

APPENDIX 1C – Recommended conditions on discharge to land permit

RM23.819.03 – Discharge Permit to sediment-laden water to water in a bore, and to land in a manner that may enter water.

Specific	
1.	<p>The discharge sediment-laden water to land and to water in a bore must be carried out in accordance with the plans and all information submitted with the application, detailed below, and all referenced by the Consent Authority as consent number RM23.819.03.</p> <ul style="list-style-type: none"> a) Resource consent application forms, Form 1, Form 5, Form 6, Form 8B, and 9A, signed by the Applicant and dated 18/05/23 b) Assessment of Environmental Effects, <i>Proposed alluvial gold mine at Millers Flat Resource Consent Applications – Otago Regional Council</i>, prepared by MacDonell Consulting Ltd, dated 16 November 2023 c) Site Plans, Sheets 1 to 8, prepared by Overview Surveying, dated 26/02/24 d) Groundwater Assessment, <i>Hawkeswood Mining Limited, - Technical Assessment of Proposed Groundwater Take and Discharge</i>, prepared by Environmental Associates Ltd, dated October 2023 e) Ecology Report, <i>Tima Burn Aquatic Ecology Assessment</i>, prepared by Water Ways Consulting, dated September 2023 f) Archaeological report, <i>1346 -1536 Teviot Road, Roxburgh, An Archaeological Assessment</i>, Rev. H, prepared by Heritage Properties Ltd 2024, dated March 2024 <p>If there are any inconsistencies between the above information and the conditions of this consent, the conditions of this consent will prevail.</p>
2.	This consent must be exercised in conjunction with Land Use Consent RM23.819.01, Water Permit RM23.819.02, Discharge Permit RM23.819.04.
3.	This consent authorises the discharge of groundwater containing sediment to land, whereby it may enter water at locations adjacent to the transient mine pit pond between NZTM 2000 grid coordinates E 1318240 N 4939570 and NZTM E 1319440 N 4938130. Sediment retention ponds are to be sized appropriately to allow adequate freeboard, and to ensure they do not overflow.
4.	<p>The volume of water discharged must not exceed:</p> <ul style="list-style-type: none"> a) 124.8 litres per second; and b) 10,783 metres per day.
5.	The Consent Holder must maintain a discharge buffer zone of at least 50 metres between the discharge to land, and the Clutha River/Mata-Au at all times, and must ensure that there is no direct discharge from the sediment retention ponds to any surface watercourse.
6.	No contaminants other than silt, sediment and biodegradable flocculants shall be discharged.
7.	<p>Under section 125 of the Resource Management Act 1991, this consent lapses five years after the date of commencement of the consent unless:</p> <ul style="list-style-type: none"> a) The consent is given effect to; or b) The Consent Authority extends the period after which the consent lapses.
Performance Monitoring	

