

In the matter of an application for approvals under the Fast-track
Approvals Act 2024 for the Barrytown Minerals Project –
Southern Block [FTAA-2605-1238]

By **Tāiko Critical Minerals Limited**

Applicant

**Memorandum on behalf of Tāiko Critical Minerals Limited replying to
comments received pursuant to Section 55(2) FTAA**

5 October 2026

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Content of the Applicant's reply

- 1 This memorandum is provided on behalf of Tāiko Critical Minerals Limited (**TCM** or **Applicant**). It addresses comments received from persons invited to comment under section 53 of the FTAA. A total of 41 invited comments were received from the 164 or so properties or persons invited to comment¹.
- 2 The Applicant's response has been prepared with technical advisor input and, in addition to matters in this memorandum, includes:

- (a) Four response tables and two sets of updated conditions²:

Attachment A: Applicant responses to relevant comments from Adjacent Owners and Occupiers, Administering Agencies, Local Authorities, Ministers of the Crown, and Specified Approvals;

Attachment B: Applicant responses to comments from other parties considered appropriate by the Expert Panel;

Attachment C: Applicant responses to comments seeking changes to conditions of resource consent;

Attachment C1: Applicant proposed resource consent conditions with tracked changes showing amendments made;

Attachment D: Applicant responses to comments seeking changes to conditions of wildlife approval; and

Attachment D1: Applicant proposed wildlife authority conditions with tracked changes showing amendments made.

- (b) Supporting technical statements of reply evidence from:

Attachment E: Jon Farren – noise;

Attachment F: David Bougourd – metallurgy;

Attachment G: Jens Rekker – hydrology;

Attachment H: Dr Gary Bramley – terrestrial ecology;

Attachment H1: Avian Management Plan;

Attachment H2: Lizard Management Plan;

¹ Including 27 statutory parties and noting that owners and occupiers were invited for each parcel of land.

² Noting NZHPT and the Applicant are agreed on the proposed conditions for the Archaeological Authority.

Attachment I: Richard Montgomerie – freshwater ecology;

Attachment J: Dr Mike Fitzpatrick – water quality; and

Attachment K: John Ballingall – economics.

- (c) Statements of evidence which respond to Minute 3 of the Expert Panel requesting additional information:

Attachment L: Pier Federici – mine planning; and

Attachment M: Andrew Hurley – geotechnical/seismic.

- 3 Planning matters have been addressed in the response tables prepared by planner Nichola Costley, including amendments to the proposed conditions.

New legislation does not apply – Planning Act and the Environment Act

- 4 The Planning Act (**PA**) and the Natural Environment Act 2026 (**NEA**) received Royal assent on 30 September 2026. There are transitional provisions for the FTAA and the Resource Management Act 1991 (**RMA**).
- 5 Schedule 12 Part 1 of the PA amends the FTAA and inserts a new provision regarding what happens to substantive applications lodged before the transition period under the new environmental framework. It states that if a substantive application seeking an approval under section 42(4)(a), (b), (c), or (d) is lodged before the date of commencement of the transition period, the application must continue to be processed and determined under the FTAA, and in relation to the RMA, as in force at the time the application was made. This provision commenced a day after the PA received Royal assent, being 1 October 2026.³
- 6 The Application must continue to be processed and determined under the FTAA and the RMA as they stood when the Application was lodged.

Clarification of part of the Southern Block Activity

- 7 One invited commenter seeks confirmation of the scope of the activity for which approval is sought⁴. The activity is as set out in the Application, and is briefly clarified below:
- (a) The existing resource consents for the Southern Block Wet Concentrator Plant (**WCP**) and Mineral Separation Plant at Rapahoe

³ Planning Act 2026, Sch 12 Pt 1.

⁴ Coast Road Resilience Group (**CRRG**) state that they have prepared its comments to the proposal on the basis that the Applicant has not sought consent to extract and concentrate rare-earth minerals [43]. This is correct.

(**MSP**) allow for the production and transportation of Heavy Mineral Concentrate (**HMC**) from the WCP to the MSP, where the HMC is processed into Ilmenite, Garnet, Zircon and a residual material stream⁵.

- (b) The Application seeks resource consent for that residual mineral stream (being the HMC remaining after the extraction of Ilmenite, Garnet and Zircon) to be returned to the WCP and combined with tailings and borrow material for use in rehabilitation of the mining void⁶. This activity is part of Mineral Extraction, for which resource consent is sought, under the Te Tai o Poutini Plan Decisions Version (**TTPP(DV)**)⁷. Resource consent is also applied for under the West Coast Regional Land and Water Plan for discharges to the mining void. Reference should be made to [Appendix N \(Rules Assessment\)](#) of the Application for more detail.

- 8 The Barrytown Mineral Project (**BMP**) has evolved significantly over the last eight years as additional environmental and resource data has been collected and assessed. During that period, TCM has undertaken multiple consenting processes that have generated substantial technical information and reports which are in the public domain. Therefore, some historical reports and project descriptions available to the public may not reflect the current project design, operational approach, or conclusions reached based on more comprehensive data.
- 9 For example, one commenter relies on a historical diagram published on TCM's website to suggest that the BMP includes rare earth element extraction and refining. That is incorrect. Neither the current Application nor any existing consent authorises such activities, and TCM has advised it has no plans to undertake them. If the residual mineral stream were commercialised in the future, separate approvals and consents would be required. The commenter is correct that earlier economic modelling contained a minor allowance relating to such material⁸. However, Mr Ballingall confirms that excluding any export or processing of the residual

⁵ Noting Gold is removed from the HMC at the WCP.

