following the availability of surface water.

The increased presence of surface water in the disposal field is likely to attract increased use by waterfowl to this habitat bringing these species closer to the eastern takeoff/ approach path of Queenstown Aerodrome ...recommends QLDC develop plans to manage this situation and the potential for increased risk to aviation in consultation with QAC.”

A further memo in August 2024: “After our meeting with the QAC Aerodrome safety team on 31st July, I undertook to update the charts for the monitoring results in the Shotover Wastewater Treatment Area.

I recommend that you reach out to QAC Staff and her team to keep the parties informed about management of the two projects for the decommissioning and the disposal field management.

Let me know how I can support this process.

I will defer to your [sic] regarding how you share these results with the QAC team. However, I do recommend that these results are shared with QAC as required by the conditions of the Designation Area.”

October 2024

“However, there is an increase in waterfowl use of the Disposal Field. Monitoring of that area started in August 2023 with the arrival of areas of open water.

The purpose of the monitoring for QLDC is the identification of activities that may increase risk or hazards to aviation. Increasing areas of open water close to the eastern end of the Queenstown Aerodrome may contribute to an increased risk to aviation if waterfowl use the habitat.

If waterfowl use the habitat, then it is important that the risk of disturbance or events that cause them to flush and take flight from the site are minimised, i.e. ensure predictable movements in vehicles (which can act as a hide), and minimise walking around in the fields where birds are nesting or roosting. Avoid rapid dewatering/ flooding of the field that causes birds to move in/ out of the area.

It is also important that we understand the patterns of bird activity and bird movement to/ from the ponds and Disposal Field to determine how best to manage the site with respect to any potential risk/ hazard for aviation going forward with this year’s dewatering of Pond 1 providing a potential indication of how this may go – even though numbers using that pond are comparatively low.

Some of the questions around management of the Oxidation Ponds and Disposal Field include:

- where will the birds go if they are displaced from the site?
- Will they become disturbed such that the flight activity around/ across the eastern end of the aerodrome increases such that it poses an increased risk to aviation?

To address these questions, I recommend the addition of further monitoring sessions, additional to the existing program.

I also recommend that you both continue to engage with QAC Staff at QAC regarding progress and management of the Shotover Wastewater Treatment Area.”

November 2024

“I strongly recommend we record observations of landing attempts and any associated behaviour, i.e. a diversion to pond 2 or 3, leave the area, direction of flight to and from area, plane activity (ie jet/ ATR incoming/ outgoing; helicopter incoming/ outgoing; small plane flying around to join the cross runway/ approach/ takeoff from eastern runway (Threshold 23).

The disposal fields as you are also no doubt aware are well flooded with the internal berms underwater, although with shallow water covering the berms in places. All species known on

the disposal field have increased this month. The disposal field is currently holding more waterfowl than all the oxidation ponds combined.

Based on observations to date, I expect the waterfowl to continue to select the disposal field due to the higher water quality and relative separation from other activities.

The issue with the increasing numbers is the proximity to the eastern aerodrome threshold; I urge you to have a conversation with the team at Queenstown Aerodrome to discuss how this area is going to be managed through the summer.

I also urge you to remind all your contractors about the importance of not undertaking activity likely to flush waterfowl into the air.

Most importantly, do not try to disperse or disturb them intentionally without prior knowledge of flight schedules and consideration for which direction flights are coming in/ flying out from the Queenstown Airport. A discussion with the QAC wildlife management team may be beneficial to improving understanding between all parties.

Simon, may I share my monitoring observations with Queenstown Airport Corporation Aviation Safety/Risk Management Team?

Iain, I know you have been in touch with QAC Staff already.

I will also be recommending that QAC undertake monitoring (as outlined above) of behaviour around the drainage of Pond 1 as it provides an insight into what may happen with Ponds 2 and then 3.

This is an opportunity for collaboration and to share resources as the identification and management of aviation risk is the purpose behind my monitoring and the designation conditions require the findings to be shared with QAC.”

January 2025

“On Sunday, the ponds were quiet with no work in progress. However, Shoveler flushed from the margins of the pond on my arrival, a large flock of about 150 mostly shoveler but some teal and mallards took flight, most moved onto the water to join others, most of those that took flight flew low over the ponds and resettled within a few minutes. A flock of about 20 made wider circles at varying heights around and over the ponds and appeared to circle across the eastern approach of threshold 05 at least twice before flying towards Lake Hayes and being lost from sight. Fortunately, no planes were present during this time although a total of 4 jets took off into the east wind from the eastern threshold over the half hour that these observations were made.

This observation highlights the risk of having high numbers of waterfowl present at this site. Most of the time, they are settled and quiet. It is common for birds roosting on the pond margins to flush onto the water, and as the flock builds, the counts require additional time to

allow them to settle on the water or climb back on to the berms away from the road before counts can commence. It is less frequent for birds to take flight, but it does happen.”