WINSTONE AGGREGATES

Belmont Quarry Development – Part C

Substantive Application
Appendix C.1 – Lizard Management Plan
Winstone Aggregates

16 August 2026

BLUEPRINT ECOLOGY

12 August 2026

Lizard Management Plan Belmont Quarry

PREPARED FOR WINSTONES AGGREGATES

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BLUEPRINT ECOLOGY

Contents

1.0 Introduction

1.1 Background

The Belmont Quarry Overburden Disposal Area (OBDA) project is to construct an aggregate overburden disposal area over 15.7 ha at Belmont Regional Park (the site) (**Figure 1**). A detailed project description is provided in **Appendix A**. In summary, the development of the OBDA will occur through a 10-stage process, eight of which require vegetation clearance and the clearance of lizard habitat (**Figure 2**).

Winstones Aggregates (WA) a division of Fletcher Concrete and Infrastructure Limited is applying for resource consents to develop the project under the Fast-track Approvals Act 2024 (FTAA).

All native lizards are protected under the Wildlife Act 1953. The FTAA provides for Wildlife Approvals which are an authority for an act or omission that would otherwise be an offence against specified provisions of the Wildlife Act 1953 including where native lizards may be harmed or killed during the course of a site's development. A Wildlife Approval may grant permission to relocate native lizards, and the killing or injury of lizards not caught or relocated from a site.

A pre-development lizard survey assessing habitat quality and condition was undertaken to assist with the management of effects based on the land use change at the site. This survey identified four northern grass skink (*Oligosoma polychroma*) and three Ngahere gecko (*Mokopirirakau* "Southern North Island"). Areas of habitat within the OBDA included rough pasture, vegetation margins, regenerating broadleaved forest and manuka forest (*Leptospermum scoparium*). The rough pasture is of low quality, regenerating broadleaved forest of moderate quality and the mānuka forest is of high quality.

The total area of lizard habitat impacted is 11.14 ha. Effects to lizards will be minimised by translocating lizards to nearby release sites, in either rough pasture for northern grass skink or manuka forest for forest-dwelling species In addition, 15 ha of native forest remediation planting and 18 ha of native forest offset planting will be undertaken to address residual adverse effects associated with the progressive loss of lizard habitat over the lifecycle of the project. A Lizard Effects Assessment (Blueprint Ecology Ltd 2026) of actual and potential impacts to lizards associated with the development was prepared which includes detailed descriptions of lizard values and habitat types present within the site, and measures taken to avoid, minimise, or remedy potential adverse impacts (**Appendix B**). That report should be read in conjunction with this Lizard Management Plan (LMP).

This LMP seeks to result in a protective benefit for lizards by increasing the extent and condition of lizard values by relocating lizards and progressively creating and protecting a net-gain of 22.08 ha of native forest within and nearby the site.

The author of this report has complied with the Environment Code of Conduct for Expert Witnesses Practice Note 2023 in preparing this document.

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

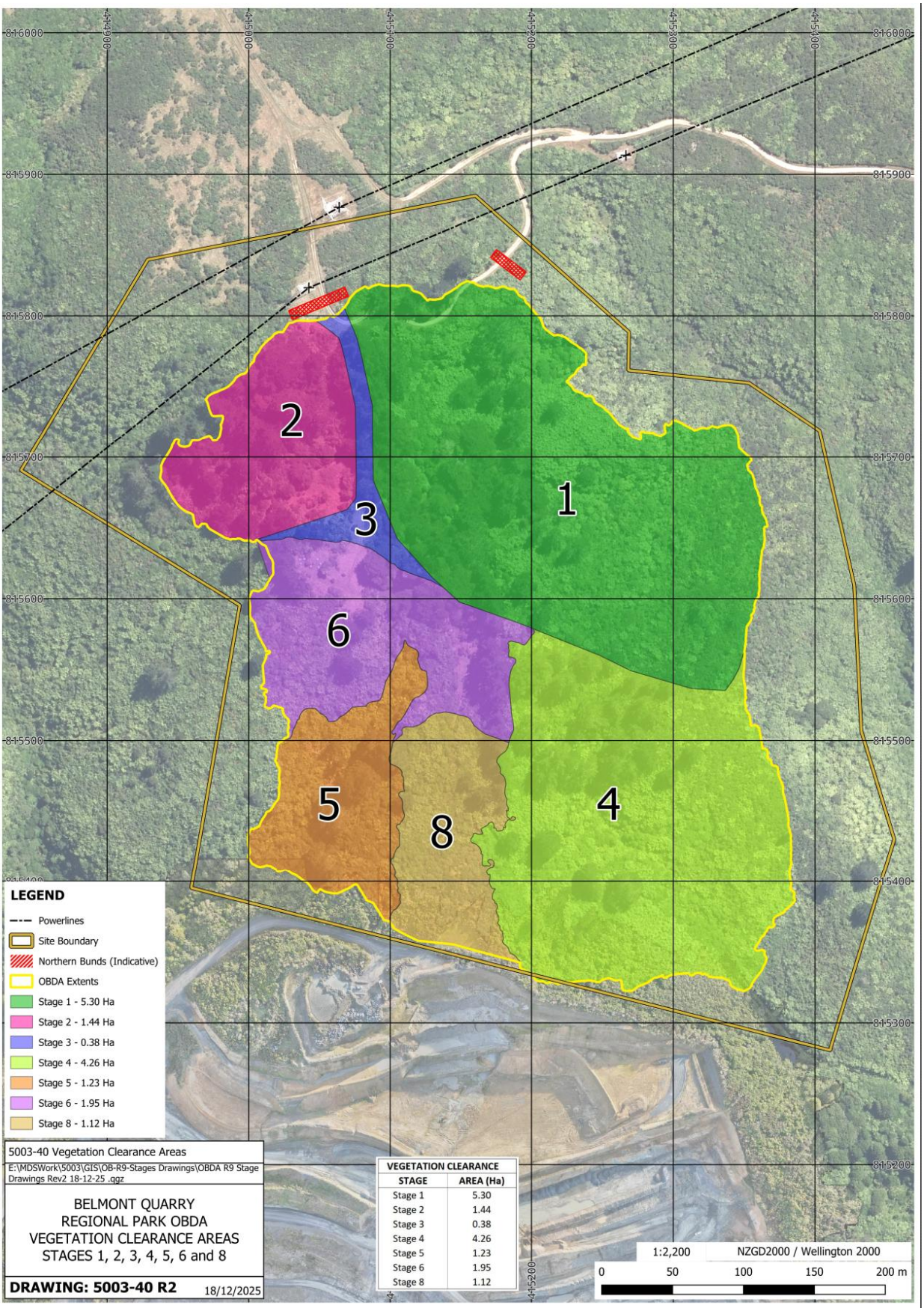

Figure 2. Vegetation clearance stages. Provided courtesy of Winstones Aggregates.

1.2 Purpose and Scope

The purpose of this LMP is to describe the methodological approach to the salvage of lizard populations across all habitat types within the proposed earthworks and vegetation clearance footprint prior to, and during earthworks and vegetation clearance.

The objective of this LMP is to mitigate actual or potential adverse effects on native lizard populations within the works footprint to ensure a protective benefit to lizards is achieved. This LMP provides the relevant information to salvage lizard populations across all habitat types within the development site, the relocation of these lizards to a suitable release site, the management of this development site and release site thereafter, and details for compensation to redress potential residual adverse effects to lizards.

1.3 Key Principles for Lizard Salvage and Transfer in New Zealand

DOC has prepared a guidance document (DOC 2019) which describes nine principles that should be adhered to when applying for lizard salvage and transfer resulting from a proposed development project (DOC's principles). It covers the mitigation practice of lizard salvage and transfer and addresses the entire process including:

1. Assessments of the impacts of proposed developments on lizards and exploration of alternatives (e.g. avoidance of lizard habitat).
2. Planning of salvage operations and assessment and approval of these proposals from the appropriate authorities.
3. Preparing habitat at release sites, capturing lizards at impact sites, temporary captivity (if required), data collection, transport to and release at receiving sites.
4. Post-release monitoring, contingency implementation as appropriate, and reporting to the Department of Conservation (DOC) (and/or other consent authorities).

A summary of the nine principles and how they have been addressed in this Plan is provided in **Table 1**.

Table 1. Assessment of DOC's Nine Principles for Lizard Salvage.

Principle for Lizard Salvage	Summary of Assessment of Principle
1. Lizard species' values and site significance must be assessed at both the impact (development) and receiving sites.	Lizard species' values, and site significance has been assessed at the development site based a pre-clearance survey of available habitats via Artificial Cover Objects, pitfall traps, manual search, and spotlight survey. The significance of the habitat at the impact site for lizards has been assessed based on the size, quality and species values. Lizard values at the receiving site have been assessed by an experienced herpetologist by expert judgement and spotlight survey.
2. Actual and potential development-related effects and their significance must be assessed.	The actual and potential development related effects and their significance have been assessed based on the Environment Institute of Australia and New Zealand (EIANZ) Ecological Impact Assessment guidelines (Roper-Lindsay, et al. 2018) (hereinafter referred to as the EIANZ Guidelines). A small number of northern grass skink and Ngahere gecko are expected from the site, and other forest dwelling species may occur at low densities. Approximately 11.14 ha of habitat will be impacted, and 15 ha of habitat will be remediated on site and an additional 18 ha of habitat created at Belmont Regional Park. After compensation has been applied, there is a net-benefit for lizards.
3. Alternatives to moving lizards must be considered.	We have been advised by the Applicant that the current layout encompasses all areas and values for lizards that can be avoided to the extent feasible. There are no alternatives to moving lizards.
4. Threatened lizard species require more careful consideration than less-threatened species.	No lizard species listed as Nationally Threatened (Hitchmough et al. 2026) are applicable to this LMP. Barking gecko (*Naultinus punctatus*), ornate skink (*Oligosoma ornatum*), copper skink (*O.* aeneum) may occur within the project footprint which are listed as Regionally Threatened (Crisp 2023).
5. Lizard salvage, transfer and release must use the best available methodology.	Lizard salvage methodology includes the best available approach for lizard salvage. For northern grass skink an extensive grid of ACO's and pitfall traps at c. 5 m spacings will be used within grassland and forest edge habitats. The effort allocated to lizard salvage will include a minimum of five checks and at least three consecutive days of no lizards being detected. For arboreal lizards, the understory of mānuka forest will be felled and then the area will be searched by spotlighting for a minimum of four nights. Spotlighting will finish after two consecutive nights of no lizards being detected. Supervised tree felling may also be undertaken based on the outcome of the spotlight survey. The transfer of lizards will be undertaken in the most appropriate way to minimise stress on lizards (cloth bags, terrarium) and lizards will be relocated the same day. The release site will be enhanced with log stacks and predator control to provide immediate protection.
6. Receiving sites and their carrying capacities must be suitable in the long term.	The forest lizard receiving site is Belmont Regional Park, which is a large area of regenerating broadleaved, mānuka and kānuka forest with suitable habitat for the relevant forest species. This release site will allow for population growth and secondary spread and provide suitable habitat resources to cater for the carrying capacity in the long-term for all forest-dwelling species of lizard potentially within the OBDA. The northern grass skink release site is within an area of dense grassland and gorse mosaic within Belmont Regional Park, immediately north of the site. This release site has synonymous habitat to the development site, ideal for northern grass skink.

Principle for Lizard Salvage	Summary of Assessment of Principle
7. Monitoring is required to evaluate the salvage operation.	If >20 lizards of any species are salvaged post-release monitoring will be undertaken for three years.
8. Reporting is required to communicate outcomes of salvage operations and facilitate process improvements.	Reporting of the outcomes of the lizard salvage will be provided to DOC. In addition, reporting of post-release monitoring will be provided annually for three years, if required.
9. Contingency actions are required when lizard salvage and transfer activities fail.	For species unlikely to occur on site (forest-dwelling species excluding Ngahere gecko), we have taken a precautionary approach and included a pre-determined release site that caters to all possible species that could be encountered as well as two alternative sites if any unforeseen circumstances arise (e.g., high numbers of lizards). We have also provided a sliding scale for the extent of habitat enhancement and predator control required to address the number and species of lizards recorded.

