Otago Regional Council

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Section 42A Staff Recommending Report

Application RM23.819
Hawkeswood Mining Limited

The recommendation in the staff report represents the opinion of the writers and it is not binding on the Hearing Commissioners. The report is evidence and will be considered along with any other evidence that the Hearing Commissioners will hear.

Danielle Ter Huurne
Senior Consents Planner

11/04/2024

Otago Regional Council

Executive Summary

Hawkeswood Mining Limited has applied for resource consent for various consents associated with alluvial gold mining activities as follows:

- A water permit to take and use groundwater;
- Land use consent to construct a bore (mine pit pond);
- Discharge permit to discharge water containing sediment to water and to land in manner that may enter water;
- Discharge permit to discharge contaminants to air; and
- Retrospective consents for a groundwater take for constructing a bore (mien pit pond), trial pit dewatering, and associated discharges to land.

A consent duration of ten years is sought, to reflect the expected life of the mine and provide for contingencies. The Applicant seeks a six-year consent term for the proposed water take, and proposes to renew the consent before its expiry.

The overall activity of the application is **discretionary.**

The application was publicly notified at the Applicant's request on January 20th in the Otago Daily Times, and the Central Otago News. In total, ten submissions have been received (four in support, one neutral, and five in opposition). One submission in support was withdrawn on 26 February 2024.

After assessing the actual and potential effects of the applications, considering submissions, and considering all of the matters in section 104 of the Resource Management Act 1991 ("RMA"), the recommendation of the consent officer is to **refuse** the application.

In summary, the application and information available at the date of this report does not demonstrate that adverse effects on cultural and historic heritage values will be appropriately avoided, remedied or mitigated, and further information is required in respect of these matters.

With regard to adverse effects on cultural values, Aukaha and TRONT submitted in opposition of the application, highlighting a number of concerns with the application, particularly in respect of potential adverse effects of dewatering on the mauri and aquatic ecology of surrounding water bodies, as well as effects on heritage values and the wider cultural landscape. Aukaha also note that there is insufficient information to assess whether the proposal provides for the mauri or wai maori and gives effect to Te Mana o Te Wai. Overall, adverse effects on cultural values are considered to be at least minor.

In terms of effects on historic heritage values, the Applicant's archaeological assessment states that works would have a "major" impact on archaeological values. Mitigation measures are recommended, which the report notes will reduce effects, but it is not clear to what extent. Given that recorded archaeological sites will be directly impacted, and that there is potential for more sites to be encountered, I consider that adverse effects on heritage values will be at least minor.

In terms of positive effects, the application does not currently demonstrate that the positive effects of the proposal will outweigh the adverse effects. It is stated that the proposal will promote the economic and social wellbeing of the community, but does not demonstrate how. That is, it is unclear whether the proposal would provide local employment opportunities, or whether workers would be brought in from elsewhere. The application also does not provide evidence of how the mining activity will support the local or regional economy.

The proposal is considered to be inconsistent with the relevant statutory documents, including the National Policy Statement for Freshwater Management, the operative Regional Policy Statement, proposed Regional Policy Statement (non-freshwater and freshwater instrument components) and the Regional Plan: Water for Otago. The reasons for this are summarised as follows:

- The current proposal does not provide for cultural values or cultural wellbeing.
- The application currently does not demonstrate that taoka species will be protected.
- The proposal does not give priority to avoiding adverse effects on existing lawful (water) uses.
- There is uncertainty around the level of adverse effects on groundwater quality, and therefore whether the proposal will avoid contamination of groundwater.
- Sites and places of historic heritage values will not be protected.
- The proposal will not maintain public access to and along the Clutha River/Mata-Au.

I am unable to assess the consistency of the proposal with several provisions of the above statutory documents, due to lack of information. In particular, there is insufficient information to assess:

- Whether the proposal provides for mauri of wai māori, and therefore prioritises the health and wellbeing of water bodies.
- If the proposal gives effect to Te Mana o Te Wai.
- Kāi Tahu values have been taken into account, however further information is required to assess the level of effects on these values.
- Whether appropriate contingency plans will be in place in the event of hazardous substance spills.
- Impacts of the proposal on te taiao and indigenous biodiversity.

For reasons outlined above, the proposal is also inconsistent with the objectives and policies of The Kai Tahu ki Otago Natural Resource Management Plan 2005 and Te Rūnanga o Ngāi Tahu Freshwater Policy Statement 1999. However, should further information be forthcoming, this should be considered further at the hearing.

In respect of Part 2 of the Act, further information is required to assess whether the proposal will achieve the sustainable management of natural and physical resources, or provides for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, or protects historic heritage from inappropriate subdivision, use, and development.

This assessment and recommendation is based on the information known to the section 42A report author at the date of this report, and should further information be forthcoming, this should be considered further at the hearing.

Whilst the recommendation is that the application is refused, a set of draft conditions which manage effects of the proposal, other than effects on cultural and historic heritage values, is provided in Appendix 1.

2. Report Author

My name is Danielle Ter Huurne, and I am a Senior Planner at Otago Regional Council. I have eight years' experience working in planning at Otago Regional Council, Queenstown Lakes District Council, Barker and Associates, and Auckland Council.

I hold the qualifications of Bachelor of Science in Geography and Geology, and a Postgraduate Diploma with Honours in Environmental Science from the University of Auckland. I am an Associate Member of the New Zealand Planning Institute.

I have been processing Consent Application RM23.819 since it was lodged on 24 November 2023. I also partly processed the Applicant's original application, RM23.474 (lodged on 24 May 2023) until I went on extended leave in early September 2023, and that notification report was completed by my colleague, Elyse Neville, Senior Consents Planner.

It is noted that the original application sought consents for virtually the same activity, except that consent was not initially sought for air discharges. The mine pit pond dimensions have also been amended in the RM23.819 application.

I visited the site on 21 June 2023, with my team leader, Mat Bell. It was unclear in the Application what activities were already established on site, or the extent of those activities, as the Application notes that the predominant land use is pastoral farming and that trial dewatering had been undertaken. The site visit confirmed that a mine pit pond and sediment ponds are already established, as illustrated in Figures 6 to 8 below.

Danielle Ter Huurne
Senior Consents Planner

Otago Regional Council

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Abbreviations

AEE	Assessment of environmental effects
ORC	Otago Regional Council
CODC	Central Otago District Council
NES-FW	National Environmental Standards for Freshwater
NES-HDW	National Environmental Standards for Human Drinking Water
NPS-FM	National Policy Statement for Freshwater Management
P-RPS	Proposed Regional Policy Statement 2021
RPS	Operative Regional Policy Statement 2019
RMA	Resource Management Act 1991
RPW	Regional Plan: Water for Otago
TRONT	Te Rūnanga o Ngai Tahu

Otago Regional Council

OTAGO REGIONAL COUNCIL
SECTION 42A REPORT

ID Ref:	**1249070055-38347**
Application No(s):	**RM23.819**
Prepared For:	**Hearings Panel**
Prepared By:	**Danielle Ter Huurne, Senior Consents Planner**
Date:	**11 April 2024**
Subject:	**Section 42A Recommending Report – Application RM23.819 by Hawkeswood Mining Limited to take and use groundwater from an unnamed aquifer, create a bore (mine pit), to discharge water to water and to land and to discharge to air, for the purpose of operating an alluvial gold mine, at 1346 – 1536 Teviot Road, Roxburgh**

1. Purpose

This report has been prepared under Section 42A of the Resource Management Act 1991 (RMA) to assist in the hearing of the applications for resource consent made by Hawkeswood Mining Limited. Section 42A enables local authorities to require the preparation of a report on an application for resource consent and allows the consent authority to consider the report at any hearing. The purpose of the report is to assist the Hearing Panel in making a decision on the application.

The report assesses the application in accordance with Sections 104 and 104B of the Resource Management Act 1991 and makes a recommendation as to whether the application should be granted.

This report contains the recommendations of the Consent Planner and is not a decision on the application. The recommendations of the report are not binding on the Hearing Commissioners. The report is evidence and will be considered along with any other evidence that the Hearing Commissioners will hear.

This application is being heard in conjunction with an application to Central Otago District Council (CODC). Ms Olivia Stirling is the consultant processing planner for the CODC application.

2. Summary of the Application

2.1 Overview

Applicant:	Hawkeswood Mining Limited
Applicant's agent:	Barry MacDonell of MacDonell Consulting Ltd

Site address or location: 1346 – 1536 Teviot Road, Roxburgh; approximately 320 metres south of the intersection of Teviot Road and Ormaglade Road.

Table 1: Legal descriptions

Legal Description of the site	Record of title number	Land Owner
Section 3 SO 24438	OT/18C/235	Alan Thomas Parker
Section 102 Block VIII Benger SD	OT/380/99	Jacks Ridge Limited (owned by the Applicant)
Section 84 Block VII Benger SD	OT/360/183	Jacks Ridge Limited (owned by the Applicant)
Section 110 118 Block VII Benger SD	0/0/241193	Alan Thomas Parker
Part Section 96 Block VIII Benger SD	OT/12C/430	Matthew Ross Hunter, Georgia Rose Parker
Section 92 Block VIII Benger SD	OT/230/94	Central Otago District Council
Section 90 Block VIII Benger SD	OT/374/110	Jacks Ridge Limited (owned by the Applicant)
Section 91 Block VIII Benger SD	OT/360/184	Jacks Ridge Limited (owned by the Applicant)
Section 106 Block VIII Benger SD	OT/12C/572	Donna May Parker, Joanne Helen Parker
Lot 2-3 DP 375668	0/0/304420	Gabrielle Claire Campbell-Lloyd, Gareth David Wilson
Lot 4 DP 375668	0/0/304421	Gabrielle Claire Campbell-Lloyd, Gareth David Wilson
Section 93, Section 97, Section 40, Part Section 89 Block VIII Benger SD	OT/B1/707	Laurie Allan Crawford, Pamela Fay Crawford.

Map reference (approximate midpoint of site; NZTM 2000): E1318684 N4938802

Consent(s) sought:

Water Permit RM23.819.01: to take and use groundwater for both consumptive and non-consumptive use.

Land Use Consent RM23.819.02: to construct a bore (mine pit pond).

Discharge Permit RM23.819.03: to discharge water containing sediment to water in a bore and to land in a manner that may enter water.

Discharge Permit RM23.819.04: to discharge to air contaminants from the operation of an alluvial gold mine.

Water Permit RM23.819.05: Retrospective consent to take and use groundwater for the purpose of trialling pit dewatering.

Discharge Permit RM23.819.06: Retrospective consent to discharge water containing sediment to land for the purpose of trial pit dewatering.

Purpose: For the purpose of alluvial gold mining

Information requested and background:

- **29 June 2023:** Further information was requested on the original application, RM23.474, under Section 92(1) of the Act in respect of groundwater. Further information requested included accurate logs providing stratigraphic and water level information, an updated drawdown assessment accounting for the aquifer barrier boundary, an assessment of effects on groundwater in respect of potential contamination from the closed landfill, and detail of discharge locations and depth to groundwater.
- **8 August 2023:** The Applicant responded to the above information request. These responses are contained within the updated groundwater assessment.
- **18 August 2023:** Alexandra Badenhop of E3 Scientific reviewed the Applicant's further information response and confirmed that the maps provided improved the clarity of the assessment. However, the review highlighted that the proposal still had the potential to affect the Tima Burn and other groundwater users, therefore monitoring and adopting adaptive management strategies was recommended. In particular, the Tima Burn was noted as having ecological values that needed to be considered.
- **30 August 2023:** In response to E3's review, and in consultation with E3, the Applicant proposed three conditions requiring the monitoring and flow augmentation of the Tima Burn.
- **13 November 2023:** Post-lodgement of the amended (current) application, the Applicant provided a Tima Burn Aquatic Ecology Assessment, prepared by Water Ways Consulting, which provides an assessment of the instream values of the Tima Burn and possible effects of the proposal on the Tima Burn.
- **21 February 2024:** The ecology assessment was reviewed by Mark Hamer of E3. Mr Hamer was generally satisfied that the assessment is robust and appropriately identifies sensitive areas and instream values of the Tima Burn. The review outlines several recommended conditions, which have been offered by the Applicant.

Notification decision:

The Applicant requested that the application be publicly notified. The application was publicly notified on 20th January 2023 in the Otago Daily Times, and the Central Otago News.

The following parties provided written approval to the application prior to the notification decision:

- Alan Parker
- Gregory and Chika Liyawarachchi
- Alan and Janet Tong
- Eoin and Noeline Garden
- Isabelle and Bernard Affleck
- Robyn Pannett
- Wayne Moore
- Gabrielle Claire Campbell-Lloyd and Gareth David Wilson
- Jacks Ridge Limited
- L.A. and P.F. Crawford

- Donna May Parker
- Matt Hunter and Georgia Parker
- Alan Thomas Parks

Submissions: Total submissions received by due date: 10

- in support: 4*
- in opposition: 5
- neutral: 1

Number of late submissions: 0

Wishing to be heard: 5

**One submission, from James Stewart, was withdrawn on 26 February 2024*

Site Visit: As noted above, a site visit was undertaken by myself and Mat Bell, Team Leader Resource Consents, on 21 June 2023. The site visit confirmed that a mine pit pond and sediment ponds are already established on the site.
It is noted that an abatement notice was issued on 21 February 2023 by the Otago Regional Council in relation to the mine pit water take and discharge. A review of the area on Otago Maps shows that, prior to these works, the land was predominantly pastoral farming, as stated in the Application.

Key Issues: It is considered that the key issues that remain unresolved at this point are:

- Adverse effects on cultural values.
- Adverse effects on historic heritage values.
- Adverse effects on air quality.
- Adverse effects on groundwater quality.
- There is currently inadequate information to assess whether the proposal is consistent with the relevant statutory documents, including the NPSFM, operative RPS, proposed RPS (non-freshwater and freshwater instrument components), and the RPW. In particular, there is insufficient information to determine whether the proposal provides for the mauri of wai māori and the health and well-being of water bodies, gives effect to Te Mana o Te Wai, or identifies and protects Māori cultural and historic heritage values. Further information is also required to assess the consistency of the proposal against provisions relating to effects on indigenous biodiversity and safeguarding the life-supporting capacity of soils.

2.2 Description of Application

Barry McDonell has provided a description of the proposal at Section 2 of the Application titled: *Proposed alluvial gold mine at Millers Flat Resource Consent Applications – Otago Regional Council*,

prepared by Barry McDonell of McDonell Consulting Ltd, dated 16 November 2023, and Section 2 of the report titled: *Hawkeswood Mining Limited, - Technical Assessment of Proposed Groundwater Take and Discharge,* prepared by Environmental Associates Ltd, dated October 2023. This description is adopted for this report, and key points of the activity are explained below:

General mine operation

- The Applicant proposes to excavate a mine pit with an area of approximately 150 metres (m) by 100 m and a depth of 18 m. Including areas being stripped, mined and rehabilitated, there will be no more than 27 hectares (ha) of ground open at any one time.
- The total area affected by the mining activity will be approximately 68 ha over the life of the mine, and it is anticipated that approximately 12 million cubic metres (m^3) of alluvial gravels will be mined.
- The overburden from the initial cut will be used to create a series of bunds around the perimeter of the site, and any excess will be stockpiled for progressive rehabilitation of the site (the proposed earthworks are under the jurisdiction of the district council and consent is not required from ORC).
- Approximately 180 m^3 of alluvium will be processed per hour (~330 tonnes per hour) by the floating gold plant. Gravels will be screened and washed, with gold recovered through gold separation devices. The washed gravel then falls out of the lower end of the gold plant back into the pit where it remains. There are no chemicals used in this process.
- Mining will progress in four stages, as shown in Figure 1, and the mine pit will traverse from side to side within the active boundary. Rehabilitation will occur progressively.
- Post-reinstatement of topsoil, topsoil will be seeded with grass and returned to pasture.
- There will typically be around 20 staff employed, and proposed hours of operation are:
    - 7 am to 7 pm Monday to Friday;
    - 7 am to 1 pm Saturdays;
    - No work on Sundays or public holidays;
    - Some machinery maintenance and dust control activities may occur on Saturday afternoons, Sundays or public holidays.
- The Applicant seeks a consent term of ten years for all consents except the water permit, to reflect the expected mine life of around 7 years and provide for contingencies. The Applicant has requested a six-year term for the proposed water take, in line with the policy direction of the RPW, and proposes to renew the consent before the expiry of the consent.
- Given the Clutha Gold Cycle Trail runs directly adjacent to the site, the Applicant proposes to temporarily divert the trail during the mining operation. This is proposed to be reinstated upon completion of mining.

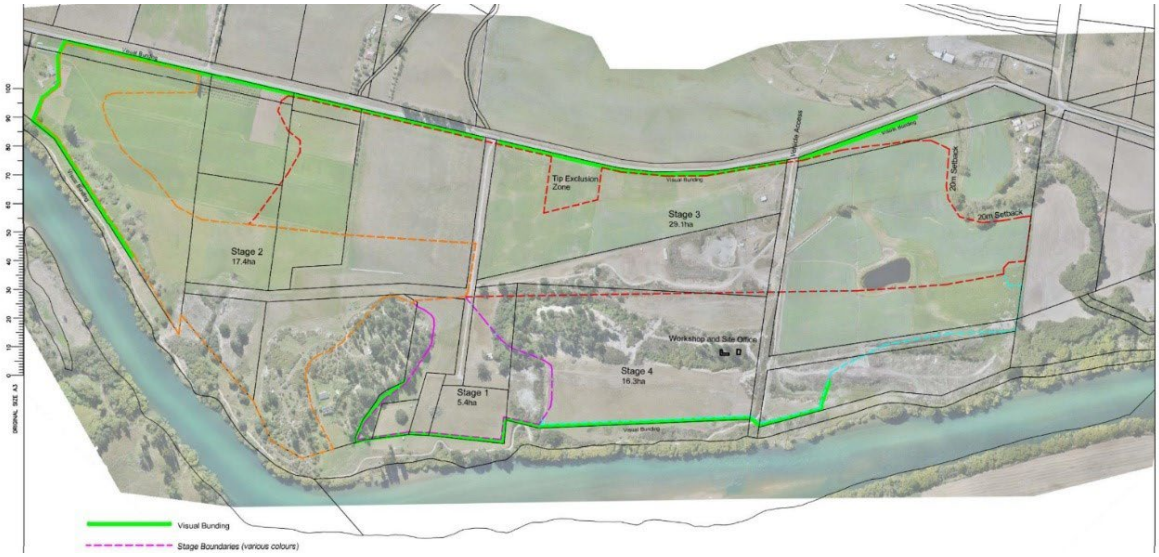

Figure 1: Site plan illustrating the four proposed stage boundaries. [Source: Application].

Mine pit dewatering and discharge

- The principal source of water for washing gold-bearing gravels will be groundwater from the mine pit.
- Dewatering of the mine pit pond will occur in two stages:
  - Initial dewatering has been undertaken as the pond was excavated and progressively dewatered to the target dewatering depth or level.
  - Ongoing transient dewatering will be undertaken as required to maintain the local groundwater level over the progressing mine pit pond area to a depth of 3 m. The rates and volumes of groundwater abstraction are expected to be variable during the transient progression of the pond.
- The primary aim of the dewatering is to maintain the local water level at desired levels to allow temporary (transient) excavation and mine operation. Dewatering will reduce water levels adjacent to and within the mine pit pond to a nominal maximum of 3 metres above basement level to allow the operation and resource recovery with a floating plant. Alternatively, where water levels are less than 2 metres above basement, augmentation may be required.
- Proposed abstraction rates and volumes are as follows:
  - 124.8 litres per second (L/s)
  - 10,783 cubic metres (m^3) per day
  - 222,394 m^3 per month
  - 1,967,846 m^3 between 1 July and 30 June the following year as a rolling average over three consecutive years.
- The Applicant proposes to undertake full metering and reporting of all water taken.
- Discharge of the transient mine pit dewatering water will most likely be required to be continually or intermittently made to land at location(s) within or adjacent to the mine footprint area.
- Discharges will contain suspended sediment from the mine pit pond, which will settle out in the initial discharge settlement pond located between the active mining operation and the Clutha

River/Mata-Au, where water will soak into ground, through the alluvial gravels to the water table and then ultimately flow into the Clutha River/Mata-Au.

- Earthworks will be set back at least 20 m from watercourses, including the Clutha River/Mata-Au and Tima Burn, and no discharge of treated water to land will occur within 50 m of any watercourse.
- There are no chemicals involved in the gold concentration process.
- The main source of water for gravel washing will be groundwater from the pit. The groundwater take will generally be used for non-consumptive alluvial wash processing. Some water (<1% of abstraction volumes) will be used for dust suppression and rehabilitation.
- The Applicant also seeks retrospective consent for preliminary trial dewatering and discharge for testing purposes that have previously been undertaken.

Following updates to the mining methodology in September 2023, the Applicant advised that consent would also be required for discharges to air, as detailed in the Assessment of Environmental Effects prepared by Air Matters, dated 14 November 2023. The original application (RM23.474) was subsequently withdrawn, and additional consents sought for discharges to air. The description of the proposed air discharges in the AEE is adopted for the purpose of this report, and key details are outlined below.

- The main discharges to air associated with the proposal will be dust. Dust-generating activities are detailed in Table 2 below.

Table 2: Dust-generating activities. [Source: Application].

Activity	Potential to generate dust (relative scale)	Description
Topsoil and overburden removal and transport	High	Topsoil contains a high proportion of finer grained material (silt and sand).
Stockpiling of topsoil and overburden	Moderate	Increased risk of windblown dust from exposed stockpiles and bunds.
Dredging of the wash with excavator	Low	Undertaken as a wet process.
Processing of alluvium through the gold plant	Low	Undertaken as a wet process.
Replacing overburden and topsoil	High	Topsoil contains a high proportion of finer grained material (silt and sand).
Vehicle movements on roads and accessways	Low-Moderate	Unsealed roads and accessways.

- Proposed mitigation measures are outlined in Section 5 of the Air Matters assessment and within the Dust Management Plan (DMP). Dust suppression measures include the use of mobile sprinkler systems, chemical suppressants and/or geotextile cloth, and re-seeding topsoil with grass as soon as is practical. Truck movements will increase during topsoil and overburden stripping and replacement, so water cart dust suppression will be used while these activities are taken out.

Vehicle speeds will also be limited to 15 km/h, to avoid excessive dust generation, and trucks carrying potentially dust loads will be covered or dampened.

- Material stockpiles will be limited to 7 m in height, kept damp when necessary, and long-term stockpiles will be vegetated or covered.
- Due to the proximity of high-risk sensitive receptors, a Specific Receptor Management Zone (SRMZ) is proposed, to provide additional mitigation within these areas.
- In addition to the above, wind speed, direction and rainfall at the site will be continuously monitored, and high dust-generating activities will cease when:
    - Wind speeds are greater than 7 m/s (rolling hourly average);
    - Wind gusts (1-minute average) exceed 10 m/s (during two consecutive 10-minute periods); and
    - During extended dry weather conditions (e.g. when it is not practical to keep surfaces visibly damp).
- The Applicant also proposes to undertake continuous real-time dust monitoring. Monitors would be placed directly between high-risk sensitive receptors and the workplace, where those receptors are within 400 m of the activity. Monitors will have a trigger threshold for PM_{10} and will have an automated alarm system, which will alert the Site Manager, or other nominated person, when that threshold is reached. This will be used to review the effectiveness of dust controls and investigate the cause of high dust levels.
- The Applicant proposes to keep a Complaints Register and, should dust monitoring results reveal significant exceedances above background levels, or repeated complaints are received, the problem source will be identified. The site manager will then be responsible for implementing the procedures outlined in the DMP to reduce dust generation.

