Full Council

19 March 2026

Report for Agenda Item | Rīpoata moto e Rāraki take [3]

Department: Property & Infrastructure

Title | Taitara: Shotover Wastewater Treatment Plant (SWWTP) Disposal Solution

Purpose of the Report | Te Take mō te Pūroko

The purpose of this report is to seek Council's approval of a long-term disposal solution for the Shotover Wastewater Treatment Plant (SWWTP), enabling QLDC to prepare and lodge a long-term Resource Consent for the disposal of treated wastewater from the SWWTP for a period of 35 years.

Executive Summary | Whakarāpopototaka Matua

The QLDC Shotover WWTP is part of Council's core critical infrastructure treating wastewater from the Whakatipu Basin and wider Queenstown urban area, servicing 18,000 dwelling unit equivalents (DUE). Areas served include Arrowtown, Millbrook, Arthurs Point, Queenstown, Frankton, Shotover Country/Lake Hayes Estate, Lake Hayes, and Hanley's Farm/Jacks Point Village. It has had significant investment by successive Councils (>$40m over the past three years alone) and today produces around 12.5 million litres (equivalent to 5 Olympic Swimming Pools) of highly treated wastewater requiring disposal each day. Under current growth assumptions, this volume is expected to increase to 26 million litres (equivalent to 10.5 Olympic Swimming Pools) per day by 2060.

Previously, the SWWTP discharged treated wastewater to a dose-and-drain (DaD) disposal field on the Shotover Delta, and before this was discharged directly to the Shotover River. Commissioned in 2019, the DaD system experienced ongoing operational issues and several non-compliance events, ultimately leading the Otago Regional Council (ORC) to seek an enforcement order in January 2025. Despite attempts to repair and reinstate the DaD system, its condition continued to deteriorate. In March 2025, QLDC carried out Emergency Works under Section 330 of the Resource Management Act to divert treated wastewater via a historic channel into the Shotover River. A separate short-term consent process—seeking authorisation for this discharge until December 2030—is currently underway.

The enforcement order brought by the ORC requires Council to lodge a consent application for a long-term solution by 31 May 2026, complete engineering design by 31 December 2027, and finish construction and commissioning by 31 December 2030. Provided that Council observes the requirements (including timeframes) of the enforcement order, then it will remain within the relevant legal processes. If Council does not, then the legal protections afforded by following those processes will no longer apply.

Over the past 14 months, multiple disposal options have been evaluated by staff. The recommended solution, detailed in the attached Shotover WWTP Disposal Short List Options Report (Attachment A), is a discharge to the Kawarau River. This option includes treatment enhancements (in the form of tertiary filtration prior to the existing UV disinfection equipment) and the installation of a pipeline to convey treated wastewater to a rock outfall structure discharging into the Kawarau River.

The recommended solution will support the needs of the growing Queenstown community over the next 35 years and provides a secure, reliable long-term method for discharging treated wastewater. The disposal solution will be capable of accommodating average daily flows of around 26 million litres per day, and peak wet weather flows of 60 million litres per day.

In recent years very few wastewater treatment plants in New Zealand, of similar size to the SWWTP, have been designed to achieve more stringent discharge standards than the SWWTP currently achieves. Similar discharge limits have since been adopted into several Waikato based WWTPs.

Council's existing Long Term Plan budget allocates $77.5 million for the upgrade works. The recommended option fits within this budgetary envelope and complies with the legislative direction within the Water Services (Local Government) Act 2025 for Water Suppliers under s254(2) to adopt the most 'cost effective' wastewater management solution.

Endorsement of the recommended solution, does not prevent Council from investigating future pathways, including potential land-based disposal alternatives, for some or all of the treated wastewater.

This paper seeks Council's approval for a long-term wastewater disposal solution. Approving the recommended option will:

- Prioritise reducing the length of time the SWWTP continues discharging into the Kimi-ākau/Shotover River;
- Allow Council to comply with the Court ordered timeframes stipulated in the enforcement order;
- Demonstrate consistency with the national policy direction in respect of instream effects on water quality and ecology values;
- Enable the project team to continue to progress preliminary design; and
- Authorise preparation of a resource consent application for a 35-year consent to discharge treated wastewater to the Kawarau River.

Recommendation | Kā Tūtohuka

That the Council:

1. **Note** the contents of this report;

2. **Approve** the recommended option 'Option 1' to enable the preparation of a Resource Consent application to be lodged with the Consent Authority for the purpose of a treated wastewater discharge from the Shotover Wastewater Treatment Plant to the Kawarau River;

3. **Approve** application for a 35 year consent and proceed with the application to meet the court ordered deadline of 31 May 2026; and

4. **Note** that preliminary design development of the recommended option will continue in parallel with the consent application process to ensure implementation by December 2030 in line with the Environment Court Enforcement Order.

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13 March 2026

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13 March 2026

Context | Horopaki

Background

1. The Shotover WWTP is part of Council's core critical infrastructure treating wastewater from the Whakatipu Basin and wider Queenstown urban area, servicing 18,000 dwelling unit equivalents (DUE)[1]. This represents a peak day population of 75,000 in 2025. Areas served include Arrowtown, Millbrook, Arthurs Point, Queenstown, Frankton, Shotover Country/Lake Hayes Estate, Lake Hayes, and Hanley's Farm/Jacks Point Village. The existing treatment process includes inlet screens, Modified Ludzac-Ettinger (MLE) activated sludge reactors, clarifiers, sludge treatment system, UV treatment and disposal.

2. The MLE activated sludge process (as visually represented in figure 1) treats wastewater to a high standard as part of several anoxic (without oxygen) and aerobic (with oxygen) processes that break down bacteria and allow microbes in wastewater to reduce nutrients before settlement and UV sterilisation occurs ahead of disposal as a clear treated wastewater. In respect of the disposal, it is only the clear treated wastewater at the very end of this process that is being considered as part of the discharge for the long-term consent. At no point is a discharge of non-treated wastewater considered as part of the consent application nor the short list options presented.

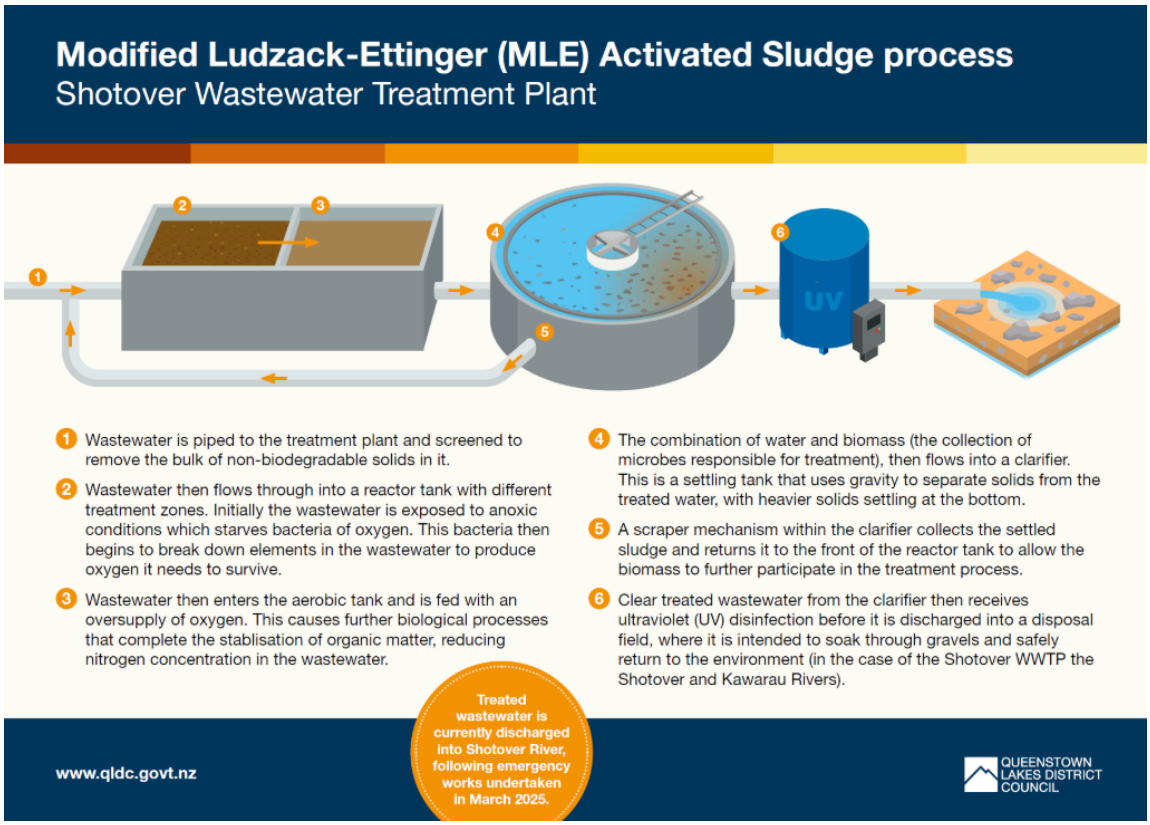

Figure 1: The Modified Ludzac-Ettinger (MLE) activated sludge process as implemented at the SWWTP.

[1] A typical residential dwelling, and representing a unit of demand for other land uses such as visitor accommodation and businesses.

3. The plant has recently (October 2025) been upgraded with a second MLE reactor and clarifier, at a cost of approximately $40M. This upgrade has enabled the oxidation pond process to be decommissioned and as a result has further reduced nutrient loads within the treated wastewater discharge.

