



Belmont Quarry Development – Part C

Substantive Application
Appendix C.2 – Assessment of Effects on Lizards
Winstone Aggregates

16 August 2026

Memo

To:	Shalini Sanjeshni; Winstone Aggregates	Project:	2529
From:	Tony Payne; Blueprint Ecology Limited	Date:	12 August 2026
Subject:	Belmont Quarry: Assessment of effects on lizards		

Dear Shalini,

This memo has been prepared by Blueprint Ecology Limited to assist Winstone Aggregates (WA) application for resource consents under the Fast-track Approvals Act 2024 (FTAA) for the proposed Overburden Disposal Area (OBDA) at Belmont Quarry, Belmont Regional Park (**Figure 1**).

This assessment follows the EIANZ Ecological Impact Assessment Guidelines (Roper-Lindsay et al. 2018)¹ and should be read alongside the Lizard Management Plan prepared for the project (Blueprint Ecology Limited, 12 August 2026) (the LMP)² and Land Exchange Lizard Assessment.³

This report has been prepared with regard to the Greater Wellington Regional Council Regional Policy Statement (appeals version) (RPS), National Policy Statement for Indigenous Biodiversity 2023, amended 2025 (NPS-IB) and Resource Management Act 1991 (RMA).

I confirm that, in my capacity as author of this report, I have read and agree to abide by the Environment Code of Conduct for Expert Witnesses Practice Note 2023.

1. Background

WA is proposing to develop a new OBDA of 15.7 ha adjacent to the existing Belmont Quarry footprint, within land administered by Greater Wellington Regional Council as part of Belmont Regional Park. The OBDA will accommodate approximately 2.8 million cubic metres of overburden over a 35-year operational period and will be constructed across 10 stages, eight of which require vegetation clearance and the clearance of lizard habitat.

Enabling the OBDA requires a land exchange between WAL and the Department of Conservation (DOC), under which WAL will provide 34 ha of land to the conservation estate in return for 23.86 ha of Crown-owned reserve land for the OBDA footprint. A Land Exchange Report was lodged with DOC in December 2025.

All native lizards are protected under the Wildlife Act 1953. The FTAA provides for Wildlife Approvals, which authorise an act or omission that would otherwise be an offence against the Wildlife Act, including the relocation, injury or killing of lizards during a site's development. A Wildlife Approval is being sought for this project.

Two categories of effect on lizards arise from the project:

¹ Roper-Lindsay, J., Fuller S.A., Hooson, S., Sanders, M.D., & Ussher, G.T. (2018). Ecological impact assessment. EIANZ guidelines for use in New Zealand: terrestrial and freshwater ecosystems. 2nd edition.

² Blueprint Ecology Limited. 12 August 2026. Lizard Management Plan: Belmont Quarry. Report prepared for Winstones Aggregates. 36 pages + Appendix.

³ Blueprint Ecology Limited. 3 December 2025. Belmont Quarry Land Exchange: Lizard Assessment.

1. Direct effects. The disturbance, injury or death of resident lizards, and the loss of 11.14 ha of lizard habitat, arising from staged vegetation clearance and earthworks.
2. Longer-term effects. The permanent change in the extent and quality of lizard habitat across the site as clearance progresses over the life of the project.

Both are addressed below, alongside the avoidance, minimisation and compensation measures set out in the LMP.



Figure 1. Site boundary (white line), OBDA boundary (red line) "the site".

1. Lizard Survey Results and Habitat Quality

A pre-development lizard survey was undertaken between September and November 2025 to assess lizard values and habitat quality across the OBDA footprint. Survey effort comprised 75 triple-stacked Artificial Cover Objects (ACOs) set in 15 locations, 105 baited pitfall traps set in six locations, and three nights of spotlighting (15.5 search hours) targeting arboreal geckos in the mānuka and māhoe forest.

The survey recorded four northern grass skink (*Oligosoma polychroma*) and three Ngahere gecko (*Mokopirirakau* "Southern North Island") within the OBDA. Northern grass skink were detected at low abundance (CPUE 3%) in rank grass along forest margins; the population is not regionally or locally significant but is likely small, permanent and self-sustaining. Ngahere gecko were detected in mānuka forest at a rate of approximately one animal per 5 hours of search effort. This species is listed as 'At Risk - Declining' (Hitchmough et al. 2026, Crisp et al. 2023)⁴ and the population on site is considered locally significant.

Given the extent of suitable forest habitat present, and the limitations of surveying cryptic arboreal geckos, the presence of other Nationally At Risk and/ or Regionally Threatened lizard species at low density cannot be entirely excluded, including copper skink (*Oligosoma aeneum*), ornate skink (*Oligosoma ornatum*), glossy brown skink (*Oligosoma zelandicum*) and barking gecko (*Naultinus punctatus*).

The 15.7 ha OBDA contains 11.14 ha of lizard habitat, of which 96% is of moderate or high quality (**Table 1**).

Table 1. Lizard habitat within the OBDA footprint.

Habitat	Quality	Area (ha)
Mānuka forest/scrub	High	3.06
Seral forest	Moderate	7.62
Gorse / rank grass	Low	0.46
Total		11.14



Figure 2. Low habitat quality (green), moderate habitat quality (orange), high habitat quality (red), OBDA (red line) site boundary (white line).