⁶ Section 6.84 of the Substantive Application covers off the rehab including "...Any tailings from the WCP will also be pumped back into the rear of the mining void. Waste material from the MSP that has been transported back to the Southern Block will also be pumped back from the WCP to the mining void and deposited with the tailings to assist with rehabilitating the landform...".

⁷ **MINERAL EXTRACTION** means the excavation, blasting and processing (crushing, screening, washing and blending), storage and distribution of mineral products and includes ancillary activities such as earthworks, landscaping and rehabilitation works, stormwater and wastewater treatment facilities, together with ancillary buildings and structures, maintenance and repair, vehicle movements and access within, to from and between the mineral extraction sites and ancillary sites.

⁸ CRRG Legal Submissions at [44(b)].

HMC stream does not materially alter the economic conclusions reached for this Application.

- 10 Invited comments⁹ appear to criticise the existence of several resource consents and approvals associated with different aspects of the BMP. It is not uncommon for large projects to go through several consent and approval processes. This also reflects the statutory framework where multiple activities can be applied for and authorised for an application site. Each resource consent and approval remains subject to its own conditions, compliance obligations and enforcement mechanisms. Compliance costs are recoverable from consent holders, and enforcement action is available in the event of non-compliance. It is noted that the councils do not have concerns with respect to "gaps" between resource consents.

A summary of key themes of the invited comments

- 11 Relevant invited comments have been addressed in detail in the tables and expert evidence in reply. A summary of some of the key themes raised and the Applicant's reply to these matters is set out below to assist the Panel, namely:
- (a) Radiation (NORM) and Radon – inadequate assessment, management and monitoring of radiation and radon risks;
 - (b) Adverse effects on Westland Petrel (Tāiko) and Other Threatened Avifauna;
 - (c) The extent of natural inland wetland loss and their values;
 - (d) Freshwater matters raised by the Department of Conservation (**DOC**);
 - (e) Maintenance of amenity and rural character; and
 - (f) Economic benefits – whether benefits are overstated and should have been assessed on a net-benefits basis.
- 12 For all of these matters, the genuinely held views expressed by invited commenters are acknowledged, but it is submitted that the site specific and comprehensive technical assessments provided for the Applicant should be preferred.

⁹ For example, CRRG legal submissions, at [72]. Noting that the CRRG is correct that there is no term on the MSP and that the version of consent supplied had a 20 year consent period, when it is unlimited (that one condition was objected to and went to an independent commissioner for decision who upheld the objection and removed the term of the land use consent).

Radiation and radon

- 13 The Radiation Safety Act 2016 (**RSA**) came into force on 7 March 2017, repealing and replacing the previous Radiation Protection Act 1965 (**RPA**) and its regulations. The RSA establishes a framework to protect the health and safety of people and protect the environment from the harmful effects of ionising radiation while allowing for its safe and beneficial use. The RSA provides clear statutory direction as to when material is regarded as radioactive for the purposes of the RSA.
- 14 The applicability of the repealed RPA has been considered in the context of a marine consent under the Exclusive Economic Zone and Continental Shelf (Environmental Effects) Act 2012 and the Decision Making Panel in that case applied the clear statutory language of what constituted radioactive material in the RPA.¹⁰ It is submitted that a similar approach should be adopted here. The Panel should give significant weight to the threshold values determined by Parliament. The evidence before the Panel is that the ore, tailings, slimes and residual HMC associated with the Application site fall well below the RSA statutory threshold (i.e. 10 Bq/g)¹¹.
- 15 Since the Application was lodged, the Office of Radiation Safety has published a Compliance Guide (dated 23 June 2026): Management of Naturally Occurring Radioactive Material (NORM) in Mining and Mineral Extraction (**NZ Compliance Guide**)¹². The Office has advised in its invited comments that the Guide is consistent with relevant International Atomic Energy Agency (IAEA) standards and other NORM-related standards and guidance. The Office expectation is that it be followed by operators and that consent authorities ensure it is followed. TCM has amended resource consent conditions 8.5 and 8.6 to require compliance with the NZ Compliance Guide in place of the previously referenced Australian guidance.
- 16 The NZ Compliance Guide adopts a risk-based approach and establishes a clear pathway for further investigation, including radon monitoring, air sampling and water quality assessment, where analysis indicates NORM activity may exceed 1 Bq/g. A Radiation Safety Plan is currently being prepared for the BMP for submission to the Office. It is submitted that, given the existence of that regulatory framework and the recently issued Compliance Guide, compliance with both of which is proposed to be

¹⁰<https://www.epa.govt.nz/assets/Uploads/Documents/Marine-Activities-EEZ/Activities/990a6509eb/CRP-Decision-EEZ000006.pdf>; paragraphs 72-76

¹¹ Refer Appendix L8A and Statements of evidence and reply of David Bougourd.

¹² <https://www.health.govt.nz/publications/compliance-guide-management-of-naturally-occurring-radioactive-material-norm-in-mining-and-mineral>

required by conditions of consent, together with the proposed ongoing monitoring requirements, an appropriate framework already exists for identifying and managing any potential radiation-related risks. Consent conditions additional to this which are sought by invited comments unnecessarily duplicate specialist regulatory oversight, and would be more onerous than necessary.

- 17 In addition, radiation and radon-related controls already apply under the existing WCP and MSP consents which will also apply to minerals from the Southern Block (see WCRC RC-2025-0170-01, Conditions 26-41; and GDC LU3473/25 and LU3489/25 - Condition 70 of [Appendix-H3-Existing-Consents-for-Wet-Concentrator-Plant-Combined](#), and LU3329/25 Condition 30 of [Appendix-H4-Existing-Consent-for-Mineral-Separation-Plant](#)).

