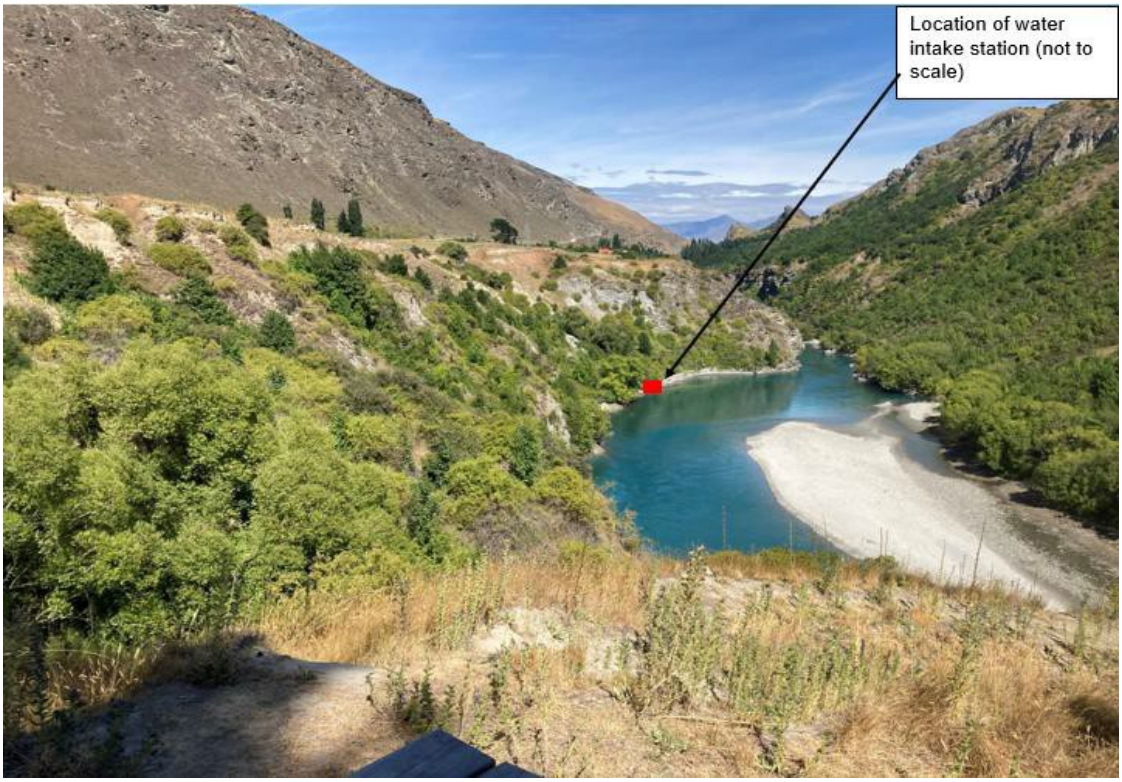


Figure 5: Photo taken from the Gibbston Cycle Trail (facing west) viewing the locatio nfo the structure and access track (Source: Application).

The Applicant has described the construction methodology as follows:

- *Set up erosion and sediment control measures;*
- *Construct 1 m wide by 600 millimetre (mm) deep trench to establish the pipeline and associated electricity and telecommunications cables for the intake pump station. The trench will be backfilled to existing ground level;*
- *Carry out excavations on the margin of the Kawarau River (outside the wetted bed) to facilitate the placement and assembly of the water intake stations;*
- *Establishment of the water pump structure, wet well rock armouring on the margin, and water intake within the bed of the river, but during low flows so that the works are not occurring within the water; and*
- *Completing the works and remediating the access track and disturbed areas.*

The earthworks associated with the construction will consist of widening the existing access track to enable a 14-tonne excavator. The total area of earthworks will be approximately 250 m^2. The maximum cut and fill depth proposed are up to 3.5 m. The proposed earthworks are to widen the existing access track and access the margin of the Kawarau River to place the intake structure. The total volume of earthworks will be approximately 110 m^3 cut and 50 m^3 fill, resulting in a balance of 60 m^3. The Applicant has described that the site will be stabilised by retaining walls that will support the pump station. Once construction is complete the temporary access track will be rehabilitated and reduced in width to accommodate a quad bike scale vehicle and smaller excavator (3-5 tonne), which will be used for maintenance access.

The proposed works will be undertaken during lower-than-average flows (in summer) in order to ensure the construction areas are not affected by water. The casing and water intake pipe placement will permanently be in the wetted bed of the Kawarau River. The Applicant has discussed the construction methodology as:

a. *Installation is proposed to be undertaken in low river season (from March to September – consistent with the construction period identified in the AEE).*
b. *A temporary coffer dam will be constructed to encapsulate the intake pipes and wet well. Coffer dam construction will be sheet piles or similar flat panel.*
c. *Some temporary works may be installed immediately upstream of the coffer dam to provide additional protection from river current.*
d. *Dewatering pumps to be installed for installation of the coffer dam and for duration of works.*
e. *The coffer dam, and other temporary works, will be removed at the end of the works.*

The Applicant has indicated that tracked excavators will need to enter the river and majority of the works can be undertaken from the margin of the river. The Applicant has stated that the erosion and sediment control measures will be minimise the release of sediment into the Kawarau River.

The Applicant has stated the works will take several days and the overall site is estimated to take 12 weeks.

The Applicant has been granted a certificate of compliance (RM23.635) to take surface water from the Kawarau River as a permitted activity under the Regional Plan:

The Applicant has provided the following documentation with the application:

- Resource consent application and supporting information report signed by the applicant and dated December 2023;
- Further information response dated 7 February 2024; and
- Final further information response dated 12 April 2024.

3.2 Proposed conditions

The Applicant has proposed the following conditions, which are included here to provide information on how the works will be undertaken. These are considered to be measures to mitigate adverse effects of the proposed activities.

1. *The intake structure, wet well, water intakes and rock armouring shall be sized, constructed and located as generally described in the application. If there are any inconsistencies between the application and this consent, the conditions of this consent shall prevail.*

2. *The consent holder shall ensure that any contractors engaged to undertake work authorised by this consent abide by the conditions of this consent. A copy of this consent shall be present on site at all times while the work is being undertaken.*

3. *Hours of work under this consent shall be from 7.00 am to 7.00 pm, Monday to Friday. Works shall not be undertaken on Public Holidays.*

4. *Works shall, as far as practicable, be undertaken when flows in the watercourse are low.*

5. *During the exercise of this consent, the consent holder shall ensure that no contaminants, including fuel, oil, cement or cement products, enter the Kawarau River. In the event of contamination, the consent holder shall undertake remedial action and shall notify the Consent Authority as soon as practical.*

6. *Fuel storage tanks and machinery working and stored in the construction area shall be maintained at all times to prevent leakage of oil and other contaminants into the Kawarau River. No refuelling of machinery shall occur within the watercourse.*

7. *All machinery shall be water blasted prior to being brought on site and following completion of the works, to reduce the potential for pest species being introduced to or taken from the watercourses. Machinery and equipment that has worked in watercourses shall, prior to entering and leaving the site, also be cleaned with suitable chemicals or agents to kill didymo. At no time during the exercise of this consent shall machinery be washed within the bed of a watercourse.*
   Advice Note: The Consent Holder shall also comply with all notices and guidelines issued by Biosecurity New Zealand, in relations to avoiding spreading the pest organism Didymosphenia geminata known as "Didymo" (refer to www.biosecurity.govt.nz/didymo).
8. *All works shall, as far as practicable, be undertaken outside the wet bed of the watercourse.*
9. *The consent holder shall ensure that any bed disturbance is limited to the extent necessary to carry out the works.*
10. *All reasonable steps shall be taken to minimise the release of sediment to water.*
11. *At completion the works shall not result in any decrease of the upstream and downstream cross-sectional area of the streambed, as the streambed exists prior to commencement of the works authorised by this consent.*
12. *The consent holder shall minimise damage to riparian vegetation when exercising this consent.*
13. *The water intake devices shall be fitted with a fish screen with 1mm aperture as identified in the approved plans. The consent holder shall ensure that existing fish passage is not impeded as a result of the placement of the intake structure.*
14. *The consent holder shall ensure that once completed the works authorised by this consent do not cause any flooding, erosion, scouring, land instability or property damage. Should such effects occur due to the exercise of this consent, the consent holder shall, if so required by the Consent Authority and at no cost to the Consent Authority, take all such action as the Consent Authority may require to remedy any such damage.*
15. *Prior to, or immediately following completion of the works authorised by this consent, the consent holder shall ensure that all plant, equipment, chemicals, fencing, signage, debris, rubbish and any other material brought on site is removed*

from the site. The site shall be tidied to a degree at least equivalent to that prior to the works commencing.

16. *The consent holder shall ensure that any damage to the stream banks, be reinstated to a quality at least equivalent to that prior to the works commencing, within one month of completion of the works and the revegetation of any existing riparian vegetation in the same vicinity is in progress.*
17. *If the consent holder:*

    (a) discovers any of the following: kōiwi tangata (human skeletal remains), wāhi taoka (resources of importance), wāhi tapu (places or features of special significance) or other Māori artefact material, or any feature or archaeological material that predates 1900:

    All works shall cease and provision shall be made to enable the site to be inspected by the relevant authority or agency:

    (b) if the discovery is human remains or kōiwi, the New Zealand Police are required to investigate the human remains to determine whether they are those of a missing person or are a crime scene. The remainder of this process shall not apply until the New Zealand Police confirm that they have no further interest in the discovery; or

    (c) if the discovery is of other than evidence of contaminants, a site inspection for the purpose of initial assessment and response shall be arranged by the Council in consultation with Heritage New Zealand Pouhere Taonga and appropriate Mana Whenua representatives;

Work within the area determined by the Council at e. shall only recommence when all of the following requirements, so far as relevant to the discovery, have been met:

I. *Heritage New Zealand has confirmed that an archaeological authority has been approved for the work or that none is required;*

II. *any required notification under the Protected Objects Act 1975 has been made to the Ministry for Culture and Heritage;*

III. *the requirements of the National Environmental Standards for Assessing and Managing Contaminants in Soil National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health are met;*

IV. *any material of scientific or educational importance must be recorded and if appropriate recovered and preserved;*

V. *where the site is of Māori origin and an authority from Heritage New Zealand Pouhere Taonga is not required the Council will confirm, in consultation with Mana Whenua, that:*

- *any kōiwi have either been retained where discovered or removed in accordance with the appropriate tikanga; and*

- *any agreed revisions to the planned works to be/have been made in order to address adverse effects on Māori cultural values.*

VI. *any necessary resource consent has been granted to any alteration or amendment to the earthworks or land disturbance that may be necessary to avoid the sensitive materials and that is not otherwise permitted under the Plan or allowed by any existing resource consent.*

VII. *there are no requirements in the case of archaeological sites that are not of Māori origin and are not covered by Heritage New Zealand Pouhere Taonga Act 2014*

3.3 Description of the Environment

A description of the site and surrounding environment is provided in the application and that is adopted for the purposes of this report. Key details are as follows below.

The site is located in Gibbston Valley, with the higher reaches of the landholding utilised for low intensity pastoral farming. The Kawarau River and its margins are zoned rural. The proposed site is on the marginal strip owned by the Department of Conservation (DoC) and Land Information New Zealand (LINZ) land adjacent is the Applicant's land shown below in Figure 6.

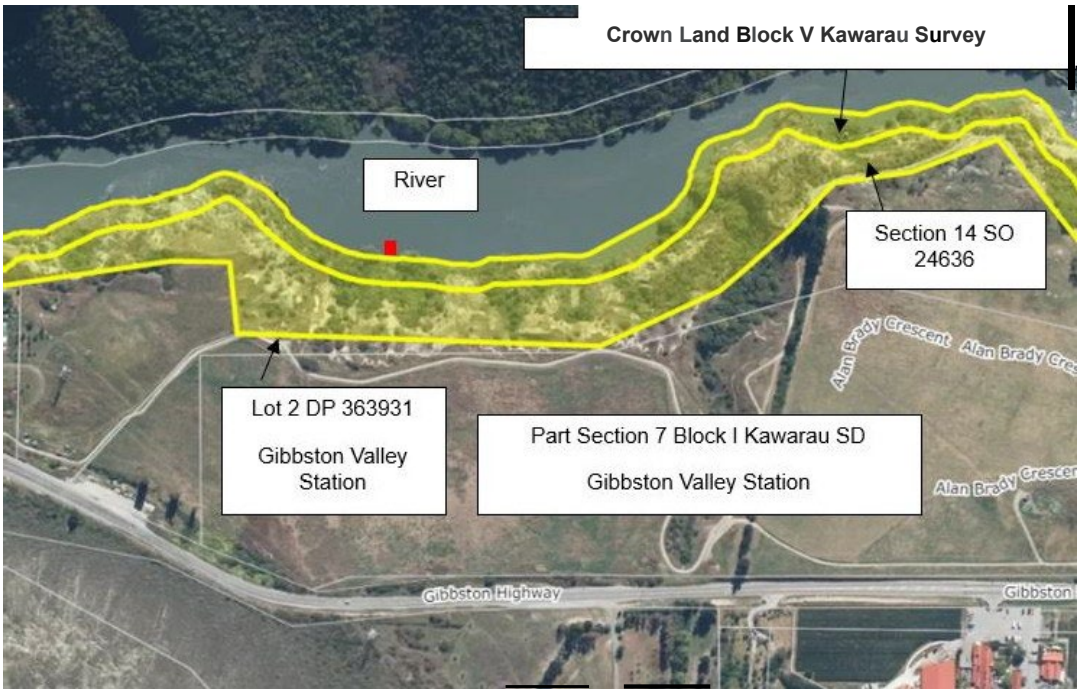


Figure 7: Showing location of intake and surrounding land (Source: Application)

Surface Water

The Kawarau River drains into Lake Whakatipu and flows generally eastwards through the Kawarau Gorge for approximately 60 kilometres until it reaches Lake Dunstan. The Shotover River enters the Kawarau River from the north in Frankton.

The Kawarau River is located in a deeply incised gorge. The river margin is characterised by a mix of exotic vegetation such as crack willow trees, rosehip and elderberry, with weed

species colonising the terrace escarpments. Indigenous vegetation is present in locations and comprise grey shrubland species such as matagouri, coprosma and Olearia. It has been identified that no ingenious vegetation is required to be removed for the proposal.

There are no consented water takes from the Kawarau River in proximity to the proposal. The closest consent is approximately 260 m up the embankment for a wastewater discharge (RM21.481.01). There are no other consented activities in the general vicinity of the works. There are likely to be takes within the permitted activity volumes.

Site Visit

A site visit was not undertaken as there was deemed to be enough information and supplementary photographs associated with the application.

Recognised values listed in the Regional Plan: Water for Otago

The Regional Plan: Water for Otago (RPW) outlines the natural and human use values of various watercourses throughout the Otago Region. The Kawarau River is identified in this schedule. The Kawarau River is identified for the following natural and ecosystem values:
The Regional Plan: Water for Otago (RPW) outlines the natural and human use values of various watercourses throughout the Otago Region. The Kawarau River is identified in this schedule. The Kawarau River is identified for the following natural and ecosystem values:

- Large water body supporting high numbers of particular species, or habitat variety, which can provide for diverse life cycle requirements of a particular species, or a range of species.
- gravel/rock bed composition of importance to resident biota.
- Absence of aquatic pest plants identified in the Pest Plant Management Strategy for the Otago Region upstream of Lake Dunstan.
- Presence of indigenous fish species threatened with extinction.
- Significant presence of trout, salmon and eel.
- Significant habitat for koaro including many tributaries.
- Outstanding natural landscape for:
    - Its wild, scenic characteristics
    - Natural characteristics and scientific values, in particular the return flow in the upper section with the Shotover River is in flood;
    - for recreational purposes, in particular rafting, jet boating and kayaking
- Outstanding natural landscape for its spectacular and rugged river gorge, schistose landscape, fast flowing white water and rapids, old gold sluicing landscape, from confluence with Arrow River to Lake Dunstan.

Schedule 1AA of the RPW identifies Otago resident native freshwater fish and their threat status. The Kawarau River is known to provide habitat for koaro, which is within this schedule.

Schedule 1B of the RPW identifies rivers where the water taken is used for public water supply purposes and Schedule 1C identifies registered historic places. The There are no Schedule 1B or 1C values in close proximity to the proposed activity.

Schedule 1D of the RPW identifies the spiritual and cultural beliefs, values and uses associated with water bodies of significance to Kai Tahu. The Kawarau River is identified as having the following values:

- ***Kaitiakitanga:*** *the exercise of guardianship by Kai Tahu, including the ethic of stewardship.*
- ***Mauri:*** *life force.*
- ***Waahi taoka:*** *treasured resource; values, sites and resources that are valued.*
- ***Trails:*** *sites and water bodies which formed part of traditional routes, including tauraka waka (landing place for canoes);*
- ***Cultural materials:*** *water bodies that are sources of traditional weaving materials (such as raupo and paru) and rongoa (medicines)*

Regionally Significant Wetlands

There are no regionally significant wetlands or natural inland wetlands in the vicinity of the proposed intake works.

Status of the Application

4. Placement of intake structure

Intake structure

The Regional Plan: Water for Otago (RPW) provides for the placement of an intake structure as a permitted activity in rule 13.2.1.4

However, as the structure will exceed 2 square metres in area, the activity cannot meet condition (a) of Rule 13.2.1.4.

Therefore, the placement of the intake structure in, on, under or over the bed of any lake or river or any Regionally Significant Wetland is a ***discretionary activity*** under Rule 13.2.3.1 of the RPW.

4.1 Bed disturbance

The disturbance of the bed of a river is a permitted activity under Rule 13.5.1.1 of the RPW.

However, as the works could involve more than 10 hours work within the bed of the watercourse, condition (f) of rule 13.5.1.1 cannot be met.

The disturbance of the bed of the lake or river is therefore a ***discretionary activity*** under Rule 13.5.3.1 of the RPW. It is noted that 'alteration' includes any disturbance, and the associated remobilisation (discharge) and redeposition (deposit) of bed material already present, reclamation or deposition of cleanfill associated with works in the bed.

4.2 Earthworks

The water intake activity is associated with a residential activity; therefore, the associated earthworks cannot meet rule 14.5.1 of the RPW.

Under Rule 14.5.1 of the Regional Plan: Water for Otago (RPW) the use of land, and the associated discharge of sediment into water or onto or into land where it may enter water, for earthworks for residential development is a permitted activity providing all of the following criteria under Rule 14.5.1.1 are met:

(a) The area of exposed earth is no more than 2,500 m^2 in any consecutive 12-month period per landholding; and

(b) Earthworks do not occur within 10 metres of a water body, a drain, a water race, or the coastal marine area (excluding earthworks for riparian planting), and
(c) Exposed earth is stabilised upon completion of the earthworks to minimise erosion and avoid slope failure; and
(d) Earthworks do not occur on contaminated or potentially contaminated land; and
(e) Soil or debris from earthworks is not placed where it can enter a water body, a drain, a race or the coastal marine area; and
(f) Earthworks do not result in flooding, erosion, land instability, subsidence or property damage at or beyond the boundary of the property where the earthworks occur; and
(g) The discharge of sediment does not result in any of the following effects in receiving waters, after reasonable mixing:
    i. the production of conspicuous oil or grease films, scums or foams, or floatable or suspended materials; or
    ii. any change in the colour or visual clarity; or
    iii. any emission of objectionable odour; or
    iv. the rendering of fresh water unsuitable for consumption by farm animals; or
    v. any significant adverse effects on aquatic life.

In this instance, the proposal does not meet all of the permitted activity criteria and consent is required under Rule 14.5.2.1 for the following reasons:

(b) The earthworks will occur within 10 metres of a water body, a drain, a water race, or the coastal marine area (excluding earthworks for riparian planting). The earthworks will be undertaken within approximately 1 m of the Kawarau River.

Except as provided by Rule 14.5.1.1, the use of land, and the associated discharge of sediment into water or onto or into land where it may enter water, for earthworks for residential development is a ***restricted discretionary activity***.

4.3 Permitted Activity Rules

The Applicant has obtained a certificate of compliance for the associated water take being able to meet the requirements of ***permitted activity*** Rule 12.1.2.2 of the RPW.

In addition, the Applicant states that the water intake pipes will comprise the placement of pipes on the bed of the Kawarau River under ***permitted activity*** Rule 13.2.1.2.

The Applicant has stated that the deposition of rock rip rap armouring will be placed on the river side of the intake station under ***permitted activity*** Rule 13.5.1.4.

4.4 Overall

Applications involving a number of different activity status can be bundled together, so that the most restrictive activity classification is applied to the overall proposal. The bundling approach developed from case law is to enable appropriate consideration of the effects of an activity, or group of activities. The most restrictive activity status applying to the activities subject to this application is ***discretionary*** activity.

Overall, the placement of the intake structure, associated earthworks and resultant bed disturbance are ***discretionary*** activities.

Assessment of Adverse Environmental Effects

An assessment of effects is provided in the application and that is adopted for the purposes of this report. Key details are outlined below as it relates to understanding the scale of effects and to inform the recommendation on notification.

5. Effects on the Hydraulic Capacity and Flow Characteristics of the Kawarau River

All instream work has the potential to affect the dynamics and characteristics of the hydraulic properties of waterways, including reducing flow resistance, increasing flow velocities, and transference of energy. Actual or potential effects to be generated from such changes to water dynamics include flooding, erosion, scouring and land instability.

The Applicant has proposed intake pipes and rip rap that will not impede on the flow of water or debris and will use markers on the banks to identify the pipes. The two water intake pipes will be staggered lengths to accommodate river flows and will each be fitted with a 1-millimetre (mm) aperture fish screen.

The application was reviewed by Council's Natural Hazards Unit (NHU) and they were satisfied the long-term effects on hydraulic capacity and flow characterises of the proposal had been addressed. NHU had concerns regarding the short-term effects of the construction phase and flood management throughout. The Applicant provided a flood management plan, which NHU was satisfied any adverse effects on hydraulic capacity and flow characteristics would be less than minor and the Applicant has agreed to offer a condition of consent requiring the flood management plan.

The construction phase flood management plan consists of:

- *Weather forecasts are to be monitored daily (including consulting multiple forecasting sources) and works sensitive to a high river level are not to be undertaken if heavy rain is forecast for the catchment of the Kawarau River in the upcoming days.*
- *The main item considered sensitive to a high river level is the proposed retaining wall. In addition to daily monitoring of multiple weather forecasts, to mitigate the hazard posed by unforecast high flows it is proposed that no more than 5 linear metres of retaining wall is to be under construction at any time, in order to minimise the area of exposed open cut.*
- *In the event of forecasted high river levels:*
    - *All equipment and materials undertaking work considered to be within a potential flood hazard location are to be moved to high ground.*
    - *Any open excavation is to be secured by covering with fastened Bidim cloth or similar geotechnical fabric to prior to high flow event.*
- *Refuelling areas will be outside of potential flood hazard.*
- *Material storage will be above high river level.*
- *Temporary drainage measures for the access track are to be constructed, and inspected/maintained following significant rainfall events. Silt transport mitigation measures are to be installed and maintained as appropriate.*
- *Before leaving site each day multiple weather forecasts will be consulted, and if significant rainfall is expected, all plant will be removed from removed from the potential flood hazard area (in addition to the stabilisation of ongoing works as described above).*

The Applicant has further proposed a condition requiring the Consent Holder to ensure the structure does not cause any flooding, erosion, instability or property damage.

The placement of the intake structure will occur during the summer months outside the fish spawning period. The Kawarau River is often silt laden due to the nature of the bed composition and surrounding steep ranges and velocity of the river flow. The Applicant has stated that any remobilising of sedimentation during the placement in the Kawarau River will be small and for a short duration. The water intake will be constructed to be able to manage the variable flows. The overall scale of the works proposed are considered to be small.

The anticipated effects on the hydraulic capacity and flow characteristics of the Kawarau River are less than minor.

5.1 Any erosion, land instability, sedimentation or property damage and effectiveness of erosion and sediment control measures

The use of land for earthworks has the potential to result in erosion and sediment losses, that may enter waterbodies. It also may cause issues in terms of land stability that may lead to discharges of soil and/ or sediment into the environment, as well as cause property damage.

The Applicant has stated that the proposed earthworks will be undertaken in accordance with an effective erosion and sediment control plan (ESCP). The ECSP will ensure that potential adverse effects will be appropriately manged and mitigated to ensure that erosion, land instability or sedimentation resulting from the activity is limited.

The Applicant has stated that all construction phase stormwater discharges and any windblow sediment discharges to air will be manage through the ESCP.

Overall, the proposed erosion and sediment control measures will be effective in reducing discharges of sediment to water, provided the activity is undertake in accordance with the Application. As such, the adverse effects in terms of erosion, land stability sedimentation and property damage are anticipated to be no more than minor.

5.2 Effects on water quality, including cumulative effects, and consideration of trends in quality of the receiving water body

The use of land for earthworks for residential development has the potential to result in adverse effects on water quality, through sediment loss, loss of contaminated soil, storage of fuel and the refuelling of vehicles and machinery.

The nearest water body to the site is the Kawarau River, which is approximately 1 m north of the site. The Applicant has stated that the amount and scale of the earthworks is small, however the location and nature of the works is on the margin of the Kawarau River. To ensure the erosion and sediment controls are effective the Applicant is proposing the ESCP be designed by a suitably qualified professional.

The Applicant has stated machinery will only enter the dry bed and margin of the Kawarau River. It will be kept clean, well maintained and refuelling will occur away from the waterway.

Overall, the effects on water quality in the Kawarau River are expected to be less than minor.

5.3 Effects on Aquatic Ecosystems

The natural ecosystem values of the Kawarau River are discussed in Section 3 of this report, and it is identified that koaro (galaxias brevipinnis) is present in the Kawarau River.

The Applicant has stated effects on ecosystems will be minimised through a construction management methodology and erosion sediment control plan (ESCP). The proposed works will occur during low flow periods to minimise the disturbance. Any effects on water quality are therefore considered to be less than minor.

The proposed works and associated disturbance are on the margin of the Kawarau River. The Applicant has proposed mitigation measures to ensure the disturbance avoids adverse effects.

The Applicant has indicated that all machinery used will be well maintained and clean, and all works will be undertaken outside of the actively flowing channel. This will prevent contamination of the watercourse. No machinery will be refuelled or cleaned within the watercourse and all machinery used in other watercourses will be waterblasted before being used on the site to prevent spread of pest plant species such as didymo.

There are no Regionally Significant Wetlands or Regionally Significant Wetland Values that will be affected by this proposal. Overall, adverse effects on Schedule 1A values, fish passage and Regionally Significant Wetlands are less than minor.