4. The second MLE reactor and clarifier has significantly improved the discharge quality particularly in terms of nutrient removal, as measured by total ammoniacal nitrogen (TAN), total nitrogen (TN) and total phosphorus (TP). The MLE upgrade was designed to achieve an average TN concentration of 10 milligrams per litre (mg/L) and an average TP concentration of 8 mg/L, based on the original land-based discharge consent. The current treated wastewater quality exceeds these values and is at a high standard when compared against similar sized WWTP's in New Zealand.

5. Prior to 2019, the SWWTP discharged treated wastewater directly to the Shotover River and, since 2019, to a dose-and-drain (DaD) disposal field on the Shotover Delta. The DaD system has experienced ongoing performance issues and several noncompliance events. These issues culminated in ORC applying for an enforcement order in January 2025, which was then enacted in June 2025.

6. The enforcement order requires that a consent application for a long-term disposal solution be submitted by 31 May 2026. It further directs that engineering design for the chosen Option 2e completed by 31 December 2027, with construction and commissioning finished by 31 December 2030.

7. There were several issues associated with the DaD performance, including increased seasonal ponding that led to a rise in waterfowl numbers and associated bird strike risk for airport operations. In addition, treated wastewater was regularly overwhelming the DaD resulting in treated wastewater overtopping and spilling into the surrounding area, creating a health and safety risk for those using the delta. Immediate steps were taken to reduce this risk with emergency works undertaken on 31 March 2025 to commence the discharge of treated wastewater through the historic discharge channel to the Kimi-ākau/Shotover River under section 330 of the Resource Management Act 1991 (RMA).

8. A short-term (5-year) resource consent application to ORC for discharge of treated wastewater to the Kimi-ākau/Shotover River was lodged in April 2025 and (as of February 2026) has been directly referred to the Environment Court.

9. QLDC commenced the indicative business case including investigations and Option 4evelopment for a new long-term disposal solution in October 2024 (this project). The objective of this business case was to identify a long term disposal approach that can replace the current treated wastewater discharge to the Kimi-ākau/Shotover River and cater for the long-term treated wastewater disposal requirements (to Year 2060). QLDC's Long Term Plan (LTP) has allocated $77.5M of funding for the replacement disposal field solution.

Figure 2: Wider Whakatipu Basin (SWWTP located at Red Pin)

Figure 3: Various components of the Shotover Wastewater Treatment Plant on the Shotover Delta.

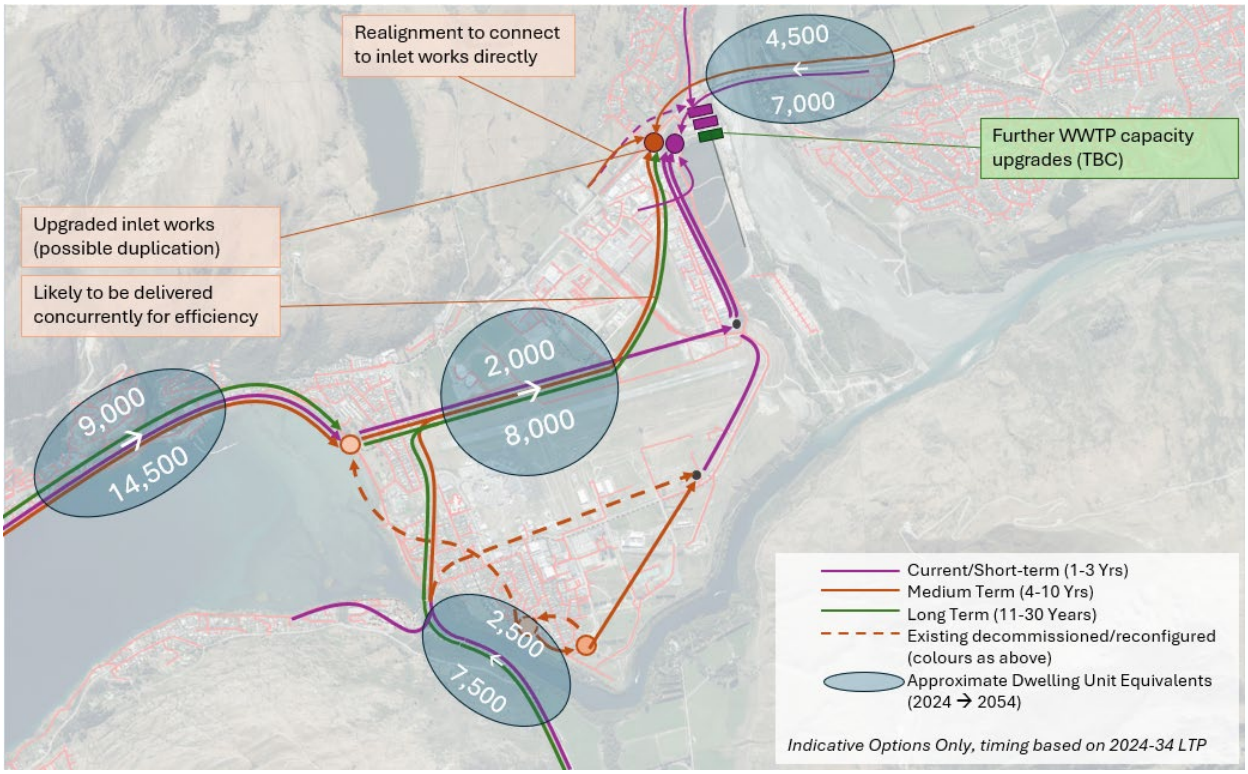

Figure 4: Existing DUE and forecast DUE within key growth areas in the Whakatipu Basin that all contribute to the current and future treated wastewater flows.

Strategic Context

10. QLDC faces rapid population and visitor growth which puts considerable pressure on our infrastructure. By 2060, the peak day population is forecast to be 141,233 with an average population of 94,887. Financial pressures, climate change adaptation, a sensitive alpine environment, and a dispersed settlement pattern across geologically unstable mountainous terrain, compound the growth challenges. Regulatory reforms and the transition to a Council Controlled Organisation for three waters add further complexity to planning and delivery.

11. The long-term strategy for three waters infrastructure is to integrate the development of the networks with land use. This vision is informed by the Spatial Plan which identifies the priority growth areas across the district for the coming decades. The Infrastructure Strategy urges Council to use adaptive planning methods and scenarios, favouring dynamic and flexible plans.

12. Historically the Council has pursued a strategic approach of centralising wastewater management resulting in the two major wastewater treatment facilities – Project Shotover for the Whakatipu catchment and Project Pure for the Upper Clutha catchment. Council has made a considerable investment in the wastewater network for the Whakatipu catchment, and funding the maintenance and renewal of current assets remains a top priority. As growth continues, technology evolves and regulations change, this approach will continue to be tested against alternative pathways with additional treatment and disposal locations.

13. The three waters servicing plan for Te Tapuae – Southern Corridor looked carefully at the option of a modern standalone treatment plant in the Corridor. There would be major resilience benefits from eliminating the conveyance of raw wastewater across the Kawarau River and freeing up capacity at the Shotover Plant. The disadvantages were the higher capital and operational costs, and the lack of sufficient suitable land for disposal of the treated wastewater. The preferred pathway for wastewater was confirmed as piping raw wastewater to the Shotover Plant.

14. The Shotover plant is located on the true right bank of the Kimi-ākau Shotover River and services the Whakatipu basin communities of Queenstown, Arthurs Point and Frankton to the west; Shotover Country, Ladies Mile, Lake Hayes and Arrowtown to the northeast; and Kelvin Heights, Jacks Point and Hanley's Farm to the south. The original plant, built c1974, consisted of basic channel inlet works and three oxidation ponds, with new inlet works and an aerated treatment lagoon added c1987. The treated wastewater was disposed of to the Shotover River.

15. The Project Shotover upgrades were initiated by a report to Council in 2009. The report set out the requirements for upgrades to the inlet works, improved treatment plant processes and removal of the direct discharge to the Shotover River. The project proposed continuing investment at the current site given the considerable investment in trunk infrastructure bringing raw wastewater to the Shotover plant (166 kilometres of trunk mains and 40 pump stations), the designation providing sufficient land for the plant, and the existing treatment infrastructure.

16. The new inlet works and trunk sewer were delivered in 2014 and the stage 1 upgrade works (the Modified Ludzack Ettinger process, secondary clarifier and UV disinfection) commissioned in 2017. The 'dose-and-drain' field for treated wastewater disposal by rapid infiltration to land was commissioned in 2019.

17. The 2020 masterplan for the Shotover Plant set out further staged upgrades to be initiated in response to growth in influent volumes. Alternative treatment processes were considered as part of the masterplan and evaluation of the options confirmed additional MLE reactors plus clarifiers as the preferred approach. The second MLE reactor was commissioned in 2025.

Business case approach

18. Investigating options for the long-term disposal of the treated wastewater requires a rigorous process to ensure that all options are robustly considered. To achieve this objective an Indicative Business Case (IBC) approach was followed in accordance with New Zealand Treasury standards. QLDC's provider, GHD, was procured to facilitate the business case development process, alongside the optioneering and technical analysis.

