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I confirm I can receive emails and my email address is correct.

File Ref: FTAA-2605-1238

Invitation to comment on the above application pursuant to Sections 53 and 54 of the Act.

Dear Members of the Expert Panel and Fast track Team,

Thank you for the opportunity to comment on this application.

I respectfully ask the Panel to look beyond the assurances contained in the applicant's management plans and carefully examine whether the environmental effects of this proposal have actually been demonstrated to be safe, manageable and acceptable.

I recognise the economic circumstances of the West Coast and the importance of employment and investment to the region. This submission is not opposed to economic development in principle, nor is it an objection to mineral development simply because the proposal involves mining.

My concern is whether this particular Project, in this particular location and at the scale proposed, has been demonstrated to be capable of proceeding without unacceptable environmental, health, amenity, ecological, infrastructure and long-term community consequences.

In my view, the application has not adequately established that proposition.

The Project involves a large-scale mineral sands operation within a sensitive coastal environment containing wetlands, shallow groundwater, waterways, rural residences, a school, significant landscape values and habitat associated with threatened and at-risk species.

It also involves the extraction and processing of mineral sands containing naturally occurring radioactive materials, the transport of heavy mineral concentrate, secondary processing, the return of processed tailings to the Barrytown site, substantial earthworks, significant truck movements and an industrial activity fundamentally different in scale and character from the existing rural environment.

This is therefore not simply a temporary change in land use. It represents a substantial industrial intervention into a rural coastal landscape and community.

I respectfully ask the Panel to please scrutinise the application on the basis of what has actually been demonstrated by evidence—not simply what the applicant says can be managed through future monitoring, management plans or mitigation.

I wish to provide the following comments and concerns in relation to the proposed project. I acknowledge that these are my own views and observations, provided as part of the opportunity to comment under sections 53 and 54 of the Fast-track Approvals Act 2024.

I offer these comments respectfully and in good faith, with the intention of bringing the matters that concern me to the Panel's attention. I appreciate that it is for the Panel to consider all comments and information properly before it and to determine what weight should be given to the matters raised.

I trust that the Panel will take the time to understand the concerns I have outlined below and give them careful and considered attention as part of its decision-making process.

1. Radiation: a matter requiring much greater scrutiny

I am particularly concerned that the radiation issue has been significantly “downplayed” by the applicant.

The applicant's radiation evidence places considerable emphasis on the fact that its measured ore, slimes and WCP tailings are below the 10 Bq/g threshold in the Radiation Safety Act 2016, and concludes from this that the material is not legally classified as radioactive.

However, a regulatory threshold is not the same thing as a finding of zero radiation, zero exposure or zero health or environmental risk.

The Radiation Safety Act exists to protect people and the environment from the harmful effects of ionising radiation. New Zealand's Ministry of Health has also published guidance addressing naturally occurring radioactive material (NORM) in mining and mineral extraction, recognising that radiation risks can arise during mining, processing and associated activities.

More importantly, the Project involves a second processing stage that I do not believe has been adequately addressed by the applicant's radiation evidence.

The Barrytown Heavy Mineral Concentrate (HMC) will be transported to the Mineral Separation Plant at Rapahoe, where it will undergo gravity, electrostatic and magnetic separation to produce ilmenite, garnet and zircon. The Rapahoe consent documents state that material remaining after product extraction—the "MSP" tailings—will then be loaded onto trucks and **returned to the Barrytown mine site**.

This raises a fundamental question:

What happens to the uranium, thorium, monazite and other naturally occurring radioactive materials when the Barrytown HMC is further concentrated and separated at Rapahoe, and what exactly is being returned (discharged) to Barrytown in the MSP tailings?

This is not merely a theoretical concern.

A peer-reviewed study published in March 2026 specifically examining the radiological properties of Barrytown heavy-mineral concentrate found that magnetic separation segregated and concentrated radioactivity. The bulk HMC measured 0.22 Bq/g, while one separated fraction reached 78 Bq/g, and radon off-gas from that fraction reached 9,665 Bq/m³.

That finding is extremely important to this application because it demonstrates that bulk-average radioactivity can conceal highly concentrated radioactive fractions produced through mineral separation.

International radiation authorities also recognise this issue. ARPANSA identifies dry mineral-sands separation and the handling and storage of radioactive mineral fractions as important exposure pathways, including inhalation of radioactive dust. The IAEA (International Atomic Energy Agency) likewise identifies the need to characterise residues arising from mineral-sands processing and recognises that processing can concentrate radionuclides.

