

Response to Minute 18 memorandum by Mr Payne

Prepared for:	Porirua City Council	Reviewed and approved for release by:  Nick Goldwater Senior Principal Ecologist
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1.0 Introduction

An application for resource consent under the Fast-track Approvals Act 2024 is being sought by the Pukerua Property Group Partnership for a staged 949 lot residential subdivision at 422 State Highway 59, Pukerua Bay (FTAA-2603-1181).

On behalf of Porirua City Council, I was invited to review the Lizard Management Plan (dated 18 November 2025, Appendix 16) and the subsequently released Lizard Report (5 May 2026) by Blueprint Ecology. These documents form part of the Mt Welcome Fast Track application.

Expert conferencing between the applicant’s herpetologist (Mr Tony Payne), myself, Dr Chris Wedding for the Department of Conservation, and Dr Gary Bramley (an independent facilitator) took place on 18 August 2026 to resolve outstanding herpetofauna matters. A conference was then held on 3 September with members of the Environmental Protection Authority (EPA) Panel and the interested parties listed above to further discuss unresolved matters. This meeting resulted in requests from the Panel to Mr Payne to provide more details on lizards (as detailed in Minute 18, Point 12). Specifically, Mr Payne was instructed to provide the information below (by 8 September):

1. Results from historical lizard surveys at the site (including additional site photos);
2. Confirmation and documentation of the proposed additional area of c.2.4ha of enhanced lizard habitat discussed in the Joint Witness Statement
3. Discussion of the practicality of fencing lizard relocation areas to assist the Panel in reaching its decision with respect to the application (7 September 2026).

Mr Payne released a memorandum in response to this request on 11 September 2026.

The EPA Panel also instructed the applicant’s counsel (Dentons) to provide any comments or submissions as to the weight to be given to the threatened status of lizards beyond that offered by Mr Payne. This advice was also released on 11 September 2026.

I have read the memorandum by Mr Payne and the advice from the applicant’s counsel. Where required, I have sought advice from herpetological experts within my team at Wildland Consultants. My responses to the memorandum and the legal advice are provided below.

2.0 Review of Mr Payne’s report

2.1.1 Summary

The memorandum begins with a discussion (pages 1-2) on the practicality and usefulness of fencing the proposed lizard release Sites 1 and 2, specifically referring to predator-proof fencing (i.e. a fence that would exclude mammalian predators and in particular, cats).

The memorandum then provides details of manual searching undertaken across the site (pages 1 and 3), which occurred over five separate occasions (totalling seven field hours):

1. 13 March 2019
2. 11-12 August 2020

3. 24 September 2025
4. 1-3 April 2026 (alongside the survey using Artificial Cover Objects (ACOs))
5. 4 September 2026 (a survey that occurred post-expert and EPA Panel conferencing)

Finally, the area of additional 2.4 hectares that could provide habitat for released lizards is also described in Mr Payne's memorandum.

2.1.2 Comment 1 - Manual searching for lizards

Mr Payne provides numerous photographs (Plates 1-64 in his memo) to further describe areas that he designated as either potential lizard habitat (to be further surveyed with ACOs) or unsuitable for lizards. Figure 1 of the memorandum shows the areas manually searched. In addition to the areas also surveyed via ACOs in April 2026, there are additional areas that were only manually-searched (specifically areas of pine shelterbelts, plus two small areas on the north and north-east edge of SNA029). I have provided a table below (Table 1) with my responses to these photographs with respect to their potential to support lizards. My responses are informed by my herpetologist colleagues and by my own visit to the site.

It is not clear which areas were searched in which months/years, and therefore it is unclear whether some areas received more effort than others, or whether the entire site was searched on each of the five occasions (although the proposed construction footprint covers approximately 140 hectares and it would therefore be unlikely that the entire site was searched each time). It is also unclear if any lizards or evidence of lizards (lizard scats or skins) were recovered during these seven hours of manual searching. I have assumed that Mr Payne did not observe any lizards or lizard sign, however, for the sake of clarity, it would be good to have this assumption verified by Mr Payne.