19. The Business Case defined the following three key problem statements associated with current arrangements:

    a. **Problem one – wastewater disposal:** The Dose and Drain (DAD) disposal field on the Shotover delta, used for treated wastewater discharge from the SWWTP, has experienced ongoing performance issues and regulatory non-compliance. Emergency works were

undertaken on 31 March 2025 to commence the short-term discharge of treated wastewater to the Shotover River through the historic discharge channel under section 330 of the Resource Management Act 1991 (RMA). At present the discharge of treated wastewater continues to occur into the Shotover River.

b. **Problem two – addressing current discharges into the Shotover River:** The emergency works undertaken in 2025 has resulted in treated wastewater discharge to the Shotover River. The period in which treated wastewater is discharged to the Shotover, must be limited as far as practicable. Efficient implementation of the long-term solution ensures discharge to Shotover is a short-term activity only.

c. **Problem three – long term growth*:*** There is insufficient disposal capacity to adequately provide for projected demand growth.

20. The following three investment objectives were developed in response to the key problem statements:

a. **Investment Objective 1** - The health and well-being of the surrounding waterways are maintained, protected and improved where practicable to support water quality;

b. **Investment Objective 2** - The disposal of treated wastewater aligns with tikanga as guided by mana whenua; and

c. **Investment Objective 3** - Ability to service the community's and visitor wastewater needs now and into the future up to the equivalent flows projected for 2060.

Basis of Design

21. The design horizon for the SWWTP disposal solution is 35 years (i.e. 2060), based on obtaining a long-term resource consent. To optimise capital expenditure, the disposal options include consideration of staged expansion of the SWWTP.

22. The consent duration of 35 years has been selected to ensure that the future upgrades to the SWWTP and the capacity that these upgrades unlock, can be accommodated in the most cost-effective manner, ensuring the investment made in both the consent application (which is considerable) and the plant upgrades have a secure means of disposal, but without limiting future options or transformative technological change that may permit other land disposal alternatives.

23. QLDC completed its population forecast estimate in April 2025. The project team have taken these forecasts and have assessed recent flow data to understand what the anticipated influent flows are likely to be for the design horizon.

24. By 2060, an average population for which the SWWTP will service, is expected to be 94,887 with a peak day population of 141,233. This culminates in an average dry weather flow (ADF) of 25.09 million litres per day (approx. 10.5 Olympic swimming pools) and peak wet weather flow (PWWF) of 59.6 million litres per day (approx. 24 Olympic swimming pools). For reference, current ADF sits at 12.06 million litres per day (5 Olympic swimming pools).

25. The SWWTP stage 3 MLE2 expansion has been designed to accommodate the WWTP growth up to 2048. Based on the stage 3 design report, the plant can currently handle a design ADF of 19.1 million litres per day and PWWF of 22.3 million litres per day. The SWWTP will require another capacity upgrade when the stage 3 design capacity is reached, or a decision on an alternative adaptive pathway is made.

Treated wastewater discharge quality requirements and the receiving environment

26. The Water Services (Wastewater Environmental Performance Standards) Regulations (WEPS) were enacted in November 2025. Discharge to the Kawarau River falls under an exception to the WEPS where a discharge occurs into a 'pristine' freshwater body in accordance with the National Policy Statement – Freshwater Management (NPS-FM). QLDC expert's initial assessment indicates that the Kawarau and Shotover Rivers both meet the 'pristine' freshwater body classification. Otago Regional Council has supported this assessment, outlining that in their view both the Shotover and Kawarau Rivers meet the NPS-FM Band A attributes, classifying both rivers as 'pristine' as defined within the NPS-FM. The WEPS therefore do not apply to the river discharge.

27. As the WEPS are not triggered for discharges to either river because of their water quality status, all shortlisted options that include a discharge to water need to be consented under the normal effects-based environmental assessment which would apply in the usual manner for any resource consent application.

28. Under an effects-based approach in accordance with the NPS-FM, there are ten attributes within the A Band tables that apply to a river meeting the 'pristine' water quality status. Of these ten attributes, seven are relevant to the Kawarau River as a lake-fed river. These include ammonia toxicity, nitrate toxicity, suspended fine sediment/clarity and Escherichia Coli (E. coli) all monitored by ORC downstream of the confluence with the Shotover River. Periphyton and point source dissolved oxygen are not monitored by ORC, and cyanobacteria is monitored upstream in Lake Whakatipu.

29. There are two primary considerations where a treated wastewater discharge from the SWWTP may impact water quality 1) Risk of periphyton growth due to nutrient loading in the treated wastewater discharged, 2) Dilution rates and achieving good mixing at the point of discharge within the river.

30. As part of the environmental assessment by QLDC's experts', they have noted wastewater has historically and is currently contributing to the nutrient load of the Kawarau River, without apparent periphyton growth, and it is considered unlikely that further assessment will indicate a

high risk of periphyton growth due to the discharge. The historical observations suggest a potentially low risk category for periphyton growth.

31. Otago Regional Council has reinforced this view, that periphyton growth can be considered low risk, as outlined in the below extract from their recent technical memorandum:

Periphyton

Periphyton is not monitored at either of the sites (Shotover & Kawarau) as depth makes monitoring difficult and/or impossible. Periphyton most readily blooms in environments with high light availability, stable beds, stable hydrology, and high nutrient levels (Snelder et al. 2019). Both sites have a high natural sediment load due to glacial processes which can scour periphyton and block light, can have frequent flushing flows due to heavy rainfall events in the upper catchments which contributes to scouring, and have low nutrient levels. ***Due to these characteristics, both sites are low risk for periphyton accrual.***

32. On the basis that the Kawarau River is assessed as low risk for periphyton growth, the quality of the treated wastewater from SWWTP is expected to meet the long-term consent requirements for discharge to the Kawarau River.

33. It is anticipated that while the WEPS do not apply, they will still be considered by the Consenting Authority as reference when assessing potential effects. As such, an assessment of the discharge against the standards is expected to be required.

34. Near field effects are anticipated to be the most significant consideration under an effects-based consent application. The length and nature of the mixing zone is an area that will be closely interrogated through the consent and preliminary design process. If mixing zones becomes too long, more stringent discharge standards (achieved via treatment plant enhancements) or an alternative diffusion mechanism could be necessary. It is important to note that these effects, if realised, can be adequately addressed through options available to QLDC at present and can be responded to through the consenting process. Any effects are considered manageable and in some cases an improvement on the current short-term situation.

Context and Scale

35. The Kawarau River has an average daily flow of over 18 billion litres per day. When considering the SWWTP discharge, both the 2060 ADF and 2060 PWWF represent less than 0.5% of the total flows. Table below outlines in comparison the recommended discharge under the recommended Option 1 for each against the total flows in the Kawarau River.

Flows	Litres per day	Olympic Pools per day	Litres per minute	Percentage of flow of the Kawarau
Kawarau River	18,662,400,000	7465	12,960,000	100%
2025 ADF	12,500,000	5	8700	0.07%
2060 ADF	26,000,000	10.5	18,000	0.14%
2060 PWWF	60,000,000	24	42,000	0.32%

Table 1: Current and future flows proportional to the total average flows in the Kawarau River.

36. The recent upgrades to the SWWTP, including the second MLE and clarifier commissioned in October 2025, have significantly improved the discharge quality particularly in reducing the nutrient levels – as measured by total ammoniacal nitrogen (TAN), total nitrogen (TN) and total phosphorus (TP). The upgrade was designed to achieve an average TN concentration of 10 mg/L and an average TP concentration of 8 mg/L. In recent years, very few wastewater treatment plants in New Zealand similar in size to the SWWTP have been designed to achieve more stringent discharge standards than the SWWTP

Options Development and Assessment Process

37. To enable a broad suite of feasible options to be developed in response to the identified problem statements and investment objectives, the options assessment for the SWWTP Disposal Field Alternative Discharge used a multi-criteria analysis (MCA) framework. MCA allows for a range of factors, both qualitative and quantitative, to be considered when evaluating options. It provides a systematic framework for working through the merits and disadvantages of each option. It is a tool that can help decision making, but it does not make the decision. When applied effectively, it provides an open, traceable, and repeatable process.

Options Longlist

38. A comprehensive list of potential solutions (options) was developed in late 2024, covering possible disposal methods and discharge locations. This list was refined by excluding options with obvious constraints or fatal flaws. Constraints such as distance from the SWWTP, residential zones, geology, slope, water supply wells, surface water, funding availability, legislative standards, and other considerations were factored into the assessment.

39. The full list of options was subject to an initial screening. Options which were unfeasible or have a significant barrier to implementation were not progressed further with rationale recorded in the Long List Options Report (GHD, 2025).

40. The development of options resulted in a long list of 13 options. The long list options were assessed by Kai Tāhu representatives and technical specialists using the MCA. As a comparator a base case of the DAD disposal field operating as intended was used at the long list stage. This was compared against the current case, which at the time of assessment was the poorly performing DAD disposal field.

41. An MCA scoring workshop was held in person at QLDC in March 2025, with key representatives from QLDC, Te Ao Mārama (TAMI), Aukaha, LandPro, and the GHD project team. The workshop presented the initial MCA scores, gathered input from the workshop group, and confirmed the options. Following the workshop, further information was provided on some of the options to enable final scoring (and selection) of the options long list.

42. Scoring is summarised in Table 2 of the Shotover WWTP Disposal Long List Options Report (Attachment D), with each criteria given a score from -5 to +5 relative to the base case. An additional fatally flawed (FF) score was provided by the scorers if the option had extreme difficulties, extremely high cost or substantial impact on the environment which could not be mitigated by reasonable measures and may not be mitigated by extraordinary mitigation. Additionally, Kāi Tahu representatives scored options that would not align with their cultural values as fatally flawed. Further detail on the scoring grades is available in the Shotover WWTP Disposal Long List Options Report (Attachment D).