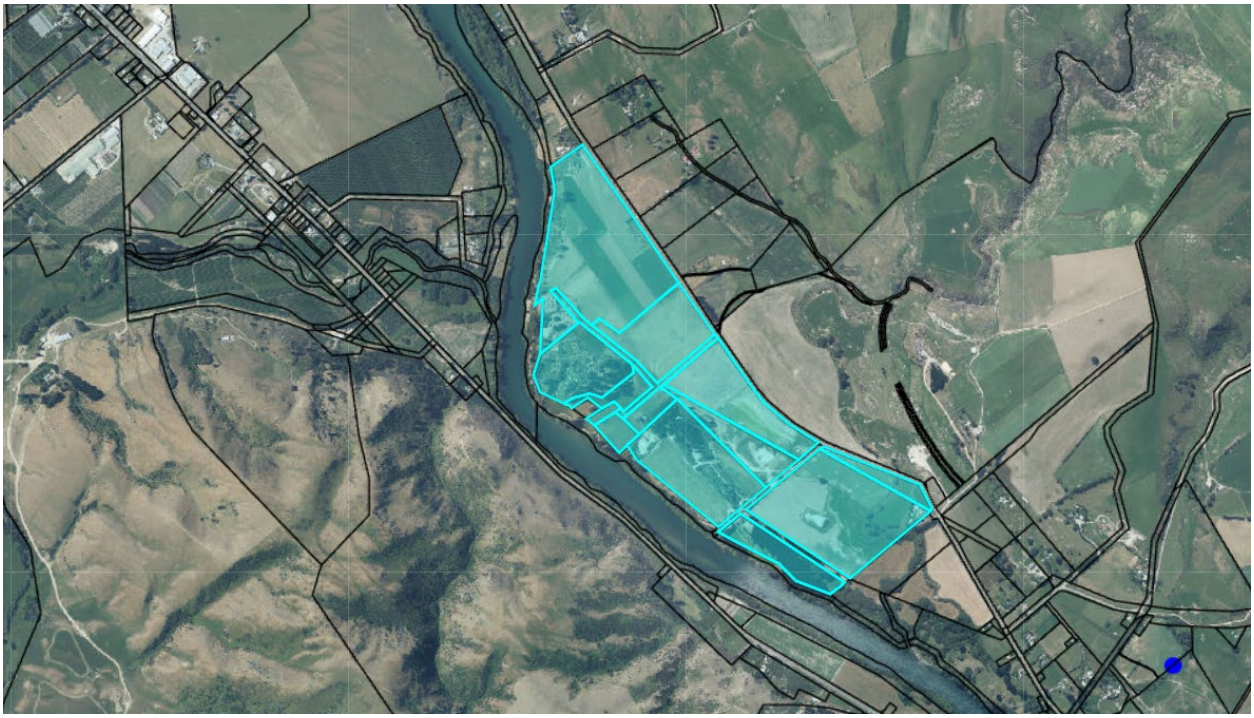

Figure 2: Aerial of subject site; 1346 – 1536 Teviot Road. [Source: Council's GIS maps].

- The Applicant has proposed a number of consent conditions to mitigate potential adverse effects. These are included in the recommended consent conditions in Appendix 1, and include conditions relating to flow augmentation of the Tima Burn, and supplying affected water users with a suitable water supply, as and when required.

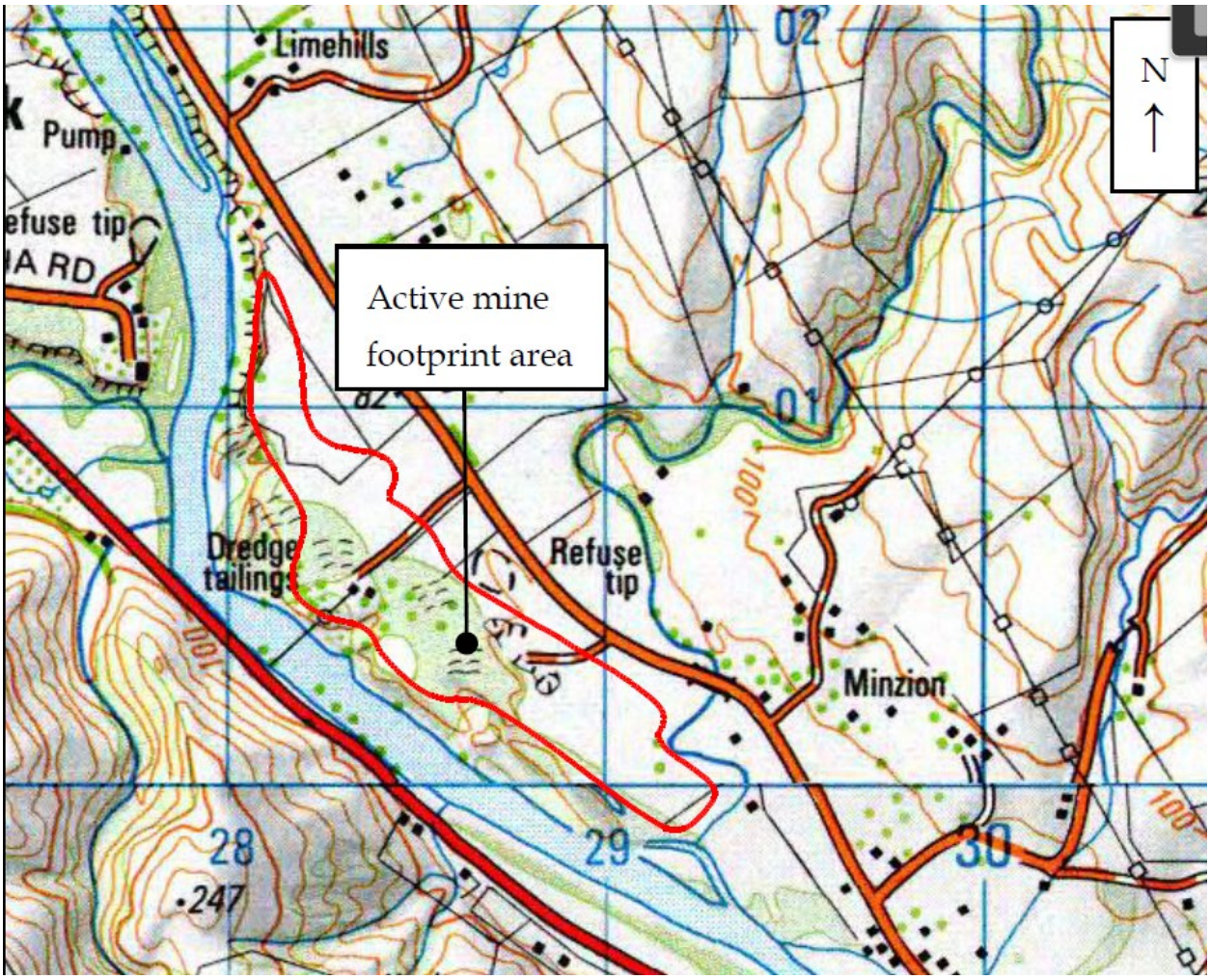

Figure 3: Map of site outlining active mine footprint area. [Source: Application].

2.5 Application Documents

The applicant has provided the following documentation with the application:

- Resource consent application forms, Form 1, Form 5, Form 6, Form 8B, and 9A, signed by the Applicant and dated 18/05/23

- Assessment of Environmental Effects, *Proposed alluvial gold mine at Millers Flat Resource Consent Applications – Otago Regional Council,* prepared by MacDonell Consulting Ltd, dated 16 November 2023
- Groundwater Assessment, *Hawkeswood Mining Limited, - Technical Assessment of Proposed Groundwater Take and Discharge,* prepared by Environmental Associates Ltd, dated October 2023
- Air Discharge Assessment, *Assessment of Environmental Effects; Discharge of Contaminants into Air from the Operation of an Alluvial Gold Mine,* prepared by Air Matters, dated 14 November 2023
- Dust Management Plan, *Hawkeswood Mining Limited: Dust Management Plan*, prepared by Town Planning Group, dated 25 October 2023
- *Dust Management Plan – Peer Review – Hawkeswood Mining Limited, Teviot*, from Nigel Goodhue of Air Matters, dated 12/10/23
- Ecology Report, *Tima Burn Aquatic Ecology Assessment,* prepared by Water Ways Consulting, dated September 2023
- Preliminary Site Investigation, *Preliminary Site Investigation 1484 Teviot Road Millers Flat for Hawkeswood Civil Limited,* prepared by Environmental Consultants Otago Ltd, dated 28 June 2021
- *Sampling Summary Report – 1484 and 1534 Teviot Road,* prepared by Environmental Consultants Otago Ltd, dated 12 February 2024
- Written approval from Alan Parker, dated 09/03/23
- Written approval from Gregory and Chika Liyawarachchi, dated 04/04/23
- Written approval from Alan and Janet Tong, dated 01/04/23
- Written approval from Eoin and Noeline Garden, dated 27/03/23
- Written approval from Isabelle and Bernard Affleck, dated 12/04/23
- Written approval from Robyn Pannett, dated 17/06/23
- Written approval from Wayne Moore, dated 26/06/23
- Written approval from Gabrielle Claire Campbell-Lloyd and Gareth David Wilson, dated 01/04/23
- Written approval from Jacks Ridge Limited, dated 11/10/22
- Written approval from L.A. and P.F. Crawford, dated 04/07/22
- Written approval from Donna May Parker, dated 22/06/22
- Written approval from Matt Hunter and Georgia Parker, dated 14/06/22
- Written approval from Alan Thomas Parks, dated 14/06/22

The following additional information was submitted with the Applicant's memorandum of counsel on 5th April 2024:

- Indigenous biodiversity memo, *Hawkeswood Mining Ltd 2024, RM23.819: Summary of Vegetation and Biodiversity Values across Proposed Gold Mine land at Millers Flat,* prepared by Dr BJ Wills of Central Environmental Services, dated March 2024
- Archaeological report, *1346 -1536 Teviot Road, Roxburgh, An Archaeological Assessment,* Rev. H, prepared by Heritage Properties Ltd 2024, dated March 2024
- *Site Plan Description,* prepared by Hawkeswood Mining Ltd
- Site Plans, Sheets 1 to 8, prepared by Overview Surveying, dated 7 March 2024

3. Notification and Submissions

3.1 Notification Decision

The Applicant sought the public notification of the application.

The application was publicly notified on 20 January 2024 and the submission period ran until 19 February 2024.

3.2 Submissions Received

A total of ten submissions were received, as summarised below.

Table 3: Summary of Submissions

Submitter	Submission Points	Wishes to be heard
Glen John Russell	**Support** Supports investment in the local economy, creating local employment, and extracting a much needed resource.	No
Precision Profile Limited	**Support** Supports the generation of jobs in the region, and considers that there will be significant economic and social benefits for the community, without generating adverse environmental effects.	No
Graeme Young	**Oppose** Concerns relating to emissions to air via dangerous dust and particulate matter, emissions from diesel use, and contamination of the Clutha River and groundwater in the area.	Yes
Culling Family Trust	**Oppose** Concerns regarding effects on groundwater, negative impact on the environment and impact of dust.	No
James Stewart	Supports positive important contribution to local export-led economy. ***This submission was withdrawn on 26 February 2024***	No
Millers Flat Water Company Limited	**Neutral** Concerns regarding effect on groundwater quality and levels, and the ability of the Millers Flat Water Company to provide additional connections to bore owners who may be affected by the mining activity.	Yes
Aukaha representing Kāti Huirapa Rūnaka ki	**Oppose**	Yes

Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga	The location and scale of the activity poses a threat to the values of the cultural landscape. Concerns about the lack of protection against the destruction and modification of archaeological sites. Concerns about the reliability of the groundwater assessment Concerns that proposed mitigation measures are insufficient. Notes that the proposal does not recognise the connections and interactions between surface water bodies and the aquifer, and the potential impact on these water bodies is of particular concern. Concerns that the proposal does not address impacts of the mining activity on te taiao and wai maori.	
Te Rūnanga o Ngai Tahu – Christchurch (TRONT)	**Oppose** Concerns that the mauri of sacred waterbodies will be adversely affected by the proposal. Supports the submission from Aukaha above.	Yes
Jennifer Patricia Clarke Kenneth Lance Franklin and FG Works Limited	**Oppose** Seek that the application be declined because of the scale and industrial nature of the proposal, lack of consistent application detail, and lack of compliance work to date. Consider that the immediate and cumulative effects are outside what might be considered acceptable under Regional Plans and will cause unacceptable adverse effects.	Yes
Peter Thomas Goodwin	**Support** Supports the proposal because of economic and social benefits to the area, and considers adverse effects on the environment will be adequately mitigated and less than minor.	No
Ministry of Education* **MoE submitted only on the CODC application, however, some of their concerns are also relevant to the ORC application.*	Concerns about potential drawdown effects on the Millers Flat School bore, and potential effects on groundwater quality. Clarity is sought on the dust suppression methods proposed.	Yes

4. Description of the Environment

4.1 Description of the Site and Surrounding Environment

The environment is described in the application for consent and is not duplicated here. The description is adopted for the purpose of this report, with additional information outlined below. The key aspects of the environment are:

- The site is located at Millers Flat, located to the southeast of Ettrick on the true left side of the Clutha River/Mata-Au, as illustrated in Figure 2 above. It comprises a number of sites, as detailed in Section 2.1 above. Written approvals have been obtained from all parties that own land within the site area, except Central Otago District Council.
- The site is located on a flat to gently sloping terrace.
- The Clutha Gold Cycle Trail runs along the Clutha River/Mata-Au to the west and south-west of the site, before cutting through the site via a paper road, then travels along Teviot Road.
- Surrounding land use is a mix of rural and rural residential.
- The site is located between two recorded māori archaeological sites; G44/12, a midden/oven which adjoins the mine site to the north-east, and G43/2, a surface scattering of oven stones and waste flakes, which is located further north-west adjoining the Clutha River/Mata-Au.
- There are two New Zealand Archaeological Association (NZAA) Historic Gold dredge Mining sites within the mining area; G43/232 and G43/233.
- Following initial trial pit dewatering works, the Applicant commissioned a heritage assessment. A site survey was undertaken on the 25th and 26th of September 2023, which identified two additional archaeological sites; G43/285, remains relating to the Kitto Family mining activities, and G44/159, an artefact scatter. It is noted that the heritage assessment was not formally submitted with the application, as the Applicant has advised it is a draft, and their intention is to work through the final assessment with mana whenua.
- The site is located in the Roxburgh Rohe, within the Clutha River/Mata-Au catchment and within, in part, the lower sub-catchment of the Tima Burn. There are two other smaller ephemeral tributaries of the Clutha River/Mata-Au in proximity to the mining area; Oven Hill Creek to the south, and an unnamed creek to the north.
- Groundwater is contained within an unconfined aquifer above and adjacent to the Clutha River/Mata-Au.
- Investigation well logs indicate that the aquifer materials are a mix of silty sandy gravels.
- High groundwater yields vary depending on location within the site; higher yields are associated with areas of greater saturated thickness and/or in proximity to the Clutha River/Mata-Au.
- Inferred groundwater flow direction based on piezometric contours is to the south/southwest, i.e. towards the Clutha River/Mata-Au.
- According to ORC's hazard database, parts of the site are located within a flood hazard area. The site is also located within a Domain A liquefaction area, meaning there is low to no liquefaction potential.
- According to Air Matters' assessment, there are two prominent wind directions from the west northwest and east southeast, as illustrated in Figure 4 below.

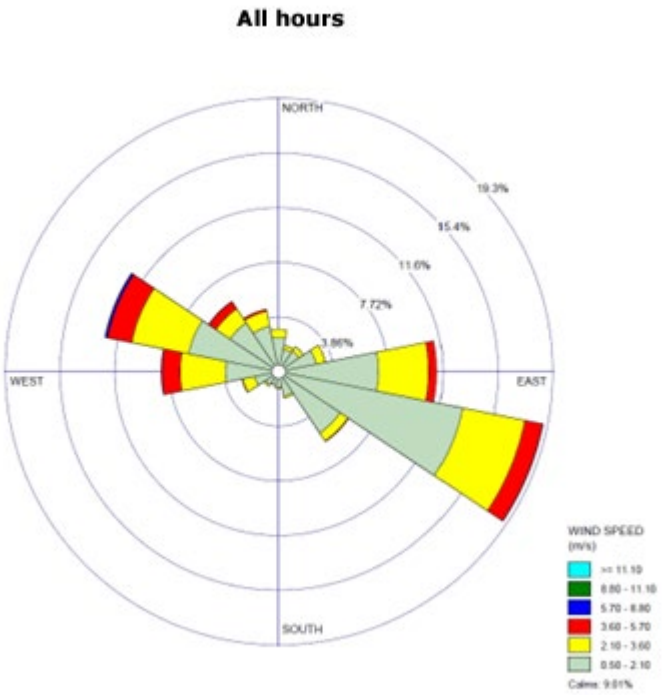

Figure 4: Wind rose for 2021-2022, as measured at Metservice's automatic weather station at Millers Flat. [Source: Air Matters Assessment, dated 14 November 2023].

- 1484 Teviot Road, located in the northern part of the site, is a verified HAIL site, as highlighted in Figure 5 below. The site is a closed landfill (Millers Flat Landfill). The Application confirms that no mining is proposed within the HAIL land; the land is excluded from the proposed mining area, and a 50 m buffer will be maintained from it.
- Historic stockyards have also been identified in a property review by EC Otago, within which works are proposed to be undertaken. Results from samples within the stockyards show that heavy metal concentrations in all samples are consistent with predicted background levels based on the underlying geology. Consent is therefore not required for disturbance of contaminated land.

Figure 5: Aerial map of 1484 Teviot Road illustrating HAIL area (highlighted green). [Source: Council's GIS Maps].

- There are two surface water takes from the Clutha River/Mata-Au in proximity to the site; RM21.291.01, adjacent to the northern portion of the site, and 2004.424, adjacent to the southern portion of the site.
- Council's GIS maps indicate that there are a number of bores located within, and in proximity to, the site. The bores, owners and well use are summarised in Table 4 below.

Table 4: Bores within and in proximity to the site, and predicted drawdowns. [Source: Otago Maps].

Well number	Landowner	Legal Description	Predicted drawdown	Written approval received?
G43/0183	Robyn Pannett, and Gray Stephen Pannett	Section 36 Block VIII Benger SD	<1m and >0.2m	Yes
G43/0219	Gregory Asoka Liyanarachchi	Section 35 Block VIII Benger SD	<1m and >0.2m	Yes
CD13/0101	Alan Thomas Parker	Unknown/Road reserve strip	>1 m	Yes
G43/0193	Matthew Ross Hunter and	Part Section 96 Block VIII Benger SD	>1m	Yes

	Georgia Rose Parker			
G43/0142	Gregory Asoka Liyanarachchi	Section 34 Block VIII Benger SD	>1 m	Yes
G43/0187	Eion Reay Hamilton Garden	Lot 2 DP 541224	>1 m	Yes
G43/0132	Alan Laughton Tong, Janet Audrey Tong	Part Section 15 Block VIII Benger SD	>1 m	Yes
G44/0132	Wendy Gunn	Section 20 Block VIII Benger SD	<1m and >0.2m	No
G43/0079	Gregory Fenwick Sligo	Section 18 Block VIII Benger SD	<1m and >0.2m	No
G44/0041	Bernard William Affleck	Part Section 19 Block VIII Benger SD	<1m and >0.2m	Yes
G44/0111	Wendy Gunn	Section 20 Block VIII Benger SD	<1m and >0.2m	No
G44/0040	Wayne Robert Moore	Section 1628R Block VIII Benger SD	<1m and >0.2m	Yes

- Post-lodgement, Tom Heller of Environmental Associates Limited has confirmed that G43/0184 and G43/0185 can also be provisionally included as potentially affected in the 0.2 m to 1 m seasonal drawdown bracket, given the change in the extent of the mining area after the groundwater assessment was prepared.

4.1.1 Surface Water

Schedule 1 of the Regional Plan: Water

Schedule 1A of the Regional Plan: Water for Otago (RPW) outlines the natural and human use values of Otago's surface water bodies. The Clutha River/Mata-Au is identified as having the following 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/sand/rock bed composition of importance to resident biota.
- Presence of significant fish spawning areas for salmon below Roxburgh dam.
- Significant presence of trout, salmon and eel.
- Presence of indigenous waterfowl threatened with extinction.
- Presence of significant indigenous aquatic vegetation below Roxburgh dam.
- Significant habitat for lamprey.

The Tima Burn is identified as having the following values:

- Absence of aquatic pest plants.
- Presence of indigenous fish species threatened with extinction.

- Significant habitat for koaro.

Schedule 1AA of the RPW identifies Otago resident native freshwater fish and their threat status. The Clutha River/Mata-Au is known to provide habitat for lamprey between Alexandra and Island Stream, which is listed in this schedule. The Tima Burn is known to provide habitat for koaro, which is listed in this schedule.

Schedule 1B of the RPW identifies water takes used for public supply purposes (current at the time the RPW was notified in 1998), while Schedule 1C identifies registered historic places which occur in, on, under or over the beds or margins of lakes and rivers. The Roxburgh Hydro Village Water Supply is listed in Schedule 1B within the Clutha River/Mata-Au between Alexandra and Island Block, but is located more than 20 kilometres upstream of the proposed works. The Four Span Steel Truss Bridge, Millers Flat (located approximately 2 kilometres downstream of the proposed works) and Old bridge piers at Roxburgh (approximately 12 kilometres upstream), adjacent to current bridge, are registered historic places over the Clutha River/Mata-Au listed in Schedule 1C.

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

- ***Kaitiakitanga:*** *the exercise of guardianship by Kai Tahu, including the ethic of stewardship.*
- ***Mauri:*** *life force.*
- ***Waahi tapu and/or Waiwhakaheke:*** *sacred places; sites, areas and values of spiritual values of importance to Kai Tahu.*
- ***Waahi taoka:*** *treasured resource; values, sites and resources that are valued.*
- ***Mahika kai:*** *places where food is procured or produced.*
- ***Kohanga:*** *important nursery/spawning areas for native fisheries and/or breeding grounds for birds.*
- ***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 in the vicinity of the activity. The applicant states that in terms of the NES freshwater (natural inland wetlands), there are no wetlands in the mine area, or within 100 m of the site's boundaries. A site visit has confirmed the absence of natural inland wetlands.

4.1.2 Climate and Soils

GrowOtago indicates that the median annual rainfall at the site is between 601-650 mm and that the median potential evapotranspiration in January and February is 176-180 mm. S-Map Online indicates that the soils at the site are Gibbston shallow, well-drained loams.

Figure 6: Mine pit, with pond pictured on the right. [Source: Site visit].

Figure 7: Sediment pond. [Source: Site visit].

Figure 8: Sediment pond. Discharge area is located to the left (indicated by arrow), away from the Clutha River [Source: Site visit].

5. Status of the Application

The following consents are required under the Regional Plan: Water for Otago (RPW) and Regional Plan: Air for Otago (RPA):

Table 5: Summary of relevant planning rules

Planning Instrument	Rule	Purpose	Activity Status
RPW	14.1.1.1	To construct a bore (mine pit pond)	Controlled
RPW	12.2.4.1(i)	To take and use groundwater (partially retrospective for trial dewatering)	Discretionary
RPW	12.C.3.2	To discharge water and sediment to water and to land where it may enter water	Discretionary
RPW	12.B.4.1	To discharge water and sediment to water or to land from an industrial or trade premises	Discretionary
RPA	16.3.5.9	To discharge contaminants to air	Discretionary

Overall, the application is considered to be a **discretionary** activity.

5.1 Operative Regional Plan: Water

Bore

A bore is defined as in the RPW as "every device or means, including any well or pit, which is drilled or constructed for the purpose of taking groundwater, or which results in groundwater being taken, other than piezometers or other monitoring devices used for water sampling purposes only". Therefore, the proposed mine pit, as it accesses groundwater and results in groundwater being taken (predominantly) non-consumptively fits the definition of a bore.

Under Rule 14.1.1.1, the construction of a bore (mine pond where it intercepts groundwater) is a **controlled activity**:

*The excavation, drilling or other disturbance of land, other than in the bed of any lake or river, for the purpose of creating a bore, is a **controlled** activity.*

In granting any resource consent for the excavation, drilling or other disturbance of land in terms of this rule, the Otago Regional Council will restrict the exercise of its control to the following:

(a) *The location of the bore including its relationship to other bores and other activities; and*
(b) *The planned depth of the bore; and*
(c) *The management of the bore head and maintenance of the bore; and*
(d) *The nature of the bore; and*

(e) *The method of drilling or excavation; and*
(f) *The duration of the resource consent; and*
(g) *The information and monitoring requirements; and*
(h) *Any bond; and*
(i) *The review of conditions of the resource consent.*

Groundwater take

The applicable permitted activity rule for the proposed groundwater take that is further than 100 metres from the Clutha River/Mata-au is Rule 12.2.2.2:

*Except as provided for by Rules 12.2.1.1 to 12.2.2.1, the taking and use of groundwater is a **permitted** activity, providing:*

(a) *No lawful take of water is adversely affected as a result of the taking; and*
(b) *The water is not taken from any aquifer identified in Schedule 2C; and*
(c) *The water is not taken from within 100 metres of any wetland, lake or river; and*
(d) *[Repealed – 1 March 2012]*
(e) *[Repealed – 1 March 2012]*
(f) *The take is for a volume no greater than 50,000 litres per day, at any landholding, from the following aquifers:*
    i. *Lower Waitaki Plains Groundwater Protection Zone A (as identified on Maps C15 and C16); and*
    ii. *(ii) Inch Clutha Gravel (as identified on Maps C26 and C27); and*
(g) *Except as provided by Condition (f) above, the take is for a volume no greater than 25,000 litres per day, at any landholding, elsewhere in Otago; and*
(h) *No back-flow of any contaminated water occurs to the aquifer; and*
(i) *The taking of groundwater is not suspended.*

The Otago Regional Council may, by public notice, suspend the taking of water under this rule if the taking of water, under a resource consent has had to cease in accordance with Rule 12.2.3.5, for the aquifer from which the taking of water under this rule is occurring.

This rule does not apply in this instance as, while classed as a non-consumptive take, the Applicant will still be taking more than 25,000 litres per day.

