

Before the Fast-track Panel

Under: The Fast-track Approvals Act 2024

In the matter of: FTAA-2603-1181 Mt Welcome, Pukerua Bay, Porirua

Statement of advice

Christopher James Wedding

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Contractor to DOC

14/07/2026



Department of
Conservation
Te Papa Atawhai

**Te Kāwanatanga
o Aotearoa**
New Zealand Government

Introduction

My full name is Christopher James Wedding and I am providing expert advice on behalf of the Department of Conservation (DOC) on the Mt. Welcome, Pukerua Bay, Porirua Application.

Instruction

I am providing expert advice on behalf of DOC on the Mt. Welcome, Pukerua Bay, Porirua – Fast-track application.

Qualification and Experience

I am Ecology Manager and a principal terrestrial ecologist at Babbage Consultants Limited, specialising in herpetology (reptiles and amphibians).

I have 20 years professional experience and hold the qualification of Master of Science (Zoology and Environmental Science) degree from Massey University. I am a full member of the Environment Institute of Australia and New Zealand (EIANZ), the Society for Research on Reptiles and Amphibians in New Zealand (SRARNZ) and the New Zealand Herpetological Society (NZHS), the latter of which I am a current officer and former President (2012-2015).

In my capacity as a specialist herpetologist, I have been an invited participant in Department of Conservation-led workshops for lizard mitigation research needs, co-authored Auckland Council's technical publication on the Conservation status of reptiles (Melzer et al. 2022)¹ in the Auckland Region, undertaken lizard survey and salvage, including reporting on outcomes and presenting results and recommendations at conferences (SRARNZ 2009, 2017², 2026).

I have led the ecological effects or management components of large-scale projects, including quarry expansions, Plan Changes, and Notices of Requirement. Recent examples of my experience include:

1. Ecology advice, review and input to consent conditions for Private Plan Changes (PPC 93 (2024); PPC119 (2026); Papakura to Bombay, Notice of Requirement for NZTA Stage 2 route protection, (2024).

¹ Sabine Melzer and others *Conservation Status of Amphibian Species in Tāmaki Makaurau/ Auckland* (Auckland Council, Technical Report 2022/4, March 2022).

² Wedding (2017) Urban RMA lizard mitigation case studies and the importance of post-management monitoring, In Monks, J.M.; Penniket, S. (Comps) 2018: Recent developments in New Zealand herpetofauna research: abstracts of papers presented at the 17th biennial conference of the Society for Research on Amphibians and Reptiles in New Zealand. DOC Research and Development Series 353. Department of Conservation, Wellington. 13 p.

2. Ecological impact assessments, residual effects modelling, management and monitoring for approved Fast Track applications, including technical lead (including herpetological matters) for Brookby Quarry Covid-19 Fast Track (2024); Drury Quarry FTAA (2025); Kings Quarry FTAA (2025); Rangitooopuni- Riverhead Countryside Living subdivision FTAA (2025).
3. Within the Wellington Region, I led the herpetological assessments of the RiverLink Project (2021) for Tonkin & Taylor, and I continue to provide ongoing construction management advice. I also led the approved (2026) Fast Track Application for Wellington International Airport's Southern Seawall Renewal, which will require management of Northern Grass skink (*Oligosoma polychroma*) and Raukawa gecko (*Woodworthia maculata*).

Code of conduct

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

This advice provides an independent technical review of the information supporting the proposed Wildlife Act approval for indigenous lizards associated with the Mt Welcome Fast-track application.

My advice has been prepared, having regard to:

- the purpose of the Fast-track Approvals Act 2024;
- the purpose of the Wildlife Act 1953;
- the effects of the project on protected lizard species and their habitats; and
- the available information relating to the protected wildlife that would be covered by the proposed Wildlife Act approval.