5.4 Effects on River Values

The placement of the intake structure and associated works could have potential adverse effects on:

- Natural character;
- Amenity values of the Kawarau River;
- Heritage;
- Public Access; and/or
- Cultural Values (Schedule 1D).

The intake structure will temporarily alter the natural character, but this effect is considered to be less than minor, because the proposed intake structure will appear incongruous to the immediate upstream and downstream environment. The works will not affect the ecology, natural flow characteristics or water quality of the river. The Applicant has described that the primary intake station will be relatively small and will not be readily visible from the trail which is approximately 40 m above the river. The adverse effects on public access and visual amenity will be less than minor. This is because the minor nature of the proposed works, the access track will be retained during the time of works and after the installation.

The intake structure and associated works will be located on the marginal strip owned by DoC and partially by LINZ. The Applicant has stated they will seek a licence to occupy from LINZ. The Applicant has a concession (PAC 13 04 294) from DoC for easements for rights to convey water, electricity and access associated with the installation and operation of the water intake structure. The Applicant will be placing a structure on the riverbank, which could have minor effects on the land.

The Kawarau Gorge Suspension Bridge is a recognised heritage site associated with the Kawarau River, which is not in close proximity to the location of the proposed intake structure.

The Kawarau River is recognised in Schedule 1D of the RPW and is not a known nohoanga site. Impacts on aquatic ecology, including on endangered indigenous fauna, are expected to be less than minor as a result of the mitigation measures proposed by the Applicant.

Aukaha/TAMI and Ngai Tahu were not notified of the activity as the Kawarau River is not a statutory acknowledgment area. The proposed area of works is considered to be temporary and small in nature. The Applicant has proposed the accidental discovery protocols being adopted for the duration of the works. The Applicant stated they provided Aukaha the proposal in May 2023 for comment and feedback has not been received.

The Kawarau River has numerous cultural values identified in Schedule 1D of the RPW. As particular spiritual and cultural beliefs and values will be affected by the proposal it is appropriate for the Applicant to consult with mana whenua prior to undertaking the works.

As assessment of the proposal against relevant provisions of the Kai Tahu ki Otago Natural Resource Management Plan 2005 is given later in the decision report.

As described earlier in this report, effects on the hydrology and ecology of the Kawarau River are assessed as being less than minor. The Applicant has sent overview documents to Aukaha in May 2023, then revised documents in November 2023 and Te Ao Marama were approached for comment, but no substantive feedback has been received. Based on this, effects on cultural values cannot be determined at this stage.

Overall, effects on iwi and cultural values are considered to be minor.

5.5 Effects on Other Water Users

There are no downstream consented water takes on the Kawarau River and takes further downstream (including permitted takes) will be unaffected by the works due to their minor nature and the proposed mitigation measures.

The Kawarau River has recreational values for rafting and kayaking. The proposed intake structure and riprap will not compromise any of these activities as the structure is located on the margin of the river. The Applicant has proposed to install markers to alert water users of the intake.

Overall, there will be no adverse effects on any recreational users from the proposal.

5.6 Consideration of Alternative Methods

The Applicant previously had consent RM13.430.01 for a wet-well pump chamber, which had a smaller above ground footprint, however this required a greater amount of earthworks and engineering requirements to excavate into bedrock. This consent was not exercised and expired.

The Applicant was in the process of applying for consent RM23.639.01 for a revised intake structure and construction methodology, which did not include the extensive rock

armouring or wet-well structure, so the Applicant withdrew the application. The current proposal is the preferred option, and not other reasonable alternative methods exist.

5.7 Conclusion

Overall, the adverse effects of the proposed activity are expected to be no more than minor.

6 Notification and Written Approvals

6.1 Section 95A Public Notification

Step 1: Is public notification mandatory as per questions (a) – (c) below?

(a) Has the applicant requested that the application be publicly notified? **No**

(b) Is public notification required by Section 95C? **No**
Has further information been requested and not provided within the deadline set by Council? **No**
Has the applicant refused to provide further information? **No**
Has the Council notified the applicant that it wants to commission a report but the applicant does not respond before the deadline to Council's request? **No**
Has the applicant refused to agree to the Council commissioning a report? **No**

(c) Has the application been made jointly with an application to exchange recreation reserve land under section 15AA of the Reserves Act 1977? **No**

Step 2: Is public notification precluded as per questions (a) – (b) below?

(a) Is public notification precluded by a rule in the plan or a NES? **No**

(b) Is the application for one or more of the following activities but no other activities**:**

(i) A controlled activity? **No**

(ii) A restricted discretionary, or discretionary activity, but only if the activity is a subdivision of land or a residential activity? **No**

(iia) A restricted discretionary, discretionary or non-complying activity but only if the activity is a boundary activity? **No**

(iii) A prescribed activity (see section 360G(1)(a)(i)? **No**

Step 3: Does the application meet either of the criteria in (a) or (b) below?

(a) Is the application for a resource consent for one or more activities, and any of those activities is subject to a rule or national environmental standard that requires public notification? **No**

(b) Will the activity have or be likely to have adverse effects on the environment that are more than minor in accordance with Section 95D? **No**

The adverse environmental effects on the environment from the proposal are discussed in elsewhere of this report. Based on this review, I consider that there will not be more than minor adverse effects on the environment (discounting the site and adjacent sites).

Step 4: Do special circumstances exist in relation to the application that warrant the application being publicly notified? No

6.2 Section 95B Limited Notification

Step 1

Section 95B(2) Are there any affected groups or persons identified under Section 95B(2):

(a) Protected customary rights groups? **No**

(b) Customary marine title groups? **No**

Section 95B(3)(a) Is the proposed activity on or adjacent to, or may it affect, land that is the subject of a statutory acknowledgement made in accordance with an Act specified in Schedule 11? **No**

Section 95B(3)(b) Is a person to whom a statutory acknowledgement is made an affected person under Section 95E? **No**

Step 2

Is Limited Notification precluded under Section 95B(6)?

(a) Is the application for a resource consent for one or more activities, and each activity is subject to a rule or national environmental standard that preclude limited notification? **No**

(b) **(i)** Is the proposal a Controlled Activity that requires consent under the District Plan (other than a subdivision of land)? **No**

(ii) Is it a prescribed activity under Section 360G(1)(a)(ii)? **No**

Step 3

Having regard to Section 95E of the Resource Management Act, identify persons who would be adversely affected by the proposed activity by effects that are minor or more than minor, but not less than minor and give reasons why affected parties were identified.

The following parties have been identified to be affected parties due to effects on them that are minor or more than minor for the reasons stated below.

Affected Party	How they are affected	Why effect is minor or more than minor
Aukaha/TAMI on behalf of Mana Whenua	Kawarau River contains spiritual and cultural beliefs, values and uses associated significant to Kai Tahu.	The proposed activity may impact on the cultural values of the water course. Therefore, Aukaha and TAMI are considered an affected party.
Land Information New Zealand (LINZ)	Due to the works being located on Crown Riverbed in a reach administered by LINZ.	The activity may also alter the riverbank. The activity would result in the Applicant taking resources from LINZ property. Overall, these effects are seen as minor.

The following parties were not considered to be affected parties to the application as effects on them will be less than minor or they are not considered to be affected parties:

Party	Why they are not affected

Otago Fish and Game (F&G)	The potential adverse effects on fish and game values identified in schedule 1 of the RPW, on sports and game fish and amenity values will be less than minor. Overall, adverse effects on F&G will therefore be less than minor.
Department of Conservation (DoC)	Any adverse effects on the proposed activity on conservation values, and indigenous freshwater species, are expected to be less than minor. Adverse effects on DoC are considered to be less than minor.
Downstream users	The potential adverse effects are not expected to extend beyond the intake structure. Therefore, effects on downstream users, such as owners of structures such as roads and bridges or any of any water take are considered to be less than minor.

Have all persons identified as affected under Step 3 provided their written approvals? Yes

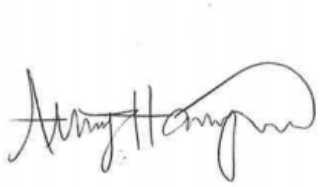
Step 4 Further notification in special circumstances

Do special circumstances exist in relation to the application that warrant notification of the application to any other persons not already determined to be eligible for limited notification under this section (excluding persons assessed under Section 95E as not being affected persons)? **No**

If notification or limited notification is required then has the applicant paid the additional notification fee? Not applicable

7. NOTIFICATION RECOMMENDATION:

In accordance with the notification steps set out above, it is recommended that the application proceed on a limited-notification basis to the parties identified as affected in Section 6.2 above.



Alexa Harrington
Senior Consents Planner
19 April 2024

DECISION ON NOTIFICATION

Sections 95A to 95G of the Resource Management Act 1991

Date:	**22April 2024**
Application No:	**RM23.870**
Subject:	***Decision on notification of resource consent application under delegated authority***

Decision under Delegated Authority

The Otago Regional Council decides that this resource consent application is to be processed on a **limited notified** basis in accordance with sections 95A to 95G of the Resource Management Act 1991.

The above decision adopts the recommendations and reasons outlined in the Notification Recommendation Report above in relation to this application. I have considered the information provided, reasons and recommendations in the above report. I agree with those reasons and adopt them.

This decision is made under delegated authority by:

Joanna Gilroy
Manager Consents
22 April 2024

1. Summary of Notification Process

1.1 Notification Decision

On 22nd April 2024 a notification decision was made by Council to process this application on a limited notified basis to the following parties:

- Aukaha on behalf of mana whenua
- Te Ao Marama Incorporated (TAMI) on behalf of mana whenua; and
- Land Information New Zealand (LINZ) – Land Owner.

This was because:

- The adverse effects on cultural beliefs, values and uses associated significant to Kai Tahu will be minor; and
- The Applicant has not been able to obtain written approval from Aukaha, TAMI and LINZ.

1.2 Submissions Received

On 14th May 2024 LINZ stated they did not wish to submit on the application. As such, adverse effects on this party have been disregarded.

On 30th May 2024 Aukaha stated they would not be submitting on behalf of Kā Rūnaka. Aukaha stated they did not oppose the application subject to the proposed conditions around river works, including a requirement that GVRI avoid discharging sediment and wet concrete into the Kawarau River. As such, adverse effects on this party have been disregarded.

On 31st May 2024 TAMI made a submission that was neutral on the proposal and did not wish to be heard. TAMI was neutral subject to the proposed conditions being included around river works and the requirement that the Applicant avoids discharging sediment and wet concrete into the Kawarau River. The conditions will be discussed in Section 3.5, and these will address the outcomes sought in the submission. As such, adverse effects on these parties are disregarded

As the submission received was neutral and did not want to be heard. The application can be decided by the Staff Consent Panel and a hearing is not necessary.

2. Summary of Recommendation

I recommend that this application be approved, subject to the conditions discussed at the end of this report.

Please note that this report contains the recommendations of the Senior Consents Planner and represents the opinion of the writer. It is not a decision on the application.

There are no principal issues in contention with the applicant and no evidence was heard as it relates to the application as it is being processed non-notified without a hearing. The key risks/issues with the application were discussed in section 2.1 of this report.

3. Section 104 Evaluation

Section 104 of the Act sets out the matters to be considered when assessing an application for a resource consent. These matters are subject to Part 2, the purpose and principles, which are set out in Sections 5 to 8 of the Act.

As this application is for a discretionary activity, the Council may grant or refuse the application. If granting consent, the Council may impose conditions under section 108 of the Act.

3.1 Section 104(1)

The remaining matters of Section 104 to be considered when assessing an application for a resource consent are:
the actual and potential effects on the environment of allowing the activity;
(ab) any measure proposed or agreed to by the applicant for the purpose of ensuring positive effects on the environment to offset or compensate for any adverse effects on the environment that will or may result from allowing the activity
(b) any relevant provisions of a national environmental standard, other regulations, a national policy statement, the Regional Policy Statement (RPS), RPW; and
I any other matter the Council considers relevant and reasonably necessary to determine the application.

3.2 S104(1)(a) – Actual and potential effects on the environment of allowing the activity

The actual and potential adverse environmental effects of the proposed activity were considered earlier in this report.

In addition to these adverse effects, it is considered that the proposal will have the following positive effects:

- Enables the Applicant to undertake activities that provide employment and economic benefit to the local community; and
- Supports the continued development and growth of the Otago Region.

3.3 S104(1)(ab)

The Applicant has not proposed or agreed to any measures to offset or compensate for adverse effects that will or may result from allowing the activity. This is because the potential adverse effects are expected no more than minor.

3.4 S104(1)(b) Relevant Planning Documents

The relevant planning documents in respect of this application are:

- The National Environmental Standard for Sources of Human Drinking Water 2007
- Resource Management (National Environmental Standards for Freshwater) Regulation 2020
- Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 and Amendment Regulations 2020
- The National Policy Statement for Freshwater Management 2020

- The Proposed Regional Policy Statement and Partially Operative Regional Policy Statement
- The Regional Plan: Water for Otago

3.4.1 National Environmental Standards for Freshwater 2020

No aspects of the proposal require consent under the NES-FW 2020.

3.4.2 National Environmental Standard for Sources of Human Drinking Water

Regulations 7 and 8 of the National Environmental Standard for Sources of Human Drinking Water (NES) need to be considered when assessing discharge permits that have the potential to affect registered drinking water supplies that provide 501 or more people with drinking water for 60 or more calendar days each year.

Regulations 11 and 12 of the NES requires the Consent Authority to place an emergency notification condition on relevant consent holders if it is assessed that the activity could pose a risk to the drinking water supply in the case of an unintended event (e.g. a spill or other accident). If the Consent Authority considers that such a risk exists, a condition must be placed on the consents that requires the consent holder to notify the drinking water supplier if such an event occurs. Regulation 11 states that Regulation 12 applies to activities with the potential to affect registered drinking water supplies that supply 25 or more people with drinking water for 60 or more days of a calendar year.

The proposal will not have an impact on the National Environmental Standards for Sources of Human Drinking Water. There are no registered drinking water supplies in proximity to the proposal.

3.4.3 National Policy Statement for Freshwater Management

The NPS-FM 2020 was introduced in September 2020 and amended in December 2022, replacing previous iterations from 2011, 2014 and 2017. The NPS-FM sets out a single objective, that natural and physical resources are managed in a way that prioritises:

a. first, the health and well-being of water bodies and freshwater ecosystems;
b. second, the health needs of people (such as drinking water); and
c. third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

This application involves an activity that supports the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future. To this extent, it sits third on the NPS-FW priority list. Nevertheless, since the proposal is not likely to result in any unacceptable effects on the health and well-being of the resource, nor on the health needs of people, it is considered consistent with this overall objective.

This objective is followed by 15 policies, require that freshwater managements gives effect to Te Mana O Te Wai, with specific guidance for Tangata Whenua involvement, integrated management, a National Objectives Framework and various activities.

Policy 1: *Freshwater is managed in a way that gives effect to Te Mana o te Wai.*

Policy 2: *Tangata whenua are actively involved in freshwater management (including decision-making processes), and Māori freshwater values are identified and provided for.*

Policy 3: *Freshwater is managed in an integrated way that considers the effects of the use and development of land on a whole-of-catchment basis, including the effects on receiving environments.*

Policy 5: *Freshwater is managed through a National Objectives Framework to ensure that the health and well-being of degraded water bodies and freshwater ecosystems is improved, and the health and well-being of all other water bodies and freshwater ecosystems is maintained and (if communities choose) improved.*

The proposal will not degrade the health and well-being of freshwater ecosystems given the proposed erosion and sediment control methods are adhered to. The proposal is therefore consistent with this policy.

Policy 7: *The loss of river extent and values is avoided to the extent practicable.*

The proposal is on the bank of the Kawarau River and the proposed mitigation measures will protect the values of the river. The proposal is consistent with this policy.

Policy 8: *The significant values of outstanding water bodies are protected.*

The proposal is in general accordance with this policy and protects the significant values of the Kawarau River.

Policy 15: *Communities are enabled to provide for their social, economic, and cultural well-being in a way that is consistent with this National Policy Statement. Include an assessment of the relevant objective and policies.*

The proposed mitigation measures and flood management plan will ensure that sediment is contained, and flooding does not occur via the intake structure in the Kawarau River. The effects on freshwater and its associated values are negligible. Overall, the proposed activity is generally consistent with the NPS-FM 2020.

3.4.4 Resource Management (National Environmental Standards for Freshwater) Regulations 2020

No other aspects of the proposal require consent under the NES-FW.

3.4.5 Regional Policy Statements

The RPS's provide an overview of the resource management issues for the Otago Region and the ways of achieving integrated management of its natural and physical resources. There are currently two regional policy statements in play in the Otago Region:

- *Otago Regional Policy Statement 2019 (ORPS 2019) fully operative; and*
- *Proposed Otago Regional Policy Statement (P-ORPS 2021), which was first notified on the 26th of June 2021 and on 30 September 2022 for the freshwater instrument components. On 30 March 2024 the P-ORPS 2021 was fully notified.*

For completeness, the relevant operative policies of the RPS 2019 have been included below, alongside the relevant proposed policies in the P-ORPS 2021.

ORPS 2019

Policy 1.1.1 Provide for the economic wellbeing of Otago's people and communities by enabling the resilient and sustainable use and development of natural and physical resources.

Policy 1.1.2 Provide for the social and cultural wellbeing and health and safety of Otago's people and communities when undertaking the subdivision, use, development and protection of natural and physical resources.

Policy 1.2.1 Achieve integrated management of Otago's natural and physical resources.

Policy 2.1.2 Treaty principles - ensure that local authorities exercise their functions and powers.

Policy 2.2.1 Managing the natural environment to support Kāi Tahu wellbeing.

Policy 2.2.2 Recognising and protecting important sites and values of cultural significance to Kāi Tahu.

Policy 3.1.1 Safeguard the life-supporting capacity of fresh water and manage fresh water to:

- Maintain good quality water and enhance water quality where it is degraded;
- Maintain or enhance ecosystem health, indigenous habitats, and indigenous species and their migratory patterns;
- Avoid aquifer compaction and seawater intrusion;
- Maintain or enhance the natural functioning of rivers, lakes, and wetlands, their riparian margins, and aquifers, coastal aquifer supported by freshwater, the habitat of trout and salmon unless detrimental to indigenous biological diversity, and amenity and landscape values of rivers, lakes, and wetlands;
- Control the adverse effects of pest species, prevent their introduction and reduce their spread;
- Avoid, remedy or mitigate the adverse effects of natural hazards, including flooding and erosion;
- Avoid, remedy, or mitigate adverse effects on existing infrastructure that is reliant on fresh water.

Policy 3.1.2 Manage the beds of rivers, lakes, wetlands, their margins, and riparian vegetation to:

- Safeguard the life supporting capacity of fresh water;
- Maintain good quality water, or enhance it where it has been degraded;
- Maintain or enhance bank stability;
- Maintain or enhance ecosystem health and indigenous biological diversity;
- Maintain or enhance, as far as practicable their natural functioning and character and amenity values;
- Control the adverse effects of pest species, prevent their introduction and reduce their spread; and

- Avoid, remedy or mitigate the adverse effects of natural hazards, including flooding and erosion.

Policy 3.2.2 Protect and enhance areas of significant indigenous vegetation and significant habitats of indigenous fauna, by:

- Maintaining those values which that contribute to the area or habitat being significant;
- Avoiding significant adverse effects on other values of the area or habitat;
- Remedying when other adverse effects cannot be avoided;
- Mitigating when other adverse effects cannot be avoided or remedied;
- Encouraging enhancement of those areas and values which that contribute to the area or habitat being significant;
- Controlling the adverse effects of pest species, preventing their introduction and reducing their spread.

Policies 3.2.13 & 3.2.14 Identify and protect outstanding freshwater bodies.

Policy 4.1.11 Enable the location of hard protection structures or similar engineering interventions on public land only when either or both of the following apply:

- There is significant public or environmental benefit in doing so;
- The work relates to the functioning ability of a lifeline utility, or a facility for essential or emergency services.

Policy 5.1.1 Maintaining and enhancing public access.

Policies 5.2.1 & 5.2.3 Recognising heritage themes and managing historic heritage values.

Policy 5.4.2 Apply an adaptive management approach, to avoid, remedy or mitigate actual and potential adverse effects that might arise and that can be remedied before they become irreversible.

As discussed in Section 5 of the Notification Report, the proposed works are to be undertaken on the bank of the Kawarau River. Mitigation measures and an Environmental Management Plan will be in place to ensure adverse effects do not arise from the proposed works. Public access to the Kawarau River will be maintained as per status quo, and the watercourse will have negligible effects on it by the proposed intake structure. The proposal is considered to be consistent with the objective and policies of the ORPS 2019.

P-ORPS 2021

MW–O1 – Principles of Te Tiriti o Waitangi The principles of Te Tiriti o Waitangi are given effect in resource management processes and decisions, utilising a partnership approach between councils and Papatipu Rūnaka to ensure that what is valued by mana whenua is actively protected in the region.

MW–P1 – Treaty obligations Promote awareness and understanding of the obligations of local authorities in regard to the principles of Te Tiriti o Waitangi, tikaka Māori a26upuna26apa Māori.

MW–P2 – Treaty principles Local authorities exercise their functions and powers in accordance with Treaty principles, by:

1. recognising the status of Kāi Tahu and facilitating Kāi Tahu involvement in decision-making as a Treaty partner,
2. including Kāi Tahu in resource management processes and implementation to the extent desired by mana whenua,
3. recognising and providing for Kāi Tahu values and resource management issues, as identified by mana whenua, in resource management decision-making processes and plan implementation,
4. recognising and providing for the relationship of Kāi Tahu culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taoka by ensuring that Kāi Tahu have the ability to identify these relationships and determine how best to express them,
5. ensuring that regional and district plans recognise and provide for Kāi Tahu relationships with Statutory Acknowledgement Areas, tōpun27upuna27aka and customary fisheries identified in the NTCSA 1998, including by actively protecting the mauri of these areas,
6. having particular regard to the ability of Kāi Tahu to exercise kaitiakitaka,
7. actively pursuing opportunities for:
   i. delegation or transfer of functions to Kāi Tahu, and
   ii. partnership or joint management arrangements, and
8. taking into account iwi management plans when making resource management decisions.

MW–P3 – Supporting Kāi Tahu well-being The natural environment is managed to support Kāi Tahu well-being by:

1. protecting customary uses, Kāi Tahu values and relationships of Kāi Tahu to resources and areas of significance, and restoring these uses and values where they have been degraded by human activities,
2. safeguarding the mauri and life-supporting capacity of natural resources, and
3. working with Kāi Tahu to incorporate mātauraka in resource management.

IM–O1 – Long term vision The management of natural and physical resources in Otago, by and for the people of Otago, including Kāi Tahu, and as expressed in all resource management plans and decision making, achieves healthy, resilient, and safeguarded natural systems, and the ecosystem services they offer, and supports the well-being of present and future generations, 27upuntou, ā, mō kā uri ā muri ake nei.

IM–O2 – Ki uta ki tai Natural and physical resource management and decision making in Otago embraces ki uta ki tai, recognising that the environment is an interconnected system, which depends on its connections to flourish, and must be considered as an interdependent whole.

IM–P2 – Decision priorities Unless expressly stated otherwise, all decision making under this RPS shall:

1. first, secure the long-term life-supporting capacity and mauri of the natural environment,
2. secondly, promote the health needs of people, and
3. thirdly, safeguard the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

IM–P6 – Acting on best available information. Avoid unreasonable delays in decision-making processes by using the best information available at the time, including but not limited to mātauraka Māori, local knowledge, and reliable partial data.

IM–P13 – Managing cumulative effects Otago's environmental integrity, form, function, and *resilience*, and opportunities for future generations, are protected by recognising and specifically managing the cumulative *effects* of activities on *natural and physical resources* in plans and explicitly accounting for these *effects* in other resource management decisions.

IM–P15 – Precautionary approach Adopt a precautionary approach towards proposed activities whose *effects* are uncertain, unknown or little understood, but could be significantly adverse, particularly where the areas and values within Otago have not been identified in plans as required by this RPS.

LF–WAI–P3 – Integrated management/ki uta ki tai Manage the use of *freshwater* and *land* in accordance with tikanga and kawa, using an integrated approach that:

1. recognises and sustains the connections and interactions between *water bodies* (large and small, surface and ground, fresh and coastal, permanently flowing, intermittent and ephemeral),
2. sustains and, wherever possible, restores the connections and interactions between *land* and *water,* from the mountains to the sea,
3. sustains and, wherever possible, restores the habitats of mahika kai and indigenous species, including taoka species associated with the *water body*,
4. manages the *effects* of the use and development of *land* to maintain or enhance the health and well-being of *freshwater* and *coastal water*,
5. encourages the coordination and sequencing of regional or urban growth to ensure it is sustainable,
6. has regard to foreseeable *climate change* risks, and
7. has regard to cumulative *effects* and the need to apply a precautionary approach where there is limited available information or uncertainty about potential adverse *effects*.

LF–WAI–P4 – Giving effect to Te Mana o te Wai

All persons exercising functions and powers under this regional policy statement and all persons who use, develop or protect resources to which this regional policy statement applies must recognise that LF-WAI-O1, LF-WAI-P1, LF-WAI-P2 and LF-WAI-P3 are fundamental to upholding *Te Mana o te Wai*, and must be given effect to when making decisions affecting *freshwater,* including when interpreting and applying the provisions of the LF chapter.

LF–VM–O7 – Integrated management

Land and *water* management apply the ethic of ki uta ki tai and are managed as integrated natural resources, recognising the connections and interactions between *freshwater*, *land* and the coastal environment, and between surface water, *groundwater* and *coastal water*.

LF–WAI–O1 – Te Mana o te Wai The mauri of Otago's *water bodies* and their health and well-being is protected, and restored where it is *degraded*, and the management of *land* and *water* recognises and reflects that:

1. *water* is the foundation and source of all life – na te wai ko te hauora o ngā mea katoa,

2. there is an integral kinship relationship between water and Kāi Tahu whānui, and this relationship endures through time, connecting past, present and future,
3. each *water body* has a unique whakapapa and characteristics,
4. *water* and *land* have a connectedness that supports and perpetuates life, and
5. Kāi Tahu exercise rakatirataka, manaakitaka and their *kaitiakitaka* duty of care and attention over wai and all the life it supports.