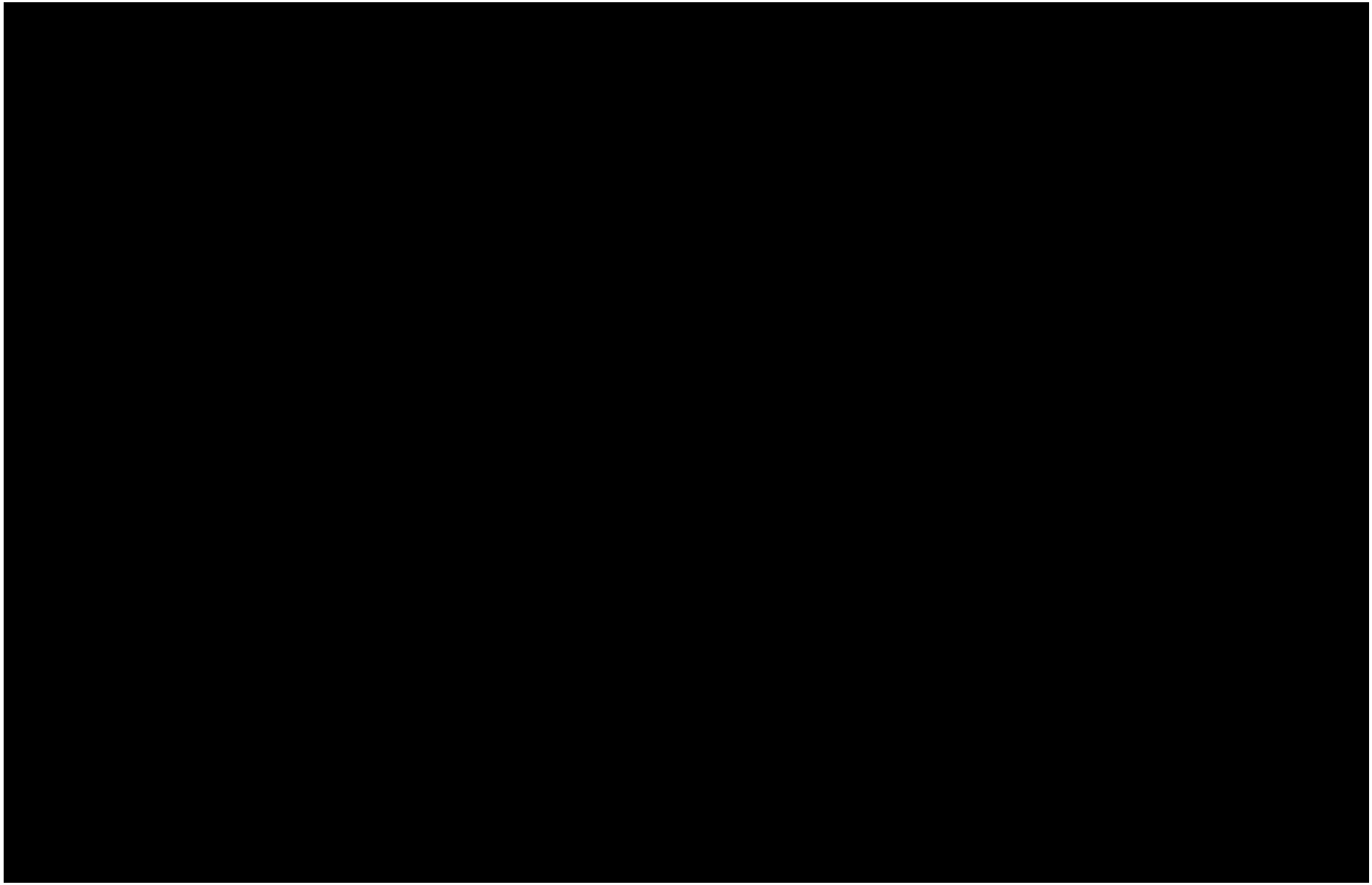

Figure 3. Lizard release site (yellow), OBDA boundary (red), site boundary (white).

2.0 Pre-development Survey

Terrestrial lizard species often occur on bush margins and also use complex ground cover vegetation such as scrambling weedland and leaf litter within forest and scrub communities. In the Wellington region, these areas can provide potential habitat for northern grass skink, Raukawa gecko (*Woodworthia maculata*), copper skink and glossy brown skink (*Oligosoma zelandicum*). Raukawa gecko, copper skink, as well as the more regionally rare ornate skink (*Oligosoma ornatum*) also occur in forest habitats including seral broadleaved forest and mānuka forest. Trees in the seral broadleaved forest and mānuka forest provide habitat for barking gecko, Ngahere gecko (*Mokopirirakau* "southern North Island") and Raukawa gecko. These habitat types and lizard species were the focus of the pre-development survey.

2.1 Methodology

All survey devices were set on 25 September 2025. 75 triple-stacked ACOs were set in 15 locations in transects of five devices and checked a total of three times on 3 to 5 November 2025 (**Figure 4**).

105 baited pitfall traps[1] were set in six locations and checked on 4 and 5 November 2025 as follows:

- Two transects of 5 devices within māhoe forest margin (dappled light, leaf packs).
- One transect of 15 devices within pine forest, regenerating mahoe understory (dappled light, pine needle litter).
- One transect of 20 devices within māhoe forest margin and more central forest (dappled light, light wells, leaf packs).
- One transect of 10 devices within māhoe central forest (dappled light, leaf packs).
- One transect of 50 devices within mānuka dominant forest (dappled light, light wells, leaf packs).

A spotlight search was undertaken as follows:

- A suitably qualified herpetologist and two assistants walked through the potential habitat on site, focusing predominantly on the mānuka forest and a portion of the southern extent of māhoe forest in the best quality habitats (**Figure 5**).
- Spotlighting involved using high-powered head-mounted spotlights (LED Lenser H15R - 2500 lumens) and binoculars (Leupold BX-1 McKenzie HD 10x42mm) to detect body shape or reflected eye-shine of arboreal geckos.
- Three nights of spotlighting were undertaken on 3 to 14 November 2025 from 9:15 pm to 11:30 pm, a total of 15.5 search hours.
- Searches were undertaken during calm, mild nights (between12 and 15 ^{o}C) i.e. avoiding cooler nights when geckos will be less active and therefore more difficult to catch.
- Searches included a systematic, grid-searches of all suitable habitat within the site (with reasonable, safe access) (Figure 3).

The lizard survey was undertaken during suitable weather conditions for the species potentially present on site (**Table 3**).

[1] DOCDM-760240 Herpetofauna: pitfall trapping v1.0.

Table 2. Environmental conditions during the survey.

Date	Time	Temperature (°C)	Overhead conditions	Ground conditions	Wind
3Nov25	10:25 am to 12:30 pm	17-18	Partly cloudy	Damp	Light breeze
	9:20 pm to 11:30 pm	14	Partly cloudy	Dry	Light to moderate breeze
4Nov25	9:15 am to 11:20 am	15-16	Partly cloudy	Damp	Moderate to strong winds
	9:10 pm to 11:20 pm	12	Partly cloudy	Dry	Calm
5Nov25	9:20 am to 10:40 am	15	Overcast	Damp	Calm
14Nov25	9:50 pm to 11:00 pm	15	Fine	Dry	Light breeze

Plate 1. Pitfall traps set in māhoe forest.

Plate 2. Spotlighting in mānuka forest.

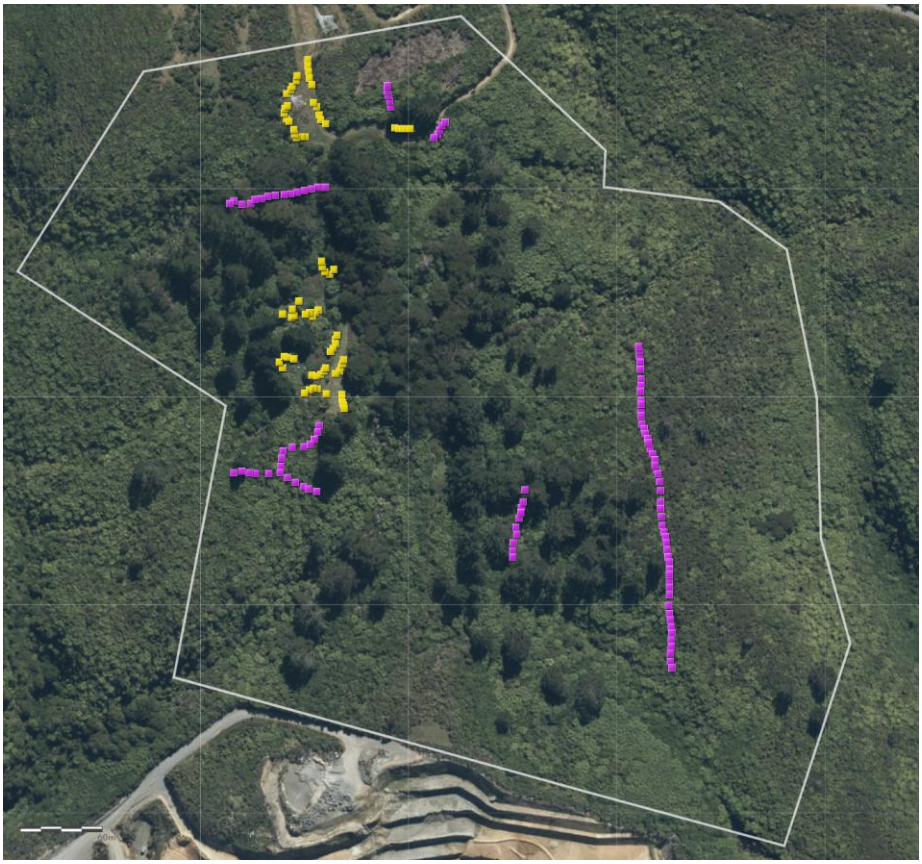

Figure 4. ACO (yellow square), pitfall trap (pink square), BRP site boundary (white line).

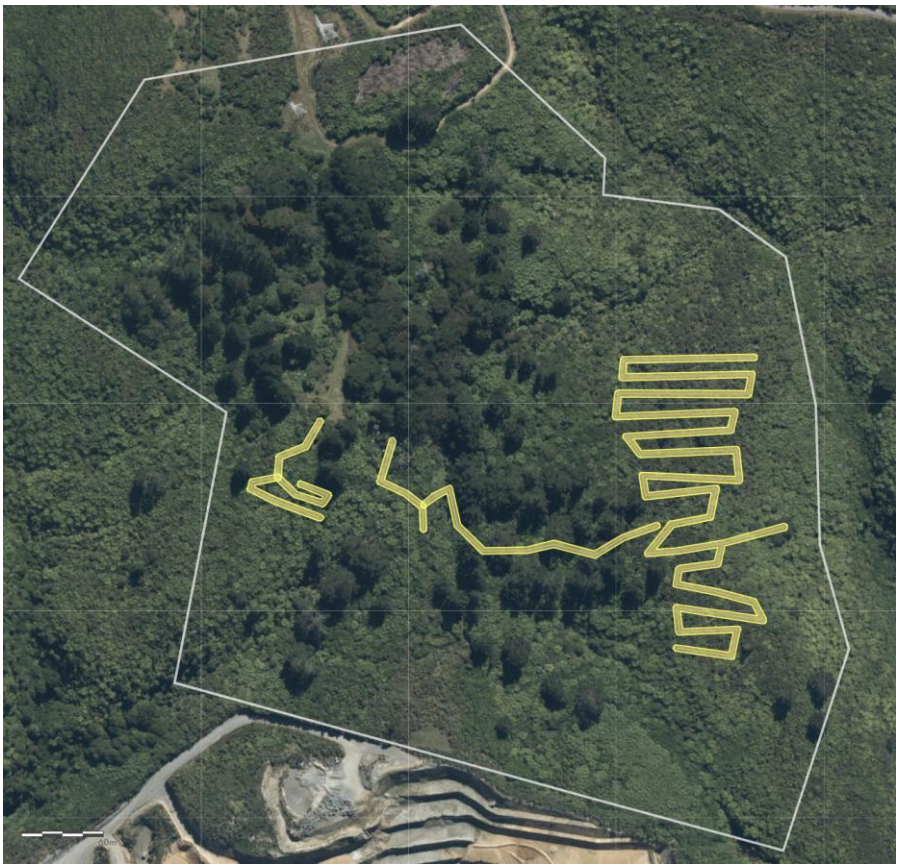

Figure 5. Approximate spotlight survey location (yellow line), BRP site boundary (white line).

2.2 Results

In total, four northern grass skink and three Ngahere gecko recorded within the OBDA. Lizard capture results are provided in **Table 3** and **Figure 6**.

The results show that northern grass skink are present in low abundance (CPUE 3%)[2] in thick grass along the forest margins within the centre of the OBDA. The population recorded is not regionally or locally significant, and the number of lizards recorded indicates that the population is small but permanent and self-sustaining.

Ngahere gecko are present within mānuka forest to the east of OBDA with one animal detected per 5 hours of search effort on average. This species is listed as 'At Risk - Declining' in the latest national threat classification (Hitchmough et al., 2025) and the population on site is locally significant.

When considering the relatively large area of suitable habitat for other forest dwelling species, and northern grass skink and Ngahere gecko as a proxy for other lizard species, we are cautious to entirely discount the presence of other potential lizard species on site (e.g., copper skink). Other species may occur in low abundance (below detectability) or in discrete, localised areas outside of our direct survey areas.

Table 3. Daily lizard survey results

Date	Method	Result	CPUE/ effort
3 Nov 25	ACO/ pitfall traps	2x northern grass skink in ACOs	ACO = 3% Pitfall traps = 0%
	Spotlighting	1x ngahere gecko	1 per 6 hrs search effort
4 Nov 25	ACO/ pitfall traps	2x northern grass skink in ACOs	ACO = 3% Pitfall traps = 0%
	Spotlighting	1x ngahere gecko	1 per 6 hrs search effort
5 Nov 25	ACO/ pitfall traps	Nil	ACO = 0% Pitfall traps = 0%
14 Nov 25	Spotlighting	1x ngahere gecko	1 per 3.5 hrs search effort

[2] Catch Per Unit Effort

Figure 6. Northern grass skink (green point), ngahere gecko (blue point), site boundary (white line).

Plate 3. A Ngahere gecko recorded within the OBDA.

Lizards that occur within the Wellington Ecological District and which are listed in the DOC bioweb database are provided in **Table 5** below. Applicable habitat has been sourced from van Winkel *et al*., 2018.

Table 4. Lizard species of the Wellington region and likelihood of occupying the applicable habitat on site.

