Appendix A:

Before the Fast-track Panel

Under:	The Fast-track Approvals Act 2024
In the matter of:	FTAA - Mahinerangi Wind Farm

Statement of advice Jacqui Wairepo

Director, Herpetologist

Kūkūwai Consulting Limited

28 February 2026 (Revised March 2026)

Introduction

My name is Jacqui Wairepo.

Instruction

I am providing expert advice on behalf of the Department of Conservation (DOC) on the Mahinerangi Wind Farm Fast-track application.

My advice relates to effects on herpetofauna.

Qualification and Experience

1. I am an experienced herpetologist, having worked with indigenous lizards since 2010. I hold a BAppSci in Biodiversity Management and a MSc (1st class hons.) in Conservation Biology. I have worked as a specialist consultant herpetologist since 2016 when I was employed by Wildland Consultants until 2021 and was responsible for all aspects of lizard management and research throughout the North Island, as well as numerous South Island based projects.
2. I have been a Northland-based independent wildlife and herpetological specialist since late 2021. I am known to all members of DOC's national lizard TAG (Technical Advisory Group) and have been a named authority on numerous Wildlife Act Authority permits since 2016. My experience with herpetofauna includes all aspects of survey, salvage, translocation and population management for a wide range of skink and gecko species throughout New Zealand.
3. I have also led and been involved with numerous surveys for Hochstetter's frogs throughout Auckland and Northland. During my years as a consultant I have worked on national infrastructure and large-scale development projects for roading, wind farms, solar farms, dams and rural developments. I have prepared and implemented Lizard Management Plans for projects throughout the country both small and large-scale, as well as preparing evidence for hearings for nationally significant infrastructure projects. I have been a Society for Research of Amphibians and Reptiles in New Zealand (SRARNZ) member since 2013 and currently sit on the SRARNZ Council and serve as the SRARNZ Secretary. I am also a member of the New Zealand Ecological Society and the Ornithological Society for New Zealand.

Code of conduct

4. 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 advice 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.

Material Considered

5. In preparing this advice I have reviewed the following elements of the application, all prepared by Blueprint Ecology Ltd:

    - Lizard Assessment for Puke Kapo Hau - Mahinerangi Wind Farm Stage 2 (30 October 2025)
    - Lizard Management Plan for Puke Kapo Hau - Mahinerangi Wind Farm Stage 2 (30 October 2025)
    - Wildlife Approval Assessment: Lizards for Puke Kapo Hau - Mahinerangi Wind Farm Stage 2 (30 October 2025)

Scope of Advice and Expert Opinion

6. My expert advice will address the following matters:

    i. Adequacy of the Applicant's assessment of values, noting any values not identified/assessed.

    ii. Adequacy of the Applicant's assessment of effects, noting any effects not adequately addressed.

    iii. Adequacy of Applicant's proposed mitigation measures.

    iv. Any alternative mitigation measures, and/or my preference for mitigation measures.

A. Feedback to inform Section 51 report

A.1 General assessment of the management plan

7. A high level of effort has gone into understanding species presence and distribution within the various habitat types throughout the project impact area. The advanced progress of the Compensation site known as the 'Scrappy Pines Block' (c.59ha) represents a good lizard relocation site with sufficient area and resources to support the potential number of lizards to be relocated during the lizard salvage process. Lizard mitigation activities include lizard salvage, together with predator control, monitoring and contingency sites which provide an additional c.7ha of protected wetland and riparian habitats.

8. Overall, the approach follows DOC's guidelines for lizard salvage; however, some areas do require further explanation, detail or reconsideration before they may be considered as aligned with best practice. These are discussed below.

A.2 Are techniques and equipment safe / best practice (if it exists)?

9. Yes, all techniques and methods identified within the LMP are in accordance with the SRARNZ toolkit and DOC's salvage guidelines.

A.3 Are mitigations appropriate?

10. The activities identified to mitigate impacts are all appropriate. The scale, intensity and duration of the activities could be increased, and these are the aspects that it would be

useful to discuss with the Applicant to see where they can bring the overall application of mitigating activities up to an acceptable level of effort and risk reduction.

