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Comments to the Expert Consenting Panel

Barrytown Minerals Project – Southern Block

Information gaps concerning wildlife, amenity, landscape, wetlands and noise, and radiation

To: The Expert Consenting Panel – Barrytown Minerals Project

Project: Tāiko Critical Minerals Limited – Barrytown Minerals Project, Southern Block

Application: FTAA-2605-1238

Date: 28 September 2026

1. Introduction

My name is **Tammy Ward**, and I live approximately 600 metres from the proposed Southern Block of the Barrytown Minerals Project. My background is in local government, having spent the last 13 years working with resource consents. I also carry out predator trapping on my property and volunteer my time to the local Westland Petrel patrol.

Thank you for the opportunity to make this submission. Barrytown is not simply the place where I live, it is a place I chose, deliberately and wholeheartedly, because of everything that makes it so special.

I moved to Barrytown almost five years ago but my connection with this place began many years before that. For years, I would come here to immerse myself in the landscape, breathe in the fresh coastal air and enjoy the peace and tranquillity that Barrytown offered. I knew this was somewhere special long before I ever imagined calling it home. So, when the opportunity came to move to Barrytown, it was a no-brainer.

I chose a rural lifestyle surrounded by outstanding natural landscapes, abundant wildlife and open space. I chose a place where the night sky is dark, where the landscape stretches uninterrupted towards the sea, and where the natural sounds of the coast are part of everyday life.

From my home, I currently have an unobstructed view across green, lush paddocks towards the sea. It is a view that I never take for granted and one of the reasons I chose to live here.

At night, I fall asleep to the sound of the ocean.

In the morning, I wake to birdsong and the sight of the landscape changing with the weather and the seasons. Wildlife is not something I travel somewhere else to experience. It is part of my home and part of what makes this place feel like home.

My connection with the wildlife of this coast has also become much more personal than simply observing it from my property.

I am a member of the community group that carries out patrols for downed Westland petrels along the coast during the fledging season. Through this work, I have seen first-hand just how vulnerable these birds are.

Westland petrels can be extremely vulnerable when they come to ground. They can become disoriented and exhausted, and if they are not found quickly, they can die. I have personally seen how important it is to find these birds as soon as possible and get them safely off the road and out of danger.

One of the greatest challenges is artificial/man-made light.

These birds can be attracted and disorientated by artificial lights. This means that something as ordinary as leaving a porch light on can have consequences for a bird flying along this coastline at night.

Our community group works constantly with people and business's all along Coast Road, from just north of Punakaiki to well south of Barrytown, trying to raise awareness of this issue. We encourage residents to think carefully about unnecessary lighting and to turn lights off or shield them where possible.

We also encourage motorists to slow down and take extra care when driving at night, because a grounded petrel on the road can be incredibly difficult to see and can be struck by a vehicle before anyone has a chance to help it.

To someone looking at the issue on a plan, a light may appear to be a small and manageable detail. From my experience on these patrols, I know that it is not necessarily that simple. The effect of light extends beyond the immediate area where the light is installed and can affect wildlife moving through the wider coastal environment.

But the Westland petrel is only one part of the wildlife that makes this coastline so special.

Little blue penguins (At Risk – Declining) nest along the coastline. **Seals** regularly come ashore on the beaches to rest as they pass through. **Kotuku (Nationally Critical)** regularly visit and can be seen using the surrounding paddocks as temporary stop overs, turning these apparently ordinary rural fields

into part of a much wider and interconnected coastal habitat. These are not isolated encounters. They are part of the living character of the area collectively known as the Barrytown Flats. **The paddocks, creeks, wetlands, coastline and ocean are all connected, and the wildlife moves through and between these environments as part of its natural cycle.**

This is why I find it difficult to think of the proposed mining area simply as a piece of land that can be assessed by the boundaries drawn on a plan. To me, and to those of us who live here, it is part of a much larger living landscape. What happens in the paddocks can affect the wetlands, the coastline and the wildlife moving through them. What happens at night with artificial lighting can affect birds flying along the coast. What happens to the landscape can change not only what we see, but how wildlife uses it.

This is a living landscape, and the consequences of changing one part of it can reach much further than the footprint shown on a map. That is why the proposed Southern Block concerns me so deeply.

I understand that mining is an important part of the history of the West Coast, and I understand that people have livelihoods and businesses connected to it. My concern is not about dismissing those interests. My concern is about what we stand to lose if this project proceeds without properly understanding and protecting the qualities that make not only Barrytown, but this entire stretch of coastline, such an extraordinary place to live.

For me, the effects are not abstract. They are the view from my kitchen window, my lounge, my bedroom and my deck.

They are the sound I hear when I sit outside and they are the birds and wildlife around my home. The open green paddocks stretching towards the sea and the darkness and quiet at night.

They are the sense of peace and connection to the natural environment that I deliberately moved here to find.

The proposed Southern Block would bring mining activity significantly closer to my home. It has the potential to change the landscape I look out upon, alter the soundscape I live within, introduce artificial lighting and machinery into what is currently a predominantly rural and natural environment, and affect the wildlife and wetlands that contribute so much to the character of Barrytown.

These are not temporary inconveniences to me. They concern the qualities and amenities of the place I chose to make my home.

I am particularly concerned that, despite the considerable volume of material accompanying the application, there remain important unanswered questions about wildlife, wetlands, landscape, noise, amenity and radiation. Some of these gaps have also been identified by the Department of Conservation in its statutory advice to the Panel.

The questions around Westland petrels are especially important to me because I have seen the consequences personally. I do not believe that the potential effects of artificial lighting can be treated as an insignificant or purely localised matter without properly understanding how it could affect these birds and the community's ongoing efforts to protect them.

I believe that before a decision is made that could fundamentally change this landscape for decades, we need to properly understand what will be lost, what will be changed, and whether the proposed mitigation can genuinely protect what is here now.

I am asking the Panel to look beyond maps, modelling and technical assessments and to consider what these changes will actually mean for the people who live here — and for the wildlife that depends on this coastline.

For me, this is about protecting my home. It is about protecting the landscape I deliberately chose to live in.

It is about protecting the wildlife, wetlands, open spaces and natural sounds that make Barrytown what it is.

And it is about protecting a community that has worked hard to understand and care for the wildlife around us, including the vulnerable Westland petrels that share this coastline with us.

Ultimately, it is about asking whether we can extract the resources beneath this landscape without losing the very things that make this place worth calling home.

I respectfully ask the Panel to give these matters careful consideration, and should the decision be to grant consent, to ensure that it is based on complete and reliable information about the environmental and amenity effects of the proposed Southern Block.

2. Submission Points

I make this submission in response to the substantive application by Tāiko Critical Minerals Limited for the Southern Block of the Barrytown Minerals Project.

I acknowledge that the application contains substantial technical documentation, including ecological, landscape, noise, hydrological, wildlife and radiation assessments. My concern is that **the quantity of documentation should not be confused with the adequacy of the information** available to determine the actual environmental effects.

The most significant issue is that several of the technical assessments rely on assumptions, future monitoring or proposed mitigation to resolve uncertainties that should instead be addressed before the Panel determines the application.

This is particularly important given the duration (35 yrs) and scale (280 hectares) of the proposal, its location between the coast and the Paparoa Ranges, its proximity to dwellings and recreational areas, and the interaction between mining, existing consents and the wider Barrytown mining area. This is by no means a temporary activity and is in fact a large-scale industrial activity within a peaceful rural settlement.

I respectfully ask the Panel to require all outstanding information to be provided and independently reviewed before determining the application, or alternatively to impose conditions which expressly address each of the uncertainties identified below.

3. Wildlife – significant information gaps

I am deeply concerned that the application does not yet provide a sufficiently complete understanding of the wildlife that uses the Southern Block and the surrounding landscape. An example is the applicant's Wildlife Act material which proposes lizard surveys as part of the **management** process.

This is not simply a matter of whether individual animals can be relocated or whether mitigation can be put in place after mining begins. Before a decision is made, the Panel needs to understand **which species are present, how they use the site, what habitat they depend upon, and what the consequences will be if that habitat is disturbed or lost.**

The Department of Conservation's September 2026 statutory report identifies a number of significant information gaps in the applicant's assessment. These concerns are particularly important because they relate to protected and threatened species. The report states that the gaps make it difficult to determine whether the effects management package is sufficient to avoid, remedy or mitigate adverse effects (DoC WAR 3.6).

3.1 Lizards Gap – no adequate baseline has been established

One of the clearest deficiencies is the absence of a comprehensive baseline lizard survey.

DOC states in the Wildlife Approval Report that **no baseline lizard survey has been undertaken**, (DoC WAR 5.3.1) meaning that it remains uncertain which lizard species are present, their distribution across the site and their abundance or population densities. DOC specifically identifies this as a significant information gap (DoC WAR 6.5.3).

This is particularly concerning because the project area is within the known range of the **West Coast green gecko** which is classified as **Threatened – Nationally Vulnerable**, as well as other indigenous lizard species.

DOC also considers that the proposed survey and salvage methodology is not adequately designed to detect West Coast green gecko.

I find this difficult to reconcile with the scale and duration of the proposed mining operation. **How can the effects of clearing and mining habitat be properly assessed when we do not yet have a reliable understanding of which species are living there?**

The applicant proposes salvage and relocation as a means of managing effects on lizards. But relocation cannot simply be treated as a substitute for protecting habitat.

DOC identifies shortcomings in relation to carrying capacity, predator control and contingency planning. In particular, it states that there are **insufficient contingency measures** if post-transfer monitoring shows that mitigation has not been effective (DoC WAR 5.10.1).

Before accepting relocation as mitigation, the Panel should require the applicant to show, with clear evidence, that they understand which lizards are present, where they occur, and whether the proposed release sites are suitable and have enough capacity to support relocated animals. There should also be clear plans for predator control, monitoring long-term survival, and dealing with relocation failure. These are basic matters that need to be addressed. Where a threatened species is present in an area proposed for clearance, the Panel **should not assume that relocation will be successful simply because animals can be moved**; the **proposed mitigation needs to be practical, evidence-based, and capable of achieving its intended outcome**.

3.2 Protected birds gap – the full range of species using the site is uncertain

There are similar concerns regarding birds.

The applicant's ecological assessment identified 14 Threatened or At-Risk bird species as likely to use the Southern Block. However, DOC considers that additional species may be present, including **Australasian bittern**, classified as Threatened – Nationally Critical, and **marsh crane**, classified as At Risk – Declining.

DOC also identifies pipit, classified as At Risk – Declining, as potentially relevant to the open habitats within the project area (DoC WAR 6.6.3). My personal observances, as stated in my introduction, have also identified **Kotuku (Nationally Critical)** as a regular visitor to the Southern Block.

This is particularly significant because some of these species are cryptic and difficult to detect. The absence of a bird from a limited survey does not necessarily demonstrate that it does not use the site.

DOC specifically notes that information about abundance and the number of individuals potentially affected **has not been adequately provided** (Expert Comments 63-64). Consequently, the scale and significance of the effects on avifauna remain uncertain.

Wildlife should not simply have to move elsewhere, and it should not be assumed they will, just because an industrial activity wants to move in. The applicant claims they want to be stewards of the land. Part of that is making sure you know what is here before you start and having appropriate measures in place to protect the habitat for continued and future use.

I respectfully request that the Panel require targeted and, where necessary, seasonal surveys to properly identify Threatened and At-Risk bird species using the proposed site, including their numbers, breeding, feeding and roosting areas, seasonal use, movements between habitats, and how mining and rehabilitation may affect these functions.

3.3 Nesting birds gap – proposed deterrence does not adequately address failure

The applicant proposes using bird deterrence measures to discourage birds from nesting in areas that are due to be mined. I find this deeply disturbing as many birds are migratory and return to familiar places each year to breed or seek areas to rest before travelling further. Why should they be chased away from doing what comes natural just because the mine wants to be there.

If the company is as much of a steward of the land as they are trying to make everyone believe, then they should be looking at what they can do to protect the birds from disturbance as they mine.

DOC raises concerns about the effectiveness of the proposed techniques and notes that birds can habituate to deterrence relatively quickly.

This is important because a mitigation measure is only meaningful if it continues to work when it is needed.

And a big question is, **what happens when deterrence fails?**

DOC identifies inadequate protection for some nests, particularly where mining may reach a nest before chicks have fledged. It also raises concerns about the protection of other protected native birds (DoC WAR 3.9).

The Panel should therefore require a clear and enforceable hierarchy of controls **through conditions of consent** such as:

1. avoid nesting habitat wherever practicable;
2. use seasonal timing to avoid breeding periods where possible;
3. actively protect known nests;
4. increased exclusion / buffer zones;
5. alter the mining sequence where necessary to allow chicks to fledge

The applicant should not be able to proceed on the assumption that a bird will simply abandon an area because mining is approaching.

3.4 Westland petrels (Tāiko) gap – lighting effects require particular attention

The issue of Westland petrels is especially important to me personally.

As I stated in my introduction, I am a member of the community group that carries out nightly patrols during the fledging season along the coast looking for grounded Westland petrels. Through this work I have seen first-hand how vulnerable these birds are once they come to ground and how quickly they can die if they are not found.

The proposed introduction of additional artificial lighting and noise associated with the mining operation therefore concerns me greatly. Even though the main infrastructure of the project is now located further south of the colony than previously consented, this does not mitigate environmental impacts to the petrels. **They use the entire coastline for travel.**

DOC identifies the risk of **night-time Westland petrel groundings** and the need for appropriate management where lighting is required.

I have carefully read the Avian Management Plan and acknowledge that it contains a number of measures intended to reduce the risk to Westland petrels, including daylight-only mining, restrictions and shielding of artificial lighting, vehicle speed limits, wildlife cameras, staff training and procedures for responding to grounded birds. The Plan also provides for operational shutdowns if repeated bird mortality occurs close to the processing plant or dredge pond.

However, I remain concerned that much of this protection is **reactive rather than preventative**. The Plan acknowledges that tāiko are attracted and disoriented by artificial lighting and can become grounded, yet it proposes to rely on discovering grounded birds and then responding to them. The Plan itself also acknowledges that the effectiveness of dipped headlights in preventing tāiko vehicle strikes is unknown. From what I have observed, dipped headlights are still lights, and any light is a potential problem for the birds.

This concerns me because I know from my own experience that finding a grounded tāiko quickly can be the difference between saving its life and finding a dead bird. A camera detecting a bird, or a member of staff discovering one after it has already been grounded, is not the same as preventing that bird from becoming disorientated in the first place.

I am particularly concerned that the proposed shutdown provision applies only when a second bird, alive or dead, is found within 50 metres of the dredge pond or processing plant/loadout area. A grounded bird elsewhere on the site, along the access road, or beyond that 50-metre area may not trigger the same response, despite potentially being attracted by the project's lighting. The Plan describes the risk of tāiko being grounded by lighting at the dredge pond as "very low". **But just because you have a light at point X does not mean that the bird will land at point X.** The bird could crash land close to the light source, more than 50 metres from it or anywhere in the vicinity, including the dredge pond.

I would respectfully ask the Panel to require the applicant to explain the evidence supporting that "very low" conclusion, particularly given that the Plan itself recognises the well-established vulnerability of tāiko to artificial light and the proximity of the project to their only known breeding colony.

In my view, the appropriate question is not simply whether the applicant has a procedure for dealing with a grounded bird. It is whether the operation can be designed and managed so that birds are **not grounded in the first place**. Given the work already undertaken by our community to protect tāiko along this coastline, I believe the Panel should require a genuinely precautionary lighting and bird-protection regime, including clear thresholds for reducing or shutting down lighting before repeated bird mortality occurs.

This should not only be contained in a fit for purpose Avian Management Plan but should the decision be to grant consent, it should also be carried through into **enforceable conditions of consent**.

3.5 Gap - Adequacy of proposed camera monitoring

I believe another issue that needs much more attention to detail is the adequacy of proposed camera monitoring. Spotting a black bird in the dead of night is no easy task.

I have examined The Avian Management Plan (para 6.3) and it says cameras will be deployed to detect grounded Westland petrels. It proposes ten motion-sensor cameras around the processing plant and along the access road, operating during hours of darkness, with footage reviewed weekly. However, proposed Condition 13.3 does not say 'ten cameras' or 'every night'. It requires wildlife cameras at suitable locations and says they must record for at least 10 nights every month.

If the AMP is changed in future, the enforceable minimum appears to be **10 nights per month**, not necessarily ten cameras operating every night. **So, for any bird that grounds on a night the cameras are not operating, that is essentially a death sentence.** These birds are nocturnal. During the daylight, grounded birds will try to seek some form of shelter to hide until it is dark again. Vegetation, structures or ditches are common sheltering areas. This makes them harder to find, and they will quickly succumb to dehydration and starvation.

The AMP and the proposed conditions do not appear to line up well. Should the Panel decide to grant consent, I would respectfully ask that they **make the stronger AMP requirements enforceable as actual consent conditions** rather than just referring to the AMP. The conditions should include performance of the cameras, including their detection range, field of view, low-light or infrared capability, resolution, weather performance or ability to reliably detect a grounded petrel.

I believe an important point to make is that simply requiring ten cameras to operate does not establish that they will actually detect grounded tāiko. The effectiveness of the monitoring will depend entirely on where the cameras are placed, what area each camera can see, their sensitivity and their ability to detect a black bird on the ground in darkness and in potentially difficult weather conditions.

I also question whether **weekly review of footage is sufficiently responsive** for a species where a grounded bird can die if it is not found quickly. My experience through participating in community patrols has shown me that time matters. **A bird that is grounded tonight cannot wait until footage is reviewed next week.** Perhaps the applicant would like to consider employing a suitably qualified person specifically to do active monitoring for the birds during the fledging season? I would imagine staff will be very busy doing other tasks and that this part of the job would not be a priority. However, having a dedicated staff member whose sole responsibility is to monitor camera footage and check the site through the night would certainly show some real stewardship.

I respectfully ask the Panel to require the applicant to specify the technical standard and performance requirements for the proposed cameras, demonstrate that their combined fields of view provide adequate coverage of **all** areas where tāiko could be attracted or grounded, and explain how quickly camera detections will be identified and acted upon. I also ask that the Panel consider daily or real-time monitoring as this would be more appropriate during the peak tāiko grounding period, rather than relying on weekly review.

The applicant should also be required to provide the camera locations and coverage maps to the Panel and DOC, together with the methodology used to demonstrate that the system is capable of reliably detecting grounded Westland petrels.

I have compared the current May 2026 Avian Management Plan with the proposed resource consent conditions, and I am concerned that some of the strongest protections described in the Management Plan are not reflected as equally strong and enforceable consent conditions.

There is a chance that I have missed something important here, but I have been unable to locate any mechanism in the conditions to force shutdown should a second taiko be found within the four-week window of the first grounding. The AMP contains a specific escalation provision for tāiko mortality, to cease operations in the event this occurs, but the proposed conditions do not mirror that information. However, **it is the conditions that create enforceability**, not the AMP and Management Plans will alter over time. There is no obligation on the applicant to follow through on the measures promised in the current management plans (should the consent be granted) if the conditions don't mirror the measures in the plans. This is a significant difference between what the applicant says it will do in its Management Plan and what appears to be directly enforceable under the consent.

My question to the Panel is, **why has this explicit shutdown provision not been incorporated into the proposed consent conditions?**

The community understands from experience that lighting is not simply a localised visual or amenity issue. It can have consequences for wildlife well beyond the point where a light is installed

I am also concerned that the Management Plan requires an initial lighting audit at the commencement of mining and a further audit if a grounded seabird is recorded, whereas **Condition 13.4(d) expressly addresses an audit following the discovery of a grounded seabird but does not appear to reproduce the same clear requirement for an initial pre-operation audit.**

There is also a notable change from earlier versions of the Avian Management Plan. An earlier version expressly stated that **no night-time truck movements would occur to the north, past the tāiko colony.**

That specific prohibition does not appear in the current May 2026 Management Plan. Given the known vulnerability of tāiko to vehicle strikes and the proximity of the only known breeding colony, I ask the Panel to require the applicant to explain why this protection was removed and to consider whether it should be reinstated as an enforceable consent condition.

Some of the most important protections are contained only in the management plan, while the enforceable conditions either don't reproduce them or don't provide equivalent consequences if they fail. Where a measure is relied upon to avoid mortality of an absolutely protected and vulnerable species, the critical protections, monitoring requirements, trigger points and consequences of failure should be clearly stated in the consent conditions themselves.

3.6 Wildlife effects cannot be confined to the mining footprint

Another concern is the tendency to view the Southern Block as an isolated area defined by the project boundary.

The wildlife does not recognise those boundaries.

Little blue penguins nest all along the coastline. Seals come ashore to rest as they move along the coast. Kotuku regularly use the surrounding paddocks as temporary habitat. Westland petrels fly along the coast and can be affected by lighting far from the place where they eventually come to ground.

The paddocks, wetlands, streams, coastline and ocean form an interconnected environment.

For that reason, the Panel should consider not only direct habitat clearance but also the indirect effects of:

- artificial lighting;
- noise;
- machinery;
- traffic;
- human activity;
- changes to wetlands;
- loss of feeding habitat;
- disturbance during breeding periods; and
- changes to the wider landscape.

A wildlife assessment that establishes what occurs inside the project footprint but does not adequately account for how wildlife moves through and uses the surrounding environment, risks understating the real effects.

3.7 The Panel should not rely on future monitoring to fill fundamental baseline gaps

I recognise that monitoring and adaptive management have an important role in a long-term project.

However, there is a significant difference between monitoring the effectiveness of an established mitigation measure and using post-approval monitoring to discover basic information that should have been established before applying for a consent.

In this case, fundamental questions remain about the species present, their abundance, habitat use and the effectiveness of proposed mitigation.

The Department of Conservation's statutory advice reinforces these concerns.

I therefore respectfully ask the Panel to require the applicant to address these information gaps **before determining the application**, rather than relying on future management plans to discover what wildlife is present after approval has already been granted.

At a minimum, I believe the Panel should require comprehensive species surveys (by an independent suitably qualified person/s), including targeted and seasonal surveys for threatened lizards and birds, reliable information on species numbers and habitat use, detailed assessment of lizard release sites and their capacity and predator controls, clear plans for failed relocation, enforceable bird and nest protection measures, effective controls for artificial lighting, specific protection and response measures for Westland petrels, and independent ecological review of the findings.

The Southern Block is not an empty piece of land awaiting development. It is habitat within a much larger and interconnected coastal environment.

Before that environment is permanently altered, I believe the Panel must have a clear and reliable understanding of what is living there and what those species will lose.

4. Wetlands and temporary loss of habitat

The proposed new wetland does not establish that there will be no net loss during mining.

The applicant places considerable weight on the creation of a new wetland of at least 50 hectares as an ecological and landscape benefit.

The rehabilitation plan proposes staged construction of the wetland, with portions developed during early mining and other portions much later. The applicant states that the completed wetland will contain a range of habitats including shallow marsh, open water, flaxland, rushland, raupō and islands.

However, DOC identifies a fundamental uncertainty: **the timing of habitat loss and reinstatement has not been sufficiently demonstrated**, including the extent and duration of any temporary net loss of functioning wetland habitat.

DOC recommends that existing wetlands within an area scheduled for mining should be protected or maintained until at least an equivalent area of constructed wetland has reached a functioning state (DoC WAR 6.7.2).

This is important because a newly excavated pond cannot simply be treated as ecologically equivalent to an established wetland.

The applicant's rehabilitation plan itself states that the basic ecological function of the new wetland is expected to take approximately **five** years to establish.

A minimum condition should be that existing functioning wetland habitat is not removed until replacement habitat has demonstrably reached an agreed ecological-function threshold.

5. Landscape and visual effects

The assessment itself identifies more-than-minor effects.

The Landscape and Visual Assessment describes a range of effects and identifies two locations where it considers the visual effect to be **more than minor**: 101 Cargill Road and Lot 2 DP2178. I also note that it states, "Neither of these are considered 'significant' under the FTAA as the effects are relatively short term and are reversible".

For 101 Cargill Road, the assessment states that a visual and noise bund will temporarily obstruct outward views towards and along the coast and that the visual outlook will markedly change during years 8–14. I fail to understand how upwards of 7 years can be considered short term or temporary.

For Lot 2 DP2178, the assessment states that mining may occur within approximately 24 metres of the property boundary during year 9, with the proposed bund both mitigating mining visibility and temporarily obstructing the existing coastal outlook.

The applicant characterises these effects as temporary and reversible.

That does not remove the need to properly consider the amenity consequences for affected residents over the period in which they occur. I do not believe that a 24 metre distance and a bund will sufficiently mitigate effects for an activity of this scale.

Information requested

The Panel should require:

- accurate time-sequenced visual simulations for the affected properties;
- simulations showing the proposed bunds at their full height;
- assessment of views both before and after planting matures;
- assessment from the affected dwellings themselves rather than only public viewpoints;
- an assessment of the duration of the visual obstruction;
- an assessment of whether the proposed planting will actually establish at the predicted rate; and

- clear performance standards for screening vegetation and bunds.

5.1 Cumulative landscape effects require closer examination

The Landscape and Visual Assessment acknowledges the potential for cumulative effects across the wider Barrytown flats mining project. It identifies the Northern Block and Southern Block but treats the limited active disturbance area and progressive rehabilitation as the principal mitigation.

The Panel should ensure that cumulative effects are assessed across the **whole operational landscape**, including:

- existing and consented Central Block mining;
- the proposed Southern Block;
- any Northern Block development;
- the Wet Concentrator Plant;
- associated roads, haulage and infrastructure;
- the Mineral Separation Plant and associated transport;
- lighting;
- noise; and
- the visual effects of bunding, stockpiles, machinery and cleared areas.

The relevant question is not simply whether the Southern Block considered in isolation produces a minor effect, but what the Barrytown landscape as a whole will experience as the various components operate over time.

6. Amenity, rural character and recreational values

The landscape assessment itself identifies the amenity values of Barrytown as including remoteness, openness, long coastal views, scenic quality, birdlife, the sound of waves and wildlife, and the darkness of the night sky.

These qualities are not independent of the project's other effects.

Noise, machinery, vehicle movement, artificial lighting, bunds and changing views interact to change the experience of the area.

The assessment should therefore be treated as an integrated amenity assessment rather than considering visual effects, noise and lighting separately.

This is especially relevant for:

- residents;

- users of Cargill Road;
- users of Pakiroa Beach;
- visitors to the Barrytown Cemetery;
- users of the freedom camping area;
- users of Coast Road/SH6; and
- recreational users of the surrounding coastal and mountain landscape.

The Panel should require an integrated assessment of how the project changes the **overall sensory experience** of these locations.

7. Noise

The noise assessment records measurements undertaken on 14–15 August 2024 at four measurement positions. One position was continuously logged during night-time hours.

The assessment identifies surf noise, traffic, farming activity, birds and insects as components of the existing sound environment. These are the sounds we expect to hear as part of this small rural settlement.

However, I would argue that a **two-day measurement period** in winter **is a limited basis** for characterising a highly variable coastal/rural soundscape over a 35-year consent period.

The Panel should consider whether additional seasonal monitoring is warranted, particularly during:

- summer;
- weekends;
- holiday periods;
- periods of low highway traffic;
- periods of high recreational use; and
- periods when wildlife contributes significantly to the acoustic environment.

This is particularly relevant because the **landscape assessment identifies the natural soundscape itself as an amenity value**.

7.1 Noise should be assessed as an integrated and cumulative effect

The noise assessment does consider cumulative noise from the proposed Southern Block and the previously consented Wet Concentrator Plant.

Noise will be a significant community and amenity issue once mining begins. The Panel should therefore require a comprehensive assessment that includes all existing, consented and proposed noise sources, rather than relying primarily on a Southern Block-plus-WCP scenario. The assessment should clearly account for mining, processing, pumping, haulage, construction, rehabilitation, truck movements, emergency activities and night-time repairs, as well as lighting-related disturbance.

Meeting a numerical noise limit alone does not mean the community impact will be acceptable; the Panel needs to understand the combined and ongoing effects of these activities on nearby residents for the length of the activity. The real time effects of these activities are that I will no longer listen to the peaceful sounds of the natural environment, but instead the constant noise and disruption of mining activities for the better part of 35 years. Sound out here travels very well and noise does not have to be right next to your property in order to be heard.

7.2 Short-duration peak effects should not be obscured by averages

The assessment states that the highest predicted noise levels occur when extraction is close to Warren Road and Cargill Road dwellings, with particularly elevated effects during brief periods when mining is within approximately 250 metres.

The Panel should therefore require time-series information showing:

- predicted noise levels by property;
- duration of elevated noise;
- frequency of those periods;
- day/night occurrence;
- cumulative exposure;
- the effect of bund construction and removal; and
- the effect of mining sequence changes.

This would provide a more meaningful indication of residential amenity than a simple statement that the applicable numerical limits are generally met.

8. Radiation

The radiation evidence reports average uranium and thorium concentrations and corresponding specific activities of approximately 0.45–0.46 Bq/g for Barrytown and Canoe Creek ore. These are reported as well below the 10 Bq/g threshold used for radioactive material under the Radiation Safety Act 2016 framework.

The evidence also **estimates** activity in slimes and tailings and concludes that these materials are expected to remain below the relevant threshold. However, the evidence describes **expected** activity levels.

In March 2026, there was a peer-reviewed study published which examined the radiological properties of mineral sand from the Barrytown flats <https://rsnz.onlinelibrary.wiley.com/doi/10.1002/jgo2.70050> . The study found that “The measured radioactivity of the bulk HMC is 0.22 Bequerels/gram for the solids and 505 Bequerels/per cubic meter for radon off-gas. Magnetic separation into 0.25, 0.45, 0.75, 1.2, and >1.2 (nonmagnetic) Franz isodynamic separator fractions segregates and (magnetically) concentrates radioactivity. The uranothorite-rich 1.2 Amp fraction is the most radioactive at 78 Bequerels/gram (solids) and 9665 Bequerels/per cubic meter (radon).”

The applicant has been downplaying the radioactive information all along. I suspect that is because New Zealand does not have a robust Act that can control these types of activities. But now there is a published study which shows that the potential for higher readings exists. **I question how the applicant can say it will stay below 10Bq/g when a published study has identified a fraction reaching 78Bq/g.**

I respectfully request that the Panel require information showing how radiation levels vary throughout the orebody and how they may change as material is mined, stockpiled, processed and separated. Average radiation levels alone may not demonstrate the maximum concentrations that workers, residents or the environment could be exposed to.

The applicant should identify whether particular mineral fractions, concentrates, slimes or tailings could contain higher levels of uranium or thorium than the original material and should provide monitoring and trigger levels that address those potential variations.

8.1 Baseline environmental radiation and public exposure should be demonstrated

The proposed conditions include radiation monitoring devices and quarterly analysis, with action triggered by specified increases above background. But there are a number of details that should be included, such as the type of devices and making sure they are fit for purpose, not just the cheapest option to tick the condition box.

The Panel should require the applicant to clearly identify:

- where baseline background radiation has been measured;
- the number and location of baseline measurements;
- the statistical basis for the background level;
- the locations of proposed monitoring devices;
- specifications of the type of devices to be used;
- whether monitoring covers both workers and members of the public;
- the exposure pathways considered;
- the relationship between measured concentration in material and actual dose to people; and
- the circumstances in which monitoring results would require suspension or modification of operations.

The evidence states that additional monitoring was not considered necessary by the applicant's radiation expert.

Given the mineral-sands context and the potential concentration of heavy minerals, the Panel should independently satisfy itself that this conclusion is supported by an appropriately conservative exposure assessment.

8.2 Radiation conditions and monitoring

The application should clearly identify the radiation monitoring equipment and methodology that will be used. It is not sufficient to state that radiation monitoring will occur without specifying the type and performance of the instruments, what forms of radiation they are capable of detecting, their detection limits and measurement ranges, calibration requirements, monitoring locations and frequency, and the trigger levels that will require investigation or corrective action.

This information is particularly important given the potential for radiation levels to vary spatially through the orebody and temporally as material is mined, stockpiled, processed and separated.

Proposed Condition 8.6 – Environmental Radiation Monitoring says, “The Consent Holder must maintain radiation monitoring devices in the locations specified in the Dust Management Plan”. However, the Dust Management Plan (DMP) does not contain these locations. **In fact, I did not find a radiation section at all in the DMP.**

Where exactly are the radiation-monitoring devices required by Condition 8.6 supposed to be located?