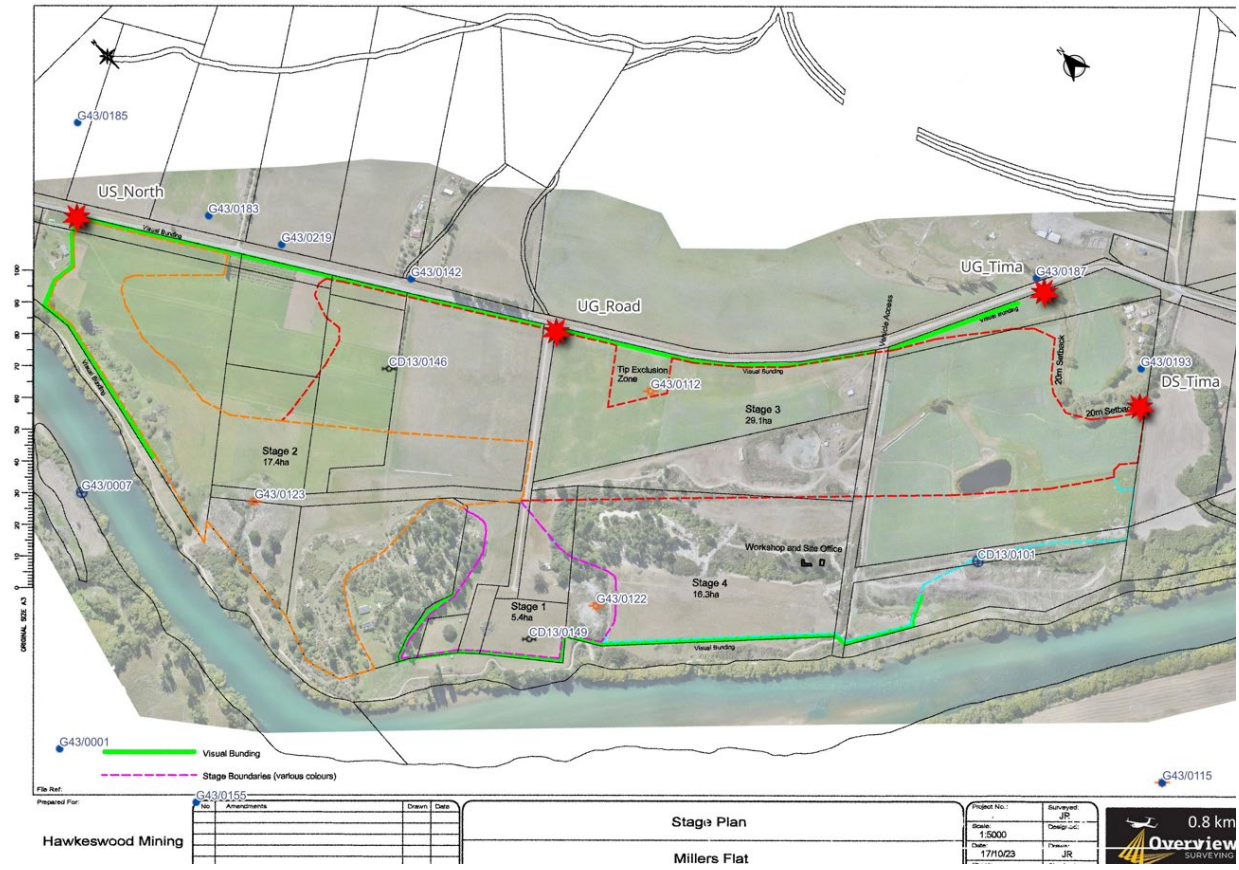
8.	<p>Within three months of this consent being exercised, a water quality monitoring network must be established for the mine which must include:</p> <p>a) Four new groundwater monitoring locations on site boundaries at the following locations (NZTM 2000 co-ordinates), and as illustrated in Appendix A:</p> <table border="1" data-bbox="371 344 751 533"> <thead> <tr> <th>id</th> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>1318342</td> <td>4939666</td> </tr> <tr> <td>2</td> <td>1319425</td> <td>4938275</td> </tr> <tr> <td>3</td> <td>1319434</td> <td>4938518</td> </tr> <tr> <td>4</td> <td>1318799</td> <td>4939004</td> </tr> </tbody> </table> <p>b) The settling pond and the exposed area of groundwater (mine pit pond), to assess discharge water quality.</p> <p>If the above monitoring bores are relocated due to access, the updated co-ordinates shall be submitted to the Consent Authority before drilling commences.</p>	id	X	Y	1	1318342	4939666	2	1319425	4938275	3	1319434	4938518	4	1318799	4939004
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1	1318342	4939666														
2	1319425	4938275														
3	1319434	4938518														
4	1318799	4939004														
9.	<p>The bore drilling and installation of the piezometers required by Condition 8 shall be overseen by a suitably qualified person. A report that demonstrates compliance with the requirements of Condition 8 shall be submitted to the Consent Authority within one month of the installation of the bore(s).</p>															
10.	<p>The Consent Holder must take quarterly representative water samples from the water quality monitoring network established in Condition 8, commencing within three months of this consent being exercised. Quarterly monitoring must continue for the duration of this consent. During each monitoring event:</p> <p>a) Water levels must be measured and recorded at the time of sampling.</p> <p>b) Field parameters (colour, odour, temperature, pH, Dissolved Oxygen (mg/L and % sat), Electrical Conductivity and Oxidation Reduction Potential) must be measured and recorded at the time of sampling using a calibrated water quality meter in a flow cell. Samples must be collected after field parameters have stabilised to within 5% of the previous three measurements. Field filtering of samples must be completed for dissolved metals analysis.</p> <p>c) Samples must be analysed by a laboratory with IANZ accreditation or equivalent for total petroleum hydrocarbons, total suspended solids, turbidity, major ions (sodium, potassium, calcium, magnesium, alkalinity, chloride, sulphate, nitrate), copper, chromium, zinc, Arsenic and E-coli, iron and manganese. Samples must be analysed for both total and dissolved metals.</p> <p>d) The sampling must be undertaken by a suitably qualified person in general accordance with the National Environmental Monitoring Standards Water Quality Part 1 of 4: Discrete Sampling, Measuring, Processing and Archiving of Discrete Groundwater Quality Data.</p>															
11.	<p>Prior to consent being exercised, the Consent Holder must take representative water samples from the monitoring bores and the settling pond(s) in accordance with Condition 10 a) and b).</p>															
12.	<p>For the term of this consent, quarterly (four times per year) water monitoring must be undertaken for total suspended solids and turbidity at the following sites:</p> <ul style="list-style-type: none"> • Final operational infiltration pond/area discharge; • True left bank of the Clutha River/Mata-Au at within 100 m upstream of the site; and 															

