

**Mt Messenger Bypass Project, Summary of Evidence of Lynn Adams  
(Herpetofauna) for DOC**

1. In my evidence I agree with Mr Chapman's recommendations to take a precautionary approach to addressing effects on herpetofauna. This is due to the uncertainty over which species of herpetofauna are present in the Project footprint.
2. I also agree that the most significant herpetofauna that may be present are the striped skink, forest gecko, goldstripe gecko and Wellington green gecko (all have the threat status of At Risk, Declining). The striped skink does not have secure sites, elevating its importance.
3. I outline why the management options of salvage, restoration planting, habitat enhancement and pest control, have deficiencies in providing positive outcomes for lizards.
4. To gain a positive outcome for lizards, I agree with Mr Chapman's predator proof fencing proposal. I say that the chosen area should protect a known population(s) of lizards, and focus on the most significant species recorded at Mt Messenger: the striped skink and aboreal geckos.
5. I outlined a number of details that I consider essential for the predator-proof fencing proposal. Eradication of all mammalian predators, and maintenance of predators at zero abundance, is needed to allow lizard recovery ([3.7] - [3.8]). I state in my evidence why fence management will determine success or failure of establishing healthy lizard populations ([6.6] - [6.7]). This includes management in the long term or in perpetuity.
6. My conclusion states:

*"A predator-proof fence that meets all or most of the criteria outlined in this evidence is supported. However the consent conditions and/or the ELMP must outline requirements for site selection, construction specifications, eradication and long-term management to ensure the predator-proof fence meets the objective of excluding all mammalian predators to allow lizards recovery in perpetuity."*

(My emphasis)

7. I had understood Mr Chapman agreed with my evidence.<sup>1</sup>

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<sup>1</sup> Chapman Rebuttal at [38] *"Paragraphs 6.1 – 6.8 of Ms Adams' evidence set out the details she considers to be missing from the lizard enclosure proposal. I agree that the proposal requires further details and that these should be incorporated into the ELMP and/or the consent conditions as suggested by Ms Adams in paragraph 7.1 of her evidence."*

**Pages 77-78 ELMP: submitted by Applicant 8 August 2018**

8. Revised pages 77-78 state the Applicant now proposes to maintain the fenced enclosure, and monitor and manage pest incursions, for 12 years following construction.
9. Revised pages 77-78 state that at year 12, or earlier if striped skink numbers are suitably abundant, the Ecological Review Panel determine how the striped skink population is managed. Options include translocation of “all or part” of the population to:
  - a. Ngati Tama land;
  - b. Rotokare pest fenced sanctuary near Eltham; or
  - c. another “suitable sanctuary or existing striped skink population”.
10. The revised proposal does not provide any certainty for positive effects for lizards.
11. If management stops after 12 years, predation will occur within the lifetime of the same individuals salvaged from the footprint and released into the fenced area (the longevity record is a female Canterbury gecko who is 52 years old).
12. The suggestion to translocate all or part of the population from the fence after 12 years is flawed because:
  - Translocation of lizards to Ngati Tama land would not be successful unless there is significant step-change in mouse control techniques, or a predator-free fenced area on that land ([3.7] – [3.8] EIC);
  - Translocation of lizards to Rotokare will not be necessary because the same species are already present (5 species) or likely to be present and protected at Rotokare. Using that sanctuary provides no additionality.
  - If translocation is to occur to “another suitable sanctuary”, I question why this is not used from day 1. Translocations are inherently difficult and result in high mortality of translocated animals even when done carefully (EIC [5.4] - [5.6]).
13. It is quite possible that striped skink numbers would not be suitably abundant to allow a portion of the lizards to be relocated after 12 years.

pg 77-78

**8 August 2018: Updated insert for ELMP – Herpetofauna Management Plan – Protocol D: Lizard relocation / mitigation site (*showing changes from version issued on 6 August 2018 as tracked*)**

**7.4.7 Protocol D: Relocation / mitigation site**

Suitable relocation / mitigation sites have been identified<sup>1</sup> outside of the project alignment which have ~~known populations~~ confirmed records of indigenous lizards that can be predator-proof fenced. A process is currently under way to rationalise these sites in order to find an appropriate site of approximately greater than 1ha containing suitable habitat that can be used as both a relocation and mitigation site. Once identified, the relocation / mitigation site will be used in part to offset any unavoidable residual effects on potential indigenous lizard populations within the project alignment.