Invited comments – Radiation and Radon

- 18 Notwithstanding the comments made above, the Applicant has replied to the invited comments from the community which raise matters of radiation and radon.
- 19 Dr Bradley's¹³ evidence addresses naturally occurring radioactive minerals (**NORM**) at Barrytown and radon, both of which form part of the existing environment. While Dr Bradley identifies potential pathways by which naturally occurring radioactivity, radon emissions, mineral weathering and radionuclide transport could occur, he stops short of expressing an opinion that the Southern Block Application will result in measurable adverse effects on human health, groundwater quality or the environment. Rather, his evidence primarily identifies areas where he considers further information is needed¹⁴.
- 20 The presence of NORM within West Coast mineral sands deposits is not a new issue. Radiation and radon effects have been considered in multiple publicly notified mineral sand applications, including projects involving similar mining and processing methods. The principal difference for the Application is the return of the residual HMC stream to the mining void as part of rehabilitation. Mr Bougourd has specifically assessed that activity

¹³ As part of invited comments from the Coast Road Resilience Group (**CRRG**).

¹⁴ Dr Bradley, at [63].

and concludes it can occur in compliance with both the proposed conditions and the NZ Compliance Guide¹⁵.

- 21 Similar concerns regarding radioactivity in air, sand and water were raised by Dr Bradley during the Central Block RMA hearing¹⁶. Those issues were reviewed by both the Applicant's expert, Mr Ryan, and the Council peer reviewer, Mr Cris Ardouin, a senior scientist at the National Centre for Radiation Science. The Commissioners accepted that evidence and concluded there would be no significant radiation risk to groundwater, surface water or the general public. Precautionary radiation conditions were nevertheless offered by the Applicant (and imposed).
- 22 In the context of the Application and invited comments, Mr Bougourd and Mr Rekker have prepared reply evidence which evaluates each of the source-pathway-receptor relationships relied upon by Dr Bradley. Their reply evidence demonstrates that key assumptions underlying Dr Bradley's comments do not reflect the composition of the Barrytown orebody, the mineral processing methodology, or the hydrogeological setting of the Application Site.
- 23 Mr Bougourd explains that the samples relied upon by Dr Bradley contain a mineral suite materially different from the Barrytown Project, including thorite, uranothorite and uraninite concentrations not representative of the orebody¹⁷. He states that the main radioactivity source at Barrytown is Monazite¹⁸ which is found in low concentrations¹⁹. This is consistent with the conclusion made by Mr Ryan for the Central Block (If the Panel is interested they can see [Supplementary Evidence confirming low levels of monazite and other radioisotope-bearing minerals](#)), and paragraph 15 of [Metallurgical and Radiological evidence of Mitch Ryan](#)).
- 24 Dr Bradley notes indoor radon measurements in some dwellings²⁰ and concludes that mining will "only exacerbate" that hazard because excavation may increase radon escape to the atmosphere²¹. Mr Bougourd further explains that radon is recognised as a risk requiring management,

¹⁵ Mr Bougourd reply, at [19], [23]-[27].

¹⁶ If the Panel is interested, reference can be made to paragraphs [621]-[622], and [629] of [Appendix H2 Commissioner-Decision](#)

¹⁷ Mr Bougourd reply at [5]-[7].

¹⁸ Monazite contains Uranium and Thorium which are naturally radioactive elements.

¹⁹ Mr Bougourd reply at [6].

²⁰ Dr Bradley, at [25].

²¹ Dr Bradley, at [32].

and monitoring and assessment will occur²² and anticipated concentrations are substantially lower than those implied by Dr Bradley's assessment²³. This same conclusion was made by Mr Ryan in the Central Block hearing (paragraph 17-19 of [Metallurgical and Radiological evidence of Mitch Ryan](#)).

- 25 Mr Bougourd rejects Dr Bradley's suggestion that the proposed mining and processing route will disturb secular equilibrium²⁴. He explains that the assumption of secular equilibrium is standard practice for mineral sand projects unless chemical or thermal processing occurs. No such processing occurs, or is proposed, at any stage of the BMP²⁵. Accordingly, concerns regarding inaccuracies in pXRF testing arising from a loss of secular equilibrium are based on assumptions that do not apply²⁶.
- 26 It is submitted that neither Dr Bradley nor any other invited commenters identify a plausible pathway by which the proposed mining activity could result in a significant radiation or radon effect on the surrounding community. Dr Bradley interprets electron microscope evidence as suggesting radionuclides may be mobilised through the hydrological system²⁷. Mr Bougourd considers this risk is low²⁸, noting that minerals have already been exposed to extensive natural weathering and transport processes prior to deposition at Barrytown²⁹. Mr Rekker explains that groundwater flow directions, flow velocities and radon's short half-life place significant physical constraints on transport of radon. He concludes that if there is any mining-generated radon it would move westward, away from areas of habitation, and that concentrations would diminish substantially before travelling any meaningful distance through groundwater³⁰.
- 27 Dr Bradley's suggestion that the material returned to the mine void will be "more radioactive"³¹ appears to be based on an incorrect understanding of its composition and that secular equilibrium will be disturbed. He seems to assume that thorite, uranothorite, and monazite will be disposed of with the

²² Mr Bougourd is referring to a draft Radiation Plan that is being prepared for the Office of Radiation Safety for the entire Barrytown Minerals Project outside of this process, and the conditions of consent relating to the WCP and MSP enclosed environments.

²³ Mr Bougourd reply, at [8]-[10].

²⁴ Dr Bradley, at [56].

²⁵ Mr Bougourd reply, at [16].

²⁶ CRRG Legal Submissions at [19].

²⁷ Dr Bradley, at [38].