43. The long list options were then refined to five options (plus a Base Case for comparison) to carry forward to the short list stage, as follows:

    - **Option 4b**: Land flow path to Kawarau River (Short list Option 1);
    - **Option 7a:** Subsurface Wetland on the Delta (Short list Option 2);
    - **Option 5a:** Deep well injections on Frankton Flats (Short list Option 3);
    - **Option 8a:** Well Point or Soak holes on Frankton Flats (Short list Option 4); and
    - **Option 2e:** Moderate rate land disposal to Airport and surrounding area (supplementary).

44. After the long-list MCA assessment and identification of the five short list options, the project team continued to develop these options through further desktop analysis, engagement with landowners, modelling, and refinements to the concept designs.

Options Shortlist

45. Four options were initially short listed for Council consideration (with a fifth, additional option introduced following Council briefing and outlined later in this paper):

    - **Option 1:** Land flow path to the Kawarau River;

- **Option 2:** Subsurface wetland on the delta, with discharge to the Kawarau River;
- **Option 3:** Deep well injections on Frankton Flats, supplemented with discharge to the Kawarau River;
- **Option 4:** Well point of soak holes on Frankton Flats, supplemented with discharge to the Kawarau River;

46. Following initial short listing, a review of key assumptions and considerations was undertaken including potential constraints to enable refinement of the short list options. This was undertaken prior to developing component sizing and MCA scoring and included:

- Reviewing the land suitability and availability at Frankton Flat;
- Determining areas potentially available for irrigation at Frankton Flat;
- Calculating the probabilities of disposal capacity of bore and soak holes at Frankton Flats via statistical modelling;
- Determining additional treatment requirements related to bore and soakhole disposal options on Frankton Flat;
- Considering reuse opportunities for the treated wastewater;
- Confirming potential disposal locations to the Kawarau River;
- Considering the influence of the Kimi-ākau/Shotover River training line and revetment on flooding and basis of design of these features; and
- Further work to determine the feasibility of the additional added option 5.

47. Further assessment of the short list options concluded that limitations in the capacity of the aquifer to accommodate wastewater disposal coupled with constrained land availability meant that there was very low confidence that a stand-alone land-based disposal Option 3ould be achieved in the Frankton Flats area. As a result, all the Frankton Flats land-based options would need to be combined with a Kawarau River discharge to be able to meet the required future flow rates and would need to be staged with a trial process before full development.

48. Several elements of a future disposal solution are common to all options. These include:

- **Discharge to Kawarau River:** To address existing and future flows, all short list options proposed include Option 1 (or 2), as they all require at least a limited discharge to the Kawarau River. None of short listed options have sufficient capacity to provide a standalone land only disposal method and therefore require part of the total treated wastewater volumes to be discharged to the river.

- **Tertiary filters:** Tertiary filtration will improve the treated wastewater quality in terms of suspended solids and clarity, prior to it being disposed of. This is separate from the membrane filtration required for Options 3 & 4.

- **Alternative discharge method:** An alternative solution to the rock outfall disposal to the Kawarau is a submerged diffuser pipe which offers several advantages & disadvantages. Advantages include greater separation of public from the point of discharge, enhanced mixing, greater resilience to flood flows, and reduced visual impact. Disadvantages include greater complexity in construction, resilience risk with a single diffuser, greater capital and operational costs expected to exceed the rock outfall by approximately a factor of 2-3. Whilst the river diffuser is not included within the recommendation, if it is deemed required due to dilution rates, this Option 3an be reintroduced during the consenting process following Council approval.

- **Calamity pond**: For storage of treated wastewater during adverse events and is a requirement of the Enforcement Order. This is not within the scope of the long-term disposal project but is underway as a stand-alone project. It is important to note, as there is integration with proposed infrastructure for the long term solution (i.e. tertiary filters).

- **Reuse:** A recycled water supply collected by water tankers for dust suppression/irrigation to the Frankton sports fields is included as a supplementary option which at most would accommodate 10,000 litres per day. It is not required for treated wastewater disposal to occur; however, it can be added to all solutions to provide the benefit of reuse. Currently all options have been costed to include recycled water, however this is not expected to be deemed commercially viable given this represents only 0.04% of the daily volumes requiring disposal.

Additional Shortlist Option – Land Only Disposal 'Option 5 – Land Disposal to the Crown Terraces'

49. Following the Council workshop in December 2025, in response to feedback from Kai Tāhu and findings from the short list options assessment peer review, the project team has included as an additional short list option, most suitable land only disposal option for consideration as part of Councils decision-making process.

50. Option 5 incorporates conveyance of treated wastewater to the Crown Terraces and discharge across approximately 288 hectares (240ha irrigation, 288 total) of contiguous land, identified as being 'technically' the most suitable land only discharge. Of all areas assessed, the Crown Terraces provide adequate connected land area, at the lowest level of constraint for an exclusively land only disposal option.

51. Option 5 has been assessed via the MCA process, as with the remaining options, and has been included acknowledging that none of the available options contained a land only discharge. MCA for Option 5 has been completed as part of an addendum to the short list assessment and report (refer to Attachment A – Shotover WWTP Disposal Short List Options Report).

Short-listed Options | Ngā kōwhiringa whakamutunga

52. As outlined in the short-listed options below, all options include Option 1 – Discharge to the Kawarau River (or Option 2), as none of the other shortlisted options have sufficient capacity to provide a standalone solution and therefore require part of the total treated wastewater volumes to be discharged to the river. Option 1 (or 2) is therefore an element of each option, including to discharge to the Kawarau to varying degrees for each.

53. Each of the shortlisted options presented are consentable from an environmental impacts' standpoint, under the current RMA framework, within an effects-based assessment. Regional policy statements require that significant adverse effects on water bodies — including groundwater & surface water interactions — are avoided, and that key values such as mahika kai, aquatic ecology, recreation, and natural character are maintained. Each option is expected to align with these requirements by demonstrating that instream water-quality and ecological values will be maintained in accordance with the RPS.

54. Kai Tāhu has made clear in their position statement that they do not support any discharge to the Kawarau River. This includes Option 2 – the subsurface wetland and land-flow path, as Kāi Tahu consider that it does not provide adequate land contact before reaching the river. Because every shortlisted option ultimately relies on a discharge to the Kawarau, Kāi Tahu do not support any of the shortlisted options. As a result, giving effect to Kāi Tahu values, as required by the RPS, is likely to be challenging in the context of the shortlisted options and Kāi Tahu's stated opposition.

55. **Option 1 - Land flow path to Kawarau River** Option 1 includes tertiary filtration, 1.35 km conveyance via a pipe (or suitable alternative) and a land flow path (rock outfall) to the Kawarau River.

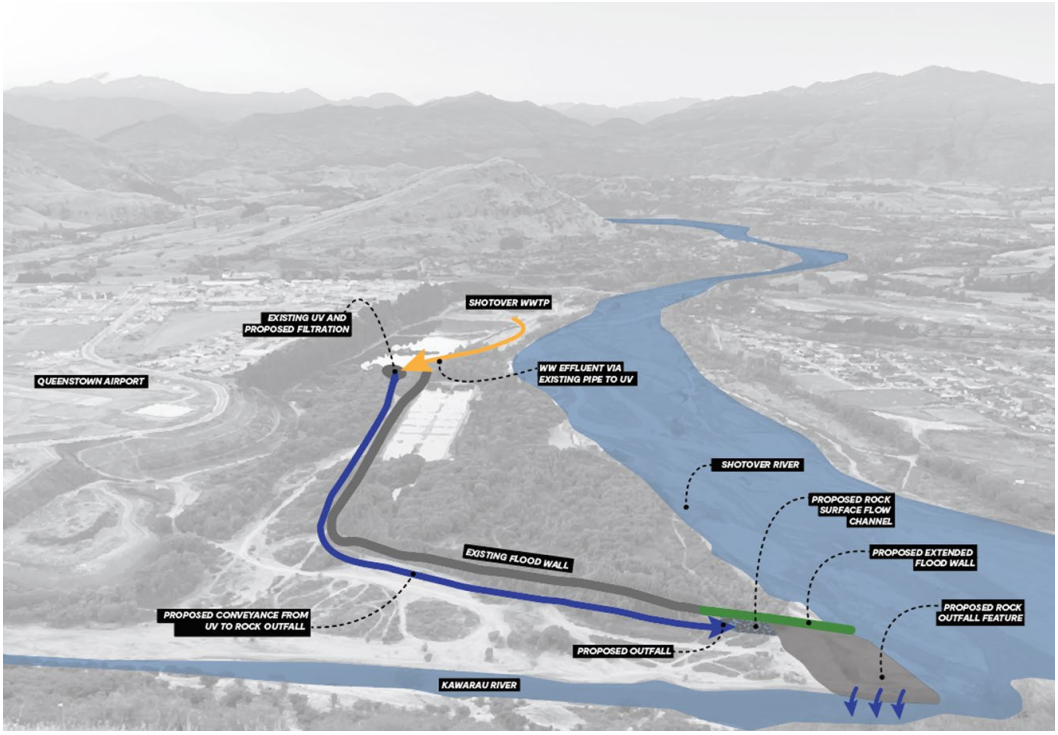

Figure 5: Overview of Option 1 – Land flow path and discharge to the Kawarau River.

Figure 6: CGI of the rock outfall on the bank of the Kawarau River.