Yet the evidence before the Panel does not appear to provide a comprehensive radiological characterisation of the Rapahoe separation process and the resulting MSP tailings, despite those tailings subsequently being transported back to Barrytown and placed within the mined environment.

I respectfully ask the Panel to require independent expert assessment of:

- the radionuclide concentrations in HMC entering Rapahoe;
- the concentrations in each mineral product and each MSP waste/tailings stream;

- uranium, thorium and their decay products;
- radium and radon/thoron generation;
- dust and inhalation pathways;
- potential leaching into groundwater and surface water;
- radiation exposure to workers and nearby residents, especially once;
- the radiological characteristics of the material being returned to Barrytown; and
- the long-term implications on the environment and residents, of burying those materials within the Barrytown Flats.

The Panel should not accept “below 10 Bq/g” as the end of the radiation assessment when the proposed processing operation is capable of concentrating radionuclides into particular fractions and those fractions and wastes have not been adequately characterised.

This is particularly important because the applicant proposes quarterly testing of HMC, while its own evidence indicates that additional regulatory requirements arise if specified radiation thresholds are exceeded.

I question whether quarterly monitoring is sufficiently protective where a processing operation is capable of producing highly concentrated radioactive fractions.

Comments on “radiation monitoring devices”

Proposed condition 8.6 says “the consent holder must maintain *radiation monitoring devices* and collect/analyse their data every three months.”

I note the application uses the generic term “**radiation monitoring devices**” rather than specifying, for example, a gamma dosimeter, scintillation detector, Geiger-Müller detector, thermoluminescent dosimeter (TLD), optically stimulated luminescence (OSL) dosimeter, or another particular instrument.

That is potentially significant because the proposed trigger is expressed as **1 mSv above background over 12 months**, whereas the HMC testing is expressed as **Bq/g**. These are different quantities: Bq/g measures radioactive activity in material, while mSv is a measure of radiation dose. The application does not appear to explain in sufficient detail how the proposed field devices will measure the latter, or how the measurements will be converted or interpreted. The proposed condition states that the annual figure is calculated from four readings at each location, minus the pre-activity background.

In my view, the effectiveness of this condition therefore depends not simply on a requirement to have “radiation monitoring devices”, but on **the correct type of monitoring instrument being selected, installed in the correct locations, operated correctly, and used in a way that is technically capable of detecting and quantifying the radiation exposure that the condition is intended to control.**

The type of detector matters because different instruments have different sensitivities, energy responses, detection limits, geometries and measurement purposes. Similarly, the location of a detector is critical. A device positioned where it is unlikely to capture the relevant exposure pathway may provide apparently reassuring measurements without necessarily demonstrating that radiation exposure at potentially affected locations is adequately characterised. The manner and frequency in which measurements are taken, together with appropriate calibration, quality assurance and interpretation against a properly established background, are also important.

I therefore consider that the proposed condition should not simply require the consent holder to maintain unspecified “radiation monitoring devices”. Should the Panel be of a view to approve this application, the consent conditions should, as a minimum, specify, or require approval of, an appropriate **radiation monitoring methodology**, including:

- the type and specification of the monitoring equipment to be used;
- the radiation quantity being measured and the units in which it is reported;
- the detection limits and energy response of the equipment;
- the locations at which monitoring is to occur, with those locations identified on an appropriate plan;
- how the pre-activity background is to be established and maintained as a valid reference;
- the required calibration and quality-assurance arrangements;
- the method and frequency of measurements;
- who is qualified to undertake and interpret the monitoring;
- how measurements are to be converted or assessed against the proposed **1 mSv above-background annual criterion**; and
- what action is required if monitoring indicates that the criterion may be approached or exceeded.

This is particularly important because **the proposed 1 mSv criterion cannot, by itself, ensure that the monitoring system is adequate.**

A numerical trigger is only meaningful if the measurement system used to assess it is capable of reliably detecting the relevant radiation, at the relevant locations, with sufficient accuracy and sensitivity.

I note also that the proposed condition refers to radiation-monitoring devices being located as specified in the Dust Management Plan. However, the current Dust Management Plan does not appear to provide the radiation-monitoring locations or a corresponding radiation-monitoring methodology.

I respectfully ask the Panel to consider whether the proposed condition provides sufficient certainty that the monitoring system will actually be capable of demonstrating compliance with the proposed radiation exposure criterion. If the intention is that radiation monitoring is to provide assurance that the operation will not result in an additional exposure exceeding 1 mSv above background, then the **equipment, locations, methodology, calibration, frequency and interpretation of that monitoring should be clearly specified and enforceable as part of the consent conditions**, rather than left as an unspecified future arrangement.

2. Water, groundwater and wetlands

I am equally concerned about the hydrology of the Barrytown Flats.

This is an exceptionally wet environment with a shallow coastal groundwater system. The applicant's own hydrological assessment states that groundwater is strongly connected with creeks and farm drains and ultimately discharges towards the Tasman Sea.

The proposed mining operation will operate for approximately 14 years in the Southern Block, using a travelling dredge pond and temporarily diverting some waterways around the active mining area.

The applicant proposes ultimately to construct at least 50 hectares of wetlands to compensate for approximately 6.73 hectares of natural inland wetland fragments affected by mining.

However, a constructed wetland created at the end of mining is not necessarily equivalent to an existing natural wetland that has been destroyed or hydrologically altered during the intervening 14 years.

I ask the Panel to examine:

- what happens to existing wetlands throughout the mining period;
- whether groundwater levels and flows could change beyond the predicted modelling envelope;

- what happens during extreme West Coast rainfall events (we have a few of those);
- whether the proposed water-management system can cope with sustained rainfall in an area that already has a very high water table;
- whether redirected streams and groundwater changes could alter wetland ecology;
- whether contaminants, metals or radionuclides could migrate through the shallow groundwater system; and
- what happens if the constructed wetlands do not develop the ecological functions claimed for them.

The applicant itself acknowledges dissolved metals in the groundwater and has undertaken leachate testing and lime-dosing trials to manage geochemical effects.

Given the close connection between groundwater, wetlands, drains and creeks, I believe the Panel should take a precautionary approach rather than assuming that predicted hydrological effects will necessarily occur exactly as modelled.

3. Westland petrels / tāiko

This matter is particularly dear to my heart, and I am deeply concerned about the potential effects of the proposed operation on the nearby Westland petrel/tāiko colony. Tāiko have an extremely restricted breeding distribution and are known to be vulnerable to artificial lighting and other hazards associated with human activity.

This is not an abstract concern for me. I am a member of the local “Petrel Patrol” group involved in rescuing grounded birds, and I have personally seen how severely tāiko can be affected by artificial lighting. Once grounded, they are highly vulnerable and may have very little to no chance of survival, if they are not located and rescued promptly.

DOC recognises that artificial lighting can disorient fledging tāiko and cause them to become grounded and identifies lighting and loud noise near flight paths as threats. The proposed operation would introduce industrial lighting, heavy machinery, increased vehicle and truck movements, and processing activity into this environment.

The applicant therefore needs to demonstrate, rather than simply assert, that these activities will not materially increase the risk to tāiko. In particular, **what evidence demonstrates that the proposed lighting design will prevent tāiko fallout, rather than simply reduce its likelihood?**

I am also concerned that the proposed management approach relies on detecting and responding to grounded birds after an incident has occurred. A response procedure for a grounded bird is not equivalent to preventing the grounding in the first place. A bird may move away from where it initially lands, hide during daylight, or die without ever being found. **Can an incident-based monitoring system therefore reliably demonstrate that the operation is not causing tāiko fallout when undetected incidents are inherently possible?**

The earlier Avian Management Plan also proposed specific procedures for tāiko found within 50 metres of the pit or processing plant. I ask the Panel to consider the scientific basis for this threshold, given that the location where a grounded bird is found may not be where it initially came down.

Given the significance and vulnerability of this species, I consider it important that the Panel be satisfied that the proposed lighting, noise, vehicle movements and monitoring regime are **preventative, scientifically justified and capable of detecting adverse effects**, rather than relying on the discovery of injured or grounded birds before action is taken.

For those of us who have been involved in rescuing these birds, this is a very real and immediate concern.

4. Protected lizards and other wildlife

DOC's September 2026 report identifies serious unresolved deficiencies in the applicant's wildlife proposal.

There has been no baseline lizard survey establishing which species occur within the proposed mining footprint, their abundance or their distribution.

DOC also identifies particular concerns about the ability of the proposed methodology to detect and protect the Nationally Vulnerable West Coast green gecko, together with concerns about release-site capacity, predator control and contingency measures if salvage and relocation fail.

The Panel is nevertheless being asked to grant a 35-year Wildlife Act authority.

I struggle to see how such a long-term authorisation can be justified when the applicant has not yet established the baseline wildlife values that will be affected.

This is precisely the type of uncertainty that, in my view, should be resolved before destructive activity is authorised, rather than after it begins.

5. Dust, noise, heavy vehicles and rural amenity

The Project will fundamentally alter the character of this very special area that I call home.

The Rapahoe processing operation alone anticipates approximately 80 heavy-vehicle movements per day associated with transporting HMC between Barrytown and Rapahoe.

The wider Project introduces mining machinery, processing, stockpiles, trucks, industrial lighting and associated infrastructure into an area that is currently predominantly rural.

I am concerned about:

- dust from mining, processing, stockpiles and vehicle movements;
- heavy-vehicle safety and increased traffic;
- noise from continuous industrial operations;
- night-time lighting;
- cumulative effects on residents and wildlife; and
- the loss of rural character and amenity.

The applicant's own Rapahoe assessment acknowledges that the proposed activity exceeds the permitted heavy-vehicle movement and floor-area standards.

These impacts should not be reduced to the question of whether a numerical noise or dust limit can technically be met.

There is a real and material difference between a quiet rural landscape and a landscape containing a large-scale industrial mining and processing operation, with associated truck movements, machinery, lighting, noise and stockpiles.

I have chosen to live here because of the quiet rural character of Barrytown, my uninterrupted views across green pasture to the sea, the dark skies at night, the abundance of birdlife, and the sound of the ocean—particularly at night. These are not simply amenities to me; they are the qualities that make this place home.

Like many Barrytown residents, I stand to lose much of what brought me here if this proposal fundamentally changes the character of our environment. I hope the Panel will recognise the significant implications this proposal carries for our community and for the vulnerable wildlife that lives in and depends upon this unique environment.

6. The adoption of the name “Tāiko” and its significance to the community

I also wish to record my strong personal objection to the company’s adoption of the name “Tāiko”.

I recognise that the Panel is not being asked to determine whether the company’s name is appropriate, and I am not asking the Panel to determine the application on that basis. I include this issue because I believe it is relevant to understanding the strength of feeling within the local community and, in particular, the significance of the nearby Westland petrel (Tāiko) colony.

The company has operated under three different names during the course of pursuing consents for this project: **Barrytown Joint Ventures, TiGa Minerals & Metals, and now Tāiko Critical Minerals Limited.**

The adoption of the name “Tāiko” is particularly difficult for me in the context of the previous consenting process. Members of this community have raised serious concerns for years about the potential effects of the proposed mining operation on the Westland petrel, or tāiko. The Coast Road community has also invested considerable time and effort in protecting and rescuing these birds, which are vulnerable to artificial lighting and other hazards and have an extremely restricted breeding range.

Against that background, the company’s decision to adopt “Tāiko” as its corporate identity feels profoundly inappropriate. Tāiko means Westland petrel, so “Tāiko Critical Minerals” essentially presents itself as “Westland Petrel Critical Minerals”. What is that supposed to mean? There is no obvious connection between the name and the company’s mining activities. Rather than clearly identifying what the company does, the name appears to appropriate the name of a vulnerable species that this community has fought hard to protect.

For those of us who have spent years protecting and rescuing tāiko, it is difficult not to experience this as a cruel irony. The name feels less like a meaningful reflection of the company’s activities and more like a reminder of the very species and concerns that have been at the centre of opposition to the proposed mining operation. To me, it makes a mockery of the efforts of people who have devoted their time to protecting these birds and feels deeply disrespectful to the community.

As someone who personally participates in rescuing these birds, I find it particularly distressing that the name of this vulnerable native species has been adopted by a company proposing an industrial mining operation in the very region where that species breeds.

I accept that corporate branding is not a matter for the Panel to determine. I am not asking the Panel to make its decision because of the company’s name. I ask only that the Panel understand the significance that this choice has for people in the local community and the strength of feeling it has generated.

Changing corporate entity:

There is also a practical issue concerning corporate continuity and accountability.

I do not suggest that changes in corporate structure or ownership establish anything about the technical or financial viability of the Project. However, the company has now operated under three different names during the development of a project of very considerable scale, and it is now seeking approvals extending over decades.

I therefore believe it is reasonable for the Panel to satisfy itself that there is a clear, stable and accountable entity behind the long-term environmental obligations it is being asked to approve. Whatever the corporate identity, the Panel should be satisfied that the entity accepting those obligations has the stability, resources and long-term commitment necessary to honour them.

Ultimately, that is what matters to the community: not what the company calls itself, but whether the promises made today will still be honoured when the mine, the wetlands, the groundwater system and the tāiko colony are living with the consequences of today's decisions.

I respectfully ask the Panel to consider carefully who will be accountable for those obligations over the full lifetime of the Project, and what safeguards are in place to ensure that accountability cannot be lost through future changes in corporate identity, ownership or structure.

7. What I am asking the Panel to require from the applicant

I respectfully ask the Panel not to treat proposed management plans as proof that adverse effects will be successfully managed.

Before granting the requested approvals, I ask the Panel to require convincing, independently tested evidence demonstrating that:

1. the radiation consequences of the entire mineral-processing chain, including the Rapahoe MSP, have been properly characterised;
2. the radiological properties of the MSP tailings being returned to Barrytown are known and their long-term environmental implications understood;
3. radionuclides, radon, dust and potentially associated metals cannot create unacceptable exposure pathways for workers, residents, wildlife or groundwater;
4. the existing wetlands and shallow groundwater system will remain adequately protected throughout the mining period;

5. the proposed water-management system can safely cope with the extreme wet-weather conditions of the Barrytown Flats;
6. the nearby Westland petrel/tāiko colony will be adequately protected from lighting, noise and industrial activity;
7. threatened lizards, particularly the West Coast green gecko, have been adequately surveyed and can genuinely be protected;
8. dust, noise and heavy-vehicle effects will be independently monitored and enforceable limits will apply; and
9. the residual adverse effects are proportionate to the benefits attributable to the Southern Block itself.

I also respectfully request that, should the Panel consider approving this proposal, **robust, specific and enforceable consent conditions are imposed on the applicant, rather than relying on Management Plans as the primary means of controlling environmental effects.**

In my view, the key environmental protections should be established within the consent conditions themselves. Management Plans can be useful for setting out how those conditions will be implemented, but they should not be relied upon to determine fundamental matters such as the level of environmental protection required, monitoring requirements, performance standards, trigger levels or the circumstances in which additional mitigation or cessation of activities is required.

This is particularly important for a project of this scale and duration. If critical environmental safeguards are contained only within Management Plans, there is a risk that important details are left to be developed after consent has been granted, or that the measures may subsequently be amended without the same level of scrutiny as the original consent. This creates uncertainty for the community and, more importantly, may leave insufficiently clear and enforceable obligations for protecting the environment.

I therefore ask that any conditions necessary to protect the community, environment, groundwater, wetlands, coastal environment, and vulnerable wildlife—including tāiko—are **clear, measurable, independently verifiable and enforceable in their own right**, with Management Plans used only to support and operationalise those requirements.

Given the potential duration of this Project, the community should not have to rely on the goodwill or future interpretation of the consent holder to determine how environmental protections will be applied. Those protections should be clear from the outset and remain binding for the lifetime of the consent.

Conclusion

This is not simply a proposal to extract sand from a rural property.

It involves large-scale excavation, groundwater interaction, wetland disturbance, mineral concentration, secondary mineral separation, the movement of concentrated mineral products and processing residues, industrial activity, heavy vehicles, dust, noise and lighting within a landscape that supports important wildlife, including the nearby Westland petrel/tāiko colony.

There are also significant questions about what happens to naturally occurring radioactive material as the minerals are concentrated and separated.

The recent Barrytown-specific scientific evidence showing that mineral separation can produce fractions with dramatically higher radioactivity makes it particularly important that the Panel does not rely solely on bulk-ore averages and the 10 Bq/g regulatory threshold.

The Panel should know exactly what is being concentrated, where it ends up, what is transported, what is returned to Barrytown, and what the long-term implications are for soil, groundwater, wetlands, wildlife and people.

In my view, those questions have not yet been answered with sufficient certainty.

I respectfully ask the Panel to apply a rigorous and evidence-based approach to the application and to require that these significant uncertainties be properly resolved before the Project is authorised.

I respectfully ask the Panel to decline the application unless it can be satisfied, on robust independent evidence, that these risks and uncertainties have been properly addressed and that the remaining adverse effects are genuinely acceptable and proportionate to the claimed benefits.

In particular, I ask the Panel not to accept assurances of future management as a substitute for evidence demonstrating that the risks can actually be controlled over the full life of the Project.

This community, this environment and the species that depend upon it will have to live with the consequences of the Panel's decision for decades.

I respectfully ask that the Panel give those consequences the level of scrutiny they warrant. Thank you for considering my comments.

Yours faithfully,

Chanelle van Rooyen