For groundwater takes within 100 metres of the Clutha River/Mata-au, permitted activity rule 12.2.2.4 is applicable. It states:

*Except as provided for by Rule 12.2.1.1, the taking and use of groundwater from within 100 metres of the main stem of the Clutha/Mata-Au or Kawarau Rivers, or from within 100 metres of Lakes Wanaka, Hawea, Wakatipu, Dunstan or Roxburgh, is a **permitted** activity, providing:*

(a) *The take does not exceed 100 litres per second, nor 1,000,000 litres per day; and*
(b) *No more than one such take occurs per landholding; and*
(c) *No back-flow of any contaminated water occurs to the water body; and*
(d) *The take is not within 100 metres of any wetland or other lake or river; and*

(e) *No lawful take of water, and no wetland or other lake or river, is adversely affected as a result of the taking.*

The Applicant is unable to meet this permitted activity rule, as a maximum of 124.8 litres per second (L/s) and 10,783 cubic metres (m^3) per day is to be taken.

As the proposed activity is unable to meet permitted activity rule 12.2.2.2 or 12.2.2.4, it therefore comes under Rule 12.2.4.1(i) which states:

*Except as provided for by Rules 12.2.1.1 to 12.2.3.5 the taking and use of groundwater is a **discretionary** activity.*

Discharge

There are two discharges of water; the first, a discharge of water back to the mine pit from the screening plant, and the second, a discharge from the Applicant's settlement ponds to gravels, where it will seep back into groundwater.

It is considered that the Application does not meet the requirements of permitted activity Rule 12.C.1.1 as the discharge of water and sediment cannot comply with Rule 12.C.1.1(d)(i)(1) as it may result in a conspicuous change in colour and visual clarity. The discharge of sediment to the mine pond where it may enter water is a discretionary activity under Rule 12.C.3.2:

The discharge of water or any contaminant:

i. *To water; or*
ii. *Onto or into land in circumstances which may result in a contaminant entering water,*

*Is a **discretionary** activity, unless it is:*

(a) *Prohibited by a rule in 12.C.0; or*
(b) *Permitted by a rule in 12.C.1; or*
(c) *Provided for by a rule in 12.C.2.*

A discharge permit is also required pursuant to Rule 12.B.4.1 of the RPW with regards to discharges from an industrial or trade premise:

*The discharge of water (excluding stormwater) or any contaminant from an industrial or trade premises or a consented dam to water or to land is a **discretionary** activity, unless it is permitted by Rule 12.B.1.6, 12.B.1.7, 12.B.1.10 or 12.B.1.11.*

5.2 Regional Plan: Air for Otago

Rule 16.3.5.2 of the Regional Plan: Air for Otago (RPA) states:

The discharge of contaminants into air from the sorting, crushing, screening, storage and conveying (including loading and unloading) of fertilisers, grains, berries, coal, coke, wood chips, sawdust, wood shavings, bark, sand, aggregates, and other powdered and bulk products whether in dry or liquid form, where:

1. *The total capacity of outside storage of bulk materials is less than 1,000 m3 if located on a site in Air Zone 1 or 2; and*
2. *The crushing and screening of bulk materials is at a rate less than 100 tonnes an hour;*

*Is a **permitted activity,** providing any discharge of odour, or particulate matter is not offensive or objectionable at or beyond the boundary of the property.*

Rule 16.3.5.3 states:

The discharge of contaminants into air from:

1. *The extraction of minerals from the surface or from an open pit at a rate less than 20,000 cubic metres per month and 100,000 cubic metres per year; or*
2. *The crushing and screening of minerals at a rate less than 200 tonnes an hour; or*
3. *The drying or heating of minerals from single activities or a combination of activities on one site with equipment that has a heat generation capacity of less than 500 kW; or*
4. *The making of refractory, bricks or ceramic products at a rate less than 200 kg/hr of products;*

*is a **permitted activity**, providing:*

(a) *The mineral extraction, crushing and screening activities are located in Air Zone 3; and*
(b) *In the case of equipment installed after 28 February 1998, any chimney complies with Schedule 6 ("Determination of Chimney Heights"); and*
(c) *Any discharge of smoke, odour or particulate matter is not noxious, dangerous, offensive or objectionable at or beyond the boundary of the property.*

The site is located within Air Zone 3, however, as the gold plant will be wet screening at a rate of up to 330 tonnes per hour (180 m^3 of gravel), the permitted activity provisions of Rules 16.3.5.2 and 16.3.5.3 above cannot be met. Consent is therefore required pursuant to Rule 16.3.5.9 below:

*Except as provided for by Rules 16.3.5.1 to 16.3.5.8 and 16.3.6.1, 16.3.6.2, 16.3.7.1, 16.3.9.2, 16.3.10.1, 16.3.10.2, 16.3.11.1, 16.3.13.1 and 16.3.13.2, or prohibited by Rule 16.3.3.1, the discharge of contaminants into air from industrial or trade processes is a **discretionary activity.***

The Hearing Panel may grant or decline the application, and if granted may impose conditions of consent in accordance with Section 108 of the Act.

All other relevant permitted activity rules are complied with, unless discussed above.

6. 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.

The remaining matters of Section 104 to be considered when assessing an application for a resource consent are:

(a) 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), the Regional Plan: Water (RPW); and

(c) any other matter the Council considers relevant and reasonably necessary to determine the application.

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

Section 104(1)(a) of the RMA requires the council to have regard to any actual and potential effects on the environment of allowing the activity. This includes both the positive and the adverse effects.

I consider that the adverse effects of the activity on the environment relate to:

- Effects on Aquifer
- Effects on Surface Water Bodies and Allocation
- Effects on Natural Character and Amenity values
- Effects on Surface Water Quality
- Effects on Other Water Users
- Effects on Groundwater Quality
- Effects on Freshwater Ecology
- Effects on Cultural Values
- Effects on Heritage Values
- Effects on Air Quality and Human Health

It is understood that the Applicant has engaged with Aukaha (representing Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga ō Ōtākou and Hokonui Rūnanga (Kā Rūnaka)) and TRONT with a view to procuring a Cultural Impact Assessment and finalising their archaeological assessment. At the time of preparing this section 42A report, these documents have not been forthcoming. Further information is also required to assess whether the proposal provides for the mauri of wai māori and gives effect to Te Mana o Te Wai.

It may be that further information is forthcoming in respect of submitters' views as to these effects and how they are to be addressed during the hearing process. Should additional information be presented, I will reassess my opinion at that time.

In summary however, presently, based on what is known to the section 42A report author at the date of this report, and subject to the receipt of further information, it is considered that adverse effects on the

matters listed above can be appropriately managed and mitigated so to be less than minor, except for adverse effects on cultural values and heritage values, which are considered to be at least minor, and adverse effects on groundwater quality, which are considered to be no more than minor.

A set of **draft** conditions is provided in **Appendix A**. These comprise conditions proposed by the Applicant and additional conditions which are considered necessary to manage adverse effects on the environment. It is noted that these do not address potential effects on cultural and historic heritage values.

The application has been audited by the following technical experts:

- Ms Alexandra Badenhop of E3 Scientific – groundwater assessment.
- Mr Mark Hamer of E3 Scientific – ecology assessment.
- Mr Cameron Brown of Pattle Delamore Partners Ltd – air quality assessment.

6.1.1 General Considerations

Permitted baseline

The permitted baseline refers to the effects of permitted activities on the subject site and does not include activities authorised by a resource consent. The permitted baseline may be taken into account and the council has the discretion to disregard those effects where an activity is not fanciful.

In this case, the construction of a bore (in this case, a mine pit where it intercepts groundwater) requires consent as a controlled activity. Given that the other mining activities could not be undertaken without this, the permitted baseline is considered to be of little relevance and is not applied in the assessment below.

Receiving Environment Assessment

When processing a resource consent regard must be had to what constitutes the "environment" to inform the assessment of the effects of a proposal. Section 95A(8) and section 104(1)(a) each require an assessment of the adverse effects or actual and potential effects on the environment respectively in order to make a decision on notification as well as make the substantial decision whether to grant or to refuse a consent.

The receiving environment beyond the subject site includes permitted activities under the relevant plans, lawfully established activities (via existing use rights or resource consent), and any unimplemented resource consents that are likely to be implemented. For resource consents issued by regional councils that are of limited duration, case law has confirmed that for activities that are seeking to be reconsented, the activities subject to those consents should not form part of the receiving environment as it cannot be assumed that existing consents with finite terms will in fact be replaced or replaced on the same conditions. Similarly, the consent term of resource consents for lawfully established activities needs to be considered when considering the effects of the proposed activity on them.

In this case, the receiving environment includes:

- The site and surrounds are zoned Rural Resource Area, and the surrounding land use is predominantly pastoral farming activities.
- The site is bound by the Clutha River/Mata-Au to the west.
- The Millers Flat township is located approximately 700 m to the southeast of the site at its nearest point. The Ettrick township is located approximately 800 m to the northwest of the site at its nearest point.
- The Clutha Gold Cycle Trail runs to the west and south-west of the site along the Clutha River/Mata-Au, and cuts through the site via a paper road, to Teviot Road.
- Permitted groundwater takes in the locality.
- There are no unimplemented consents in proximity to the site.

Positive effects

The application states that the proposal will promote the economic and social wellbeing of the community, but does not demonstrate how. That is, it is unclear whether the proposal would provide local employment opportunities, or whether workers would be brought in from elsewhere. The application also does not provide evidence of how the mining activity will support the local or regional economy. Overall, the application does not demonstrate that the benefits are so compelling that consent should be granted, in light of other considerations, such as the direction in the plans, and the adverse effects of the proposal.

Adverse effects

In considering the adverse effects, the Consent Authority:

- may disregard those effects where the plan permits an activity with that effect; and
- must disregard those effects on a person who has provided written approval.

Any adverse effects on persons who have provided written approvals (identified in Table 6) are disregarded.

Table 6: Written approvals received.

Party	**Address**
Alan Parker	1534 and 1536 Teviot Road
Gregory and Chika Liyawarachchi	1403 Teviot Road
Alana and Janet Tong	1537 Teviot Road
Eoin and Noeline Garden	1535 Teviot Road
Isabelle and Bernard Affleck	23A Oven Hill Road
Robyn Pannett	1313 Teviot Road
Wayne Moore	Oven Hill Road
Gabrielle Claire Campbell-Lloyd and Gareth David Wilson	1406 Teviot Road
Jacks Ridge Limited	1426 Teviot Road

L.A. and P.F. Crawford	1346 Teviot Road
Donna May Parker	14B Foxs Terrace, Arrowtown
Matt Hunter and Georgia Parker	1534 Teviot Road

The assessment of adverse effects undertaken for notification identified and evaluated adverse effects, and these are adopted for the purposes of s104(1)(a).

6.1.2 Effects on Aquifer Allocation

Maximum allocation limits (and aquifer restrictions, discussed below) are a means of managing the cumulative effects of groundwater takes on long-term storage of an aquifer and on outflows to surface water bodies, while avoiding contamination of groundwater and surface water resources, and permanent aquifer compression.

Parts of the proposed mine site will occur within 50 metres of both the Clutha River/Mata-Au and the Tima Burn. Under Policy 6.4.1A of the RPW, when the groundwater take is within 100 metres of any perennial surface water body, the take is allocated as surface water. The Clutha River/Mata-Au is a perennial water body; the Tima Burn is not. When groundwater is being taken within 100 metres of the Clutha River/Mata-au, it needs to be allocated from the Clutha River/Mata-Au.

The Application states that the groundwater is contained within an unconfined aquifer above and adjacent to the Clutha River/Mata-Au. Groundwater use within the aquifer includes domestic household, stock water and irrigation supply. There are a number of bores surrounding the mine site that may be affected by the groundwater drawdown, as identified in Table 3 above, and discussed in Section 6.1.7 below.

The Applicant states that the maximum instantaneous rate of take will be around 124.8 L/s but will only occur at the start of dewatering. To maintain the lowered groundwater level in the pit, the annual 'steady state' average will be less than 48 L/s. Some groundwater will be used for alluvial wash processing, which will be returned to the mine pit pond.

The Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 and the RPW define a non-consumptive take as when:

(1) The same amount of water is returned to the same water body at or near the location from which it was taken; and
(2) there is no significant delay between the taking and returning of water.

The Applicant states that any water taken for the proposed mine pit pond dewatering and alluvial wash processing meets the definition of a non-consumptive take. That is, the groundwater taken is not utilised for any consumptive means, and the water abstracted is discharged to land and subsequently to the receiving waterbody (water table aquifer and/or Clutha River/Mata-Au) within a very short timeframe, and in a location consistent with the existing aquifer and Clutha River/Mata-Au surface

water feature. It is determined that mine pit pond dewatering and use for alluvial wash processing can meet the definition of a non-consumptive take.

It is noted that the submission from JP Clarke et al. raises concerns about the use of water, noting that the processing of gravels is anticipated, but that the potential volumes to be used for this purpose are not quantified. While the application does not specifically quantify volumes to be used for this purpose, these fall within the total abstraction volumes, and, as above, I am satisfied that this use is non-consumptive.

The Application states that a "relatively small" amount of water will be used for dust suppression and/or rehabilitation. The application does not provide a breakdown of the different water uses, therefore the likely percentage of water uses, particularly for dust suppression, is unknown. Regardless of whether the water take is allocated as surface water or groundwater, the Applicant has confirmed that volumes for consumptive use, i.e. dust suppression and rehabilitation, will be within the allocation limits of the Clutha River/Mata-au and the aquifer. It is noted that permitted activity rules provide for abstraction from the Clutha River/Mata-Au (including hydraulically connected groundwater) up to 100 L/s and 1,000,000 L/day, and groundwater takes up to 25,000 L/day.

Overall, the take will be predominantly non-consumptive, and water taken during initial dewatering will be returned to land overlying the aquifer and allowed to soak back into groundwater. Furthermore, no restriction levels have been set for the unmapped aquifer. Therefore, any adverse effects on aquifer allocation are considered to be less than minor.

6.1.3 Effects on Surface Water Bodies and Allocation

When an aquifer is hydraulically linked to a surface water body, a groundwater take could affect flows, water quality, aquatic ecosystems, amenity values, recreational values, and the spiritual and cultural values of that water body. The Applicant states that hydraulic connection exists between the aquifer and the Clutha River/Mata-Au. The direction of groundwater flow at the mine site is predominantly from the northeast to southwest towards the Clutha River/Mata-Au.

The Applicant states that predicted stream depletion suggests that up to approximately 75 L/s may potentially be depleted from the Clutha River/Mata-Au for a short duration when mine pit dewatering is in close proximity. The predicted maximum stream depletion of 75 L/s equates to 0.03 % of the 7-day Mean annual low flow (MALF) for the Clutha River/Mata-Au. The Application notes that, additionally, full discharge of any net dewatering flow is required to be made to discharge-seepage area(s) adjacent to the river in the same reach that may incur any stream depletion effect. Therefore, any stream depletion that may occur would be offset.

Given the predicted maximum stream depletion and the predominantly non-consumptive use of water, adverse stream depletion effects on the Clutha River/Mata – Au are considered to be less than minor.

As noted in Section 2.1 above, the Applicant has offered several conditions to require ongoing monitoring of flows in the Tima Burn, as well as flow augmentation during periods where any water table level decline as a result of the mine dewatering exceeds 0.2 m adjacent to the reach of the Tima

Burn from Millers Flat Road Bridge to the confluence with the Clutha River/Mata-Au. The Applicant proposes to maintain a flow of 21 L/s, and any water flow augmentation to the Tima Burn will be fresh (clean) water. The Applicant's proposed flow augmentation conditions have been drafted in consultation with, and accepted by, E3. Given the mitigation measures proposed, potential stream depletion effects on the Tima Burn are considered to be appropriately mitigated.

As noted above, there are no Regionally Significant Wetlands or any known regionally significant wetland values or natural inland wetlands that will be affected by the proposed water take.

Overall, provided the works are undertaken in accordance with the Application and the recommended consent conditions, potential adverse stream depletion effects on surface water bodies are considered to be no more than minor.

6.1.4 Effects on Surface Water Quality

The proposed discharge of sediment-laden water to land has the potential to impact water quality of surface water bodies. In this case, excess water from the dewatering activity will be discharged to an infiltration pond via a sediment retention pond, where sediments will settle out, and seep back into the groundwater before migrating laterally to the Clutha River/Mata-Au. The infiltration pond will be located at least 50 m from the Clutha River/Mata-Au, and the Applicant proposes a minimum discharge buffer zone of 50 m from the river.

Environmental Associates Limited (EAL), on behalf of the Applicant, has conservatively calculated an average groundwater velocity of around 10 m/day. Based on this estimated velocity, a minimum setback of 50 m from the Clutha River/Mata-Au, and the diffuse nature of the discharge, EAL considers that any increased turbidity from mine pit pond dewatering and subsequent pre-treatment and discharge to land, would be sufficiently remediated by the in-situ gravels, such that there would be no measurable impact on surface waters.

It is noted that the Applicant also proposes ongoing quarterly water quality monitoring for total suspended solids and turbidity to be undertaken at, within 100 m upstream of, and within 500 m downstream of, the final infiltration pond/area discharge. A condition of consent is also recommended to outline non-conformance procedures.

Recommended consent conditions and conditions offered by the Applicant, as attached in Appendix 1, would also ensure that any water for flow augmentation of the Tima Burn will be fresh (clean) and oxygenated, and that a setback of 50 m be maintained from the Tima Burn for discharges.

<u>Submitter concerns</u>

In his submission, Mr Graeme Young discusses the decline in water quality of an unnamed stream that runs through his property, to the north of the proposed mine site, noting "*In this 5 year period the creek has gone from a clean aquatic life supporting water source to a sediment laden sewer."* Mr Young also notes that other fishermen concur that this part of the Clutha River/Mata-Au are fishing poorly, and considers it a warning about the health of the river which should not be ignored. He has concerns that

the mining activity will contaminate the river, noting the sheer amount of water proposed to be abstracted, and contaminated with sediment, each day and pumped back onto land.

The application does not specify minimum setbacks from this stream, however, it is recommended that the same setbacks from the Clutha River/Mata-Au and the Tima Burn should apply to ensure that water quality of the stream is not further degraded as a result of the mining activity.

Given the setbacks of discharges from surface water bodies and mitigation measures proposed by the Applicant, and subject to recommended consent conditions, it is considered that adverse effects on the water quality of surface water bodies can be appropriately managed and mitigated, so to be less than minor.

6.1.5 Effects on Natural Character and Amenity Values

As outlined in Section 4.1 above, the Tima Burn and Clutha River/Mata-Au have a number of significant natural character, amenity and recreation values.

Policy 5.4.8 of the RPW lists matters to which particular regard should be had when considering adverse effects on the natural character of rivers, being:

a) The topography, including the setting and bed form of the lake or river;
b) The natural flow characteristics of the river;
c) The natural water level of the lake and its fluctuation;
d) The natural water colour and clarity in the lake or river;
e) The ecology of the lake or river and its margins; and
f) The extent of use or development within the catchment, including the extent to which that use and development has influenced matters (a) to (e) above.

The proposal will not impact the topography, natural flow characteristics, natural water colour, clarity or water level, or ecology of the Clutha River/Mata-Au. As discussed in Section 6.1.3, the mining activity may impact flows of the Tima Burn, however, flow augmentation conditions are proposed by the Applicant and have been deemed appropriate by Mr Hamer of E3.

Policy 5.4.9 of the RPW also lists matters to which particular regard should be had when considering adverse effects on amenity values of rivers, being:

a) Aesthetic values associated with the lake or river; and
b) Recreational opportunities provided by the lake or river, or its margins.

No works are proposed within the bed of the Clutha River/Mata-Au or the Tima Burn; the Applicant proposes a 20 m setback of works from both water bodies, as well as a 50 m setback for any discharges. I consider these setbacks to be sufficient, in addition to the predominantly non-consumptive nature of the water take, and mitigation measures proposed, to mitigate adverse effects on natural character, amenity and any recreational values of the watercourse.

Overall, it is considered that the effect on natural character and amenity values of the Clutha River/Mata-Au and the Tima Burn as a result of the proposed activity will be less than minor.

6.1.6 Effects on Groundwater Quality

Several submissions raise concerns about potential effects of the proposal on groundwater quality and the Millers Flat water supply. As Ms Badenhop notes in her technical review, the key issues in respect of groundwater quality are from sediment discharges from washing, the mobilisation of contaminants from the closed landfill, and the possible introduction of sediments during augmentation. The submission of Mr Young also raises concerns about the potential for dust mitigation measures, namely water cannons and/or sprinklers, to contaminate groundwater beneath the site.

6.1.6a Contaminated land

The cone of depression created by water abstraction may extend to areas where there could be the potential of groundwater contamination (i.e., from contaminated sites, landfills or effluent discharges), hastening migration or recharge of contamination through the aquifer.

As noted in Section 4.1 above, a portion of the site is a registered HAIL site, being a closed landfill. The Application states that no works will be undertaken within the area of contaminated land, and the Applicant has advised that a 50 m setback will be maintained from the HAIL site. A Preliminary Site Investigation (PSI) prepared by contaminated site specialists EC Otago on behalf of the Applicant in June 2022, found that, at or beyond the buffer zone set for mining purposes, there was no contamination present from the landfill that exceeded natural background levels. The Applicant's groundwater assessment also states that static water levels of well G43/0112 measured as part of landfill monitoring, ranged from 10.8 m to 11.62 below land surface, and that the assessment made by the Council is that the aquifer static water level in the vicinity of the landfill is at least 6 m below the base of the landfill.

Given the above, EAL states that considering the groundwater extraction for mine dewatering would draw upon a moderately large areal extent of the aquifer, significant dilution of any naturally (currently) occurring landfill drainage will result, and that effects on the environment or any person with regard to potential contamination were not considered to be measurable.

When assessing this information on behalf of ORC, Ms Badenhop noted that the Applicant's PSI only assessed surface contamination, and therefore has limited value in respect of potential groundwater contamination effects. Whilst there is an unsaturated zone beneath the landfill, Ms Badenhop noted that this does not mean that there is not a contaminated plume of water beneath the landfill that could be mobilised during the mine pit dewatering. However, she does consider that dilution of contaminated waters is likely to reduce potential effects, if the extent of the plume is not large. Given this uncertainty, Ms Badenhop has recommended that dedicated monitoring bores are installed on the site boundaries, with ongoing monitoring of turbidity, total suspended solids, and landfill contaminant indicators such as NH4-N, Cl, and metals. She also notes that sampling of groundwater below the landfill would provide greater certainty in respect of risk from this source. The static groundwater level in the vicinity of the landfill is at least 6 metres below the base of the landfill contamination area.

As detailed above, Ms Badenhop has recommended monitoring be undertaken as a precautionary approach to ensure that any potential contamination is not spread into the aquifer. It is therefore recommended that groundwater monitoring be undertaken prior to commencement of works to understand the risk of groundwater contamination. Recommended monitoring conditions will also ensure that provision can be made for alternate water supplies for groundwater users, should monitoring indicate they may be impacted. As Ms Badenhop was unavailable at the time of writing this report, her colleague and senior environmental scientist, Mr Simon Bloomberg, has recommended monitoring bore locations to reflect Ms Badenhop's recommendations. These are accepted, and are appended to the recommended consent conditions.

Overall, subject to the activity being undertaken with recommended conditions, potential effects in respect of groundwater contamination from the landfill are expected to be no more than minor.

6.1.6b Sedimentation

An assessment of potential adverse effects upon aquifer water quality is provided at Pages 44 and 45 of the Groundwater Assessment prepared by EAL. EAL notes that the process of abstraction of sediment-laden water from the mine pond is replaced by recharge from the aquifer ensures a positive head or flow will be maintained toward the mine pond at all times. Therefore, there is no potential for any of the sediment-laden pond water, or stormwater, to be introduced into the aquifer.

EAL also acknowledges that a small area in the northern portion of the mine site may require augmentation to enable successful operation of the mine plant, as the aquifer saturated thickness may be less than 2 m in that location. Where augmentation is required, EAL considers that a modest negative head or pond outflow to the aquifer could result, which may introduce some sediment-laden water to the saturated gravels surrounding the mine pit pond.

Overall, EAL considers that a small amount of sediment-laden water may progress into the aquifer, however, this can be offset by continued water abstraction to again establish a positive head toward the mine pit pond and remove the majority of any sediment-laden water.

As noted in Section 6.1.6a above, Ms Badenhop recommends that dedicated monitoring bores are installed on the site boundaries and ongoing groundwater quality monitoring conditions to provide an indication of any groundwater contamination and provide early warning to groundwater users. I recommend a consent condition requiring that the Applicant provides bore owners with a sufficient alternative potable water supply, should monitoring indicate that the mining activity has contaminated groundwater.

The Millers Flat Water Company (MFWC) recommends that, in addition to proposed groundwater level and water quality monitoring, the Applicant should be required to arrange a technical assessment by a suitably qualified independent professional of all groundwater level and groundwater quality data collected each year to determine if the predictions made in the application are correct and whether any effects on the MFWC water course are likely. MFWC suggest that this information be provided to them, as well as ORC, so they are able to ensure the water source remains safe and reliable for water users. I have recommended consent conditions in this regard.

