

Before the Independent Hearing Panel

In the Matter of the Resource Management Act 1991 (**RMA**)

And

In the Matter of an application to the Central Otago District Council and Otago Regional Council for resource consent to establish and operate a gold mining activity at 1346 – 1536 Teviot Road, Millers Flat

Reference RC230325 (Central Otago District Council)
RM23.819 (Otago Regional Council)

Summary Statement of Richard Mark Allibone on behalf Hawkeswood Mining Limited

(Freshwater Ecology)

Dated 13 May 2024

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Introduction

1. My full name is Richard Mark Allibone. I am a director and principal ecologist at Water Ways Consulting. I hold a BSc (Zoology and Geology), MSC (Zoology) and PhD (Zoology) from the University of Otago. I have been working as freshwater ecologist for over thirty years and my experience is set out in paragraphs 1-4 of my Evidence in Chief. I confirm that I have continued to comply with the Code of Conduct for expert witnesses in preparing this summary statement.

Summary

2. I conducted a fish, macroinvertebrate and habitat survey of the lower Tima Burn to determine the ecological condition of this stream and assess the possible effects of any dewatering as a result of the proposed mining activity.
3. The fish survey found the only common fish was longfin eel, three other fish species, brown trout (2 individuals), inanga (1 individual) and upland bully (1 individual) were found across the three sites fished. None of the fish are threatened fish species. Environmental DNA (eDNA) samples did not detect other fish species present.
4. Observations of the macroinvertebrate community and the eDNA samples found the common taxa were worms and snails. These are low flow and low oxygen tolerant species. Species such as mayflies and caddisflies that are indicators of good habitat were very rare and limited to one or two individuals from very few species.
5. No threatened fish or macroinvertebrates were found in the Tima Burn.
6. The riparian habitat upstream of the Teviot Road is assessable to stock. Downstream of the road the riparian zone is fenced but was dominated by crack willow trees and their root mats extend into and often across the river channel. These willow root mats smother instream habitat used by fish and macroinvertebrates and are major detrimental effect on the stream health.

7. The present assessment is that dewatering of the mine will not impact on the Tima Burn and therefore there will be no effects on the Tima Burn and the low ecological value flora and fauna present in the stream.
8. In the event there is some reduction in flow this will occur in the area already subject to low or no flow. This reach has a low/no flow, low dissolved oxygen tolerant fauna and any further induced low flow will not impact on any significant ecological values and the drought and low oxygen tolerant fauna will not be lost. Furthermore, as flow augmentation is proposed in specified circumstances (if they arose) to prevent dewatering due to the mine dewatering this protects the lower Tima Burn fauna from any induced drying. I consider that the amended conditions of consent put forward by the applicant (and addressed at paragraphs 54 - 55 of my Evidence in Chief) are appropriate from a freshwater ecology perspective.

Matters Arising

9. Mr Vial raises issues regarding the Tima Burn and the assessment of effects of the application. He frequently refers to assessing the natural character and the application cannot show it preserves the natural character (e.g., paragraph 30, 87, 93). My assessment report and the technical review by Mr Hamer both characterise the lower Tima Burn as a stream of low ecological health with a fauna of pollution and/or poor habitat quality tolerant species. I also described the riparian margins as either grazed pasture or a crack willow dominated riparian zone where the crack willow root mats further reduce the instream habitat quality. In my opinion this provides the assessment of the present state of the natural character.
10. Further, my report and evidence in chief assess the possible effects of the proposed mining activity. There will be no effect if there is no groundwater draw down that affects the Tima Burn. In this case the present natural character will remain unaffected. If some lowering of the water table and the flow in the Tima Burn is recognised while mining is occurring, then flow augmentation will be initiated to protect the stream flow. This will protect the existing natural character.

11. Mr Vial (paragraphs 100-101) discusses the use of the precautionary approach and providing a safety margin when managing activities that may cause harm and raises concerns the flow augmentation in the Tima Burn is unsuitable (paragraphs 105-110) and possible water quality effects from the ground water augmentation. The dominant macroinvertebrates (worms and snails) and fish (longfin eels) are fauna known to tolerate poor water quality conditions and I do not consider the flow augmentation to represent a water quality risk to these species and would expect the existing poor natural character to be maintained. I also consider the flow augmentation proposal to be a good precautionary condition as it is readily achieved and will provide assurance that flow is maintained in the lower Tima Burn even when natural no flow conditions can occur.
12. I would also note that the poor habitat and/or water quality conditions extend well upstream of the potential area of any groundwater impact. Following the completion of mining work in the vicinity of the Tima Burn the upstream water quality issues and the effects of the riparian crack willows will continue and the natural character will continue in its present state.
13. Finally with respect to natural character the mine proposal could potentially reduce the flow in lower 600 m of the Tima Burn. There is approximately 15 km of the Tima Burn upstream of this reach and there is also the network of tributaries meaning by far the majority of the Tima Burn is at no risk of any affect from the proposed activities.

Conclusions

14. Overall, the lower Tima Burn is assessed as having low ecological value.
15. The present assessment is that dewatering of the mine will not impact on the Tima Burn and therefore there will be no effects on the Tima Burn and its flora and fauna.
16. In the event there is some reduction in flow this will occur in the area already subject to low or no flow. The proposed flow augmentation will prevent any stream dewatering due to the mine dewatering and this will protect the lower Tima Burn fauna from any induced drying.

17. With respect to the natural character of the Tima Burn the majority of the catchment cannot be affected by the proposed activity. In the event of some groundwater draw down effects on the lower Tima Burn the proposed flow augmentation will provide for the protection of the existing natural character. I do not consider the augmented water represents a risk to the low ecological value ecosystem of the lower Tima Burn.

A handwritten signature in blue ink, appearing to read 'R. Allibone', is centered on the page.

Richard Allibone

Dated 13 May 2024