56. The land flow path (rock outfall) would be a structure located on the delta that would allow the treated wastewater to pass through and disperse into the Kawarau River. An indicative high-level sketch of this is provided in Figure 5. The land flow path is intended to minimise the visual impact of the discharge, to provide aeration, enable some land contact prior to the treated wastewater entering the river, and to obstruct public contact with the treated wastewater. It is recognised that this form of land contact is inadequate to meet the cultural requirements for a land-based discharge as sought by Kāi Tahu.

57. The land flow path would be designed for the full 2060 flows and the details would be refined through the preliminary design stage.

58. Option 1 provides certainty for accommodating future flows both through to 2060 and beyond. It represents a low risk option, being simple in design and operation, and leverages the existing QLDC designation in place for the Shotover WWTP (while the rock outfall is on riverbed managed by LINZ). Discharge to the Kawarau River, does not restrict any future treatment upgrades and plant augmentation that might arise through technological transformation or changing legislative requirements.

59. This option has lower capital and operational costs compared to other options and involves less technical complexity and fewer risks. The required infrastructure is wholly on QLDC or publicly managed land and is expected to be able to be designed and delivered within the required timeframes of the enforcement order. This conclusion is supported by the expert advice of GHD upon which the options assessments were based.

60. **Option 2 – Subsurface Wetland + land flow path to Kawarau River** Option 2 includes tertiary filtration, pipeline conveyance to a 3ha subsurface wetland, 550m conveyance via a pipe (or suitable alternative) to a land flow path (rock outfall) to the Kawarau River. Option 2 is an extension of Option 1 by adding a 3ha subsurface wetland into the discharge path.

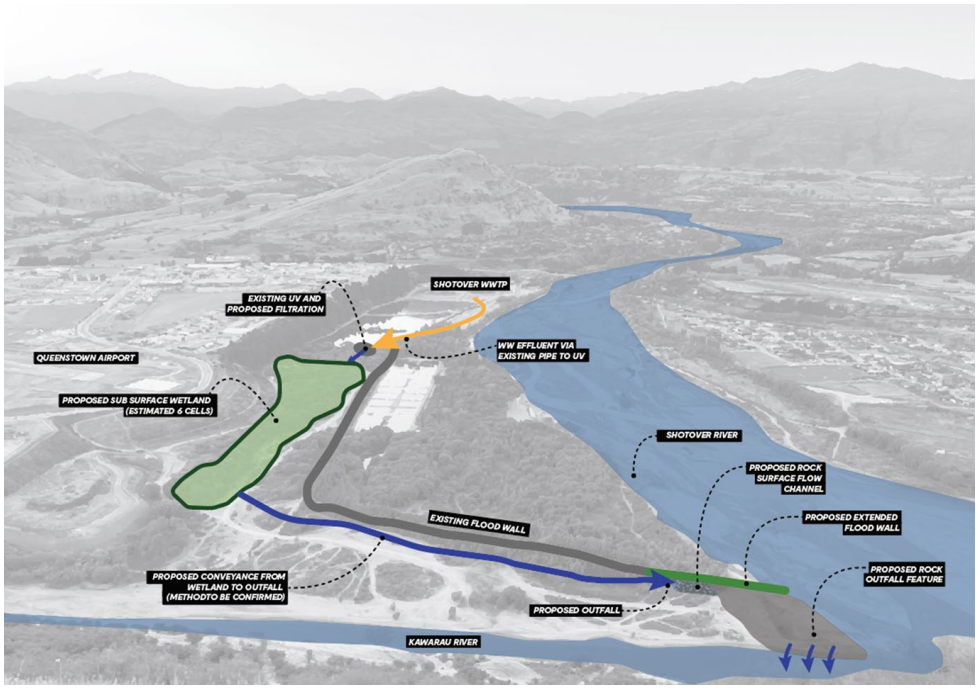

Figure 7: Overview of Option 2 - Wetland + land flow path to Kawarau River

61. This option would include a horizontal flow subsurface wetland in the area south of the UV outlet with ultimate discharge to the Kawarau River. The addition of the wetland provides limited land contact (as opposed to a land only based discharge) and is located between the tertiary treated wastewater (from the UV) and the land flow path (rock outfall) discharge to the Kawarau River. Although the wetland is not required for treatment purposes, the wetland utilises biological processes to further polish already highly treated wastewater prior to discharge.

62. The use of subsurface wetland avoids the risk of contact with treated wastewater. The treated wastewater would enter the inlet forebay and percolate horizontally beneath the surface through the rock media within the plant root zone. Beyond the forebay, surface water would not be visible under normal operating conditions. The subsurface wetland will have the ability to operate all year round and the flexibility to take one cell offline for maintenance if required. Boardwalks and other amenity features could be added to further enhance the aesthetic and recreation value of the wetlands and the delta.

63. The subsurface wetland will need to be carefully designed and plant species selected to avoid attracting birdlife that could pose a risk to the adjacent aviation activities. Regular and comprehensive maintenance of the wetland area will be essential to manage this risk on an ongoing basis.

64. The option has relatively low technical complexity or risks. Capital and operational costs are considerable and could possibly be staged relative to the flows. The required infrastructure for the wetland is wholly on QLDC land (while the rock outfall is on riverbed managed by LINZ). and is expected to be able to be designed and delivered within the required timeframes.

65. **Option 3 - Hybrid of Boreholes at Frankton (+ Option 2)** Option 3 considers the disposal of wastewater to land via boreholes in the Frankton Flats area. Option 3 is a hybrid with Option 2 being constructed initially with a staged approach onto Frankton Flats required to determine if disposal capacity can be achieved. If trials are positive, part of the treated wastewater would be conveyed into the Frankton Flats area for land-based discharge (via Boreholes).

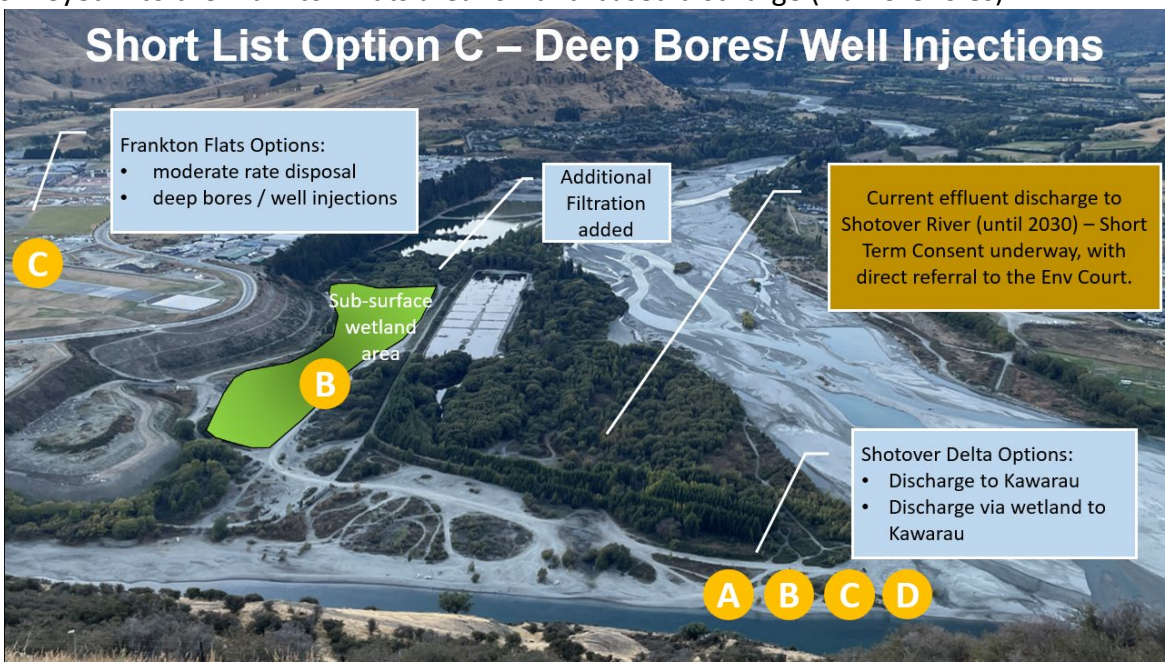

Figure 7: Overview of Option 3 - Wetland + land flow path to Kawarau River + Frankton Flats deep bores.

66. During the Stage 1 trial period, a large portion (approx. 80%) of the 2030 average daily flow of treated wastewater would be disposed of as outlined in Option 2. The remaining volume would be managed through deep bore discharge, irrigation, and recycled water reuse.

67. If the trial demonstrated that substantial disposal of wastewater via boreholes is achievable in the long term, Stage 2 would proceed. For the long-term Stage 2, approximately 50% of the 2060 average daily flow of treated wastewater would continue to be discharged via Option 2 to the Kawarau River. The balance would be treated by membrane filtration and disposed of via deep bore discharge. These flows assume that 12,500 m3/day can be disposed of via the boreholes, which was estimated to have a 25% probability of achievement.

68. **Option 4 - Hybrid of Soakholes at Frankton (+ Option 2)** Option 4 considers the disposal of wastewater to land via soakholes in the Frankton Flats area. Option 4 is a hybrid, with Option 2 being constructed initially with a staged approach onto Frankton Flats required to determine if disposal capacity can be achieved. If trials are positive, part of the treated wastewater would be conveyed into the Frankton Flats area for land-based discharge (via soakholes).

Figure 8: Overview of Option 4 - Wetland + land flow path to Kawarau River + Frankton Flats soakholes.