It is noted that the Ministry of Education has also raised concerns about potential effects on groundwater quality, and considers that a groundwater quality baseline should be established prior to commencement of operations, as well as an ongoing groundwater monitoring programme. As above, I have recommended consent conditions in this regard.

Overall, subject to recommended consent conditions to address the areas of uncertainty outlined above, potential adverse effects on groundwater quality are expected to be no more than minor.

6.1.7 Adverse Effects on Other Water Users (Water Quantity)

Abstraction of groundwater creates a cone of depression in groundwater levels (drawdown) that extends laterally from the pumping bore as water is abstracted. This may result in lowering groundwater levels in neighbouring bores. The lowering and/or consequent change in aquifer characteristics may prevent existing users from taking their authorised amount.

The Applicant's groundwater assessment predicts maximum drawdowns on a number of neighbouring bores, as outlined in Table 3 above. As the Applicant has not obtained the written approval of all of the affected neighbouring bore owners identified, only the effects on those who have provided written approval can be discounted in accordance with s95D(e).

Given the drawdown on neighbouring bore owners is identified to breach the thresholds detailed in Schedule 5B of the RPW, there is potential for the reliability of supply in these bores to be affected. In this case, the following bores have been identified as potentially affected, and these parties have not provided written approval:

Table 7: Potentially affected bores and owners.

Bore number	Owner	Purpose	Proximity to site
G44/0111	Wendy Gunn	Domestic supply	Approximately 450 m
G44/0132	Wendy Gunn	Domestic supply	Approximately 380 m
G43/0079	Gregory Fenwick Sligo	Domestic supply	Approximately 413 m
G43/0184	B & T Fairhurst	Domestic supply	Approximately 149 m
G43/0185	B & T Fairhust	Domestic supply	Approximately 144 m

It is noted that submissions have not been received from the parties identified in Table 7 above.

The MoE's submission states that they have received technical advice which indicates that the Millers Flat School bore may experience drawdown effects, and notes that further information should be provided on potential drawdown effects. Given that this submission relates to the CODC application, it is unclear whether MoE has reviewed the groundwater assessment submitted with this (ORC) application. It is noted, however, that the Millers Flat School bore (G44/0028) has not been identified as having potential adverse drawdown effects from the proposal.

The Applicant proposes to augment the water supply of any affected groundwater users through connections to the Millers Flat Water Scheme and/or repositioning/deepening existing water takes. In regard to the former option, the MFWC submission raises the issue of its ability to provide additional

connections to bore owners who may be affected by the proposal, noting that there is currently spare available capacity of 22 connections. MFWC advise that the Applicant initially suggested up to 22 connections would be required, but this has been reduced to 13 connections.

Following discussions with the Applicant, MFWC considered that a written agreement was required which specified matters such as the maximum number of connections required, location, duration, costs, ownership of connections, and timing. The Applicant did not think this was necessary, and MFWC subsequently confirmed that it would "consider applications for new connections within the reticulation of its scheme as and when required." These connections are therefore not guaranteed. There are alternative options available to the Applicant, however, and the EAL's assessment notes that an appropriate temporary groundwater or other water source will be provided to affected well owners, if and when required.

Ms Badenhop accepts EAL's assessment in respect of drawdown effects on neighbouring bores, provided the Applicant provides an alternative water supply for all affected groundwater users.

Given the above, I consider that drawdown effects on surrounding groundwater users will be minor, however, subject to recommended consent conditions requiring the Applicant to provide sufficient alternative water supply, I consider that these adverse effects can be appropriately mitigated, so to be less than minor.

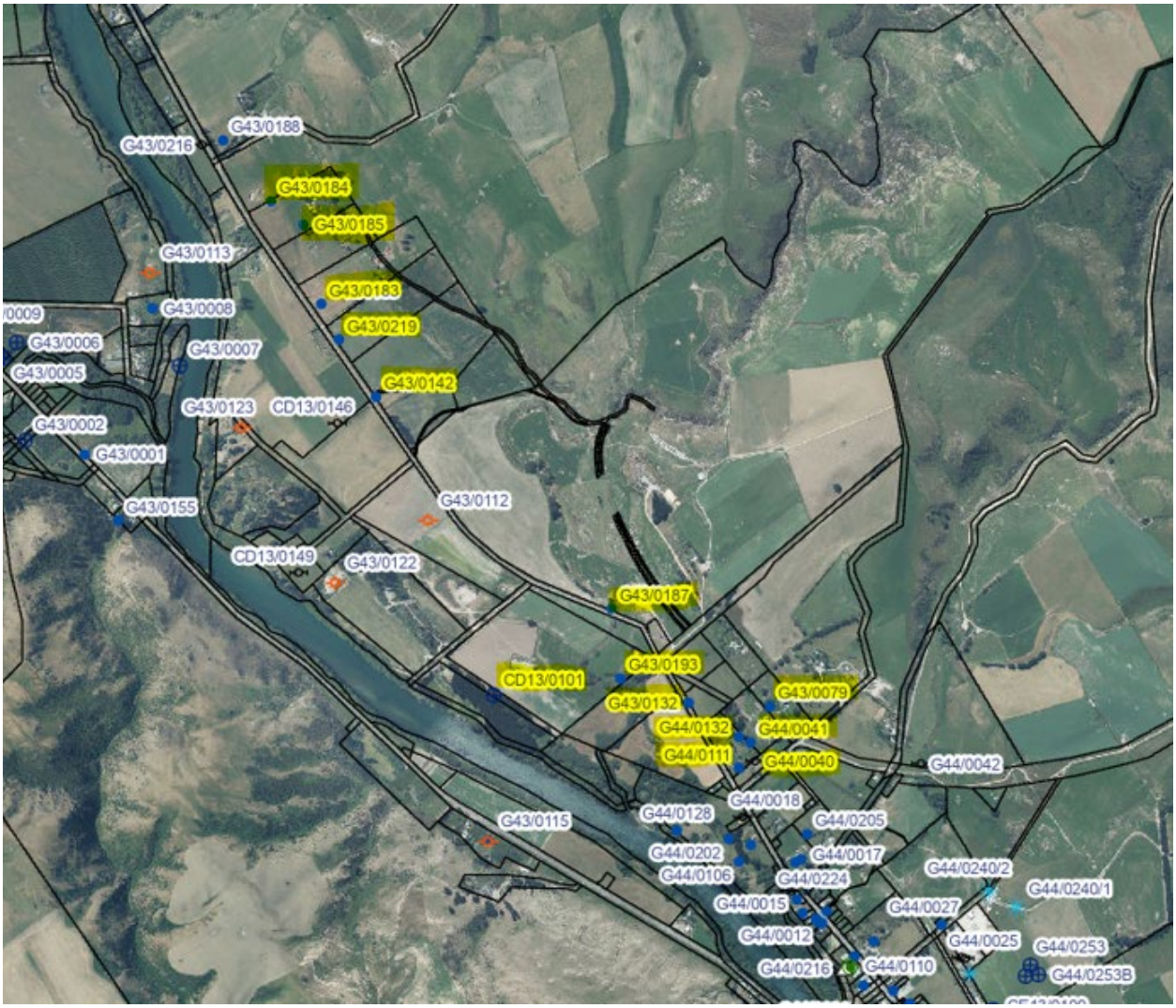

Figure 9: Aerial of site and surrounds highlighting affected bores, as identified in the application. As noted in Section 4.1 above, G43/0184 and G43/0185 were identified as potentially affected post-lodgement. [Source: GIS maps].

EAL has also provided an assessment of effects on the nearest community drinking water supply, from bore G44/0225, located approximately 1.6 km to the southeast of the site. The bore is located approximately 36 m from the Clutha River/Mata-Au, and EAL notes that the pumped drawdown of the well is no greater than 1.6 m, which indicates that the well has hydraulic connection to the Clutha River/Mata-Au. EAL has determined that the maximum seasonal drawdown effects upon well G44/0225 will be less than 0.2 m, and otherwise nil to not measureable. Overall, adverse effects on this community water supply are considered to be less than minor.

There are two consented water takes within the vicinity of the proposed activity. Water Permit RM21.291 is located upstream of the proposed works, and the Consent Holders, LA and PF Crawford, have provided their written approval to the application, so effects on their surface water take cannot be considered. Water Permit 2004.424 is a surface water take located approximately 300 metres

downstream of the closest boundary of the proposed site, and is held by Minzion Station Limited. This take is not considered to be adversely affected by the proposal.

Overall, given the above, and the assessments in Sections 6.1.4 and 6.1.5, adverse effects on surface water users will be less than minor, and subject to recommended consent conditions, adverse effects on groundwater users can be mitigated, so to be less minor.

6.1.8 Effects on Freshwater Ecology

As noted in Section 4.1.1 above, the Tima Burn has several Schedule 1A values, including the presence of indigenous fish species threatened with extinction, and a significant habitat for koaro.

The Applicant has submitted an ecological report, prepared by Water Ways Consulting, to assess instream values of the Tima Burn and potential adverse effects of any loss of flow on the river. This assessment concludes as follows:

- That the lower Tima Burn has a low diversity, low abundance, poor habitat/pollution tolerant macroinvertebrate and fish fauna, noting that this fauna is the most depleted in the reach below Teviot Road where the Tima Burn is reported to dry in the summer.
- In the event that the mine pit dewatering leads to a reduction in flow in the Tima Burn, Water Ways Consulting considers that this is going to affect this reach of the Tima Burn below Teviot Road, which is already reported to dry in the summer.
- If water draw down occurs during high flow periods, outside the summer months, the likelihood of drying is smaller and the effect is more likely to be a reduction in flow and some reduction of riffle habitat. The report notes that this riffle habitat in some of the lower Tima Burn is comprised by the encroachment of willow root mats, and did not support any fish or sensitive macroinvertebrates, therefore a flow reduction is expected to have little effect on the lower Tima Burn aquatic fauna.
- Finally, the report concludes that, if the mine does affect the Tima Burn water levels, any loss of aquatic fauna will not be permanent and the stream will recover to its present quality state in less than 12 months, and most likely, in less than six months.

This report was technically audited by Mr Mark Hamer of E3 Scientific, who is satisfied that the natural character, native and sport fish values and sensitive attributes of the Tima Burn have been appropriately assessed. Mr Hamer notes that the habitat quality is accurately identified as poor quality, however, the presence of two threatened fish (longfin eel and inanga) indicate that the stream values are high.

The Applicant's ecological assessment offers three potential scenarios that could occur, given the uncertainty around the stream connectivity to shallow groundwater at the site. As noted in Section 6.1.3 above, several conditions are outlined in the Applicant's hydrological report, which will require that flows of the Tima Burn are augmented when dewatering causes a 0.2 m water table level decline adjacent to the reach of the Tima Burn. Mr Hamer considers the precautionary approach proposed to augment the stream flow to be the most appropriate from an ecological perspective, noting some recommended changes to the flow augmentation conditions:

- That groundwater taken and supplied to the Tima Burn shall be metered.
- That the Teviot Road Bridge, rather than the Millers Flat Bridge is utilised.
- That dissolved oxygen is monitored downstream (after reasonable mixing) of the flow augmentation input on the Tima Burn. To support ecological values, the 7-day mean minimum Dissolved Oxygen level at this sampling location shall be >8 mg/L.

The Applicant has accepted these changes and is happy to incorporate them in the consent conditions.

Given the above, potential adverse effects on the ecological values of the Tima Burn are considered to be no more than minor.

6.1.9 Effects on Cultural Values

The Applicant acknowledges in their application, that in respect of cultural values, the Clutha River/Mata-Au between Alexandra and Island Block is significant to Kāi Tahu, due to its spiritual importance and as a potential food and material source.

The Applicant's groundwater report provides some assessment of effects of the proposal on iwi values. The following is extracted from the groundwater report, by way of summary:

- *"The resulting impact of the proposed discharge upon mana whenua values associated with the Mata-au will not be discernible, or otherwise of any offensive nature to local Iwi. The nature and methodology of the discharge (and resulting non-measureable effect upon water quality), will maintain the mauri of the Mata-au, and the activity itself will give effect to Te Mana o te Wai, with respect to the importance of the waterbody and in maintaining the health and wellbeing of that environment. Cultural and spiritual values associated with the Mata-au, including historic and traditional association with local Iwi, will not be affected by the proposed discharge to land, as there are no effects of the activity that would otherwise alter or detract from those values which currently apply. Additionally, there is no cultural or spiritual change with respect to the mauri of the Mata-au waters, as there is no inter-catchment mixing of waters in relation to the discharge activity."*
- "*Notwithstanding the assessed effect of localised and temporary groundwater level decline, the balance of effect (being very small to not measurable), upon the Mata-Au and Tima Burn, represents a nil impact upon mahika kai. As a result of the assessment of effects for the proposed activities, the existing values of food resources and ecosystems within the Mata-Au and Tima Burn for local Iwi will be maintained."*
- *"The impacts of drawdown in relation to local groundwater supply (with alternate supply), maintaining long term integrity of the aquifer, and in maintaining Mata-Au flow and aquifer connection, will not be any more than minor and will be temporary in nature. At all times, the mauri of the Mata-au including the connection to the adjacent aquifer will be maintained."*

The groundwater assessment relies on the proposed mitigation measures previously discussed, i.e. proposed flow augmentation conditions for the Tima Burn, the 50 m buffer zone from the Clutha River/Mata-Au, and ongoing monitoring. The Applicant has not proposed conditions to specifically

mitigate cultural values, however, as previously noted, the Applicant has been in consultation with Aukaha, but at the time of writing of this report, a Cultural Impact Assessment has not been received.

As noted above, submissions in opposition of the proposal have been received from Aukaha and TRONT. Key points of Aukaha's submission are summarised below:

- Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga (Kā Rūnaka) oppose the applications, for reasons set out below.
- The Mata-Au and Tima Burn are part of an integral ancestral landscape that transcends the generations, noting that the potential for inappropriate development to degrade the values of the ancestral landscape is an issue of concern for mana whenua.
- Wai is of high significance to Kāi Tahu, and rivers are a symbol of permanence and a source of spiritual meaning. Waterways like the Mata-Au were important pathways, and are often still recognised as ara tawhito.
- Kāi Tahu has a cultural, spiritual, historic and traditional relationship with the Clutha catchments/Mata-Au, of which the proposed mining area is a part. Because of the long history of use of the Clutha/Mata-Au catchments as mahika kai, there are numerous urupā and wāhi tapu associated with the waterways across the catchment.
- The application area falls within a draft wāhi tupuna area known as the Mata-Au River Trail, which has a number of cultural values including, but not limited to, mahika kai, ara tawhito, archaeological values, nohoaka, wāhi tupuna, water transport routes, place names, urupā and pā.
- There is a mahika kai site in the vicinity of the mine area Omaiuru, located to the north west, and archaeological sites that are located in close proximity to the mine area.
- Mining, earthworks, groundwater takes, and the discharge of contaminants are a threat to the values of this wāhi tūpuna landscape and the relationship of Kāi Tahu with the Mata-Au.
- The current proposal does not recognise and sustain the connections and interactions between surface water bodies and the aquifer, nor does it sustain the on-going relationship of Kāi Tahu with wāhi tūpuna in this catchment.
- There are concerns about the effects of the proposal on Te Taiao, Te Mana o te Wai, and the values of the ancestral landscape.
- There is insufficient information to assess whether the proposal provides for the mauri of wai māori and gives effect to Te Mana o Te Wai; the application is not supported by aquifer testing or an assessment of impacts of the proposal on water quality.
- The proposal does not recognise and provide for the relationship of Kai Tahu with water, nor does it maintain and enhance the quality of the District's water resources.
- The proposal poses a threat to the values of the cultural landscape, and the Applicant has not taken into account the impact of the proposal on wai māori or the relationship of Kāi Tahu with this significant cultural landscape.
- Mining activities have the potential to destroy and modify archaeological sites. The Applicant has undertaken 5,118 m^3 of excavation works for the mine 'test pit' without first commissioning a heritage assessment. Aukaha acknowledge that a heritage assessment has since been commissioned, however, still have concerns about the lack of protection against the destruction and modification of archaeological sites, given the scale and nature of the

proposal, and excavation depths proposed. As noted in Section 4.1 above, the site lies between two recorded māori archaeological sites, G44/12 (midden/oven) and G43/2 (a surface scattering of oven stones and waste flakes).

- Concerns that the proposed consent conditions to mitigate effects on wai māori are not fit for purpose, and comprehensive water management supported by robust water quantity and quality monitoring are required to mitigate effects on the aquifer and surrounding water bodies.
- Significant concerns over potential discharge of contaminants to land and water from the excavation of the mine pit, sedimentation and migration of soils.
- TRONT's submission also raises concerns about adverse effects on the mauri of waterbodies, and supports Aukaha's submission.

As discussed in Sections 6.1.2 to 6.1.8 above, I consider that adverse effects on the physical aspects and mauri of water bodies, i.e. water quality and ecological values, can be appropriately managed and mitigated to an acceptable level. However, there is insufficient information to assess adverse effects on the metaphysical aspects of mauri and the intrinsic values of ecosystems, and to determine whether the proposal provides for the mauri of water bodies and gives effect to Te Mana o Te Wai.

Overall, the proposed mining activities are in an area of cultural significance, and Aukaha and TRONT have a number of concerns about the impact of the proposal on their relationship with Mata-Au and Tima Burn and the surrounding catchment.

As previously noted, the Applicant has sought to engage with Aukaha and TRONT to develop a Cultural Impact Assessment, but at the time of preparing this section 42A report, this has not been forthcoming.

It may be that further information is forthcoming in respect of submitters' views as to cultural effects and how they are to be addressed during the hearing process.

Presently however, based on what is known to the section 42A report author at the date of this report, and subject to the receipt of further information, it is considered that the conditions as currently proposed have not adequately addressed cultural effects, such that adverse effects on cultural values are considered to be at least minor.

6.1.10 Effects on Historic Heritage Values

As noted in Section 4.1, there are several registered historic places on the Clutha River/Mata-Au. These places are not located in close proximity to the site and are not considered to be adversely affected by the proposal. In addition to the two recorded māori archaeological sites noted above, there are two historic gold dredge mining sites within the mining area; G43/232 and G43/233.

The Applicant has commissioned an archaeological report, prepared by New Zealand Heritage Properties Limited, which I understand was intended to be a draft, to be finalised in consultation with Aukaha.

The archaeological report notes that there is potential for further unrecorded archaeological remains to be encountered throughout the project area, which may hold low to high archaeological value. The recorded archaeological sites are assessed as being of low to moderate value.

I understand an Archaeological Authority is also being sought, but it is noted that, at the time of writing this report, an authority has not been obtained.

The archaeological assessment notes that the proposed excavations *"will result in the total destruction* [of] *any archaeological remains encountered."* In particular, impacts on the archaeological values of G43/233 are described as being "major." The artefact scatter of G44/159 will be entirely removed, and impacts on this site are also described as being "major."

The archaeological assessment notes that the proposed bunds are necessary to ensure compliance with predicted noise levels at adjacent dwellings and mitigate impacts on rural amenity values, and provide a barrier to discourage the public accessing the area. The assessment confirms that these bunds will affect G43/232 and G43/233, which cannot be excluded from the works area.

Overall, the archaeological assessment concludes that, *"due to the nature of the proposed works the overall impact of the works on the archaeological values of both recorded and unrecorded sites will be major. However, with the recommended mitigation outlined in Section 9.2, the overall impact of the works would be reduced."* It is unclear to what extent these effects would be reduced, and therefore whether the proposed conditions adequately address cultural effects such that the effects remain at least minor.

As noted above Aukaha have concerns about the lack of protection against the destruction and modification of archaeological sites, given the scale and nature of the proposal, and excavation depths proposed.

The Applicant has sought to engage with Aukaha and TRONT to finalise the archaeological report but at the time of preparing this section 42A report, this has not been forthcoming. It may be that further information is forthcoming in respect of submitters' views as to heritage effects and how they are to be addressed during the hearing process.

Notwithstanding the above, based on what is known to the section 42A report author at the date of this report, and subject to the receipt of further information, given the potential for effects on archaeological values to be "major," and the uncertainty around the appropriateness of proposed mitigation measures, I consider that adverse effects on historic heritage values will be at least minor.

6.1.11 Effects on Air Quality and Human Health

The Applicant has submitted an assessment in support of the application, prepared by Air Matters, which has been reviewed by Mr Cameron Brown of Pattle Delamore Partners (PDP) on behalf of Council. A Dust Management Plan (DMP) has also been submitted with the application.

As described in Table 1 above, the activities that will generate dust will be:

- Topsoil and overburden removal and transport;
- Stockpiling of topsoil and overburden;
- Dredging of the wash with the excavator;
- Processing of alluvium through the gold plant;
- Replacing overburden and topsoil; and
- Vehicle movements on roads and accessways.

The predominant air discharge contaminant will be particulate matter in the form of dust. Combustion products will also be discharged in the emissions from the operation of machinery and vehicles.

The Air Matters AEE considers that air quality of the Millers Flat area is generally good, noting that air quality will be affected at times by local activities, including rural activities, such as dust emissions, emissions from open fires, and domestic activities. The report concludes that there is potential for adverse effects on neighbouring properties if the dust levels are not controlled and mitigated appropriately.

Several submissions raise concerns about potential dust effects on nearby sensitive receptors.

JP Clarke, KL Franklin and FG Works Limited's submission raises concerns about the health effects of respirable crystalline silica (RCS), which can be produced by the crushing and grinding of quartz-rich rock. The submissions states that the application notes that dry works may occur on the site, and the potential health of effects have not been assessed. I am unclear where the application states this and note that the Air Matters assessment and the AEE confirm that the processing of gold bearing wash is a wet process, therefore will not generate dust or RCS discharges. The Air Matters assessment also states that the potential for RCS to be generated is low, given that the activities on-site will not involve any crushing and grinding of material, however, notes that controls in place to measure dust will also adequately control any potential RSC emissions. Subject to the mitigation measures proposed, I therefore consider that adverse health effects in respect of RCS can be appropriately mitigated.

Several submissions raise concerns about dust generation, the effects on human health and on local businesses. JP Clarke et al. submit that the proposal will result in the generation of a significant amount of PM_{10} pollution that has not been assessed in the application, is unmanaged and not monitored in the north of the site. The Ministry of Education seeks clarity on the methods of dust suppression proposed, noting that there is no detail of the proposed DMP within the [CODC] application.

The Air Matters assessment states that "*PM_{10} emissions will be minimised to acceptable levels provided the dust mitigation measures as detailed in Section 5 are employed."* The DMP outlines dust mitigation procedures and identifies a Sensitive Receptor Management Zone (SRMZ) which includes four residences located within 250 m of the work site and the prevailing wind direction. The DMP outlines additional controls to be implemented in this zone, including undertaking potentially dusty works during winter, where practicable, reducing stockpile heights to 4 m, additional dust suppression, and the lowering wind speed triggers, if indicated by visual observations and boundary dust monitoring.

The DMP states that two real-time dust monitors will be installed in predominant downwind locations on, or near, the site boundary to measure PM_{10} concentrations. In his submission, Mr Young considers that the proposed two air quality monitors are "surely inadequate," and based on his own observations, considers that the Applicant has not mitigated potential dust from their existing 10 m high stockpiles. JP Clarke et al. also note that the application provides no information as to where these monitors would be sited.

It is noted that, in addition to the two monitors noted in the DMP, the Air Matters assessment also states that a dust monitor should be placed directly between the work site and high-risk sensitive receptors, where any activity is undertaken within 400 m of that receptor. I consider this appropriate.

In the event that trigger thresholds are exceeded, or repeated complaints are received, the DMP notes that monitoring data and recorded meteorological information will be analysed to identify the problem source. It is the Site Manager's responsibility to implement "Elimination of fugitive dust" procedures to reduce dust generation from the problem area, and works must cease if the problem persists, until a solution has been implemented.

Overall, given the proposed mitigation measures, Air Matters concludes that adverse effects of nuisance and health-related dust will be less than minor on the receiving environment. Mr Brown agrees with this conclusion that the air quality is generally good, given the nature of the rural surroundings and absence of other major sources of air contaminants. He also notes that the FIDOL (Frequency, Intensity, Duration, Offensiveness, and Location) assessment method in the Air Matters AEE reflects good practice and is of sufficient detail for the scale and type of activity proposed. He agrees that the proposed dust mitigation measures should be able to control dust, such that adverse effects can be less than minor.

In terms of potential adverse health effects, Mr Brown notes that monitoring and management procedures will ensure that emissions of respirable particulate are adequately controlled. Mr Brown also agrees with the Air Matters assessment in respect of potential health effects associated with dust.

The above conclusions are accepted. Overall, given the mitigation measures proposed to be implemented, and subject to recommended consent conditions, adverse dust effects on the environment and human health are considered to be appropriately managed and mitigated, so to be less than minor.