Additionally, searching of habitat that occurred over six years ago (i.e. the 2019 and 2020 dates) should not lend significant weight to estimates of lizard distribution at the site. Lizard populations may have moved and/or expanded in that time, and habitats may also change (e.g. greater accumulation of leaf litter or woody debris, changes in ground cover etc).

It should be noted that although seven hours of manual searching was undertaken at the site over the past seven years, it appears that no lizards or lizard sign were observed during those searches. However, 16 lizards were detected across multiple areas and habitats during the three days of ACO survey in April 2026 (14 northern grass skinks/*Oligosoma polychroma*; four copper skinks/*Oligosoma aeneum*), with one of these copper skinks caught on two separate days). This highlights the difference in efficacy of the two methods (manual searching vs. ACO surveys). Lizards are clearly present at the site but no evidence of this appears to have been revealed during the multiple sessions of manual searching.

Manual searching is an important tool to be used for lizard surveys (especially for ground lizard species), but detection devices are often the most reliable and efficient survey methods when used for the correct duration and in appropriate weather conditions. Spotlighting of taller vegetation is also the preferred method for detecting arboreal lizards, which has not been undertaken in any areas of indigenous treeland, scrub, or forest within the Mt Welcome site.

Table 1: Descriptions of the 64 photographs provided in the memorandum, with commentary on the potential suitability of the habitat for lizards. Supervised clearance is recommended for areas listed in bold.

Plate No.	Habitat	Survey method	Potential lizard habitat	Reasons
Plate 01	Agapanthus, indigenous treeland	Manual, ACOs	Unlikely	ACO survey found no lizards here and habitat is marginal
Plate 02	Indigenous scrub and pine treeland	Manual	Possible	Possible habitat for arboreal geckos & ground lizards (copper skinks found nearby). Spotlight before clearance
Plate 03	Indigenous scrub and pine treeland	None (too steep)	Possible	Marginal habitat but possible
Plate 04	Same as Plate 2	None (too steep)	Possible	Likely too steep for lizards) on bank, but spotlighting possible and devices could potentially be placed above the bank
Plate 05a	Left side: Same as Plate 2	None (too steep)	Possible	As above
Plate 05b	Right side: pine forest	None	Unlikely	Ground cover not suitable
Plate 06	Same as Plate 2	None (too steep)	Possible	Manual searching and spotlighting is possible here
Plate 07	Same as Plate 2	None (too steep)	Possible	Devices and manual searching possible. Spotlight before clearance
Plate 08	Same as Plate 2	None (too steep)	Possible	As above
Plate 09	Same as Plate 2	None (too steep)	Possible	As above
Plate 10	Same as Plate 2	None (too steep)	Possible	As above
Plate 11a	Right side: Same as Plate 2	None (too steep)	Possible	As above
Plate 11b	Left side: Pine habitat	None (ACOs possible)	Unlikely	Habitat not suitable
Plate 12	Pine habitat with scattered indigenous scrub	None (Tracking tunnels possible)	Possible	Possible habitat for arboreal geckos & ground lizards (copper skinks found nearby)
Plate 13	Same as Plate 12	None (Tracking tunnels possible)	Possible	As above