My advice considers whether the available information adequately identifies values and assesses effects; and provides for appropriate management of effects on indigenous lizards. In particular, my advice addresses:

- the adequacy of information describing lizard species, habitat and ecological values within the project area;
- the assessment of actual and potential effects on protected lizards, including direct, indirect and cumulative effects;

- whether the proposed Lizard Management Plan is supported by the available ecological information and is likely to appropriately avoid, minimise or mitigate effects on protected wildlife;
- the suitability of proposed salvage, relocation, release site management, monitoring and adaptive management measures;
- whether the proposed management adequately addresses the confirmed presence of protected lizard species and the implications of the recent survey results;
- the extent to which uncertainty has been appropriately recognised and incorporated into the proposed management framework; and
- whether any additional information or management measures are required to enable the effects on protected wildlife to be appropriately evaluated.

Sources

In preparing my advice, I have reviewed the following reports:

- Appendix 15 Ecological Assessment, Bluegreen 2025
- Appendix 16 Lizard Management Plan, Blueprint Ecology 2025
- Appendix 17 Wildlife Approval Application, Blueprint Ecology 2025
- Appendix 30-40 Ecological Remediation
- Appendix 30-41 Ecological Overlay
- Appendix J Wildlands Ecological Review and Applicant's Response
- Mount Welcome Lizard Survey Results, May 2026, Blueprint Ecology (dated 5 May 2026)
- Assessment of effects on lizards, Blueprint Ecology (dated 8 July 2026)

I have also provided high-level commentary on aspects of some of these documents and discussed with the applicant's herpetologist on 11 June 2026. The assessment of effects on lizards was provided in response to this discussion.

Discussion

General comments

The information supporting the proposed Wildlife Act approval has improved materially since the application was lodged. The May 2026 survey confirms northern grass skink (*Oligosoma polychroma*) and copper skink (*O. aeneum*) within the development footprint. The 8 July 2026 lizard effects memorandum also quantifies the survey effort more clearly, separates construction and operational effects, acknowledges the chronic risk posed by domestic cats, and provides a species-specific effects assessment using the EIANZ

framework. The proposed survey of the adjacent QEII-protected forest is also an appropriate response to uncertainty regarding arboreal geckos.

These additions address several earlier information gaps. They do not, however, resolve the principal issues concerning the spatial extent of terrestrial lizard habitat, the ecological values assigned to Regionally Threatened copper skink and its habitat, the magnitude and level of effect of habitat and potential population loss, or the likelihood that the proposed management will produce an equivalent or improved outcome for lizards, particularly copper skink. The revised effects assessment continues to depend on the proposition that only 3,484 m² of lizard habitat is affected and that copper skink will experience a low magnitude of effect. In my opinion, neither conclusion is supported by the information presented.

My assessment is that copper skink should be assigned Very High ecological value when assessed at the regional scale, that the affected lizard habitat is likely to be in excess of 3 ha, and that removal of almost all habitat associated with the only known threatened copper skink population within the development site is consistent with a Very High magnitude of effect. On that basis, the unmitigated level of effect on copper skink is Very High under the EIANZ matrix. The current Lizard Management Plan may reduce direct mortality to individuals only, but it does not yet demonstrate that the effects on the affected population and its habitat will be avoided, adequately minimised, or offset to an acceptable ecological outcome.

1. Adequacy of information describing lizard species, habitat and ecological values within the project area

Survey Information

The May and July 2026 memoranda provide a clearer account of the terrestrial survey effort. The formal survey used 110 artificial cover objects checked on three consecutive days in April 2026 across the 19 accessible habitat areas identified by Blueprint Ecology. The July memorandum also records approximately six hours of earlier manual searching undertaken during site visits in 2019 and 2020, covering accessible potential habitats. While these areas are not mapped, this information improves transparency and confirms that representative examples of pasture margins, gardens, vegetation edges, shelterbelts, debris and other selected microhabitats were inspected.

The survey provides reliable evidence that northern grass skink and copper skink are present within affected areas. It does not provide equivalent confidence about population abundance, absence from unsampled habitat, or the spatial limits of occupied habitat. Three copper skink detections (male, female, juvenile) do not constitute a population-density estimate because detection probability was not estimated and the survey was not designed to delineate the boundary of the population. The earlier manual searches also have limited value for determining habitat extent because manual searching in rough

grass, deep litter, dense understorey and plantation debris has low and variable detectability.