Scientific name	Common name	Threat Status (Hitchmough et al., 2026)	Regional Threat Status (Crisp et al., 2023)[3]	Likelihood of occupying the site	Applicable habitat (van Winkel et al., 2018)
Naultinus punctatus	Barking gecko	At Risk- Declining	Threatened – Regionally Vulnerable	Very low	Seral broadleaved forest, mānuka forest.
Mokopirirakau "southern North Island"	Ngahere gecko	At Risk- Declining	At Risk - Declining	Confirmed	Seral broadleaved forest, mānuka forest.
Oligosoma ornatum	Ornate skink	At Risk- Declining	Threatened – Regionally Vulnerable	Very low	Seral broadleaved forest, mānuka forest. Edges of scrub and rank grassland/ weedland.
Oligosoma zelandicum	Glossy brown skink	At Risk- Declining	At Risk - Declining	Very low	Seral broadleaved forest, mānuka forest. Edges of scrub and rank grassland/ weedland.
Oligosoma aeneum	Copper skink	At Risk- Declining	Threatened – Regionally Vulnerable	Low	Seral broadleaved forest, mānuka forest. Edges of scrub and rank grassland/ weedland.
Oligosoma polychroma	Northern grass skink	Not threatened	Not threatened	Confirmed	Edges of scrub and rank grassland/ weedland.
Woodworthia maculata	Raukawa gecko	Not threatened	Not threatened	Very low	Seral broadleaved forest, mānuka forest.. Edges of scrub and rank grassland/ weedland.

[3]Conservation Status Wellington Mainland

3.0 Lizard Habitat Quality

Lizard habitat quality has been assessed based on existing lizard record datasets (Bioweb database, iNaturalist), aerial imagery, our site survey results and previous survey results undertaken nearby the OBDA.

In determining habitat quality, we have considered:

- Representativeness: Typical structure, species composition (abundance) and indigenous representation of forest as a proxy for lizard habitat quality.
- Rarity / distinctiveness: Species of conservation significance. This includes At Risk species (copper skink, ornate skink, glossy brown skink, ngahere gecko, barking gecko). There are no relevant Threatened species.
- Diversity and pattern: Habitat diversity, lizard species diversity and patterns in habitat use (e.g., multiple habitat types, multiple lizard species).
- Ecological context: Size, shape, ecological networks (e.g., linkages, pathways).

Habitat quality categories are as follows:

1. No effective habitat. Areas are excluded from mapping. Includes within pine trees.
2. Low quality habitat. Where very few lizards are expected and/ or no At Risk species are likely to occur.
3. Moderate quality habitat. Not threatened species (e.g., northern grass skink) are present or At Risk species are expected to be recorded at least infrequently and may include more than one species. Includes seral broadleaved, treefern forest, rank grass margins.
4. High quality habitat. Includes mature forest with numerous preferred habitat values (e.g., forest with lianes, perched epiphytes, and higher diversity through forest tiers). Provides high quality habitat for multiple At Risk lizard species. Includes mature forest and larger areas of kānuka or mānuka dominant scrub or forest.

The OBDA has 11.14 ha of lizard habitat, of which 96% is of moderate or high quality (**Figure 7**).

Table 5. Extent and quality of lizard habitat impacted by the OBDA.

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

Figure 7. Low habitat quality (green), moderate habitat quality (orange), high habitat quality (red), site boundary (white line), OBDA boundary (red line).

4.0 Effects Management Hierarchy

The OBDA design and functional requirements mean that the potential adverse effects on lizard habitats cannot be avoided. We have been advised that the current OBDA layout has been an iterative process assessing alternative locations. As part of this alternatives assessment, high value habitats (e.g., mature tawa forest) in other nearby locations were avoided. The layout encompasses all areas and values for lizards that can be avoided to the extent feasible.

The clearance of vegetation on site has the potential to disturb, injure and/ or kill lizards that are if they are residing within the site. The most suitable habitats are shown on **Figure 7** and cover approximately 11.1 ha.

To minimise adverse effects to lizards a lizard salvage is proposed. The lizard salvage will relocate native lizards away from locations which will be impacted by physical works and vegetation clearance.

Lizards will be released into pre-determined release sites, which satisfies all habitat requirements (food, water, cover, space) of the relocated lizards (**Figure 3, Section 6**). If lizards are placed into habitats where resident lizards are currently present in high numbers, or are relocated into habitat without adequate refuges, individuals may become displaced and are then vulnerable to predation.

Creation and enhancement of habitat at the release site in combination with predator control are critical tools to reduce mortality after a lizard salvage. These considerations have been included in this LMP.

Overall, the lizard salvage will minimise most adverse effects to lizards associated with disturbance, accidental harm or killing. Avoidance and minimisation measures cannot result in no-net-loss of lizards from the development area. Therefore, native forest remediation planting of 15 ha and 18 ha of native forest offset planting is proposed to achieve a no-net-loss in lizard habitat values and an overall protective benefit to lizards. The quantum of remediation and offset planting required to balance adverse effects is based on a replacement of forest habitat values calculated by BlueGreen Ecology Ltd (BlueGreen Ecology 2026).

The location of the offset planting will adjoin existing forest and scrub and link existing areas of vegetation ('biolinks'). This will establish biodiversity that will create a lasting legacy for future generations and the environment.

5.0 Lizard Salvage

5.1 Approach

The approach for this lizard management plan is guided by DOC's Principles, consultation with relevant stakeholders, findings of the development site survey and nearby records, the history of the development site, and the known preferred habitats for lizards. The mosaic of modified vegetation and the uneven distribution of lizards at the site requires a targeted salvage approach with the salvage effort focused on areas where lizards have been confirmed within the site or likely to be present.

The habitat size and quality recorded during the pre-development lizard survey indicates that there would only be a very small population of northern grass skink and Ngahere gecko at the OBDA. Based on our results as well as our understanding of other local populations in the Wellington Ecological District and limitations with surveying cryptic arboreal geckos, we estimate a low number of animals will be recorded (<30 Ngahere gecko and <50 northern grass skink).

5.2 Timing

Lizard capture, handling and relocation will be undertaken at a suitable time of year, between 1 October and 30 April in weather conditions suitable for lizard salvage. That is temperatures of 12°C and above, with no more than light winds and <5 mm rain. These conditions must be forecast for a period of time long enough to allow for the salvage and post-release settling in period of lizards.

5.3 Salvage Method

The following methods will be used to salvage lizards at the site:

1. Artificial Cover Objects (ACOs): A c. 5 x 5 m grid network of triple-stacked ACO's will be set in the grassland within the centre of the OBDA (**Figure 8**).
   ACOs will be installed and left to "bed in" for at least six-weeks prior to the salvage in any area.
   ACOs will be checked (and any lizards present captured) a minimum of five times during suitable weather conditions.
   The effort allocated to each ACO check will include a minimum of five checks and at least three consecutive days of no lizards being recorded up to 15 days.
2. Pitfall traps: Trapping using pitfall traps will be used to supplement ACO's. Pitfall traps will include a 4L bucket dug flush with the ground and covered by an ACO. Each pitfall trap will be baited with pear (or similar), have a moist, clean sponge, and vegetation for cover and to minimise stress of captured animals. A trapping programme involving traps set under every second ACO for multiple days within the development site will be undertaken concurrently with ACO checks. Traps will be checked daily for at least three days. If mice are recorded in pitfall traps, traps will be removed immediately and trapping using pitfalls will cease.
3. Understory felling and spotlight search: The understory (saplings, tree ferns) of the mānuka forest within the OBDA will be hand felled under the direction of the herpetologist. The intention of opening up the forest is to encourage lizards to move to mānuka trunks and allow for easier, effective access and searching **Figure 8**.

A spotlight search will be undertaken after understory felling has been completed. The spotlight search will include:

a. A minimum of four nights of spotlighting and until at least two consecutive nights of no lizards being recorded.
b. A suitably qualified herpetologist will walk through the potential habitat beginning 30 minutes after sunset using head-mounted spotlights to detect body shape or reflected eye-shine of geckos.
c. Searches will be undertaken on calm, mild nights (>12 ºC) i.e. avoiding cooler nights when geckos will be less active and therefore more difficult to detect.
d. Searches will include systematic, grid-searches of all suitable habitat within the mānuka forest in the OBDA (with reasonable, safe access) shown in green in **Figure 8**.
e. If a gecko is sighted, safe capture will be attempted by hand or using poles with a soft end for lizards to grasp (lizards are not harmed when using this technique). If geckos are not able to be salvaged during spotlighting, the tree will be marked and the herpetologist and an arborist will work together to firstly fell or limb the tree and the branches and then foliage will be systematically searched.

4. Supervised tree felling: If >10 Ngahere gecko are recorded, a selection of the best habitat within the mānuka forest will also be searched after being felled. This will be larger trees which will have their trunks, cavities and canopy systematically searched. The extent of which will be determined by the project herpetologist.

Figure 8. Lizard salvage area for northern grass skink (blue) and forest dwelling species (green) within the OBDA (red line), site boundary (white line).

5.4 Development Site Management

Prior to vegetation clearance and earthworks commencing the project herpetologist will have a toolbox meeting with contractors to describe the process if any lizards are accidentally encountered during construction. If any lizards are accidentally encountered during construction, works will cease immediately, and the project herpetologist will be contacted.

The project herpetologist for this project is Tony Payne. **Email:** [redacted]

It is usual practice after a salvage operation to remove the habitat or to fence it off in order to prevent lizards from adjacent areas re-colonising the salvage area. Vegetation clearance and ensuing earthworks within each stage will remove all potential habitat within the development footprint, thereby removing the need to install lizard-proof fencing between the development site and vegetated margin.

5.5 Lizard Handling and Processing

The relocation will be undertaken in the most appropriate way to minimise stress on lizards. In order to ensure the welfare of animals during relocation and to maximise the chance of a successful relocation outcome; all staff will be suitably trained and experienced in the capture, handling, holding and release techniques that will be used. Lizard handling will be kept to a minimum and will only be carried out by trained and experienced staff. Handling will be limited to capture, morphometric measurement, and photography.

Captured lizards will be relocated to the identified release sites and will be released as soon as practicable into the release site (within 1 hour). Ground dwelling lizards will be released directly into log stacks, Ngahere gecko will be released into a Closed Cell Foam Cover (CCFC), and barking gecko will be released into mānuka foliage.

Lizards will be held in individual breathable cloth bags. Each cloth bag will have a small amount of damp grass from the capture site, and a wetted sponge will be placed inside with the lizards to prevent dehydration. All lizards within cloth bags will be temporarily stored in ventilated, hard-sided terrariums (to prevent accidental crushing). Terrariums will be placed in secure, shaded locations (ideally where the internal temperature is kept below 10°C) until they can be transported to the release site.

In accordance with the Animal Welfare Act 1999, section 11, the project herpetologist may euthanise lizards in their care if the wildlife is:

a. Suffering unreasonable or unnecessary pain or distress; and

b. Is seriously ill or permanently injured and unlikely to survive in the wild.

5.6 Data collection

The following data will be recorded on pre-prepared field datasheets:

- Date and time of monitoring;
- Weather conditions and ambient air temprature at the start and finish of the survey;
- Species of lizard;

- Sex;
- Morphometric measurements, including snout–vent length (SVL) and weight
- Age class (adult, sub-adult, juvenile);
- Monitoring device where captured individuals are recorded.

6.0 Lizard Release Sites

A range of factors need to be considered for the suitability of a release site, including:

- The site must be ecologically appropriate and suited to the species being salvaged.
- Have long-term protection and be suitable through time for the lizard species being salvaged.
- It must provide protection from predators.

Two suitable release sites have been identified. A northern grass skink release site [redacted] of the OBDA and a forest species lizard site [redacted] of the OBDA for Ngahere gecko, barking gecko, Raukawa gecko, copper skink, ornate skink, and glossy brown skink.

When assessing the potential for the lizard release site to support lizards, the following considerations were made:

- Vegetation type and cover: These species prefer sunny areas of complex groundcover but also inhabit a wide range of other habitats. The release sites consist of synonymous mānuka forest or rough pasture, both have similar aspects, altitude, and numerous micro-habitats ideal for lizards.
- Access to site: Ease of access to the release site was considered an important criterion. This is to aid in translocation success. The less time that lizards are held in transportation containers and the ease of transfer to the new site can have direct bearing on the mortality of the species, as the less time in transit means less chance of death from high levels of stress. Preference was given to a nearby site that could be accessed with a short walk from a vehicle.
- Habitat complexity: It is ideal to have dense, complex mānuka forest for forest species and dense grassland ground cover for northern grass skink. These vegetation types are present at the release sites.
- Surrounding landscape: The wider links to nearby suitable habitat to allow for population growth and secondary spread was considered, including identifying a release site with extensive habitat for lizards to naturally disperse into.

Release site suitable is summarised in **Table 6**.