LF–VM–O2 – Clutha Mata-au FMU vision

In the Clutha Mata-au *FMU*:

(1) management of the *FMU* recognises that:
  (a) the Clutha River / Mata-au is a single connected system ki uta ki tai, and
  (b) the source of the wai is pure, coming directly from Tawhirimatea to the top of the mauka and into the awa,
(2) *freshwater* is managed in accordance with the LF–WAI objectives and policies,
(3) the ongoing relationship of Kāi Tahu with *wā29upunauna* is sustained,
(4) *water bodies* support thriving mahika kai and Kāi Tahu whānui have access to mahika kai,
(5) indigenous species migrate easily and as naturally as possible along and within the *river* system,
(6) the national significance of the Clutha hydro-electricity generation scheme is recognised,
(7) in addition to (1) to (6) above:
  (a) in the Upper Lakes rohe, the high quality *waters* of the *lakes* and their tributaries are protected, recognising the significance of the purity of these *waters* to Kāi Tahu and to the wider community,
  (b) in the Dunstan, Manuherekia and Roxburgh rohe:
    (i) flows in *water bodies* sustain and, wherever possible, restore the natural form and function of main stems and tributaries to support Kāi Tahu values and practices, and
    (ii) innovative and sustainable *land* and *water* management practices support food production in the area and reduce discharges of nutrients and other *contaminants* to *water bodies* so that they are safe for human contact, and
  (iii) sustainable abstraction occurs from main stems or *groundwater* in preference to tributarie©(c) in the Lower Clutha rohe:
    (i) there is no further modification of the shape and behaviour of the *water bodies* and opportunities to restore the natural form and function of *water bodies* are promoted wherever possible,
    (3) (ii) the ecosystem connections between *freshwater*, *wetlands* and the coastal environment are preserved and, wherever possible, *land* management practices reduce discharges of nutrients and other *contaminants* to *water bodies* so that they are safe for human contact, and
    (iv) there are no direct *discharges* of *wastewater* to *water bodies*, and
(8) the outcomes sought in (7) are to be achieved within the following timeframes:
  (a) by 2030 in the Upper Lakes rohe,
  (b) by 2045 in the Dunstan, Roxburgh and Lower Clutha rohe©nd
  (c) by 2050 in the Manuherekia rohe.

LF–VM–P5 – Freshwater Management Units (FMUs) and rohe Otago's freshwater resources are managed through the following freshwater management units or rohe which are shown on MAP1:

Table 1 – Freshwater Management Units and rohe

Freshwater Management Unit	**Rohe**
Clutha/Mata-au	Upper Lakes Dunstan Manuherekia Roxburgh Lower Clutha
Taieri	n/a
North Otago	n/a
Dunedin & Coast	n/a
Catlins	n/a

LF–VM–P6 – Relationship between FMUs and rohe Where rohe have been defined within FMUs:

(1) environmental outcomes must be developed for the FMU within which the rohe is located,

(2) if additional environmental outcomes are included for rohe, those environmental outcomes:
  (a) set target attribute states that are no less stringent than the parent FMU environmental outcomes if the same attributes are adopted in both the rohe and the FMU, and
  (b) may include additional attributes and target attribute states provided that any additional environmental outcomes give effect to the environmental outcomes for the FMU,

(3) limits and action plans to achieve environmental outcomes may be developed for the FMU or the rohe or a combination of both,

(4) any limit or action plan developed to apply within a rohe:
  (a) prevails over any limit or action plan developed for the FMU for the same attribute, unless explicitly stated to the contrary, and
  (b) must be no less stringent than any limit set for the parent FMU for the same attribul and
  (c) must not conflict with any limit set for the underlying FMU for attributes that are not the same, and

(5) the term "no less stringent" in this policy applies to attribute states (numeric and narrative) and any other metrics and timeframes (if applicable).

LF–FW–O8 – *Freshwater* In Otago's *water bodies* and their catchments:

(1) the health of the wai supports the health of the people and thriving mahika kai,

(2) *water* flow is continuous throughout the whole system,

(3) the interconnection of *freshwater* (including *groundwater*) and *coastal waters* is recognised,

(4) native fish can migrate easily and as naturally as possible and taoka species and their habitats are protected, and

(5) the significant and outstanding values of Otago's *outstanding water bodies* are identified and protected.

LF–FW–P7 – *Freshwater* *Environmental outcomes, attribute* states (including target *attribute* states) and *limits* ensure that:

(1) the health and well-being of *water bodies* is maintained or, if *degraded,* improved,
(2) the habitats of indigenous species associated with *water bodies* are protected, including by providing for fish passage,
(3) *specified rivers and lakes* are suitable for primary contact within the following timeframes:
    (a) by 2030, 90% of *rivers* and 98% of *lakes*, and
    (b) by 2040, 95% of *rivers* and 100% of *lakes*, and
(4) mahika kai and *drinking water* are safe for human consumption,
(5) existing *over-allocation* is phased out and future *over-allocation* is avoided, and
(6) *freshwater* is allocated within environmental limits and used efficiently.

LF–LS–P18 – Soil erosion Minimise soil erosion, and the associated risk of sedimentation in water bodies, resulting from land use activities by:
(1) implementing effective management practices to retain topsoil in-situ and minimise the potential for soil to be discharged to water bodies, including by controlling the timing, duration, scale and location of soil exposure,
(2) maintaining vegetative cover on erosion-prone land, and
(3) promoting activities that enhance soil retention.

LF–LS–P21 – Land use and fresh water

Achieve the improvement or maintenance of fresh water quantity or quality to meet environmental outcomes set for Freshwater Management Units and/or rohe by:
(1) reducing direct and indirect discharges of contaminants to water from the use and development of land, and
(2) managing land uses that may have adverse effects on the flow of water in surface water bodies or the recharge of groundwater.

The proposed activity will install the intake structure when flows are low and will avoid discharging sedimentation to the Kawarau River. The adverse effects on the Kawarau River will be negligible given the temporary nature of the installation. Overall, subject to the recommended conditions of consent, it is considered that the application is consistent with the relevant objectives and policies of the P-ORPS 2021 including the Freshwater Planning Instruments**.**

3.4.6 Regional Plan: Water

Relevant objectives and policies of the RPW are found in Chapter 5 (Natural and Human Use Values of Lakes and Rivers), Chapter 7 (Water Quality) and Chapter 8 (The Beds and Margins of Lakes and Rivers).

Policy 5.4.2 To undertake the works in a manner that avoids, in preference to remedying or mitigating, adverse effects on natural values and character, ecology and habitat, water supply values, historic places or archaeological sites, values of significance to Kai Tahu, amenity values,

lawful water users and causing or exacerbate flooding, erosion, land instability, sedimentation or property damage.

The Karawau River is identified in Schedule 1A-1D of the RPW. Given the proposed mitigation measures adverse effects will be negligible on natural values, ecology and habitat and iwi values therefore the proposal is considered consistent with this policy.

Policy 5.4.3 To avoid adverse effects on existing lawful uses and priorities.

There will not be any adverse effects on existing lawful uses of surface or groundwater, therefore the proposal is considered consistent with this policy.

Policy 5.4.4 To recognise Kai Tahu's interests in Otago's lakes and rivers by promoting opportunities for their involvement in resource consent processing.

The proposal will have negligible effects on Otago's lakes and rivers, therefore it is in line with this policy.

Policy 5.4.5 To recognise the Water Conservation (Kawarau) Order 1997 by preserving, as far as possible, the waters set out in Schedule 1 of the Water Conservation Order in their natural state, protecting the outstanding characteristics of waters set out in Schedule 2 of the Water Conservation Order, and sustaining the outstanding amenity and intrinsic values set out in both Schedules of this order.

The proposal recognises the Water Conservation (Kawarau) Order 1997 and the proposal will minimise adverse effects by placing the intake structure as discreet as possible. Being in alignment with Schedule 1 of the Water Conservation Order *and is considered consistent with this policy.*

Policy 5.4.6 Legal public access to and along the margins of lakes and rivers will only be restricted where necessary. To protect the health or safety of people and communities, to ensure a level of security consistent with the purposes of a resource consent; or in other exceptional circumstances sufficient to justify the restriction notwithstanding the national importance of maintaining that access.

The proposal will not take away public access and protects the safety of people and communities, therefore it is in line with this policy.

Policy 5.4.7 Where existing public access to or along the margins of Otago's lakes or rivers is restricted, the provision or enhancement of alternative access may be required with respect to the restriction of existing legal public access, and will be promoted with respect to the restriction of informal access arrangements.

The proposal is consistent with the above policy by providing public access to promote Otago's water bodies.

Policy 5.4.8 To have particular regard to topography, natural flow characteristics or water levels, water colour and clarity, ecology, the extent of use or development within the catchment, when considering adverse effects on natural character of lakes, rivers and their margins.

The proposed works has given considered to natural flow characteristics, ecology and water colour and clarity, therefore is consistent with the above policy.

Policy 5.4.9 To have particular regard to aesthetic values and recreational opportunities provided by a lake or river, or its margins when considering adverse effects on amenity values.

The proposal has given regard to the recreational opportunities on the Kawarau River and is considered consistent with the above policy.

Policy 8.4.1 To give priority to avoiding changes in the nature of flow and sediment processes in those water bodies, where those changes will cause adverse effects on the stability and function of existing structures; associated erosion, sedimentation or land instability; or any reduction in the flood carrying capacity of any lake or river.

Policy 8.5.1 To require, where necessary, desirable and practicable, any structure in or on the bed of any lake or river to provide for fish migration through or past it, or alternative remedial measures where fish migration is not practicable.

Policy 8.6.1 To have regard to any adverse effect on the spawning requirements of indigenous fauna, and trout or salmon; bed and bank stability; water quality; amenity values caused by any reduction in water clarity; and downstream users.

The proposal has given regard to spawning requirements and is considered consistent with the above policy.

Policy 8.6.2 To promote best management practices for activities that occur within or adjacent to the bed of lakes and rivers in order to avoid, remedy or mitigate any adverse effect.

The Applicant has proposed best practice for the various activities and is consistent with Policy 8.6.2.

Overall, subject to the recommended conditions of consent, it is considered that the application is consistent with the relevant objectives and policies of the RPW.

3.5 Section 104(1)(c) Any other matters

3.5.1 The Kai Tahu ki Otago Natural Resource Management Plan 2005 (NRMP)

The NRMP considered to be a relevant other matter for the consideration of this application. This is because the RPW is yet to be amended to take into account this Plan and this Plan expresses the attitudes and values of the four Papatipu Rūnaka: Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga. The following objectives and policies are of most relevance to this application:

- To require that work be undertaken when water levels are naturally low or dry.
- To require that works are not undertaken during spawning season of certain fish species and fish passage is provided for at all times.
- To require that any visual impacts at the site of the activity are minimal.
- To require that all practical measures are undertaken to minimise sediment or other contaminant discharge and that wet concrete does not enter active flow channels.

- To require that machinery only enters the dry bed of the waterway to the extent necessary to undertake the work, and that it is kept clean and well-maintained, with refuelling occurring away from the waterway. Machinery operating in flowing water is to be discouraged.

Various mitigation measures have been proposed by the Applicant to ensure the objectives relating to instream work will generally be met. The Applicant will undertake works when the water levels are naturally low and ensure that any visual impacts from the intake structure will be minimal. The EMP will ensure that best practice is undertaken to minimise sediment and contaminants discharging to the Kawarau River. Machinery use will be limited in the water body and refuelling will also be carried out away from the waterways. Overall, subject to the recommended conditions of consent, it is considered that the application is consistent with the above policies of the NRMP.

Aukaha did not oppose the application subject to the proposed conditions around river works, including a requirement that GVRI avoiding discharging sediment and wet concrete into the Kawarau River. Aukaha did not wish to submit on the proposal, therefore adverse effects have been disregarded.

The Ngāi Tahu ki Murihiku Natural Resource and Environmental Iwi Management Plan 2008 - The Cry of the People, Te Tangi a Tauira is considered to be a relevant other matter for the consideration of this application. This is because the RPW is yet to be amended to take into account this Plan and this Plan expresses the attitudes and values of the four Rūnanga Papatipu o Murihiku – Awarua, Hokonui, Ōraka/Aparima and Waihōpai.

The following objectives and policies are of most relevance to this application:

- Require that short term effects on water quality and appearance are mitigated during culvert or flood works construction, and for a settling period following. For example, straw bales may be used to minimise turbidity, and contain discolouration and sedimentation.
- Ensure that all native fish species have uninhibited passage from the river to the sea at all times, through ensuring continuity of flow.

The proposed works will be of a temporary nature and have short term effects on water quality. Overall, subject to the recommended conditions of consent, it is considered that the application is consistent with the above policies. Te Ao Marama Incorporated was neutral on the proposal and stated subject to the proposed conditions around river works, including a condition that avoids discharging sediment and wet concrete into the Kawarau River.

There are no other matters considered relevant or reasonably necessary to determine the application.

4. Part 2 of the Act

Under Section 104(1) of the RMA, a consent authority must consider resource consent applications "subject to Part 2" of the RMA, specifically, sections 5, 6, 7 and 8.

The Court of Appeal has recently clarified how to approach the assessment of “subject to Part 2” in section 104(1). In *R J Davidson* the Court of Appeal found that (in summary):[1]

[1] *R J Davidson Family Trust v Marlborough District Council* [2018] NZCA 316.

- Decision makers must consider Part 2 when making decisions on resource consent applications, where it is appropriate to do so. The extent to which Part 2 of the RMA should be referred to depends on the nature and content of the planning documents being considered.
- Where the relevant planning documents have been prepared having regard to Part 2 of the RMA, and with a coherent set of policies designed to achieve clear environmental outcomes, consideration of Part 2 is not ultimately required. In this situation, the policies of these planning documents should be implemented by the consent authority. The consideration of Part 2 "would not add anything to the evaluative exercise" as "genuine consideration and application of relevant plan considerations may leave little room for Part 2 to influence the outcome". However, the consideration of Part 2 is not prevented, but Part 2 cannot be used to subvert a clearly relevant restriction or directive policy in a planning document.
- Where it is unclear from the planning documents whether consent should be granted or refused, and the consent authority has to exercise a judgment, Part 2 should be considered.
- If it appears that the relevant planning documents have not been prepared in a manner that reflects the provisions of Part 2, the consent authority is required to consider Part 2.

The application is consistent with the purpose and principles of the Act, as outlined in Sections 5-8. The proposed activity will enable the natural and physical resources of the river to meet the reasonable foreseeable needs of future generations and have a no more than minor effect on the life-supporting capacity of the ecosystem associated with the watercourse. The recommended consent conditions will ensure that any adverse effects of the activity will be avoided, remedied or mitigated. The Kawarau River is protected under the Water Conservation Order of 1997 and is of national importance, however the proposed activity will not have adverse effects on the Kawarau River. There are no other matters of national importance that may be affected by the proposed activity. Particular regard has been given to the efficient use and development of natural and physical resources, intrinsic values of ecosystems maintenance and enhancement of the quality of the environment, finite characteristics of natural and physical resources, and the effects of climate change. The proposed activities are consistent with these matters, provided recommended consent conditions are adopted. The principles of the Treaty of Waitangi have been taken into account and the application has been processed according to Council's protocol for consultation with Iwi.

Overall, the application is considered to be consistent with Part 2 of the Act, given the nature of the activity and the proposed conditions of consent.

5. Section 108 and 108AA of the Act

The attached conditions are recommended in accordance with Sections 108 and 108AA of the Act.

These conditions have been recommended because they provide requirements to ensure that the activity does not have an adverse effect on the environment.

6. Recommendation

That the Council grants to Gibbston Valley Resort Limited (GVRL) Land Use Consent RM23.870.01, Land Use Consent RM23.870.02, Land Use Consent RM23.870.03 and Discharge Permit RM23.870.04 subject to the terms and conditions set out in the attached consent.

6.1 Reasons for the Recommendation

(a) The effects of the activity are expected to be less than minor.
(b) The activity is consistent with the relevant statutory requirements.
(c) The activity is consistent with Part 2 of the Act.

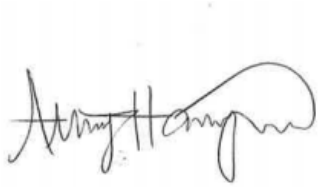
6.2 Term of Consent

Case law has distilled the following factors that will be relevant to the Council's determination of the duration of a resource consent:

- The duration of a resource consent should be decided in a manner which meets the RMA's purpose of sustainable management;
- Whether adverse effects would be likely to increase or vary during the term of the consent;
- Whether there is an expectation that new information regarding mitigation would become available during the term of the consent;
- Whether the impact of the duration could hinder implementation of an integrated management plan (including a new plan);
- That conditions may be imposed requiring adoption of the best practicable option, requiring supply of information relating to the exercise of the consent, and requiring observance of minimum standards of quality in the receiving environment;
- Whether review conditions are able to control adverse effects;
- Whether the relevant plan addresses the question of the duration of a consent;
- The life expectancy of the asset for which consents are sought;
- Whether there was significant capital investment in the activity/asset; and
- Whether a particular period of duration would better achieve administrative efficiency.

The application seeks a term of 3 years. A consent term of 3 years is recommended for the following reasons:

- Allow time for the completion of the works; and
- It will allow for any unforeseen delays to the works being undertaken.



Alexa Harrington
Senior Consents Planner
18 June 2024

DECISION ON RESOURCE CONSENT APPLICATION

Section 113 of the Resource Management Act 1991

Date: **24 June 2024**

Application No: **RM23.870**

Subject: ***Decision on non-notified resource consent application under delegated authority***

1. Notification

The application was approved to be processed non-notified and under delegated authority on 22 April 2024 .

2. Decision and Reasons for Decision

I have considered the information provided, reasons and recommendation in the above report.

No principal issues were in contention and no evidence was heard as this was a non-notified consent that did not require a hearing. There are no main findings as it relates to any principal issues in contention.

I agree with the reasons and recommendations provided by Alexa Harrington in the above report and adopt them as the reasons for decision under Section 113(1) to (3). This decision, report and any accompanying letter are the written decision under Section 113(4).

3. Conditions (section 108)

Pursuant to sections 108 and 108AA of the RMA, this consent is issued subject to the appended conditions.

4. Decision under delegated authority

Under delegated authority, this resource consent application is granted by the Otago Regional Council by:

Peter Christophers
Acting Team Leader Consents Coastal

RECORD OF TITLE
UNDER LAND TRANSFER ACT 2017

Search Copy

R.W. Muir
Registrar-General
of Land

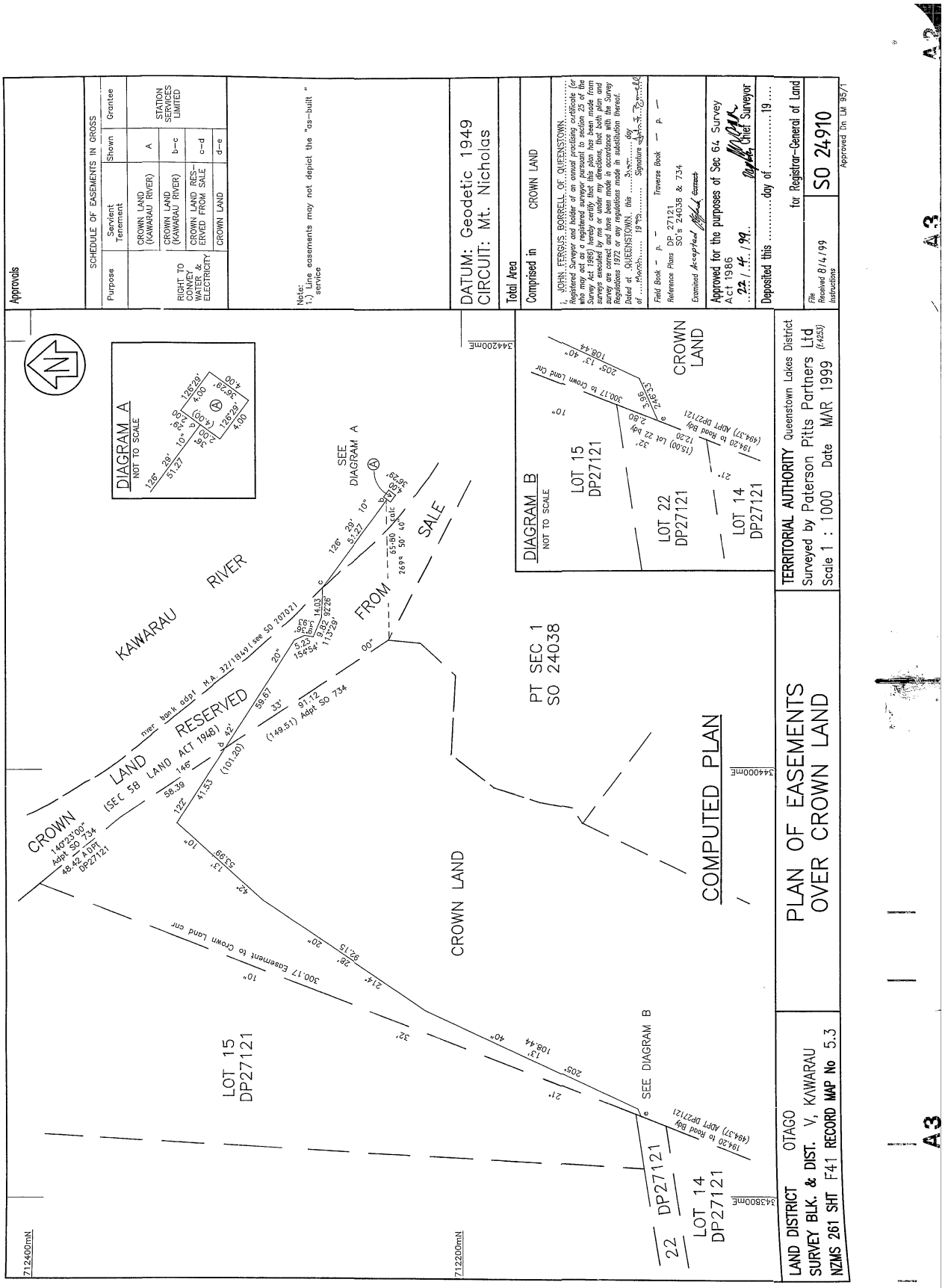
Identifier	**23395**
Land Registration District	**Otago**
Date Registered	24 October 2001 01:49 pm

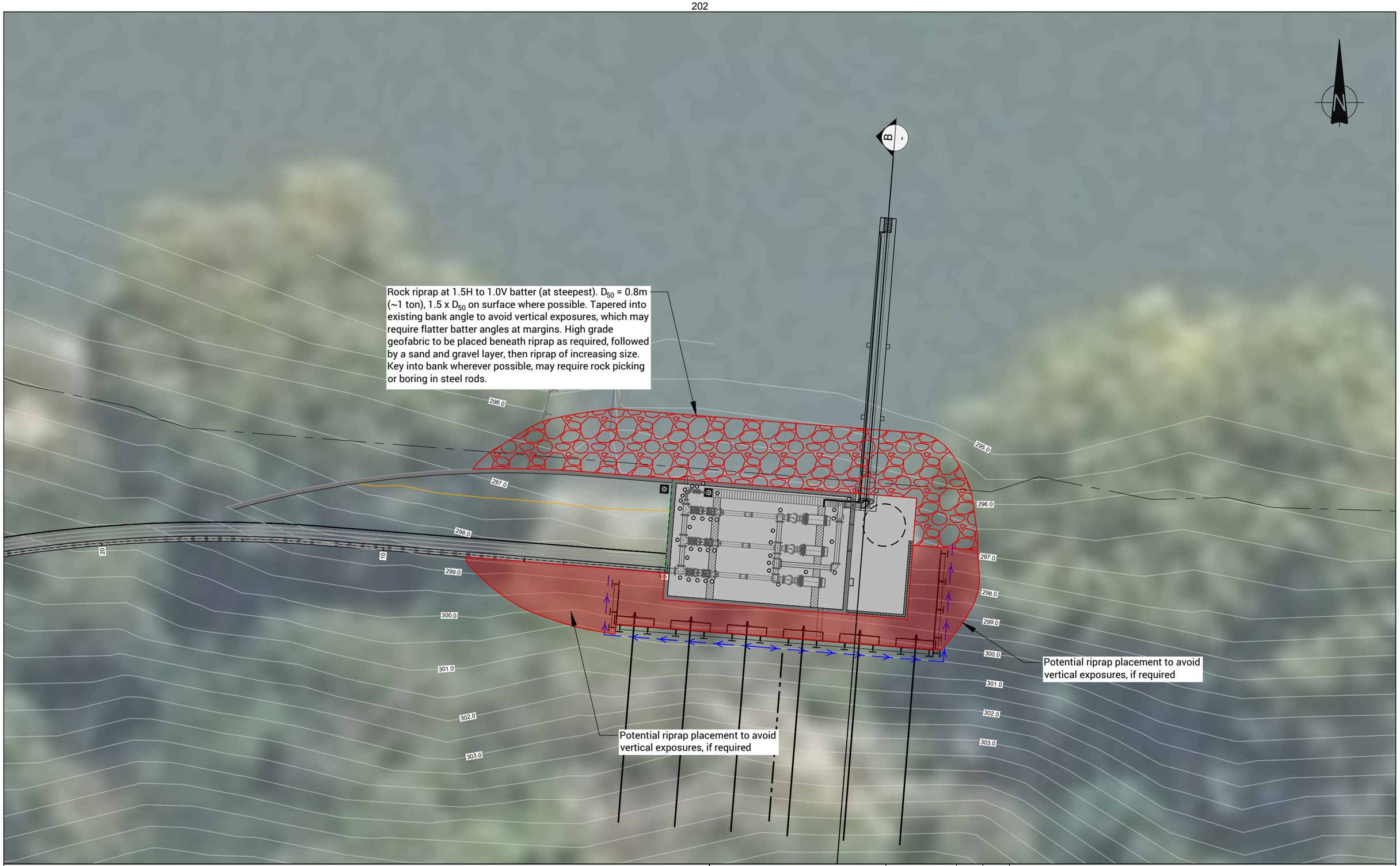
Type	Deed of Easement under s17ZA Conservation Act 1987	**Instrument**	YEC 5098276.1
		Term	30 years commencing on 11 September 1998
Legal Description	Section 1-2 Survey Office Plan 300487 and Crown Land Block V Kawarau Survey District		
Purpose	Easement in Gross to convey water and electricity marked c-d-e on SO 24910		

Registered Owners

Station Services Limited

Interests





Notes:
1. These drawings have been prepared for the benefit of Fluent Infrastructure Solutions Limited with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

Legend:
- Rock Riprap
- Potential riprap placement to avoid vertical exposures, if required

SCALE 1:125
0 1.25 2.5 3.75 5.0 6.25 (m)

GEOSOLVE
Level 1, 70 MacAndrew Road, South Dunedin
www.geosolve.co.nz

DRAWN	WCG	Nov.23
DRAFTING CHECKED		
APPROVED		
CADFILE: 200752.03.dwg		
SCALES (AT A3 SIZE): 1:125		

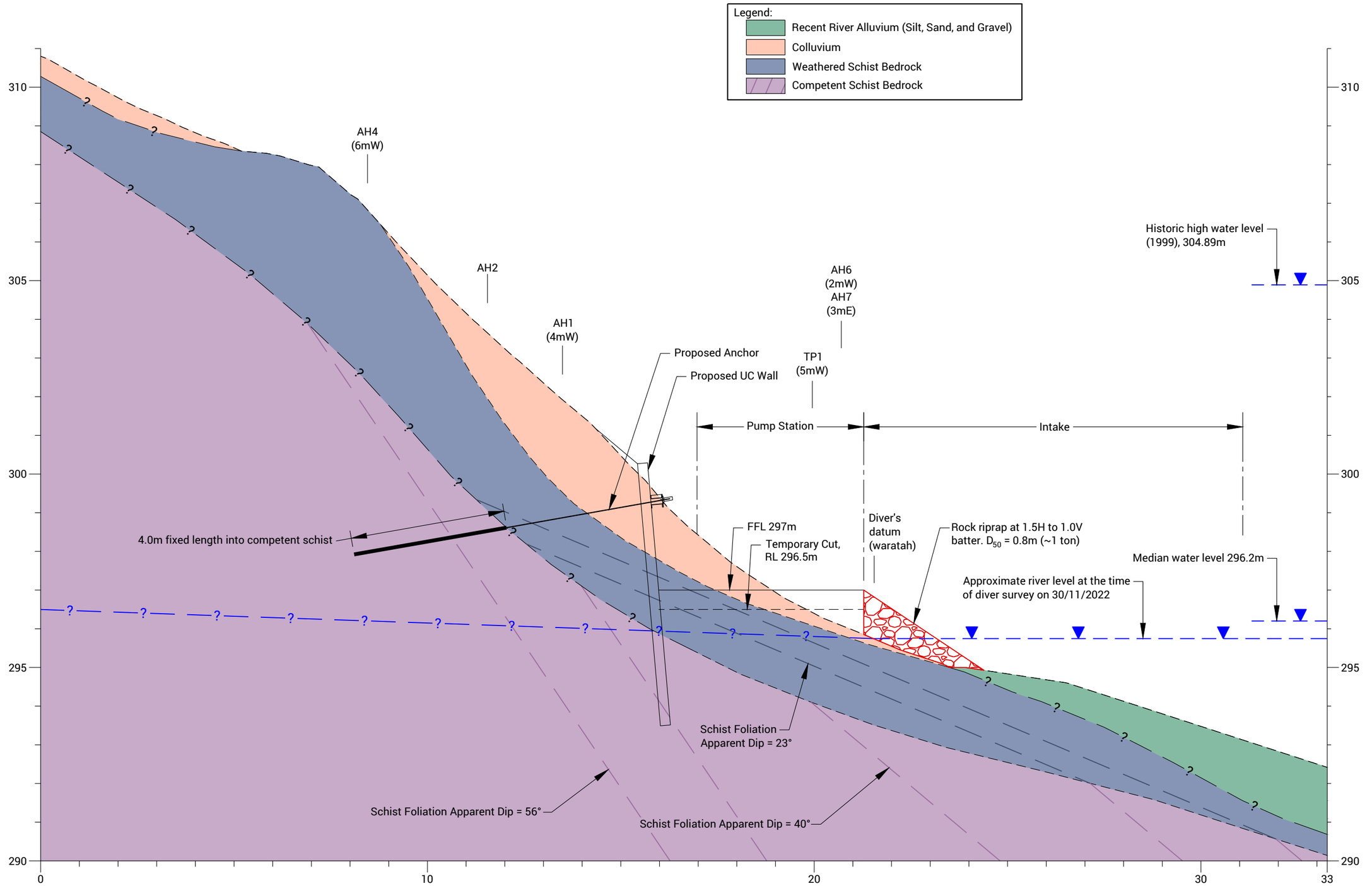
Fluent Infrastructure Solutions Limited

Gibbston Valley Resort

Rip Rap Extent

Site Plan

PROJECT No:	FIG No:	REV.
200752.03	Figure 1	0



Notes:
1. These drawings have been prepared for the benefit of Fluent Infrastructure Solutions Limited with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement.

SCALE 1:100
0 1 2 3 4 5 (m)

GEOSOLVE
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DRAWN	WCG	Nov.23
DRAFTING CHECKED		
APPROVED		
CADFILE: 200752.03.dwg		
SCALES (AT A3 SIZE): 1:125		
PROJECT No: 200752.03		

Fluent Infrastructure Solutions Limited

Gibbston Valley Resort

Rip Rap Extent

Cross Section

FIG No: Figure 2

REV. 0

Environmental Management Plan

Gibbston Valley Resort Water Intake

January 2025

Document Control	
Report title	Gibbston Valley Resort Water Intake - Environmental Management Plan
Address	Gibbston Valley Station, Gibbston Valley, Queenstown
Client	Gibbston Valley Resort
Project number	24116

Revision	Revision date	Revision details	Prepared by	Reviewed by
A	24/01/2024	Prepared for client review.	Lucy Cramp (BSc, MEnvMgt) Senior Environmental Consultant	Tom Grandiek (BAppSc, CEnvP) Principal Environmental Consultant

Appendices	
Appendix 1	Erosion and Sediment Control Plan Drawings
Appendix 2	Calculations for Erosion and Sediment Controls
Appendix 3	Environmental Induction Handout
Appendix 4	Environmental Induction Register
Appendix 5	Weekly Environmental Inspection Form
Appendix 6	Environmental Incident Report
Appendix 7	Complaints Register
Appendix 8	Environmental Non-Conformance Register
Appendix 9	Water Quality Monitoring Results Form
Appendix 10	Archaeological Discovery Protocol

Disclaimer

Contents

Emergency Contacts

Contact made with any of the following shall be undertaken with due consultation of the Environmental Representative or Project Manager.

Table 1: *Emergency Contacts*

Element	Emergency Contact	Details
Pollution incident	Otago Regional Council (ORC) Spill Hotline	0800 800 033 pollution@orc.govt.nz compliance@orc.govt.nz
Environmental complaint	Environmental Representative	Ryan Bullock Strata Civil 022 350 6826
Discovery of contaminated land	Environmental Representative	
Unexpected heritage finds	Environmental Representative	
Human remains	New Zealand Police	111
Fire including bushfire	Fire and Emergency New Zealand (FENZ)	111
Public utilities	Queenstown Lakes District Council (QLDC)	(03) 441 0499 rcmonitoring@qldc.govt.nz
Internal contacts	Project Manager	Terence Vallelunga Gibbston Valley 021 190 2544
Internal contacts	Environmental Consultant	Lucy Cramp Enviroscope 022 173 6902

1.0 INTRODUCTION

1.1 Purpose and Scope

On behalf of Gibbston Valley Resort, Enviroscope has prepared this Environmental Management Plan (EMP) to undertake earthworks within the margins of the Kawarau River, for the installation of a water intake at Gibbston Valley Resort, Gibbston Valley, Queenstown. This includes widening the existing access track. The water intake will sit upon the bank of the river which will then connect to the infrastructure granted under QLDC resource consent, RM220392 and ORC resource consents RM23.870.01-04. This EMP aims to reduce the effects of the project's construction activities on the environment and sensitive receptors.

This EMP is prepared according to the Queenstown Lakes District Council (QLDC) QLDC Guidelines for Environmental Management Plans, June 2019 (EMP Guidelines). It is considered to have a 'Medium' environmental risk level as per the risk categories outlined in the EMP Guidelines.

This document will also ensure that the project aligns with the objectives and policies of the Otago Regional Council's (ORC) Regional Plan.

The purpose of this EMP is to be an effective and practical reference manual for construction personnel that applies to all project activities during the construction phase and includes the following:

- Strategies to manage environmental aspects and risks, based on associated best practice.
- Provides for contingency planning.
- Provides a framework for monitoring, reporting, review and continual improvement.
- Defines roles and responsibilities.
- Procedures to investigate and resolve environmental non-conformances and initiate corrective and preventative actions.

An overview of the project and sequencing can be found in the construction methodology at **Section 2.0**.

1.2 Site Overview

The site is located on the north-facing, (true right) bank of the Kawarau River, adjacent to Gibbston Valley Station in Queenstown. The land is legally described as Crown Land, Block V, Kawarau Survey District. Access to the site is via Vines Way from Gibbston Highway (State Highway 6).

The proposed works will be partially undertaken within the margins of the Kawarau River itself. An overland flow path discharges upslope of the site, and a groundwater spring is present on site. The vegetation on site predominantly consists of mature exotic species such as willow and ash.

The surrounding land use includes the larger 330-ha Gibbston Valley Station, which supports viticulture, farming, and visitor-related activities. The Gibbston River Trail runs adjacent to both Gibbston Valley Station and the Crown land and is frequently used by the public for recreational activities such as walking and cycling.

This is shown in **Figure 1** below.

Figure 1: *Location of the site shown in red (Source: QLDC GIS)*

1.2.1 Soils and Geotechnical Summary

A geotechnical report has been prepared by GeoSolve dated November 2023 which details site investigations. The report notes that "... colluvium is present on the surface overlying very weak to weak weathered schist bedrock at relatively shallow depths. Schist becomes less weathered with depth."

GeoSolve also note that regional groundwater is expected to be influenced by the Kawarau River levels, with the river having a median water level of RL 296.2 m, a low water level of RL 294.4 m, and a historic high of RL 304.89 m.

1.2.2 Summary of Earthworks

The proposed earthworks are to widen the existing access track to enable a 14-tonne excavator to access the margin of the Kawarau River to place the intake and associated infrastructure. A total of approximately 110 m^3 of material will be excavated, while approximately 50 m^3 of fill will be used within the site. The total extent of earthworks will be undertaken over 250 m^2. The extent of earthworks is depicted on the Erosion and Sediment Control (ESCP) drawing in **Appendix 1**. It is anticipated that the works in the riverbed will take a few days and the overall site works are estimated to take six weeks.

1.3 Associated Resource Consents

This EMP has been prepared to ensure that all relevant conditions of associated resource consents are addressed. Provided the activity is undertaken in accordance with this EMP, it will comply with the relevant conditions set within the associated resource consents. The resource consents associated with this project are given in **Table 2**.

Table 2: *Associated resource consents*

Resource Consent Number	Related Council	Activity Description	Date of Decision Issue
RM220392	QLDC	Application under Section 88 of the Resource Management Act 1991 (RMA) to install a water supply system for the Gibbston Valley resort development which includes the placement of pipes, two water tanks, water storage pond, a water treatment building and associated earthworks.	8th September 2022
RM23.870.01	ORC	To place structures in the Kawarau River for the purpose of water abstraction.	19th April 2024
RM23.870.02	ORC	To disturb the bed of the Kawarau River for the purpose of placing structures.	19th April 2024
RM23.870.03	ORC	To undertake earthworks for the purpose of creating a water intake structure for a resort development and associated residential development.	19th April 2024
RM23.870.04	ORC	To discharge contaminants to land in a manner that they may enter water for the purpose of a water intake structure for resort development and associated residential development.	19th April 2024

1.4 Suitably Qualified and Experienced Professional

This EMP has been reviewed by Tom Grandiek of Enviroscope Limited. Tom is a certified Environmental Professional (CEnvP) and holds a Bachelor of Applied Sciences degree, majoring in Environmental Management. He spent five years working in RMA compliance with local government. Tom has extensive experience in the preparation and monitoring of EMPs and ESCPs.

Tom meets the criteria of a Suitably Qualified and Experienced Professional (SQEP) for the purposes of preparing this EMP and overseeing the environmental aspects of this project.

2.0 CONSTRUCTION METHODOLOGY

2.1 Sequencing of Works

The following sequencing will ensure the earthworks are undertaken efficiently while ensuring good environmental outcomes. This is a preliminary staging methodology and may be subject to change based on site conditions encountered during construction. This methodology shall be read in conjunction with the Erosion and Sediment Control Plan (ESCP) attached as **Appendix 1**.

Preliminary works and site establishment (prior to as-built confirmation) - Appendix 1, ESCP 001 and 002

- Ensure the current EMP is available onsite.
- Complete site induction with the Environmental Representative.
- Establish site laydown.
- Install the silt curtain within the Kawarau River around the consented works area. It is important that the silt curtain is secured at the bank above the high flow level of the river with waratah stakes. The silt curtain should hug the bank and work extent as close as reasonably possible to avoid the higher velocity flow rates in the centre of the river.
- Works should only commence at low river levels, within a settled forecast weather window between the months of March and June.
- Install the sediment sump, pipe drop and turkey nest as per specifications provided in Appendix 1, ESCP 003-006.
- Install a silt fence along the lower length of the track, where the track is in proximity to the river.
- Establish spill kit on site.

Temporary Track Widening

- Progressively excavate the track alignment and install engineer-designed stormwater swales (which will act as dirty water diversion channels) within the alignment. If swales are not to be included, install a dirty water diversion channel instead. Refer to **Appendix 2** for dimensions.
- Install drop-out pits regularly along the stormwater swale / DWDC. The number of drop-out pits on ESCP- 001 is indicative only. Additional drop-out pits may be required and will be determined by the SQEP on site.
- Install trafficable swales before forecast rainfall events as per ESCP-002, **Appendix 1**.

Bulk Earthworks

- Undertake bulk earthworks to construct the water intake infrastructure foundations and install rock riprap on the downslope batter surface.
- Works are to be undertaken, as far as practicable, in dry conditions. Water pooled within the excavations is to be skim-pumped via the turkey nest.
- Installation of infrastructure that requires concrete is to be undertaken with care. A sheet of impermeable plastic sheet is to be installed around the work's surface to capture any concrete spills or sawdust from on-site cutting of materials. This plastic sheeting is to be removed and disposed of appropriately. Concrete spills, deposition of sediment or other construction materials such as sawdust on the river bank are to be cleaned up and disposed.

Contingency

All works are to be undertaken when River levels are low. As noted in the GeoSolve report, all temporary excavations do not allow for the rise of groundwater/river levels above RL 296.2 m (i.e. median Kawarau River levels). If water levels rise above the median, works will cease, and all construction-related equipment and materials are to be moved to higher ground until water levels are reviewed and considered safe to restart construction. In addition, all sediment control devices will be maintained or dismantled until river levels have receded to safe levels. It should be noted that all site facilities have been installed on higher ground above the historic high river level.

Dewatering

- Dewatering of groundwater in excavations and low-lying areas of the river will likely be required. If dewatering is required, the following dewatering methodology should be implemented to mitigate potential adverse effects.

Methodology

- Minimise dewatering where possible.
- Pump from the top of the water column using a float, or similar, to keep the intake off the bottom of the excavation (the area to be dewatered). This will remove cleaner water while avoiding the mobilisation of sediments.
- Water will be pumped to the turkey nest prior to discharging to the river. The silt curtain downstream will provide a final line of defence.
- Ensure that the outlet to any pumped water is not creating any erosion issues.
- Monitoring the discharge is critical to ensure the pumped discharge meets required discharge standards in relation to water quality and quantity.

Monitoring

- To assess the ongoing suitability of extracted water for discharging off-site, water quality monitoring will be undertaken for the duration of dewatering activities on site. Ongoing monitoring is also required to ensure the treatment solutions are functioning as intended and confirm the quality of discharged water is within acceptable ranges. Monitoring will be undertaken by the contractor's nominated Environmental Representative. Water quality discharge criteria and recording is provided in **Appendix 9**.

Contingency

All contained water resulting from the dewatering process will be treated as discussed above, before discharging into the Kawarau River. If water quality is not meeting the resource consent requirements, the following contingency measures should be adopted.

- On-site re-use of groundwater should be considered as a priority for all dewatering activities. Dewatered groundwater from areas with low potential for contamination may be re-used on site. Examples include use for dust suppression, to assist with compaction, re-injection or watering landscaped areas. Re-used water must never be discharged in a manner that exceeds the capacity of sediment controls and/or generates runoff from the site.
- Implementation of chemical treatment to improve sediment retention efficiency.
- Disposal off-site via pumping to a water cart to a licensed waste disposal facility.

- Cease works temporarily to determine additional contingency measures.

Vertical Construction

- Undertake vertical construction of the water intake infrastructure.
- Upon establishment of foundation structures all works areas are to be cleared of all construction waste and remnants of concrete/grout.

Decommissioning

- Remove erosion and sediment control devices once stabilisation has occurred across the entire site. This is generally defined as 80% vegetative cover.

2.2 Hours of Operation

Construction activities and the associated hours of operation shall comply with *NZS 6803:1999 Acoustics - Construction Noise Guidelines*. Site works may be undertaken between 0700 and 1900 hours, Monday to Saturday as per Condition 4 of RM23.870.01. No works are to be undertaken on Sundays or Public Holidays. However, this does not preclude any emergency works or works required for incident investigation or response. Additional detail relating to noise-producing activities are to be undertaken in accordance with **Section 7.0** of this EMP.

3.0 EMP IMPLEMENTATION

3.1 Environmental Roles and Responsibilities

3.1.1 Project Manager

The Project Manager is responsible for the effective implementation of the EMP and has overall responsibility for the environmental performance of the project. Duties include:

- Ensuring adequate resources are in place to implement the EMP.
- Ensuring all staff and sub-contractors operate within the guidelines of the EMP.
- Ensuring that an EMP is prepared and that environmental standards, processes and procedures meet relevant resource consent conditions.
- Overseeing the successful implementation, monitoring and review of the EMP.
- Ensuring that inspections are carried out in accordance with the relevant EMP.
- Restricting or stopping any activity that has the potential to or has caused adverse environmental effects.
- Providing notification and reporting of Environmental Incidents to Council and other environmental reports as required by The Guidelines.
- Delegating authority of the above responsibilities.

3.1.2 Environmental Representative

The Environmental Representative supports the Project Manager in the day-to-day implementation of the EMP. Duties include:

- Ensuring the installation of environmental controls as per the EMP.
- Undertaking environmental site inspections.
- Undertake water quality sampling during rainfall events.
- Overseeing the maintenance and improvement of defective environmental controls.
- Providing environmental inductions to all staff and sub-contractors.
- Assisting the project leadership in attending to Environmental Incidents and Complaints.

The Environmental Representative shall be familiar with environmental risks associated with the project, the EMP and best practice erosion and sediment control principles and practices.

3.1.3 Environmental Consultant

The Environmental Consultant (SQEP) will provide technical environmental management advice as required. Key tasks include providing as-built confirmation of erosion and sediment controls to Council. The Environmental Consultant shall undertake monthly monitoring of the site and submit Monthly Environmental Reports to QLDC and ORC.

3.1.4 All Staff and Sub-Contractors

All staff and sub-contractors have a responsibility to undertake all activities in accordance with the requirements of this EMP. This includes reporting any activity that has the potential to or has resulted in an Environmental Incident to the Project Manager or Environmental Representative.

3.2 Site Environmental Induction

All staff and subcontractors shall attend an Environmental Induction to ensure they are aware of the project's environmental risks as well as their responsibilities to help manage these risks. Prior to ground-disturbing activities, the Environmental Representative will deliver the induction to core staff. During the project, the Environmental Representative will induct sub-contractors and new staff. The site induction handout is attached as **Appendix 3** and all persons inducted will be recorded on the Induction Register attached as **Appendix 4.**

3.3 Environmental Inspections

Table 3 outlines the regular environmental inspections to be undertaken.

Table 3: *Environmental inspections*

Environmental Inspection	Timing	Purpose
Weekly Inspection	Every seven days	A comprehensive environmental inspection will: • Confirm that all environmental controls are present, functional, and adequate. • Identify any activities that may cause an environmental incident or actual or potential environmental effects. • Identify maintenance requirements for implemented management measures. All weekly inspections shall be recorded on the Weekly Site Inspection form attached as **Appendix 5.**
Pre-Event Inspection	Prior to a significant rain event[1]	To ensure that erosion and sediment controls are present, functional, and adequate for forecast rain event. This inspection will inform any preventative work required and may result in the Rapid Response Procedure being implemented (see **Section 4.8**).
Rain Event Monitoring	During a significant rain event	To ensure that: • Erosion and sediment control devices continue to function correctly and inform any necessary emergency responses. • Sediment retention devices are functioning effectively and have capacity available. • No dirty[2] water is crossing the boundary of the site. Observations and remediation measures taken will be recorded in a daily job diary.

[1] A significant rain event is defined as any forecast/actual rain event of 15 mm within a 12-hour period or a rain event that can generate overland flow, noting that this varies seasonally.

[2] 'Dirty water' is defined as water that exceeds the maximum allowable water quality value outlined in the Discharge Criteria at **Section 5.3**.

Environmental Inspection	Timing	Purpose
Post-Event Inspection	Immediately following a significant rain event	Any observations and corrective actions should be recorded in a daily job diary.

3.4 Monthly Environmental Inspection and Reporting by SQEP

The Environmental Consultant (SQEP) will monitor the site monthly to ensure that the EMP is correctly implemented, identify any unforeseen issues arising and advise on alternative environmental solutions.

The Environmental Consultant (SQEP) will also submit a Monthly Environmental Report to QLDC and ORC within five working days of the end of each month. The report will include the following information:

- Updates to the EMP and the Erosion and Sediment Control Plan (ESCP) during the month.
- Number of weekly and pre and post-rain event site inspections completed.
- Summary of corrective actions undertaken.
- Positive environmental outcomes achieved and opportunities.

3.5 Environmental Incident Management

Environmental incidents shall be responded to as soon as the project team becomes aware of them occurring. The response will generally involve oversight by the Environmental Consultant and will involve:

- Immediate cessation of the activity that caused the incident.
- Investigation into the cause of the incident.
- Initial response to bring the incident under control.
- Implement any remediation works.

The Project Manager shall notify QLDC and ORC of the details of any Environmental Incident within 12 hours of becoming aware of the incident. Notification will be through a phone call to Council monitoring staff (see Emergency Contacts in **Table 1**). The Project Team shall provide an Environmental Incident Report within ten working days of the incident occurring. The Incident Report form is attached as **Appendix 6.**

3.6 Complaints Procedure

Any complaint received will be recorded and an investigation will be carried out. The complainant will be provided with a response acknowledging receipt of the complaint and outlining corrective actions to be implemented. After the investigation, any necessary corrective actions will be carried out and a follow-up of the original complaint is to be conducted to ensure the actions implemented have been effective. All complaints will be recorded on the Complaints Register attached as **Appendix 7.**

3.7 EMP Non-Conformance and Corrective Actions

EMP non-conformances found during site inspections, monitoring or as a result of environmental incidents or complaints shall be recorded in the EMP Non-Conformance Register. The non-conformance register attached as **Appendix 8** will detail when corrective actions are due, how they are to be carried out and the close out date. The non-conformance register ensures that issues do not escalate or are missed, as well as, providing a clear record of evidence that can be used to defend any potential complaint or formal enforcement action.

3.8 Records and Registers

The records listed below will be collated onsite. If a request is made by a QLDC and ORC official, the records shall be made available to the official within 24 hours of the request being made.

- Environmental Induction Register - **Appendix 4.**
- Weekly Environmental Inspection Form - **Appendix 5.**
- Environmental Incident Reports - **Appendix 6.**
- Complaints Register - **Appendix 7.**
- EMP Non-Conformance Register - **Appendix 8.**
- Water Quality Monitoring Results - **Appendix 9.**
- Rain event inspection observations.

3.9 EMP Updates

The EMP will be regularly reviewed throughout the project to ensure the document remains fit for purpose and to drive continual improvement. This may be initiated by:

- Significant changes to the construction methodology.
- Improvements identified as a result of an Environmental Incident or Corrective Action.
- Where directed by QLDC and/or ORC's Monitoring and Enforcement team.

All EMP updates will be managed through the document control table on page one and shall be submitted to QLDC and ORC for acceptance.

4.0 EROSION AND SEDIMENT CONTROL MEASURES

4.1 Performance Criteria

Design, install and maintain erosion and sediment controls in accordance with industry best practices. Generally, this is:

- Queenstown Lakes District Council's (QLDC) QLDC Guidelines for Environmental Management Plans, June 2019 (The Guidelines).

4.2 Erosion and Sediment Control Principles

Erosion and sediment control ('ESC') devices shall be installed, maintained and decommissioned in accordance with the following principles:

- Erosion and sediment controls are integrated with construction planning.
- Construction is staged to minimise the duration and area of exposed soil open at any one time.
- A 'treatment train' approach so that the sediment retention devices operate as efficiently and effectively as possible.
- Separation of 'clean' and 'dirty' water with clean water to be diverted around the site to minimise the volume of dirty water needing management onsite.
- The extent and duration of soil exposure is minimised.
- Controls are always maintained in proper working order.
- Progressively stabilise and revegetate disturbed or completed areas.
- The site is monitored, and erosion and sediment control practices are adjusted to maintain the required performance standard.
- Soil erosion is minimised as far as reasonable and practical.
- Avoidance of sediment discharge off-site and protection of receiving environments.

4.3 Guidance on Erosion and Sediment Control Devices

The effective control of surface water shall be achieved through the utilisation of carefully selected erosion and sediment control devices to achieve a specific purpose. These guidelines for the devices employed on this project shall be read in conjunction with the ESCP attached as **Appendix 1** of this document.

4.3.1 Site Definition

At the commencement of the project, the following components onsite will be clearly defined as detailed in **Table 4**.

Table 4: *Site definition specifications*

Site component	Method of Demarcation
Internal 'no-go' areas (protected or sensitive areas)	Bunting or flagging tape with waratahs

4.4 Erosion Control Practices

4.4.1 Non-Structural Controls

Timing of works

Works should only commence at low river levels, within a settled forecast weather window between the months of March and June. Works are to be undertaken during an extended period of fine weather where possible to reduce erosive potential and susceptibility to further dislodgement of material. Ensure that all disturbed areas are stabilised (temporarily or long term) and loose materials are secured prior to forecast rain events to prevent further movement of material.

Progressive rehabilitation

Disturbed areas will be progressively stabilised. It is important that when completed, exposed or disturbed areas are stabilised prior to moving on to the next area. Stabilisation methods will vary around the site due to differing gradients and growing mediums. Stabilisation and rehabilitation measures are outlined below:

4.4.2 Stabilised Entranceway

The existing access track off the Gibbston Trail will act as a stabilised access for the duration of this project.

4.4.3 "Clean Water" Diversion Channels

Clean water diversion channels have not been implemented across the site due to the steep terrain, which limits the ability to install, as well as the presence of exotic and indigenous vegetation, which we aim to preserve by minimising its removal.

4.4.4 "Dirty Water" Diversion Channels

Dirty water diversion swales will be installed to capture and carry sediment-laden stormwater from the disturbed works areas to the relevant sediment retention devices.

A trackside swale is not proposed in the current earthworks plan. However, it is assumed that trackside drainage will be necessary long-term. On this premise, the trackside stormwater swale will act as a DWDC and will be constructed in a switchback formation, directing water to cross-fall drop-out pits where small sections of water can be discharged to the vegetated slope below.

Regardless, a formalised dirty water diversion channel (DWDC) has been calculated based on the conservative assumption that stormwater swales are not designed and included. The DWDC will be constructed in accordance with the schematic diagram in ESCP-003, **Appendix 1** (complete guidelines on pages 43-46 of GD05). Full calculations are included in **Appendix 2**.

4.4.6 Drop-Out Pits

Drop-out pits will be used within the DWDC to allow the heavier coarse sediments to drop out, preventing them from entering the sediment sump, and reducing loads on these devices.

It is noted that relatively hard schist rock appears to be present at shallow depths. Given this, drop-out pits will be constructed where possible, and in accordance with the image reference in ESCP-005, **Appendix 1** (complete guidelines on page 45 of GD05).

4.4.7 Trafficable Swale

Trafficable swales will be used across the site to allow dirty water overland flows to cross haul roads without the need for culvert installation. Trafficable swales shall be constructed in accordance with the reference image in ESCP-005, **Appendix 1.**

4.4.8 Pipe-Drop Structures and Flumes

As discussed in **Section 5** of the EMP, a surface springs is located close to the proposed works area. A pipe drop structure shall be used to transport seepage from the groundwater spring upslope of the extent of the earthworks, without causing erosion. Sandbags will be used to construct a bund around a short section of 110 mm polyethylene culvert at the spring and a 110 mm flexi pipe will be secured to the end of the culvert to ensure that clean water is conveyed beyond the extent of the earthworks. Regular inspections will check that this water is not causing any erosion and if so, rock riprap or geofabric lining may be necessary.

The pipe drop structure and flume will be constructed in accordance with the schematic diagram in ESCP-004, **Appendix 1** (complete guidelines on pages 55-60 of GD05).

4.5 Sediment Control Practices

4.5.1 Floating silt curtain and boom

A floating silt curtain and boom will be placed within the immediate bank and Kawarau River to contain any errant sediment stirred up during the proposed works. This will be long enough to be placed around the entire work footprint (approximately 15 m) and shall remain in place until works are complete and the turbidity of the water inside the curtain meets water quality discharge criteria.

The curtain will be placed by having chains already secured to the bottom of the silt curtain, with both ends secured to the bank via waratahs. They should be kept as tight into the bank as possible to reduce disturbance of the riverbank. It is noted that if the silt curtain is observed to be moving around in river flows, extra weight should be added. The curtains will be installed in accordance with the manufacturer's instructions. During removal, the curtain is to be carefully dismantled by unbolting/unzipping each section and carefully removing the waratahs from the riverbed.

It is important to note that the silt curtain is not to be relied upon as the primary means of silt control and rather is a last line of defence in case the primary controls fail to prevent sediment-laden water from entering the river. The silt curtain will be installed in accordance with the reference image in ESCP-006, **Appendix 1**.

4.5.2 Skim pump

A skim pump is to be utilised to dewater the excavation area as required, to remove the majority of the water and enable bulk earthworks and vertical construction to commence. This will prevent the sedimentation of a larger volume of water within the Kawarau River.

Water is to be skim pumped to the turkey nest, prior to discharging to the Kawarau River, within the silt curtain. The skim pump will be installed in accordance with the reference images in ESCP-006, **Appendix 1**.

4.5.3 Turkey Nest

A turkey nest is typically constructed using a physical structure wrapped in a layer of permeable geotextile matting to act as a means of filtration for dirty water. The turkey nest will be located at the base of the track, adjacent to the rock riprap as shown in ESCP-001, **Appendix 1**. Water will be skim pumped through the turkey nest during dewatering before percolating into the Kawarau River. The turkey nest, in conjunction with silt socks, will help filter suspended sediment and provide a greater opportunity for sediment to be captured. The silt curtain downstream will act as a last line of defence for errant sediment. This is demonstrated on ESCP-001, **Appendix 1**.

A turkey nest has been selected due to its strong filtration capability and ease of installation within the confined site area, with the potential to produce cleaner water if dewatering is required. Turkey nests will be installed in accordance with the reference images in ESCP-006, **Appendix 1** (example can be found on page 130 of GD05).

4.5.4 Sediment Sump

A sediment sump shall be installed at the outlet point of the DWDC, as depicted in ESCP-001, **Appendix 1**. A DEB would be preferable in this location as per GD05, however, due to the site's underlying geography and steep terrain, space for larger sediment retention devices is not possible. A sediment sump, in conjunction with silt socks, is considered best practice in this instance, given the site's steep terrain and the treatment train approach (involving drop out pits, silt socks and rapid rehabilitation.

The sediment sump serves as an important element of the 'treatment train' approach, whereby flow velocity is reduced and sediment is able to settle out of suspension before being discharged via silt socks for additional filtration. It is important to monitor the spillway of the sump, ensuring that the lining is secured in place to avoid erosion and undercutting. The sediment sump shall be constructed in accordance with the reference image in ESCP-003, **Appendix 1.**

4.5.5 Silt Socks

Silt socks will be utilised to intercept runoff within channel and sediment retention (e.g. turkey nest) outlets. These devices are essentially mesh or fabric tubes filled with sand and/or compost. Silt socks have been chosen for this site due to the inability to install more traditional sediment controls due to the steep nature of the site.

Silt socks will be installed in accordance with the reference images in ESCP-005, **Appendix 2** (complete guidelines on pages 126-130 of GD05).

4.5.6 Standard Silt Fence

A standard silt fence will be used to capture potential sheet flows from the lower portion (adjacent to the Kawarau River) of the track. The location of this device is to be confirmed prior to construction, to ensure it can feasibly be installed. The silt fences will be installed in accordance with the schematic diagram in ESCP-007, **Appendix 1** (complete guidelines on pages 112-119 of GD05).

4.5.7 Temporary Stockpiles

Stockpiles shall be located on higher ground and will be constructed in accordance with the schematic diagram in ESCP-005, **Appendix 1.**

4.6 As-Built Verification

The Environmental Consultant will provide the Council with as-built confirmation to verify that the erosion and sediment controls have been installed in accordance with the approved ESCP.

4.7 Maintenance of Erosion and Sediment Control Devices

Ongoing maintenance of the site shall be undertaken according to the ESCP as follows:

- Clean out sediment of all ESC devices such as the sediment sump, as soon as 20% capacity has been reached and prior to any forecast storm event.
- Regular clean out of sediment from the silt fences and drop out pits to maintain operational functioning capacity (as soon as weather permits following rain event).
- Eroded channels and contour drains should be re-shaped and consult with SQEP to determine if additional measures may be required.

Spare erosion and sediment control products will be stored onsite at all times including but not limited to:

- Silt fencing (remainder of roll)
- Waratahs (x10)
- Spare high tensile wire
- Silt fence clips (x50)
- Pump and generator
- Geofabric x 2 rolls

4.8 Rapid Response Procedure for Significant Rain Events

The Environmental Representative will stay vigilant of weather forecasts. If a significant rain event is imminent, all works will cease in sufficient time for staff to inspect and maintain erosion and sediment control devices and undertake any stabilisation required. Observations will continue through the rain event to ensure the functioning of erosion and sediment control devices.

4.9 Decommissioning and Removal

Erosion and sediment control devices will remain in place until ‘stabilisation’ of the site has been achieved. This is generally defined as 80% vegetative cover as depicted in **Figure 2**.

It is noted that the removal of controls may result in minor soil exposure. Any soils exposed during decommissioning will be stabilised with either grass, mulch or other appropriate erosion control.

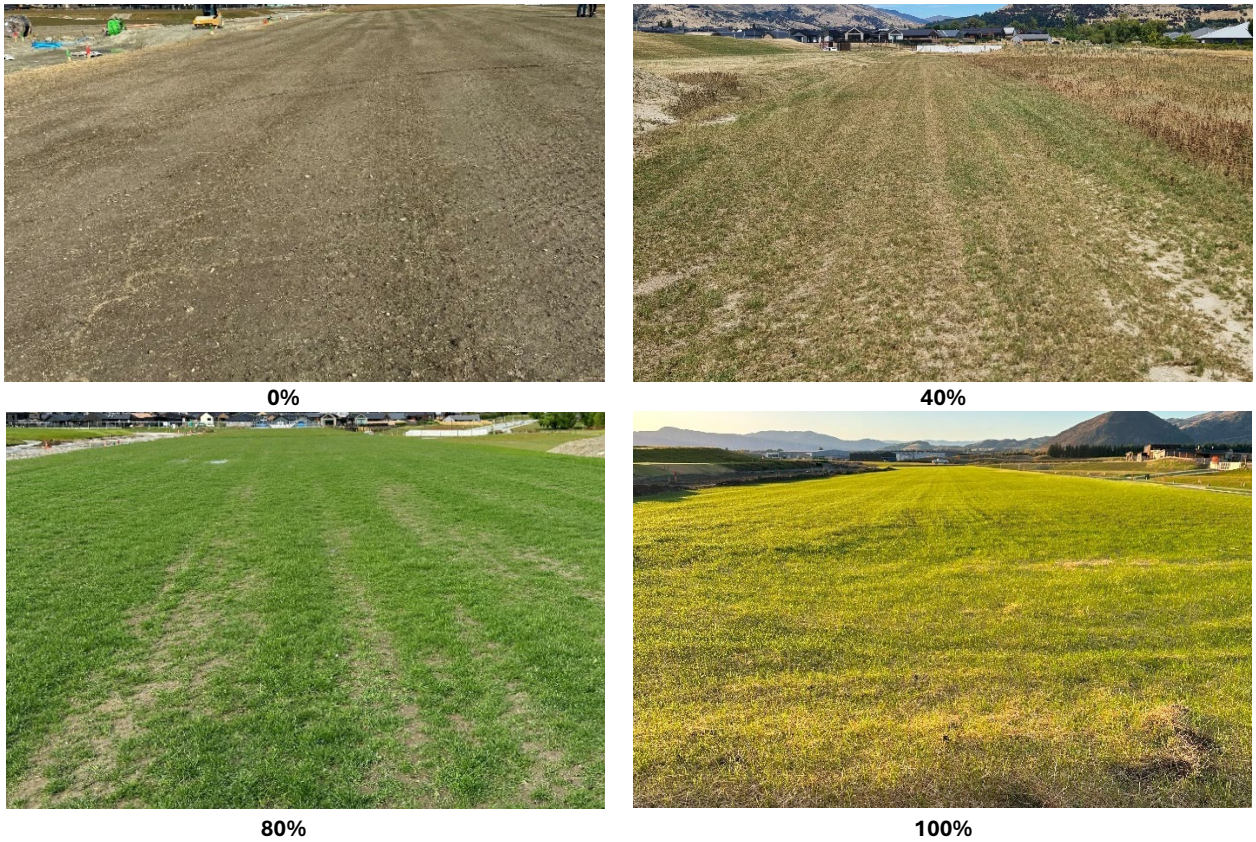


Figure 2: *Visual cover estimation.*

4.10 Inspections and Monitoring

Details of inspections and monitoring are stated in **Section 3.3**.

4.11 Contingency Measures

The following contingency measures in **Table 5** shall be deployed as required.

Table 5: *Erosion and sediment control contingency measures*

Issue	Contingency Measure
Sediment-laden stormwater flowing across the site boundary	Undertake measures to stop the flow immediately. Ensure controls are installed according to the ESCP. Contact the Environmental Consultant (SQEP) who will initiate the incident response.
Controls do not appear to be working as intended	Contact Environmental Consultant (SQEP) to inspect, advise and revise ESCP as required.

Issue	Contingency Measure
The site is inappropriately exposed prior to imminent rain event	Cease works and shift effort to checking erosion and sediment controls and stabilisation via the Rapid Response Procedure outlined in **Section 4.8.**
Sediment retention devices are near capacity and more rain is forecast	Contact the Environmental Consultant (SQEP) immediately for advice.
Abatement notice issued by Council	Contact the Environmental Consultant (SQEP) immediately to advise on methods to meeting abatement notice requirements within the time stated by the abatement notice.

4.12 Erosion and Sediment Control Incident

An erosion or sediment control incident is considered to have occurred where performance criteria outlined in **Section 4.1** is not met. The incident procedures outlined in **Section 3.5** shall commence.

5.0 WATER QUALITY MANAGEMENT

Surface water bodies (rivers, streams, lakes and wetlands) provide important habitats for many species of plants, fish, birds and animals, some of which are endemic and/or threatened. To protect these values, water quality must be safeguarded, and the natural flow of the watercourse maintained to the greatest possible extent. Where flow must be reduced or diverted, mitigation is required to ensure the values of the watercourse are not degraded.

5.1 Receiving Waterbodies

The proposed works are partially located within the margins of the Kawarau River. The Kawarau River, which drains Lake Wakatipu, is a fast flowing and high-volume river set within the steep sided Kawarau Gorge. GoeSolve note in their 2022 report that the river has a median water level of RL 296.2 m, a low water level of RL 294.4 m, and a historic high of RL 304.89 m.

An overland flow path begins at the Gibbston Trail, flowing down the gorge bank before discharging into the Kawarau River. No flow was observed during the site visit in January 2025.

GeoSolve note in their 2023 report that regional groundwater is expected to be influenced by Kawarau River levels. For design purposes, GeoSolave has assumed that groundwater is at RL 296.2 m (median Kawarau River level). A groundwater spring was identified during the site visit which discharges into the proposed works area.

These waterbodies are shown below in **Figure 3**.

5.1.1 Effects on Waterbodies

The potential adverse effects on receiving waterbodies, as a result of the proposed works, are expected to be less than minor. These effects will be mitigated through the adoption of best-practice erosion and sediment controls and environmental management measures that avoid the generation and discharge of contaminants associated with earthworks and general construction activities.

Except for the turkey nest, no point source discharges to the Kawarau River are anticipated. The turkey nest will only be used if dewatering is required and, when combined with silt socks, should enhance sediment capture. The silt curtain downstream will serve as the final safeguard against any residual sediment.

Overland flow path

Surface spring discharge

Figure 3: *Waterways within and in proximity to the site (site location shown in red).*

5.2 Legislative Considerations

5.2.1 Water Conservation (Kawarau) Order 1997

The Kawarau River has outstanding values recognised by a water conservation order under the Resource Management Act. The order protects the Kawarau River and its tributaries, including Lake Wakatipu, for their outstanding natural characteristics and cultural, recreational, and ecological values. Key points include:

- **Protection of Natural Characteristics:** The Order recognises the river system's scenic beauty, clear waters, and unique biodiversity, safeguarding these features from significant alterations.

- **Recreational and Cultural Significance:** It protects the river's value for activities like fishing, kayaking, jet boating, and its importance to local Māori for cultural practices.
- **Flow and Water Quality Standards**: The Order sets specific water quality standards, flow requirements, and water use restrictions to maintain ecological health and prevent degradation from activities such as damming or pollution.
- **Restrictions on Water Use and Development**: Limitations are placed on water rights and activities that could negatively affect the river's flow, quality, or character, ensuring sustainable management aligned with conservation priorities.

5.3 Performance Criteria

Any discharge from the sites' works areas, or erosion and sediment control devices will meet the criteria in **Table 6**.

Table 6: *Water quality discharge criteria – Medium/High Water Quality Risk*

Parameter	Discharge Criteria
Visual Clarity (mm)[3]	No conspicuous change in the colour or clarity of the receiving waters beyond 20 m from the construction site;
Total Suspended Sediment (TSS)	≤ 50 mg/L
pH[4]	5.5 – 8.5
Hydrocarbons or tannins	No visible trace
Waste	No waste or litter is visible

In addition to the above, all construction and maintenance activities must be managed in accordance with conditions 2 and 5 of RM23.870.01 and RM23.870.02, respectively, to ensure that discharges associated with the works do not cause:

- A conspicuous change in the colour or clarity of the receiving waters beyond 20 m from the construction site;
- Conspicuous oil or grease films, scums, foams, or floatable suspended material 20 m from the construction site.

Furthermore, in accordance with condition 4 of RM.23.879.04, any discharges must not result in:

- The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials;
- Any conspicuous change in colour or visual clarity;
- Any emissions of objectionable odour;

[4] pH to be tested only when chemical treatment is undertaken.

- The rendering of fresh water unsuitable for consumption by farm animals or any significant adverse effects on aquatic life.

In any river, lake, artificial watercourse or wetland.

5.4 Management Measures

The following measures will be deployed to ensure the protection of water quality:

- Erosion and sediment controls will be implemented and maintained in accordance with the Erosion and Sediment Control Measures in **Section 4.**
- Refuelling, servicing and storage of hydrocarbons will be in accordance with the relevant procedures in the Chemicals and Fuels Management in **Section 10.**
- All concrete washing is to be undertaken in the designated concrete wash-out pit as per the design specifications in ESCP-008, **Appendix 1**.
- All plant and equipment onsite will be inspected regularly to ensure they are of an acceptable standard.
- Stockpiling of any organic, erodible or hazardous material onsite is not to be placed within close proximity of a watercourse/major drainage line, unless appropriate controls are in place.

5.5 Monitoring

Water quality will be monitored in accordance with **Table 7**.

Table 7: *Water quality monitoring measures*

Sampling Scope	
Objective	To assess whether controlled and uncontrolled discharge, meets the Discharge Criteria referred to in **Section 5.3.**
Responsibility	On site water quality sampling is to be completed by the nominated Environmental Representative. Note: SQEP is available to provide training and guidance regarding on site sampling and can provide sampling services as required.
Spatial boundaries	Discharges from within the sites' work areas and/or erosion and sediment control devices.
Frequency	A significant rain event is defined as any forecast/actual rain event of 15 mm within a 24-hour period or a rain event that can generate overland flow, noting that this varies seasonally. Where a Significant Rain Event occurs through the night, monitoring shall be undertaken the following morning.
Sampling Design	
Water Quality Criteria	As outlined in the Discharge Criteria referred to in **Section 5.3.**
Sampling Locations	At boundaries of the site where any water is flowing, specifically the following point discharges: • Turky nest outlet

Sampling Method	• TSS – Registered laboratory • pH – pH meter – only if utilising chemical treatment • Gross pollutants – visual observations • Tannins – visual observations (any unusual darkening of waters?) • Hydrocarbons – visual observations (is there any oily film[5] on surface or smell?)
Quality Control	Any water quality meter will be calibrated according to manufacturer instructions. All observations will be recorded and analysed.
Recording	
Recording Results	All results will be entered into a spreadsheet and kept onsite (form attached as **Appendix 9**).
Actions	
Non-conformances	Any exceedances observed will be reported to the Project Manager/ Environmental Consultant who will investigate and ensure appropriate corrective actions are implemented immediately.

5.6 Contingency Measures

The following contingency measures in **Table 8** shall be adopted if required.

Table 8: *Water quality contingency measures*

Issue	Contingency Measure
Exceedance of water quality criteria	• Contact the Project Manager and Environmental Consultant (SQEP) immediately. • Works will cease or be modified to remove further risk of contamination. • QLDC and ORC will be verbally notified. • The Environmental Incident procedure will commence. • Remedial measures will be implemented and the Environmental Incident will be closed out by the Environmental Consultant (SQEP), with a copy of an Environmental Incident report to the Project Manager, QLDC and ORC.

5.7 Water Quality Incidents

A water quality incident is considered to have occurred where the water quality performance criteria outlined in **Section 5.3** is breached. The incident procedures outlined at **Section 3.5** shall commence.

[5] Some bacteria produce a naturally occurring film on the water surface. Bacteria films breaks apart in angular shapes when disturbed whereas hydrocarbon film separates as globules.

6.0 DUST MANAGEMENT

Dust from construction activities, vehicle movements and stockpiles can contribute to sediment runoff and create a nuisance to the public, neighbouring properties, adjoining roads and service infrastructure. The key risks associated with dust occur during the bulk earthworks phase of the project.

There are a range of activities that may produce dust onsite including:

- General disturbance of soil (particularly during drier months).
- Stockpiling of topsoil or subsoil.
- Slow or ineffective revegetation procedures.

6.1 Sensitive Receptors

Key sensitive receptors to protect from the effects of dust include the Kawarau River and workers on site. The Gibbston River Trail is located over 100 to the south at its closest point and the nearest building, Gibbston Winery Tasting Rooms, is located over 315 m south-west of the site.

The prevailing wind in the closest monitoring point (Queenstown Aero) is a south-westerly[6]. The site is sheltered from damaging winds due to being surrounded by steep faces to the west and south. Minimal earthworks are required to construct the water intake and the access and therefore potential or actual effects associated with construction-generated dust are anticipated to be less than minor.

6.2 Performance Criteria

The project must ensure that reasonable and practical measures are taken to avoid dust moving across the boundaries of the site at all times.

6.3 Management Measures

The following measures will be deployed to ensure dust generation onsite is minimised:

- Stage works where possible to minimise soil exposure extents and timeframes.
- Revegetate disturbed areas progressively throughout construction.
- Dust suppression of exposed areas and stockpiles using k-lines approved by the Environmental Representative.[7]
- If dust activities cannot be controlled during high winds, works will cease until favourable conditions return.
- Only designated access points and haul routes are to be used.
- All site access and surrounding roads to be swept clean regularly.
- To avoid spillage risks, trucks will not be overloaded.

[6] Macara, G.R. 2015. The climate and weather of Otago. NIWA Science and Technology Series 67, 44 pp.

[7] Ensure a consented water take permit is approved by the local authority. If taking water from lakes and or rivers, ensure that the permitted volume of water is taken.

- All trucks must have tail gates up and swept or cleaned prior to exiting to external roads.
- Stockpile heights are to be minimised where possible (< two metres) unless they are covered (e.g. an erosion blanket, chemical sealant, temporary cover crop or mulched).
- Long-standing stockpiles (greater than six weeks) shall be appropriately stabilised.
- Within two weeks of completion, all earth worked areas will be sown out with grass, landscaped or otherwise stabilised by an appropriate erosion control.

6.4 Monitoring

Site staff will maintain continual vigilance for any increases in wind to ensure measures are deployed prior to dust crossing site boundaries. Weekly Environmental Inspections and the Monthly SQEP Environmental Inspections will also ensure that the management measures described above are sufficient and performing effectively.

6.5 Contingency Measures

The contingency measures in **Table 9** shall be adopted if required.

Table 9: *Dust contingency measures*

Issue	Contingency Measure
Excessive dust creation from soil disturbance	• Increase frequency of irrigation. • Spray down excavation areas and activities where excavator bucket is operating. • Cease excavation during high winds, particularly if wind direction is likely to impact sensitive receivers.
Excessive dust creation from hauling operations	• Reduce truck speeds. • Cover or spray down loads causing dust impacts.
Excessive dust creation from stockpiles	• Spray stockpiles with water or apply a temporary polymer. • Hydro-mulch, seed or stabilise stockpiles, cover stockpiles with geofabric. • Locate stockpiles further away from sensitive receptors.
Abatement notice issued by Council	Contact the Environmental Consultant (SQEP) immediately to advise on methods to meeting abatement notice requirements within the time stated by the abatement notice.

6.6 Dust Incident

A dust incident is considered to have occurred where:

- Dust is observed crossing the boundary into sensitive receptors or,
- A justified complaint is received regarding dust emissions across the boundary of the site.

The incident procedures outlined at **Section 3.5** shall commence.

7.0 NOISE AND VIBRATION MANAGEMENT

The following assessment and management measures are intended for standard construction equipment that is not expected to induce noise or vibration beyond the maximum limits in the QLDC District Plan. Where upper noise and vibration levels of district plans will be breached, an Acoustic Specialist may need to be engaged to assist with the management of these nuisance effects.

Potential noise and/or vibration effects may be generated by the following:

- Excavation and earth moving plant
- Light vehicles near sensitive receptors
- Ancillary plant and equipment
- Reversing alarms

7.1 Sensitive Receptors

As noted in the 2023 GeoSolve report, schist bedrock is present at shallow depths, and as such, rock breaking during earthworks will likely be required, although only in a small area. The proposed earthworks are expected to take less than 6 weeks to complete.

However, due to the isolated nature of the site and distance from the nearest receptors (over 100 m to the Gibbston Trail and over 300 m to the Gibbston Winery Tasting Rooms), the potential effects on nearby receptors are expected to be low.

7.2 Performance Criteria

1. Construction activities shall meet relevant noise limits specified under Rule 36.5.13 of the Queenstown Lakes Proposed District Plan. This rule requires Construction sound at any point within the site must comply with the limits specified in Tables 2 and 3 of *NZS 6803:1999 Acoustics - Construction Noise*, when measured and assessed in accordance with that standard (see **Table 10** below).
2. Construction activities shall meet relevant vibration limits specified under Rule 36.5.10 of the Queenstown Lakes Proposed District Plan. This rule requires vibration from any activity must not exceed the guideline values given in *DIN 4150-3:1999 Effects of vibration on structures* on any structures or buildings on any other site (see **Table 11** below).
3. Construction activities shall be undertaken in accordance with the permitted hours of operation outlined at **Section 2.2** of this EMP.

Table 10: *Upper limits in dB(A) for construction work noise in residential areas for less than 20 weeks*

Time of Week	Time Period	$L_{Aeq(t)}$	L_{Afmax}
Weekdays	0630 – 0730	60 dB	75 dB
	0730 – 1800	75 dB	90 dB
	1800 – 2000	70 dB	85 dB

Saturdays	0630 – 0730	45 dB	75 dB
	0730 – 1800	75 dB	90 dB

Table 11: *Vibration Thresholds for Structural Damage (PPV mm/s)*

	Short Term				Long-Term
	At Foundation			Uppermost Floor	Uppermost Floor
Types of Structures	0 to 10 HZ	10 to 50 Hz	50 to 100 HZ	All Frequencies	All Frequencies
Commercial/Industrial	20	20 to 40	40 to 50	40	10
Residential	5	5 to 15	15 to 20	15	5
Sensitive/Historic	3	3 to 8	8 to 10	8	2.5

Note: When a range of velocities is given, the limit increases linearly over the frequency range.

7.3 Management Measures

The following measures will be deployed to ensure noise and/or vibration associated with the project are appropriately mitigated:

- Where practicable, select lower noise producing equipment or use lower noise generating alternatives.
- Regularly service equipment to ensure plant is running optimally.
- Revving of engines will be limited. All plant and vehicles will be turned off when not in use and if safe to do so.
- The use of audible alarms on mobile equipment will be limited, and two-way communication will be used.
- Undertake activities that may lead to noise or vibration effects, during reasonable and practical hours.

7.4 Monitoring

All earthworks activity will be closely monitored by the operator to ensure that noise and vibration remains within the required limits. If monitoring finds the activity cannot comply with performance criteria, an Acoustic Specialist may need to be engaged to assess the project and provide appropriate mitigation measures and monitoring. Weekly Environmental Inspections and Monthly SQEP Environmental Inspections shall include an assessment of the site to determine the effectiveness of noise and vibration management controls.

7.5 Contingency Measures

The following contingency measures in **Table 12** shall be adopted if required.

Table 12: *Noise and vibration contingency measures*

Issue	Contingency Measure
Noise and/or vibration complaint received	Manage the complaint in accordance with the Environmental Complaints procedure in **Section 3.5**

Issue	Contingency Measure
Exceedance of performance requirement criteria	The Environmental Consultant (SQEP), in consultation with the Environmental Representative, will investigate and implement actions to reduce noise and/or vibration levels to below criteria levels.
Ongoing noise and/or vibration issues	Where noise or vibration emissions consistently exceed the performance criteria despite the site staff's best efforts, an Acoustic Specialist will be engaged to assist.
Abatement notice issued by Council	Contact the Environmental Consultant (SQEP) immediately to advise on methods to meeting abatement notice requirements within the time stated by the abatement notice.

7.6 Noise and Vibration Incident

A noise or vibration incident is considered to have occurred when a justified complaint is received and on investigation is found to exceed the performance criteria. The environmental incident procedures outlined in **Section 3.5** shall commence.

8.0 CULTURAL HERITAGE MANAGEMENT

The loss or damage of cultural heritage items could be caused by construction activities. The damage or loss of artefacts can lead to the loss of culturally or historically significant items and information.

Examples of cultural heritage items include:

- Koiwi tangata (human skeletal remains).
- Waahi taoka (resources of importance).
- Waahi tapu (places or features of special significance).
- Māori artefact material.
- A feature or archaeological material predating 1900.
- Unidentified archaeological or heritage site.

8.1 Location of Known Cultural Heritage Significance

A search of QLDC's database indicates there are no known items of cultural or heritage significance within the site. It should be noted however, that the site is located adjacent to the Kawarau River Wāhi Tūpuna and has the listed values of Ara Tawhito, archaeological values, mahika kai, and nohoaka.

Wāhi Tūpuna are landscapes that embody the relationship of mana whenua and their culture and traditions with their ancestral lands, water, sites, wāhi tapu (sacred places), and other taoka (treasure). This is shown in **Figure 4** below.

Due to the modest scale of the activity and limited disturbance required to form the intake, potential and actual effects on the Kawarau River Wāhi Tūpuna, are anticipated to be less than minor.

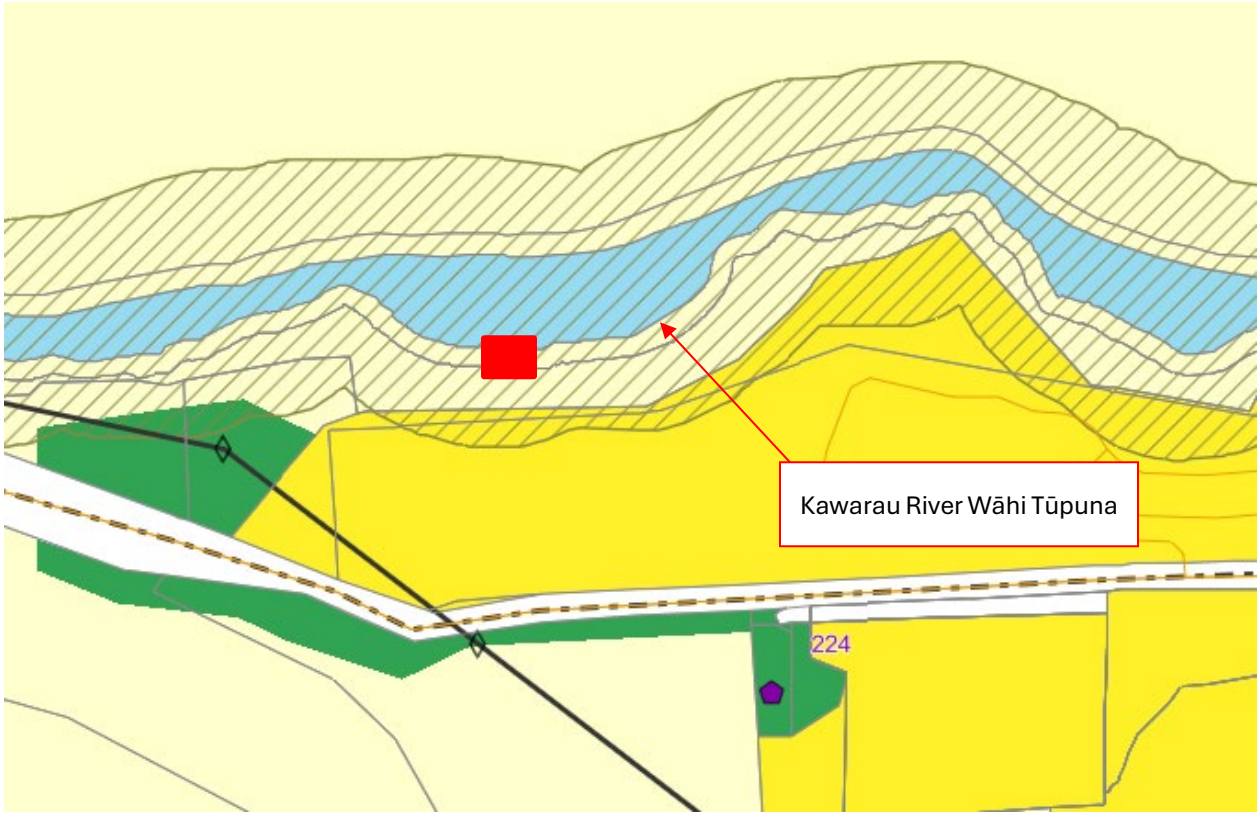


Figure 4: *Locations of areas with cultural significance. Approximate site location shown in red. (Source: QLDC GIS)*

8.2 Performance Criteria

- The protection of cultural heritage artefacts and places in accordance with the *Heritage New Zealand Pouhere Taonga Act, 2014*.
- Strict adherence to Heritage New Zealand's *Archaeological Discovery Protocol* (attached as **Appendix 10**) in the case of unexpected finds.

8.3 Management Measures

All works on this project will be undertaken in accordance with the obligations of the *Heritage New Zealand Pouhere Taonga Act*, 2014.

8.4 Monitoring

Weekly inspections shall include a visual assessment of the site to ensure that no new significant artefacts have been encountered. However, operators must remain vigilant for such encounters as they occur.

8.5 Accidental Finds

If any unknown artefacts are uncovered, the project will work to Heritage New Zealand's *Archaeological Discovery Protocol* (attached as **Appendix 10**).

9.0 VEGETATION MANAGEMENT

The site, which is located on the north bank, on the true right of the Kawarau River, is vegetated with a mixture of mainly exotic and some indigenous species, including willows (*Salix* sp.), ash (*Fraxinus* sp.), mountain flax (*Phormium cookianum*) and mingimingi (*Caprosma* sp.).

Vegetation at the water level.

Vegetation looking down the river bank.

Figure 5: *Vegetation on site (Source: Enviroscope).*

9.1 Sensitive Receptors

The site is situated within the Kawarau River Wāhi Tūpuna area. Vegetation in this area predominantly consists of a mixture of mature exotic and some indigenous species, as described above. A small portion of vegetation clearance within the Wāhi Tūpuna area will be necessary to accommodate the proposed earthworks.

However, due to the small area of vegetation being removed, the lack of rare native species, and the proportion of exotic species observed, the potential adverse effects associated with the earthworks are considered to be low.

9.2 Performance Criteria

- Undertake disturbance within the consented earthworks extent.
- Avoid the clearance of indigenous or protected vegetation where possible during excavation works.
- Avoid the spread of noxious weeds onsite or to other sites.

9.3 Management Measures

The following measures will be deployed to manage vegetation:

- Demarcate protected vegetation areas as no go zones.
- Treating weeds prior to disturbance of the natural surface.
- Maintain existing indigenous and or any protected vegetation.
- Weed free topsoil will be retained for reuse in site rehabilitation.

9.4 Monitoring

Weekly Environmental Inspections and Monthly SQEP Environmental Inspections shall include a visual assessment of the site to determine the effectiveness of vegetation management controls.

9.5 Vegetation Incident

A vegetation incident is considered to have occurred where:

- Protected vegetation is damaged or removed.
- A no-go zone is breached.

The environmental incident procedures outlined at **Section 3.5** shall commence.

10.0 CHEMICALS AND FUELS MANAGEMENT

Hazardous substances can endanger both human health and the environment. Used incorrectly they can cause catastrophic accidents, such as fires and explosions, and serious harm to people who are exposed to them.

10.1 Sensitive Receptors

Key sensitive environmental receptors include the Kawarau River and staff members working on the site.

10.2 Performance Criteria

- Chemicals and fuels are stored and used in a manner that avoids contamination of site and surrounding environment.
- All spills are cleaned up immediately and the contaminated soils/waters disposed of appropriately.

10.3 Management Measures

The following measures will be deployed to ensure chemicals and fuels associated with the project are appropriately managed.

- All hazardous substances to be stored, transported and used according to the safety data sheet requirements.
- Storage of chemicals and fuels shall be located as far as practicably possible from waterways and concentrated flows.
- Refuelling of vehicles and plant onsite will occur in the designated refuelling bay within the laydown area, as shown in ESCP-008, **Appendix 1**.
- All concrete washing is to be undertaken in the designated concrete wash-out pit as per the design specifications in ESCP-008, **Appendix 1**.
- One 120 L Oil and Hydrocarbon spill kit will be located in close proximity to the location of liquid hazardous materials storage and refuelling areas.
- The volumes of the hazardous substances listed in **Table 13** will not be exceeded.

Table 13: *Maximum volumes of chemicals and fuels*

Chemicals and Fuels	Maximum Volume	Storage Location
Diesel	1000 L	Portable trailer
Unleaded Fuel	60 L	Jerry cans in lockable container
Oil	10 L	Packaging in lockable container
Lubricant (WD40 or similar)	Six Cans	Packaging in lockable container
Grease	5 L	Packaging in lockable container
Spot marking paint	2 L	Packaging in lockable container

10.4 Monitoring

Weekly Environmental Inspections and Monthly SQEP Environmental Inspections shall include a visual assessment of the site to determine the effectiveness of chemicals and fuels management.

10.5 Contingency Measures

The following contingency measures in **Table 14** shall be adopted if required.

Table 14: *Chemicals and fuels contingency measures*

Issue	Contingency Measure
Spills response	• Stop works in proximity to the spill and assess the safety of all personnel. • Take immediate action to contain the spill to prevent discharge into stormwater drains or natural waterways. • Use spill kits to contain and treat the spill. • Notify Environmental Consultant to advise on next steps. • If necessary, notify the Regional Council spill response unit. • Remove contaminated material to a suitable contained location for remediation/disposal (require any necessary approvals/permits from ORC). • The spill kits shall be replaced by an approved supplier.
Inappropriate storage	• Upgrade facility. • Clean-up of storage area. • Notify and train staff.
Inappropriate handling/transport	• Notify and train staff through toolbox meetings on the appropriate handling and transport methods.
Inadequate spill kit materials	• Order more materials. • Investigate types of chemicals onsite and consult a supplier for advice on appropriate equipment. • Develop or revise spill material monitoring and ordering system.
Inappropriate disposal of chemicals or fuels	• Provide appropriate disposal facilities or service providers. • Notify and train staff.
Inaccurate or insufficient records	• Advise staff and update records. • Monitor through inspections.

10.6 Chemicals and Fuels Incident

A chemicals and fuels incident are considered to have occurred where:

- A spill more than five litres has occurred.

- A situation is discovered where a spill of more than five litres would likely have occurred before it happens where the management measures listed above have not been followed.

The environmental incident procedures outlined at **Section 3.5** shall commence.

11.0 WASTE MANAGEMENT

Waste from construction activities can create a nuisance to the public, neighbouring properties, and adversely affect flora and fauna.

11.1 Sensitive Receptors

Key sensitive environmental receptors include the Kawarau River and staff members working on the site.

11.2 Performance Criteria

- Non-recyclable waste generation is minimised, and the site and surrounds are kept free from waste at all times.
- Wastes shall be stored safely and in an organised manner until recycling, reuse, or disposal.

11.3 Management Measures

The following measures will be deployed to ensure waste management associated with the project is appropriately mitigated:

- The Waste Management Hierarchy philosophy will be implemented, as illustrated in **Figure 6**.

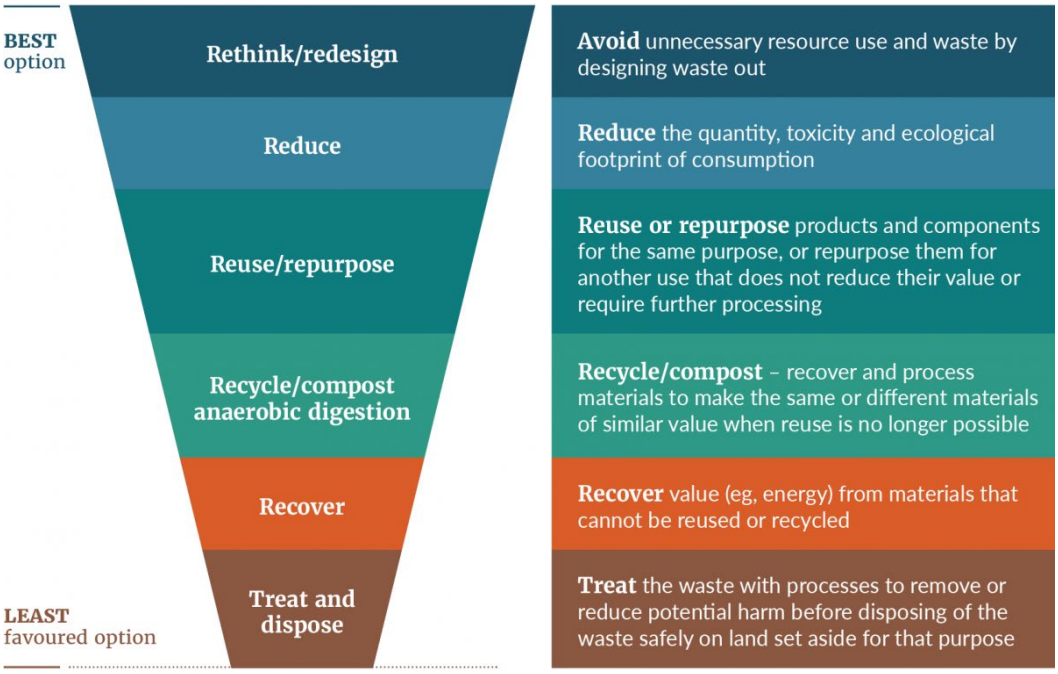


Figure 6: *The Waste Hierarchy (Source: Ministry for the Environment).*

- Measures will be implemented to ensure the site is maintained in a safe, clean and tidy state.
- Where possible, waste shall be segregated into labelled bins with lids: General, Hazardous and Recyclables.
- Wastes onsite shall be suitably contained and prevented from migrating offsite.

- The waste is to be contained so it doesn't contaminate soil, surface or ground water, create unpleasant odours or attract vermin.
- Any material dropped in or adjacent to open drains shall be recovered immediately after it occurs.
- Waste storage is not permitted in or near drainage paths.
- The burning of waste is strictly prohibited.
- No wastes shall be disposed of onsite.
- Wastes shall be removed from site regularly and at completion of works.

11.4 Monitoring

Site staff will be briefed on waste processes prior to works commencing and shall maintain continual vigilance for excess waste around the site and following appropriate disposal procedures. Weekly Environmental Inspections and Monthly SQEP Environmental Inspections shall include a visual assessment of the site to determine the effectiveness of waste management controls.

11.5 Contingency Measures

If waste items are accumulating or are stockpiled, the following contingency measures will be adopted:

- Arrange for collection by approved licensed contractor.
- Provide additional bins with lids if available.
- Remove waste offsite as soon as possible.

11.6 Waste Incident

A waste incident is considered to have occurred where:

- Waste from the site is found within a sensitive environment or where it may reasonably migrate to a sensitive environment,
- A complaint is received regarding inappropriate management of waste and on investigation is warranted.

The environmental incident procedures outlined at **Section 3.5** shall commence.

12.0 CONTAMINATED SITE MANAGEMENT

A search of QLDC HAIL Database has not provided any indication of the site being used in the past for a HAIL activity.

12.1 Sensitive Receptors

Key sensitive environmental receptors include the Kawarau River and staff members working on the site.

12.2 Performance Criteria

- Effectively identify and manage any sites where contaminants are found and ensure they do not contaminate beyond the location they are found (including offsite) or present a risk to human health.

12.3 Management Measures

The following measures will be deployed to ensure contaminated soil associated with the project is appropriately mitigated:

- If any evidence of contamination be noticed in the field, the personnel noting the contamination shall immediately notify the Environmental Representative.
- Any known contaminated soil to be removed must be undertaken wearing appropriate PPE.
- All imported fill material from off-site sources will be procured from a project approved quarry/source. Records of quantity and location shall be managed by the Project Engineer.
- Many of the controls required to manage potential for effects associated with low level contaminated soil is based on best practice erosion and sediment control and dust management techniques. These are outlined in **Section 4.3** (erosion and sediment controls) and **Section 6.4** (dust controls). Both sections cover management of stockpiles.
- All surplus fill material requiring removal shall meet the Ministry for Environment definition of clean fill, as specified in Section 2.2 of the report "A Guide to the Management of Cleanfills", prepared by *Beca Carter Hollings & Ferner Ltd for the Ministry for the Environment and dated January 2002*.
- If materials have been approved to be removed from site, materials will be transported to the approved disposal location.
- Trucks removing or transporting any soil from the site will be covered or sealed to prevent dust, leakage or loss of materials during transport.

12.4 Monitoring

Unless any higher-level contamination is accidentally found during earthworks, no specific monitoring of soil, groundwater or water quality will occur (other than what is detailed in the water quality criteria outlined at **Section 5**). If material is found it is expected that monitoring may be required but this shall be at the direction of the soil contamination expert.

12.5 Contingency Measures

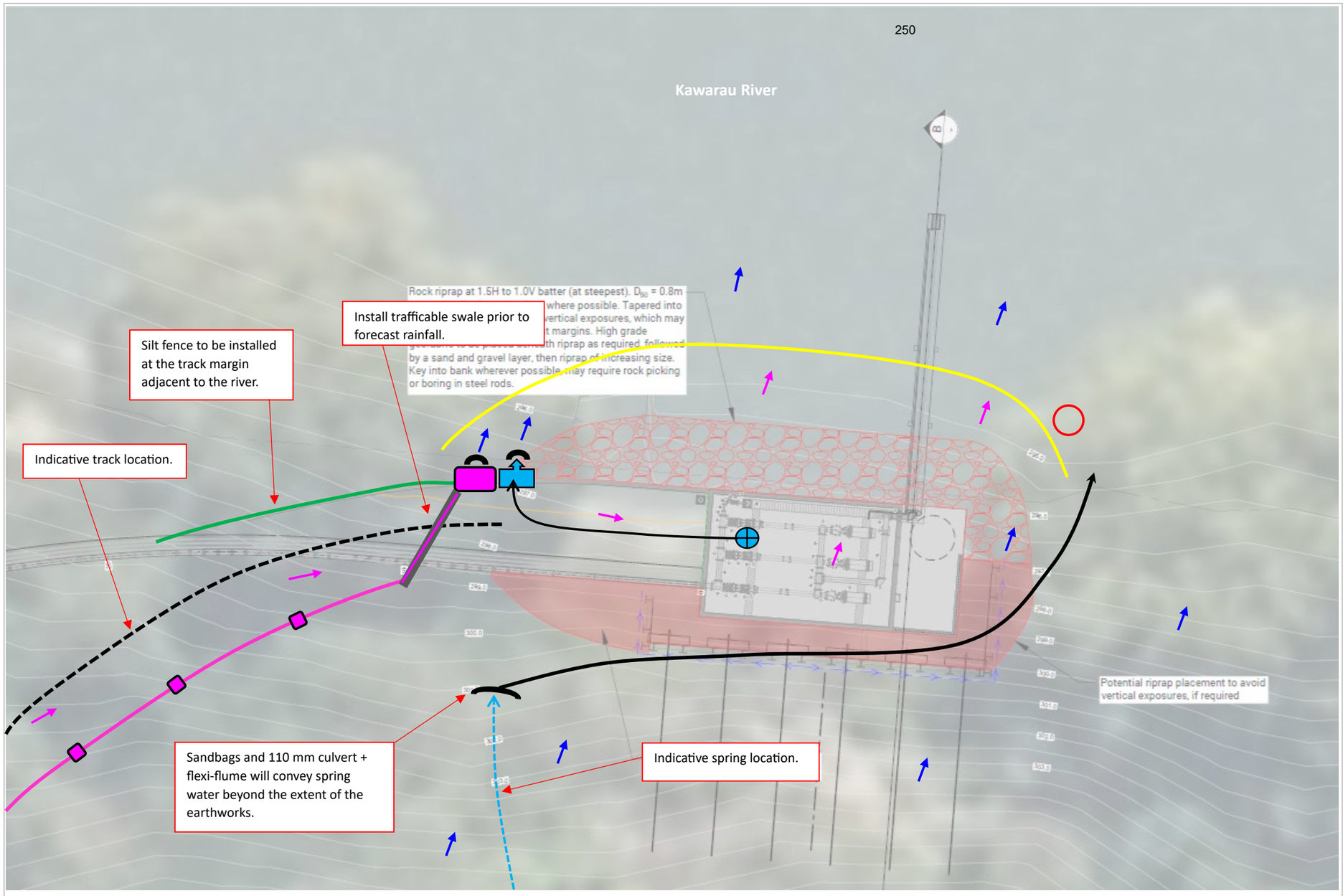
It is not expected that contaminated material will be encountered, however this cannot be ruled out. If a potential contaminated site is identified (e.g., by landfilled waste, odour) during construction works, the following contingency measures will be undertaken:

- Immediately notify the Project Manager.
- Prevent spread of contamination by installation of silt fencing, covering material with plastic or geofabric material. This will be done wearing appropriate PPE as outlined in the Health and Safety Management Plan.
- Engage the Environmental Consultant who will advise on the engagement of a Contaminated Soil expert.
- EMP to be amended to manage any new contaminated soil encountered in coordination with the contaminated soil expert (if engaged).

12.6 Contamination Incident

An environmental incident is considered to have occurred where inspection finds that excavation or other work continues within contaminated soil without report or remedial action. The environmental incident procedures outlined in **Section 3.5** shall be followed.

APPENDIX 1 Erosion and Sediment Control Plan Drawing



See ESCP-002 for laydown and stockpile area.

Legend

	Clean water overland flow
	Dirty water overland flow
	Dirty water diversion swale
	Trafficable swale
	Standard silt fence
	Pipe drop
	Silt curtain
	Skim pump and hose
	Turkey nest
	Drop out pit
	Sediment sump
	Silt sock
	Indicative track route
	Indicative spring location
	Water sampling location

Notes

- This plan is to be read in conjunction with the Environmental Management Plan document prepared by Enviroscope.
- All locations of erosion and sediment control (ESC) devices are indicative and exact placement to be confirmed onsite.
- ESC devices to be installed and maintained in accordance with Auckland Council's 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05) and manufacturer's instructions where relevant.
- All devices are to be inspected daily and pre and post-rain event to ensure they are fully functional.
- Earthworks plans provided by GeoSolve 2023.