Greenhouse Gas Emissions

Mr Young's and JP Clarke et al.'s submissions also raise concerns about greenhouse gas emissions associated with the activity, the lack of assessment in this regard, and health impacts. It is noted that resource consent is not required for a discharge to air from products of combustion, as outlined in the Regional Plan: Air for Otago, as no fuel burning equipment is proposed. Consent is also not required under the National Environmental Standards for Air Quality. In terms of the National Environmental Standards for Greenhouse Gas Emissions from Industrial Process Heat, the site does not have fuel burning equipment or heat devices.

Ki Uta Ki Tai

With regard to ki uta ki tai, it is considered that the application recognises the interconnectedness of the whole environment, and the interactions between freshwater, land, water bodies, ecosystems, and receiving environments. This is because the proposed water take is predominantly non-consumptive, and water will be discharged to a settlement pond, then recharged to the aquifer once sediment is removed. The Applicant has also considered potential effects on surrounding groundwater users and will augment affected water supplies, as and when required. The Tima Burn will also be augmented as required.

There is insufficient information, however, to assess whether freshwater, and land use and development, in catchments is managed in an integrated and sustainable way to ensure the health and well-being of water bodies, freshwater ecosystems, and receiving environments.

The submission by Aukaha (supported by TRONT) states that the proposal *"does not recognise and sustain the connections and interactions between surface water bodies and the aquifer, nor does it sustain the on-going relationship of Kāi Tahu with wāhi tūpuna in this catchment."* Aukaha's submission also states that Kāi Tahu is unable to assess whether the proposal provides for the mauri of wai māori and gives effect to Te Mana o te Wai.
Given the above, the proposal does not achieve Ki Uta Ki Tai management.

Summary – Actual and Potential Effects
Taking into consideration the positive environmental effects identified above and the assessment of adverse effects done for notification purposes in Section 6.1, and based on what is known to the report writer at the date of this report, overall, actual and potential effects on the environment are considered on balance to be at least minor, due to the adverse effects on cultural values, groundwater quality and heritage values.

As noted above, there is currently insufficient information to assess the level of adverse effects on cultural and heritage values, and should additional information be presented, I will reassess my opinion at the time.

6.3 S104(1)(ab)

The Applicant has not proposed any measures to offset or compensate for any residual adverse effects that will or may result from allowing the activity.

6.3 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
- 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 Operative Regional Policy Statement and Proposed Regional Policy Statement
- The Regional Plan: Water for Otago
- The Regional Plan: Air for Otago
- Proposed Plan Change 7 (Water Permits) (PPC7)
- Proposed Plan Change 8 to the Water Plan

6.3.1 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 water 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.

Subject to the proposed mitigation measures, and recommended consent conditions, it is considered that adverse effects on any downstream registered drinking water supply can be appropriately managed.

6.3.2 Resource Management (National Environmental Standards for Freshwater) Regulation 2020 (NESFW)

The NESFW 2020 regulations came into force on 3 September 2020. They impose standards on a range of farming activities and other activities relating to freshwater. They also set out a framework for consenting certain activities if the standards are not met.

No resource consents are required under the NESFW for the proposed activities.

6.3.3 National Policy Statement Freshwater Management 2020 (NPS-FM)

The National Policy Statement for Freshwater Management 2020 ("NPS-FM") provides direction to local authorities and resource users regarding activities that affect the health of freshwater and sets out objectives and policies for freshwater management under the RMA.

The NPS-FM came into force on 3 September 2020, replacing the previous 2014 NPS-FM. Although it retains some of the same principals as the NPS-FM 2014, including a strengthened focus on Te Mana o te Wai, the NPS-FM 2020, amongst other things:

- Sets out a framework of objectives and policies to manage activities affecting freshwater in a way that prioritises first, the health and well-being of water bodies and freshwater ecosystems, second, the health needs of people, and third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.

- Requires regional councils to develop long-term visions for freshwater in their region and include those long-term visions as objectives in their regional policy statement.
- Requires every local authority to actively involve tangata whenua in freshwater management.
- Sets out a more expansive National Objectives Framework, and Freshwater Management Unit, environmental flows and levels setting, and take limit setting processes. This includes 13 new attribute states for ecosystem health, including national bottom lines and national targets.
- Specific requirements to protect streams and wetlands and to provide for fish passage – including new policies which must be included in all regional plans.

Part 2 of the NPS-FM sets out the national objective for future freshwater management and 15 separate policies that support this objective.

Relevant policies from the NPS-FM are considered below:

Table 8: Assessment against the provisions of the National Policy Statement for Freshwater Management

Provision	**Assessment**
Objective	
(1) The objective of this National Policy Statement is to ensure 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)* *(c) third, the ability of people and communities to provide for their social, economic, and cultural well-being, now and in the future.*	(a) As discussed in Sections 6.1.4 and 6.1.8 above, adverse effects on surface water quality and ecosystem values are considered to be appropriately mitigated. However, the level of adverse effects on groundwater quality is uncertain. Furthermore, given Aukaha's submission, there is insufficient information to determine whether the proposal provides for the mauri, and therefore the health and wellbeing, of water bodies. (b) Subject to the proposed mitigation measures and recommended consent conditions, it is considered that the proposal will not affect the health needs of people. (c) The application states that the proposal provides for the social and economic wellbeing of the local community, but does not demonstrate how. Aukaha also raise concerns about potential effects of the proposal on cultural values, Te Taiao, and Te Mana o Te Wai. Based on the information available to the time of writing this report, and subject to receipt of further information, the proposal is not considered to provide for cultural wellbeing.

	Overall, further information is required to assess whether the proposal is consistent with this objective.
Policies	
1: Freshwater is managed in a way that gives effect to Te Mana ō te Wai. The NPS-FM defines the concepts of Te Mana o Wai as being: *"Te Mana o te Wai is a concept that refers to the fundamental importance of water and recognises that protecting the health of freshwater protects the health and well-being of the wider environment. It protects the mauri of the wai. Te Mana o te Wai is about restoring and preserving the balance between the water, the wider environment, and the community."*	The Applicant has consulted with Aukaha, and the application has been publicly notified, enabling the involvement of tangata whenua in freshwater management. At the time of writing this report, a Cultural Impact Assessment had not been obtained. However, Aukaha has submitted on the application and has advised that they are unable to assess whether the proposal provides for the mauri of wai Māori and gives effect to Te Mana o Te Wai. There is therefore insufficient information to determine whether the proposal is consistent with these policies.
2: Tangata whenua are actively involved in freshwater management (including decision-making processes), and Māori freshwater values are identified and provided for.	
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.*	As noted above, the proposed water take is predominantly non-consumptive, and water will be discharged to a settlement pond, then recharged to the aquifer once sediment is removed. The Applicant has also considered potential effects on surrounding groundwater users and the Tima Burn and will augment affected water supplies and stream flows, as and when required. The proposal therefore gives consideration to the effects of the activity on a whole-of-catchment basis, and is considered to be consistent with this policy.
5: Freshwater is managed (including 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.	As discussed in Sections 6.1.4, 6.1.6 and 6.1.8 above, adverse effects on ecosystem values are considered to be appropriately mitigated, and adverse effects on surface water quality are considered to be acceptable. However, there is uncertainty around the level of effects on groundwater quality. Given this uncertainty, and the assessment against Objective 1 above, there is insufficient information to determine whether the proposal provides for the mauri, and

	therefore the health and wellbeing, of water bodies.
8: The significant values of outstanding water bodies are protected.	The NPSFM defines an outstanding water body as *a water body, or part of a water body, identified in a regional policy statement, a regional plan, or a water conservation order as having one or more outstanding values.* The RPW does not identify the Clutha River/Mata-Au as an outstanding water body, and the Clutha River/Mata-Au between Alexandra and Island Block is not identified in Schedule 1A as having any outstanding natural features or landscapes. Given that the Clutha River/Mata-Au is not identified as an outstanding water body in a regional policy statement, regional plan or water conservation order, Policy 8 is not considered to be applicable.
9: The habitats of indigenous freshwater species are protected. *10: The habitat of trout and salmon is protected, insofar as this is consistent with Policy 9.*	Given the mitigation measures proposed by the Applicant, and proposed setbacks from surface water bodies, adverse effects on the natural character and ecological values of the Tima Burn and Clutha River/Mata-Au are considered to be appropriately managed and mitigated. Therefore, the proposal is considered to be consistent with these policies.
11: Freshwater is allocated and used efficiently, all existing over-allocation is phased out, and future over-allocation is avoided.	The groundwater take will not result in over-allocation of the freshwater resource. The take is predominantly non-consumptive and there will be no significant delay between the taking and returning of the water taken, therefore the use is considered to be efficient, and the proposal is consistent with this 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.	The application does not provide evidence that the proposal will contribute to the social and economic well-being of the community. Based on the information known to the section 42A report author at the date of this report and subject to the receipt of further information, it is not considered that the proposal will provide for the cultural wellbeing of the community, given the concerns raised by Aukaha, noted above.

	Further information is required to assess the level of effects on cultural values, and determine whether the proposal is consistent with this policy.

As previously noted, the Applicant has sought to engage with Aukaha and TRONT to develop a Cultural Impact Assessment, but at the time of preparing this section 42A report, this has not been forthcoming.

Presently, based on what is known to the section 42A report author at the date of this report, and subject to receipt of further information, the current proposal is considered to be consistent with Policies 3, 9, 10 and 11 of the NPS-FM, however, further information is required to assess whether the proposal gives effect to Te Mana o Te Wai, and provides for the mauri of wai māori, and cultural wellbeing.

Should additional information be presented, I will reassess consistency of the proposal with the NPS-FM at that time.

6.3.5 Resource Management (Measurement and Reporting of Water Takes) Regulations 2010 and Amendment Regulations 2020

Whilst the proposed take is predominantly non-consumptive, the Applicant proposes to fully comply with these regulations and will undertake full metering and reporting of all water taken.

6.3.6 Operative Regional Policy Statement

The Operative RPS was made fully operative on the 30th of March 2024.

Table 9: Assessment against the provisions of the Operative Regional Policy Statement

Provision	Assessment
Chapter 1 – Resource management in Otago is integrated	
Objective 1.1 Otago's resources are used sustainably to promote economic, social, and cultural wellbeing for its people and communities	The application does not provide evidence that the proposal will provide for the social and economic wellbeing of the community. The proposal is considered to be a sustainable use of Otago's resources, given the predominantly non-consumptive water take, and subject to ongoing water quality monitoring. However, the proposal is not considered to provide for cultural wellbeing. Aukaha considers that the proposal does not recognise or provide for the relationship of Kāi Tahu with water.
Policy 1.1.1 Economic wellbeing 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 Social and cultural wellbeing and health and safety 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 by all of the following: a) Recognising and providing for Kāi Tahu values; b) Taking into account the values of other cultures; c) Taking into account the diverse needs of Otago's people and communities; d) Avoiding significant adverse effects of activities on human health; e) Promoting community resilience and the need to secure resources for the reasonable needs for human wellbeing; f) Promoting good quality and accessible infrastructure and public services.	The values and needs of the community have been taken into account, including those raised in submissions. Subject to the works being undertaken in accordance with the proposed mitigation measures and ongoing monitoring, it is not anticipated that the proposal will result in significant adverse effects on human health. Overall, further information is required to demonstrate how the proposal will provide for the wellbeing of local people and communities. Based on the information available at the time of writing this report, and subject to receipt of further assessment on effects on cultural values, the proposal is not considered to be consistent with Objective 1.1 or Policy 1.1.2 in respect of cultural wellbeing and providing for cultural values.
Chapter 2 – Kāi Tahu values and interests are recognised and kaitiakitanga is expressed	
Objective 2.1 The principles of Te Tiriti o Waitangi are taken into account in resource management processes and decisions	Kāi Tahu values, as identified in Schedule 1D of the RPW, have been taken into account in decision making. Particular regard has been had to the exercise of kaitiakitanga, and the relevant iwi management plans have been taken into account (assessed in Section 6.4.1 below). The statutory acknowledgement on the Clutha River/Mata-Au has also been recognised and provided for in the assessment of this application. As discussed throughout this report, Aukaha have raised a number of concerns with the proposal, and submit that the proposal does not recognise or provide for the relationship of Kāi Tahu with water, or sustain the ongoing relationship of Kāi Tahu with wāhi tupuna in the catchment. Given the above, the proposal is inconsistent with this policy.
Policy 2.1.2 Treaty principles Ensure that local authorities exercise their functions and powers, by: a) Recognising Kāi Tahu's status as a Treaty partner; and b) Involving Kāi Tahu in resource management processes implementation; c) Taking into account Kāi Tahu values in resource management decision-making processes and implementation; d) Recognising and providing for the relationship of Kāi Tahu's culture and traditions with their ancestral lands, water, sites, wāhi tapu, and other taoka; e) Ensuring Kāi Tahu have the ability to: i. Identify their relationship with their ancestral lands, water, sites, wāhi tapu, and other taoka; ii. Determine how best to express that relationship; f) Having particular regard to the exercise of kaitiakitaka;	

g) Ensuring that district and regional plans: i. Give effect to the Ngāi Tahu Claims Settlement Act 1998; ii. Recognise and provide for statutory acknowledgement areas in Schedule 2; iii. Provide for other areas in Otago that are recognised as significant to Kāi Tahu; h) Taking into account iwi management plans.	
Objective 2.2 Kāi Tahu values, interests and customary uses are recognised and provided for.	As above, Aukaha submit that the proposal does not recognise or provide for the relationship of Kāi Tahu with water, and that there is inadequate information to assess whether the proposal gives effect to Te Mana o te Wai. The submission also raises concerns around the lack of protection against the destruction and modification of archaeological sites in a landscape with a long history of occupation and use by Kāi Tahu. The submission also notes that the proposal does not recognise and sustain the connections and interactions between surface water bodies and the aquifer, nor does it sustain the on-going relationship of Kāi Tahu with wāhi tūpuna in this catchment. TRONT shares the same concerns raised by Aukaha. Given the concerns raised by Aukaha and TRONT, the proposal is considered to be inconsistent with these provisions.
Policy 2.2.1 Kāi Tahu wellbeing Manage the natural environment to support Kāi Tahu wellbeing by all of the following: a) Recognising and providing for their customary uses and cultural values in Schedules 1A and B; and, b) Safeguarding the life-supporting capacity of natural resources.	
Policy 2.2.2 Recognising sites of cultural significance Recognise and provide for the protection of wāhi tūpuna, by all of the following: a) Avoiding significant adverse effects on those values that contribute to the identified wāhi tūpuna being significant; b) Avoiding, remedying, or mitigating other adverse effects on the identified wāhi tūpuna; c) Managing the identified wāhi tūpuna sites in a culturally appropriate manner.	
Policy 2.2.3 Wāhi tūpuna and associated sites Enable Kāi Tahu relationships with wāhi tūpuna by all of the following: a) Recognising that relationships between sites of cultural significance are an important element of wāhi tūpuna; b) Recognising and using traditional place names.	
Chapter 3 – Otago has high quality natural resources and ecosystems	
Objective 3.1 The values (including intrinsic values) of ecosystems and natural resources are recognised and maintained, or enhanced where degraded	Adverse effects on ecological values are assessed in Section 6.1.8 above, and it is considered that those effects can be appropriately mitigated, except that the proposal does not address effects on te taiao or demonstrate that it provides for wai māori. Therefore, further information is

	required to assess whether the proposal is consistent with this objective.
Policy 3.1.1 Fresh water Safeguard the life-supporting capacity of fresh water and manage fresh water to: a) Maintain good quality water and enhance water quality where it is degraded, including for: i. Important recreation values, including contact recreation; and, ii. Existing drinking and stock water supplies; b) Maintain or enhance aquatic: i. Ecosystem health; ii. Indigenous habitats; and, iii. Indigenous species and their migratory patterns. c) Avoid aquifer compaction and seawater intrusion; d) Maintain or enhance, as far as practicable: i. Natural functioning of rivers, lakes, and wetlands, their riparian margins, and aquifers; ii. Coastal values supported by fresh water; iii. The habitat of trout and salmon unless detrimental to indigenous biological diversity; and iv. Amenity and landscape values of rivers, lakes, and wetlands; e) Control the adverse effects of pest species, prevent their introduction and reduce their spread; f) Avoid, remedy or mitigate the adverse effects of natural hazards, including flooding and erosion; and, g) Avoid, remedy or mitigate adverse effects on existing infrastructure that is reliant on fresh water.	a) The proposal will maintain surface water quality, including for recreation values (including contact recreation) but has the potential to impact groundwater quality. Whilst the Applicant proposes to provide affected groundwater users with sufficient potable water supply, the proposal will impact groundwater users, therefore is not consistent with a). b) The flow augmentation conditions proposed by the Applicant will ensure that flows within the Tima Burn are maintained to support ecological values and support the habitats of indigenous species. However, Aukaha have concerns around the effects on Te Taiao and wāi māori. I consider that further information is required to assess whether the proposal provides for the mauri of wāi māori, and therefore ecosystem health. c) Ms Badenhop notes that aquifer compaction is unlikely, due to the gravel substrate. d) The proposal may adversely affect the flows of the Tima Burn, which the Applicant proposes to augment, as and when required, thereby maintaining natural functioning. The proposal is considered to maintain the natural functioning, habitats of trout and salmon, and amenity and landscape values of the Tima Burn and Clutha River/Mata-Au. The aquifer will also be recharged within a reasonable timeframe, such that the natural functioning is considered to be maintained. e) Works will be set back at least 20 m from water bodies, therefore the proposal is not anticipated to result in the introduction or spread of pest species. f) The main natural hazard risk to the site is flooding. The Applicant has submitted a Flood Hazard assessment with the CODC application. Based on the conclusions of this report, I consider that adverse effects of natural hazards can be mitigated.

	g) A number of local bores are identified as being affected by the proposal, and the Applicant proposes to supplement any water supplies that are impacted. Given the above, the proposal is not entirely consistent with this policy. Further information is also required to assess the proposal against b).
Policy 3.1.2 Beds of rivers, lakes, wetlands, and their margins Manage the beds of rivers, lakes, wetlands, their margins, and riparian vegetation to: a) Safeguard the life supporting capacity of fresh water; b) Maintain good quality water, or enhance it where it has been degraded; c) Maintain or enhance bank stability; d) Maintain or enhance ecosystem health and indigenous biological diversity; e) Maintain or enhance, as far as practicable: i. Their natural functioning and character; and ii. Amenity values; f) Control the adverse effects of pest species, prevent their introduction and reduce their spread; and, g) Avoid, remedy or mitigate the adverse effects of natural hazards, including flooding and erosion.	No works are proposed within the bed of any river, lake, wetland, or their margins, as earthworks will be set back at least 20 metres from the Tima Burn and Clutha River/Mata-Au.
Policy 3.1.3 Water allocation and use Manage the allocation and use of fresh water by undertaking all of the following: a) Recognising and providing for the social and economic benefits of sustainable water use; b) Avoiding over-allocation, and phasing out existing over-allocation, resulting from takes and discharges; c) Ensuring the efficient allocation and use of water by: i. Requiring that the water allocated does not exceed what is necessary for its efficient use; ii. Encouraging the development or upgrade of infrastructure that increases efficiency; iii. Providing for temporary dewatering activities necessary for construction or maintenance.	The social and economic benefits of sustainable water use are recognised. The water use is predominantly non-consumptive, and the application states that only a “relatively small” amount of water, within permitted activity volumes, will be used for dust suppression. No allocation limits apply to the Clutha River/Mata-Au, therefore over-allocation is avoided, and the proposed use is considered to be an efficient use of the water resource. Overall, the proposal is considered to be consistent with this policy.

Policy 3.1.6 Air quality Manage air quality to achieve the following: a) Maintain good ambient air quality that supports human health, or enhance air quality where it has been degraded; b) Maintain or enhance amenity values.	Adverse effects on air quality are assessed in Section 6.1.11 above. Subject to the recommended consent conditions and proposed mitigation measures, it is considered that the ambient air quality can be maintained. Therefore, the proposal is consistent with this policy.
Policy 3.1.7 Soil values Safeguard the life-supporting capacity of soil and manage soil to: a) Maintain or enhance as far as practicable i. Soil biological diversity; ii. Biological activity in soils; iii. Soil function in the storage and cycling of water, nutrients, and other elements through the biosphere; iv. Soil function as a buffer or filter for contaminants resulting from human activities, including aquifers at risk of leachate contamination; v. Soil fertility where soil is used for primary production; b) Where a) is not practicable, minimise adverse effects; c) Recognise that urban and infrastructure development may result in loss of soil values. d) Control the adverse effects of pest species, prevent their introduction and reduce their spread; e) Retain the soil mantle where it acts as a repository of historic heritage objects unless an archaeological authority has been obtained.	The application does not provide an assessment of effects on soil quality or outline proposed erosion and sediment controls, therefore there is insufficient information to assess whether the proposal is consistent with these policies.
Policy 3.1.8 Soil erosion Minimise soil erosion resulting from activities, by undertaking all of the following: a) Using appropriate erosion controls and soil conservation methods; b) Maintaining vegetative cover on erosion prone land; c) Remediating land where significant soil erosion has occurred; d) Encouraging activities that enhance soil retention.	

Policy 3.1.9 Ecosystems and indigenous biological diversity Manage ecosystems and indigenous biological diversity in terrestrial, freshwater and marine environments to: a) Maintain or enhance: i. Ecosystem health and indigenous biological diversity including habitats of indigenous fauna; ii. Biological diversity where the presence of exotic flora and fauna supports indigenous biological diversity; b) Maintain or enhance as far as practicable: i. Areas of predominantly indigenous vegetation; ii. Habitats of trout and salmon unless detrimental to indigenous biological diversity; iii. Areas buffering or linking ecosystems; c) Recognise and provide for: i. Hydrological services, including the services provided by tall tussock grassland; ii. Natural resources and processes that support indigenous biological diversity; d) Control the adverse effects of pest species, prevent their introduction and reduce their spread.	The Applicant's ecological report concludes that the Tima Burn has a low diversity, low abundance, poor habitat/pollution-tolerant macroinvertebrate and fish fauna. Mr Hamer confirmed that the report accurately identifies the habitat quality as low quality, however notes that the presence of two threatened native fish indicates the stream values are high. Overall, Mr Hamer is satisfied that the precautionary approach to augment the flow of the Tima Burn is acceptable. However, Aukaha have concerns about potential impacts of dewatering on the mauri and aquatic ecology of water bodies and note that the application does not address effects on te taiao, therefore further information is required to assess whether the proposal provides for the mauri of wāi māori, and ecosystem health. The proposal is not anticipated to result in the introduction or spread of pest species in the Clutha River/Mata-Au and Tima Burn, given the setbacks from surface water bodies proposed. Overall, further information is required to assess whether the proposal is consistent with this policy.
Chapter 4 – Communities in Otago are resilient, safe and healthy	
Objective 4.1 Risks that natural hazards pose to Otago's communities are minimised Policy 4.1.6 Minimising increase in natural hazard risk Minimise natural hazard risk to people, communities, property and other aspects of the environment by: a) Avoiding activities that result in significant risk from natural hazard; b) Enabling activities that result in no or low residual risk from natural hazard; c) Avoiding activities that increase risk in areas potentially affected by coastal hazards over at least the next 100 years; d) Encouraging the location of infrastructure away from areas of hazard risk where practicable; e) Minimising any other risk from natural hazard.	As previously noted, the Applicant has submitted a flood hazard assessment with the CODC application. Based on the conclusions of this report, it is considered that the proposal is consistent with these provisions.