Plate 14	Same as Plate 2	None (Tracking tunnels possible)	Possible	As above
Plate 15	Same as Plate 12	None (ACOs possible)	Possible	As above
Plate 16	Same as Plate 12	None (ACOs possible)	Possible	Possible habitat for arboreal geckos & ground lizards (copper skinks found nearby)
Plate 17	Tradescantia herbfield, pines	None	Possible	Copper skinks found nearby
Plate 18	Pine treeland	None	Possible	Copper skinks found nearby
Plate 19	Rank grassland and indigenous treeland	ACOs	Confirmed	Copper skink found here
Plate 20	Pine treeland	ACOs	Confirmed	Copper skink found here
Plate 21	Indigenous scrub	ACOs	Confirmed	Copper skink found here
Plate 22	Pine shelterbelt/forest	None	Unlikely	Ground cover not suitable
Plate 23	Same as Plate 22	None	Unlikely	As above
Plate 24	Pine shelterbelt/forest with rank grassland	None	Possible	Pine needles and grass could provide habitat for skinks
Plate 25	Pine shelterbelt/forest	None	Unlikely	Habitat not suitable
Plate 26	Same as Plate 25	None	Unlikely	As above
Plate 27	Same as Plate 25	None	Unlikely	As above
Plate 28	Same as Plate 25	None	Unlikely	As above
Plate 29	Same as Plate 25	None	Unlikely	As above
Plate 30	Same as Plate 25	None	Unlikely	As above
Plate 31	Pine forest and farm structures/debris	Manual	Possible	Ground lizards could use debris as cover
Plate 32	Pine shelterbelt/forest	None	Unlikely	Habitat not suitable
Plate 33	Same as Plate 32	None	Unlikely	As above
Plate 34	Same as Plate 32	None	Unlikely	As above
Plate 35	Same as Plate 32	None	Unlikely	As above
Plate 36	Same as Plate 32	None	Unlikely	As above
Plate 37	Same as Plate 32	None	Unlikely	As above
Plate 38	Grazed grassland and rockland	None	Unlikely	As described, habitat not suitable
Plate 39	Grazed grassland and rockland	None	Unlikely	As above
Plate 40	Pine shelterbelt/forest	Manual	Possible	Ground lizards could use leaf litter and woody debris for cover

Plate 41	Pine shelterbelt/forest	Manual	Possible	Searched and nothing found. Habitat suitable for ground lizards
Plate 42	Indigenous scrub	Manual	Possible	Possible habitat for arboreal geckos & ground lizards (copper skinks found nearby)
Plate 43	Indigenous scrub	Manual	Unlikely	Searched and nothing found. Habitat not suitable
Plate 44	Pine shelterbelt/forest	Manual	Unlikely	Searched and nothing found. Habitat not suitable
Plate 45	Same as Plate 44	Manual	Unlikely	As above
Plate 46	Same as Plate 44	Manual	Unlikely	As above
Plate 47	Same as Plate 44	Manual	Unlikely	As above
Plate 48	Same as Plate 44	Manual	Unlikely	As above
Plate 49	Pine forest and indigenous scrub	Manual	Possible	Possible arboreal lizards in indigenous vegetation in gully (spotlight before clearance)
Plate 50	Pine shelterbelt/forest	Manual	Unlikely	Searched and nothing found. Habitat not suitable
Plate 51	Indigenous scrub	Manual	Possible	Possible arboreal lizards in indigenous vegetation (spotlight before clearance)
Plate 52	Same as Plate 51	Manual	Possible	As above
Plate 53	Same as Plate 51	Manual	Possible	As above
Plate 54	Tradescantia herbfield, pines	None	Possible	Copper skinks found nearby.
Plate 55	Pine shelterbelt/forest	Manual	Unlikely	Searched and nothing found. Habitat not suitable
Plate 56	Same as Plate 55	Manual	Unlikely	As above
Plate 57	Same as Plate 55	Manual	Unlikely	As above
Plate 58	Same as Plate 55	Manual	Unlikely	As above
Plate 59	Same as Plate 55	Manual	Unlikely	As above
Plate 60	Same as Plate 55	Manual	Unlikely	As above
Plate 61	Same as Plate 55	Manual	Unlikely	As above
Plate 62	Same as Plate 55	Manual	Unlikely	As above
Plate 63	Rank grassland (and woody debris)	Manual	Possible	Possible habitat for ground lizards
Plate 64	Same as Plate 63	Manual	Possible	As above

The numerous photos supplied by Mr Payne have provided me with a much better understanding of the habitat types and their potential to provide habitat for lizards. Without these, it was difficult to narrow down the areas that will specifically require management during construction, as copper skinks

have been salvaged from areas of pine forest before, despite seemingly poor-quality habitat. However, that said, I now believe there are only a few select areas that need to be managed during construction (Table 1). I have highlighted areas where supervised clearance is likely to be required during construction, with some of these sites also requiring pre-clearance spotlighting of indigenous vegetation to search for arboreal lizards.