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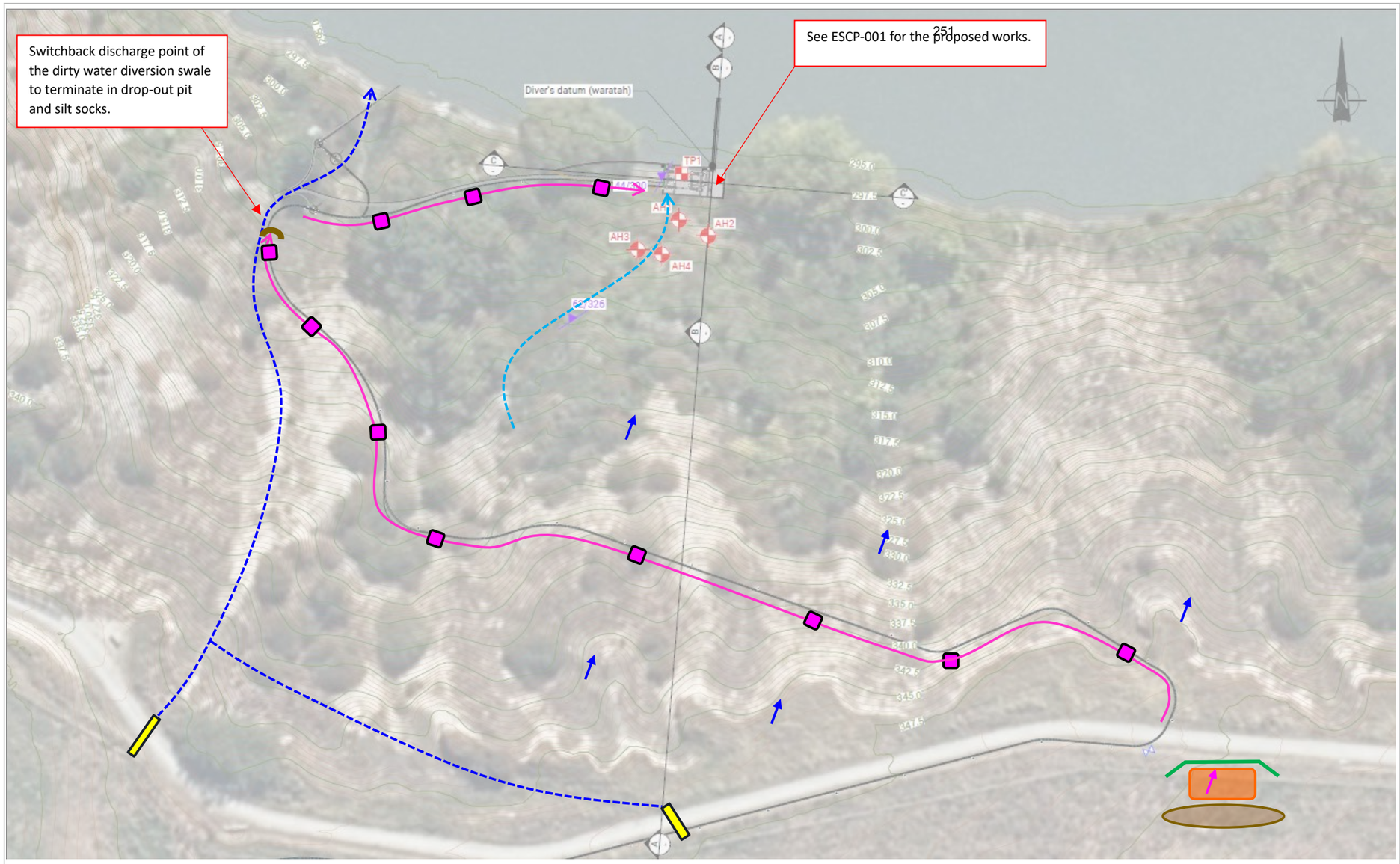
Project: Gibbston Valley Resort - Water Intake

Description: Erosion and Sediment Control Plan Drawing

Drawn	Approved	Date	Drawing No.	Revision
LC	TG	24/01/2025	ESCP - 001	A



Legend

	Clean water overland flow
	Dirty water overland flow
	Laydown area
	Standard silt fence
	Stockpile area
	Existing culvert
	Existing access track
	Dirty water diversion swale
	Drop out pit
	Overland flow path
	Indicative spring location

Notes

- This plan is to be read in conjunction with the Environmental Management Plan do
- cument prepared by Enviroscope.
- All locations of erosion and sediment control (ESC) devices are indicative and exact placement to be confirmed onsite.
- ESC devices to be installed and maintained in accordance with Auckland Council's 'Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region (GD05) and manufacturer's instructions where relevant.
- All devices are to be inspected daily and pre and post-rain event to ensure they are fully functional.
- Plans provided by GeoSolve

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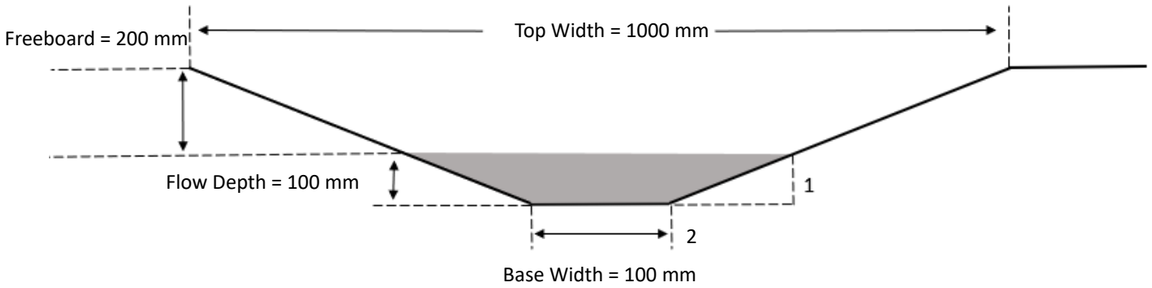
Project: Gibbston Valley Resort - Water Intake

Description: Erosion and Sediment Control Plan Drawing

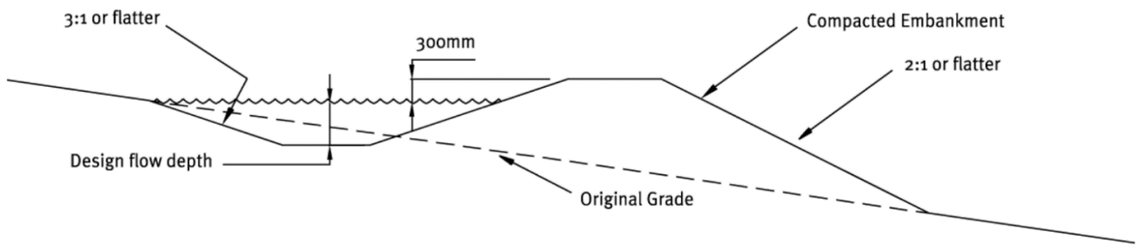
Drawn	Approved	Date	Drawing No.	Revision
LC	TG	24/01/2025	ESCP - 002	A

DIRTY WATER DIVERSION SWALE / CHANNEL

(Pages 43-46 from GD05)



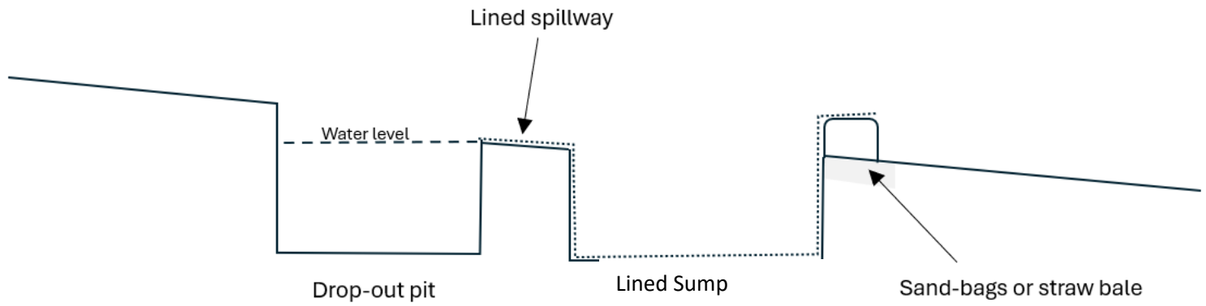
DIRTY WATER DIVERSION SWALE



Cross Section

- The formalised DWDC has been designed to convey up to a 5% AEP design event.
- Include drop out pits.
- Trapezoidal shape
- Full calculations are included in **Appendix 2**.

SEDIMENT SUMP



- The sediment sump is to be formed to dimensions of 1.0 m W x 2.0 m L x 1.0 m D.
- Install a small section of PVC pipe to serve ensure discharge from the sediment sump is conveyed to the lined sump.
- Straw bales or sandbags are to be placed around the perimeter of the sump, excluding the upslope side.
- A spillway is to be constructed to convey any overtopping water from the upslope sediment sump to the lined basin. This spillway is to be lined with geofabric that is secured appropriately to avoid erosion and undercutting.
- Ensure geofabric lining is appropriately secured.
- To be mucked out once 20% capacity reached.

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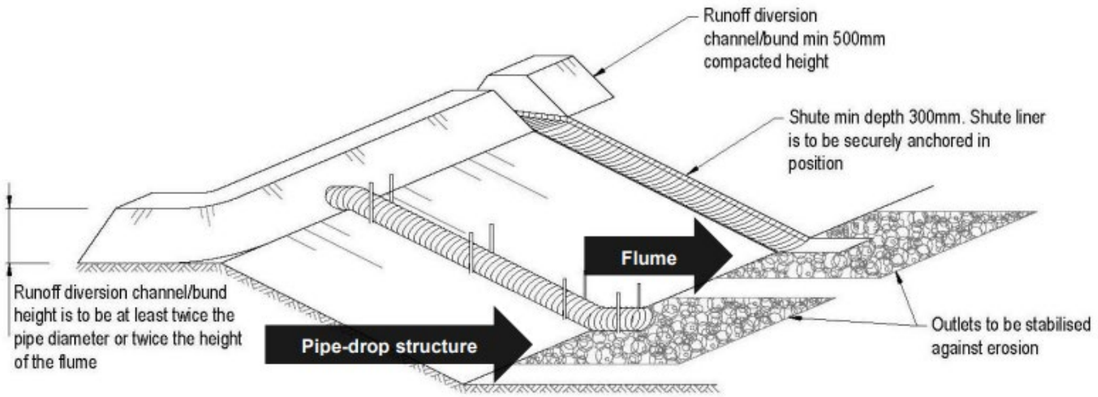
Project: Gibbston Valley Resort - Water Intake

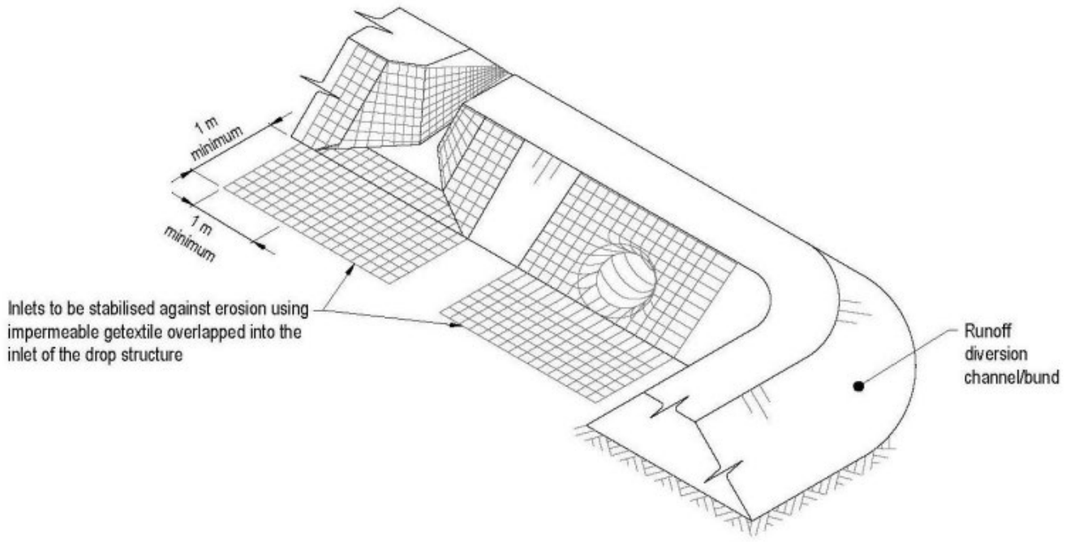
Description: Erosion and Sediment Control Plan - Schematics

Drawn	Approved	Date	Drawing Number	Revision
LC	TG	24/01/2025	ESCP - 003	A

PIPE DROP STRUCTURE

Page 55-60 from GD05





- Ensure 110 mm pipe is secured tightly to the 160 mm culvert.
- Ensure the height of the sand bag bund is 2x the culvert diameter.
- Ensure the pipe drop extends beyond the earthworks extent, and that the outlet is stabilised with geofabric or rock rip rap as required to avoid downslope scouring.
- The pipe drop structure will be monitored and maintained regularly to ensure it operates effectively.

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Project: Gibbston Valley Resort - Water Intake

Description: Erosion and Sediment Control Plan - Schematics

Drawn	Approved	Date	Drawing Number	Revision
LC	TG	24/01/2025	ESCP - 004	A

DROP-OUT PIT

Page 45 from GD05

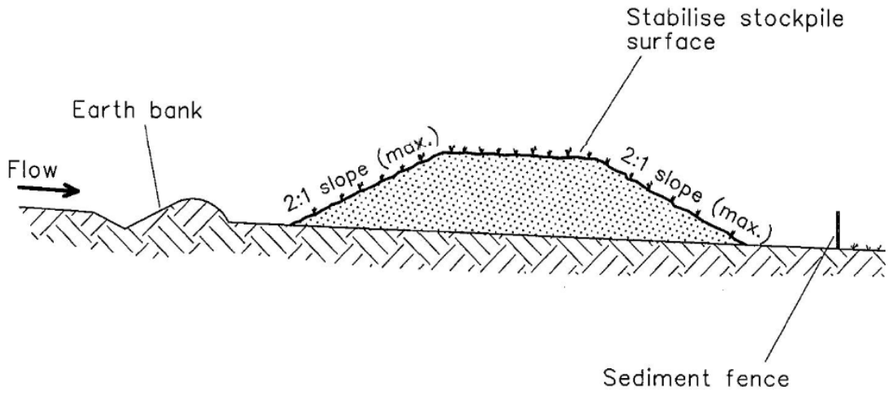
- Where feasible, drop out pits should be one metre deep by one-metre-wide cube.
- As a contingency measure, drop out pits can be increased in size and lined to prevent any scour of the pit.

TRAFFICABLE SWALE

Image from Enviroscope

- Trafficable swales should be constructed by mounding and compacting soil diagonally across the road to direct water in the direction required.
- Vehicles should be able to cross trafficable swales often.
- Rock-lining may need to be added if the swale structure is continuing to degrade by trafficking.

TEMPORARY STOCKPILES



- Temporary stockpiles should be a maximum height of two metres to mitigate wind effects and to preserve the quality of the topsoil as future planting media for revegetation.
- If the stockpile is to be left insitu for a period of 6 weeks or more it shall be seeded with grass or erosion control matting to provide erosion and dust protection.
- A silt fence should be installed on the downslope of the stockpile.

SILT SOCKS

Page 126-130 from GD05

- Silt socks and coir logs can be placed at outlets of swales or sediment retention devices to assist in capturing suspended sediments and reducing flow velocity.
- It is important that the silt socks are secured flush with the ground to prevent sediment from undercutting the sock.
- Ensure silt socks are placed perpendicular with the channel.

enviroscope	**Project:** Gibbston Valley Resort - Water Intake **Description:** Erosion and Sediment Control Plan - Schematics				
	Drawn	**Approved**	**Date**	**Drawing Number**	**Revision**
	LC	TG	24/01/2025	ESCP - 005	A

SKIM PUMP

- A skim pump is to be utilised to dewater the excavation site in order for works to be undertaken.
- Water is to be dewatered to the turkey nest as shown in ESCP-001.

SILT CURTAIN

- The silt curtain should be long enough to be placed around the entire work footprint (approximately 15 m)
- The curtain will be placed by having chains already secured to the bottom of the silt curtain, with both ends secured to the bank via waratahs. They should be kept as tight into the shore as possible to reduce disturbance of the riverbank.

TURKEY NEST

Image from Enviroscope

- Turkey nests should be constructed using straw bales encased in a base-laid permeable geotextile and placed at the discharge outlet of a flow path, pipe or culvert.
- Ensure geofabric lining is appropriately secured.
- To be mucked out once 20% capacity reached.

enviroscope	**Project:** Gibbston Valley Resort - Water Intake **Description:** Erosion and Sediment Control Plan - Schematics				
	Drawn	**Approved**	**Date**	**Drawing Number**	**Revision**
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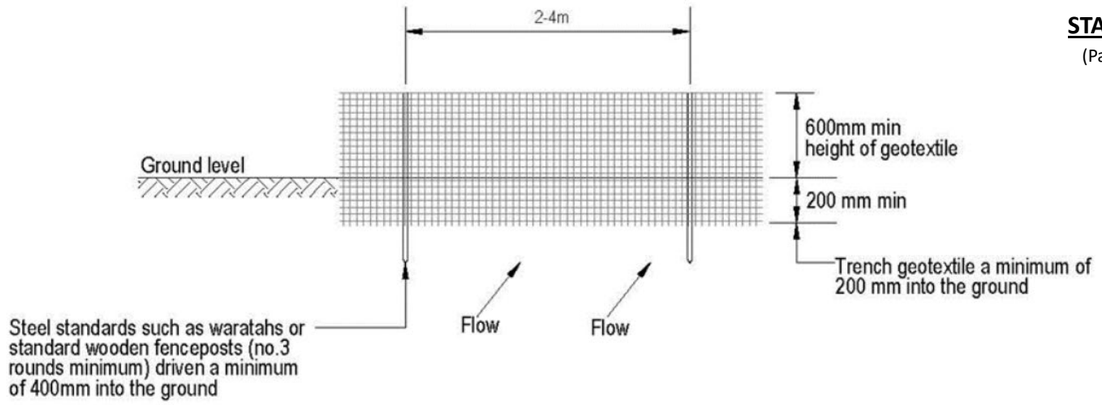
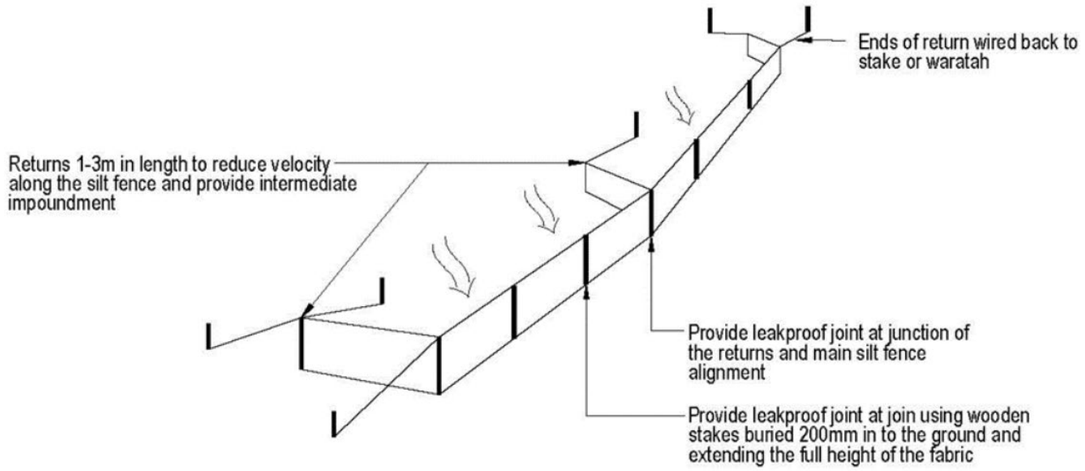
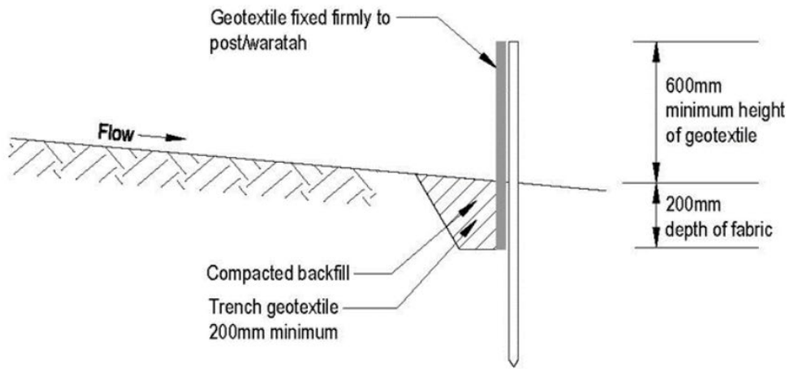
STANDARD SILT FENCE

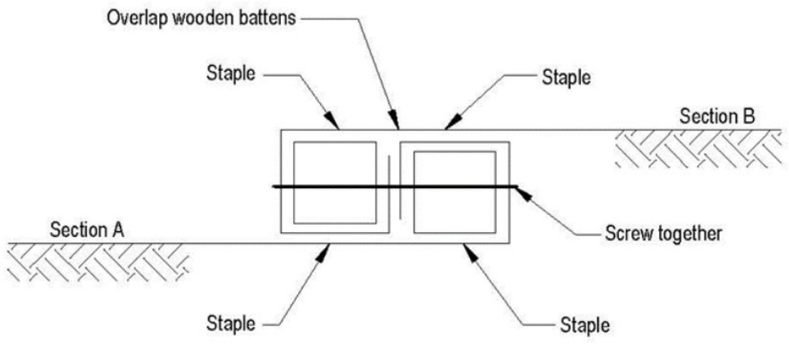
(Page 112-119 from GD05)







Slope steepness (%)	Slope length (m) (maximum)	Spacing of returns (m)	Silt fence length (m) (maximum)
Less than 2%	Unlimited	N/A	Unlimited
2- 10%	40	60	300
10- 20%	30	50	230
20- 33%	20	40	150
33- 50%	15	30	75
Greater than 50%	6	20	40



- Ensure the silt fence is ‘keyed’ into the ground to form a good seal at ground level to capture water and avoid undermining.
- Silt fences should be 600 mm above ground level and 200 mm below ground level.
- Supporting waratahs should be placed at 2-4 m intervals.
- Returns should be formed at either end facing upslope to contain flows.
- It is also important that silt fences are installed along the contour of the slope to prevent ponding of water in a concentrated area of the fence.
- To be mucked out once 20% capacity reached.

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Project: Gibbston Valley Resort - Water Intake

Description: Erosion and Sediment Control Plan - Schematics

Drawn	Approved	Date	Drawing Number	Revision
LC	TG	24/01/2025	ESCP - 007	A

REFUELING BAY

- Locate the hardstand as far as practicably possible from waterways and concentrated flows.
- Ensure spill kit is located nearby.

SPILL KITS

- Spill kits should be located in the laydown area.

CONCRETE WASHOUT PIT

- The concrete wash out pit consists of a plastic-lined bunded pit constructed with fill or straw bales.
- After concrete washout any water shall be left to evaporate.
- Cured concrete is to be disposed of within the plastic sheet to a licensed facility.

WASTE

- Where possible, waste shall be segregated into labelled bins.
- Wastes on site will be suitably contained and prevented from escaping off site. This may include covering skip bins during high winds.
- Waste storage is not permitted in or near drainage paths.
- Wastes will be removed from site when bin is full.

enviroscope	**Project:** Gibbston Valley Resort - Water Intake **Description:** Erosion and Sediment Control Plan - Schematics				
	Drawn	**Approved**	**Date**	**Drawing Number**	**Revision**
	LC	TG	24/01/2025	ESCP - 008	A

APPENDIX 2 Calculations for Erosion and Sediment Controls

DIRTY WATER DIVERSION CHANNEL CALCULATIONS - GIBBSTON VALLEY - REVISION A

Specifications	Value 5	Units	Reference/Notes
Site Details			
Contributing catchment	0.89	ha	Google Earth
Design rainfall event	0.05	AEP	5% AEP as required by GD05
Time of Concentration			
Overland sheet flow path length (L)	120	m	
Hortons roughness value (n)	0.4		Dense shrubbery - Steep terrain
Slope of surface (S)	41.7	%	
Time of Concentration (Tc)	7.8	minutes	
Rounded Tc to align with HIRDS	10	minutes	10 minute minimum required if Tc <10
Rational Method: Q = (C*I*A)/360			
Area ground cover	Shrubs		
Proportion of catchment	1		
Runoff coefficient (C)	0.4		Dense shrubbery with steep slopes
Rainfall intensity (I)	44.5	mm	NIWA HIRDS, 10 min (Tc), 5% AEP
Catchment Area (A)	0.89	ha	
Qp (Peak runoff flow)	0.0440	m3/s	Rational Method: Q = CIA
Total Qp (Peak runoff flow)	0.0440		
Channel Design			Manning's Formula Uniform Trapezoidal Channel Flow
Bottom Width	200	mm	
Batter ratio= 1 to	2	ratio	
Manning's roughness coefficient of channel (n)	0.025		Gravelly earth channel
Channel slope	22	%	Slope=rise/run
Flow depth	100	mm	
Channel depth	300	mm	200 mm freeboard provided due to the constrained nature of the site and slope of the channel means freeboard is not a concern.
Flow (Q)	0.1173	m3/s	
Buffer	167	%	
Top width	1000	mm	

APPENDIX 3 Environmental Site Induction Handout

ENVIRONMENTAL SITE INDUCTION HANDOUT

Key Roles and Responsibilities

Role	Responsibilities
Project Manager	The Project Manager is responsible for the effective implementation of the EMP and has overall responsibility for the environmental performance of the project. Duties include: • Ensuring adequate resources are in place to implement the EMP. • Ensuring all staff and sub-contractors operate within the guidelines of the EMP. • Ensuring that an EMP is prepared and that environmental standards, processes and procedures meet relevant resource consent conditions. • Overseeing the successful implementation, monitoring and review of the EMP. • Ensuring that inspections are carried out in accordance with the relevant EMP. • Restricting or stopping any activity that has the potential to or has caused adverse environmental effects. • Providing notification and reporting of Environmental Incidents to Council and other environmental reports as required by The Guidelines. • Delegating authority of the above responsibilities.
Environmental Representative	The Environmental Representative supports the Project Manager in the day-to-day implementation of the EMP. Duties include: • Ensuring the installation of environmental controls as per the EMP. • Undertaking environmental site inspections. • Overseeing the maintenance and improvement of defective environmental controls. • Providing environmental inductions to all staff and sub-contractors. • Assisting the project leadership in attending to Environmental Incidents and Complaints. The Environmental Representative shall be familiar with environmental risks associated with the project, the EMP and best practice erosion and sediment control principles and practices.
All staff and sub-contractors	All staff and sub-contractors have a responsibility to undertake all activities in accordance with the requirements of this EMP. This includes reporting any activity that has the potential to or has resulted in an Environmental Incident to the Project Manager or Environmental Representative.

Key Environmental Locations

Environmentally sensitive receptors: The Kawarau River, groundwater spring.

Key Resource Consent Conditions

TBC.

The site EMP has been prepared in response to all environmental-related conditions of consent and therefore provides direction for how compliance with these conditions will be achieved. Provided that the EMP is followed, the project will at the same time comply with all conditions of consent.

Limits of Clearing

The sequencing of works is a key component to ensure that environmental effects of construction are appropriately managed. It is imperative that the sequencing outlined in Section 2.1 of the EMP is followed so that the site is stabilised in the most efficient manner.

All staff should be familiar with this sequence. Any potential changes to that sequence need to be approved by the Project Manager which will be discussed first with the Environmental Consultant.

Key Environmental Management Measures in EMP

Erosion and Sediment Control (Section 4 of EMP)

- Direction provided in Erosion and Sediment Control Plan (ESCP) in Appendix 1 of EMP.
- Separation of clean and dirty water is the most important principle to ensure that the contributing catchment of dirty water that needs to be treated is as small as possible.
- Progressive stabilisation (revegetation) of disturbed areas will ensure that the extent and duration of exposed soil is minimised. Keep it covered!
- All controls to be checked immediately before storm events to ensure they are in good-working order.
- Erosion and sediment control devices to remain in place until site is stabilised (defined as 80% vegetative cover).

Any works that disturb the controls outlined on the ESCP must be reinstated before moving to the next task.

Water Quality Management (Section 5 of EMP)

- Any water caught in the sediment devices to be re-used in dust suppression where possible and if required.
- Any observations of dirty water running offsite to be reported directly to the Project Manager.

Dust Management (Section 6 of EMP)

- Dust suppression should occur on any exposed soil on unsealed roads, this can be done using the water caught in the retention basin.
- Avoid all unnecessary vegetation clearing that exposes soil and work should be conducted in stages as this can increase the impact from dust in the event of strong winds.
- During high wind events and dust suppression is becoming difficult works must cease until more favourable weather conditions.
- Constant vigilance should be maintained onsite to ensure that dust is appropriately managed and weekly monitoring should be completed to ensure that management measures are effective.

Noise and Vibration Management (Section 7 of EMP)

- Noise producing works only be undertaken during the hours of 0700-1800 from Monday-Saturday and no works to be completed on Sundays or public holidays.
- Particularly noisy work should be completed during the middle of the day during business hours.
- Noise dampening should occur when possible.
- Weekly site inspections should be undertaken by the Environmental Representative to ensure the strategies in place are effective.

Cultural Heritage Management (Section 8 of EMP)

- If any artefacts are found works must stop within 20 meters of the discovery and the site manager notified immediately.
- The site manager must then secure the area and notify the Heritage New Zealand Regional Archaeologist, who will advise when works can begin again.

Vegetation Management (Section 9 of EMP)

- Maintain vegetated surfaces as far as reasonably possible.
- Maintain protected or indigenous vegetation.
- Complete all landscaping and or ecological restoration in accordance with approved plans.

Chemicals and Fuel Management (Section 10 of EMP)

- Chemicals and fuels are stored and used so not to cause contamination of works areas and surrounding environment.