Table 6. Release site suitability summary

Criteria	Northern grass skink release sites	Forest lizard release site
Suitability of existing habitat	The grassland has been retired which provides excellent habitat for northern grass skink. Log stacks will provide immediate refuge and food resource.	This includes c. 3 ha of Belmont Regional Park reserve with mānuka forest that is suitable for all forest dwelling lizard species.
Proximity of the site from the salvage	The release site is <5 min drive from the OBDA.	The release site is <5 min drive from the OBDA.
Long-term protection of the site	The proposed release site is part of Belmont Regional Park which is a Crown Derived Reserve and will be protected in perpetuity under the Reserves Act 1977.	The proposed release site is part of Belmont Regional Park which is a Crown Derived Reserve and will be protected in perpetuity under the Reserves Act 1977.
Accessibility for release	There is nearby vehicle access to allow for the log stacks to be constructed and easy access when releasing lizards and monitoring.	Has vehicle and bait line tracks to allow for easy access when releasing lizards and monitoring.
Size of the release site and its connectivity to other habitat	The release site provides ample suitable habitat for northern grass skink.	Is part of a large tract of forest that provides connection to a wide variety of habitats.
Existing lizard populations	Given the small number of lizards expected to be salvaged and the amount of habitat creation proposed, the relocated lizards will have no measurable influence on existing lizard populations (e.g., overcrowding).	Ngahere gecko are present. Other forest dwelling species could be present.
Habitat enhancement opportunities	Log stacks will be created in advance of the salvage, and native planting will be undertaken during the first planting season following the lizard salvage.	CCFC and log stacks will be installed in advance of the salvage.
Existing predator control or opportunities to enhance predator control	Predator control will be undertaken for two months prior to the lizard salvage and for five years following the final lizard translocation.	Existing predator control is undertaken by GWRC and Friends of Belmont Regional Park. Additional predator control primarily focused on rodents will be provided by the Applicant for two months prior to release of lizards and for five years following the final lizard translocation.

6.1 Northern Grass Skink Release Site

Figure 9. Northern grass skink release site (yellow), OBDA boundary (red line) site boundary (white line).

The northern grass skink release site has a range of ideal habitat types for terrestrial lizards, including north facing pasture. In relation to the grassland area within the OBDA development footprint, this constitutes a synonyms habitat. The release site will be enhanced with log stacks and native planting that provides habitat for lizards in the long-term

A minimum of two log stacks covering a minimum of 5x 5 m each will be constructed at the release site (**Plate 4**). The log stacks will be constructed using a mix of large and small logs (10-20 DBH) with interstitial spaces that provide immediate protective cover and refuge for lizards as well as long-term high-quality habitat. Additional log stacks surrounded by predator control will be created for every 10 lizards that are captured (i.e., 20 lizards = 2 log stacks, >30 lizards = 3 log stacks) – a sliding scale of management relative to the effect to lizards.

Plate 4. An example of a log stack within pasture.

A 2 m wide margin around each log stack will be planted with eco-sourced mingimingi (*Coprosma propinqua*). The planting will create self-sufficient native shrubland community and grass margins that provides ideal habitat for northern grass skink. Ecological principles that underpin this planting are:

- Plant to create habitats which benefit native lizard species.
- Use indigenous species that are representative of natural local plant communities, and which provide appropriate community structure.
- Source seed and plants locally (eco-sourcing) in order to select strains that are best suited to local environmental conditions and to maintain the integrity of local genetic stocks.
- Plant in late winter to provide the longest possible time for root systems to develop before summer droughts occur.
- Undertake release weeding (spraying) to clear grass before planting. Once root systems have developed (over the first three growing seasons, or as appropriate based on monitoring) plants should readily survive grass and herb competition.

Table 7. Release site lizard enhancement specifications

Task	Description
Enhancement area	Release site shown in **Figure 9**
Revegetation objective	Plant native species to provide lizard habitat around log stacks.
Existing vegetation	Pasture grass and gorse.
Site Preparation	Single spray treatment of existing pasture grass two weeks prior to log stack creation and planting.
Planting	Planting at 1 m centers.
Monitoring	Assess plant survival/ health/ cover annually in Years 1 to 3 following completion of the planting programme. Monitor ecological weeds and animal pest damage.
Maintenance (up to two years)	Release grass and control weeds three times a year for first two years. Infill planting as required to replace losses over three years.

6.2 Forest Lizards

Plate 5. Mānuka forest at the forest lizards release site.

Figure 10. Forest lizards release site (yellow line), OBDA (red line), indicative predator control layout for Area 1 – 25 x 25 m spacings (red point), site boundary (white line).

Mānuka forest in Belmont Regional Park reserve was chosen based on the high-quality lizard habitat for forest dwelling species. Mānuka forest is a preferred habitat for Ngahere gecko and it is the same forest type where lizards have been recorded in the OBDA.

A pre-release lizard spotlight survey over one night (4 search hours) recorded no lizards. Given the similarities in forest structure, age, community assemblage, altitude and proximity to the OBDA, our assessment is that forest dwelling lizards, particularly Ngahere gecko, are likely to occur in this area at low densities, comparable to that of the OBDA.

Ngahere geckos are mainly arboreal and are usually found on vegetation. When using vegetation, most individuals are mainly observed on the trunks and branches of shrubs and trees, unlike arboreal *Naultinus* geckos which prefer foliage and stems. Raukawa gecko use a range of habitat and are found on the trunks and branches of shrubs and trees and beneath suitable ground cover. As such, any Raukawa geckos and/or Ngahere geckos salvaged will be relocated into individual closed-cell foam covers (artificial arboreal refugia) attached to mānuka trees. These will provide immediate retreats for geckos following relocation, granting them interim protection from predators and exposure before dispersing further into the coastal forest. Barking gecko will be released directly into mānuka foliage. Any copper skink, glossy brown skink or ornate skink will be released directly into log stacks within forest (**Figure 11**).

The first 20 animals of any species will be released into Area 1, the next 10 animals will then be released into Area 2 and any further animals in Area 3 (**Figure 10**).

Figure 11. Examples of log stacks which will be created if forest dwelling terrestrial skinks are salvaged.

6.3 Predator Control

The purpose of the predator control programme for this LMP is primarily to assist in the survival of relocated lizards and to increase the abundance of existing lizard populations at the release site.

Predator control at both release sites will include toxic bait stations at 25 m spacings and DOC200s at 100 m spacings. Predator control will only be undertaken in forest lizards Areas 2 and 3 if the >20 or >30 animal triggers are met.

Predator control will be undertaken by Winstones Aggregates for two months prior to any lizards being released and for five years after the final year of lizards being released.

Control will be pulse management three times per year, consisting of a 7-week period through September to October, January to February, and May to June (**Table 8**). The frequency of checks and rebaiting within these periods will be as per the recommendation of a qualified animal control expert to ensure that baits are adequately replenished.

Table 8. Pulse periods (3 per annum) for predator control.

	Jan Feb	Mar Apr	May Jun	Jul Aug	Sep Oct	Nov Dec
Pulse period	Refill baits		Refill baits		Refill baits	

The predator control will focus on rodents using toxins. Toxins rely on the target species ingesting bait as a food source eliciting a feeding response that results in death. Because of this, interaction rates tend to be higher with toxins than with traps.

Using a toxin that is safe, effective, and will not bioaccumulate in the environment thus endangering non-target species, is key to the execution of a successful toxin operation. It is recommended that a first-generation anticoagulant such as diphacinone or pindone is used. These toxins have a short life so they do not bioaccumulate and are ideal for targeting rodents.

Rodents, particularly rats, are known to remove toxic baits from bait stations and cache these which can result in non-target species being exposed to these baits when removed from bait stations. Potential solutions to reduce this risk involve wiring pellet baits into bait stations or the use of bait station designs that make this caching behaviour difficult, e.g. the pied piper bait station. The pied piper bait station is a run through station with small openings in the underside of the tunnel roof that require rodents to access and eat bait through a grided bait basket (**Figure 12**). It is recommended that the toxic baits are delivered in pellet form in pied piper bait stations (or similar) to minimise the risk to non-target animals from toxic baits being removed from bait stations during toxic control operations.

Figure 12. The Pied Piper bait station, rodents cannot remove baits and are forced to eat bait within the stations.

6.4 Post-Release Monitoring

The small number of lizards expected to be relocated in conjunction with the abundance of complex habitat at the release sites means that meaningful post-release monitoring is unlikely to be possible.

A post-release monitoring programme will only be required if >20 individual animals of any species are salvaged.

The post-release monitoring programme will include a three-year period as follows:

a) Skinks: four pitfall traps surrounding and four triple-stacked ACOs will be setup surrounding each log stacks. Devices will be left for a minimum of 6 weeks during warm weather, and checked four times consecutively in mid to late March annually for three years.

b) Arboreal species: closed-cell foam covers will be set up throughout the release site at a ratio of 2 retreat units per individual animal (2:1). Three nights of spotlighting will be undertaken in summer for three years.

c) An annual report detailing the outcomes of monitoring will be provided to DOC and Greater Wellington Regional Council.

The following data will be recorded on pre-prepared field datasheets:

- Date and time of monitoring;
- Weather conditions (wind, overhead conditions) and ambient air temprature at the start and finish of the survey;
- Species of lizard;
- Sex;
- Morphometric measurements, including snout–vent length (SVL) and weight
- Age class (adult, sub-adult, juvenile);
- Monitoring device where captured individuals are recorded;
- Presence of lizards observed but not captured;
- Unique numbered on the ventral surface using a non-toxic (Xylene-free) pen.

If <20 individuals of any species are relocated, no post-release monitoring will be undertaken.

7.0 Roles and Responsibilities

Project implementation, project management and performance monitoring will be managed internally by the Wildlife Act Authority holder with fieldwork delivered mainly by the project herpetologist and contractors. Details of roles and responsibilities associated with this management plan are provided in **Table 9**.

Table 9. Roles and responsibilities associated with this Management Plan.

Position	Accountable Task
Winstone Aggregates (a division of Fletcher Concrete and Infrastructure Ltd) (Wildlife Act Authority Holder)	• Provide adequate resources for the implementation of this Plan and ensure it is implemented in accordance with Wildlife Act Authority requirements; • Report the results of the works to relevant authorities in accordance with the monitoring and reporting requirements of this Plan; • Organise annual work programme as described in the relevant parts of this Plan; • Facilitate any monitoring required as part of this Plan; • Ensure the instruction of workers, implementation and overseeing of the requirements of this Plan, including monitoring the effectiveness of the methods set out in this Plan; and • Ensure monitoring is conducted, recorded and communicated as per the requirements of this plan. • Ensure all remediation and offset planting is undertaken in accordance with the relevant management plan(s).
Greater Wellington Regional Council	• Ensure all workers or contractors working on reserve land have the necessary qualifications, and health and safety requirements to undertake activities. • Administer the reserve in accordance with Belmont Regional Park Plan.
Blueprint Ecology Ltd (Project herpetologist)	• Provide technical advice, including on-site assistance (e.g., lizard salvage, monitoring, and technical reporting) as required by this Plan and by Winstone Aggregates

8.0 Contingency

A precautionary approach has been undertaken for this LMP, which includes identifying a pre-determined release site suitable for all possible species that could be encountered, and multiple release sites for forest species well beyond what is expected to be recorded. The need to include this as part of lizard management is to ensure contingency measures have been appropriately considered.

9.0 Reporting

Following all lizard salvage activities, a compliance report will be prepared which includes details of all individual lizards salvaged and transferred to the release sites. This compliance report will be made available to DOC, Hutt City Council and Greater Wellington Regional Council by 30 June. The report will detail:

- Locations searched or trapped;
- The number of lizards salvaged and where they were released;
- Any incidental deaths or euthanasia.
- Outcomes of post-release monitoring.
- Data collected as described in Section 5.6 and Section 6.4; and
- ARDS card provided to DOC.

10.0 Credentials and Permitting

This LMP has been prepared by Tony Payne who is an expert herpetologist.

Sectors include national highways, renewable energy (solar farms and wind farms), quarries, and urban development. Spanning Northland to Otago, providing lizard management advice, lizard presence/ absence surveys, Lizard Management Plans, Wildlife Act Authority applications, salvage programs, monitoring, mitigation habitat design (constructed habitats, plantings) and specific predator control plans. Over the past 10 years he has been involved with the survey and salvage of over 4,000 lizards.

Examples of relevant projects:

- **Lincolnshire Farm, Wellington (2022-2025).** Three seasons of lizard salvage. Prepared and implemented LMP, coordinated onsite works, provided training to Te Rūnanga O Toa Rangatira, salvaged over 1,500 native lizards.
- **Shelly Bay, Wellington (2020-2023).** Two seasons of lizard salvage. Prepared and implemented LMP, coordinated onsite works, provided training to Jobs for Nature staff and Victoria University students, salvaged over 300 native lizards.
- **Mt Cass Windfarm, Canterbury (2020-2022).** Two seasons of lizard survey and salvage. Salvage and relocation of Waitaha geckos and southern grass skinks from windfarm areas. Over 100 lizards relocated.
- **LPC Gollans Bay Quarry, Lyttleton (2019).** Salvage and relocation of Waitaha geckos and southern grass skinks from quarry areas. Over 150 lizards relocated.
- **Adventure Drive, Whitby (2017).** Two seasons of lizard salvage. Prepared LMP and implemented parts of the LMP, coordinated on site works, salvage included over 2,500 northern grass skink.
- **Transmission Gully, Wellington (2015-2016).** 2 years of lizard salvage under permit held by TG constructor. Prepared 15 site specific LMPs and undertook lizard salvages in boulder fields, grassland, kanuka forest and mature broadleaved forest.
- **Approx. 20 x lizard survey and salvage projects** in Auckland and Wellington region during 2019-2025 from consented developments. LMP preparation, survey, salvage, relocation, report writing. Tasks included designing salvage setup, setting/ checking ACOs, g-minnow traps, undertaking manual search, spotlighting, lizard handling, lizard measurement/ weighting/ data recording, lizard transfer to predetermined release site.
- **Research:** Northern grass skink (*Oligosoma polychroma*) utilisation of Artificial Cover Objects (ACO) over a one-year period, and the implications for monitoring and management (2021). This included longitudinal research of northern grass skink in Nelson, New Zealand. Research was presented at the 2021 New Zealand Ecological Society Conference.