69. During the Stage 1 trial period, a large portion (approximately 85%) of the 2030 average daily flow of treated wastewater would be disposed of as outlined in Option 2. The remaining volume would be managed through soakhole discharge on Frankton Flats.

70. If the trial demonstrated that substantial disposal of wastewater via soakholes is achievable in the long term, Stage 2 would proceed. For the long-term Stage 2, approximately 50% of the 2060 average daily flow of treated wastewater would continue to follow Option 2 to the river. The balance would be treated by membrane filtration and disposed of via soakhole discharge to Frankton Flats. These flows assume that 12,500 m3/day can be disposed of via the soakholes, which was estimated to have a 13% probability of being achieved.

71. **Alternative Discharge Method to the Kawarau -** For Options A, B, C & D, an alternative solution to the rock outfall disposal to the Kawarau River is a submerged diffuser pipe which offers several advantages & disadvantages. Advantages include greater separation of public from the point of discharge, enhanced mixing, greater resilience to flood flows, and reduced visual impact. Disadvantages include greater complexity in construction, resilience risk with a single diffuser, greater capital and operational costs expected to exceed the rock outfall by approximately a factor of 2-3. Whilst the river diffuser is not included within the recommendation, if it is deemed required due to dilution rates, this Option 3 can be considered during the consenting process following Council approval.

72. **Option 5 – Land disposal to the Crown Terraces.** Through the evolved short list options, a fifth option for a land only discharge has been included for consideration, predominantly for comparison purposes at this stage (refer Attachment E -Shotover WWTP Disposal Short List Options Report – Option 5 Addendum). Option 5, if directed to explore further, would see QLDC proceeding with the development of a land only disposal option with discharge to the Crown Terraces following land acquisition/easements etc. Approximately 288 hectares of land is

required in total to comply with the WEPS application rates for the 2060 peak wet weather flows (PWWF).

73. This option was added to the shortlist following further input from the independent peer reviewer, who noted that a land-only disposal alternative had not been included. The option has since been presented to and discussed with Kai Tāhu. The project team identified the most suitable area for land-based disposal without relying on the location of the SWWTP to guide the decision. Through this assessment, land on Crown Terraces were found to offer sufficiently connected land parcels and the lowest level of constraints (e.g. soil types, topography etc) for an exclusively land-only disposal option.

74. Although Option 5 in itself does not require a discharge to water once implemented, the likely time to acquire the subject land, undertake required infiltration and geotechnical investigations, design and construct the associated infrastructure including bridges, pipelines, pump stations etc. for a 360m elevation gain, would far exceed the short-term consent period (5 years). This would then require consented discharge to water in the intervening period and a likely discharge into the Kawarau River, in preference to continuing to discharge into the Kimi-ākau/Shotover River beyond 2030.

75. This option has been included to enable the original four shortlisted options to be compared against a theoretically feasible, exclusively land-based disposal option, it demonstrates the quantity of land required and the anticipated infrastructure, land acquisition and operational costs to support a technically viable land only disposal option. It is not presented as an option that has been sufficiently developed to support an immediate Resource Consent application.

76. Option 5 has been prepared at a broad, conceptual level, without undertaking site-specific analysis or engagement with affected landowners. It outlines the scale of an exclusively land-based disposal option but has not explored the complexities of land access (beyond provisions in the cost estimate). These land access challenges would equally apply for any land-only disposal solution within the basin. Should the Council elect to progress this option (or a similar option based on other areas of appropriate land), significant further work would be required to confirm its feasibility.

Cost Estimates

77. Preliminary capital cost estimates for the short list options were prepared based on the conceptual sizing outlined earlier in this report. The cost estimating consultancy ALTA was engaged to support the development of Class 4 cost estimates, as defined by the Association for the Advancement of Cost Engineering (AACE International). Class 4 estimates are typically utilised during feasibility studies for comparing options, as in this report, and have an expected accuracy range of -30% to +50%. The level of accuracy is a function of the level of design development undertaken at this stage in an options identification process. These estimates are intended to support relative comparisons between options, decision making and high-level budget setting. Table 2 below presents a summary of the preliminary capital cost estimates of the four options,

with further detail provided in Attachment A. These costs are presented in 2026-dollar terms and do not include annualised cost escalations.

	Option 1 Land flow path to the Kawarau	Option 2 Wetland + land flow path to the Kawarau	Option 3 Boreholes at Frankton (+ Option 2)	Option 4 Soakholes at Frankton (+ Option 2)	Option 5 Land Disposal Crown Terraces
Stage 1 Construction Costs	$33M to $38M	$64M to $73M	$97M to $111M	$96M to $109M	$509M to $580M
Stage 2 Construction Cost (C&D)	-	-	$51M to $58M	$70M to $80M	-
Consent, Investigations and design	$6M	$7M	$17M	$17M	$16M to $20M
Land Cost	-	-	-	-	$50M to $75M
Total Capex (P50 to P90)	**$39M to $44M**	**$71M to $80M**	**$165M to $186M**	**$183M to $206M**	**$575M to $675M**

Table 2: Capex cost estimates (P50 to P90) for short listed options A to E.

78. Preliminary operating costs have been compiled to estimate the relative operational and maintenance costs associated with the treated wastewater disposal options. These estimates are presented in Table 3, with an accuracy range a range of -10%/+30%.

	Option 1 Land flow path to the Kawarau	Option 2 Wetland + land flow path to the Kawarau	Option 3 Boreholes at Frankton (+ Option 2)	Option 4 Soakholes at Frankton (+ Option 2)	Option 5 Land Disposal Crown Terraces
Power	$71k	$66k	$370k	$366k	1.9M to 3.3M (2030 to 2060 flows)
Chemicals & Other	$4.7k	$4.7k	$53k	$53k	$4.7k
Labour (additional)	10K	$30k	$170k	$170k	$71k
Civil & mechanical maintenance costs*	$260k	$370k	$1.033M	$1.125M	$2.5M

	Option 1 Land flow path to the Kawarau	Option 2 Wetland + land flow path to the Kawarau	Option 3 Boreholes at Frankton (+ Option 2)	Option 4 Soakholes at Frankton (+ Option 2)	Option 5 Land Disposal Crown Terraces
Annual operating cost	$350k	$480k	$1.6M	$1.7M	$4.5M to $5.9M
Range (-10% to +30%)	**$320k to $460k**	**$430k to $620k**	**$1.4M to $2.1M**	**$1.5M to $2.2M**	**$4.5M to $5.9M**

Table 3: Opex cost estimates (ranging -10% to +30%) for short listed options A to E.

79. Preliminary Whole of Life Cost has been evaluated for each Option 2y calculating the net present value (NPV) and is presented on Table 4 below:

	Option 1 Land flow path to the Kawarau	Option 2 Wetland + land flow path to the Kawarau	Option 3 Boreholes at Frankton (+ Option 2)	Option 4 Soakholes at Frankton (+ Option 2)	Option 5 Land Disposal Crown Terraces
Net Present Value	$48M	$85M	$188M	$209M	$771M

Table 4: Net present values for short listed options A to E.

Consenting Strategy

80. All options presented require several approvals and consents before detailed design and implementation can proceed. The broad activities associated with each of the options requiring approvals include:

- Discharge of treated wastewater to land and/or water;
- Earthworks to construct the disposal system;
- Works in the bed of the Kawarau River to construct an outfall;
- For Options C & D, construction of bores/soakholes; and
- Any other construction related activities (e.g. diversions).

81. For the options that include land application disposal (C, D, E), land acquisitions or easements will also be required to ensure security of the disposal for the consented period (separate to the consenting process).

82. Several consenting pathways have been assessed as part of the optioneering undertaken on the solutions short list. The two core pathways for the long-term disposal consent include an application made under the existing Resource Management Act (RMA) framework or an application made under the newly proposed (not yet law) planning and natural environment bills.

83. Given the consenting strategy is dependent on the decision by Council, a separate detailed consenting pathways assessment and report for decision will be provided to Council post the decision in this report. The strategy will also outline the advantages, disadvantages, risk and opportunities for an application made under the RMA or the new planning bill.

Implications of the future Water Service Council Controlled Organisation (WSCCO)

84. As part of the current government's Local Water Done Well policy, Queenstown Lakes District Council (QLDC) has resolved to establish a new Council Controlled Organisation responsible for the delivery of water services to the district. The new organisation is intended to take over responsibility for service provision from 1 July 2027.

85. On the basis that decision-making on this matter complies with legislative requirements, aligns with expert professional advice, and can obtain resource consent, the future WSCCO would have no reason to revisit the Council's decision.

Analysis and Advice | Tatāritaka me kā Tohutohu

86. This report identifies and assesses the following reasonably practicable options for addressing the matter as required by section 77 of the Local Government Act 2002.

87. Each short-listed option presents advantages and disadvantages. It is important to note that no single option addresses all concerns or challenges faced with a long-term wastewater disposal solution. Council must consider and select the solution that best addresses the ability for the district to discharge its treated wastewater in the Whakatipu basin now and in the future, with the information available. Summarised below are the key considerations for each option, and the selections put forward for decision:

88. 'Option 1 – Land flow path to the Kawarau River' as the disposal approach and direct staff to apply for Resource Consent on this basis.

Advantages:

- Supports achieving the requirements of the Enforcement Order.
- Provides for long term (35 years plus) certainty around wastewater management in the Whakatipu basin.
- Can be accommodated within existing LTP budgets.