I acknowledge that representative terrestrial habitats were surveyed and that extensive areas of short, grazed pasture are unlikely to support resident lizard populations. However, the eastern portions of the property were not surveyed at comparable intensity and Area 1 was not included in the April ACO survey because of access and safety constraints. The proposed spring survey of the adjacent QEII forest will improve information for arboreal species, but it does not resolve the issues with estimated extents of lizard habitat.

Habitat mapping and extent

The July 2026 memorandum states that the total area of lizard habitat within the development footprint is 3,484 m² and presents ten small green polygons in Figure 1. I do not support this figure and consider it to be a substantial underestimate of impacted lizard habitat. The mapped polygons largely correspond to narrow edge locations where survey devices recorded lizards or where survey effort was concentrated. They do not map the wider connected (and representative contiguous) vegetation within which those records occur. The figure therefore conflates confirmed detections with the spatial extent of habitat.

For example, Areas 9 and 10 (Figure 1, July Memorandum) are localised portions of the edge of an approximately 0.7 ha planted native shrubland (estimated by the Wildlands review to be 0.5 ha) that aerial imagery indicates is more than 20 years old. That native vegetation is contiguous with plantation pine and associated edge habitat, forming a wider vegetation fragment of approximately 2.7 ha (see Figure 1, below).



Figure 1. fragment of vegetation showing approximately 0.7 ha of indigenous shrubland and 2 ha of pine. Pine debris, typical of skink habitat, is visible at gaps in the plantation canopy.

Area 8 (Figure 1, July Memorandum), within pine edge habitat and representing copper skink detections, is also mapped as a narrow, localised area of pine-forest edge. Reviewed aerial imagery (2017, Figure 1, above) indicates that the wider fragment of plantation contains fallen pine material beneath the canopy. Such features provide cover, moisture gradients, invertebrate food source and refugia of the type used by copper skink.

Copper skink are not restricted to forest edges. They are known to occupy forest interiors and including plantation forest where suitable ground-layer complexity, deep litter, understorey vegetation and fallen woody debris are present. Planted vegetation is also likely to have accumulated sufficient ground cover to support such habitat features as evidenced by their regular occurrences through planted vegetation across their natural range. Confirmation of copper skink at Area 8 therefore provides a reasonable basis to treat the surrounding contiguous vegetation as potential habitat unless field assessment demonstrates that particular portions lack suitable ground-layer attributes. The absence of captures beneath devices placed at other selected locations does not establish that intervening connected vegetation is not habitat.

In my opinion, a precautionary and ecologically coherent estimate of terrestrial lizard habitat associated with this fragment is approximately 2.7 ha (as mapped in Figure 1, above). The current figure of 339 m² for areas 8, 9 and 10, which occur as discrete locations within this fragment is not supported, and this underestimate is likely to extend to other areas of the site (e.g. impacted vegetation cover to the west of areas 12 and 16, Figure 2 of the LMP). Therefore, 3,484 m² is not an adequate basis for quantifying habitat loss, the proportional effect on the copper skink population, or the amount of habitat required at receiving and compensation sites.

Ecological Value

Species Value

Copper skink is classified nationally as At Risk - Declining and as Threatened - Regionally Vulnerable on the Wellington mainland. The July memorandum assigns High ecological value, apparently by applying the national At Risk - Declining category in Table 5 of the EIANZ Guidelines. The EIANZ Guidelines also advise that ecological value and magnitude should generally be assessed at the same spatial scales. The assessment expressly relies on the national status and evaluates effects within an Ecological District context. A scale-consistent application of the framework should therefore recognise the regional Threatened classification.

On this basis, copper skink warrants 'Very High' ecological value for this assessment. This reflects its Threatened - Regionally Vulnerable status at the scale at which the relevant population and effects are being considered. Assigning 'High' value understates

the conservation significance of the affected population within the Wellington Region and directly reduces the level of effect produced by the EIANZ matrix.

Northern grass skink is nationally and regionally 'Not Threatened' and may reasonably be assigned Low species value. However, that classification does not justify assigning Low habitat value to a connected vegetation fragment that supports a mixed lizard assemblage including regionally threatened copper skink. Species values, habitat values and effects on individual populations should be assessed separately so that the higher-value component is not suppressed by the more common species or by the modified origin of the vegetation.

Habitat Values

The assessment does not distinguish between vegetation value, species value, and the functional value of vegetation as lizard habitat. A planted or modified vegetation community may have limited botanical value but still provide important habitat for indigenous fauna. Conversely, the value of habitat to lizards cannot be inferred solely from its planting origin, age, or overall vegetation classification.

The LMP defines low-quality habitat (Section 1.5 of the LMP) as habitat where very few lizards are expected and/or no At Risk species are likely to occur. It defines moderate-quality habitat as including habitat where At Risk species are expected to occur at least infrequently. The subsequent confirmation of copper skink, an At Risk species that is Threatened – Regionally Vulnerable on the Wellington mainland, means that the basis for assigning a low habitat value requires reconsideration. The low-value classification applied to Areas 8–10 is not consistent with the LMP's own valuation criteria where that vegetation forms part of the habitat supporting copper skink.

The July 2026 effects memorandum describes Areas 9 and 10 as "native planting edge with long grass" and assigns each a low habitat value. It treats these areas as narrow strips of 127 m² and 108 m², rather than as sample locations within a larger, contiguous area of planted native vegetation. Likewise, although northern grass skink is recognised as an edge-associated species, Areas 8 to 10 represent only sampled portions of a much more extensive vegetation margin. The adjoining pine fragment is also relevant because copper skink is known to use forested habitats, including plantation forest, and is treated in the LMP as a forest-associated species. The surveyed locations therefore demonstrate occupancy within the wider vegetation complex, but they do not define the full extent of habitat, nor do non-detections elsewhere demonstrate that adjoining vegetation is unsuitable or unoccupied. This distinction is important because the mapped polygons appear to represent where lizards were detected or survey devices were placed, rather than the full extent of habitat available to, and potentially occupied by, the affected lizard populations.

The lizard survey report itself recognises that terrestrial lizards use complex ground cover, scrambling vegetation and leaf litter within forest and scrub communities and identifies seral broadleaved forest and scrub edges as applicable copper skink habitat. It

also includes a photograph specifically captioned as “*rough pasture and regenerating forest providing copper skink habitat*” (Plate 2, Lizard Survey Results). It is therefore unclear why indigenous vegetation contiguous with the recorded locations is classified as low-quality habitat without a documented assessment of its understorey, litter, refuge availability, connectivity or use by the wider lizard population.

On the information currently available, I do not support that a low habitat value for Areas 8–10 and the adjoining vegetation has been demonstrated. The confirmed presence of a regionally threatened species and the apparent extent and structural complexity of the connected vegetation indicate that its value to lizards is likely to be at least **Moderate**, and potentially **High**. This should be resolved before the magnitude and overall level of effect are finalised.

2. Assessment of actual and potential effects on protected lizards, including direct, indirect and cumulative effects

Direct effects and magnitude

The July memorandum is an improvement because it provides a separate EIANZ assessment for northern grass skink, copper skink, Area 1 and the adjacent QEII forest. However, the assessment remains dependent on the underestimated habitat area (described above) and does not assess the pre-mitigation effect on the affected copper skink population.

Table 3 (Lizard Management Plan) assigns a Low magnitude of effect to copper skink on the basis that three individuals were recorded, the population is described as small and discrete, and the animals will be salvaged and relocated. This approach is problematic for three reasons. First, the number captured during a short survey is not an estimate of the number present. Second, the Ecological Assessment (appendix 15) concludes that the magnitude of effect is low because similar vegetation is widespread within the ecological district. This is not an appropriate surrogate for assessing effects on threatened lizard populations. The availability of superficially similar vegetation elsewhere does not necessarily indicate that it provides habitat for the species, equivalent habitat quality, or contributes similarly to population viability. Potential habitat elsewhere may be unoccupied, may differ in ground-layer quality, or may support separate populations with limited connectivity. No data are provided to demonstrate that the local population is part of a larger continuous population or that replacement habitat is available within dispersal distance. Thirdly, salvage and relocation are mitigation measures and should not be used to reduce the description of the magnitude before mitigation. The table then lists salvage again in the mitigation column, which effectively counts the same measure twice.

The relevant pre-mitigation effect is the permanent removal of almost all of the connected vegetation associated with the only known copper skink population within the development site. The surrounding intensively grazed pasture is accepted by the applicant as generally unsuitable. On the information available, the project may therefore

remove a very high proportion of the habitat available to this population and may result in its complete loss from the site unless relocation succeeds.

The EIANZ Guidelines describe a Very High magnitude as total loss or very major alteration of key baseline features, or loss of a very high proportion of the known population or range of the feature. In my opinion, the proposed loss is consistent with that description. Combining Very High ecological value with a Very High magnitude produces a Very High level of effect. This is materially different from the Moderate pre-mitigation and Low residual effect reported in the July memorandum. A Very High ecological effect would also be well above a more than minor threshold in RMA terminology.

Effects Management Hierarchy

The consequences of the revised lizard information have not been carried back into project design. The LMP records that the project ecologist was advised by the applicant that all practicable avoidance had been incorporated and that there were no alternatives to moving lizards. That conclusion was reached before copper skink was confirmed and before the wider habitat implications were considered. The application does not provide an ecological options assessment showing whether the connected native and pine fragment, or a materially larger part of it, could be retained.

Very High adverse effects should be avoided where practicable. The NPSIB effects management hierarchy similarly requires sequential consideration of avoidance, minimisation and remediation before biodiversity offsetting or compensation is relied upon for residual effects. Salvage and relocation may reduce the number of animals killed during clearance, but they do not avoid the loss of occupied habitat and should not be assumed to preserve the affected population. Where significant residual effects remain, an offset or compensation package should be designed against the lizard attributes lost, including population abundance, occupancy, habitat area, habitat condition and connectivity.

Indirect and cumulative effects

The July memorandum acknowledges that approximately 950 dwellings will create a chronic operational effect through increased domestic-cat predation. This is a substantial improvement on information provided at time of lodgement. It correctly distinguishes that effect from the one-off construction salvage and acknowledges risk to copper skink and potentially arboreal geckos.

The assessment remains incomplete. The proposed cat controls apply to the QEII-protected forest and a surrounding buffer, rather than to all retained lizard habitat and the five on-site terrestrial release areas. Desexing and microchipping reduce the risk of feral population establishment and assist identification, **but do not prevent owned cats from roaming into lizard habitat and killing lizards**. Live capture followed by return to an owner is reactive and does not remove the continuing source of predation. The proposed

minimum ten-year duration is also short relative to a permanent residential land use and a permanent habitat-protection objective. Therefore it is reasonable to assume that the project will result in long-term habitat degradation or localised extinction for resident and/or relocated lizard populations- particularly where such remaining habitats are small fragments (as indicated in Figure 2 of Appendix 16).

The operational assessment focuses on cats and does not address the likely increase in commensal rats associated with residential zones. Rodent control is proposed at release sites for a limited period, but no long-term assessment or performance standard is provided for the urban rat population that may affect retained habitat, release sites and adjacent natural areas. The combined effect of cats and rats is relevant because both are effective predators of indigenous lizards and are likely to be concentrated along the urban-natural habitat interface.

Other foreseeable operational effects include fragmentation, road barriers to movement, increased recreational access, disturbance of logs and ground cover. The adjoining Muri Road development is part of the cumulative context. The existence of separate management requirements for that development does not remove the cumulative increase in residential predator sources, fragmentation and disturbance across the wider landscape.

These effects are particularly important because the mitigation package relies on small retained and created habitats supporting relocated populations in the long term. The assessment should therefore address the post-development suitability of those sites over the life of the subdivision, rather than only their condition at the time of release.

3. Lizard Management Plan likelihood to appropriately avoid, minimise or mitigate effects on protected wildlife

The LMP contains the basic components expected for development-related lizard management. The proposed use of ACOs, pitfall traps, spotlighting, supervised vegetation clearance, same-day transfer, release-site enhancement, predator control and reporting is broadly consistent with accepted practice. The project herpetologist is suitably experienced to prepare and implement this work.

However I do not consider that the Lizard Management Plan will sufficiently reduce effects on native lizard populations.

A key issue is that the Plan was prepared before copper skink was confirmed and remains based on a substantially smaller habitat footprint, low expected capture numbers and an assumption that no threatened species is applicable. The July memorandum does not replace the need for a consolidated revised LMP because it introduces changes and statements that are not consistently reflected in the Plan.

Consistency with DOC's nine principles for lizard salvage and transfer

Table 1 of the LMP accurately identifies the general subject matter of DOC's nine principles for lizard salvage and transfer. However, the statements in the table do not, by themselves, demonstrate that those principles have been satisfied.

In particular:

- Receiver site values and habitat extent have not been adequately quantified for copper skink;
- the effects assessment understates the potential effect on copper skink;
- avoidance has not been reconsidered following the survey results;
- the regional threat status of copper skink has not been given commensurate consideration;
- receiving-site suitability and carrying capacity have not been demonstrated;
- monitoring remains conditional on capture thresholds despite a potential population-scale loss for threatened copper skinks; and
- contingency measures do not adequately address potentially higher capture numbers, receiving-site failure or the potential loss of the affected copper skink population.

My assessment of each principle is set out below.

Principle 1: Values and site significance at impact and receiving sites

This principle is not fully met. The impact-site habitat is incompletely mapped and copper skink is undervalued. The receiving sites have not been surveyed to establish the presence and relative abundance of northern grass skink or copper skink, and their carrying capacity has not been quantified. Expert judgement is relevant, but is not a substitute for species-specific baseline information where an entire regionally threatened population may be lost or moved.

Principle 2: Actual and potential effects and their significance

This principle is not met. The direct effect on copper skink is assessed using an underestimated habitat area, a High rather than Very High value, and a Low magnitude that already assumes successful salvage. Operational effects are now partly recognised, but rats, fragmentation and effects on the on-site release sites remain insufficiently assessed.

Principle 3: Alternatives to moving lizards

This principle is not demonstrated. The LMP relies on advice from the applicant that avoidance has been maximised. It does not independently assess options to retain the confirmed copper skink habitat and has not revisited avoidance following the 2026 survey.

Principle 4: Greater consideration for threatened species

This principle is not met. The LMP states that no Threatened species is applicable because it relies only on the national classification. Copper skink is Threatened -

Regionally Vulnerable on the Wellington mainland. Greater consideration should be evident in habitat valuation, avoidance, receiving-site assessment, monitoring and contingency provisions.

Principle 5: Best available salvage, transfer and release methodology

The proposed techniques are generally standard, but the effort and completion criteria require revision. Three checks and two consecutive suitable days without captures will not provide a reliable basis for concluding that most animals have been captured. The proposed estimate that 90 percent of lizards have been removed is unlikely to be robust where captures are few and detection probability is unknown. Spotlighting should also be undertaken for at least three suitable nights, consistent with the Wildlands review, and the duration of supervised clearance should be determined by the works rather than fixed in advance.

The proposed provision of approximately one log stack per ten relocated lizards is also not supported by a site-specific assessment demonstrating that this level of refuge provision is sufficient. Similarly, the ecological basis for planting only approximately 20 percent of the terrestrial release areas is unclear. The release sites should be designed against measurable habitat requirements, including the distribution and density of refuges, ground-cover continuity, litter and woody-debris availability, open basking habitat, shrub cover and connectivity.

Plate 4 of the LMP also shows relatively steep terrain within at least part of R1. Steep slopes do not necessarily preclude lizard release, but the Plan does not demonstrate that large log stacks can be safely constructed and remain stable in those locations. Site-specific design should identify suitable locations, stabilisation requirements, drainage and erosion controls.

Principle 6: Long-term suitability and carrying capacity of receiving sites

This principle is not demonstrated. The five on-site terrestrial release sites are small and several are disconnected. R2 is approximately 300 m², and R3, R4 and R5 are spatially separated from the larger R1-R2 area. Distributing animals among isolated patches may reproduce or exacerbate the fragmentation caused by removing the connected impact habitat. No population or carrying-capacity assessment demonstrates that Karehena Bay Scenic Reserve or any of the onsite areas can receive a copper skink population, or any of the other species listed in Table 2 (Appendix 16, LMP), other than Ngahere gecko. No assessments have been made that demonstrates that a native skink population at any of the onsite receptor sites would survive in the presence of increased domestic cats and rats, provided only 20% restoration cover at any identified location.

Principle 7: Monitoring

This principle is only partly met. Monitoring is conditional on more than 20 individuals of a species being salvaged. That threshold is inappropriate for copper skink because a

regionally threatened population could be removed and relocated without any post-release monitoring if fewer than 20 animals are captured. Monitoring should be required for all relocated copper skinks, irrespective of capture number, and triggers for adaptive management required for failed establishment. Three years is not supported to determine population establishment.

Principle 8: Reporting

The proposed compliance reporting to DOC is appropriate in principle. Reporting should also include annual release-site, pest-control and habitat-performance results for the full monitoring period, regardless of the number of lizards captured, and should record all changes made under adaptive management.

Principle 9: Contingency actions

This principle is only partly met. The Plan provides alternate arrangements for unexpected species and scales habitat enhancement with capture numbers, but does not set out adequate responses to receiving-site failure, declining post-release detections, failure to meet pest-control targets, substantially greater habitat extent, or capture of more copper skinks than a receiving site can support. Predetermined alternate receiving sites and decision thresholds are required.

Other LMP Comments

- The LMP proposes five terrestrial release sites. These sites are generally small and patchily distributed, with R3, R4 and R5 appearing relatively isolated from R1 and R2 and from each other. The strategy therefore proposes to replace a comparatively large connected occupied vegetation fragment (such as the 2.7 ha fragment of indigenous vegetation and pine supporting both species) with several smaller receiving areas. The implications of this configuration for dispersal, recolonisation, population connectivity and resilience have not been assessed.
- There is also uncertainty regarding the intended destination for copper skink. The LMP identifies Karehana Bay Scenic Reserve as the receiving site for copper skink and other forest-associated species. The July 2026 memorandum, however, refers to the 6,700 m² of on-site grassland being enhanced for both northern grass skink and copper skink. These approaches are not equivalent and should be resolved in an updated LMP or residual effects analysis (e.g. demonstration of offset or compensation outcomes).
- Copper skink has not been recorded at the proposed on-site terrestrial release sites. This does not necessarily establish that those areas are unsuitable, but it means that their suitability and carrying capacity for copper skink have not been demonstrated. If copper skink is absent because the sites lack suitable litter, ground cover, woody debris or microclimatic conditions, relocation there would not

be appropriate. If the apparent absence is due to limited detection, the resident population and available carrying capacity remain unknown.

- The LMP does not clearly explain how release-site establishment will correspond with the staged construction programme. Several proposed sites are currently grazed pasture and will not provide equivalent lizard habitat immediately following stock exclusion.
- Receiving sites should be fully functional before salvage begins within the corresponding construction stage. This should include completion of planting, installation and stabilisation of refugia, establishment of suitable ground cover, exclusion of stock, protection from later construction disturbance and implementation of predator control for an appropriate lead-in period. The project herpetologist should confirm that predefined habitat-condition criteria have been achieved before any lizards are released.
- The July 2026 memorandum proposes desexing and microchipping requirements to reduce the risk of stray and feral cat establishment and improve the ability to identify roaming cats. However those measures do not prevent owned cats from entering retained habitat or release sites. Live capture followed by return to the owner and provision of educational material is reactive and does not remove the continuing source of predation. The proposed cat-management programme is also limited to the QEII forest and its buffer and is proposed for a minimum of ten years, despite the residential land use and associated predator source being permanent. Physical barriers (e.g. lot specific fencing, or around sensitive habitats), curfews or bans on domestic cat ownership, coupled with educational signage will directly address domestic cat predation risks in the long-term.
- The LMP also provides only time-limited rodent control at release sites. It does not establish long-term predator performance standards that respond to the likely increase in urban-associated rats. The long-term suitability of the release sites therefore remains uncertain. A residents Association, or similar, that is responsible for managing and maintaining restoration planting, pest control and any domestic cat management or compliance should be considered.

Other Comments: Residual Effects on lizards

The application is likely to result in more than minor residual adverse effects for copper skinks, when considering the extent and permanence of potential habitat loss. The LMP (Appendix 16) is likely to reduce direct injury and mortality to individual lizards only. It does not demonstrate that the affected copper skink population will persist, that the receiving sites can support those populations, or that the habitat compensation is commensurate with the loss. On my assessment, there is a net loss of habitat for copper skinks, even if this species was to be relocated onsite into dedicated, managed habitat with Northern grass skinks. Of an approximately 2.7 ha impact area associated with one of the fragments, the 0.67 ha of Northern grass skink habitat restoration habitat is

materially smaller than the habitat removed, before accounting for localised, fragmented distribution, unknown quality, time lags, release-site occupancy and translocation risk. At Karehana Scenic Reserve, there is no information on resident skink populations. The assertion that habitat value will almost double onsite is unfounded and a consequence of using the disputed 0.35 ha habitat estimate.

The application also does not demonstrate a net gain for lizard values. A credible offset or compensation response would need measurable objectives for copper skink, including confidence measures associated with habitat condition, occupancy, abundance or recruitment targets, and would need to account for uncertainty and time lag. Those matters are not presently quantified. Appendices 3 and 4 of the NPSIB set out Principles for biodiversity offsetting and compensation, which should be demonstrated.

Conclusion

The May and July 2026 memoranda greatly improve the information available to DOC and the Panel. The survey confirms northern grass skink and copper skink, the survey effort is now described more transparently, and the applicant has acknowledged an operational effect from domestic cats. The general salvage methods are consistent with established practice and are likely to reduce direct mortality during vegetation clearance.

The principal ecological conclusions remain unsupported. In my opinion, the affected terrestrial habitat is likely to be more than 3 ha rather than 3,484 m². Copper skink should be assigned Very High value at the regional scale. Because the project removes almost all habitat associated with the only known population within the development site, the pre-mitigation magnitude is Very High and the resulting level of effect is Very High under the EIANZ framework.

The current management package does not demonstrate that this effect will be reduced to Low or that the project will produce a positive long-term outcome for copper skink. The species has not been demonstrated to occur at, or be absent from, the proposed terrestrial release sites; carrying capacity is unknown; the release-site configuration is fragmented; monitoring may not be triggered for copper skink; and domestic-cat and rat risks are not controlled for the life of the development. The application also has not demonstrated that avoidance has been reconsidered using the revised ecological information.

I therefore consider that a revised effects assessment, definitive habitat mapping, a consolidated species-specific LMP and strengthened avoidance, receiving-site, predator-control, monitoring and contingency provisions are required before there can be confidence that the proposed Wildlife Act approval will appropriately protect and manage the affected lizards. Salvage and relocation may form part of that response, but should not be treated as a substitute for avoidance of Very High effects or as evidence that the affected copper skink population will persist.

References

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