

In the matter of an application for approvals under the Fast Track Approvals Act 2024

By **TiGa Minerals and Metals Limited**

Applicant

Statement of evidence of Graeme Ridley in relation to Erosion and Sediment Control

26 March 2026

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Introduction

- 1 My name is Graeme Ridley.
- 2 My role in relation to the application by Tāiko Critical Minerals Limited (**the application**) for approvals relating to the Barrytown Mineral Sands – Southern Resources Block Project (**the Project**) has been to provide expert advice in relation to erosion and sediment control during construction.
- 3 I prepared the Erosion and Sediment Control Plan Report (**Report**) which has been provided in support of the application.
- 4 The purpose of this evidence is to:
 - (a) provide my qualifications and experience relevant to the Report;
 - (b) confirm my compliance with the Code of Conduct for expert witnesses, contained in the Environment Court of New Zealand Practice Note 2023;
 - (c) provide a brief summary of the report and confirm its contents; and
 - (d) comment on the proposed conditions.

Qualifications and Experience

- 5 I am the Director of Ridley Dunphy Environment Limited.
- 6 I have a Bachelor of Agricultural Science from Massey University, Palmerston North (1986).
- 7 I am a Certified Professional in Erosion and Sediment Control (CPESC Number 7629), a qualification that is achieved through Envirocert International and previously the International Erosion Control Association. I am also a Registered Soil Practitioner in Erosion and Sediment Control, a formal qualification through Soil Science Australia.
- 8 I have specific on-site and consenting experience with a number of major earthwork projects including, but not limited to, Transmission Gully, Puhoi to Warkworth, North Canterbury Transport 3 Infrastructure Recovery, and Tauriko Business Estate. Having been directly involved with all erosion and sediment control aspects of large-scale infrastructure projects, I am aware of the issues, opportunities and practicalities with planning and onsite implementation.
- 9 I have also had specific erosion and sediment control technical input into previous mineral sand mining operations on the West Coast of the South Island, including the Barrytown Central Resources Block.

- 10 I was the primary author of the ARC Technical Publication Number 90 "Erosion and Sediment Control Guidelines for Land Disturbing Activities" ("TP90"), which was the primary tool promoted and used by the former ARC, and now Auckland Council, for the management of erosion and sediment associated with development sites.
- 11 I was one of the authors and peer reviewers of the New Zealand Transport Agency Erosion and Sediment Control Standard for State Highway Infrastructure September 2014. I have had contribution into the development of the Erosion and Sediment Control Guide for Land Disturbing Activities in the Auckland Region June 2016 Guideline Document 2016/005 (GD05).
- 12 My on-site experience has included significant implementation and interpretation of these guidelines and ensuring best practice and effective implementation.
- 13 I am a past director and vice president of the Australasian chapter of the International Erosion Control Association.

Expert witness Code of Conduct

- 14 While this application is not being considered by the Environment Court, I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court of New Zealand Practice Note 2023 and that I have complied with it when preparing this evidence. Other than when I state I am relying on the advice of another person, this evidence is within my area of expertise. I have not omitted to consider material facts known to me that might alter or detract from the opinions that I express.

Summary of Report

- 15 My assessment for the erosion and sediment control is based on two specific phases of the Project referred to as construction and operation. I was the primary author of the Erosion and Sediment Control Plan (ESCP) that supports this approach.
- 16 The ESCP provides the overarching approach to water management and confirms that prior to any work activity a detailed Site Specific ESCP (SSESCP) will be established for the Project.
- 17 The SSESCP will primarily be based upon the principles detailed within the ESCP and will reconfirm the methodologies and construction sequence to be followed to ensure that the ESCP outcomes, as specified, are achieved at all times. The benefits of allowing this management plan approach to be confirmed at implementation time is to ensure ongoing innovation and flexibility remains and enables the Project team and the consent authority to have further input into the methodologies implemented.

- 18 The ESCP also confirms a monitoring programme that will be implemented throughout the mining and rehabilitation earthworks that will inform future activities and water management approaches. This monitoring programme will form a key component of an Annual Work Programme (AWP) which will apply to both establishment, mining and rehabilitation phases and will confirm the outcomes from the previous 12 months and confirm the approach for the upcoming 12 month period.
- 19 The mining void itself, including the establishment of the mine location and rehabilitation stages of this area, are self-contained systems with a bund established (from the initial topsoil stripping) to fully isolate the area of disturbance from surrounding runoff. It also fully contains any water within the area of disturbance where groundwater infiltration can occur. The ESCP confirms that the mining activity itself will have no intentional surface water discharges during the operation.
- 20 Outside of the Mining Disturbance Area and within the Application Area earthworks will occur over 72ha for the purpose of sourcing borrow material for final rehabilitation. This borrow material location will have water management measures in place, including the options of utilisation of the mining void infiltration and also installation of independent sediment control measures.
- 21 Creek diversions are also required as part of the mining phase, and are subject to a detailed methodology and specific ESC measures as outlined in the ESCP.
- 22 Table 1 of the ESCP confirms all the associated earthworks and land disturbance activities, including bund establishment and haul roads, that will occur on the Project. This confirms the overarching water management methodologies that will be implemented for these activities.
- 23 The Project has committed to having a maximum area open at any one time of 16ha within which a maximum 2ha will be exposed as part of the wider borrow cut area. This includes all the bund establishment and road access provisions. This has the effect of ensuring, including through site establishment phases, that progressive stabilisation is implemented and the risk of sediment generation and discharges are greatly reduced.
- 24 An adaptive monitoring programme will be implemented which will allow for ongoing continuous improvement of the ESC and water management measures and will allow for annual reporting and adaptations all detailed within the AWP for the mining and rehabilitation activities. The monitoring regime includes qualitative monitoring and also specific quantitative monitoring.

Proposed Conditions

25 I have reviewed the proposed conditions at Appendix P of the application as they relate to my area of expertise. I consider that:

- (a) in the context of erosion and sediment control, the ESCP approach and the proposed conditions of consent, into which I had input, allow for flexibility for the contractor to implement the Project, while providing certainty that effects of the Project can be managed appropriately;
- (b) my experience in erosion and sediment control confirms that the Project is proposing a best practice approach with effective structural and non-structural measures;
- (c) overall, I conclude that with the implementation of the conditions and the ESCP, the effects of sediment discharges from the Project will be no more than minor.

Graeme Ridley

26 March 2026