Current a previous authorities held:

National survey: 118461-FAU.

Auckland salvage: 62230-FAU, 66672-FAU, 70820-FAU.

Wellington salvage: 81670-FAU, 91371-FAU, 93616-FAU, 102442-FAU, 111140-FAU, 117207-FAU, 117925-FAU, 120108-FAU.

Wellington/ Nelson survey: 91417-FAU, 107412-FAU.

Nelson salvage: 118355-FAU

Waikato survey: 117601-FAU.

Canterbury salvage: 98153-FAU.

11.0 References

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Report prepared by:

Tony Payne

Principal Ecologist

Blueprint Ecology Ltd

Appendix A: Belmont Quarry Development Project Description

Project Description

Belmont Quarry Development

Substantive Application – July 26

1 Overview

Belmont Quarry, operated by Winstone Aggregates (a division of Fletcher Concrete and Infrastructure Limited), is a principal source of aggregates for the Wellington region, supplying approximately 40% of local demand. The quarry is essential for meeting ongoing demand for roading, housing, and development materials. The quarry contains a remaining rock reserve of approximately 33.7 million tonnes which, at forecast production rates, provides for a quarry life of approximately 40 years. Continued access to aggregate resources requires controlled removal and placement of overburden.

The estimated 40-year quarry life reflects the quantity of accessible aggregate resource made available through development of the proposed OBDA, whereas the 35-year duration sought for regional discharge permits the maximum duration for those approvals under the RMA. The two periods are not required to align. The proposed OBDA enables access to resource extending beyond the consent duration, and any continued operation beyond the expiry of the permits would be subject to future consent renewal processes.

Belmont Quarry's ability to access and sustain aggregate production is dependent on continuous overburden disposal capacity; with the existing Cottle Block nearing exhaustion, the proposed OBDA is essential to permanently place overburden and process fines, remove a critical operational constraint, and enable continued extraction of the remaining rock resource.

As the quarry has progressed, available space within the current Overburden Disposal Area (**OBDA**), specifically the Cottle Block has steadily reached capacity and is now effectively exhausted. The only remaining capacity at Cottle Block is for fines disposal.

Based on the current extraction and disposal rates, it is projected that existing capacity at will be exhausted within approximately five to ten years. Without a new overburden disposal solution in place, the quarry will reach a critical constraint that will prevent further extraction, effectively halting operation and impacting the region's construction supply chain, as the quarry will be restricted to quarrying in areas where there is no overburden to dispose.

To ensure a long-term solution for overburden management, a new OBDA adjacent to the existing quarry footprint (Figure 1) is proposed to be developed. The selected OBDA location is situated within the Belmont Regional Park, adjacent to the existing Quarry operational area. This location has been identified as the most suitable due to its operational, environmental and logistical advantages. Its adjacency to the quarry operation allows for a direct haul route, minimising transport distances, fuel use and emissions.

Enabling this development requires a land exchange between Winstone Aggregates and the Department of Conservation, as described in section 2.1. A Land Exchange Report was lodged with Department of Conservation in December 2025.

The proposed OBDA will accommodate approximately 2.7 million cubic metres of overburden, including topsoil, subsoil, weathered greywacke, and process & pond fines, placed progressively over the approximately 40-year life of the quarry. The OBDA has been designed to function as a permanent engineered landform. It will be established and

constructed across 10 stages, with supporting haul infrastructure, drainage, fines containment, and progressive rehabilitation.

The documents set out the project description for the proposed OBDA.

2 Project Overview

2.1 Land Exchange

This FTAA application includes a land exchange between Winstone Aggregates and the Department of Conservation. The land involved on the Crown side is reserve land, owned by the Crown, managed by Greater Wellington Regional Council as administering body on behalf of the Crown as part of the Belmont Regional Park. The exchange is integral to enabling the OBDA, which forms part of the proposed expansion of Belmont Quarry. The exchange would see Winstone provide 34.1 hectares of land to the conservation estate in return for 23.86 hectares of Crown-owned reserve land for the OBDA footprint, Figure 1.

Subdivision consent is sought as part of the substantive application in order to isolate the Crown and Winstone parcels of land for exchange.

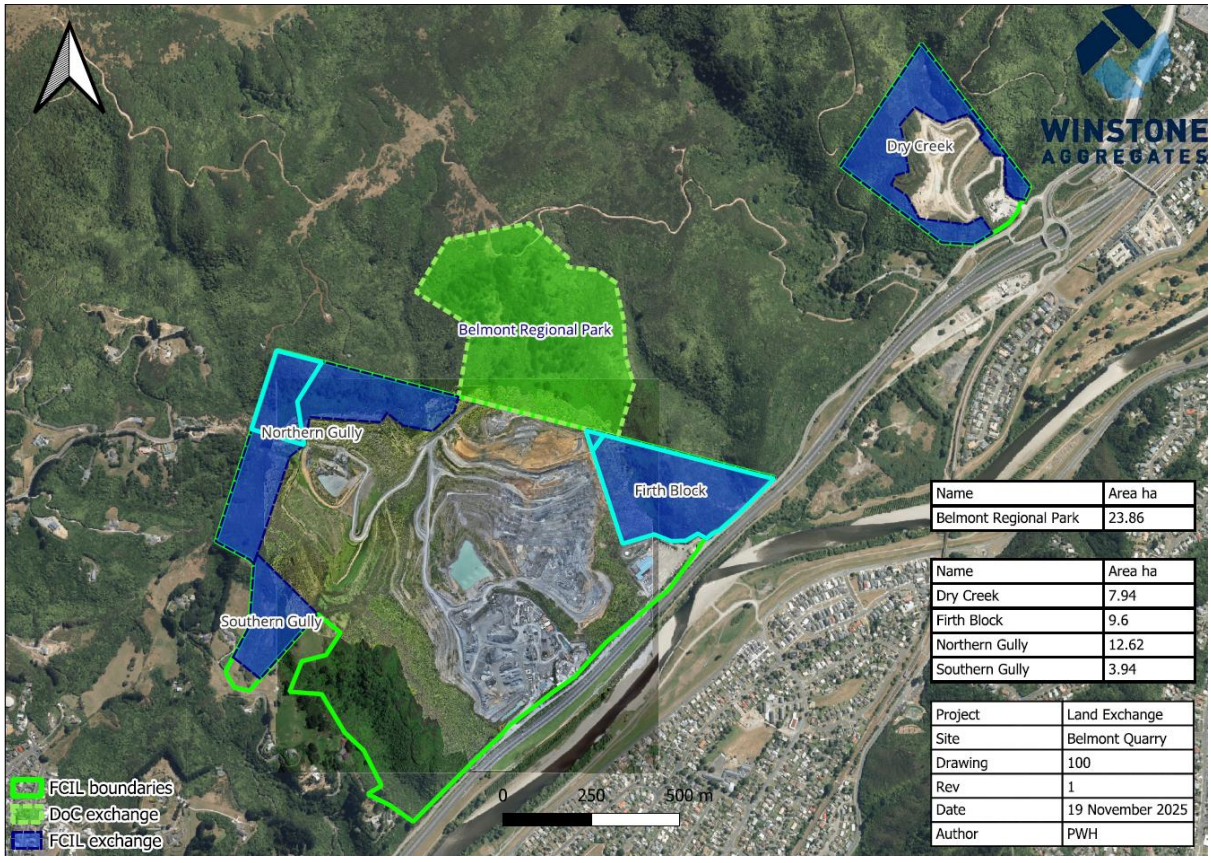


Figure 1 Land exchange parcels

2.2 Nature of Overburden

The overburden material at the Belmont Quarry typically includes soil, and subsoil, weathered or decomposed rock and other non-suitable material, including process fines and silts from settlement ponds. Historically, this material has been placed within the Cottle Block, under existing consent WGN240139, which includes conditions for erosion control and rehabilitation.

2.3 Site Description

Belmont Quarry is located immediately adjacent to Belmont Regional Park, in the western hills of Lower Hutt, Wellington Region. The landscape is defined by steep ridgelines, rolling slopes, and incised gullies. Vegetation across the area reflects a mix of land-use histories, including regenerating native bush, exotic shrubland, grazed pasture, and previously modified slopes.

The quarry operations involve the extraction of rock by drill and blast, followed by digging and carting using heavy machinery to processing facilities. The extraction area is a designed cut face with a bench-and-batter configuration to ensure safety, stability, and operational efficiency. While the upper quarry faces are partially visible from urban locations such as Taita and Pomare, the majority of the site is visually screened by topography and vegetation. The Belmont Quarry is accessed via Hebden Crescent off the State Highway 2 and State Highway 58. The Belmont quarry site has no public access.

The proposed OBDA site is immediately north of the current Belmont quarry operational area. It lies within land classified as a recreation reserve, owned by the Department of Conservation (DOC) and administered by the Greater Wellington Regional Council (GWRC) as part of Belmont Regional Park. The proposed OBDA site forms part of the broader Belmont Hills and Western Escarpment landscape context, including the Boulder Hill character area within Belmont Regional Park. While the site contributes to the green backdrop of the Hutt Valley, the local landscape is already influenced by existing quarrying activity, historical overburden disposal area (Cottle Block), transmission infrastructure, exotic vegetation and former agricultural use. The site is not identified as an Outstanding Natural Feature or Landscape, and no Special Amenity Landscape applies to the site. The proposed OBDA is characterised by moderate to steep terrain, with surface flow paths following natural contours into ephemeral watercourses.

The OBDA is located on an interfluve (or catchment divide) between five small headwater gullies. These gullies drain either west toward the Waikoropupu catchment or east toward small catchments that ultimately discharge to Te Awa Kairangi (Hutt River). Surface flow in the upper gully heads is generally limited and variable, with much of the upper catchment flow occurring as subsurface flow through the regolith before emerging further downslope.

Vegetation cover includes mānuka and kānuka scrub, pastoral grasses, gorse, and regenerating native species. This land was originally a working farm that was acquired by DOC in 1989, having been taken by Hutt City Council under the Public Works Act for housing, which was deemed surplus to requirements.

Given the topography of the site, potential views of the OBDA include parts of the Belmont Regional Park, Kaitangata Cresent, and elevated locates on the Eastern Hutt Hill. Views from the Hutt Valley floor are generally more limited or screened. The nearest residential property to the proposed OBDA is located more than 750 m to the west at Kaitangata Crescent.

Ecologically, the site also forms part of the wider Belmont-Dry Creek Key Native Ecosystem and occurs within a broader regenerating hill-country ecological corridor. While parts of the OBDA area modified and exotic-dominated, the site contains indigenous vegetation communities and fauna habitat that contribute to the wider ecological settings.

Ecological assessments confirm the presence of indigenous flora and fauna within the wider park, including lizard habitat and native bird species such as tūī, korimako, and riroriro. Bat acoustics survey did not detect bats, and the site is not considered likely to provide regular roosting or foraging habitat for long-tailed or short-tailed bats. The OBDA footprint avoids the most sensitive habitats, such as the central western swamp maire gully and northeastern wetland. Targeted relocation of native lizards will occur prior to any vegetation clearance.

Hydrologically, the site is located within the Te Awa Kairangi/Hutt River catchment. EDNA sampling did not identify fish within the OBDA tributaries, and fish passage to the affected headwater system is constrained due to waterfalls and existing culverts.

The OBDA will be developed and operated using a staged stormwater management framework that differentiates between construction, operational, and post-rehabilitation phases.

During construction and active overburden placement, each stage of the OBDA will operate as a self-contained stormwater catchment, with runoff directed internally to purpose-built sediment retention and fines containment facilities.

As individual stages reach their final design profile, external faces will be progressively topsoiled, stabilised, and revegetated. Once stabilised, clean surface water runoff from rehabilitated slopes may be discharged in a controlled manner to downstream ephemeral watercourses within the Te Awa Kairangi / Hutt River catchment, in accordance with approved erosion and sediment control measures and applicable regional consent conditions.

The underlying greywacke geology and relatively thin regolith do not provide the conditions necessary for aquifer or significant groundwater resource. Any groundwater is expected to be transient and associated with saturation of the regolith following intense or prolonged rainfall, contributing to baseflow rather than forming a groundwater resource Subsoil drainage will be installed beneath overburden fill to manage groundwater and pore water pressures.These drains will discharge at controlled locations at the toe of the OBDA and will integrate with the staged surface water management system. These drains will designed to maintain the surface and subsurface hydrological input to downstream intermittent and perennial watercourses, eastern wetland system and the central western swamp maire gully. The design intent is to maintain or simulate existing ephemeral flow paths as far as practicable so that downstream wetlands and streams continue to have water inputs.

Belmont Regional Park offers a wide range of recreational activities, including walking, mountain biking, and horse riding. While the OBDA site is not directly connected to formal tracks, informal recreational use occurs across parts of the site, including a Transpower utilities track (utilities track) that runs parallel to the OBDA's northern boundary. This portion of track will be lost due to the OBDA footprint. However, discussions with Transpower's ongoing operation and maintenance activities. The existing upper Buchanan's Track will continue to provide suitable 4WD access to the transmission structures for routine maintenance purposes and will remain available for recreational users. Should future operational requirements necessitate upgraded or alternative access, any such access solution would be developed by, or in consultation with, Transpower and designed to meet Transpower's operational requirements and technical specification.