I recommend that Mr Payne update Figure 1 in his memorandum to delineate areas that have been identified as possible or confirmed as lizard habitat for appropriate management of these areas before and during construction.

2.1.3 Comment 2 – Additional area for lizard releases

Mr Payne provides details on the location of the additional 2.4 hectares of area for potential lizard releases. I have attempted to superimpose this area onto Appendix 30-40 (drawing 1753-02 SK9202) in Figure 1 below. Most of this area appears to offer an appropriate site for lizard habitat restoration, being currently grazed pasture on north-facing faces on moderately steep slope. However, the eastern end appears to coincide with an area of proposed fill. I assume this area would not provide suitable habitat for lizard releases until the appropriate vegetation has been established post-construction on the fill slope.

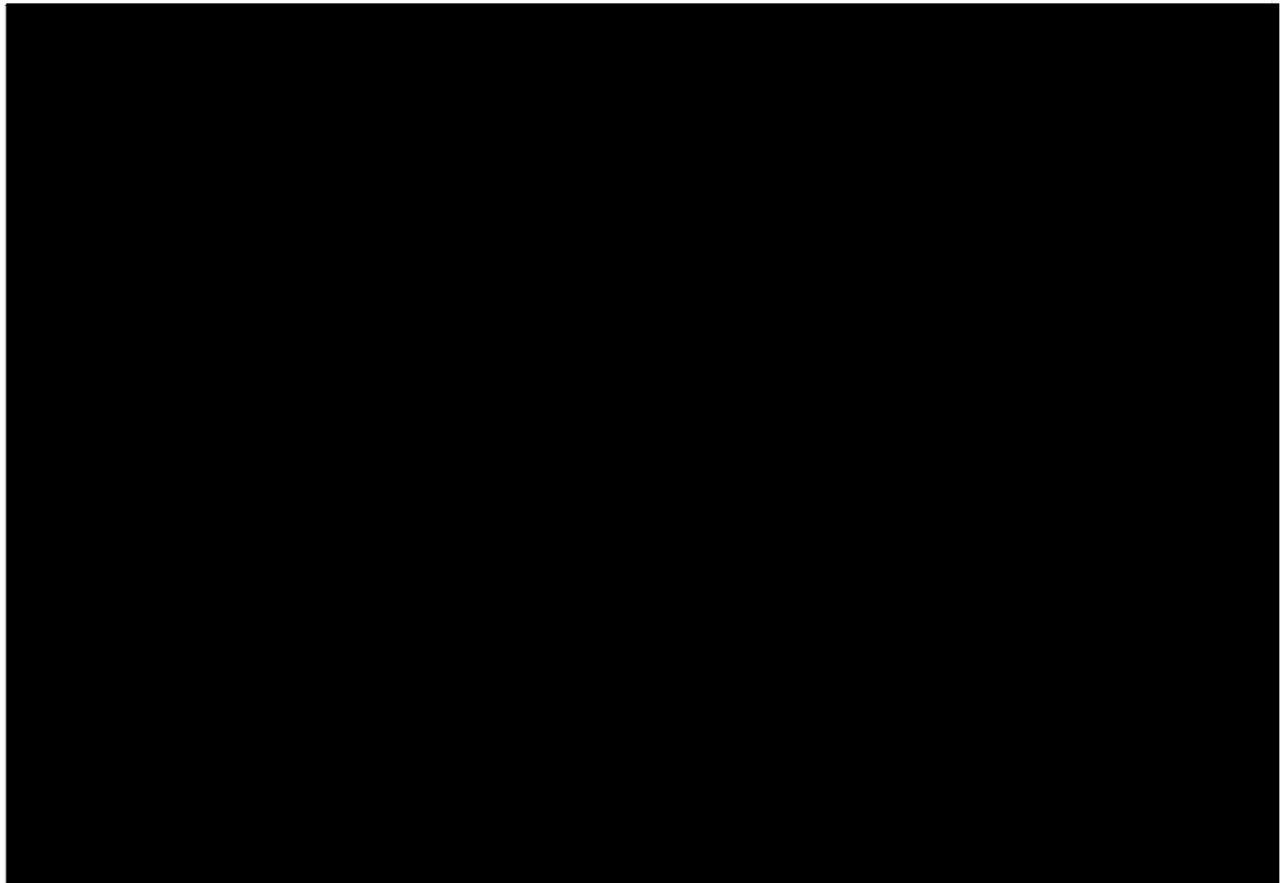


Figure 1. An estimation of the additional 2.4-hectare area proposed as a lizard release site (black polygon) described in Mr Payne’s memorandum.