11. Lizard salvage methods are generally appropriate; however, the assignment of habitat value to different pockets of the same habitat type that range between low and high based on lizard detection does result in up to 22ha of lizard habitat being excluded from mitigation efforts. For example, the survey indicates that snow tussock and rough pasture are the highest quality habitats, followed by wetlands and then rocks. Yet despite this, numerous survey sites of these vegetation types that failed to detect any/many lizards resulted in a 'low' value assignment and will subsequently be excluded from salvage effort. This is concerning, particularly with ACO surveys whereby only two inspections were conducted, which is low for small, cryptic and hard to detect species. As a result, I have concerns that unmitigated impacts will occur across the 22ha by way of lizard injury, mortality and/or displacement. Discussions with the Applicant's herpetologist did provide some explanation to defend the exclusion of areas of the best habitat types from salvage (i.e., snow tussock, rough pasture, wetland and rock stacks). The position for this is based on expert judgement around the quality of habitat at each site. For example, despite snow tussock representing high value lizard habitat, there are numerous sites where the quality of the snow tussock is degraded and lizards were not detected during the survey. This is considered to be a reasonable explanation for the exclusion of low-value sites where no lizards were encountered.

12. The applicant has confirmed the intention for lizard salvage to be completed within a single field season (October – April).

13. Lizard salvage is proposed to continue for a minimum of five trapping days or until two consecutive days of zero captures. Best practice is for three consecutive days of zero captures (as per DOC's guidelines for lizard salvage); however, given the significant number of lizards that are suggested to be in the landscape it is suggested that trapping and salvage continue until a measurable decline is observed followed by three days of no captures. The final LMP has taken my earlier comments on board and provisioned for 4 ha of predator control, including good provisions for mouse control. This is an improvement upon the initially suggested 1ha of predator control; however, it is suggested that a precautionary approach is taken when assuming that very high densities of relocated lizards will remain in the immediate release site with substantial competitive pressures. It is preferred that an area of 10ha should be the minimum requirement, with a preference for up to 50% of the Scrappy Pines block being subject to mouse-scaled predator management, given the potential for 5000 lizards to be relocated, including up to 1000 of an At-Risk species. Once agreed upon, the Boffa Miskell Pest Control Plan should be edited to reflect the changes.

14. The WA report also states that mitigation activities provisioning for lizard exclusion fencing and rock re-instatement will be implemented; however, this is not fully described within the LMP. It would be useful to include an additional section within the LMP where these

additional activities are discussed and include examples of where fencing may be considered for installation.

A.4 Is monitoring appropriate?

15. Post salvage monitoring serves to confirm whether salvaged lizards have survived and become self-sustaining. A three year monitoring effort is proposed; however, it would be appropriate to undertake monitoring for a minimum of five years to ensure that monitoring objectives may be met. Noting that the omission of up to 22ha of lizard habitat will not be subject to salvage, monitoring should be undertaken to ensure lizard population growth in Scrappy Pines has replaced approximate lizard numbers lost. This may take between five and 10 years to achieve.

16. Best practice requires contingency planning for salvage failure. The WA application says that no contingency planning for salvage failure is proposed; however, the potential for several thousand lizards to be salvaged renders contingency planning an important part of the overall lizard management planning process. If lizard numbers are found to decline rapidly following salvage after the first monitoring season's efforts then that will be critically important to inform adaptive management for subsequent monitoring seasons. A high-level contingency plan is recommended given the scale, intensity and duration of this project that is likely to impact several thousand indigenous animals.

17. Assumptions that the Scrappy Pines block will result in negligible residual effects associated with lizard mortality should be investigated through post-salvage monitoring that is robust enough to evaluate lizard salvage success or failure.

A.5 Are release sites appropriate (size and quality of habitat)?

18. Yes. The Scrappy Pines block is of sufficient size and quality. The substantial lead-in time associated with retiring this block, leaving felled material to break down and regenerate in microhabitat complexity suggests that this site should represent high quality lizard habitat that is capable of supporting the high number of lizards to be moved into it, together with significant resources to support a long-term and sustained carrying capacity.

A.6 Are the numbers they've estimated accurate?

19. Quantitative estimates are for 4000-5000 lizards to be present in the project area, but for 2000-4000 to be salvaged. The WA document states that it's a 3:1 ratio for McCann's skink to tussock skink. There is an estimate for an upper range of 1300 lizards to be remain uncaptured following salvage.