The site comprises a collapsed 20th century farm building, possibly a piggery, and is assessed as having limited local archaeological and historic heritage value. (R27/910), is located within the proposed OBDA footprint in the Stage 1 works area. No known pre-1900 archaeological sites or scheduled historic heritage sites are recorded within the proposed OBDA, and the potential for unrecorded pre-1900 archaeological is considered low, although it cannot be completely excluded. An Archaeological Authority will be sought under the Fast-track Approvals Act 2024 for risk management purposes to cover the preliminary enabling works and Stage 1 and Stage 2 works. This is recommended because, while no known pre-1900 archaeological sites will be affected, the possibility of unrecorded subsurface archaeological remains cannot be completely excluded, particularly in the vicinity of R27/910.

The wider Belmont hills and associated catchments form part of the ancestral landscape of Taranaki Whānui and Ngāti Toa Rangatira. Cultural values are acknowledged in the project

design. An Accidental Discovery Protocol will be implemented, and ongoing engagement with mana whenua will inform both operational delivery and final landform outcomes.

Ongoing engagement will continue through detailed design, construction, and rehabilitation planning, including input into planting and landform outcomes where appropriate.

3 Proposal

3.1 OBDA Design Rationale and Alternatives Assessment

The proposed OBDA is located within the regional park to the north of the existing Belmont quarry pit. The design is based on an OBDA concept originally developed in 2016 and has subsequently been refined to reflect updated site information, operational requirements, and environmental constraints.

As part of the design development process, the 2016 OBDA concept was reviewed alongside four additional OBDA options. These options considered alternative footprint extents, landform configurations, and development sequencing. The selected design was identified as the most appropriate option when assessed against operational efficiency, geotechnical performance, environmental effects, and compatibility with the surrounding regional park environment.

The OBDA footprint was further refined in 2025 using updated LiDAR topographic survey data. This refinement resulted in a reduction of the overall footprint in several locations to avoid a central western swamp maire gully, avoid mature pukatea forest in the lower southwestern gully, avoid most of the eastern natural wetland area in the north-east, areas of higher ecological value in the south-west, and areas of increased geotechnical uncertainty. The design also seeks to retain downstream hydrological inputs to the six tributary systems and associated wetland habitats. The staging has also been developed to align, where practicable, with natural sub-catchment boundaries. This approach limits hydrological disturbance to discrete gully head catchments at any one time and reduces the potential for cumulative hydrological effects, as each completed stage will be stabilised and hydrologically rehabilitated before works progress into later stages. In other locations, the footprint was selectively extended to increase available overburden storage capacity while maintaining overall landform stability.

The final footprint has also been designed to ensure the OBDA does not encroach into the minimum separation distances from overhead electricity transmission lines and complies with Transpower requirements and the mandatory provisions of NZECP 34.

3.2 Key Aspects

The project comprises the following key aspects:

- **Location and extent:** The proposed OBDA is located directly to the north of the existing quarry and has a footprint of approximately 15.7 ha in size. A main access road is initially developed from the south to north along the ridge through the centre of the OBDA. Secondary access roads are then developed for each stage to provide access for enabling works and the subsequent construction of the OBDA.
- **Temporary works:** For each stage of the OBDA development, enabling works are required. These include construction of temporary access road, temporary ESC, vegetation clearance, topsoil stripping and stockpiling, described in section 4.3. Temporary works may be required outside of the OBDA footprint but within the wider project area for maintenance access.

- **Foundation preparation:** Foundation preparation will be undertaken in accordance with the geotechnical design framework described in Section 3.5 (Geotechnical Design and Stability). At all stages, foundation preparation will involve the removal of unsuitable material until competent foundation material is exposed that satisfies the material parameters adopted in the geotechnical design.
- **Water management**: Stormwater and groundwater will be managed through a staged system of internal catchments, clean and dirty water separation, sediment retention, fines containment, subsoil drainage, and progressive stabilisation, as described in Section 3.3 (Drainage and Stormwater Systems). The water management will maintain existing discharge to drainage lines beyond the OBDA as far as practicable, including both surface and subsurface flow paths, and will be implemented in accordance with the Geotechnical and Erosion and Sediment Control design principles.
- **Capacity and duration**: It will accommodate approximately 2.7 million cubic metres of overburden, placed progressively over the approximately 40-year life of the quarry, renewal of regional consents with a maximum duration of 35 years will be required over this period.
- **Design and staging:** The OBDA will be designed as a permanent, engineered landform established with early preliminary works, followed by construction works in ten sequenced stages. The final stage will provide for formal closure and rehabilitation.
- **Stability:** Engineered controls are included to ensure long-term stability and erosion control. The overburden will be progressively stabilised as the fill levels are lifted and completed.
- **Regional Park interface management:** Access to the OBDA will occur through a new haul road and reflects the planned north-to-south development of the OBDA. This approach allows the northern works adjoining the Belmont Regional Park to be completed and rehabilitated early, so that later stages both physically and visually distant from Belmont Regional Park and the Buchanan's Track.
- **Archaeology and historic heritage:** An Archaeological Authority will be sought for risk management purposes for the preliminary enabling works and Stage 1 and Stage 2 works, and archaeological monitoring will be undertaken during vegetation clearance and topsoil stripping in the area of R27/910. Stages 4 to 6, and 8 will be managed either under a future Archaeological Authority or through Accidental Discovery Protocols.
- **Rehabilitation**: As the final external profiles are achieved topsoil within each stage, completed surfaces will be stabilised, hydroseeded, topsoiled will be respread from the on-site stockpile and planted during the next available planting season. Rehabilitation of completed final surfaces will be implemented within 12 months of reaching final design levels, unless otherwise agreed through a certified rehabilitation plan. Rehabilitation will include managed natural regeneration, active indigenous planting, riparian planting along reinstated drainage paths, enrichment planting, pest plant and animal control and ongoing monitoring and maintenance.

3.3 Haul Roads

Access to the OBDA will be provided through an extension of the internal haul road network to connect the two sites. The extended haul road will connect the northern quarry area to the OBDA footprint, following the ridgeline to reduce earthworks and maintain workable gradients for heavy vehicles.

The route is entirely contained within the operational design footprint and sits in the centre of the OBDA area. The route avoids interaction with public accessways or legal roads. Road

gradients and widths will be designed to safely accommodate staged overburden placement, heavy vehicle manoeuvring, and ongoing maintenance access.

The internal access routes will be developed during the enabling works of each stage to allow for implementation of erosion sediment controls and foundation preparation works. Drainage controls and surface treatments will be applied to manage dust and sediment. No additional access from the public road network is proposed, as there is no need for vehicles working within the OBDA to access the roading network. Hence all vehicle movements will be internalised.

3.4 Drainage and Stormwater Systems

Stormwater management for the OBDA is designed to reflect the staged nature of development and to manage effects during construction, operation, and rehabilitation. Key principle of the water management system will be the separation of clean and dirty water. Clean water will be diverted and discharged, as far as practicable, to the same drainage lines as under existing conditions. Sediment-laden water from active works areas will be collected, treated through sediment control devices and discharged in accordance with ESCP. Each stage will function as a discrete stormwater catchment during earthworks, with runoff retained and treated internally through sediment retention and fines containment systems.

As stages are completed and external slopes are stabilised and vegetated, clean runoff from rehabilitated areas may be discharged in a controlled manner to downstream watercourses. Discharge locations and treatment measures will be progressively established to ensure erosion and sediment effects are appropriately managed.

Subsoil drainage will be installed beneath overburden fill and fines containment areas to manage groundwater and pore water pressures. These drains will discharge at controlled outlets that form part of the OBDA stormwater management network. Hydrological monitoring including installation of shallow slotted PVC standpipes and water-level recorder in the eastern wetland and adjacent to the pond on the Firth QEII boundary. Water levels will be recorded at intervals of no longer than one hour, with monitoring retained until one year after works associated with the OBDA in the relevant upstream sub-catchment have been completed. If departures from long-term conditions are identified and are not explained by climactic variation, the case will be investigated and changes to stormwater or erosion and sediment controls will be implemented where required.

Detailed stormwater design will be confirmed through the Erosion and Sediment Control Plan (ESCP), which will be prepared, reviewed, and certified prior to the commencement of earthworks for each stage. The ESCP will be treated as a live document, updated for each stage and reviewed prior to each earthworks campaign.

In addition to the ESCP, ecological sediment monitoring will be undertaken for sensitive downstream receiving environments, particularity the central western swamp maire gully. Baseline monitoring will be established prior to works and will include sediment deposition measures, vegetation condition monitoring and photographic records of swamp maire root zones. If sediment control failures or sediment deposition effects are detected, remedial actions such as careful hand removal of deposited sediments and additional ecological response measures will be implemented.

3.5 Fines Containment and Dewatering

Fines containment cells will be constructed as part of the OBDA staging to manage process fines and silts generated by the quarry’s crushing and washing operations. These cells are

engineered to allow gradual dewatering and consolidation of fine material, with containment provided by surrounding overburden fill.

Dewatering will occur primarily through evaporation and controlled subsurface drainage. Subsoil drains beneath fines containment cells will be designed to manage pore water pressures and maintain stability. Any discharge from these drains will be routed through the OBDA's stormwater management system prior to entering the receiving environment and will comply with applicable regional consent requirements.

As OBDA development progresses, the settling pond (fines containment cell) location will migrate within the OBDA footprint, initially moving westward during construction of Stages 1 and 2, and subsequently migrating southward as development continues.

This approach avoids the need to establish multiple discrete settling pond locations over the life of the OBDA and enables fines management to remain integrated within the active OBDA landform.

3.6 Geotechnical Design and Stability

The OBDA has been conceptually designed as a permanent engineered landform, informed by site investigations, geotechnical assessment, and established quarry overburden placement practices. As a general construction principle applicable to all stages of the development, foundation preparation will involve the removal of unsuitable material – such as soft or saturated alluvium, highly weathered rock, clay-rich soils, organic material, and remnants of historic fines disposal cells where encountered – until competent foundation material is exposed that satisfies the material parameters adopted in the geotechnical design. Excavated unsuitable material will be replaced with engineered fill placed and compacted in accordance with the geotechnical specifications. Foundation preparation will also include installation of subsoil drainage, and construction of engineered features such as rockfill toe buttresses, toe bunds, basal undercuts, or shear keys where required to achieve long-term stability. The extent of foundation preparation and the subsoil drainage network will be confirmed and verified during foundation preparation for each construction stage.

Overburden will be placed in controlled lifts and compacted in accordance with geotechnical specifications appropriate to the material type and location within the landform. Coarser materials will be preferentially used in structural zones such as outer embankments and toe areas, while finer or moisture-sensitive materials will be placed in contained zones with appropriate drainage and capping.

Detailed geotechnical design will be confirmed prior to the commencement of each stage and will be documented through construction records and certification by a suitably qualified geotechnical professional. Geotechnical laboratory testing will be undertaken during construction to verify the material parameters adopted in the geotechnical assessment, with a testing schedule prepared prior to commencement of Stage 1 works. Testing results and geotechnical verification reports will be used to confirm compliance of placed materials and construction methods with the approved design.

Additional geotechnical investigations and design verification will be undertaken where construction stages encounter areas of elevated geotechnical complexity or uncertainty. In particular, detailed assessment of ground and groundwater conditions will be completed in advance of development of stages located adjacent to the Belmont Quarry cut slopes, and detailed geotechnical design will be completed for any process water ponds or similar structures to confirm liquefaction potential, process fines behaviour, seepage performance, and overall slope stability.

Progressive stability assessments will inform staging, drainage installation, rehabilitation timing, and operational controls throughout the life of the OBDA. Should investigations,

testing, or verification identify a material change to the geotechnical design assumptions, the geotechnical assessment and detailed design will be reviewed and updated by a suitably qualified geotechnical professional. Any resulting design modifications will remain within the approved OBDA footprint and landform geometry and will be subject to the relevant certification and approval requirements.

3.7 Overlap between existing and new activities

The overburden generated from quarry operation is currently deposited in the Cottle Block OBDA. The use of the Cottle Block fines cell will continue under existing consents, subject to production volumes and demand. Process fines generated by the quarry will continue to be disposed of within the Cottle Block fine cells until it reaches capacity and is capped. Once the Cottle OBDA fines cell is filled and capped, a dedicated fines containment cell will be established within Stage 1 of the proposed OBDA for the on-going disposal of process fines and management of sediment generated internally within the OBDA.

No changes are proposed to the operational consents of the quarry. The quarry and the proposed OBDA will continue to operate under separate consents frameworks, and the proposed application relates solely to the establishment and operation of the OBDA and associated infrastructure.

Associated project components include the construction of a haul road linking quarry to the proposed OBDA. Consent is required for the removal of existing planting where the haul road is to be construction, together with associated earthworks, drainage and works necessary to establish and operate the haul road corridor.

4 Overburden Management

The placement of overburden will take place over a number of campaigns (earthworks seasons) across several years. It is useful to think of the works in ten stages for the purposes of understanding the proposal. These stages generally correspond to a series of key milestones that would be achieved to ensure that the facility can continue to operate and provide ongoing storage capacity in conjunction with the quarry production. The development sequence is designed to keep within discrete water catchments, specifically stages 1, 2, 4 and 5.

While the OBDA is described in ten indicative stages for assessment purposes, the timing and duration of individual stages will respond to quarry production requirements and market demand. Regardless of timing, each stage will be developed as a discrete and stable unit, with progressive rehabilitation undertaken as soon as final design levels are achieved. Completion of each stage will be stabilised and rehabilitated before works progress to the next relevant sub-catchment, including reinstatement of drainage paths and management of surface and subsurface flows. This approach limits the extent of exposed surfaces at any one time and enables areas adjoining Belmont Regional Park to be rehabilitated early in the programme. For each stage, final external faces, bunds and reinstated drainage margins will be rehabilitated as soon as practicable once final design levels are reached. Rehabilitation will include stabilisation, hydroseeding, indigenous planting, riparian planting where drainage paths or streams margins are reinstated, and subsequent enrichment plantings to support long-term integration with the Belmont Hills landscape. Spatial perspective appended as Appendix A to this Project Description assist in visualising individual stages.