⁴ Hitchmough R, Barr B, Knox C, Lettink M, Monks JM, Patterson GB, Reardon JT, van Winkel D, Makan T, Michel P. 2026. Conservation status of reptiles in Aotearoa New Zealand, 2025. Wellington: Department of Conservation.
Crisp P, Hitchmough R, Newman D, Adams L, Lennon O, Woolley C, Hulme-Moir A, Bell T, Herbert S, Spearpoint O and Nelson N. 2023. Conservation status of reptile species in the Wellington region. Greater Wellington Regional Council, Publication No. GW/ESCI-G-23/03, Wellington.

2. Effects on Lizards and the LMP Mitigation Hierarchy

The OBDA's design and functional requirements mean that effects on the 11.14 ha of lizard habitat within the footprint cannot be avoided; the current layout already reflects an iterative process that avoided higher-value habitat elsewhere on site (e.g. mature tawa forest).

To minimise effects, a staged lizard salvage is proposed ahead of each clearance stage. Northern grass skink will be salvaged using an ACO and pitfall trap grid at c. 5 m spacings; forest-dwelling species will be salvaged via supervised understory felling followed by a minimum of four nights of spotlighting. Salvaged lizards will be translocated the same day to one of two purpose-selected release sites: a grassland release site in the immediately northwest of the OBDA for northern grass skink, and c. 3 ha of existing mānuka forest for forest-dwelling species, both within Belmont Regional Park. Both release sites will be enhanced with log stacks or closed-cell foam covers and protected by predator control (toxic bait stations at 25 m spacings and DOC200 traps at 100 m spacings, pulsed three times a year), scaled up on a sliding basis for every 10 lizards salvaged.

Residual effects on habitat extent and quality will be addressed through compensation: 15 ha of native forest remediation planting and 18 ha of native forest offset planting, calculated by BlueGreen Ecology Ltd (2026)⁵ to replace the forest habitat values lost. Together this achieves a net gain of 22.08 ha of native forest within and near the site, consistent with DOC's nine principles for lizard salvage and transfer (DOC 2019) and the LMP's objective of achieving an overall protective benefit to lizards. The proposal has demonstrated that there is a net-gain benefit for lizards.

With regards to indigenous lizards, the proposed development is in accordance with the objectives and policies of the NPS-IB, including:

- Following the effects management hierarchy by avoiding, minimising, remediating and offsetting effects in that order;
- Increasing the extent and value of indigenous biodiversity as habitat for lizards on site and elsewhere within the Ecological District;
- A precautionary approach has been applied in this assessment when considering potential and actual adverse effects to lizards; and
- Significant habitats of lizards are identified using significance criteria in the NPS-IB and Policy 23 of the RPS.

3. Assessment of Effects (EIANZ 2018)

The EIANZ Guidelines require ecological effects to be assessed by combining the ecological value of the resource affected, and the magnitude of effect on that resource, to derive an overall level of effect using the EIANZ effects matrix **Table 2**. Ecological effects are summarised in **Table 3**.

This extent of lizard habitat relative to what is present within the local environment and Ecological District is important to understand the magnitude of an effect. The magnitude of an effect is related to the scale of comparison and temporal persistence of the effect. The scale is often related to the scale at which the values of an area are considered, which can be national (such as a threat classification), Regional – as in a regionally uncommon species or ecosystems, or an Ecological District. A consideration at only an individual site level is unusual, not typically relevant and not intended by the EIANZ (2018) guide or Resource Management Act (1991) (RMA).

Approximately 15% of the Wellington Ecological District consists of broadleaved indigenous hardwoods or seral/ secondary native forest (Landcare Research 2015)⁶, which equates to c. 7,800 ha. At a smaller localised scale, the western hills of Hutt City, there are similar ecological conditions to the site and seral forest cover across a 1,700 ha (**Figure 3**). This takes into consideration altitude, aspect, topography, land environment, and vegetation cover.

Works within c. 11 ha of lizard habitat at the local scale, is considered to be of a magnitude that is 'Low' i.e., the amount of clearance relative to 1,700 ha of lizard habitat within the local area is very small.

⁵ Bluegreen Ecology 2026. Belmont Quarry OBDA Offset Management Plan (Draft). Report prepared for Winstones Aggregates Ltd, version 3, 28 July 2026

⁶ Landcare Research (2015). LCDB v4.1 - Land Cover Database version 4.1. <https://iris.scinfo.org.nz/layer/423-lcdb-v41-land-cover-database-version-41-mainland-new-zealand/>

"Minor shift away from existing baseline conditions. Change arising from the loss/alteration will be discernible, but underlying character, composition and/or attributes of the existing baseline condition will be similar to pre-development circumstances or patterns; AND/OR Having a minor effect on the known population or range of the element/feature".

The loss of habitat does contribute to a cumulative decline of lizard habitats and in order to ensure there is no-net-loss and biodiversity is maintained; ecological redress of habitat enhancement and creation is required at a ratio of at least 1:1.