The condition above refers to radiation monitoring devices but there is no specification about what these are or what they will measure. I am not an expert in this matter by any stretch of the imagination, but I do know that there are different types of radiation and it can present in different ways (airborne/dust, gas) or a combination of ways. So, it would stand to reason that there are different types of monitors depending on whether you are monitoring an area or personal monitoring.

The proposal has a 1mSv trigger which I understand to be about exposure, but the ore assessment is expressed in Bq/g which is a measure of radioactivity concentration. Those are different measurements. So, **we have a proposed condition that tells us something must be measured but doesn't clearly tell us what technical standard the measuring equipment must meet to achieve the outcome.**

9. The significance of the DOC report

The Panel should give particular weight to DOC's September 2026 statutory assessment, which identifies significant gaps and uncertainties in the applicant's ecological information, including lizard surveys and relocation, threatened and at-risk birds, nest protection, Westland petrel management, and wetland loss.

These are independent findings by DOC under the Fast-track Approvals Act, not simply concerns raised by a submitter, and they raise important questions about whether there is sufficient information to properly assess the environmental effects of the proposal.

10. Requested further information and conditions

I respectfully request that the Panel require the applicant to provide, and where appropriate independently review, the following before determining the application:

Wildlife

1. A baseline lizard survey of the proposed disturbance area.
2. Species-specific survey methodology for West Coast green gecko.
3. A map of all lizard habitat.
4. Population estimates or defensible abundance information.
5. Full assessment of proposed lizard release sites.
6. Carrying-capacity assessment for each release site.

7. Predator-control measures.
8. Relocation success criteria and monitoring.
9. Contingency measures if relocation fails.
10. Updated Lizard Management Plan reviewed by DOC which should include robust, mirroring consent conditions.

Avifauna

11. Targeted surveys for cryptic wetland birds, including Australasian bittern and marsh crake.
12. Identification of **all** protected bird species potentially using the site.
13. Seasonal abundance and habitat-use information.
14. A clear nest-protection hierarchy.
15. Conditions preventing mining from reaching active protected nests before fledging wherever reasonably practicable.
16. Targeted searches for grounded Westland petrels whenever night lighting is required.
17. DOC involvement in material amendments to the Avian Management Plan.

Wetlands

18. A year-by-year wetland loss and replacement schedule.
19. Defined criteria for when replacement wetland is considered functionally established.
20. A requirement to maintain existing functioning wetland until equivalent replacement habitat is functioning, or an approved alternative effects-management response is implemented.
21. **Independent** ecological monitoring of wetland establishment.

Landscape and amenity

22. Time-sequenced visual simulations for the most affected dwellings.
23. Confirmation of bund dimensions, construction timing and duration.
24. Independent verification of proposed planting performance and screening.
25. A cumulative landscape assessment incorporating existing and proposed Barrytown mining infrastructure.

26. An **integrated** assessment of visual, noise, lighting, movement and recreational amenity effects.

Noise

27. Consideration of additional seasonal baseline monitoring.
28. Time-series noise modelling for the most affected properties.
29. Clear identification of the duration and frequency of peak noise periods.
30. Confirmation that **all** existing and consented noise sources have been included in cumulative modelling.
31. Adaptive monitoring and response conditions where predicted noise is exceeded.

Radiation

32. Spatially representative baseline sampling.
33. Characterisation of variability rather than relying on average ore activity.
34. Specific monitoring of heavy mineral concentrate and other potentially concentrated material.
35. A conservative public and worker exposure assessment.
36. Clearly defined escalation, investigation and operational-response thresholds.
37. Clearly defined equipment suitable for each type of monitoring required.
38. **Independent** verification of radiation monitoring where trigger levels are exceeded.

11. Conclusion

The application contains extensive technical material, but important uncertainties remain.

A key concern is that the proposed management relies on surveys, monitoring and adaptive management to address important uncertainties **after implied approval**. This creates uncertainty about whether the effects can be properly managed in the first place, particularly when the applicant has not yet established which protected species are present, where they occur, whether relocation sites are suitable, whether bird deterrence will work, how failed nest protection will be managed, or the extent and duration of wetland loss. **Given these gaps, the Panel should carefully consider whether it is appropriate**

to approve the proposal on the assumption that these issues can be resolved later.

The Department of Conservation's September 2026 report confirms several of these uncertainties and describes some of them as **significant** information gaps.

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

I respectfully request that the Panel use an evidence-based approach to the application and require the outstanding information and expert review identified above before determining the application. And should the decision be to approve the application, impose robust, enforceable and adaptive consent conditions which address these matters directly.

Thank you for considering my comments.

Yours faithfully,

Tammy Ward