- Is the most cost-effective option for the reasons stated in paragraph 57 of this report and therefore complies with the cost effectiveness provisions of the Water Services (Local Government) Act 2025.

- Achieves appropriate environmental outcomes and supports moving away from the discharge to Shotover River in shortest possible period.

- Ensures the utilisation of capital investment and expenditure in the SWWTP to date is maximised.

- Permits future adaptive pathways to be pursued while providing certainty should detailed investigations/analysis deem alternatives infeasible.

Disadvantages:

- Option is inconsistent with Kāi Tahu views.

- Does not support exploration of immediate land-based disposal options in the short term.

89. 'Option 2 – Subsurface wetland + land flow path to the Kawarau River' as the disposal approach and direct staff to apply for Resource Consent on this basis.

Advantages:

- Supports achieving requirements of Enforcement Order.

- Provides for long term (35 years plus) certainty around wastewater management in the Whakatipu basin.

- Can be accommodated within existing LTP budgets.

- Achieves appropriate environmental outcomes and supports moving away from the discharge to Shotover River in shortest possible period.

Disadvantages:

- Option is inconsistent with Kāi Tahu views as the subsurface wetland is not deemed sufficient land contact.

- Does not support exploration of immediate land-based disposal options in the short term.

- Is inconsistent with the cost effectiveness provisions of the Water Services (Local Government) Act 2025.

90. 'Option 3 – Hybrid of boreholes at Frankton (+ Option 2)' as the disposal approach and direct staff to apply for Resource Consent on this basis, including progression of investigations on Frankton Flats to support a subsequent Resource Consent application for discharge via boreholes.

Advantages:

- Provides for increased use of land disposal.

Disadvantages:

- Option is inconsistent with Kāi Tahu views due to discharge being direct into groundwater and still includes a discharge to the Kawarau River to accommodate current and anticipated flows over the design horizon.
- Is inconsistent with the cost effectiveness provisions of the Water Services (Local Government) Act 2025.
- Cannot be accommodated within existing LTP budget and will result in significant implications for rates and development contributions.
- Precludes compliance with the deadline to submit Resource Consent by under the Enforcement Order (an application for extension to the Environment Court would be required).
- May preclude compliance with the Enforcement Order deadline to implement the long-term wastewater disposal solution by December 2030 , as only part of the solution (discharge to the Kawarau) is anticipated to be completed.
- Delays obtaining certainty around the future of wastewater management in the Whakatipu basin.

91. '**Option 4** – Hybrid of soakholes at Frankton (+ Option 2)' as the disposal approach and direct staff to apply for Resource Consent on this basis, including progression of investigations on Frankton Flats to support a subsequent Resource Consent application for discharge via soak holes.

Advantages:

- Provides for increased use of land disposal (to a greater extent than is achieved under Option 3).

Disadvantages:

- Option is inconsistent with Kāi Tahu views as still includes a discharge to the Kawarau River to accommodate current and anticipated flows over the design horizon.

- Is inconsistent with the cost effectiveness provisions of the Water Services (Local Government) Act 2025.

- Cannot be accommodated within existing LTP budget and will result in significant implications for rates and development contributions.

- Precludes compliance with the deadline to submit Resource Consent by under the Enforcement Order (an application for extension to the Environment Court would be required).

- May preclude compliance with the Enforcement Order deadline to implement the long-term wastewater disposal solution by December 2030, as only part of the solution (discharge to the Kawarau) is anticipated to be completed.

- Delays obtaining certainty around the future of wastewater management in the Whakatipu basin.

92. 'Option 5 – Land disposal to the Crown Terraces' as the disposal approach and direct staff to undertake further work to develop this option to a sufficient level of detail to support a Resource Consent application to be made and directing staff to assess an interim disposal solution (between the short term 2030 consent and implementation of the long term consent) likely being a discharge to the Kawarau.

Advantages:

- Provides for full disposal to land for all flows from SWWTP over the design horizon.

- Is anticipated to be consistent with Kāi Tahu preferences.

Disadvantages:

- Is inconsistent with the cost effectiveness provisions of the Water Services (Local Government) Act 2025.

- Cannot be accommodated within existing LTP budget and will result in significant implications for rates and development contributions.

- An anticipated lengthy process for land acquisitions/easements, with no guarantee that the land could be acquired or easements could be secured.

- Precludes compliance with the deadline to submit Resource Consent by under the Enforcement Order (an application for extension to the Environment Court would be required).

- Precludes compliance with the Enforcement Order deadline to implement the long-term wastewater disposal solution by December 2030.

- Delays obtaining certainty around the future of wastewater management in the Whakatipu basin.

Recommendation | Tūtohunga

Recommended Solution – Option 1 Land flow path to Kawarau River

93. This report recommends **Option 1** – a land-based flow path to the Kawarau River – as the recommended solution.

94. This option is consentable under the current planning framework, and the assessments undertaken to date show that the discharge can meet all relevant water quality and environmental performance standards.

95. The Kawarau River has a large high energy flow that provides rapid dilution and dispersion of the discharged treated wastewater. Technical assessments undertaken to date, indicate that once the discharge has mixed with the river beyond the defined mixing zone, the effects on water quality, ecological values and public health are no more than minor. This reflects both the high treatment standard achieved at the SWWTP and the capacity of the receiving environment.

96. The discharge under Option 1, will comply with the long-term consent limits proposed for nutrients, pathogens and total suspended solids. This option avoids the large-scale land disturbance, groundwater risks, and property acquisition challenges associated with full land-based disposal options such as Option 5. The three key effects criteria (impacts to the surrounding environment, and environmental impacts to surrounding catchment land, soil and groundwater, and amenity effects) assessed as part of the long list options, are all considered manageable and in some cases an improvement on the current short-term solution.

97. When evaluated against the agreed criteria and subjected to sensitivity testing, Option 1 consistently performs as the strongest technical option. It also has the lowest capital and operating expenditure, resulting in the lowest whole-of-life cost and the smallest impact on rates and development contributions.

98. A 35 year consent application for Option 1 provides sufficient capacity for the projected growth in treated wastewater volumes through to 2060. With future upgrades to technology and plant infrastructure, it may also support flows beyond this timeframe.

99. Discharging to the Kawarau River gives Council and the wider community confidence that a long-term, consentable, baseline solution compliant with relevant national policies in respect of instream effects on water quality and ecology values, has been selected to manage both current

and future wastewater flows. It also reduces the duration of discharges to the Shotover River under the short-term consent, which expires in 2030.

100. Option 1, if approved in March 2026, is the only option that could be consented by the May 2026 enforcement order deadline, be fully designed by the December 2027 deadline, and implemented by December 2030. A decision to implement any other option would not allow council to achieve the court ordered timeframes, because of the additional complexity and uncertainty associated with them, and an extension of time would need to be sought.

101. Importantly, Option 1 does not limit Council's ability to continue exploring future adaptive pathways, including decentralised wastewater solutions or alternative land disposal options. Investment in infrastructure for a Kawarau discharge does not become a sunk or unrecoverable cost if Council later pursues additional disposal routes.

102. Because a discharge to the Kawarau River is expected to form the baseline solution for all assessed options (including Option 5, even if only temporarily), progressing Option 1 now assures that:

- Time spent discharging treated wastewater to the Shotover River under the short-term consent is minimised.
- All enforcement order deadlines set out by the Environment Court can be realistically achieved.
- Council can assess further options for land disposal and adaptive pathways in parallel to the consenting and implementation of discharge to the Kawarau River. If alternative viable land disposal options are identified, Council can direct staff to progress their development to supplement discharge to the Kawarau.
- The community has confidence that the treated wastewater being disposed of is consented and complies with the relevant national policies in respect of instream effects on water quality and ecology values.

Consultation Process | Hātepe Matapaki

Significance and Engagement | Te Whakamahi I kā Whakaaro Hiraka

103. This matter is of high significance, as determined by reference to the Council's Significance and Engagement Policy 2024. It meets the threshold for high significance, as the decision is important to the Queenstown Lakes District, has a high level of community interest, has the potential to have a high impact on Councils capability and capacity, and has a high impact on Mana Whenua relationship as it relates to impacts on a body or water within the district.

104. In addition to Mana Whenua, persons who are affected by or interested in this matter are residential and commercial properties connected to the SWWTP, residents and ratepayers of

the Queenstown district community, commercial operators/businesses who utilise the Shotover/Kawarau Rivers.

105. While the matter is of high significance, the policy states that QLDC will not use the Special Consultative Procedure (SCP) for a decision to act where it is necessary to comply with the law or decisions in relation to regulatory or enforcement activities, as is the case here. It should also be noted that this matter was identified as a project in the QLDC Long Term Plan, including a $77.5M budget to implement an option, which was subject to the LTP SCP.

106. In addition, all information relating to the SWWTP issue and process to investigate the options for identifying a wastewater solution has been transparently shared with the community. Community drop-in sessions were held on 11 and 15 December 2025 and the 22 January 2026. They were widely publicised but had limited engagement. More engagement was received via 12 social media posts over the course of December, January and February. The full pack of information, including more latterly Option 5 is available in full on the Council website. In addition, the material has been promoted via Let's Talk (2,500 subscribers), radio advertising, and a full-page advertisement in the Mountain Scene.

Iwi Consultation | Local Rūnaka

107. QLDC has engaged with Kāi Tahu representatives from Aukaha and Te Ao Marama Inc (TAMI) from early in the project (November 2024). Kāi Tahu representatives have contributed to options identification, MCA criteria setting, Long List Options scoring and contribution to short list options development.

