**BEFORE THE COMMISSIONERS APPOINTED ON BEHALF OF CENTRAL OTAGO DISTRICT COUNCIL**

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| **Under** | The Resource Management Act 1991 (the **Act**) |
| **In the Matter** | of Resource Consent Application RC250077 for the purpose of mining at Sandy Point, Queensberry |
| **Between** | **AWA KOURA MINING LIMITED**<br>**Applicant** |
| **And** | **CENTRAL OTAGO DISTRICT COUNCIL**<br>**Territorial Authority** |

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# BRIEF OF EVIDENCE OF THOMAS BRENDAN HELLER (HYDROGEOLOGY)

**DATED 13 OCTOBER 2026**

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# BRIEF OF EVIDENCE OF THOMAS BRENDAN HELLER (HYDROGEOLOGY)

## Introduction:

1. My full name is Thomas Brendan Heller. I am based in Dunedin as a Director of Water and Environment at Environmental Associates Ltd.

2. I hold the qualifications of New Zealand Certificate in Engineering (Civil) and a National Diploma of Science majoring in surface water and groundwater resources from the Otago Polytechnic, Central Institute of Technology, and the New Zealand Qualifications Authority. I hold a Certificate in Management from the New Zealand Institute of Management and a Master's Degree in Environmental Science completed with first class honours from the University of Otago.

3. I have over 40 years' experience working in surface water and groundwater resource evaluation. A considerable amount of that time has been spent on hydro-geologic and water quality assessment relating to water allocation and land use issues. I have also been involved with technical aspects of groundwater and surface water policy development for the Regional Plan: Water for Otago, the Regional Freshwater Plan for Southland and the Land and Water Regional Plan for Canterbury.

4. I am familiar with the proposed Awa Koura Limited (AKL) mine site and mining proposal. I have previously (and recently) been involved with similar projects such as Hawkeswood Mining Limited - Millers Flat, Foothills Mining Limited – Nevis Valley, and Road Metals and Fulton Hogan Limited Quarries – Upper Clutha Valley, Cromwell.

5. Although this is not an Environment Court hearing, I have read and agree to comply with the Code of Conduct for Expert Witnesses (Environment Court Practice Note 2023). I confirm that the opinions that I express in this evidence are on matters within my expertise.

**Scope of Evidence**

6. In preparing this evidence I have read and refer to the following documentation:

   (a) The Awa Koura Limited Application for Resource Consent;

   (b) The accompanying Groundwater Technical Assessment prepared by Environmental Associates Limited; and

   (c) Relevant submissions and s42A officer reporting.

7. The scope of my evidence is limited to assessing the hydrogeological effects of the proposed resource consent especially as it relates to local groundwater and the Clutha River Mata-Au.

8. I rely on my groundwater technical assessment from 19 September 2025.

9. Overall, I consider the hydrogeological effects as a result of the AKL mining operation will be no more than minor.

10. In my evidence I will briefly address the following matters:

    (a) Recommendations;

    (b) Response to submitters; and

    **(c)** Response to the s42A officer reporting.

**Recommendations**

11. The sole recommendation arising out of the Groundwater Technical Assessment was for a 40 metre set-back or buffer zone from the proposed mine pit pond to the Clutha River Mata-Au.

12. The effect of the proposed set-back distance is to provide approximately 80-days of retention time under natural groundwater gradient (flow) conditions for any turbid mine pit pond water to potentially migrate to the Clutha River Mata-Au.

13. This is a significant retention time, and will result in sufficient filtration of any sediment laden groundwater, prior to entering the Clutha River Mata-Au. Typically, under natural groundwater gradient conditions, sufficient filtration of sediment laden groundwater would actually occur within the first 5 metres of horizontal aquifer occurrence.

**Response to submitters**

14. Submitters have raised concerns regarding the risk of contamination of the Clutha River Mata-Au.

15. As discussed in my report, the 40 metre set-back from the mine pit pond is more than sufficient for adequate filtration of any sediment laden groundwater that naturally migrates away from the mine pit pond to the Clutha River Mata-Au. Under these environmental conditions, there will be no measureable effect upon river water quality and/or aquatic ecosystems.

16. Whilst not discussed in my report, any potential accidental spill (of fuel or oil), would be highly unlikely, would be contained within the alluvial silts and sediments at the site and can be extracted to landfill, or if within the mine pit pond itself, can be captured by boom and/or trash pump as the hydrocarbons will float and not mix with the groundwater.

17. Additionally, the natural movement of groundwater is very slow and any hydrocarbons (spill) would be unable to migrate (with groundwater flow) through the alluvial aquifer. Any hydrocarbons (that are not captured) would invariably by contained within the alluvial silts and sediments that flanked the mine pit pond, and could easily be extracted to landfill.

18. Under the above circumstances, the risk of contamination of the local aquifer and/or the Clutha River Mata-Au (from sediment laden groundwater or hydrocarbons), is very low and highly unlikely.

**Response to s42A officer reporting**

19. The s42A reporting officer recognises that effects on groundwater from the proposed take are matters to be assessed by the Otago Regional Council (ORC). This has been done, and the ORC has granted consent to construct a pond[1], take and use groundwater[2], and discharge water and sediment to water.[3]

Dated 13 October 2026



Tom Heller

[1]RM26.315.01.
[2]RM26.315.02.
[3]RM26.315.03.