Waste Management (Section 11 of EMP)

- Waste management on site will ensure wastes are stored safely and in an organised manner until recycling, reuse or disposal.

Contaminated Land Management (Section 12 of EMP)

- Prevent spread of contamination.
- Engage the Environmental Consultant (SQEP) to ensure that the site can be managed in accordance with statuary requirements (i.e., National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health).

Environmental Incidents

The procedure for managing environmental incidents is outlined in Section 3.4 of the EMP, however these can be summarised as follows:

- Environmental incidents must be reported as soon as they occur, and the Project team must respond immediately to mitigate further environmental impacts.
- Investigation into the cause of the incident should be completed and a solution should be constructed to remediate the Environmental damage.

- The Project Manager must then notify the QLDC and/or the ORC of the details of the incident within 12 hours of being made aware of the incident.

Rapid Response for Storm Events

The procedure for rapid response to storm events is outlined in Section 4.6 of the EMP, however these can be summarised as follows:

- The Project Manager will observe and understand the **weather forecast** throughout the project to ensure appropriate preparation onsite.
- If a **significant storm** event is forecast all works should stop within an appropriate amount of time to inspect ESC devices and undertake any maintenance or site stabilisation required.
- The sediment controls should be in operating condition and fully functional.
- During the storm event the site should be monitored to sure the functioning of the ESC devices and maintained if required.

When storms are forecast it is crucial that tools are downed in time for the rapid response procedure to be implemented. This will help avoid environmental incidents, potential enforcement action and site shutdown.

APPENDIX 4 Environmental Site Induction Register

Gibbston Valley

ENVIRONMENTAL SITE INDUCTION REGISTER

Name	Organisation	Date Inducted	Induction Delivered by	Signature

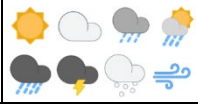
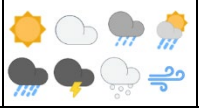
APPENDIX 5 Weekly Environmental Site Inspection Form

Gibbston Valley

WEEKLY ENVIRONMENTAL SITE INSPECTION FORM

Environmental Representative: Date:

Item	Yes	No	Comment
General			
Is the EMP available onsite?	☐	☐	
Have any environmental incidents occurred during the week? If so, provide details	☐	☐	*If yes, complete environmental incident report.
Complete description of weather for upcoming week – circle applicable			

Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
						

Are there any rain events forecasted for the coming week?	☐	☐	
Have pre rain event inspections been completed?	☐	☐	
Have post rain event inspections been completed?	☐	☐	
Water Quality			
Is water quality monitoring occurring when water is flowing across the site boundaries?	☐	☐	*If yes, complete water quality monitoring form
Is there visual evidence of sediment from the construction site entering the Kawarau River?	☐	☐	
Does water in sediment retention devices meet water quality criteria before being discharged?	☐	☐	
Erosion and Sediment Control			
Are works contained within the current stage and site boundaries?	☐	☐	
Are completed areas being progressively stabilised?	☐	☐	
Is there any new evidence of erosion?	☐	☐	
Are erosion and sediment controls installed as per the ESCP?	☐	☐	
Is dirty water entering dirty water diversion channels during rain events?	☐	☐	
Do sediment controls have over 80% capacity?	☐	☐	

Item	Yes	No	Comment
Cultural Heritage			
Have any finds of cultural significance been found?	☐	☐	
Noise and Vibration			
Have any complaints been received during the week?	☐	☐	*If yes, complete Complaints Register
Are nearby sensitive receptors being notified before significant noise and/or vibration causing activities?	☐	☐	
Are works only occurring within the hours of operation?	☐	☐	
Dust			
Have any complaints been received during the week?	☐	☐	*If yes, complete Complaints Register
Have completed areas been revegetated or stabilised?	☐	☐	
Is dust suppression of disturbed work areas and stockpiles occurring?	☐	☐	
Are works ceasing during high winds?	☐	☐	
Are only designated access points and haul routes being used?	☐	☐	
Is the site access and surrounding roads swept clean of sediment?	☐	☐	
Vegetation			
Are vegetated surfaces being maintained as far as reasonably possible?	☐	☐	
Contaminated Soils			
Have any contaminants been uncovered during excavations?	☐	☐	
Chemicals and Fuels			
Are all hazardous substances on site stored, transported and used according to the safety data sheet requirements?	☐	☐	
Are vehicles and plant being refuelled in the refuelling bay?	☐	☐	
Is concrete washing being undertaken in the concrete wash-out pit?	☐	☐	
Is there an adequate supply of spill kits onsite? Have any used materials been replaced?	☐	☐	
Waste			
Is the site in a safe, clean and tidy state?	☐	☐	

Item	Yes	No	Comment
Are wastes segregated into labelled bins with lids?	☐	☐	
Are skip bins not overfilled?	☐	☐	
Is waste removed from open drains and drainage paths?	☐	☐	

Actions resulting from this inspection must be forwarded to the Project Manager any actions should be recorded in the Non-Conformance Register – Appendix 8.

Additional Comments:

Names and Signatures of inspection attendees:

APPENDIX 6 Environmental Incident Report Form

Gibbston Valley

ENVIRONMENTAL INCIDENT REPORT FORM

Project Address:	**Consent Number:**
Brief Project Description:	

Instructions- Complete this form for all environmental incident that cause contaminants (including sediment) or environmental nuisance to leave the site. Be succinct, stick to known facts and do not make assumptions. Once completed submit to Queenstown Lakes District Council at RCMonitoring@qldc.govt.nz and Otago Regional Council at pollution@orc.govt and compliance@orc.govt.nz. Call the QLDC Regulatory team immediately on 03 441 0499 and ORC's Pollution Hotline on 0800 800 033 for any serious or ongoing incidents that cannot be brought under immediate control.

Date and Time	Date: XX/XX/XXX Time: XX:XX hours
Description? Provide a brief and factual description of what happened during the incident, include relevant details such as: - The activity being undertaken when the incident occurred - The estimated distance to nearest waterway (include stormwater and dry courses) - The estimated distance to the nearest sensitive receiver Sketches/diagrams/photos may be referenced and appended to this report to aid in the description of the incident.	
Exact Location of the incident? Include address, landmarks, features, nearest tree, etc. Maps and plans can be attached.	
Quantity or volume of material escaped or causing incident? (provide and estimate quantity)	
Who identified the incident?	Contractor ☐ Council ☐ Community ☐ Other ☐

What immediate actions/control measures were taken to rectify or contain the incident?
What initial corrective action will be taken to prevent similar incidents recurring in the near future?
Has the Queenstown Lakes District Council been notified? Yes ☐ No ☐ Will be notified ☐ **Has the Otago Regional Council been notified?** Yes ☐ No ☐ Will be notified ☐

Role of person making report: Project Manager / Site Supervisor / Environmental Representative / SQEP	
Name……	Signature……
Organisation……	Date……
Mobile phone number……	

APPENDIX 7 Environmental Complaints Register

Gibbston Valley

ENVIRONMENTAL COMPLAINTS REGISTER

Complaint #	Date and Time Received	Complainant details (name, address, phone number)	Details of Complaint	Investigation and Findings	Outcome	Close out Date

APPENDIX 8 Environmental Non-Conformance Register

Gibbston Valley

ENVIRONMENTAL NON-CONFORMANCE REGISTER

Ref Number	Date Observed	Found via (e.g., inspection, monitoring, complaint?)	Details of Non-conformance	Corrective Actions	Updated by	Close out Date

APPENDIX 9 Water Quality Monitoring Results Form

Gibbston Valley

enviroscope

WATER QUALITY MONITORING RESULTS FORM

Date		Monitoring Trigger		Location Description	
			Yes	No	Measurement
Is the clarity of the water more than 100 mm?			☐	☐	____ mm
Is the pH of the water between 5.5-8.5?*			☐	☐	pH ____
Are total suspended solids less than 50 mg/L?*			☐	☐	____ mg/L
Are hydrocarbons visible?			☐	☐	
Are tannins visible in the water?			☐	☐	
Is there any waste in the water?			☐	☐	
Description of any non-conformance and actions required: •					
Include images of sampling location:					

*Enviroscope can provide Water Quality Monitoring services to measure pH.

HOW TO: WATER QUALITY SAMPLING

1. Select a Sampling Location

Sampling a discharge

Collect sample where water crosses the site boundary or enters a sensitive receptor from a retention device. Always photograph the location you sample from.

Sampling a waterway

Collect sample from the centre of the flow and the top third of the water column where possible.

Sampling a from a Sediment Retention Device

Collect sample from the discharge location, this is either near the decanting arms, spillway, hose or the outlet pipe.

2. Collect a Water Sample

Taking a Water Sample

- ➔ Label container with site name, sampling location, date and time taken.
- ➔ Fill the container with water from the surface of your sampling location.

If you wade into the water to collect the sample, always collect the sample 'upstream' of where you're standing to avoid contamination by disturbed sediment.

Always ensure your meters are calibrated regularly to ensure accurate sampling results.

3. Measure and Record Turbidity, Clarity, and pH

Measuring Turbidity using a Turbidity Meter

- ➔ Fill the turbidity pottle with the sampled water. Wipe away any moisture on the outside of the pottle and insert it into the meter. Turn the meter on and once the standby value appears press read. Record the turbidity value.

Measuring Clarity using a field testing seechi disc

- ➔ Lower the seechi disc into the water sample until you can no longer see the disc. Then lift the seechi disc back up until the disc is just visible. Record the number where the water level sits.

Measuring pH using a pH Meter

- ➔ Submerge the probe of the pH meter into the water sample. Keep the probe in the water until the value on the meter is fixed. Swirling the probe can help the value fix faster. Record the pH value.

APPENDIX 10 Archaeological Discovery Protocol

HERITAGE NEW ZEALAND
POUHERE TAONGA

Heritage New Zealand Pouhere Taonga Accidental Discovery Protocol

This protocol does not apply when an archaeological authority issued under the Heritage New Zealand Pouhere Taonga Act 2014 is in place.

Under the Heritage New Zealand Pouhere Taonga Act (2014) an archaeological site is defined as any place in New Zealand that was associated with human activity that occurred before 1900 and provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand. For pre-contact Māori sites this evidence may be but is not limited to, bones, shells, charcoal, stones etc. In later sites of European/Chinese origin, artefacts including but not limited to bottle glass, crockery etc. may be found, or evidence of old foundations, well, drains, or similar structures. Burials/kōiwi may be found in association with any of these cultural groups.

In the event that an unidentified archaeological site is located during works, the following applies;

1. Work shall cease immediately at that place and within 20m around the site.

2. The contractor must shut down all machinery, secure the area, and advise the Site Manager.

3. The Site Manager shall secure the site and notify the Heritage New Zealand Regional Archaeologist. Further assessment by an archaeologist may be required.

4 If the site is of Māori origin, the Site Manager shall notify the Heritage New Zealand Regional Archaeologist and the appropriate papatipu rūnaka of the discovery and ensure site access to enable appropriate cultural procedures and tikaka to be undertaken, as long as all statutory requirements under legislation are met (*Heritage New Zealand Pouhere Taonga Act*, *Protected Objects Act*).

5. If human remains (kōiwi) are uncovered the Site Manager shall advise the Heritage New Zealand Regional Archaeologist, NZ Police and the appropriate papatipu rūnaka and the above process under 4 shall apply. Remains are not to be moved until such time as papatipu rūnaka and Heritage New Zealand have responded.

6. Works affecting the archaeological site and any human remains (kōiwi) shall not resume until Heritage New Zealand Pouhere Taonga gives written approval for work to continue. Further assessment by an archaeologist may be required.

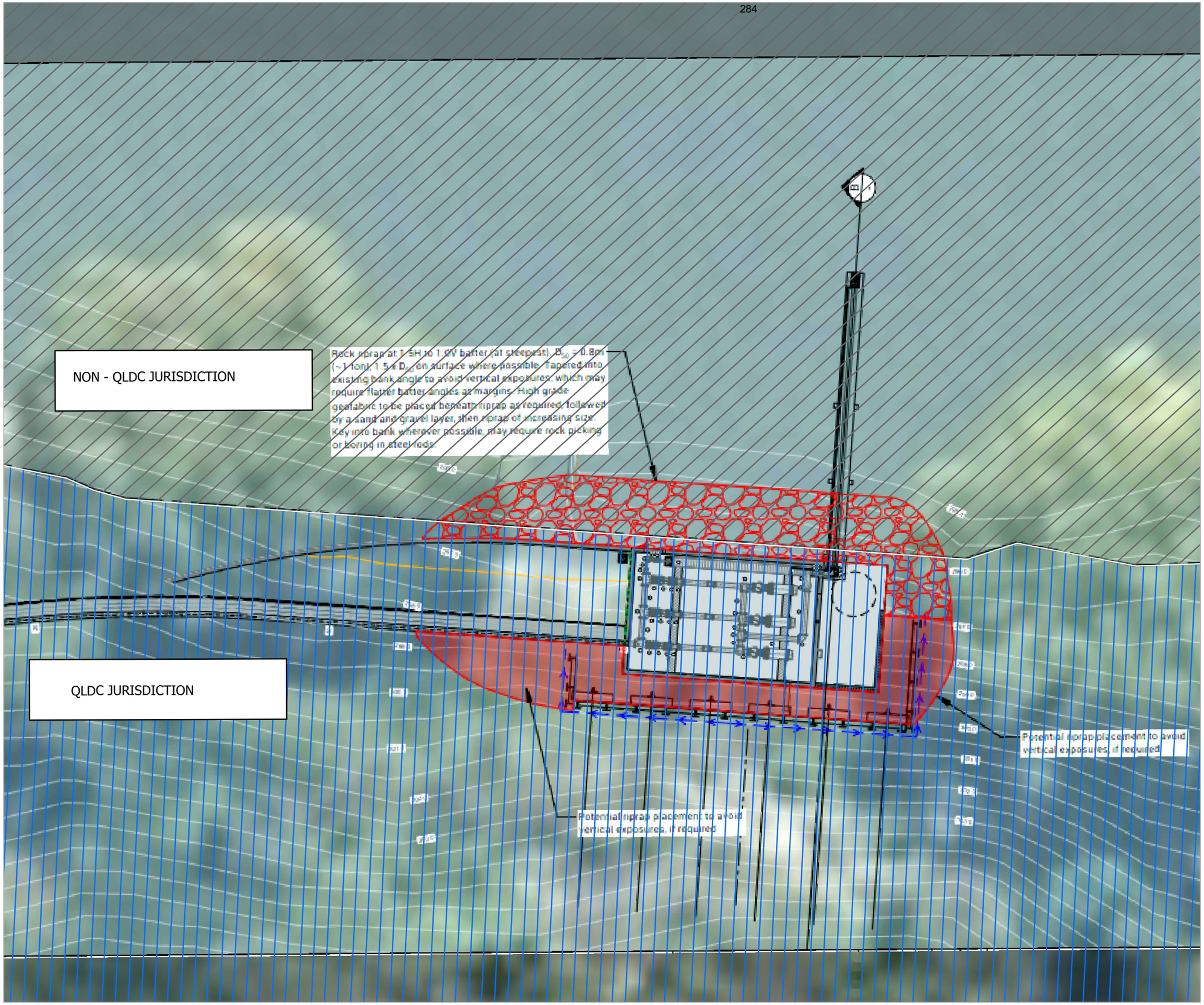
7. Where iwi so request, any information recorded as the result of the find such as a description of location and content, is to be provided for their records.

8. Heritage New Zealand Pouhere Taonga will advise if an archaeological authority under the *Heritage New Zealand Pouhere Taonga Act* 2014 is required for works to continue.

It is an offence under S87 of the *Heritage New Zealand Pouhere Taonga Act 2014* to modify or destroy an archaeological site without an authority from Heritage New Zealand irrespective of whether the works are permitted or consent has been issued under the Resource Management Act.

Heritage New Zealand Pouhere Taonga Archaeologist contact details:

Nikole Wills
Regional Archaeologist Otago/Southland
Heritage New Zealand
PO Box 5467
Dunedin
Ph. +64 3 470 2364, mobile 027 240 8715
Fax. +46 3 477 3893
nwills@heritage.org.nz



LEGEND

- QLDC Jurisdiction
- NonQLDC

WATER INFRASTRUCTURE JURISDICTION

Gibbston Valley Station

Source: LINZ

Date: 3/10/2024
Scale: 1:125 @ A3
Project: 2375-20

N

Revision: 1

TOWNPLANNING GROUP

TOWNPLANNING GROUP

5 March 2025 Our Ref: 2375-20

Joanna Purvis
Planner
Queenstown Lakes District Council

VIA EMAIL: joanna.purvis@qldc.govt.nz

Dear Joanna,

RESPONSE TO FURTHER INFORMATION REQUEST RM240679 – GIBBSTON VALLEY STATION LIMITED

This letter is in response to an email dated 25 February 2025 in which further information was requested (RFI) in relation to application RM240679 to construct water infrastructure and pump station for the water take and use consented by Otago Regional Council for the Gibbston Valley resort development.

We respond to the various points raised in turn and have repeated each information request below for clarity.

1. *The application references a maximum cut and fill depth up to 3.5m, which is over the PDP standards for cut and fill. Please confirm the maximum cut depth and maximum fill depth and if consent is sought in regard to PDP rules 25.5.15 and 25.5.16.*

Yes, 25.5.15 and 25.5.16 will be breached however this does not change the assessment presented within the application. The maximum cut depth will be 3.5m and the maximum fill depth will be 2.5m.

2. *The retaining wall that is required to support the cut at the toe of the slope for the pump station exceeds 1.5m in height and it is not associated with any building structure. Please provide evidence in the form of a PS1 that it is designed appropriately to prevent land instability.*

The Applicant accepts a condition requiring the retaining wall, required to support the cut at the toe of the slope for the pump station, be designed appropriately to prevent land instability and a PS1 be provided with building consent.

3. *Earthworks are proposed within a wahi tupuna area and within proximity to a water body – please confirm consent is also sought for PDP rule 25.5.10A.2 and advise if there has been any consultation undertaken with Iwi.*

Yes, consent is also sought for 25.5.10A.2 as the site is within the Wāhi Tūpuna. As stated within the AEE a thorough cultural heritage assessment and comprehensive archaeological assessment will be undertaken before any ground disturbance. Additionally, open communication with the local community and indigenous groups will be maintained to effectively minimise impacts on cultural and heritage resources while facilitating the successful development of the water intake infrastructure. The EMP also states due to the modest scale of the activity and limited disturbance required to form the intake, potential and actual effects on the Kawarau River Wāhi Tūpuna, are anticipated to be less than minor.

4. *The application references vegetation clearance. Please provide the area of the expected clearance of vegetation as the clearance will be within 20m of the riverbed - relevant to PDP rule 33.4.7.*

As stated within the EMP the site, which is located on the north bank, on the true right of the Kawarau River, is vegetated with a mixture of mainly exotic and some indigenous species, including willows (Salix sp.), ash (Fraxinus sp.), mountain flax (Phormium cookianum) and mingimingi (Caprosma sp.). Vegetation in this area predominantly consists of a mixture of mature exotic and some indigenous species, as described above. A small portion of vegetation clearance within the Wāhi Tūpuna area will be necessary to accommodate the proposed earthworks.

However, due to the small area of vegetation being removed, the lack of rare native species, and the proportion of exotic species observed, the potential adverse effects associated with the earthworks are considered to be less than minor.

In conjunction to this ecological advice was sought when undertaking the regional consent and has been provided as **Attachment [A]** which confirms that impacts on indigenous vegetation will be avoided.

5. *Related to the above, please confirm if any vegetation clearance will be of indigenous species.*

No indigenous vegetation needs to be cleared. **Attachment [A]** contains a botanical survey from E3 Scientific which identifies any indigenous vegetation in the vicinity of the water intake and access track. The E3 Scientific report identifies that there would not be any indigenous vegetation required to be removed.

6. *The technical drawings provided lack detail to clearly depict how the proposed pump station will appear. Please provide additional plans/elevations of the proposed pump station.*

Please find **Attachment [B]** the full set of plans. These are the same plans that were submitted with the Otago Regional Council and were approved by them for the water take and use consents.

7. *As it is noted within the application that the pump station will abide by condition 26 of RM220392, please confirm that condition 26 is also to be varied as part of the section 127 application to reference the proposed pump station.*

Condition 26 can also be varied if QLDC see this as requiring the pump station to be included as:
*"The water treatment shed, **water intake structure** and water tanks are to be finished in a recessive colour such as, or similar to Ironsand – LVR 8%."*

8. *Please confirm if the proposed works require a License to Occupy from LINZ? If so, will this be sought prior to the issue of this consent, such that any changes that may be required by LINZ can be included within this application.*

As stated within the AEE the Applicant holds a concession from the Department of Conservation (**DoC**) for easements for rights to convey water, electricity and access associated with the installation and operation of the water intake structure for a term not exceeding 60 years associated with the water infrastructure being located on a marginal strip[1].

In addition, a licence to occupy will be required from Land Information New Zealand (**LINZ**) for the portion of the intake structure on the bed of the Kawarau River. The implementation of the concession and licence to occupy are matters before the regulatory functions of those respective agencies and have no bearing on the RMA and District Plan administration.

9. *The Kawarau River is a sensitive landscape, and the subject site is in proximity to the Queenstown Trail. As such, please provide a landscape comment by a suitably qualified professional.*

As shown in the plans at **Attachment [B]** the pump station and water take infrastructure is almost contained wholly within the bankside and will not be visible from the trail. The structure is accessed from the top with rip-rap on the sides to embed it into the bankside. E3 have provided a report that concludes that no indigenous vegetation is required to be removed, see **Attachment [A]**. The only vantage point of the inbuilt structure is from the river itself with the inclusion of the structure in condition 26 the structure will blend into the surrounding environment and will not be incompatible or inappropriate in this location. It is also beneficial to note that this section of river is closed to all boat traffic except for special permission from

[1] Concession number: PAC 13 04 294

the Harbourmaster. Therefore the likelihood of persons that would view the structure is extremely low.

We trust this additional information will afford you further clarity with respect to the proposal. Please contact the undersigned on sam@townplanning.co.nz or 021 057 3762 should you have any queries.

Yours sincerely,
Town Planning Group

Samantha Kealey
Senior Planner

Enclosed:
Attachment [A] E3 Scientific Report
Attachment [B] Set of Plans

TOWNPLANNING GROUP

12 March 2025 Our Ref: 2375-20

Joanna Purvis
Planner
Queenstown Lakes District Council

VIA EMAIL: joanna.purvis@qldc.govt.nz

Dear Joanna,

FURTHER RESPONSE TO FURTHER INFORMATION REQUEST RM240679 – GIBBSTON VALLEY STATION LIMITED

This letter is in response to an email dated 6 March 2025 in which further information was requested (RFI) and provided and then further requested in relation to application RM240679 to construct water infrastructure and pump station for the water take and use consented by Otago Regional Council for the Gibbston Valley resort development.

We respond to the various points raised in turn and have repeated each information request below for clarity.

Original Request

4. *The application references vegetation clearance. Please provide the area of the expected clearance of vegetation as the clearance will be within 20m of the riverbed - relevant to PDP rule 33.4.7.*

Further Request

4. *Please confirm the expected area of vegetation clearance necessary. The comment from E3 Scientific notes "Care should be taken to avoid indigenous vegetation where possible". Please advise how works will be undertaken to avoid indigenous vegetation.*

As stated within the EMP the site, which is located on the north bank, on the true right of the Kawarau River, is vegetated with a mixture of mainly exotic and some indigenous species, including willows (Salix sp.), ash (Fraxinus sp.), mountain flax (Phormium cookianum) and

mingimingi (Caprosma sp.). Vegetation in this area predominantly consists of a mixture of mature exotic and some indigenous species, as described above. A small portion of vegetation clearance within the Wāhi Tūpuna area will be necessary to accommodate the proposed earthworks (for the pump station). This area is 28.732m^2 (the area of the pump station itself) and has no indigenous vegetation within it. The Environmental Management Plan has a section on vegetation management, and this will be adhered to.

5. Related to the above, please confirm if any vegetation clearance will be of indigenous species.

No indigenous vegetation will be cleared.

Original Request

6. The technical drawings provided lack detail to clearly depict how the proposed pump station will appear. Please provide additional plans/elevations of the proposed pump station.

Further Request

6. The plans provided are again technical drawings and further detail is required to visualise the building which has been applied for. Please provide additional plans which provide more detail of the proposed pump station.

The plans submitted are the plans of the proposal. We have further provided a visual concept and commentary from Fluent Solutions for the purposes of your assessment only at **Attachment [A]**. The building is ¾'s built into the ground and the plans provided clearly depict this.

Original Request

8. Please confirm if the proposed works require a License to Occupy from LINZ? If so, will this be sought prior to the issue of this consent, such that any changes that may be required by LINZ can be included within this application.

Further Request

8. Noted and agreed, however LINZ will be considered within the effects on persons assessment and an approved license to occupy from LINZ would effectively provide affected party approval.

The implementation of the concession and licence to occupy are matters before the regulatory functions of those respective agencies and have no bearing on the RMA and District Plan administration.

There is no adverse effect on LINZ if they choose to decline a licence to occupy. Therefore, has no holding over a s95 decision. For clarity Otago Regional Council ('**ORC**') limited notified the water take and use application to LINZ and they did not wish to submit on the application. As such effects on LINZ were disregarded by ORC. Please find attached the commentary emails between ORC and LINZ at **Attachment [B]** as well as the ORC report at **Attachment [C]**.

Original Request

9. *The Kawarau River is a sensitive landscape, and the subject site is in proximity to the Queenstown Trail. As such, please provide a landscape comment by a suitably qualified professional.*

Further Request

9. *The provided plans do not demonstrate that the building will not be visible to users of the track. The structure will be visible to users of the river, as you mention. It is noted that landscape effects go beyond that of the visibility of the building. This point remains outstanding*

As previously stated the pump station and water take infrastructure is almost contained wholly within the bankside and will not be visible from the trail. The structure is accessed from the top with rip-rap on the sides to embed it into the bankside. The memorandum provided by Fluent Solutions as **Attachment [A]** gives further clarification and can be referred to. The only vantage point of the inbuilt structure is from the river itself when the river level is low as previously stated this section of river is closed to all boat traffic except for special permission from the Harbourmaster. Therefore, the likelihood of persons that would view the structure is extremely low.

We trust this further additional information will afford you further clarity with respect to the proposal. Please contact the undersigned on sam@townplanning.co.nz or 021 057 3762 should you have any queries.

Yours sincerely,
Town Planning Group

Samantha Kealey
Senior Planner

Enclosed:
Attachment [A] Fluent Solutions Memorandum
Attachment [B] ORC and LINZ correspondence
Attachment [C] RM23.870 Notification and Decision Report