

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)

Supplementary Statement of Nigel Goodhue on behalf Hawkeswood Mining Limited

(Air Quality)

Dated 25 June 2024

Jeremy Brabant
Barrister
Foundry Chambers
Level 4, Vulcan Buildings
PO Box 1502, Shortland St
Auckland City
021 494 506
Email: jeremy@brabant.co.nz

Introduction

1. My full name is Nigel David Goodhue. I hold the position of Environmental Scientist at Air Matters Limited. My highest qualification is a Master of Science Degree from the University of Waikato as set out in paragraph 1 of my Evidence in Chief (**EiC**).
2. I confirm that I have continued to comply with the Code of Conduct for expert witnesses in preparing this supplementary statement.
3. My scope of works included peer reviewing the Dust Management Plan (**DMP**) and undertaking an Assessment of Environmental Effects (**AEE**) to support the Air Discharge Consent sought from Otago Regional Council. I presented evidence at the Consent Hearing on 14 May 2024 and responded to a range of questions from the Hearing Commissioners. This supplementary statement addresses the key matters relevant to my expertise that arose during the hearing.

Matters Arising

4. As a response to questions raised in the hearing, I have updated the DMP to:
 - a. Define Sensitive Receptor Management Zones in response to written approvals;
 - b. Detail a process for positioning the dust monitors;
 - c. Adjusting the dust monitoring trigger values; and
 - d. Other minor clarifications.
5. These matters are discussed in more detail below.
6. Sensitive Receptor Management Zones (**SRMZ**) have been updated to reflect the current written approvals to the Air Discharge Permit sought from Otago Regional Council. Based on this, three SRMZ within the active site are recommended and have been included in the DMP (dated 17 June 2024). Controls proposed outside of the SRMZ are considered sufficient to ensure the

effects on any neighbouring dwelling, accommodation facility or property are maintained to an acceptable level. The more stringent controls within a SRMZ will provide a greater level of mitigation in the event of an unanticipated dust generating event, such as extreme weather conditions.

7. Boundary dust monitors were discussed during the hearing and the Commissioners requested that the applicant provide more certainty on the locations of the monitors and the setting of trigger levels. I stated in the hearing that providing fixed locations based on the mine's stages may be achievable. I have given this further thought and, after reviewing the staging plans, I am of the opinion that providing a fixed location for the dust monitors for each stage is NOT practical (or the most appropriate solution) for an activity progressively moving around a 68-ha site.
8. To provide better certainty, I recommend that the dust monitor locations are defined (in degrees) based on predominant wind direction. Within these downwind zones the monitors should be located on the site boundary and placed between the active work site and any habitable dwelling. This proposed method will provide better certainty for the applicant, Councils and neighbours on the locations of the monitors, while providing flexibility to take into account the variables that impact the dispersion of dust.
9. The second question raised by the Commissioners was the appropriateness of the PM₁₀ trigger levels. In the AEE and my EIC I had recommended the MfE Guidance of 150 µg/m³ as a 1-hour average. I still consider this trigger value appropriate for this activity and environmental setting. Lower trigger limits are typically used in very specific situations such as for individual dwellings under certain wind conditions. To provide additional warning, I recommended that a short-term average (10-minute) is employed as an early trigger warning. Both these measures have been included in the draft DMP.
10. A procedure for reviewing and reducing the trigger value has also been incorporated into the draft DMP. This review process would be prompted by the applicant's observations or where a complaint was received, and the existing trigger limits were not reached.

11. The applicant has confirmed data access to an onsite wind monitoring station and the DMP has been updated to reflect this. The proposed wind speed thresholds outlined in the Air Matter's AEE and DMP were based on data from an offsite MetService weather station but are still considered generally suitable for measurements from the onsite wind monitoring station.
12. I recommend that the wind speed thresholds are specified in the DMP and not the conditions of consent. This would allow an adaptive approach which may be necessary where: the onsite conditions are not reflective of MetService's offsite wind monitoring station; particulate monitoring or visual observations indicate the wind speed thresholds do not correlate with cross boundary effects or the onsite wind monitoring station needs to be relocated or the height increased (and the new location is not reflective of the existing station).
13. In my view the DMP is now in an appropriate form to manage and control air quality effects related to the operation of the gold mine.
14. I have reviewed the proposed conditions of the Air Discharge Permit and made a number of minor technical recommendations as outlined in the supplementary evidence of Ms Collie. I consider these conditions are appropriate to control to potential air quality effects of the operation.



Nigel Goodhue

Dated 25 June 2024