	<ul style="list-style-type: none"> • True left bank of the Clutha River/Mata-Au at within 500 m downstream of final infiltration pond/area discharge.
13.	Copies of the results of any water quality analyses or aquifer testing performed on the groundwater shall be forwarded to the Consent Authority within two weeks of the analysis or testing being undertaken.
14.	<p>By the 30th of June each year, the Consent Holder must submit an Annual Groundwater Report to the Consent Authority. The report shall:</p> <ol style="list-style-type: none"> a) Be prepared by a suitably qualified and experienced water quality expert who has reviewed all the available water quality and level data. b) Include a conceptual groundwater model for the site based on the collected data. c) Include an assessment of whether the data indicates activities on the Consent Holder's site are adversely impacting groundwater quality, and in particular, sensitive receptors. d) State the identity, expertise and sampling methodology of the person(s) who collected water samples in accordance with this resource consent; e) Identify any measures required under Condition 15 and 16; and f) Include copies of the complaints record for any complaints in relation to groundwater quality for the preceding 12 months.
15.	<p>Should the measured value of any of the determinants in a sample from monitoring bores measured in accordance with Conditions 10 and 11 exceed a NZ Drinking Water Standard Maximum Acceptable Value or Guideline (Aesthetic) Value (as specified in the relevant New Zealand Drinking Water Standards at the time of sampling), then the Consent Holder must:</p> <ol style="list-style-type: none"> a) Advise the Consent Authority and affected bore owners within 48 hours of receipt of the results; b) Within one week from the receipt of the results, begin an investigation into the cause of the elevated sample results. The investigation is to be carried out by a suitably qualified water quality expert and is to include, but is not limited to; <ol style="list-style-type: none"> i. results of water quality sampling; ii. activities at the mine site; iii. activities at the neighbouring property(s); iv. rainfall prior to, and during, the investigation period; and v. any additional water quality monitoring that may be required to assess the potential cause of contamination. c) Within one month of receipt of the elevated sample results, submit a report signed by a suitably qualified water quality expert to the Consent Authority and the bore owner on the investigation undertaken, any potential sources of contamination identified, the likely cause(s) of the contamination and recommend any remedial measures to prevent or mitigate the contamination. d) In the event that the report concludes that it is likely that the contamination was caused by the Consent Holder; and <ol style="list-style-type: none"> i. the contamination was in potable drinking water supply, the Consent Holder must, within 48 hours of receipt of the report, provide any affected bore owner(s) with an alternative supply of potable drinking water sufficient to provide 2,000 litres per day to each household provided by the supply, until such time as monitoring demonstrates compliance with the relevant