2.1.4 Comment 3 – Fencing of the lizard release areas

While predator-proof fences are an excellent (albeit very expensive and labour intensive) tool for excluding mammalian predators from an area, generally that area would need to be entirely fenced to ensure no incursions can occur. In this case, however, full fencing is not possible, as a private residence sits within SNA029 and the western boundary cannot be fenced. Even if fencing were possible on the

other three boundaries, predators would still be able to access the lizard release sites. SNA029 is also contiguous with SNA225 (along its northern boundary), and construction of a predator-proof fence would necessarily involve substantial clearance of significant indigenous vegetation.

Overall, I agree with Mr Payne that a predator-proof fence does not offer an appropriate tool at this site for managing the predators of the released lizards. However, I believe other management tools need to be explored to protect the released lizards from mammalian (especially cat) predation as I have concerns that the programme of live-trapping will also be ineffective at protecting the released lizards. I have over 20 years of professional experience working in the field of pest mammal control and, in my experience, live-trapping of cats is problematic for a number of reasons. Cats are very hard to live-trap and most cats will avoid approaching, or entering, a trap. However, even for the few that can be trapped once, those cats (whether they are roaming pets, strays, or feral cats) are then very likely to avoid a trap thereafter. Therefore, the released lizard population is still likely to receive similar levels of predation pressure from cats despite the amount of effort and funding put into regularly checking and servicing the traps.

Further consideration is needed to explore tools that are more effective at protecting the lizards (e.g. the use of lethal traps that only trigger if a non-microchipped animal is detected, or making the subdivision entirely cat-free).

I do not agree with Mr Payne's statement that copper skinks are tolerant of mammalian predators. The New Zealand lizard fauna has evolved in the presence of avian and reptilian predators and their adaptations to these predators include excellent camouflage, hiding, and keeping still. These adaptations are ineffective against mammalian predators who have an excellent sense of smell, and in the case of mice, can access the same small spaces lizards like to hide in. In addition, mammalian predators are often active at night, when lizards are at their coldest, and therefore at their most vulnerable.

Like most aspects of a lizard's physiology, the ability of a lizard to move quickly depends on temperature, with warmer temperatures facilitating faster movement, and cooler temperatures making it harder for them to respond to threats. Like most New Zealand lizard species, copper skink are highly vulnerable to mammalian predators. Specifically, several papers in the literature point to the vulnerability of copper skink to mammalian predators. For example, Hoare et al. (2006) found copper skink declined at Pukerua Bay following removal of grazing, and the authors attributed this decline to an increase in grass seed that then supported rodent irruptions that subsequently depleted the copper and Whitaker's skink populations. Similarly, a mouse population irruption on Mana Island was considered a significant, if not the sole, reason for decline in several skink species, including copper skinks (Newman 1994). In addition, copper skink are slow to recover following the removal of predators, likely due in part to the faster recovery of larger competitors (Hitchmough et al. 2025).

3.0 Review of Counsel's advice

3.1.1 Overview

The applicant's counsel provides advice on how differing local and national threat levels should be reconciled through the Environment Institute of Australia and New Zealand (EIANZ) Ecological Impact Assessment Guidelines, given this matter was also raised at conferencing on the 3 September 2026.

Mr Payne considers it more appropriate to use the national status for the copper skink (2025, At Risk – Declining) because he considers the regional threat status (2023, Regionally Vulnerable) to be overly conservative, and not reflective of more recent findings. Mr Wedding and myself consider that it is more appropriate to apply the regional threat ranking as this assessment was undertaken by eleven experts with expertise covering a wide range of research and experience.