The key aspects of the physical indigenous lizard relocation / mitigation site are:

- The identified relocation / mitigation site will contain habitat suitable for striped skink and will be located in an area where striped skink have ~~recently~~ been detected;
- The relocation site will be no smaller than 1ha in size and will be encircled by a pest proof fence that has been designed to exclude farm livestock, goats, pigs, feral cats, possums, hedgehogs, mustelids, rats and mice.
- The ~~pest predator~~ proof area fence will be constructed from wire mesh with apertures no wider than 6mm across one dimension, shade cloth and a 500mm Colorsteel® section with rolled hood (similar to the schematic shown in Figure 7.1). The fence will be 2000mm high, with a 300 – 400mm skirt pinned to the soil surface;
- Rats, possums, mustelids, mice, hedgehogs, goats, cats and pigs will be eradicated from inside the fenced enclosure using similar techniques as outlined within the Chapter 9 – Pest Management Plan; Any striped skink and arboreal geckos (that occupy similar habitat to striped skink) ~~observed-encountered~~ during vegetation clearance will be salvaged from the Project footprint and relocated to the enclosure (copper skink will be relocated to suitable habitat adjacent to the Project footprint);
- The fenced enclosure will be maintained for 12 years following construction and the fence will be inspected twice yearly until year 12. Maintenance will be undertaken during that period to ensure the fence remains able to exclude all mammalian pests;
- Pests will be monitored within the enclosure annually following the achievement of pest eradication until year 12;
- ~~Pest control within the predator-proof fence will be monitored twice a yearly (six monthly) for six years once pest eradication has been achieved;~~
- Lizards will be monitored every 3 years up until year 12 using, but not limited to, a combination of sampling techniques such as visual encounter surveys Pre and post

<sup>1</sup> Predator-Proof Fenced Lizard Sanctuary Options, Mount Messenger Bypass Project. Prepared for the Mt Messenger Alliance by Simon Chapman, dated 14 June 2018.

indigenous lizard monitoring is proposed within the fenced enclosure, the latter occurring once every two years for six years. Monitoring will use but not be limited to a combination of passive sampling techniques such as nocturnal spotlighting, Closed Cell Foam Cover (CCFC's), Artificial Cover Objects (ACO's) and tracking tunnels used for pest control monitoring.

- At year 12 (or before-hand if striped skink numbers are suitably abundant) a final assessment of striped skink abundance will be undertaken. At this stage the Ecological Review Panel will determine how the striped skink population is managed depending on skink abundance. The options to be considered may include (but not be confined to):
  - Translocation of all or part of the population to Ngati Tama land;
  - Translocation of all or part of the population to Rotokare pest fenced sanctuary near Eltham;
  - Translocation of all or part of the population to another suitable sanctuary or existing striped skink population;

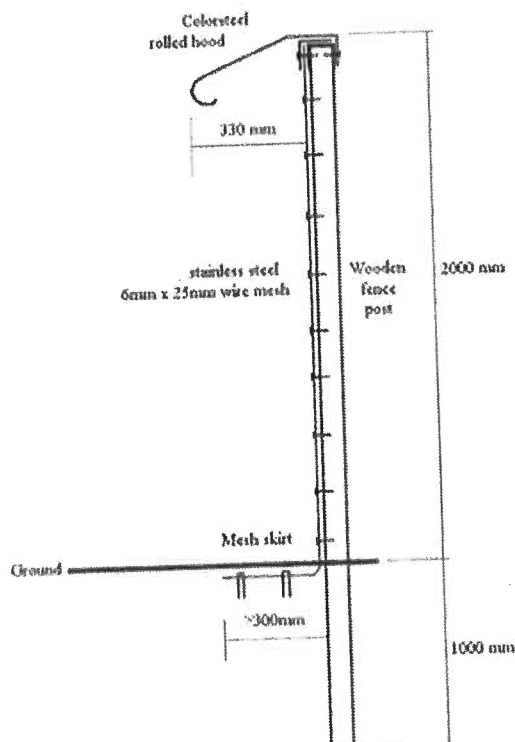


Figure Error! No text of specified style in document..1- Mouse, rat, mustelid, possum and cat proof fence design