20. Number estimates have been gained through calculating 'catch-per-unit-effort' (CPUE) associated with multiple survey tools (ACOs, Gee's Minnow traps, Visual Encounter Surveys and Manual Hand Searching). Each survey tool/method has a different probability of detecting lizards which inevitably results in wide variance of CPUE and subsequent occupancy, abundance and density estimates. While two inspections of ACOs is acceptable, it must be noted that this represents the minimum number of inspections and subsequent abundance and density estimates may reflect much lower estimates than true

numbers. Gee's minnow traps were inspected on six occasions yet only detected seven lizards.

21. It's unclear how estimates were calculated as the numbers presented are not scaled linearly and are somewhat confusing. For example, 5% occupancy or less is estimated at 10 skinks / hectare which is extremely low. Conversely the lower threshold of 5%-25% occupancy resulted in an estimate of 400 skinks / hectare whereby 5% would reflect 80 skinks / ha and 25% would reflect 400 skinks / hectare. As these numbers have been used to determine which habitats are subject to salvage and which are not, further explanation regarding the modelling is important to determine the suitability of the programme. It is worth noting that detection probabilities associated with survey tools are highly reflective of numerous variables pertaining lizard behaviour, age, habitat complexity, time of day, time of year etc. Given the high number of devices that needed to be inspected it is likely that a good proportion of the devices wouldn't have been inspected during the optimal time of day when animals may have been residing within them. For example, if the optimal time of day to inspect an ACO is early morning or early evening for a diurnal and heliothermic species such as McCann's skink then the detection probability associated with all devices inspected between mid-morning and late afternoon could be considerably lower than those devices that were inspected at the optimal time of day. This may have resulted in detection rates that were substantially under representative of true lizard abundance.

A.7 Are proposed staff suitably qualified and experienced?

22. Yes, the herpetologist that has prepared the LMP is well-known, and it is confirmed that they will be the implementing herpetologist. The report states that all ecologists who will be participating will be fully trained in all the appropriate and relevant techniques and methods.

A.8 Will the actions / mitigations the applicant is taking protect wildlife or any recommendations on how to improve management plan / additional conditions if not?

23. Yes, in part lizards will be protected via salvage. However, it's possible that the LMP is overstating the likely success of salvage by assuming that the majority of lizards will be caught through ACOs and hand-searching. This is rarely the case as both tools can be limited and biased and contingent upon detection probability at each of the sites to be cleared. The protective benefits to the overall local population will be most apparent via the Scrappy Pines release block and the success of lizard establishment and persistence there. Over the medium-to-long term the numbers should result in population growth to compensate for the lizard losses (i.e., those that don't get salvaged), but it's important to ensure monitoring is designed to understand if this eventuates or not, given the high number of lizards to be impacted. Contingencies in the event of apparent failure should be prepared so that management may be appropriately adapted in response.

B. Feedback to inform Section 53 comments

B.1 Brief description of values that could be affected, focusing on values of key concern to DOC

24. Key values to be impacted are those around lizard species, numbers and habitats. Desktop and field-based assessments have resulted in the detection of two species on-site, with potential for several additional species. Key habitats have been identified, described and categorised by value. Of key concern is the quantum of potential lizard habitat that will not be subject to salvage effort of any kind (c.22ha) due to an assessment of 'low value'. This is discussed in more detail throughout this memo.

B.2 Identify any concerns with the assessment of values, and the assessment of effects on those values, in the application

25. Two key areas of concern are i) around the mixed valuation of habitat units (i.e., snow tussock described as the highest value habitat, yet also assigned as 'low value' in areas where lizards were not detected) and ii) lack of contingency planning in the event that salvage fails. Overall, the key risk appears to be in the assignment of lizard habitat value based on survey results and subsequent density assessments. The risk is that surveys failed to detect lizard numbers that were a true reflection of potentially much higher densities and as a result the impacts associated with mortality could potentially be much higher than estimated.

B.3 Consideration of proposals to address effects

26. Overall, the methods and approach are consistent with standard practice; however, the proposed scale, intensity and duration of salvage, predator control and monitoring may not be sufficient to result in negligible residual effects and a no-net-loss in lizards over a reasonable period of time.

B.4 Are the applicant's proposals to address effect adequate?