108. When further development of the short listed land based options indicated that only a partial discharge of wastewater to land would be possible, and therefore all options would include a portion of wastewater discharge to the Kawarau River, Kāi Tahu representatives declined to attend the short list scoring workshop. They have restated their position that they will not support any options that continue to rely on a discharge to the Kimi-ākau/Shotover or Kawarau Rivers.

109. Due to the difficulties of reflecting the Kāi Tahu position through a scoring approach, Aukaha and Te Ao Marama requested the opportunity to include a clear statement endorsed by the seven Kāi Tahu papatipu rūnaka with interests in the Kimiākau/ Shotover and Kawarau rivers and the greater Whakātipu area. Aukaha and Te Ao Marama Inc have restated their position that they do not support any options that continue to rely on a discharge to the Kimi-ākau/Shotover or Kawarau Rivers. The full position statement is provided in Attachment B of this report.

110. Following further consultation with Kāi Tahu representatives, a mana to mana hui has been arranged between elected members and Rūnaka leaders.

111. The mana to mana hui has been scheduled for 11 March 2026 and is expected to include a discussion on the SWWTP disposal solution. Following this session, an update/addendum to

this paper may be provided to Council if required regarding Kāi Tahu's views on the recommended option and any other agreed actions connected with wastewater management within the district.

Risk and Mitigations | Kā Raru Tūpono me kā Whakamaurutaka

112. This matter relates to the Regulatory/Legal/Compliance risk category. It is associated with RISK10029 Ineffective compliance management practices within the QLDC Risk Register. This risk has been assessed as having a high residual risk rating.

113. The approval of the recommended option will allow Council to implement additional controls for this risk. This will be achieved by progressing and gaining new Resource Consents associated with the discharge of treated wastewater from the SWWTP.

114. This matter also relates to the Regulatory/Legal/Compliance risk category. It is associated with RISK10021 Ineffective operations and maintenance of property or infrastructure assets within the QLDC Risk Register. This risk has been assessed as having a very high residual risk rating.

115. The approval of the recommended option will allow Council to implement additional controls for this risk. This will be achieved through the progression of design work on a new disposal solution that caters for existing and future SWWTP requirements and supports appropriate environmental protection.

116. The approval of the recommended option (or any other Option discussed in the report) does not materially change the underlying risks associated with treatment plant performance. A separate workstream is underway to increase emergency storage capacity at the facility, which will better enable short-term disruptions to be managed and reduce the risk of non-compliance. In parallel, QLDC continues to prioritise improvements to operational practices and asset management capability to support reliable and optimised treatment plant performance.

117. This matter also relates to the Strategic/Political/Reputation risk category. It is associated with RISK10056 Ineffective provision for the future planning and development needs of the district within the QLDC Risk Register. This risk has been assessed as having a moderate residual risk rating.

118. The approval of the recommended option will allow Council to implement additional controls for this risk. This will be achieved by enabling the provision of a disposal solution that is adequately sized for the growth of the district and wastewater volumes expected over the next 35 years.

119. Note that these risk mitigations and controls will only be realised if the project progresses through implementation.

Financial Implications | Kā Riteka ā-Pūtea

120. The existing project budget on the LTP is considered sufficient to support the recommended option.

121. Construction of the recommended solution will require an increase to rates and development contributions, and subject to final funding arrangements, is likely to require an increase of Council borrowing. These financial implications must be balanced by the recommended solution remaining the most cost-effective option available.

122. Financial implications associated with delivery of the recommended solution are outlined in more detail in Attachment A – Shotover WWTP Disposal Short List Options Report

Council Effects and Views | Kā Whakaaweawe me kā Tirohaka a te Kaunihera

123. The following Council policies, strategies and bylaws were considered:

- QLDC's Strategic Framework
- 30 Year Infrastructure Strategy
- Three Waters Services Asset and Activity Management Plan 2024-2034
- Climate and Biodiversity Plan 2025-28
- Long Term Plan 2024/34
- Queenstown Lakes Spatial Plan
- Queenstown Lakes District Plan
- Te Pūtahi Ladies Mile Structure Plan
- Te Tapuae Southern Corridor Structure Plan

124. This matter is included in the Long Term Plan as part of the 3 Waters capital investment programme (specifically as the *Shotover Disposal Field* project) and highlighted as a key planned activity of "Investment in the Shotover Disposal Field arrangements in the context of current challenges, to ensure ongoing performance and compliance".

Legal Considerations and Statutory Responsibilities | Ka Ture Whaiwhakaaro me kā Takohaka Waeture

125. The Local Government (Water Services) Act 2025 (LGWSA) has replaced the Council's obligations as a water provider under the Local Government Act 2002 (LGA). The Act establishes a framework for local government to provide water services in a flexible, cost-effective,

financially sustainable, and accountable manner. Particularly, Section 254(2) sets out a specific obligation to choose the "most cost-effective" option over the life of the infrastructure assets:

> *254 Obligation to consider cost-effectiveness of wastewater options*
>
> *(1) This section applies when a water service provider makes a decision relating to—*
>
> *(a) options for providing wastewater infrastructure:*
>
> *(b) options for treating wastewater.*
>
> *(2) The water service provider must, when making a decision under subsection (1), choose the option it considers to be the most cost-effective option for providing wastewater services over the life of the infrastructure assets required to implement that option.*

126. This is a statutory requirement and is mandatory. Cost effective is not necessarily the least costly Option 2ut would likely entail a comparative assessment of the total costs (including capital, operational, and maintenance costs) and effectiveness of each option over the lifetime of the assets. The expert advice of GHD has considered these matters, including complexity and risk, and supports the conclusion that the recommended option is clearly the most cost effective over the life of the infrastructure assets.

Enforcement Order

127. Council is bound by the timeframes in Environment Court orders (EO) directing it to lodge consent for the Long-term solution by 31 May 2026, with implementation of the long-term solution by 2030.

128. The terms of the EO including the deadlines, while agreed to by consent, reflect the ORC's independent enforcement team's strong position that these steps should be undertaken within the tight timeframe that was agreed.

129. QLDC sought longer timeframes but ORC pressed for them to be as short as possible, and the deadlines imposed reflect that. QLDC risks potentially legal (and reputational) consequences, including prosecution if the deadlines are not met.

130. There is provision in the EO for QLDC (or any party) to seek leave to apply for changes to the order (which could include an extension of time), however any such application would need to be supported by very good reasons. There is no guarantee of the Court agreeing to it (if the ORC is amenable to the changes this would likely increase the chances of the Court agreeing, but it remains ultimately up to the Court) and any extension is expected to be limited. There is a risk that in applying for a variation to the order, the outcome of that application may not be known until the window for compliance has closed.

131. Some councillors have expressed a preference to consider applying for the extension of the Court-imposed deadlines in order to further explore options and/or to engage with mana whenua. Extension of the time limit may be possible, with the provision of clear and justifiable reasons.

132. If an extension to the deadline for lodging the consent (31 May 2026) is sought, then corresponding extensions must also be sought to the other two EO deadlines, namely completing engineering design by 31 December 2027, and finishing construction and commissioning by 31 December 2030. Otherwise, the timeframe for complying with these later deadlines is likely to be too compressed and unrealistic. Further, it may be necessary to amend and lengthen the term of the short-term consent (or seek an additional short term consent to fill the gap) by a matching period of time, to avoid the situation where there is a gap between the expiry of the short term consent (currently proposed to expire on 31 December 2030) and the EO timing for the long term option to be operational.

133. In other words, failing to meet / delaying the 31 May 2026 deadline may result in a domino effect of delays unless all the dates are extended.

134. Failure to comply with any of the dates could result in the following:

- Otago Regional Council (ORC) could prosecute QLDC under the RMA for contravening the enforcement order. This is a strict liability offence with narrow statutory defences available.

- This would not be a novel action against QLDC by ORC. QLDC was prosecuted in 2019 for an unlawful discharge under s15(1)(b) of the RMA. It was sentenced, convicted and fined for the unlawful act. The circumstances in that case were far less serious than the consequences of non-compliance in this case. [Otago Regional Council v Queenstown Lakes District Council, [2019] NZDC 832 (2019) [2019] ELHNZ 5, 2019 WL 479847]

Local Government Act 2002 Purpose Provisions | Te Whakatureture 2002 o te Kāwanataka ā-Kīaka

135. Section 10 of the Local Government Act 2002 states the purpose of local government is (a) to enable democratic local decision-making and action by, and on behalf of, communities; and (b) to promote the social, economic, environmental, and cultural well-being of communities in the present and for the future. The Shotover Disposal project will ensure adequate infrastructure is established in Queenstown to contribute to the social, economic and environmental wellbeing of the community. As such, the recommendation in this report is appropriate and within the scope of Section 10 of the Act.

136. The recommended option:

- Can be implemented through current funding under the Long Term Plan and Annual Plan;

- Is consistent with the Council's plans and policies; and

- Would not significantly alter the intended level of service provision for any significant activity undertaken by or on behalf of the Council or transfer the ownership or control of a strategic asset to or from the Council.

Attachments | Kā Tāpirihaka

A	Shotover WWTP Disposal Short List Options Report
B	Kāi Tahu position statement on Shotover disposal field alternative options
C	Compliance of the Kawarau and Shotover Rivers with NPS-FM
D	Shotover WWTP Disposal Long List Options Report
E	Shotover WWTP Disposal Short List Options Report – Option 5 Addendum

All attachments have been circulated separately.