For this project, there is a net-gain in lizard habitat values with an increase in forest extent of 22.08 ha or a ratio of approximately 2:1. Overall, the level of construction and operational effects before mitigation range from Low to Very high. Following full implementation of the LMP's salvage, habitat creation, planting and predator control programme, remediation and offset planting, the residual effect is assessed as Very low or Low.



Figure 3. Approximate area of seral native forest on the western Hutt City hills (yellow), OBDA (red).

Table 1. Criteria for describing level of effects from the EIANZ guidelines.

Magnitude	Ecological value				
	Very high	High	Moderate	Low	Negligible
Very high	Very high	Very high	High	Moderate	Low
High	Very high	Very high	Moderate	Low	Very low
Moderate	High	High	Moderate	Low	Very low
Low	Moderate	Low	Low	Very low	Very low
Negligible	Low	Very low	Very low	Very low	Very low
Positive	Net gain	Net gain	Net gain	Net gain	Net gain

Table 2. Lizard effects assessment.

Resource	Ecological Value	Magnitude of Effect	Level of Effect	Mitigation	Level of Effect after Mitigation
Northern grass skink and terrestrial habitat (0.46 ha)	Low – Not Threatened, common and widespread; confirmed present at low density (4 individuals recorded, CPUE 3%)	Low – small, low-quality habitat well represented in the surrounding landscape; population salvaged under the LMP	Low	Pre-clearance salvage, translocation to a synonymous grassland release site, log stack creation, native planting and predator control	Very low
Ngahere gecko and mānuka forest habitat (3.06 ha, high quality)	High – At Risk – Declining, locally significant population confirmed present (1 animal per 5 hrs search effort)	High – permanent loss of high-quality habitat; risk of injury/mortality during understory felling and tree removal	Very high	Targeted salvage (felling + spotlighting), translocation to a habitat-matched, predator-controlled forest release site, sliding-scale log stacks/predator control, 15 ha remediation + 18 ha offset planting	Low Positive over long-term (net-gain)
Seral forest (7.41 ha, moderate quality) – other At Risk species (precautionary)	Moderate – potential habitat for At Risk species (copper skink, ornate skink, glossy brown skink, barking gecko); presence cannot be entirely excluded	Moderate – loss of moderate quality habitat. Scale of vegetation clearance in relation to the forest	Very high	Salvage methodology extended precautionarily across all clearance stages; contingency release capacity; monitoring triggered if >20 individuals of any species salvaged. 15 ha remediation + 18 ha offset planting	Low Positive over long-term (net-gain)

4. Conclusion and Recommendation

The pre-clearance survey confirms northern grass skink and Ngahere gecko are present within the OBDA footprint, in low numbers and largely within moderate-to-high quality habitat of limited extent (11.14 ha) relative to what remains available within Belmont Regional Park.

Applying the EIANZ Guidelines, the level of effect after mitigation is Very Low for northern grass skink and Low for Ngahere gecko and other potential forest-dwelling species, once the LMP's salvage, translocation, predator control and remediation and offset planting measures are implemented as proposed.

Given the confirmed presence of Ngahere gecko (At Risk – Declining) and the precautionary treatment required for other cryptic forest species that cannot be entirely excluded, we recommend the LMP's salvage and monitoring triggers be applied within the known habitats and other similar mānuka forest habitats within the site, and that the compliance and annual monitoring reporting to DOC, Hutt City Council and Greater Wellington Regional Council be maintained for the life of the project.

The following actions are recommended to ensure that potential adverse ecological effects of the proposed OBDA are minimised, remediated and offset (mitigated) to the extent practicably feasible. These initiatives should be incorporated as consent conditions and/or advice notes, and evidence provided to Council that these mitigations have been duly incorporated.

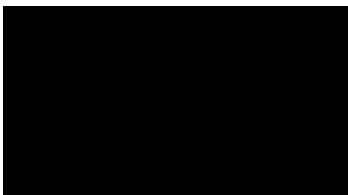
Prior to any vegetation clearance or ground disturbance works associated with the consented activity, the consent holder shall implement the Lizard Management Plan: Belmont Quarry (Blueprint Ecology Limited, 12 August 2026) and the Belmont Quarry OBDA Offset Management Plan (Bluegreen Ecology, version 3, 28 July 2026), prepared for Winstone's Aggregates Limited.

All vegetation clearance and disturbance works shall be undertaken in general accordance with the methodology, timing, lizard salvage and relocation, exclusion fencing, monitoring, and reporting requirements set out in those plans. Where any conflict arises between the two plans, the Lizard Management Plan shall prevail in respect of lizard capture, salvage, and relocation methodology, and the Offset Management Plan shall prevail in respect of offset habitat establishment and management.

The Offset Management Plan shall be submitted to Hutt City Council for certification prior to the commencement of any vegetation clearance or disturbance works, and works shall not commence until written certification has been received.

Provided the mitigation described in this report is undertaken as recommended, the development can be expected to result in an overall low level of effect, and net-gain over the long term, which equates to a less than minor overall effect on lizard values at the site.

Yours sincerely,



Tony Payne
Principal Ecologist⁷
Blueprint Ecology Ltd



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