The other stages are constructed on top of previously constructed stages. As an overall strategy, the OBDA is constructed to its final landform in the north before developing towards the south, with the final landform being 230m RL. The aim of this is to complete construction works and vegetation adjacent to the Buchanan’s Track first. After this is the majority of

OBDA construction will be shielded from the users of Buchanan’s Track by the earlier stages and the northern bund.

Overburden removal seasonal campaigns are timed to align with the drier months of the year to maximise efficiency and minimise environmental risk. These campaigns typically commence around 1 October and conclude by 30 April, coinciding with the optimal earthworks window in the Wellington region. That said, works outside of these typical seasons may occur to cater for demand within the region and operational changes.

Overburden is stripped from the Quarry to access the rock resource below and will be placed in accordance with the OBDA's staged layout, as described in sections below. While the staging is sequenced, the timing of the stages will depend on several factors, including market demand for the resource and the depth of overburden to be stripped to access the rock in the quarried area. This may occur in small campaigns that run annually, taking 1-3 years to complete a stage, or less frequently, for example, in larger campaigns every 3-5 years. The stages and areas for placement will be either progressively stabilised or entirely rehabilitated (depending on whether they have reached their final form in any campaign). For much of the year, outside of campaign periods, fines disposal will occur, along with any required maintenance works.

Earthworks associated with overburden placement are generally confined to the recognised earthworks season (approximately October to April) to minimise erosion and sediment risk.

Limited out-of-season works may be required to respond to any secondary operational or unplanned circumstances. In such cases, the total volume of overburden placed outside the normal earthworks season will not exceed 50,000 cubic metres per calendar year, and appropriate erosion and sediment controls will be implemented in accordance with the approved ESCP. Each stage is designed to operate as a stable, self-contained module that, during development, will integrate with adjacent stages. Material will be spread and compacted in layers to meet geotechnical specifications. Temporary bunds and toe structures may be used to guide placement and manage stability during construction.

The overburden material is transported from the active extraction zones to the north via a dedicated internal haul road. During peak earthworks campaigns, internal haulage activity is anticipated to generate up to approximately 25 one-way truck movements per hour. Actual movement rates will vary depending on campaign size, haul distances, and material type. All haulage associated with OBDA development will be contained within the quarry and land exchange area, with no interaction with the public road network. Once delivered to the OBDA, the material is placed in accordance with the indicative staging sequence that aligns with the broader quarry development plan. The overburden material is deposited in controlled lifts, with each lift compacted as required to achieve the necessary geotechnical parameters. The placement is supervised to ensure that materials are appropriately segregated based on their physical properties. The coarse, more stable materials may be used to construction perimeter bunds and embankments, while the finer more moisture-sensitive materials are placed in contained areas with appropriate drainage and capping.

Sequencing will allow for the use of chimney and subsurface drainage to manage porewater pressure within the OBDA structure, subject to further design inputs. Rehabilitation of the outer faces will be carried out progressively and commence once final heights are reached in each stage. The reinstated drainage paths and stream margins will be formed progressively as relevant final landform surfaces are completed, with riparian planting undertaken during the first available planting seasons following stabilisation of those margins.

The OBDA has been designed with an indicative placement volume of approximately 2.7 million cubic metres, with detailed staging and fill rates to be confirmed through detailed design.

4.1 Indicative Stages

The development of the OBDA at Belmont Quarry will occur through a progressive and flexible staging process designed to align with the quarry's long-term extraction programme. The total development is divided into ten stages, each representing an indicative phase of site establishment, foundation preparation, overburden placement, infrastructure installation, and environmental management. This modular approach provides both operational flexibility and environmental control, allowing Winstone to adapt to evolving conditions, manage cumulative effects, and ensure staged rehabilitation is undertaken as each portion of the OBDA is completed.

The north-to-south staging sequence also forms part of overall OBDA development approach. Early completion and rehabilitation of the northern stages will assist in screening later works from adjoining areas of the Belmont Regional Park. As the later stages process, previously completed faces will become increasingly vegetated.

From a hydrological perspective the stagings sequence limits hydrological disturbance to small, discrete headwater catchments at any one time. Stage 1 affects sub-catchment OBDA-2 and OBDA 5, Stage 2 affects OBDA-1, Stage 4 affects OBDA-4, and Stage 5 affects OBDA3. Stages 3 and 6 to 10 are generally located on interfluves between gully heads and have little potential to affect the hydrology of drainage lines downgradient. The staging of the OBDA has been integrated with the quarry development schedule so that disposal capacity remains available ahead of quarry production requirements throughout the approximately 40-year remaining quarry life. Under the integrated programme, bulk overburden placement within the OBDA commences in approximately Year 4, following the preliminary works and Stage 1 enabling works, with the Stage 1 fines containment cell established and commissioned by approximately Year 5 to succeed the Cottle Block fines cell. Placement then proceeds progressively from north to south, with the northern stages (Stages 1 to 3) reaching their design levels within approximately the first 14 years, the central stages (Stages 4 and 5) by approximately Year 17, the western stages (Stages 6 and 7) by approximately Year 20, and the final southern shaping, capping and closure stages (Stages 8 to 10) completed progressively through to approximately Year 35.

Average placement is approximately 55,000 cubic metres (in-situ volume) per year over the life of the programme. Annual volumes will vary with quarry production and stripping requirements, with peak campaign years of up to approximately 315,000 cubic metres associated with enabling works and overburden stripping. Major stripping campaigns are limited to approximately five years across the programme, each involving up to approximately 190,000 cubic metres. The indicative completion timing and cumulative placement volume for each stage under the integrated schedule are set out in Table 1 below.

Table 1 Indicative OBDA staging programme

Stage	Indicative completion (year from commencement)	Cumulative fill volume (m³)	Cumulative footprint (ha)
Stage 1	Year 11	536,000	5.3
Stage 2	Year 12	594,000	6.74
Stage 3	Year 14	1,010,000	7.12
Stage 4	Year 16	1,352,000	11.38
Stage 5	Year 17	1,425,000	12.61
Stage 6	Year 19	1,811,000	14.56
Stage 7	Year 20	1,870,000	14.56
Stage 8	Year 25	2,448,000	15.68
Stage 9	Year 33	2,666,000	15.68
Stage 10	Year 35	2,729,000	15.68

The timing set out in Table 1 is indicative only. As described above, the commencement, duration and completion of individual stages will respond to quarry production requirements and market demand, and each stage will be developed and stabilised as a discrete unit regardless of timing.

In each stage work is managed to limit the extent of exposed surfaces at any one time. Where fill placement is temporarily suspended (e.g. between earthworks seasons), the area will be temporarily stabilised. This may include compaction, sealing with aggregates, hydroseeding, straw mulching, or geotextile covering.

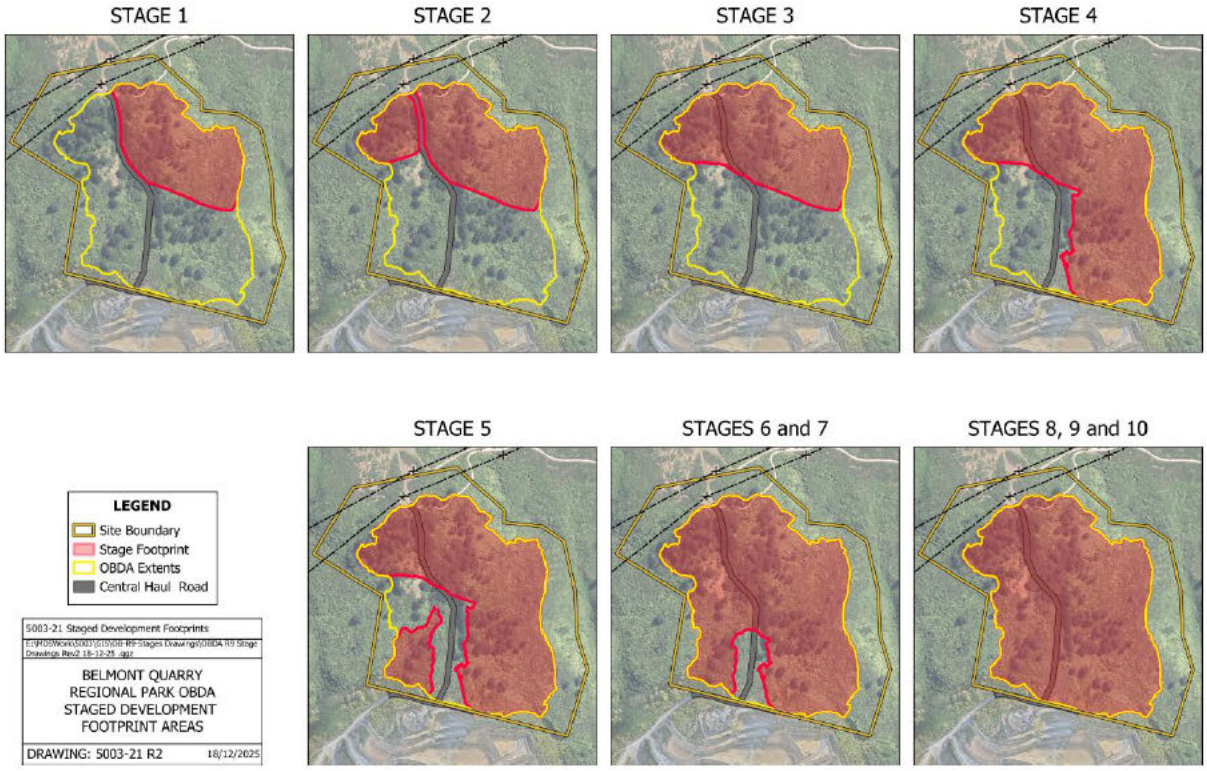


Figure 2 OBDA staged development

4.2 Mobile Plant

Exact plant specifications will vary depending on the contractor engaged, the total volume and nature of material to be moved, haul distances, and production targets. Where ground or operational conditions change, additional or specialised machinery may be required—for example, for soft-ground management, stabilisation, surface profiling, haul road reconstruction, or other maintenance activities. These include:

- 20–70 tonne articulated dump trucks
- 40–70 tonne production excavator
- large bulldozers for push/stockpile work,
- secondary 20–40 tonne excavators for trimming and ancillary excavation,
- a water cart,
- grader, and
- compactor for haul road maintenance and surface conditioning.

The placement of overburden within the Belmont Quarry OBDA will generate intermittent noise and vibration associated with earthmoving plant, haulage, and material placement. No blasting, crushing or processing will be undertaken within the OBDA. Noise generating activities are principally related to vegetation clearance, enabling works, haul road construction are considered temporary works. Overburden and fines placement, compaction, grading, water cart use, rehabilitation and closure works are considered as operational activities. These activities are consistent with existing quarry operations and will occur within established working hours.

Noise and vibration effects will be managed through compliance with recommended consent conditions, including construction hours, cumulative operational noise limits for Belmont Quarry and the OBDA, and the restriction on tonal reversing alarms on machinery. Vibration generated by OBDA activities is not anticipated to pose a risk to structures beyond the quarry boundary. Operational controls will nevertheless be implemented to minimise perceptible vibration within adjacent parkland areas where public presence may occur.

4.3 Hours of Operation

Working hours for overburden placement will be (except for emergency works and secondary works):

7:00 am to 6:00 pm Monday to Thursday

7:00 am to 5:00 pm Friday

7:00 am to 2:30 pm Saturdays.

No work will occur on Sundays or Public holidays.

4.4 Preliminary Works

Preliminary works include establishing an access track along the alignment of the future central haul road. This track as shown in Figure 3 will provide access to the northern boundary of the land exchange area to enable upgrading of the Transpower utility access road, installation of security fencing, signage, and construction of northern bund for amenity screening, prior to bulk earthworks commencing in Stage 1.