	<p>Maximum Acceptable Values or Guideline values. All costs associated with this shall be borne by the Consent Holder.</p> <p>ii. the contamination was in a monitoring bore, sampling frequency at the closest target monitoring bore identified in Condition 10 (a) shall increase to one per week, until the issue has been rectified.</p>
16.	<p>If a report required under Condition 15 concludes that the discharge is causing a significant adverse water quality effect at a target monitoring bore, the Consent Holder must, within three months of receiving that report, implement additional or alternative sediment treatment/management measures to reduce the concentration of suspended solids entering the infiltration/settling pond and:</p> <p>a) The Consent Holder must report to the Consent Authority as soon as practicable on the completion of any such works; and</p> <p>b) Within 12 months of completion of any additional sediment treatment/management measures, the Consent Holder must provide a report to the Consent Authority written by a suitably qualified person on the effectiveness of those measures.</p>
General	
17.	<p>There must be no direct discharge, or run-off via tile or open drain, of any sediment-laden groundwater from the site.</p>
18.	<p>The discharge authorised by this consent must not result in:</p> <p>a) the production of any conspicuous oil or grease films, scums or foams, or floatable or suspended materials.</p> <p>b) any conspicuous change in the colour or visual clarity.</p> <p>c) any emission of objectionable odour.</p> <p>d) the rendering of fresh water unsuitable for consumption by farm animals; or</p> <p>e) any significant adverse effects on aquatic life.</p> <p>In any river, lake, artificial watercourse or wetland.</p>
19.	<p>The Consent Holder shall ensure that the discharge authorised by this consent does not cause any flooding, erosion, scouring, land instability or damage to any adjacent property.</p>
Review	
20.	<p>The Consent Authority may, in accordance with Sections 128 and 129 of the Resource Management Act 1991, serve notice on the Consent Holder of its intention to review the conditions of this consent during the period of three months either side of the date of granting of this consent each year, or within two months of any enforcement action taken by the Consent Authority in relation to the exercise of this consent, or on receiving monitoring results, for the purpose of:</p> <p>a) Determining whether the conditions of this consent are adequate to deal with any adverse effect on the environment which may arise from the exercise of the consent and which it is appropriate to deal with at a later stage, or which becomes evident after the date of commencement of the consent;</p> <p>b) Ensuring the conditions of this consent are consistent with any National Environmental Standards, relevant regional plans, and/or the Otago Regional Policy Statement;</p> <p>c) Reviewing the frequency of monitoring or reporting required under this consent;</p> <p>d) Amending the monitoring programme set out in accordance with Conditions 8 to 16; or</p> <p>e) Varying the consented quantities and rates of take and monitoring, operating and reporting requirements, and performance requirements to respond to:</p>

	<ul style="list-style-type: none"> i. the results of previous monitoring carried out under this consent and/or: <ul style="list-style-type: none"> a) water availability, including alternative water sources; b) actual and potential water use; c) groundwater levels and/or the setting of aquifer restriction levels; d) surface water flow and level regimes; e) groundwater or surface water quality; f) efficiency of water use; g) Instream biota, including fish passage and the functioning of aquatic ecosystems; or h) new requirements for measuring, recording and transmission.
Notes to Consent Holder	
1.	<p><i>If you require a replacement consent upon the expiry date of this consent, any new application should be lodged at least 6 months prior to the expiry date of this consent. Applying at least 6 months before the expiry date may enable you to continue to exercise this consent under section 124 of the Resource Management Act 1991 until a decision is made on the replacement application (and any appeals are determined).</i></p>
2.	<p><i>The Consent Holder is responsible for obtaining all other necessary consents, permits, and licences, including those under the Building Act 2004, the Biosecurity Act 1993, the Conservation Act 1987, and the Heritage New Zealand Pouhere Taonga Act 2014. This consent does not remove the need to comply with all other applicable Acts (including the Property Law Act 2007 and the Health and Safety at Work Act 2015), regulations, relevant Bylaws, and rules of law. This consent does not constitute building consent approval. Please check whether a building consent is required under the Building Act 2004.</i></p>
3.	<p><i>Where information is required to be provided to the Consent Authority in condition/s 8 to 16, this is provided in writing to compliance@orc.govt.nz, and the email heading is to reference RM23.819.02 and the condition/s the information relates to.</i></p>
4.	<p><i>The Consent Holder will be required to pay the Consent Authority an administration and monitoring charge to recover the actual and reasonable costs incurred to ensure ongoing compliance with the conditions attached to this consent, collected in accordance with Section 36 of the Resource Management Act 1991.</i></p>

Appendix A: Monitoring bore locations



File No: G43/0155
 Prepared For: Hawkeswood Mining

No.	Amendments	Drawn	Date

Stage Plan
 Millers Flat

Project No.:	Submitted:
Scale:	Design CC:
Date:	Drawn:

