

Before the Fast-track Panel

Under: The Fast-track Approvals Act 2024
In the matter of: FTAA-2605-1238 Barrytown Minerals Project

Statement of advice Jacqueline Wairepo
Herpetologist
Independent Consultant and Wildlife Ecologist, Kūkūwai
Consulting Ltd
22 September 2026



Department of
Conservation
Te Papa Atawhai

**Te Kāwanatanga
o Aotearoa**
New Zealand Government

Introduction

1. My full name is Jacqueline Crystal Wairepo

Instruction

2. I have been engaged to provide expert advice on behalf of DOC on the Barrytown Minerals Project – Fast-track application.

Qualification and Experience

3. I am an independent Ecological Consultant and specialised Herpetologist for Kūkūwai Consulting Ltd. I hold a Bachelor of Applied Science (Biodiversity Management, 2012) and a Master of Science (Conservation Biology, 2015). I have been working in the ecological industry since 2009, working in a variety of areas all specifically relating to wildlife management. I have worked with a wide range of indigenous lizards since 2010. I have been working as an Ecological Consulting since 2016 when I was employed by Wildland Consultants Ltd as one of two national herpetologists. I have been self-employed since 2021, focusing on herpetofauna and wildlife management for development and infrastructure projects.
4. I am a Council member and Secretary of the Society for Research of Amphibians and Reptiles of New Zealand (SRARNZ), a member of the New Zealand Ecological Society and Birds New Zealand, Ornithological Society.
5. I have been involved in numerous infrastructure projects of significance at local, regional and national level. I am the Technical Specialist for lizards for the Mt Messenger Bypass project and was the lead Wildlife Ecologist for NZTA's slip repair programme in Mangamuka (2024-2025).
6. I have been engaged by DOC to provide expert technical advice relating to wildlife approval applications for lizards since 2025, and have or am currently contributing towards 12 other Fast Track projects.
7. I have a strong understanding of lizard management requirements and best practice in the mitigation and development context at small and large scale.

Code of conduct

8. Whilst it is acknowledged this is not an Environment Court Proceeding; I confirm that I have read the Code of Conduct for expert witnesses contained in the Environment Court Practice Note 2023. I have complied with the Code of Conduct in the preparation of this advice. Unless I state otherwise, this assessment is within my area of expertise, and I have not omitted to consider material facts known to me that might alter or detract from the opinions I express.

Scope of advice and expert opinion

9. My expert advice relates to the following matters:
 - i. Effects of the Project on lizards and the proposed management package to address the effects. The adequacy of the Applicant's application for each of the specified lizard species has been assessed.

Sources

10. In preparing this advice I have reviewed:

- i. Substantive Application Appendix M2 – Lizard Management Plan (March 2026 version)
- ii. Substantive Application Appendix L12 – Wildlife Act Authorisation Technical Report (May 2026 version)
- iii. Substantive Application Appendix L4 – Ecological Effects Assessment (March 2026)

Discussion

General Assessment of the Lizard Management Plan (March 2026 Version)

11. The Lizard Management Plan (LMP) that has been reviewed is a version that was prepared in March 2026 and approved in May 2026.
12. Subsequent to this, I understand that at least two revisions have been made to this LMP in August and September 2026, neither of which have been provided to DOC for review at the time of preparing this document.
13. It is understood through communications with the Applicant's ecologist that many of the general issues raised in this technical feedback document had already been resolved in the August update of the report, with remaining issues to be addressed in the September update.
14. As these have not been submitted to DOC for review, the below comments may no longer be relevant but in the absence of having assessed the most recent version, should still be considered relevant at this stage.

Lizard values

15. Lizard species that are potentially present have been identified, with two identification errors.
16. Lizards identified as potentially present include:
 - a. Canterbury grass skink (*Oligosoma* aff. *polychroma* Clade 4; At Risk-Declining)
 - b. Newman's speckled skink (*Oligosoma* aff. *newmani* "Westland"; Threatened – Nationally Vulnerable)
 - c. Forest gecko (*Mokopirirakau granulatus*; At Risk-Declining)
 - d. West Coast green gecko (*Naultinus tuberculatus*; Threatened – Nationally Vulnerable)
17. It is noted that Canterbury grass skink is likely to be Northern grass skink (*Oligosoma polychroma*; Not Threatened) due to the biogeographical boundary between the two species situated around Hokitika.
18. The Westland variant of Newman's speckled skink is also listed as At Risk-Declining (not Threatened – Nationally Vulnerable).
19. One of the key issues is that a dedicated lizard survey has not been undertaken to adequately inform the suggested management framework for the range of lizard species that may be impacted by this project.

20. It remains unknown which lizards are present on-site, and how they are distributed throughout and surrounding the project's impact area.
21. The proposal assumes that any lizards on-site will be restricted to marginal areas including riparian habitats and shelterbelts due to most of the site being subject to grazing and disturbance pressures.
22. However, species such as Northern grass skink are known to occupy microhabitats even on grazed pasture and therefore the assumption that lizards will be absent from these areas does not provide confidence in the assessment of impact to lizards and suggested mitigation package.
23. In the absence of understanding lizard values, the potential impacts on lizards cannot be accurately assessed.

Effects assessment

24. It is noted that the Ecological Effects Assessment identifies the high ecological values of the lizards themselves (if present), yet only assigns negligible value to their habitats without understanding if or how critical they may be in facilitating the persistence of Not Threatened, At Risk and/or Threatened species.
25. While I agree that heavily modified, grazed pasture doesn't necessarily offer much habitat value to many species, the potential presence of Northern grass skink means that this is the exact type of habitat that this species will readily occupy, and the grazing regime is likely to beneficially reduce rodent pressures within this type of landscape. Therefore, if any patchy mosaics of habitat in the form of woody debris or scattered pockets of ungrazed vegetation is present, then there is some potential for Northern grass skink and Newman's speckled skink ('Westland') to be distributed throughout the entire impact footprint.
26. It is unclear how the grasslands will be maintained throughout the stages of work, and therefore if areas of grassland are temporarily unmanaged, this will quickly revert to a higher quality of lizard habitat and potentially facilitate higher levels of lizard occupation (if lizards are present).

Proposed management framework

27. The proposed methods comprise lizard salvage and relocation as the only mitigating activity focussed on managing the effects of the project on lizards. The proposed methods include standard capture techniques and are generally appropriate; however, the application of them could be improved to meet best practice standards, particularly in the absence of understanding species presence and/or distribution throughout and surrounding the impact area. For example, trapping effort should be increased to a minimum of five trapping days (as opposed to three), with a contingency to continue trapping if lizards continue to be caught on the final day. Artificial Cover Objects (ACOs) should be checked on alternate days spaced across the survey timeframe to reduce disturbance levels that may deter lizards from occupying them. Clarification of the time of day that ACOs will be inspected would be useful to ensure that the timings will maximise the likelihood of detection based on species-specific activity patterns.

28. It is equally important that a good level of effort is taken to protect relocated lizards in their release site and this should come in the form of protection from resident predator communities. Some limited and bird-focussed pest animal control is proposed in the wetland restoration area; however, this is unlikely to benefit lizards and may have unintended impacts through selective pest control that facilitates increases in well-established lizard predators; namely mice.
29. The reviewed version of the LMP provides two protocols for At Risk and Not Threatened lizards, and Threatened lizards; however, it is unclear how these protocols are different from one another. Additionally, Protocol 2 is not considered appropriate for the only Threatened species that may be on-site (West Coast green gecko), as the proposed methods are for terrestrial species, not arboreal species. Spotlighting and manual searches are more appropriate to target West Coast green geckos.
30. There appears to be no additional thought or planning that has gone into how Threatened lizards may be managed if they are encountered on-site. It is understood that the August version of the LMP addresses this, but without having reviewed it I cannot comment on the adequacy of the revisions.
31. The proposed release site around Granite Creek will be prepared with eco-stacks composed of logs, rocks and other debris sourced from the impact area. If these are not constructed with a good level of consideration for lizard refuge requirements, they will not facilitate the dense areas of micro-refugia that lizards need to evade predation from mice and other predators.
32. It has been recommended to the Applicant's ecologist that they consider rock stacks designed in accordance with research on interstitial space requirements as per the recommendations of Lennon (2023) and Herbert (2023)¹.
33. I have some concerns about the adequacy of the proposed release site in terms of size, lizard carrying capacity, ongoing surrounding disturbance due to both sandmining activities and restoration activities. Because no information is available regarding estimated numbers of lizards to be impacted or estimated numbers of lizards at the release site, the current proposal for lizard release contains significant information gaps and does not address the needs of lizards in terms of adequate protection from predators and disturbance.
34. I have suggested to the Applicant's ecologist that a suitable alternative may be Canoe Creek for the first seven-year Stage of works. This site may offer a solution to carrying capacity issues due to its much larger size and contiguous landscape. It will offer a setback from ongoing disturbance associated with mining and it likely offers superior habitat value to lizards in the form of mature, complex refugia.

¹ Lennon, O. (2023). *Mitigation translocation for conservation of New Zealand skinks* (Master's thesis). Te Herenga Waka – Victoria University of Wellington.
Herbert, S. M., Knox, C., Clarke, D., & Bell, T. P. (2023). *Use of constructed rock piles by lizards in a grassland habitat in Otago, New Zealand*.

35. Canoe Creek is managed as a Stewardship Area - Public Conservation Land under the Conservation Act 1987. Langridge Scenic Reserve is a Scenic Reserve under the Reserves Act 1977.
36. Predator management would be required in addition to enhancements to ensure there is immediate protective refuge to salvaged lizards.
37. DOC's local office has expressed support in theory of this option provided the Applicant takes measures to prepare it in accordance with best practice guidelines.²
38. As noted in Paragraph 23, the absence of baseline survey information results in a high level of uncertainty about the true value of this site to several lizard species. This has a flow-on effect into assessing the adequacy of the lizard management and mitigation package and ensuring that the proposed package is commensurate with the impact.

Wildlife Act Authorisation Technical Report

39. This report goes through the requirements of the Wildlife Approval process and generally aligns with the LMP despite some minor inconsistencies that are assumed to have been corrected in subsequent versions of both documents. These include corrected species names and Threat Status. The application is for a duration of 30 years to allow for a 14-year mining duration followed by completion of site rehabilitation.
40. It is suggested that the LMP be reviewed and revised upon completion of each stage of the programme (i.e., every 7 years) throughout the life of the permit, so that updated versions reflect any changes in lizard Threat Status and best practice methodologies.
41. The application includes the Threatened West Coast green gecko; however, fails to provide in any way for this species with appropriate survey effort, technique, duration and release management. If this species is to be included on the Wildlife Approval, a species-specific contingency plan should be prepared that demonstrates they have been adequately provisioned for in the LMP (as per Principle 4 of DOC's Key Principles for Lizard Salvage and Transfer guidelines). This has been communicated to the Applicant's ecologist, and it is anticipated that a revised LMP will be provided that incorporates these recommendations for West Coast green gecko.
42. The application requests approval for Dr Graham Ussher and Matt Charteris to be named as the ecologists implementing the LMP. Dr Ussher is a well-known herpetologist and this is supported. However, I request the credentials of Matt Charteris for assessment to ensure he holds a sufficient level of expertise and experience to undertake this specialised high-impact work for lizards. If he is not assessed as a Suitably Qualified and Experienced ecologist for lizard salvage work, he will be required to be under the direct supervision of Dr Ussher during all salvage work.

² Department of Conservation. (2019). *Key principles for lizard salvage and transfer in New Zealand*. Lizard Technical Advisory Group. Department of Conservation.

Conclusion

42. The LMP that has been reviewed is the first version of a document and planning framework that has been revised at least twice. It is unfortunate that neither of these documents have been made available for me to review, and that many of the points of note described within this document are likely to be outdated and/or fully resolved in the updated versions.
43. A Microsoft Teams meeting with the Applicant's ecologist was undertaken on Friday, 4 September 2026, confirming that an update would be provided that addressed many of the concerns raised based on the review of the LMP version prepared in March 2026. The concerns are listed below:
1. Incorrect identification of which grass skink Clade is likely to be present (i.e., Northern grass skink as opposed to Canterbury grass skink).
 2. Survey and salvage methods contained inconsistencies between the LMP and Wildlife Approval Technical Report, and do not align with best practice in terms of duration and contingencies.
 3. Methods also lacked clarity between Protocols 1 and 2, and do not provide adequately for Threatened species.
 4. The proposed lizard release site doesn't align with best practice requirements and will not be appropriate for all species that have been applied for under the permit application.
 5. No provisions for predator control for lizard protection have been included, and it is recommended that this is reconsidered, particularly in the context of At Risk and/or Threatened species that may be present on the site.
44. In the absence of having received either of the LMP revisions, at this stage it is not possible for me make a fully informed assessment of the adequacy of the proposed management strategy due to the lack of baseline survey information.