27. As stated above, there is some risk that the proposed scale, intensity and duration of salvage, predator control and monitoring may be insufficient to ensure a no-net-loss in lizard values at this site. An increase in salvage effort together with at least five years (or more) of mouse-level predator control across at least 10ha (or, ideally 25ha) should be considered the minimum requirement to address the effects associated with the impact of several thousand indigenous animals.

B.5 Do any alternative or additional measures need to be taken, to better address effects?

28. Ensuring all areas of good quality potential habitat are subject to minimum salvage efforts (i.e., five device inspections). These should include all areas of snow tussock, rough pasture, wetland and all rock stacks, regardless of whether the initial survey resulted in low or no detections.

29. Scaling pest control and monitoring as described above. The purpose of extended mouse-scale control is in recognition that mouse numbers may flourish under the broad, selective predator control programme that is designed for the whole Scrappy Pines block, once mouse-level control finishes. Lizard numbers gained over the years may be rapidly lost if habitat complexity is not sufficient to ensure that lizards can escape abundant mouse populations that flourish with the suppression of rats and other higher predators. For this reason, monitoring over 10 years may enable on-going pulsed management of mouse populations if lizard declines are observed in response to higher mouse abundance.

B.6 Highlight any areas of uncertainty

30. The key area of uncertainty revolves around the density estimates and assignment of habitat value to areas that failed to detect lizards during the initial survey, despite being assessed as overall high value habitat types (e.g., snow tussock). The overall quantum of vegetation (c.22ha) that has been assigned as 'low value' and therefore not subject to lizard salvage is a key risk associated with this management plan.

31. It is also unclear what the Applicant will do if lizard salvage efforts are determined to have failed as no Contingency Plan has been put forward.

B.7 Any relevant changes to the proposal suggested to DOC by the applicant, since the application was lodged, that would result in improvements in the management of effects

32. Improvements were made following initial feedback regarding the increased area of predator control at the Scrappy Pines release block. The initial suggestion of 1ha was increased to 4ha following feedback. This is unlikely to be sufficient for the upper anticipated capture/impact threshold of 4000-5000 skinks.

33. The suggestion to ensure mice are managed at the release site has also been taken onboard and the updated proposal suggests a 4ha controlled area that will be scaled to ensure adequate coverage for mice, with a proposed duration of three years.

B.8 Any comments on proposed conditions/ changes requested to improve these

34. A key risk is that lizard numbers may rapidly decline following the three year duration of mouse-scaled predator control, and that high densities of skinks that are contained within a finite area may be more vulnerable to the rapid reinvasion of mice than if they were spread out over a wider area within the block, or if control duration was scaled back over time rather than completely stopped at the three year mark. It would be reasonable to require that mouse-level predator control be implemented for at least five years, but with an adaptive programme that can respond to high mouse abundance as required for the duration of the Consent.

C. General comments

35. The two lizard reports and wildlife approval document cover off all areas that a specialized herpetologist should address as standard practice. Overall, the methods and techniques used to survey and salvage are in accordance with industry standard; however, there

remains some uncertainty around habitat value assignments and density estimates. There is a risk that the proposed mitigation package is not sufficient to yield a no-net-loss in lizards over the medium term, and the lack of contingency planning to determine salvage success creates a high level of risk that a potential overall loss in lizards will not be identified or adequately addressed by the current proposed monitoring duration.

36. Key recommendations to reduce the risk associated with the above concerns include:

- Ensuring that all areas of good quality potential lizard habitat (based on habitat type, rather than baseline survey results) are subject to minimum salvage efforts, or supervised clearance (e.g., vegetation scrapeback and rock stack deconstruction). Where lizards continue to be salvaged after minimum effort is applied, then salvage should continue until there is a clear decline in captures followed by three consecutive days of zero captures.
- Ensuring that mouse-level predator control scale, intensity and duration is increased to a minimum of five years across 10-25ha to ensure it is commensurate with the estimated potential impact.
- Ensuring that post-salvage monitoring Is extended in duration to meet LMP objectives; namely that salvaged lizards have established into a self-sustaining population with a sufficient growth trajectory to result in a no-net-loss of lizard numbers over the medium term.
- Development of a contingency plan if any species other than McCann's skink or Tussock skink is encountered once salvage begins, with the ability to respond appropriately to the discovery of a Threatened species or if lizard salvage fails to result in a sustained population at the Scrappy Pines block.