²⁸ Mr Bougourd reply, at [13].

²⁹ Mr Bougourd reply, at [13].

³⁰ Reply J Rekker, at [75].

³¹ Dr Bradley, at [40].

returned material³². As Mr Bougourd explains this mineral suite is different to the BMP³³.

- 28 It is submitted that the invited comments do not identify any credible material radiation or radon impacts. The reply evidence demonstrates that those concerns are either based on assumptions that do not apply to the BMP and the Application or involve pathways that are not comparable to the Application.

Effects on Westland Petrel (Tāiko) and Other Threatened Avifauna

- 29 The invited comments contend the Application will result in significant adverse effects on threatened and at-risk avifauna, including Westland petrel, kororā, bittern and marsh crake through habitat loss, lighting, disturbance and mortality risk³⁴. On that basis it is said the Application is contrary to NZCPS Policies 3 and 11³⁵, and NPSIB Policies 3, 4, 13 and 15³⁶. Those matters are addressed extensively in the reply evidence of Dr Bramley.
- 30 It is submitted that the invited comments overstate the ecological effects and do not adequately account for: the existing environment, being an actively managed dairy farm and rural productive zone; the sequential nature of mining across the Barrytown operations; the limited extent of active mining footprint and habitat affected at any one time; the progressive rehabilitation and advance establishment of replacement habitat; and the significant long-term enhancement proposed across the duration of the consent.

Bittern and marsh crake and other protected birds

- 31 Dr Bramley and his team have undertaken ecological investigations on the Barrytown Flats since 2021³⁷ including seasonal monitoring programmes across the Southern Block, Central Block and adjoining areas utilising five-minute bird counts, acoustic recorders and targeted avifauna surveys³⁸. Despite that extensive survey effort, neither bittern nor marsh crake have been recorded in any of the surveys³⁹. He considers that while those

³² Dr Bradley, at [63].

³³ Mr Bougourd reply, at [13].

³⁴ For example, Forest & Bird and CRRG.

³⁵ Forest & Bird, Legal submissions [50]-[58].

³⁶ Forest & Bird, Legal submissions [59]-[68].

³⁷ Dr Bramley reply, at [4].

³⁸ Dr Bramley reply, at [30].

³⁹ Dr Bramley reply, at [33].

species may visit the Southern Block, it does not provide breeding habitat for them and the higher quality habitat at Canoe Creek Lagoon will not be affected by the Application⁴⁰.

- 32 Any effects on those species are considered not to be material and would primarily comprise temporary disturbance and short-term habitat removal rather than injury or mortality⁴¹. Importantly, the active mining footprint is limited to approximately 16 hectares at any one time, mining progresses slowly through the landscape⁴², and replacement wetland habitat is established in advance of mining reaching the higher-value wetland areas south of Granite Creek⁴³.
- 33 The invited comments also criticise the proposed use of deterrence measures. Dr Bramley explains that deterrence is a recognised management tool intended to provide temporary displacement and prevent nesting within the active mine path to avoid the greater adverse effect that would occur⁴⁴. He considers that birds deterred from nesting within the mine path can readily utilise the extensive areas of similar habitat available beyond the active mining footprint⁴⁵.
- 34 It is submitted the evidence and proposed conditions do not support the contention that significant mortality effects will arise. The proposed management framework includes habitat modification, deterrence, nest detection surveys, protection of nests located outside the mine path and species-specific management responses. Dr Bramley concludes that any additional mortality risk arising from the Proposal is low, although it cannot be entirely eliminated⁴⁶.
- 35 DOC identifies for the Wildlife Approval application that incidental mortality cannot be entirely excluded. The Applicant has (as a precaution) accepted that despite the deterrence, monitoring and nest detection measures proposed and the low risk of mortality.

⁴⁰ Dr Bramley reply, at [28], [33].

⁴¹ Dr Bramley reply, at [34].

⁴² 6m per day.

⁴³ Dr Bramley reply, at [63].

⁴⁴ Dr Bramley reply, at [39]-[42].

⁴⁵ Dr Bramley reply, at [42].

⁴⁶ Dr Bramley reply, at [44].

Westland Petrel/tāiko

- 36 Some invited comments are concerned there is insufficient information to assess effects on Westland petrel/tāiko⁴⁷. It is submitted that this comment may have resulted due to a misunderstanding of the activities for which resource consent is sought.
- 37 The Southern Block is a daylight mining operation. No floodlighting, fixed lighting structures or permanent night-time lighting is proposed within the mining area. The only lighting that may occasionally be required is portable task lighting associated with an unforeseen breakdown or maintenance event, together with vehicle headlights used to access the relevant location⁴⁸. The lighting concerns raised predominantly appear to relate to the WCP and load-out area which are separately consented and are not part of this Application. It is noted for completeness that the WCP contains conditions for external lighting to comply with the Australian Government's National Light Pollution Guidelines for Wildlife January 2023 (or any subsequent amendments)⁴⁹, a transport service is provided for staff and there is no trucking during the hours of darkness⁵⁰. I am also advised by TCM that, through discussions with DOC, it has committed to undertaking a lighting assessment for the Southern Block WCP⁵¹, and it will consider the contents of the invited comments and Mr Geddis' report (lighting expert) as part of that process (separate to the FTAA Application).
- 38 A lighting plan for this Application is more onerous than necessary when considering the existing environment – a dairy farm operation with a dairy shed, associated rural productive activities including tractor work during nighttime hours and the ability to construct permitted sheds and housing on 4ha blocks⁵² with some limits on outdoor artificial lighting⁵³ and coastal setbacks⁵⁴.
- 39 It is submitted there is sufficient information before the Panel to understand and assess lighting effects, and that any residual uncertainty has been addressed through offering to comply with the Australian Government's National Light Pollution Guidelines for Wildlife (May 2023 or subsequent

⁴⁷ For example, CRRG at [62]-[63].