Objective 4.6 Hazardous substances, contaminated land and waste materials do not harm human health or the quality of the environment in Otago	A 50 m buffer will be maintained from the closed landfill, and the Applicant has confirmed that works will not disturb contaminated land. As discussed in Section 6.1.6a, a precautionary approach is also recommended to ensure that any potential contamination is not spread to the aquifer, as well as consent conditions requiring that the Applicant provide affected groundwater users with a suitable potable water supply, should groundwater monitoring indicate contamination caused by the mining activity. The CODC Application states that there will be up to 60,000 litres of diesel storage on site in a containment facility compliant with Health and Safety at Work (Hazardous Substances) Regulations 2017. Storage will be located away from areas of flood hazard and excavation, and will have an appropriately sized containment area. Given the above, and subject to recommended consent conditions, the proposal is considered to be generally consistent with these provisions.
Policy 4.6.2 Use, storage and disposal of hazardous substances Manage the use, storage and disposal of hazardous substances, by all of the following: a) Providing secure containment for the storage of hazardous substances; b) Minimising risk associated with natural hazard events; c) Ensuring the health and safety of people; d) Avoiding, remedying or mitigating adverse effects on the environment; e) Providing for the development of facilities to safely store, transfer, process, handle and dispose of hazardous substances; f) Ensuring hazardous substances are treated or disposed of in accordance with the relevant regulatory requirements; g) Restricting the location and intensification of activities that may result in reverse sensitivity effects near authorised facilities for hazardous substance bulk storage, treatment or disposal; h) Encouraging the use of best management practices.	
Policy 4.6.5 Managing contaminated land Ensure contaminated or potentially contaminated land does not pose an unacceptable risk to people and the environment, by: a) Assessing and, if required, monitoring contaminant levels and environmental risks; b) Protecting human health in accordance with regulatory requirements; c) Minimising adverse effects of the contaminants on the environment.	
Chapter 5 – People are able to use and enjoy Otago's natural and built environment	
Objective 5.1 Public access to areas of value to the community is maintained or enhanced	Although the Applicant proposes to maintain public access to the Clutha Gold Cycle Trail, the diversion will reduce public access along a stretch of the river during the mining operation.
Policy 5.1.1 Public access Maintain or enhance public access to the natural environment, including to the coast, lakes, rivers	

and their margins and where possible areas of cultural or historic significance, unless restricting access is necessary for one or more of the following: a) Protecting public health and safety; b) Protecting the natural heritage and ecosystem values of sensitive natural areas or habitats; c) Protecting identified sites and values associated with historic heritage or cultural significance to Kāi Tahu; d) Ensuring a level of security consistent with the operational requirements of a lawfully established activity.	The trail will, however, be reinstated upon completion of mining. Given the above, the proposal is not entirely consistent with this objective and policy.
Objective 5.2 Historic heritage resources are recognised and contribute to the region's character and sense of identity Policy 5.2.1 Recognising historic heritage Recognise all the following elements as characteristic or important to Otago's historic heritage: a) Residential and commercial buildings; b) Māori cultural and historic heritage values; c) 19th and early 20th century pastoral sites; d) Early surveying, communications and transport, including roads, bridges and routes; e) Early industrial historic heritage, including mills and brickworks; f) Gold and other mining systems and settlements; g) Dredge and ship wrecks; h) Coastal historic heritage, particularly Kāi Tahu occupation sites and those associated with early European activity such as whaling; i) Memorials; j) Trees and vegetation. Policy 5.2.2 Identifying historic heritage Identify historic heritage places and areas of regional or national significance, using the attributes in Schedule 5. Policy 5.2.3 Managing historic heritage Protect and enhance places and areas of historic heritage, by all of the following: a) Recognising that some places or areas are known or may contain archaeological sites, wāhi	The site is located between four recorded archaeological sites, and the Applicant's archaeological site survey identified two additional sites, noting the potential for further archaeological remains to be uncovered in the mining area. Submissions from Aukaha and TRONT highlight concerns around the lack of protection against the destruction and modification of archaeological sites, noting that a heritage assessment was not commissioned prior to trial dewatering works being undertaken. As discussed in Section 6.1.10 above, the Applicant's archaeological assessment states that effects on archaeological values would be "major," particularly on the sluice faces and tailings of G43/233, which sits entirely within the mine footprint. Overall, the proposal will not protect and enhance historic heritage values, given that archaeological sites will be directly impacted by the mining activity, therefore the proposal is not consistent with these provisions.

tapu or wāhi taoka which could be of significant historic or cultural value; b) Applying these provisions immediately upon discovery of such previously unidentified archaeological sites or areas, wāhi tapu or wāhi taoka; c) Avoiding adverse effects on those values that contribute to the area or place being of regional or national significance; d) Minimising significant adverse effects on other values of areas and places of historic heritage; e) Remedying when adverse effects on other values cannot be avoided; f) Mitigating when adverse effects on other values cannot be avoided or remedied; g) Encouraging the integration of historic heritage values into new activities; h) Enabling adaptive reuse or upgrade of historic heritage places and areas where historic heritage values can be maintained.	
Objective 5.4 Adverse effects of using and enjoying Otago's natural and physical resources are minimised	I consider that the proposal does not adequately demonstrate that adverse effects on cultural and historic heritage values will be minimised.
Policy 5.4.1 Offensive or objectionable discharges Manage offensive or objectionable discharges to land, water and air by: a) Avoiding significant adverse effects of those discharges; b) Avoiding significant adverse effects of discharges of human or animal waste directly, or in close proximity, to water or mahika kai sites; c) Avoiding, remedying or mitigating other adverse effects of those discharges.	(a) As described throughout this report, Aukaha's submissions identifies information gaps and highlights concerns, including in respect of the discharge of contaminants and the threat it poses to the wāhi tūpuna landscape and the relationship of Kāi Tahu with the Mata-au. Currently, there is not enough information to determine whether significant adverse effects in respect of cultural values will be avoided. Adverse effects on historic heritage values will not be avoided, given that archaeological sites will be directly impacted by the works. I consider that significant adverse effects in respect of other matters, as assessed within Section 6.1 will be avoided. (b) The proposal does not involve the discharge of human or animal waste. (c) There is potential for further archaeological sites to be encountered during works, and the mining activity will have a "major impact" on archaeological values, (to be reduced through proposed mitigation measures).

	Based on the information available at the date of this report, I consider that the proposal does not demonstrate how adverse effects on cultural values will be adequately avoided, remedied or mitigated. Subject to recommended consent conditions, I consider that adverse effects on other matters assessed can be avoided, remedied or mitigated. Overall, I consider further information is required to assess whether the proposal is consistent with this policy.
Policy 5.4.2 Adaptive management approach 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, by both: a) Setting appropriate indicators for effective monitoring of those adverse effects; and b) Setting thresholds to trigger remedial action before the effects result in irreversible damage.	Ms Badenhop considers that adaptive management strategies will provide appropriate mitigation for potential effects on other groundwater users and the Tima Burn, and conditions are recommended in this regard. An adaptive management approach to dust monitoring is also recommended. The proposal is therefore considered to be consistent with this policy.
Policy 5.4.3 Precautionary approach Apply a precautionary approach to activities where adverse effects may be uncertain, not able to be determined, or poorly understood but are potentially significant or irreversible.	Given that the level of adverse effects on groundwater quality is uncertain, a precautionary approach is applied.
Policy 5.4.8 Adverse effects from mineral and petroleum exploration, extraction and processing Manage adverse effects from the exploration, extraction and processing of minerals and petroleum, by: a) Giving preference to avoiding their location in all of the following: i. Areas of significant indigenous vegetation and significant habitats of indigenous fauna in the coastal environment; ii. Outstanding natural character in the coastal environment; iii. Outstanding natural features and natural landscapes, including seascapes, in the coastal environment;	a) The proposal will not affect any areas of significant indigenous vegetation, and the site is not in an area subject to significant natural hazard risk. The site is located between two archaeological sites and contains two New Zealand Archaeological Association Historic gold dredge mining sites, therefore the proposal will not avoid places of historic heritage of regional or national significance. The proposal will not occur in any outstanding natural features or outstanding natural character areas. The proposal is considered to avoid adverse effects on the health and safety of the community. The mine area will be located within a flood hazard area, to a limited degree.

iv. Areas of significant indigenous vegetation and significant habitats of indigenous fauna beyond the coastal environment; v. Outstanding natural character in areas beyond the coastal environment; vi. Outstanding natural features and landscapes beyond the coastal environment; vii. Outstanding water bodies or wetlands; viii. Places or areas containing historic heritage of regional or national significance; ix. Areas subject to significant natural hazard risk; b) Where it is not practicable to avoid locating in the areas listed in a) above because of the functional needs of that activity: i. Avoid adverse effects on the values that contribute to the significant or outstanding nature of a) i-iii; ii. Avoid, remedy or mitigate, as necessary, adverse effects on values in order to maintain the outstanding or significant nature of a)iv-viii; iii. Consider first biological diversity offsetting, and then biological diversity compensation, if adverse effects described in b)ii. on indigenous biological diversity cannot be practicably remedied or mitigated; iv. Minimise any increase in natural hazard risk through mitigation measures; v. Consider environmental compensation if adverse effects described in b) ii, other than on indigenous biological diversity, cannot practically be avoided, remedied or mitigated; ba) Avoid significant adverse effects on natural character in all other areas of the coastal environment;- c) Avoiding adverse effects on the health and safety of the community; d) Avoiding, remedying, or mitigating adverse effects on other values including highly valued natural features, landscapes and seascapes in order to maintain their high values; e) Considering biological diversity offsetting or compensating for residual adverse effects on other values; f) Reducing unavoidable adverse effects by:	b) Once adverse effects on cultural values are assessed, biodiversity offsetting or compensation could be considered for the management of any residual adverse effects on cultural values, if this is considered appropriate by Aukaha. Based on the conclusions of the flood hazard assessment prepared by GeoSolve and submitted with the CODC application, it is considered that flood risk can be adequately mitigated. c) There is uncertainty around the level of adverse effects on groundwater quality and drinking water supplies of local water users. Although adverse effects on water supplies, and therefore the health and safety of the community, will be mitigated through provision of alternative water supplies, effects will not be avoided. Similarly, adverse health effects of dust will be mitigated, but not avoided. d) Aukaha's submission raises concerns about the effects of the mining activity on the significant cultural landscape. Based on the information available at the date of this report, I do not consider that those effects will be adequately avoided, remedied or mitigated. e) Biological diversity offsetting or compensating for residual adverse effects on other values is not considered to be required. f) The mining activity will be staged so that the work area is approximately 27 ha at any one time, and the site will be progressively stabilised. g) There is some uncertainty around the level of effects on groundwater quality, and adaptive management strategies are recommended. Overall, the proposal is not consistent with this policy.

i. Staging development for longer term activities; and ii. Progressively rehabilitating the site, where possible; g) Applying a precautionary approach (including adaptive management where appropriate) to assessing the effects of the activity, where there is scientific uncertainty, and potentially significant or irreversible adverse effects. Where there is a conflict, Policy 5.4.8 prevails over policies under Objective 3.2, (except for policy 3.2.12) Policy 4.3.1 and Policy 5.2.3.	

As previously noted, at the time of writing this report, a Cultural Impact Assessment has not been forthcoming. It may be that further information is forthcoming in respect of submitters' views as to cultural effects and how they are to be addressed during the hearing process. Should additional information be presented, I will reassess consistency of the proposal with the above provisions at that time.

On 26 June 2021 Council notified the proposed Otago Regional Policy Statement. This RPS gives effect to the NPS-FW 2020 and includes freshwater visions, FMU's and rohe. On 30 September 2022 Council notified the freshwater instrument components of the proposed Otago Regional Policy Statement that was originally notified in June 2021**.** As this RPS has been notified, it has been included and assessed below.

Proposed Otago Regional Policy Statement (ORPS 2021) and Proposed Otago Regional Policy Statement – Freshwater Instrument Components 2021 (notified September 2022).

Air	
AIR–O1 – Ambient air quality Ambient air quality provides for the health and well-being of the people of Otago, amenity and mana whenua values, and the life-supporting capacity of ecosystems.	Air Matters considers that air quality in the Millers Flat area is generally good and is not expected to exceed the Resource Management (National Environmental Standards Relating to Certain Air Pollutants, Dioxins, and Other Toxics) Regulations 2004, although notes that air quality may be affected at times by surrounding agricultural practices. As discussed in Section 6.1.11 above, Air Matters and PDP agree that adverse effects on air quality can be appropriately mitigated. Human health, amenity and the life-supporting capacity of ecosystems
AIR–O2 – Discharges to air Human health, amenity and mana whenua values and the life-supporting capacity of ecosystems are protected from the adverse effects of discharges to air.	
AIR–P1 – Maintain good ambient air quality Good ambient air quality is maintained across Otago by:	

(1) ensuring discharges to air comply with ambient air quality limits where those limits have been set, and (2) where limits have not been set, only allowing discharges to air if the adverse effects on ambient air quality are no more than minor.	are considered to be protected, given the mitigation measures proposed. The submissions of Aukaha and TRONT do not raise concerns about potential effects of proposed discharges to air on mana whenua values, but also do not specifically comment on those effects. Therefore, it is unclear whether the discharges to air would adversely affect mana whenua values. Overall, the proposal is considered to be generally consistent with these provisions.
AIR–P3 – Providing for discharges to air Allow discharges to air provided they do not adversely affect human health, amenity and mana whenua values and the life supporting capacity of ecosystems.	
AIR–P4 – Avoiding certain discharges Avoid discharges to air that cause offensive, objectionable, noxious or dangerous effects	The proposal is considered to be consistent with this policy.
AIR–P5 – Managing certain discharges Manage the effects of discharges to air beyond the boundary of the property of origin from activities that include but are not limited to: (1) outdoor burning of organic material, (2) agrichemical and fertiliser spraying, (3) farming activities, (4) activities that produce dust, and (5) industrial and trade activities.	The Applicant proposes to manage dust generation through good management practices and active dust control, and PDP agrees that potential dust effects can be effectively controlled using the appropriate mitigation measures, provided their monitoring recommendations are implemented. Conditions are recommended to this effect, and the proposal is considered to be consistent with this policy.
AIR–P6 – Impacts on mana whenua values Avoid discharges to air that adversely affect mana whenua values by having particular regard to values and areas of significance to mana whenua.	As noted above, the submissions by Aukaha and TRONT do not raise concerns about, or provide comment on, potential adverse effects of discharges to air on mana whenua values. It is therefore unclear whether the proposal is consistent with this policy.
Land and Freshwater	
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,	As previously noted, Aukaha has advised that there is insufficient information to assess whether the proposed mining activity provides for the mauri of wai maori and gives effect to Te Mana o Te Wai. There is therefore insufficient information to determine whether the proposal is consistent with this objective.

(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–WAI–P1 – Prioritisation In all management of fresh water in Otago, prioritise: (1) first, the health and well-being of water bodies and freshwater ecosystems, te hauora o te wai and te hauora o te taiao, and the exercise of mana whenua to uphold these, (2) second, the health and well-being needs of people, te hauora o te tangata; interacting with water through ingestion (such as drinking water and consuming harvested resources) and immersive activities (such as harvesting resources and bathing), and (3) third, the ability of people and communities to provide for their social, economic, and cultural wellbeing, now and in the future	The proposal aligns with the third priority and as such, must meet the first and second priorities. The proposal will provide for the second priority, being the health and well-being needs of people. However, there is uncertainty around the scale of adverse effects on groundwater quality, and there is insufficient information to assess whether the proposal provides for the mauri, and therefore, the health and wellbeing of water bodies. More information is therefore required to assess whether the proposal is consistent with this policy.
LF–WAI–P2 – Mana whakahaere Recognise and give practical effect to Kāi Tahu rakatirataka in respect of fresh water by: (1) facilitating partnership with, and the active involvement of, mana whenua in freshwater management and decision-making processes, (2) sustaining the environmental, social, cultural and economic relationships of Kāi Tahu with water bodies, (3) providing for a range of customary uses, including mahika kai, specific to each water body, and (4) incorporating mātauraka into decision making, management and monitoring processes	As discussed throughout this report, Aukaha's submission states that the proposal does not recognise and provide for the relationship of Kāi Tahu with water, nor does it recognise and sustain the connections and interactions between surface water bodies and the aquifer. There are also concerns around the significant loss of mahika kai and taoka species throughout Kāi Tahu history, and that the proposal will perpetuate this without appropriately mitigating effects. Overall, based on the information available at the date of this report, the proposal is not consistent with these policies. Should additional information be presented, I will reassess consistency with these provisions at that time.
LF–WAI–P3 – Integrated management/ki uta ki tai Manage the use of fresh water and land in accordance with tikaka 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 fresh water 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 RPS and all persons who use, develop or protect resources to which this RPS 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 fresh water, including when interpreting and applying the provisions of the LF chapter.	As above, Aukaha has submitted that there is insufficient information to assess whether the proposal gives effect to Te Mana o te Wai. Therefore, further information is required to assess whether the proposal is consistent with this policy.
Land and Freshwater – Visions and Management	
LF–VM–O2 – Clutha Mata-au FMU vision In the Clutha Mata-au FMU: (1) management of the FMU recognises that: (a) the Clutha 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) fresh water is managed in accordance with the LF–WAI objectives and policies,	There is insufficient information to assess whether the proposal meets this provision, in particular (2), (3) and (4). (1) the interconnectedness of the catchment is recognised. (2) The assessment against the LF-WAI objectives and policies above concludes that the proposal is inconsistent, and that there is insufficient information to assess whether the proposal provides for the mauri of wai māori, and

(3) the ongoing relationship of Kāi Tahu with wāhi tūpuna 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 tributaries, (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, (ii) the ecosystem connections between freshwater, wetlands and the coastal environment are preserved and, wherever possible, restored, (iii) 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	therefore, the health and wellbeing of water bodies. (3), (4) Aukaha's submission states that the proposal does not sustain the on-going relationship of Kāi Tahu with wāhi tupuna in this catchment, and raises concerns about the significant loss of mahika kai and taoka species in the past, which are considered to be perpetuated by the proposal. (5) The proposal will not impact the ability of indigenous species to migrate along and within the river system. (6) The national significance of the Clutha hydro-electricity generation scheme is recognised. (7)(b)(i) The proposal will not adversely affect flows in surface water bodies. (ii) The proposal does not relate to food production. (iii) Abstraction will occur from groundwater and hydraulically connected groundwater, and is considered to be sustainable given the predominantly non-consumptive use. (8) The proposal will not affect the ability of the 2045 timeframe to be met.

(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, and (c) by 2050 in the Manuherekia rohe.	
Freshwater	
LF–FW–O8 – Fresh water 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 fresh water (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.	(1) There is insufficient information to assess whether the proposal meets this provision. (2) Water flow is continuous throughout the whole system. (3) The interconnection of fresh water and coastal waters is recognised. (4) The ease of migration of native fish will not be affected by the proposal, however, Aukaha have concerns that the proposal will perpetuate a pattern of extractive use, resulting in further loss of taoka species. (5) Otago's outstanding water bodies will be identified through the preparation of the Land and Water Regional Plan. Overall, there is insufficient information to assess whether the proposal is consistent with this objective.
LF–FW–O10 – Natural character The natural character of wetlands, lakes and rivers and their margins is preserved and protected from inappropriate subdivision, use and development.	Given the proposed setbacks of earthworks and discharges from the Clutha River/Mata-Au, and other mitigation measures proposed, the proposal is considered to preserve and protect the natural character of the Clutha River/Mata-Au and the Tima Burn, their beds and margins.
LF-FW-P7 Fresh water 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	(1) There is insufficient information to assess whether the proposal provides for the mauri, i.e. wellbeing, of waterbodies. (2) The flow augmentation conditions proposed by the Applicant will ensure that adequate flows in the Tima Burn are maintained, and thereby protect habitats of indigenous species. Given the setbacks of works and mitigation measures proposed, the habitats of the Clutha/Mata-Au are also considered to be protected. (3) The proposal will not impact these timeframes being reached. (4) Aukaha's submission raises concerns about further loss of mahika kai, and adverse effects on

(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) fresh water is allocated within environmental limits and used efficiently.	groundwater quality (and drinking water supplies) are uncertain. (5) No allocation limits apply to the aquifer, and given that the water take is predominantly non-consumptive, the proposal will not result in over-allocation. (6) The water take is considered to be efficient, given the predominantly non-consumptive use. Overall, further information is required to assess whether the proposal is consistent with this policy.
LF–FW–P13 – Preserving natural character Preserve the natural character of lakes and rivers and their beds and margins by: (1) avoiding the loss of values or extent of a river, unless: (a) there is a functional need for the activity in that location, and (b) the effects of the activity are managed by applying: (i) for effects on indigenous biodiversity, either ECO-P3 or ECO-P6 (whichever is applicable), and (ii) for other effects, the effects management hierarchy, (2) not granting resource consent for activities in (1) unless Otago Regional Council is satisfied that: (a) the application demonstrates how each step of the effects management hierarchies in (1)(b) will be applied to the loss of values or extent of the river, and (b) any consent is granted subject to conditions that apply the effects management hierarchies in (1)(b), (3) establishing environmental flow and level regimes and water quality standards that support the health and well-being of the water body, (4) wherever possible, sustaining the form and function of a water body that reflects its natural behaviours, (5) recognising and implementing the restrictions in Water Conservation Orders, (6) preventing the impounding or control of the level of Lake Wanaka,	As above, the proposal is considered to preserve and protect the natural character of the Clutha River/Mata-Au and the Tima Burn, their beds and margins. The application does not provide an assessment of effects on indigenous biodiversity. Aukaha have concerns around the impacts of dewatering on the mauri and aquatic ecology of water bodies, and I consider that further information is required to assess effects on indigenous biodiversity.

(7) preventing modification that would reduce the braided character of a river, and (8) controlling the use of water and land that would adversely affect the natural character of the water body	
Land and Soil	
LF–LS–O11 – Land and soil The life-supporting capacity of Otago's soil resources is safeguarded and the availability and productive capacity of highly productive land for primary production is maintained now and for future generations.	No assessment of effects on soil quality has been provided in the application. However, the proposed mining activity will impact the future use of the land, and will not maintain soil quality or its current productive capacity, therefore is inconsistent with these provisions.
LF–LS–O12 – Use of land The use of land in Otago maintains soil quality and contributes to achieving environmental outcomes for fresh water.	
LF–LS–P16 – Integrated management Recognise that maintaining soil quality requires the integrated management of land and freshwater resources including the interconnections between soil health, vegetative cover and water quality and quantity.	
LF–LS–P17 – Soil values Maintain the mauri, health and productive potential of soils by managing the use and development of land in a way that is suited to the natural soil characteristics and that sustains healthy: (1) soil biological activity and biodiversity, (2) soil structure, and (3) soil fertility.	
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–P19 – Highly productive land Maintain the availability and productive capacity of highly productive land by: (1) identifying highly productive land based on the following criteria: (a) the capability and versatility of the land to support primary production based on the Land Use Capability classification system, (b) the suitability of the climate for primary production, particularly crop production, and (c) the size and cohesiveness of the area of land for use for primary production, and (2) prioritising the use of highly productive land for primary production ahead of other land uses, and (3) managing urban development in rural areas, including rural lifestyle and rural residential areas, in accordance with UFD–P4, UFD–P7 and UFD–P8.	
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.	Given the proposed setback distances and mitigation measures proposed, adverse effects on surface water quality are considered to be appropriately mitigated. However, there is uncertainty around the level of effects on groundwater quality and whether this will be maintained. The groundwater take is predominantly non-consumptive, and water will be discharged to sediment retention ponds before recharging the aquifer. Overall, the proposal is not considered to be entirely inconsistent with this policy.
LF–LS–P22 – Public access Provide for public access to and along lakes and rivers by: (1) maintaining existing public access, (2) seeking opportunities to enhance public access, including by mana whenua in their role as kaitiaki and for gathering of mahika kai, and (3) encouraging landowners to only restrict access where it is necessary to protect: (a) public health and safety, (b) significant natural areas, (c) areas of outstanding natural character, (d) outstanding natural features and landscapes,	(1) Public access along the Clutha River/Mata-Au will be impacted for the duration of the mining activity, as the Applicant proposes to temporarily divert the Clutha Gold Cycle Trail. Whilst the Applicant proposes to maintain the trail for the duration of works, it will not maintain the existing trail along the river. (2) The proposal will not enhance public access. (3) As a result of the proposed mining activity, access will be restricted to protect public health and safety. Given the above, the proposal is not considered to be entirely consistent with this policy.

(e) places or areas with special or outstanding historic heritage values, or (f) places or areas of significance to takata whenua, including wāhi tapu and wāhi tūpuna.	
Ecosystem and indigenous biodiversity	
ECO–O1 – Indigenous biodiversity Otago's indigenous biodiversity is healthy and thriving and any decline in quality, quantity and diversity is halted.	As discussed throughout this report, Aukaha's submission raises concerns that the proposal will result in further loss of taoka species, as well as adversely affect cultural values. Overall, given the position of mana whenua, and based on information available at the date of this report, the proposal is not considered to be consistent with these provisions.
ECO–O3 – Kaitiakiaka and stewardship Mana whenua are recognised as kaitiaki of Otago's indigenous biodiversity, and Otago's communities are recognised as stewards, who are responsible for: (1) te hauora o te koiora (the health of indigenous biodiversity), te hauora o te taoka (the health of species and ecosystems that are taoka), and te hauora o te taiao (the health of the wider environment), while (2) providing for te hauora o te takata (the health of the people).	
ECO–P1 – Kaitiakitaka Recognise the role of Kāi Tahu as kaitiaki of Otago's indigenous biodiversity by: (1) involving Kāi Tahu in the management of indigenous biodiversity and the identification of indigenous species and ecosystems that are taoka, (2) incorporating the use of mātauraka Māori in the management and monitoring of indigenous biodiversity, and (3) providing for access to and use of indigenous biodiversity by Kāi Tahu, including mahika kai, according to tikaka.	
ECO–P4 – Provision for new activities Maintain Otago's indigenous biodiversity by following the sequential steps in the effects management hierarchy set out in ECO–P6 when making decisions on plans, applications for resource consent or notices of requirement for the following activities in significant natural areas, or where they may adversely affect indigenous species and ecosystems that are taoka:	

(1) the development or upgrade of nationally and regionally significant infrastructure that has a functional or operational need to locate within the relevant significant natural area(s) or where they may adversely affect indigenous species or ecosystems that are taoka, (2) the development of papakāika, marae and ancillary facilities associated with customary activities on Māori land, (3) the use of Māori land in a way that will make a significant contribution to enhancing the social, cultural or economic well-being of takata whenua, (4) activities that are for the purpose of protecting, restoring or enhancing a significant natural area or indigenous species or ecosystems that are taoka, or (5) activities that are for the purpose of addressing a severe and immediate risk to public health or safety.	
ECO–P8 – Enhancement The extent, occupancy and condition of Otago's indigenous biodiversity is increased by: (1) restoring and enhancing habitat for indigenous species, including taoka and mahika kai species, (2) improving the health and resilience of indigenous biodiversity, including ecosystems, species, important ecosystem function, and intrinsic values, and (3) buffering or linking ecosystems, habitats and ecological corridors.	
ECO–P10 – Integrated management Implement an integrated and co-ordinated approach to managing Otago's ecosystems and indigenous biodiversity that: (1) ensures any permitted or controlled activity in a regional or district plan rule does not compromise the achievement of ECO–O1, (2) recognises the interactions ki uta ki tai (from the mountains to the sea) between the terrestrial environment, fresh water, and the coastal marine area, including the migration of fish species between fresh and coastal waters,	As discussed throughout this report, Aukaha's submission states that the proposal does not recognise and provide for the relationship of Kāi Tahu with water, nor does it recognise and sustain the connections and interactions between surface water bodies and the aquifer. Based on the information available at the date of this report, the application does not demonstrate that ki uta ki tai management will be achieved. More information is required to assess whether the proposal is consistent with this policy.