3.1.2 Response 1 - Weight to be given to threatened status

Although Mr Payne opined in his evidence that copper skinks are in a healthier state than the current regional classification (Crisp et al. 2023), all of the projects he mentioned as examples of healthy populations were ones he has personally been involved with. Rather than assuming that this small subset of subjective projects represents the region as a whole, I recommend that more weight be given to the findings of multiple experts who have collated evidence from various sources and various experts. Their conclusion for the regional trend of copper skink is: “The status of copper skink (*Oligosoma aeneum*) [in 2023 regional assessment] had improved from Regionally Critical to Regionally Vulnerable. This was due to a higher rate of decline assessment being made in the previous regional report (>70%), as there were major concerns about the population crash at Pukerua Bay. However, this rapid decline has slowed. The rate of decline was lowered to the 50-70% range in this assessment, but it should be noted that the conservation status for the species had worsened in the last national review [i.e. from 2015 to 2021]” (page 5, Crisp et al. 2023). To ensure the assessment panel has all the pertinent information needed for each assessment, I encourage Mr Payne to make a submission in the next round of threat classification revisions using the robust and standardised criteria set out in the regional threat classification system manual (Crisp et al. 2026).

The applicant’s counsel also refers to the explanatory note recently release by the EIANZ (August 2026) that clarifies that the magnitude of an effect must be assessed at the same spatial scale as the ecological value assessment. They guide the Panel to place more reliance on assessments of effect that have explicitly set out the scale of the assessment and maintained the same scale when assessing value and assessing effects than those have not. This advice also applies to the evidence from both Mr Wedding and myself. We considered the regional scale when assessing the value of the lizards and the effects on their populations. In particular, Mr Wedding drew attention to the possibility that removing copper skink from the site could result in total loss of the local population (i.e. within the project site). When considering that this species is listed as Regionally Vulnerable (or nationally At Risk – Declining, with a corresponding ecological value of ‘High’), the total loss of copper skinks from this site could result in loss of a high proportion of the known regional population or *range* of the element/feature’ (page 83, EIANZ guidelines). I have italicised the word ‘range’ here, as there are patchy observations for copper on mainland sites in this north-western part of the Wellington region. We need to remember the limitations of the database: an absence of records can be the result of an absence of survey effort, rather than necessarily indicating an absence of lizards.

The Department of Conservation herpetofauna database (updated 2024) shows that no copper skinks have been recorded at mainland sites within five kilometres of the Mt Welcome site (there are numerous records of copper skinks on the offshore Mana Island). Furthermore, the database shows only five locations between Porirua and Paekākāriki where copper skinks have been detected in the last 20 years (with 13 individuals caught overall). That said, 50 copper skinks were caught in ACOs, pitfall traps, and manual searching between 2015-2017 during lizard surveys for Transmission Gully, approximately five kilometres east of the Mt Welcome site (Lennon 2019, i.e. not available on the DOC database), and 12 copper skinks were detected between 2018 and 2019 at Pukerua Bay (Herbert 2020). No copper skinks were found by RMA Ecology across the Plimmerton Farm subdivision to the south (c.2023), and no copper skinks were found across the Muri Road site directly to the north. I note that although manual searching was undertaken by Blueprint Ecology for the Muri Road development, the survey period was (May 2024) outside the official lizard monitoring season of October to April, inclusive.

As such, from what is currently known about the mainland range of copper skinks in the north-western Wellington region, the loss of copper skinks from the Mt Welcome site could have a moderate or high magnitude of effect on their range within the Wellington region. Although data is patchy, it is my understanding that this would result in a ‘High’ or ‘Very High’ level of effect. The regional population is very fragmented and the number of populations appears to be declining, therefore the loss of small localised populations may have serious consequences for the regional population overall.

The explanatory note from the EIANZ further states that assessments made at larger scales (e.g. Ecological District or national scales) can effectively minimise the overall effects (page 4), and although the wider landscape provides relevant ecological context, the assessment of effects should consider the loss or modification of an important ecological feature within a site or the 'Zone of Influence' (page 5). Assessing the effects of the project on copper skinks at the national scale would substantially understate the disproportional effect on the regional population that is known to be in serious decline.

4.0 References

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