⁴⁸ Dr Bramley reply, at [53].

⁴⁹ Condition 61, Appendix H3.

⁵⁰ Conditions 74-76, Appendix H3.

⁵¹ Dr Bramley reply, at [54].

⁵² TTPP(DV) Sub-R6; GRUZ-R3 – subdivision of 4ha controlled subject to standards.

⁵³ TTPP(DV) Light-R5 – requires outdoor artificial lighting to be fully shielded and mounted in a horizontal position, and have colour corrected temperature of no greater than 3000 K (warm white).

⁵⁴ TTPP(DV) CE-R4 - 25m setback from the MHWS.

revision), and the other precautionary management and monitoring measures in conditions. Dr Bramley is of the view that effects on Westland Petrel are avoided by the Application, and he does not consider any cumulative impact arises in relation to TCM activities⁵⁵.

Interpretation of avoid

40 The ecological evidence also does not support that effects on threatened and at-risk avifauna are significant and require decline of the application under NZCPS Policy 11 or the NPSIB. Dr Bramley's ultimate conclusion remains that the short-term ecological effects of the Application will have a negligible effect and that, in the medium to long term, ecological outcomes will be positive due to a substantial increase in wetland, shrubland and forest habitat extent together with improved ecological connectivity across the Site⁵⁶. His view is the Application is consistent with the NZCPS and NPSIB⁵⁷.

41 Legal submission for Forest & Bird has referred to the *East West Link* decision in relation to the interpretation of avoid under the NZCPS having an ordinary meaning of "not allow" or "prevent the occurrence of".⁵⁸ The Applicant submits that this is well-established, while noting that *it is improbable that it would be necessary to prohibit an activity that has minor or transitory adverse effects*⁵⁹. Since *King Salmon* defined "avoid", the concept of materiality of adverse effects has gained momentum in the higher courts. The Supreme Court in *Port Otago Limited v Environmental Defence Society Incorporated and Others (Port Otago)* relevantly concluded, in relation to "avoidance policies", that⁶⁰:

the avoidance policies in the NZCPS must be interpreted in light of what is sought to be protected including the relevant values and areas and, when considering any development, whether measures can be put in place to avoid material harm to those values and areas.

42 In coming to this conclusion, the Supreme Court considered both the *King Salmon* interpretation of "avoid" and the *Trans-Tasman* "material harm test" – which was summarised as⁶¹:

⁵⁵ Dr Bramley reply, at [61]

⁵⁶ Dr Bramley reply, at [115]-[117]

⁵⁷ Dr Bramley reply, at [115]-[118].

⁵⁸ Submissions for Counsel for the Royal Forest and Bird Protection Society Incorporated (28 September 2026) at [24], referring to *Royal Forest and Bird Protection Society v New Zealand Transport Agency* [2024] NZSC 26.

⁵⁹ *Environmental Defence Society Inc v NZ King Salmon Co Ltd* [2014] NZRMA 195 at [145].

⁶⁰ *Port Otago Ltd v Environmental Defence Society Inc* [2023] NZSC 112 at [68].

⁶¹ *Port Otago Ltd v Environmental Defence Society Inc* [2023] NZSC 112 at [66].

decision-makers must either be satisfied there will be no material harm or alternatively be satisfied that conditions can be imposed that mean:

(i) material harm will be avoided;

(ii) any harm will be mitigated so that the harm is no longer material; or

(iii) any harm will be remedied within a reasonable timeframe so that, taking into account the whole period harm subsists, overall the harm is not material [...].

- 43 The concept of material harm has now been utilised in a resource consent application under the RMA in *Te Rūnanga o Ngāti Whātua v Auckland Council* [2023] NZEnvC 277, upheld on appeal to the High Court in *Te Rūnanga o Ngāti Whātua v Auckland Council* [2024] NZHC 3794, and is relevant to the Panel's consideration of the term "avoid".

Cumulative effects

- 44 Some invited comments suggest there has been a failure to assess cumulative effects of the Southern Block together with the Central Block, WCP and MSP approvals⁶². This is not correct, and I note that these comments did not provide any particular reference to expert evidence in support. Expert assessment did consider cumulative effects⁶³.
- 45 Dr Bramley has explicitly confirmed, in response to this suggestion, that he assessed cumulative effects⁶⁴. In relation to tāiko, Dr Bramley notes that the Southern Block does not involve routine night-time operations and therefore presents a materially different risk profile to the WCP. In his opinion, any condition triggered by cumulative effects across separate approvals would be unworkable because any grounding event would need to be attributed to the activity responsible for it. A grounding event near the WCP is more likely to be attributable to that facility than to daytime mining within the Southern Block⁶⁵. Further, because the Southern Block activities do not involve night-time operations a trigger requiring night operations to cease has little practical effect for this application beyond the occasional emergency repair.

Wetland loss

- 46 The invited comments raise concerns regarding the extent of wetland loss, wetland classification, ecological values and whether the proposed wetland

⁶² For example, CRRG at [67], Forest & Bird at [40]-[41].

⁶³ For example, Statement of Evidence N Crawford (landscape) at [31].

⁶⁴ Dr Bramley, at [116].

⁶⁵ Dr Bramley reply, at [60].

response should be characterised as remediation, offsetting or compensation.