(3) promotes collaboration between individuals and agencies with biodiversity responsibilities, (4) supports the various statutory and non-statutory approaches adopted to manage indigenous biodiversity, (5) recognises the critical role of people and communities in actively managing the remaining indigenous biodiversity occurring on private land, and (6) adopts regulatory and non-regulatory regional pest management programmes.	
Hazards and risks	
HAZ–NH–O1 – Natural hazards Levels of risk to people, communities and property from natural hazards within Otago do not exceed a tolerable level.	As previously noted, the Applicant has submitted a flood hazard assessment with the CODC application, prepared by GeoSolve. This report notes that the mine pit area will be located within the flood risk area, albeit to a limited degree, and that flooding would only reach the mine area during extreme flood events. GeoSolve considers that, given the relatively short duration of the mining activity, such extreme flood events are unlikely to occur during the mining activity. Nevertheless, the report recommends that any works in the vicinity of the Tima Burn are immediately backfilled upon completion of mining, to mitigate flood risk. Overall, given the conclusions of this report, I consider that the levels of risk to people, communities and property from natural hazards can be appropriately managed and mitigated, and will not exceed a tolerable level. The proposal is therefore consistent with these provisions.
HAZ–NH–P1 – Identifying areas subject to natural hazards Identify areas where natural hazards may adversely affect Otago's people, communities and property by assessing: (1) the hazard type and characteristics, (2) multiple and cascading hazards, where present, (3) any cumulative effects, (4) any effects of climate change, (5) likelihood, using the best available information, and (6) any other exacerbating factors	
HAZ–NH–P3 – New activities Once the level of natural hazard risk associated with an activity has been determined in accordance with HAZ–NH–P2, manage new activities to achieve the following outcomes: (1) when the natural hazard risk is significant, the activity is avoided, (2) when the natural hazard risk is tolerable, manage the level of risk so that it does not become significant, and (3) when the natural hazard risk is acceptable, maintain the level of risk.	
HAZ–NH–P11 – Kaitiaki decision making Recognise and provide for the role of Kāi Tahu as kaitiaki over wāhi tūpuna, Māori reserves and	The application has been publicly notified, thereby recognising and providing for the role of Kāi Tahu. Aukaha's submission states that

freehold land that is susceptible to natural hazards by involving mana whenua in decision making and management processes.	further information is sought on the conclusions of the Applicant's flood hazard assessment, particularly in relation to extreme flood events. Therefore, further information is required to assess whether the proposal is consistent with this policy.
Historical and Cultural Values	
HCV–WT–O1 – Kāi Tahu cultural landscapes Wāhi tūpuna and their associated cultural values are identified and protected.	As discussed throughout this report, Aukaha's submission raises a number of concerns with the proposal. The submission states that the connections and interactions between surface water bodies and the aquifer are not recognised, and the on-going relationships of Kāi Tahu with wāhi of Kai Tahu are not sustained in this catchment. The current proposal is therefore not consistent with these provisions.
HCV–WT–O2 – Rakatirataka The rakatirataka of mana whenua over wāhi tūpuna is recognised, and mana whenua are able to exercise kaitiakitaka within these areas.	
HCV–WT–P1 – Recognise and identify wāhi tūpuna Kāi Tahu relationships with wāhi tūpuna are sustained, including by: (1) identifying as wāhi tūpuna any sites and areas of significance to mana whenua, along with the cultural values that contribute to each wāhi tūpuna being significant, (2) recognising the rakatirataka of mana whenua over wāhi tūpuna and providing for their ability to exercise kaitiakitaka within these areas, (3) recognising and providing for connections and associations between different wāhi tūpuna, and (4) recognising and using traditional place names	
HCV–WT–P2 – Management of wāhi tūpuna Wāhi tūpuna are protected by: (1) avoiding significant adverse effects on the cultural values associated with identified wāhi tūpuna, (2) where adverse effects demonstrably cannot be completely avoided, remedying or mitigating adverse effects in a manner that maintains the values of the wāhi tūpuna, (3) managing identified wāhi tūpuna in accordance with tikaka Māori, (4) avoiding any activities that may be considered inappropriate in wāhi tūpuna as identified by Kāi Tahu, and	

(5) encouraging the enhancement of access to wāhi tūpuna to the extent compatible with the particular wāhi tūpuna.	
Historic Heritage	
HCV–HH–O3 – Historic heritage resources Otago's unique historic heritage contributes to the region's character, sense of identity, and social, cultural and economic well-being, and is preserved for future generations.	The site is located between two Maori archaeological sites recorded by the NZAA, and there are two NZAA historic gold dredge mining sites located within the mining area. Aukaha's submission raises concerns about the lack of protection against the destruction and modification of archaeological sites. Additionally, for reasons discussed in Section 6.1.10 above, I consider that the proposal will not protect historic heritage values or qualities and is not consistent with these provisions.
HCV–HH–P3 – Recognising historic heritage Recognise that Otago's historic heritage includes: (1) Māori cultural and historic heritage values, (2) archaeological sites, (3) residential and commercial buildings, (4) pastoral sites, (5) surveying equipment, communications and transport, including roads, bridges and routes, (6) industrial historic heritage, including mills and brickworks, (7) gold and other mining systems and settlements, (8) dredge and ship wrecks, (9) ruins, (10) coastal historic heritage, particularly Kāi Tahu occupation sites and those associated with early European activities such as whaling, (11) memorials, and (12) trees and vegetation.	
HCV–HH–P5 – Managing historic heritage Protect historic heritage by: (1) requiring the use of accidental discovery protocols, (2) avoiding adverse effects on areas or places with special or outstanding historic heritage values or qualities, (3) avoiding significant adverse effects on areas or places with historic heritage values or qualities, (4) avoiding, as the first priority, other adverse effects on areas or places with historic heritage values or qualities,	

(5) where adverse effects demonstrably cannot be completely avoided, remedying or mitigating them, and (6) recognising that for infrastructure, EIT–INF–P13 applies instead of HCV–HH–P5(1) to (5).	

Overall, further information is required to assess potential effects on cultural values, and effects on indigenous biodiversity, as well as to determine whether the proposal provides for wai maori and gives effect to Te Mana o Te Wai. An understanding of these effects will enable an assessment to determine whether the proposal is consistent with PO-RPS.

As previously noted, at the time of writing this report, a Cultural Impact Assessment has not been forthcoming. It may be that further information is forthcoming in respect of submitters' views as to cultural effects and how they are to be addressed during the hearing process. Should additional information be presented, I will reassess consistency of the proposal with the above provisions at that time.

6.3.7 Regional Plan: Water for Otago

Table 10: Assessment against the provisions of the Regional Plan: Water for Otago

Provision	Assessment
Chapter 5 – Natural and Human Use Values of Lakes and Rivers	
Objective 5.3.1 To maintain or enhance the natural and human use values, identified in Schedules 1A, 1B and 1C, that are supported by Otago's lakes and rivers.	The Clutha River/Mata-Au and Tima Burn are identified as having a number of natural and human use values. For reasons discussed in Section 6.1.5, the proposal is considered to maintain these values, and is considered to be consistent with this objective.
Objective 5.3.2 To maintain or enhance the spiritual and cultural beliefs, values and uses of significance to Kai Tahu, identified in Schedule 1D, as these relate to Otago's lakes and rivers.	The stretch of the Clutha River / Mata-Au subject to this application is identified in Schedule 1D (kaitiakitanga, mauri, wāhi tapu and/or waiwhakaheke, wāhi taoka, mahika kai, kohanga, trails and cultural materials). Based on the concerns and information gaps highlighted in the submissions by Aukaha and TRONT, discussed throughout this report, I consider that the proposal does not maintain spriritual and cultural beliefs, values and uses of significance to Kai Tai, and is not consistent with this objective.
Policy 5.3.3 To protect the natural character of Otago's lakes and rivers and their margins from inappropriate subdivision, use or development.	As discussed in Section 6.1.5, the proposal is considered to protect and maintain the natural character and amenity values of the Clutha

Policy 5.3.4 To maintain or enhance the amenity values associated with Otago's lakes and rivers and their margins.	River/Mata-Au and its margins. Therefore, the proposal is consistent with these policies.
Policy 5.3.5 To maintain or enhance public access to and along the margins of Otago's lakes and rivers.	The proposal will temporarily realign the Clutha Gold Rail Trail, therefore, it will not maintain public access along the Clutha River/Mata-Au in the area to be diverted. Overall, whilst the Applicant will maintain the trail, access to and along the river will be affected for the duration of the mining activity, therefore the proposal is inconsistent with this objective.
Policy 5.3.6 To provide for the sustainable use and development of Otago's water bodies, and the beds and margins of Otago's lakes and rivers.	Given the predominantly non-consumptive nature of the water take, the proposal is considered to be a sustainable use of the water resource.
Objective 5.3.8 To avoid the exacerbation of any natural hazard or the creation of a hazard associated with Otago's lakes and rivers.	The proposal will not exacerbate existing, or create new, natural hazards, therefore is consistent with this policy.
Policy 5.4.1 To identify the following natural and human use values supported by Otago's lakes and rivers, as expressed in Schedule 1: (a) Outstanding natural features and landscapes; (b) Areas with a high degree of naturalness; (c) Areas of significant indigenous vegetation, significant habitats of indigenous fauna, and significant habitats of trout and salmon; (d) Ecosystem values; (e) Water supply values; (f) Registered historic places; and (g) Spiritual and cultural beliefs, values and uses of significance to Kai Tahu.	The Schedule 1 values of the Clutha River / Mata-Au and Tima Burn have been identified in Section 4.1. These include (c) areas of significant habitat and vegetation, (d) ecosystem values, (e) water supply values, (f) registered historic places and (g) significant spiritual and cultural beliefs, values and uses to Kāi Tahu.
Policy 5.4.2 In the management of any activity involving surface water, groundwater or the bed or margin of any lake or river, to give priority to avoiding, in preference to remedying or mitigating: (1) Adverse effects on: (a) Natural values identified in Schedule 1A; (b) Water supply values identified in Schedule 1B; (c) Registered historic places identified in Schedule 1C, or archaeological sites in, on, under or over the bed or margin of a lake or river;	(1a) – consistent; adverse effects on natural values identified in Schedule 1A will be avoided. (1b) – consistent; there are no water supply values identified in Schedule 1B located in proximity to the site. (1c) – consistent; there are no registered historic places identified in Schedule 1C, or archaeological sites in, on, under, or over the bed of the Clutha River/Mata-Au located in proximity to the site. (1d) – given the position of Aukaha and TRONT, and that proposed conditions do not adequately

(d) Spiritual and cultural beliefs, values and uses of significance to Kai Tahu identified in Schedule 1D; (e) The natural character of any lake or river, or its margins; (f) Amenity values supported by any water body; and (2) Causing or exacerbating flooding, erosion, land instability, sedimentation or property damage.	address cultural effects, the proposal is considered to be inconsistent. (1e) – consistent; adverse effects on natural character will be mitigated. (1f) – consistent; adverse effects on amenity values will be mitigated. (2) – there is insufficient information to assess whether the proposal is consistent. Given the above, the proposal is not consistent with this policy.
Policy 5.4.3 In the management of any activity involving surface water, groundwater or the bed or margin of any lake or river, to give priority to avoiding adverse effects on: (a) Existing lawful uses; and (b) Existing lawful priorities for the use, of lakes and rivers and their margins.	The proposal will not avoid adverse effects on existing lawful water users, however affected water users will be provided with a sufficient potable water supply, if and when they are affected by the mining activity. The proposal is not considered to have adverse effects on any existing lawful priorities for the use of the Clutha River/Mata-Au and its margins. Overall, the proposal does not give priority to avoiding adverse effects on existing lawful uses, therefore the proposal is not 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 application has been publicly notified, enabling tangata whenua to be actively involved in the assessment of the application with respect to freshwater management. The Applicant also engaged Aukaha to prepare a CIA, but no assessment has been provided at the time of writing this report. As previously discussed, Aukaha's submission highlights several concerns and information gaps, therefore I do not consider that Kai Tahu's interests have been recognised and provided for in the current application.
Policy 5.4.8 To have particular regard to the following features of lakes and rivers, and their margins, when considering adverse effects on their natural character: (a) The topography, including the setting and bed form of the lake or river; (b) The natural flow characteristics of the river; (c) The natural water level of the lake and its fluctuation;	Regard has been given to these matters, and adverse effects on natural character and amenity values are assessed in Section 6.1.5.

(d) The natural water colour and clarity in the lake or river; (e) The ecology of the lake or river and its margins; and (f) The extent of use or development within the catchment, including the extent to which that use and development has influenced matters (a) to (e) above.	
Policy 5.4.9 To have particular regard to the following qualities or characteristics of lakes and rivers, and their margins, when considering adverse effects on amenity values: (a) Aesthetic values associated with the lake or river; and (b) Recreation	
Chapter 6 – Water Quantity	
Objective 6.3.1 To retain flows in rivers sufficient to maintain their life-supporting capacity for aquatic ecosystems, and their natural character.	The hydrological characteristics of water resources have been recognised; the take is predominantly non-consumptive, and flows of the Tima Burn will be augmented as and when required. As such, flows of surface water bodies, and their life-supporting capacity, are not considered to be adversely affected. The proposal provides for the water needs of Otago's industry, although there is some uncertainty around effects on community domestic water supplies and on groundwater levels. The hydrological connections between water bodies are recognised. Written approvals have been obtained from most affected bore owners, and the Applicant proposes to provide suitable potable water supply to all affected groundwater users, as and when required. Overall, the proposal is considered to be generally consistent with these provisions.
Objective 6.3.2 To provide for the water needs of Otago's primary and secondary industries, and community domestic water supplies.	
Objective 6.3.2A To maintain long term groundwater levels and water storage in Otago's aquifers.	
Policy 6.3.3 To minimise conflict among those taking water.	
Policy 6.4.0 To recognise the hydrological characteristics of Otago's water resources, including behaviour and trends in: (a) The levels and flows of surface water bodies; and (b) The levels and volumes of groundwater; and (c) Any interrelationships between adjoining bodies of water, when managing the taking of water.	
Policy 6.4.0A To ensure that the quantity of water granted to take is no more than that required for the purpose of use taking into account: (a) How local climate, soil, crop or pasture type and water availability affect the quantity of water required; and	The proposed take volume is required for the mine pit dewatering. There is no allocation limit for the Clutha River/Mata-Au or the aquifer and, given that the take is predominantly non-consumptive, it is considered to be an efficient use of water.

(b) The efficiency of the proposed water transport, storage and application system.	
Policy 6.4.0C To promote and give preference, as between alternative sources, to the take and use of water from the nearest practicable source.	The proposed take is from the nearest practicable source, and there are no alternatives to the groundwater take for mine pit dewatering.
Policy 6.4.1 To enable the taking of surface water, by: (a) Defined allocation quantities; and (b) Provision for water body levels and flows, except when: (i) The taking is from Lakes Dunstan, Hawea, Roxburgh, Wanaka or Wakatipu, or the main stem of the Clutha River/Mata-Au or Kawarau Rivers. (ii) All of the surface water or connected groundwater taken is immediately returned to the source water body. (iii) Water is being taken which has been delivered to the source water body for the purpose of that subsequent take.	The groundwater take will be located both within 100 m, and greater than 100 m, of the Clutha River/Mata-Au in places, which is not subject to minimum flows. No allocation limits apply to the aquifer.
Policy 6.4.1A A groundwater take is allocated as: (a) Surface water, subject to a minimum flow, if the take is from any aquifer in Schedule 2C; or (b) Surface water, subject to a minimum flow, if the take is within 100 metres of any connected perennial surface water body; or (c) Groundwater and part surface water if the take is 100 metres or more from any connected perennial surface water body, and depletes that water body most affected by at least 5 litres per second as determined by Schedule 5A; or (d) Groundwater if (a), (b) and (c) do not apply.	
Policy 6.4.10A1 Enable the taking of water allocated as groundwater by Policy 6.4.1A, by: (a) Determining the volume available for taking as the maximum allocation limit less the assessed maximum annual take for an aquifer calculated using Method 15.8.3.1; and (b) Applying aquifer restrictions where specified in Schedule 4B.	No allocation limits apply to the aquifer. Regardless, the take is predominantly non-consumptive, therefore the proposal is considered to be consistent with this policy.
6.4.10A3 For any aquifer, avoid allocating beyond the maximum allocation limit, unless the water: (a) Is for a non-consumptive take; or	

(b) Has been previously taken under a resource consent; or (c) Is for a new, consumptive take of a temporary nature that is necessary for construction or repair of a structure; or (d) Is in a rock formation having an average hydraulic conductivity of less than 1 x 10-5 metres per second, which is not an aquifer mapped in the C-series of this Plan, and is taken in connection with mineral extraction activities.	
Policy 6.4.10A5 In managing the taking of groundwater, avoid in any aquifer: (a) Contamination of groundwater or surface water; and (b) Permanent aquifer compaction.	(a) – not consistent, given the uncertainty around the effects on groundwater quality. (b) Ms Badenhop considers that aquifer compaction is unlikely, due to the gravel substrate. Given the above, the proposal is not consistent with this policy.
Policy 6.4.10AC To avoid aquifer contamination by: (a) Recognising contaminated sites; (b) Identifying areas vulnerable to seawater intrusion; (c) Setting maximum allocation limits; (d) Setting aquifer restriction levels; (e) Restricting takes; and (f) Requiring monitoring of groundwater quality and levels.	As above, the proposal is not considered to be consistent with this policy as it is unlikely to avoid aquifer contamination, and there is uncertainty around the level of effects on groundwater quality. Ongoing monitoring of groundwater quality is recommended.
Policy 6.4.10B In managing the taking of groundwater, to have regard to avoiding adverse effects on existing groundwater takes, unless the approval of affected persons has been obtained.	Whilst written approvals have been obtained from most identified affected groundwater users, there are several affected persons who have not provided written approval. The proposal is not consistent with this policy, as adverse effects on existing groundwater takes will be mitigated through the provision of alternate water supplies, but will not be avoided.
Policy 6.4.16 In granting resource consents to take water, or in any review of the conditions of a resource consent to take water, to require the volume and rate of take to be measured in a manner satisfactory to the Council unless it is impractical or unnecessary to do so.	Whilst the water take is predominantly non-consumptive, the Applicant proposes metering and reporting of all water taken. Therefore, the proposal is consistent with this policy.
Policy 6.4.19 When setting the duration of a resource consent to take and use water, to consider:	This policy has been superseded by Policy 10A.2.2, assessed below.

…	
Chapter 7 – Water Quality	
Objective 7.A.1 To maintain water quality in Otago lakes, rivers, wetlands, and groundwater, but enhance water quality where it is degraded.	The proposal involves the discharge of sediment-laden water only and the Clutha River / Mata-Au is classified as being in the best 25% of all sites and 'state A' for clarity. As such, the water quality is not considered to be 'degraded' and water quality should be maintained. The proposal is considered to achieve this, however, given the uncertainty around effects on groundwater quality, it is not clear whether the proposal is entirely consistent with this objective.
Objective 7.A.2 To enable the discharge of water or contaminants to water or land, in a way that maintains water quality and supports natural and human use values, including Kāi Tahu values.	As above, there is uncertainty around whether groundwater quality will be maintained. I consider that the proposal will maintain water quality such that it supports the values identified in Schedule 1A, however, given the position of Aukaha described throughout this report, the proposal does not maintain Kāi Tahu values. The proposal is therefore not consistent with this objective.
Objective 7.A.3 To have individuals and communities manage their discharges to reduce adverse effects, including cumulative effects, on water quality.	Given the uncertainty of effects around the level of effects on groundwater quality, the proposal is considered to be inconsistent with this objective.
Policy 7.B.1 Manage the quality of water in Otago lakes, rivers, wetlands and groundwater by: (a) Describing, in Table 15.1 of Schedule 15, characteristics indicative of Good Quality Water; and (b) Setting, in Table 15.2 of Schedule 15, receiving water numerical limits and targets for achieving Good Quality Water; and (c) Maintaining, from the dates specified in Schedule 15, Good Quality Water; and (d) Enhancing water quality where it does not meet Schedule 15 limits, to meet those limits by the date specified in the Schedule; and (e) Recognising the differences in the effects and management of point and non-point source discharges; and (f) Recognising discharge effects on groundwater; and	(a) – (b) refer to Schedule 15 of the RPW, which has been reviewed and considered in the assessment of this application. With respect to (c), Table 15.2 sets a limit of 5 NTU for the Clutha River / Mata-Au, to be reached by 31 March 2025, and it is considered that the proposal will maintain water to this quality. (d) not applicable, as the date in (c) is 31 March 2025. (e) The differences in the effects and management of point source discharge and non-point source discharges have been recognised. (f) Discharge effects on groundwater are recognised, but the level of these effects remains uncertain. (g) Aside from sediment-laden water discharged back to the mine pit pond and to sediment retention ponds, discharges will be to land and

(g) Promoting the discharge of contaminants to land in preference to water.	will be set back at least 50 m from the Clutha River/Mata-Au and Tima Burn. Overall, the proposal is not inconsistent with this policy.
Policy 7.B.2 Avoid objectionable discharges of water or contaminants to maintain the natural and human use values, including Kāi Tahu values, of Otago lakes, rivers, wetlands, groundwater and open drains and water races that join them.	Subject to recommended consent conditions, the proposal is considered to maintain the natural and human use values of the Clutha River/Mata-Au. However, there is uncertainty around effects on groundwater, and adverse effects on Kāi Tahu values will not be avoided. Therefore, the proposal is not consistent with this policy.
Policy 7.B.4 When considering any discharge of water or contaminants to land, have regard to: (a) The ability of the land to assimilate the water or contaminants; and (b) Any potential soil contamination; and (c) Any potential land instability; and (d) Any potential adverse effects on water quality; and (e) Any potential adverse effects on use of any proximate coastal marine area for contact recreation and seafood gathering.	Consideration has been given to the ability of the land to assimilate water and contaminants, and potential soil contamination, however, there is uncertainty around the level of effects on groundwater quality from the contaminated land and sedimentation. Recommended consent conditions will ensure ongoing monitoring of groundwater quality. The proposal will not have adverse effects on the coastal marine area. Overall, the proposal has regard to these matters, and is not considered to be inconsistent with this policy.
Policy 7.B.6 When assessing any consent to discharge contaminants to water, consider the need for and the extent of any zone for physical mixing, within which water will not meet the characteristics and limits described in Schedule 15, by taking account of: (a) The sensitivity of the receiving environment; and (b) The natural and human use values, including Kāi Tahu values; and (c) The natural character of the water body; and (d) The amenity values supported by the water body; and (e) The physical processes acting on the area of discharge; and (f) The particular discharge, including contaminant type, concentration and volume; and	The proposal involves the discharge of sediment-laden water back into the mine pit pond, and to sediment retention ponds. Sediments will settle out in the settlement ponds before being discharged to land and infiltrating back to groundwater, and subsequently the Clutha River/Mata-Au. Proposed land management practices will therefore help to reduce adverse effects on water. As discussed in Section 6.1 above, adverse effects on natural character and amenity values are considered to be acceptable. Adverse effects on Kāi Tahu values have been taken into account, however, more information is required to determine the level of effects on these values. The discharge is sediment-laden water to land, and the Good Quality Water guidelines in Schedule 15 have been taken into account.

(g) The provision of cost-effective community infrastructure; and (h) Good Quality Water as described in Schedule 15.	Given the uncertainty around the level of effects on groundwater quality, adaptive management strategies and monitoring conditions are recommended to ensure that adverse effects on groundwater quality are appropriately managed and mitigated. Overall, subject to recommended consent conditions, the proposal is generally consistent with these provisions, except in respect of consideration of Kāi Tahu values.
Policy 7.B.7 Encourage land management practices that reduce the adverse effects of water or contaminants discharged into water.	
Policy 7.B.8 Encourage adaptive management and innovation that reduces the level of contaminants in discharges.	
Policy 7.C.1 When considering applications for resource consents to discharge contaminants to water, to have regard to opportunities to enhance the existing water quality of the receiving water body at any location for which the existing water quality can be considered degraded in terms of its capacity to support its natural and human use values.	
Policy 7.C.2 When considering applications for resource consents to discharge contaminants to water, or onto or into land in circumstances which may result in any contaminant entering water, to have regard to: (a) The nature of the discharge and the sensitivity of the receiving environment to adverse effects; (b) The financial implications, and the effects on the environment of the proposed method of discharge when compared with alternative means; and (c) The current state of technical knowledge and the likelihood that the proposed method of discharge can be successfully applied.	Regard has been had to the nature of the discharge and sensitivity of the receiving environment. Due to the nature of the proposal and the requirement for dewatering, alternative means of discharge are considered unrealistic. It is considered that the proposed method of discharge can be successfully applied. The proposal is therefore considered to be consistent with this policy.
7.C.3 When considering any resource consent to discharge a contaminant to water, to have regard to any relevant standards and guidelines in imposing conditions on the discharge consent.	Regard has been had to the relevant limits for turbidity in Schedule 15 of the RPW.
Policy 7.C.7 To require that all practical alternative locations for the storage of hazardous substances have been considered before such storage occurs in close proximity to any lake or river or to mean high water springs; and, if it is not practical to locate elsewhere, to require that appropriate risk management contingencies are put in place.	The CODC application does not comment on the proximity of the storage of hazardous substances to rivers, however, confirms that it will be located in accordance with Health and Safety at Work (Hazardous Substances) Regulations 2017, and away from areas of flood risk and excavation.

Policy 7.C.8 To promote the use of contingency plans for the prevention, containment and recovery of the accidental spill of any hazardous substance which may adversely affect water quality.	The application does not outline any contingency plans for accidental spills of hazardous substances. Further information is therefore required to assess whether the application is consistent with these policies.
Policy 7.C.9 To support the coordination of measures to remedy or mitigate the adverse effects associated with accidental spills which could potentially contaminate water.	
Chapter 9 – Groundwater	
Policy 9.3.1 To sustain the recognised uses of Otago's groundwater.	This objective seeks to sustain consumptive uses, such as domestic and public water supply, stock drinking water, industry and irrigation, for the continued benefit of present and future generations. The level of effects on groundwater quality are not fully understood, and the proposal will adversely impact a number of existing groundwater users. However, the underlying aquifer is unmapped and is therefore not identified in Schedule 3 of the RPW for any recognised uses. The proposal is therefore not considered to be inconsistent with this policy.
Policy 9.3.3 To maintain the quality of Otago's groundwater	Given the uncertainty around effects on groundwater quality, it is unclear whether the proposal would maintain Otago's groundwater quality.
9.4.1 In managing any activity involving the taking of groundwater or the discharge of contaminants, to ensure that the suitability of aquifers to support the recognised uses of groundwater identified in Schedule 3 is maintained.	As noted above, the aquifer is not identified in Schedule 3 as having recognised uses to be maintained.
9.4.14 To require appropriate siting, construction and operation of new groundwater bores, to prevent: (a) Contaminants from entering an aquifer; and (b) The contamination of groundwater in any aquifer from the groundwater in another aquifer; and to promote such management for existing bores.	There is uncertainty around the level of effects on groundwater quality and whether contaminants would be prevented from entering the aquifer, therefore, ongoing groundwater quality monitoring is recommended. Subject to recommended monitoring conditions, the proposal is considered to not be inconsistent with these policies.
9.4.21 To support appropriate codes of practice and management guidelines for land use	

activities which may result in contaminants entering groundwater.	
Chapter 10A – Replacement Water Take and Use Permits	
Objective 10A.1.1 Facilitate an efficient and effective transition from the operative freshwater planning framework toward a new integrated regional planning framework, by managing: (a) The take and use of freshwater; and (b) The replacement of Deemed Permits, and (c) The replacement of water permits for takes and uses of freshwater where those water permits expire prior to 31 December 2025.	The Applicant seeks a consent term of six years for the water permit, but seeks a consent term of ten years for the other permits. Given that the permits are intrinsically linked, and that the other permits cannot be implemented without the water permit, I consider a consent term of six years for all consents is appropriate.
Policy 10A.2.2 Irrespective of any other policies in this Plan concerning consent duration, only grant resource consents for takes and uses of freshwater, where this activity was not previously authorised by a Deemed Permit or by a water permit expiring prior to 31 December 2025, for a duration of no more than six years.	

As previously noted, at the time of writing this report, a Cultural Impact Assessment has not been forthcoming. It may be that further information is forthcoming in respect of submitters' views as to cultural effects and how they are to be addressed during the hearing process. Should additional information be presented, I will reassess consistency of the proposal with the above provisions at that time.

Additionally, further information is required to assess whether the proposal is consistent with Policies 7.C.8 and 7.C.9, in respect of contingency plans for hazardous substances.

6.3.8 Regional Plan: Air for Otago

The relevant objectives and policies are assessed in Table 11 below.

Table 11: Assessment against the provisions of the Regional Plan: Air for Otago

Provision	Assessment
Objective 6.1.1 *To maintain ambient air quality in parts of Otago that have high air quality and enhance ambient air quality in places where it has been degraded.*	Adverse effects on air quality are assessed in Section 6.1.11 above. As discussed, Mr Brown considers that the proposed monitoring and management procedures will ensure that emissions of respirable particulate are adequately controlled. Adverse effects on human health can also be adequately mitigated by proposed mitigation measures, and it is
Objective 6.1.2 *To avoid adverse localised effects of contaminant discharges into air on:* *a) Human health;*	

b) *Cultural, heritage and amenity values;* c) *Ecosystems and the plants and animals within them; and* d) *The life-supporting capacity of air.*	considered that ambient air quality can be maintained. Given the nature of the discharge, the proposed mitigation measures and recommended consent duration, the activity is a sustainable use of Otago's air resource.
Objective 6.1.3 *To allow for the sustainable use of Otago's air resource.*	Overall, the proposal is considered to be consistent with these objectives.
Policy 7.1.1 *To recognise and provide for the relationship Kai Tahu have with the air resource through procedures that enable Kai Tahu to participate in management of the air resource.*	As above, adverse effects of the air discharges can be appropriately managed through proposed mitigation measures. The submissions by Aukaha and TRONT do not raise specific concerns about the proposed discharges to air, therefore it is unclear whether the discharge will have adverse effects on values of significance to Kāi Tahu. There are no known existing discharges to air from the site. Given the above, the proposal is considered to be generally consistent with these provisions.
Policy 8.2.3 *In the consideration of any application to discharge contaminants into air, Council will have:* a) *Particular regard to avoiding adverse effects including cumulative effects on:* i. *Values of significance to Kai Tahu;* ii. *The health and functioning of ecosystems, plants and animals;* iii. *Cultural, heritage and amenity values;* iv. *Human health; and* v. *Ambient air quality of any airshed; and* b) *Regard to any existing discharge from the site, into air, and its effects.*	
Policy 8.2.4 *The duration of any permit issued to discharge contaminants into air will be determined having regard to:* a) *The mass and nature of the discharge;* b) *The nature and sensitivity of the receiving environment; and* c) *Any existing discharge from the site, into air, and its effects.*	The Applicant has requested a consent duration of ten years. There are no existing discharges from the site, and proposed mitigation measures are considered to adequately manage adverse effects on sensitive receptors. As noted above, given the six-year consent term proposed for the water permit, a six-year consent term is considered appropriate for all consents. Given the above, the application is considered to be consistent with this policy.
Policy 8.2.5 *To require, as appropriate, that provision be made for review of the conditions of*	A review condition is recommended.

any resource consent to discharge contaminants into air.	
Policy 8.2.8 *To avoid discharges to air being noxious, dangerous, offensive or objectionable on the surrounding local environment.*	Subject to works being undertaken in accordance with the application and Dust Management Plan, the proposal is considered to be consistent with this policy.

Overall, the proposal is considered to be generally consistent with the relevant objectives and policies of the RPA.

6.4 Section 104(1)(c) - Any other matters

6.4.1 The Kai Tahu ki Otago Natural Resource Management Plan 2005

The Kāi Tahu ki Otago Natural Resource Management Plan 2005 (NRMP) 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 Papatipu Rūnaka: Te Rūnanga o Moeraki, Kāti Huirapa Rūnaka ki Puketeraki, Te Rūnanga o Ōtākou and Hokonui Rūnanga. Aukaha's submission highlights the following objectives and policies as being relevant to the application:

Overall objectives:

- The rakātirataka and kaitiakitaka of Kāi Tahu ki Otago is recognised and supported.
- Ki Uta Ki Tai management of natural resources is adopted within the Otago region.
- The mana of Kāi Tahu ki Otago is upheld through the management of natural, physical, and historic resources in the Otago Region.
- Kāi Tahu ki Otago have effective participation in all resource management activities within the Otago Region.

Wai Māori General Objectives

- The spiritual and cultural significance of water to Kāi Tahu ki Otago is recognised in all water management.
- The waters of the Otago Catchment are healthy and support Kāi Tahu ki Otago customs.
- Contaminants being discharged directly or indirectly to water are reduced.

Wai Māori General Policies

- To require an assessment of instream values for all activities affecting water.
- To protect and restore the mauri of all water.

Mahika Kai and Biodiversity Objectives

- Habitats and the wider needs of mahika kai, taoka species and other species of importance to Kāi Tahu ki Otago are protected.

- Mahika kai resources are healthy and abundant within the Otago Region.
- Indigenous plant and animal communities and the ecological processes that ensure their survival are recognised and protected to restore and improve indigenous biodiversity within the Otago Region.
- To restore and enhance biodiversity with particular attention to fruiting trees so as to facilitate and encourage sustainable native bird populations.
- To create a network of linked ecosystems for the retention of and sustainable utilisation by native flora and fauna.

Mahika Kai and Biodiversity General Policies

- To promote catchment-based management programmes and models, such as Ki Uta Ki Tai.
- To require that all assessments of effects on the environment include an assessment of the impacts of the proposed activity on mahika kai.

Cultural Landscapes

Cultural Landscapes Objectives

- The relationship that Kāi Tahu ki Otago have with land is recognised in all resource management activities and decisions.
- The protection of significant cultural landscapes from inappropriate use and development.
- The cultural landscape that reflects the long association of Kāi Tahu ki Otago resource use within the Otago region is maintained and enhanced.

Cultural Landscapes General Policies

- To identify and protect the full range of landscape features of significance to Kāi Tahu ki Otago.

It is noted the policy convention 'to oppose' that is used throughout the Kai Tahu ki Otago Natural Resource Management Plan 2005 means 'an activity or action that must not occur' in order to achieve the objectives of this Plan and protect Kai Tahu ki Otago values.

As discussed in Section 6.1.9 above, Aukaha have raised a number of concerns with the proposal, particularly in respect of potential adverse effects of dewatering on the mauri and aquatic ecology of surrounding water bodies, as well as effects on archaeological values and the wider cultural landscape. Aukaha's submission notes that the Applicant has not taken into account the impact of the activity on wai māori and the relationship of Kai Tahu with the significant cultural landscape, and Kai Tahu is unable to assess whether the activity provides for the mauri or wai māori, and gives effect to Te Mana o Te Wai.

As previously noted, the Applicant has sought to engage with Aukaha to develop a Cultural Impact Assessment and finalise the archaeological report, but at the time of preparing this section 42A report, this has not been forthcoming.

It may be that further information is forthcoming in respect of submitters' views as to effects on cultural and heritage values and how they are to be addressed during the hearing process. As the proposal currently stands, I consider that the proposal is not consistent with the objectives and policies of the

NRMP, however, I note the paucity of information in respect of cultural values, and will reassess my opinion at such time as further information is provided.

6.4.2 Te Rūnanga o Ngāi Tahu Freshwater Policy Statement 1999

The Ngāi Tahu Freshwater Policy Statement 1999 (NTFP) is considered to be a relevant other matter for the consideration of this application because the RPW is yet to be amended to take into account the NTFP. The NTFP expresses the attitudes and values of Te Rūnanga o Ngāi Tahu.

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

Mauri: *To restore, maintain and protect the mauri of freshwater resources.*

- *Accord priority to ensuring the availability of sufficient quantities of water of appropriate water quality to restore, maintain and protect the mauri of a waterbody, in particular priority is to be accorded when developing water allocation regimes.*
- *Protect the opportunities for Ngai Tahu's uses of freshwater resources in the future.*

Kaitiakitanga: *To promote collaborative management initiatives that enable the active participation of Ngai Tahu in freshwater management.*

- *Ensure Ngāi Tahu has access to information about the status of resources and the activities of resource users so that it is able to anticipate the effects of activities on customary values and uses.*
- *Assist with the development of Ngāi Tahu's capacity to conduct formal cultural impact assessments and require such assessments as part of an assessment of environmental effects.*
- *Improve the integration of western science and traditional local knowledge in order to develop a better understanding of all water use planning related matters.*

TRONT's submission raises concerns that the proposal will adversely affect the mauri of sacred water bodies. The submission supports Aukaha's, which notes there is insufficient information to assess whether the proposal provides for the mauri of wai māori and gives effect to Te Mana o Te Wai.

The application has been publicly notified, allowing for input from mana whenua, and the Applicant has sought to obtain a Cultural Impact Assessment, however, this has not been received at the time of writing this report.

It may be that further information is forthcoming in respect of submitters' views as to effects on cultural values and how they are to be addressed during the hearing process. As the proposal currently stands, I consider that the proposal is not consistent with the objectives and policies of the NTFP, however, I note the paucity of information in respect of cultural values, and will reassess my opinion at such time as further information is provided.

10. Sections 105 and 107

Section 105 of the Act states that if an application is for a discharge permit, the consent authority must, in addition to the matters in section 104(1), have regard to:

a) the nature of the discharge and the sensitivity of the receiving environment to adverse effects; and
b) the applicant's reasons for the proposed choice; and
c) any possible alternative methods of discharge, including discharge into any other receiving environment.

The discharge is sediment-laden water. The receiving environment is described in Section 6.1.1 of this report, and adverse effects of the discharge on the receiving environment are assessed in Sections 6.1.4, 6.1.5, 6.1.6, 6.1.8 and 6.1.9.

The application does not provide reasons for the proposed choice or possible alternative methods of discharge, however, due to the nature of the proposal, it is considered that the proposed discharge to land is the most realistic option.

Section 107(1) of the Act states, except as provided in subsection (2) (relating to exceptions), a discharge permit shall not be granted if, after reasonable mixing, the contaminant or water discharged (either by itself or in combination with the same, similar or other contaminants in water) is likely to give rise to all or any of the following effects in the receiving waters:

a) The production of any conspicuous oil or grease films, scums or foams, or floatable or suspended material;
b) Any conspicuous change in the colour or visual clarity;
c) Any emission of objectionable odour;
d) The rendering of fresh water unsuitable for consumption by farm animals;
e) Any significant adverse effects on aquatic life.

These matters were considered in Section 6.1 of this report.

Given the setbacks from surface water bodies and mitigation measures proposed, I do not consider it likely that the mining activity will result in the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended material, nor the emission of objectionable odour, or significant adverse effects on aquatic life. EAL's assessment states that the impact on turbidity of the Clutha River/Mata-Au will not be measurable and/or visually detectable, and conditions are proposed in this regard.

Whilst there is uncertainty around the level of effects on groundwater quality, given the contaminant is sediment-laden water, it is not considered likely that the discharge would render freshwater unsuitable for consumption by farm animals.

Given the above, it is considered that the proposal can be granted with respect to Section 107(1) of the Act.

11. Part 2 of the RMA

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.

Section 5 identifies the purpose of the RMA as the sustainable management of natural and physical resources. This means managing the use of natural and physical resources in a way that enables people and communities to provide for their social, cultural and economic well-being while sustaining those resources for future generations, protecting the life supporting capacity of ecosystems, and avoiding, remedying or mitigating adverse effects on the environment.

Section s6, 7 and 8 outline the principles of the Act. Section 6 sets out a number of matters of national importance which need to be recognised and provided for, section 7 identifies a number of "other matters" to be given particular regard by the council, and section 8 requires the council to take into account the principles of the Treaty of Waitangi.

The Court of Appeal has 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 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.

In the following, I assess the application against Part 2 so as to assist the decision maker:

11.1 Section 5

Section 5 identifies the purpose of the Act as to promote the sustainable management of natural and physical resources. This is defined as meaning:

"managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—
a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
c) avoiding, remedying, or mitigating any adverse effects of activities on the environment."

The proposed water take is considered to be a sustainable use of the water resource, given its predominantly non-consumptive use. However, the application does not demonstrate how the life-supporting capacity of soils will be safeguarded or sustained to meet the reasonable foreseeable needs of future generations.

Aukaha are unable to determine whether the proposal provides for the mauri, and therefore health and wellbeing, of water bodies. Furthermore, Aukaha have concerns that the Applicant's proposed conditions to mitigate effects on wai māori are not fit for purpose, and that archaeological sites will not be adequately protected. I consider that adverse effects in respect of other matters can be appropriately managed and mitigated.

As discussed throughout this report, a Cultural Impact Assessment has not been forthcoming at the time of writing. Further information may be forthcoming in respect of submitters' views as to cultural effects and how they are to be addressed during the hearing process, and should be explored further during the hearing. Based on the information known to the section 42A author at the date of this report, the application does not adequately demonstrate that the proposal achieves the sustainable management purpose of Section 5.

11.2 Section 6

Section 6 sets out a number of matters of national importance which need to be recognised and provided for. The following matters of national importance are of relevance to this proposal:

(a) the preservation of the natural character of the coastal environment (including the coastal marine area), wetlands, and lakes and rivers and their margins, and the protection of them from inappropriate subdivision, use, and development:

Adverse effects on natural character are assessed in Section 6.1.5. It is considered that the proposal will maintain the natural character of the Clutha River/Mata-Au, the Tima Burn, and their margins.

(d) the maintenance and enhancement of public access to and along the coastal marine area, lakes, and rivers:

Whilst public access to the Clutha Gold Cycle Trail will be maintained for the duration of the mining activity, this will involve diverting the trail away from the Clutha River/Mata-Au, therefore, will not maintain public access to, or along, the river.

(e) the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga:
(f) the protection of historic heritage from inappropriate subdivision, use, and development:

As discussed throughout this report, Aukaha have a number of concerns with the proposal, including around the lack of protection against the destruction and modification of archaeological sites. The archaeological assessment also states that the mining activity will have a "major" impact on archaeological values. Whilst the report notes that recommended mitigation measures would reduce

effects, it is not clear to what extent. Additionally, the current proposal does not recognise and provide for Kai Tahu's interests.

11.3 Section 7

Section 7 identifies a number of "other matters" to be given particular regard by the Council. Of relevance to this proposal are:

(a) kaitiakitanga
(aa) the ethic of stewardship

Particular regard has been given to kaitiakitanga and the ethic of stewardship throughout the assessment of this application. The Applicant has sought a CIA from Aukaha, but at the time of writing this report, this has not been forthcoming. Aukaha's submission outlines a number of issues with the proposal and concerns around effects on cultural values. Further information is also required to assess whether the proposal provides for the mauri or wai māori, and gives effect to Te Mana o Te Wai. Should additional information be presented, this should be explored further at the hearing.

(b) the efficient use and development of natural and physical resources

The proposed water take is predominantly non-consumptive, and is considered to be an efficient use of the water resource. Adaptive management strategies are also recommended to ensure adverse effects on groundwater quality are appropriately monitored and managed.

(c) the maintenance and enhancement of amenity values

An assessment of effects on amenity values of water bodies is undertaken in Section 6.1.5, and these effects are considered to be less than minor. The proposal is therefore considered to maintain amenity values.

(d) intrinsic values of ecosystems

Particular regard has been given to the intrinsic values of ecosystems. The assessment of effects on aquatic ecology in Section 6.1.8 concludes that adverse effects will be less than minor. However, further information is required to determine whether the proposal provides for the mauri, and therefore health and wellbeing, of water bodies and ecosystems.

(f) maintenance and enhancement of the quality of the environment

Particular regard has been given to the maintenance and enhancement of the quality of the environment. Given the uncertainty around the level of effects on groundwater quality, historic heritage values and cultural values, I consider that the current proposal does not maintain the quality of the environment.

(h) the protection of the habitat of trout and salmon

Particular regard has been given to the protection of trout and salmon habitat. Adverse effects on aquatic ecology and surface water quality are considered to be less than minor.

11.4 Section 8

Section 8 requires the council to take into account the principles of the Treaty of Waitangi when exercising functions and powers under the Act in relation to managing the use, development and protection of natural and physical resources.

The Applicant requested public notification of the application, and has sought to obtain a CIA from Aukaha, thereby enabling mana whenua to be actively involved in the assessment of the application. However, a CIA has not been forthcoming, and Aukaha's submission raises a number of concerns with the application, as discussed throughout this report. There is also inadequate information for Aukaha to determine whether the application provides for the mauri or wai māori, and gives effect to Te Mana o Te Wai.

Overall, based on the paucity of information available at the time of writing this report, I do not consider that the proposal actively protects Māori cultural values and interests, or is consistent with Section 8. It may be that further information is forthcoming in respect of submitters' views during the hearing process. Should additional information be presented, I will reassess my opinion at that time.

12 Section 108 and 108AA of the RMA

Should the decision maker wish to grant the application, the attached conditions on RM23.819 are recommended in accordance with Sections 108 and 108AA of the Act.

Conditions have been recommended in order to avoid adverse dust effects on neighbouring properties, mitigate potential adverse drawdown effects on surrounding groundwater users, and minimise potential adverse effects on groundwater quality.

Draft conditions have been offered by the Applicant, and these have been supplemented with additional conditions to achieve appropriate mitigation, ongoing monitoring of effects and information sharing.

The recommended condition in relation to the duration and lapse of consent, and for a s128 review condition are discussed below.

The full set of recommended conditions is appended to this s42A recommendation.

13. Recommendation

Under section 104B it is recommended that this consent application is **refused** for the following reasons.

- In accordance with an assessment under ss104(1)(a) and (ab) of the RMA, the actual and potential effects are considered to be appropriately managed and mitigated, so to be less than minor,

except in respect of adverse effects on groundwater quality, cultural values and historic heritage values.

  - As previously noted, at the time of writing this report, a CIA has not been forthcoming. Currently, based on what is known to the section 42A report author at the date of this report, and subject to receipt of further information, it is considered that the conditions as currently proposed have not adequately addressed cultural effects, such that adverse effects on cultural values are considered to be at least minor.

  - Similarly, there is uncertainty around the level of adverse effects on heritage values. The archaeological report states that the impact on archaeological sites will be "major" and it is unclear to what extent recommended mitigation measures would reduce those effects. Given that archaeological sites will be directly impacted by the works, and given the uncertainty around the appropriateness of proposed mitigation measures, it is considered that adverse effects will be at least minor. It may be that additional information in this respect is forthcoming, which will need to be considered at the hearing.

  - Taking into consideration the uncertainty around the level of effects on groundwater quality, and the mitigation measures proposed, adverse effects are considered to be no more than minor.

- In accordance with an assessment under s104(1)(b) of the RMA, there is inadequate information to assess whether the proposal is consistent with the relevant statutory documents, including the NPSFM, operative RPS, proposed RPS (non-freshwater and freshwater instrument components), and the RPW. In particular, there is insufficient information to determine whether the proposal provides for the mauri of wai māori and the health and well-being of water bodies, gives effect to Te Mana o Te Wai, or identifies and protects Māori cultural and historic heritage values. Further information is also required to assess the consistency of the proposal against provisions relating to effects on indigenous biodiversity and safeguarding the life-supporting capacity of soils.

- In accordance with an assessment under s104(1)(c) of the RMA, as the proposal currently stands, and given the concerns raised by TRONT and Aukaha, I consider that the proposal is not consistent with the objectives and policies of the NRMP or KTMP. However, I note the paucity of information in respect of cultural values, and should additional information be presented, this should be explored at the hearing.

- An assessment has been completed under Part 2 of the RMA. I consider that further information is required to assess whether the proposal will achieve the sustainable management of natural and physical resources, or provides for the relationship of Maori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga, or protects historic heritage from inappropriate subdivision, use, and development.

Overall, there is insufficient information to assess the level of adverse effects on cultural and historic heritage values, and whether the proposal is consistent with the statutory documents, outlined above. Based on the information available to the section 42A report author at the date of this report, I recommend that the proposal in its current form be **declined**.

Otago Regional Council

Danielle Ter Huurne
Senior Consents Planner
11 April 2024

Otago Regional Council

Appendix 1: Recommended Conditions of Consent

Appendix 2: Technical review by E3 Scientific - groundwater

Appendix 3: Technical review by E3 Scientific – aquatic ecology

Appendix 4: Technical review by Pattle Delamore Partners – air qualiy