- 47 While Dr Bramley and Mr Payne differ as to the extent of natural inland wetlands present within the Site⁶⁶, Dr Bramley's evidence is that all wetland habitats within the mining footprint were identified and assessed, regardless of whether they met the definition of a natural inland wetland⁶⁷. The proposed wetland response has been designed to replace those habitats and associated ecological values⁶⁸.
- 48 Dr Bramley does not accept Mr Payne's assessment that approximately 35.8 ha of natural inland wetland would be removed⁶⁹. It is submitted this figure is difficult to reconcile with the measurement by TCM that the farm is in 98% pasture. Dr Bramley considers that the area of natural inland wetland affected is approximately 6.7 ha⁷⁰, with many of the areas relied upon by Mr Payne falling within the exclusions to the NPS-FM definition because they are associated with historic dredge ponds and drainage features⁷¹.
- 49 Importantly, even if the Panel were to prefer aspects of Mr Payne's characterisation, Dr Bramley explains that the Project will establish at least 53.1 ha of new wetland habitat comprising a range of wetland types, including raupō, rushland, marsh, open water and flaxland habitats. In his opinion, the replacement wetland will be several times larger than the wetland area affected (however described) and will be of higher ecological quality due to its size, habitat diversity, connectivity and protection from grazing⁷².
- 50 Dr Bramley further concludes that the proposed wetland will provide habitat values that are largely absent from the existing environment, including improved habitat for species such as bittern, crake and brown mudfish⁷³.
- 51 The proposed wetland response is also integrated into the mining sequence. Mining commences in areas which do not contain the highest value wetlands, while replacement wetland habitat is established early in

⁶⁶ Dr Bramley reply, at [83]-[90].

⁶⁷ Dr Bramley reply, at [102].

⁶⁸ Dr Bramley reply, at [111].

⁶⁹ Dr Bramley reply, at [100].

⁷⁰ Dr Bramley reply, at [101].

⁷¹ Dr Bramley reply, at [100].

⁷² Dr Bramley reply, at [108].

⁷³ Dr Bramley reply, at [111].

the Project. As a result, the replacement habitat will have several years to establish before higher value wetland habitat is affected.

- 52 To the extent there is debate as to whether the proposed wetland creation constitutes remediation or an offset, Dr Bramley's evidence is that it is properly characterised as remediation. The replacement wetland is located on-site and is created contemporaneously with the mining activities. It directly restores habitat values affected by the Project rather than providing a separate ecological benefit elsewhere. This approach is supported by caselaw.
- 53 In *Royal Forest and Bird Protection Society of New Zealand Inc v Buller District Council* the High Court differentiated an offset from a mitigation measure on the basis that mitigation measures reduce the impact of an adverse effect arising from the activity, while the term offset implies that the adverse effect remains, but is counterbalanced by another positive effect – being the offset.⁷⁴ In summary, an offset is effectively a "like for like" additional positive benefit, usually off-site or outside the point of impact, which provides a net gain in ecological outcomes to counterbalance residual adverse effects.
- 54 Ultimately, the evidence demonstrates that wetland effects have been comprehensively assessed, that the Project incorporates extensive rehabilitation and wetland creation measures, and that the long-term outcome will be a substantial improvement in wetland extent, quality and ecological function across the Site.

Freshwater Effects

- 55 Invited comments from DOC raise concerns regarding freshwater fish habitat, stream restoration, groundwater, stream flows, water quality, water takes and the adequacy of the proposed management framework.
- 56 The freshwater ecology, hydrology and water quality reply evidence has considered the matters raised and ultimately concludes that:
- (a) freshwater ecological effects will be negligible in the short term and positive in the medium to long term due to enhanced stream habitat, riparian planting and ecological functioning⁷⁵;

⁷⁴ *Royal Forest and Bird Protection Society of New Zealand Inc v Buller District Council* [2013] NZHC 1346, at [62] and [72].

⁷⁵ Mr Montgomerie, at [18]-[19].

- (b) the invited comments do not identify any matters that materially alter the hydrological assessment of the Application⁷⁶;
 - (c) potential adverse effects associated with mine water discharges will be avoided through lime treatment, conservative thresholds, monitoring and adaptive management⁷⁷.
- 57 In relation to freshwater ecology, Mr Montgomerie disagrees with DOC's suggestion that freshwater fish values have not been adequately assessed. He explains that the surveys undertaken by Ecological Solutions involved both electric fishing and eDNA sampling across a wide range of habitats and provide a robust basis for assessing freshwater fish values across the Site⁷⁸.
- 58 Mr Montgomerie also disagrees that spring habitats have been inadequately assessed. He explains that the springs identified by DOC are highly modified, including as a result of historic mining activities, and that based on the comprehensive macroinvertebrate surveys undertaken across the Site, they are highly unlikely to support unusual macroinvertebrate communities⁷⁹.
- 59 With respect to stream restoration and ecological functioning, DOC raises concerns regarding recolonisation of reconstructed streams and whether stream ecological values can be restored following mining. However, Dr Montgomerie explains that the extent of stream habitat originating entirely within the Site is limited⁸⁰, that there will remain abundant source populations of fish and macroinvertebrates in proximity, and that recolonisation is expected to commence almost immediately following disturbance⁸¹. He considers macroinvertebrate communities from the site are likely to recover within 3 to 6 months and fish communities within 1 to 2 years⁸². He concludes that the avoidance of loss of stream extent, coupled with enhancement of stream habitat, riparian vegetation and ecological values, fully addresses the residual ecological effects of the Application⁸³.
- 60 Notwithstanding this, several of DOC's recommendations have been accepted by the Applicant. Mr Montgomerie agrees with amendments

⁷⁶ Mr Rekker, at [81]-[106], [111].

⁷⁷ Dr Fitzpatrick, at [34]-[35].

⁷⁸ Mr Montgomerie, at [4].

⁷⁹ Mr Montgomerie, at [5].

⁸⁰ Mr Montgomerie, at [8].

⁸¹ Mr Montgomerie, at [8]-[9].

⁸² Mr Montgomerie, at [10].

⁸³ Mr Montgomerie, at [10].

requiring fish and macroinvertebrate monitoring using recognised NPS-FM metrics, additional reporting requirements, Stream Ecological Valuation (SEV) monitoring and wider riparian margins. He specifically notes that TCM has agreed to increase riparian planting widths to 5 metres and that this will materially contribute to stream ecological enhancement⁸⁴.

- 61 DOC also raise concerns that mining activities may lower groundwater levels, alter groundwater flow paths or deplete stream flows. Those concerns are not accepted by Mr Rekker. Mr Rekker explains that the Southern Block mining methodology utilises a floating dredge and is specifically designed to operate without dewatering. The dredge pond remains at the same elevation as the surrounding groundwater table and groundwater removed through the slurry transport process is returned to the site as part of the same operational cycle, resulting in a water-volume-neutral system⁸⁵.
- 62 DOC also suggests that a cease-take trigger should be imposed in relation to abstraction from Canoe Creek. However, Mr Rekker explains that the take is from a gallery well field rather than directly from the creek, that the maximum abstraction rate is restricted to less than 10% of MALF, that Canoe Creek is the largest watercourse on the Barrytown Flats and that the gallery is expected to operate intermittently and at relatively low average abstraction rates. In his opinion, requiring a cease-take trigger would be disproportionate to the nature and scale of the activity and the monitoring framework already proposed⁸⁶.
- 63 With respect to water quality, DOC raises concerns regarding contaminant mobilisation, heavy metals, iron, nutrients and the appropriateness of the proposed water quality thresholds. Dr Fitzpatrick disagrees with those criticisms. He explains that the water quality modelling was undertaken conservatively and under low-flow conditions, and therefore intentionally overestimates contaminant concentrations in receiving waters⁸⁷.
- 64 Dr Fitzpatrick also rejects the suggestion that the proposed use of hydrated lime is experimental. He explains that lime augmentation is a well-established and validated technique for reducing contaminant concentrations and toxicity and is specifically incorporated within the Water Management Plan framework proposed for the Application⁸⁸.

⁸⁴ Mr Montgomerie, at [11]-[16].

⁸⁵ Mr Rekker at [81]-[91].

⁸⁶ Mr Rekker, at [92]-[94].

⁸⁷ Dr Fitzpatrick, at [19].

⁸⁸ Dr Fitzpatrick, at [21].

- 65 DOC further suggests that guideline values should be consent limits. Dr Fitzpatrick disagrees. He explains that the thresholds proposed are intentionally conservative guideline-based triggers designed to initiate management responses before adverse ecological outcomes occur. In his opinion, exceedance of a guideline should not automatically amount to a breach of consent but should instead trigger a considered response under the adaptive management framework established by the conditions⁸⁹. In response to DOC's comments the Applicant has updated conditions of consent to better reflect the 2026 ANZG updates⁹⁰.

Rural Character and amenity

- 66 A number of invited comments raise concerns regarding rural character, visual amenity, noise and dust effects. Those concerns are acknowledged, and detailed assessments accompanied the Application assessing these as being appropriately managed. An assessment of amenity values must start with an understanding of the subjective values, based on articulation by those who enjoy the values, but it must be able to be tested objectively with reference to the district plan⁹¹.
- 67 The Application involves a sequential mining operation with an active footprint of approximately 16 ha at any one time that gradually moves through the landscape and is accompanied by progressive rehabilitation. It is not a static industrial activity across the entirety of the Application site.
- 68 The invited comments place significant weight on perceived changes to rural character. The Grey District Plan expressly anticipates mining within the rural environment, subject to appropriate management of effects. The Te Tai o Poutini Plan (DV) similarly recognises the functional and operational needs of mining activities and provides for them through a dedicated policy framework. It is submitted the existence of those provisions reflects a community decision that mining can appropriately occur within rural areas.
- 69 As part of the Application, the Legal Considerations memorandum set out in detail the relevant policy and site context, and the Panel should refer to that at paragraphs 28-40.
- 70 While the technical assessments prepared for the Applicant do not rely on the permitted baseline, the Southern Block also forms part of an existing working rural landscape. Amenity values must therefore be assessed

⁸⁹ Dr Fitzpatrick, at [26]-[27].

⁹⁰ Dr Fitzpatrick, at [31]-[32].

⁹¹ *Schofield v Auckland Council* [2012] NZEnvC 68 at [51].

against that existing environment, which already includes farming activities, machinery operation, earthworks and other productive land permitted uses.

- 71 CRRG has requested that a Community Liaison Group be required if consent is granted. The Applicant supports ongoing community engagement and notes that a Community Liaison Group is already established for the BMP (via the Central Block consent conditions). The Applicant has always intended that engagement process continue and has offered a proposed condition to accommodate this request.

Economics

- 72 Concerns have been raised with the benefits being overstated in the economics assessment. It is considered by some invited comments that the overall net benefit should have been considered⁹², and that tourism impacts, effects arising from radioactive material, and other alleged disbenefits such as impacts on the roading network and costs of carbon emissions should have been quantified⁹³.
- 73 It is submitted that an Applicant is not required to attempt to place a value on selected asserted environmental or social effects to understand whether a proposal will generate significant regional and national economic benefits for the purposes of the FTAA, and to do so may result in a decision maker "double counting" adverse impacts.
- 74 Mr Ballingall explains that his assessment considered some quantifiable costs (including grazing output) and discussed tourism and housing, while recognising that environmental costs and effects addressed by the relevant technical experts will be ultimately weighed by the Panel as part of its decision making⁹⁴. Mr Ballingall observed that had he quantified the matters suggested by invited comments he would have been criticised for "*crudely and insensitively trying to put dollar values on the inherently un-monetisable*"⁹⁵.
- 75 Some invited comments which suggest the Applicant is improperly claiming economic benefits associated with the already consented Wet Concentrator Plant (**WCP**) and Mineral Separation Plant (**MSP**)⁹⁶ misunderstand the Application. Mr Ballingall explains that a separate financial model was not completed, but rather scaled economic figures were presented for this next

⁹² Forest & Bird legal submissions, at [25]-[27], 35, Professor Banks, at [37].

⁹³ Noting the impacts on the roading network between the MSP and WCP (especially SH6) are outside scope of this Application.

⁹⁴ John Ballingall reply, at [41]-[45]

⁹⁵ John Ballingall reply, at [43].

⁹⁶ See for example CRRG, Legal submissions at [56].

stage of mining (the Southern Block) which he considers is appropriate⁹⁷. The figures represent the economic activity attributable to the Southern Block relative to a scenario where mining does not occur. The Central Block and the Southern Block mining will not occur at the same time⁹⁸. The processing facilities rely upon a consented mineral resource to operate. Without a mineable sand resource, the economic activity associated with those facilities cannot occur beyond the life of the Central Block.

- 76 The invited comments raise a number of criticisms regarding assumptions in the economic modelling, including commodity prices, exchange rates, operating costs and employment multipliers. Uncertainty is inherent in any forward-looking assessment. However, as Mr Ballingall notes, that uncertainty operates in both directions⁹⁹ and that none of the matters raised by submitters fundamentally undermines his findings that the Southern Block would deliver significant benefits to the West Coast and New Zealand economies¹⁰⁰. This is estimated at approximately \$107 million per annum of GDP, \$200 million per annum in export earnings, \$66.9 million in annual operating expenditure and approximately \$39.8 million in royalties and taxation, together with significant additional employment opportunities¹⁰¹.
- 77 In the context of this Application, it is submitted that the economic analysis is appropriate and directed to the matters which the Panel is to consider under ss 81 and 85(3) of the FTAA.

Consent conditions not transferred to FTAA

- 78 The proposed consent conditions included in the Application are based on the set of conditions granted by a Consent Order of the Environment Court for the Central Block. For the Application, changes to the consent conditions were made to reflect:
- (a) that the activity applies only to the mining component, and not to the WCP (this is why the Lighting conditions and Avian Management Plan conditions have not been transferred¹⁰²);
 - (b) the unique characteristics of the Southern Block; and

⁹⁷ John Ballingall reply, at [7]-[11].

⁹⁸ This is clearly identified in the AEE (1.11, which identifies mining of the Central Block as proposed to occur in 2029-2034, and Southern Block occurring 2035-2050) and is required to be complied with (Proposed condition 1.1)

⁹⁹ John Ballingall reply, at [17].

¹⁰⁰ John Ballingall reply, at [68].

¹⁰¹ John Ballingall reply, at [8]-[10].

¹⁰² CRRG, at [36].

- (c) the different mining technique in the use of the floating dredge as opposed to dry mining on the Central Block (this is relevant to the protection of birds' nest in the mining pathway).
- 79 The draft resource consent conditions, as they were lodged with the Application are supported by Te Rūnanga o Ngāi Tahu, Te Rūnanga o Ngāti Waewae and Grey District Council. The West Coast Regional Council has proposed some additional changes in its invited comments (most of which have been accepted by the Applicant). DOC and the Applicant are also now aligned with respect to a large amount of proposed conditions.
- 80 The Applicant has offered several amendments to resource consent and wildlife authority conditions in response to invited comments and these are set out in detail in the attached table responses.

Conclusion

- 81 The Applicant has its roots in a joint venture between New Zealand investors and intends to work collaboratively with and deliver economic benefits and employment opportunities to the West Coast community (and Aotearoa) with minimised environmental impact. After duly considering the invited comments, the Application continues to be assessed by Mr Ballingall as delivering significant regional and national benefits. It is respectfully submitted that the purpose of the FTAA will be met by the granting of the approvals.
- 82 The Applicant's commitment to the environment is clear¹⁰³. The Application has been designed with the surrounding environment and cultural considerations in mind, and with a view for environmental restoration¹⁰⁴. The Panel has before them a well-considered and comprehensively assessed Application which will appropriately avoid, minimise and remedy effects during mining. There has been considerable attention given to mine planning by hydrologists, water quality experts and ecologists on how to appropriately avoid, or minimise, adverse effects on ecologically sensitive areas while also enabling a mining operation. No adverse impacts of significance are identified. It is respectfully submitted the purposes of the RMA, Wildlife Act 1953, HNZPTA will be met by the granting of the approvals.
- 83 From the earliest stages of the BMP meaningful engagement has been undertaken with Te Rūnanga o Ngāti Waewae, residents, landowners,

¹⁰³ Application, Section 2.7-2.11.

¹⁰⁴ Application, Section 2.8.

environmental groups and other relevant stakeholders¹⁰⁵. The Applicant wishes to acknowledge the constructive and meaningful contribution given by the community and mana whenua in this process to date.

- 84 It further wishes to acknowledge the considerable time and effort that went into preparing comments on the Application, and to thank the community for its considered input into the proposed conditions of consent.

A handwritten signature in black ink that reads "A Booker". The signature is written in a cursive style with a large, stylized 'A' and 'B'.

Alex Booker
Counsel for TCM

5 October 2026

¹⁰⁵ Application, Appendix F.