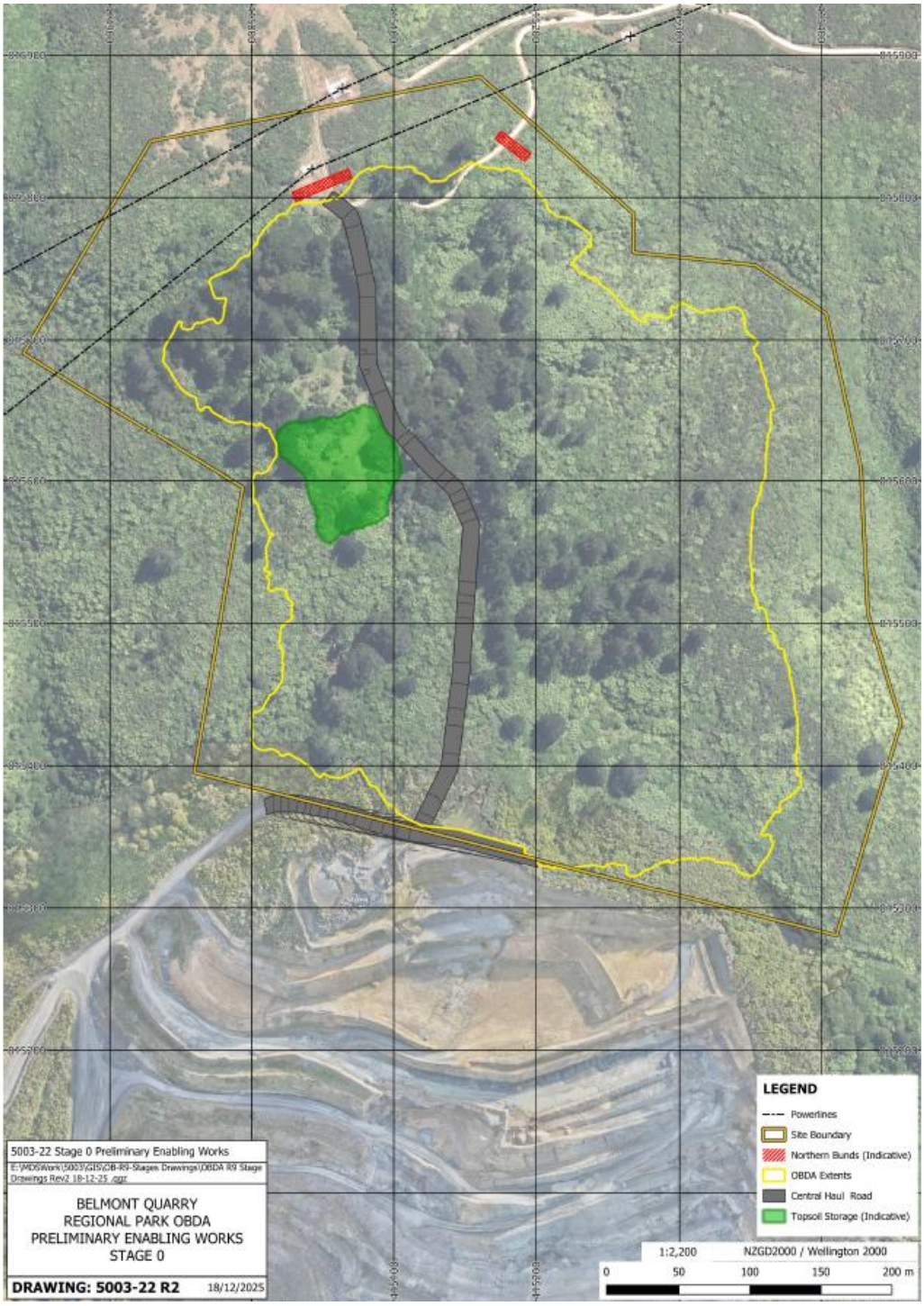


Figure 3 Preliminary works

The northern bunds will be 3–5 m high, approximately 7 m wide. These bunds will be established and planted with native vegetation prior to bulk earthworks for Stage 1 and will function as both a visual and physical buffer between OBDA activities and adjoining areas of Belmont Regional Park. Signage and security fencing, if required along the northern bund will be implemented to redirect park users away from the works area and maintain safe separation between public recreation use and OBDA operations. A stockpile area will be established within the OBDA footprint to store any topsoil removed from site. The stockpile will remain in place till Stage 5 and be used as the main stockpile area on site.

Any material generated from remedial works will be managed separately form clean topsoil and disposed offsite due to elevated zinc concentration that may present an environmental risk.

4.5 Enabling Works

Enabling works occur at the start of each stage where new ground is cleared and prepared to received overburden fill. These works are required for Stages 1, 2, 3, 4, 5, 6, and 8. Stages 7 and 9 builds on the foundations established in preceding stages. Upon completion of final OBDA design and landform grading, in Stage 10 the area is prepared for the remaining stages of final rehabilitation and closure.

As shown in the accompanying plans, albeit limited, some enabling works is required outside the OBDA design footprint but within the land exchange area. Such works will be limited in extent and confined to areas required for structural stability, drainage, or maintenance access dependent on factors such as localized ground conditions, topography, and weather.

Enabling works for each stage include the following phases:

- **Ecological Pre-Clearance Requirements**

Prior to vegetation clearance in each relevant stage (1-6 and 8) ecological pre-clearance requirements will be completed. These include confirming of the clearance boundaries, identifying and marking and translocation of special flora (i.e. swamp maire, coprusma ruba, and ramarama), implementing lizard salvage and transfer as per the Lizard Management Plan, undertaking native bird nesting checks where clearance occurs during the breeding season, and confirming any required buffer or avoidance areas.

If vegetation clearance is required during the native bird breeding season, pre-clearance nest surveys will be undertaken by a suitably qualified ecologist or ornithologist. Active native bird nests will be avoided until nesting has finished, with appropriate buffers applied. Where falcon nesting is identified, specific surveys and avoidance measures will be implemented

- **Access Track Construction**

Tracks are constructed to the toe of the OBDA design for each stage.

- **Installation of Temporary Erosion and Sediment Controls**

These controls will remain in place during the earthworks campaign and will be decommissioned at the end of the campaign once external-facing slopes are topsoiled and stabilized.

- **Topsoil Stripping**

Topsoil will be removed and stockpiled in a predetermined location on a flat area at the top of the ridge where it will remain stable and away from water ways and wetlands. The stockpile will be added to at the start of each new stage and drawn down as soil is respread on final external-facing slopes.

Topsoil handling will be managed to retain its value as a rehabilitation resource where practicable, including its use in revegetation to support soil development, seedling establishment and recovery of indigenous vegetation communities.

Majority of the soil from the OBDA is considered suitable for reuse on site under commercial/ industrial land use scenarios. A small portion of area 2 m and 3 m at a minimum depth of 0.5 m bgl will require offsite disposal due to elevated zinc concentration that may present in topsoil. Remediation of the topsoil is as per the Remedial Action Plan.

- **Foundation Preparation**

Includes removal of materials below topsoil that are unsuitable for forming the OBDA foundation, such as soft or saturated alluvium, highly weathered rock, clay, or organic material. At all stages, unsuitable material will be removed until competent foundation material is exposed that satisfies the material parameters adopted in the geotechnical design. For the enabling works associated with Stages 4, 5 and 8, excavation of unsuitable foundation material will also include the removal of remnants of historic fines disposal cells, where encountered. Excavated unsuitable material will be replaced with engineered fill placed and compacted in accordance with the geotechnical specifications. Foundation preparation may also involve construction of geotechnical features such as shear keys, basal undercuts, or rockfill toe buttresses where required by ground conditions, with the extent of foundation preparation verified for each construction stage.

- **Subsoil Drainage**

To manage pore water pressure at the interface between natural ground and overburden fill, subsoil drains will be installed. These drains will be positioned in existing low-lying areas and will discharge at the toe of the OBDA footprint. Subsoil drainage will generally follow existing gully alignments to maintain subsurface flow paths. The final design may include formal subsoil drains, drainage blankets, perforated pipes, drainage aggregates and geofabric, with larger drains used in main gully channels and smaller drains used to capture localised seepages identified during foundation preparation.

4.6 Stage 1

The initial stage of work includes establishing the main haul road approximately 20m wide along the central ridge of the OBDA, creating access tracks to the toe of the slope to allow for commencement of foundation preparation, drainage and establishment of and installing temporary erosion and sediment controls.

Stage 1 includes the area containing recorded R27/910, a collapsed 20th Century farm building. Vegetation clearance and topsoil stripping within the defined monitoring area around R27/910 will be undertaken under archaeological supervision in accordance with the Archaeological Authority and Archaeological Management Plan.

Prior to Stage 1 vegetation clearance special flora within the Stage 1 footprint, including any swamp maire, Coprosma rubra identified for management, will be marked and managed in accordance with the Landscape Rehabilitation Management Plan. Stage 1 will provide the first opportunity to test the swamp maire translocation methodology. The translocation is supported by 1:10 seedling propagation of swamp maire and planting in the nearby gullies.

Lizard salvage and transfer will be undertaken before vegetation clearance, with any salvage areas, release sites and methods confirmed through the Lizard Management Plan and Wildlife Authority.

Approximately 5.3 ha of vegetation is progressively cleared within the working footprint, and topsoil is stripped and stored in a static stockpile area of approximately 0.6ha for later rehabilitation (Figure 4). Drainage controls, foundation preparation and groundwater management features are installed to prepare the area for bulk fill placement.

. **Enabling Works** **OBDA Design**

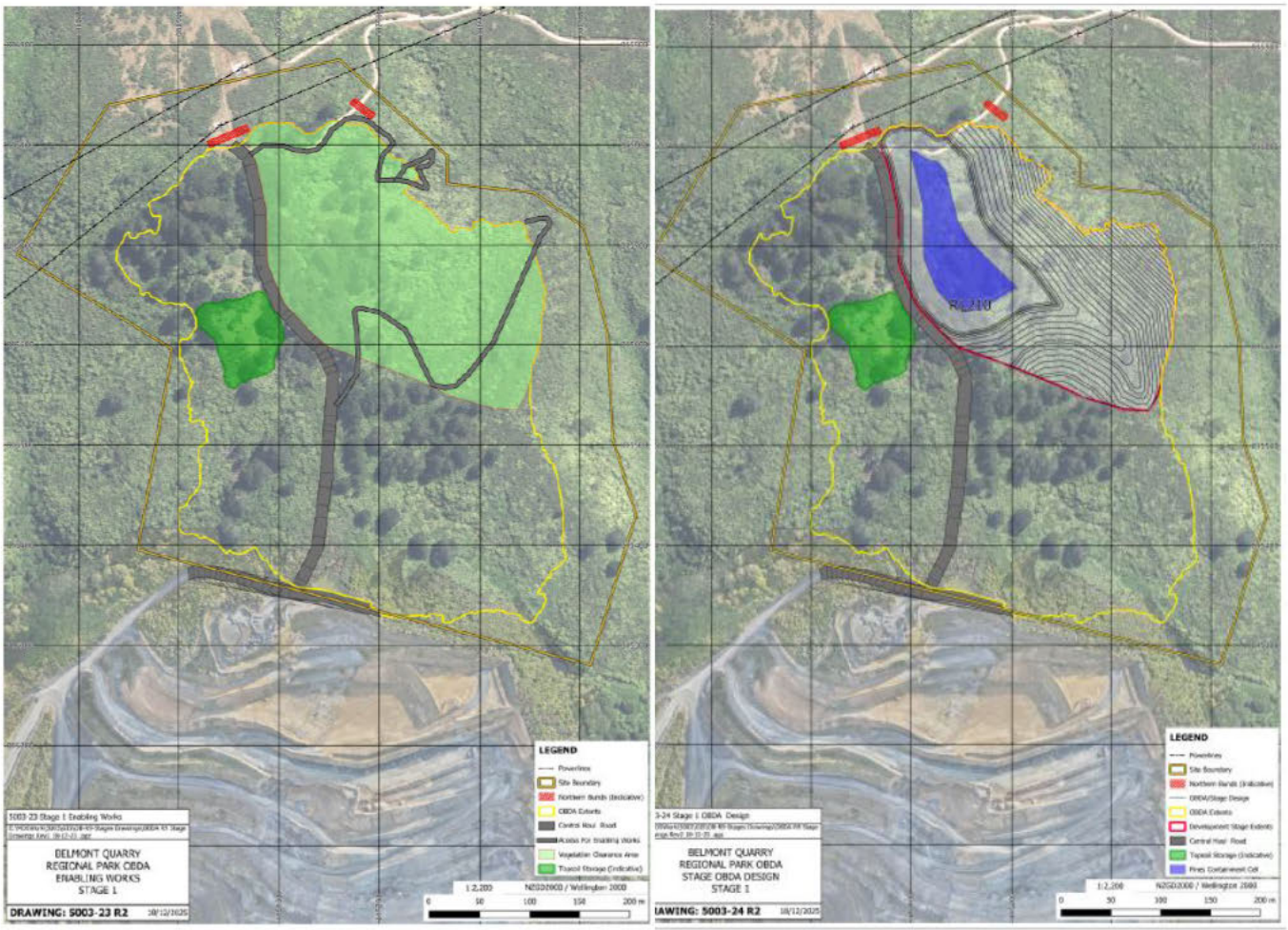


Figure 4: Stage 1 - Enabling and OBDA Design

Stage 1 affects sub-catchments OBDA-2 and OBDA-5, which are headwater tributaries of the eastern drainage system identified as FB-4. Stage 1 water management will therefore focus on maintaining clean and treated discharge to the existing downstream drainage lines and reinstating surface and subsurface flow paths as final landform surfaces are completed

Upon completion of Stage 1, the OBDA is lifted to near-final height of 210m RL. This stage also prepares the footprint for the fines containment cell. The fines containment cell is established and commissioned to receive process fines from the quarry, replacing the existing Cottle Block facility.

4.7 Stage 2

Stage 2 extends development northward into the second catchment. Stage 2 works will also be covered by the Archaeological Authority sought for the preliminary enabling works and Stage 1 and Stage 2. Any archaeological requirements applying to the Stage 2 works will be implemented in accordance with the Archaeological Management Plan.

Temporary works are required for site establishment and construction of additional toe bunds and drainage structures to manage stormwater within the stage footprint. Stage 2 drainage will be designed to maintain discharge to the existing downstream drainage lines, where practicable. Approximately 1.44 ha of vegetation is progressively cleared (Figure 5). Prior to clearance, ecological pre-clearance checks will be completed and special flora such as swamp maire will be managed in accordance with the Landscape Rehabilitation Management Plan. If translocation in Stage 1 was successful, then swamp maire marked within stage 2 will be translocated.

Enabling Works **OBDA Design**

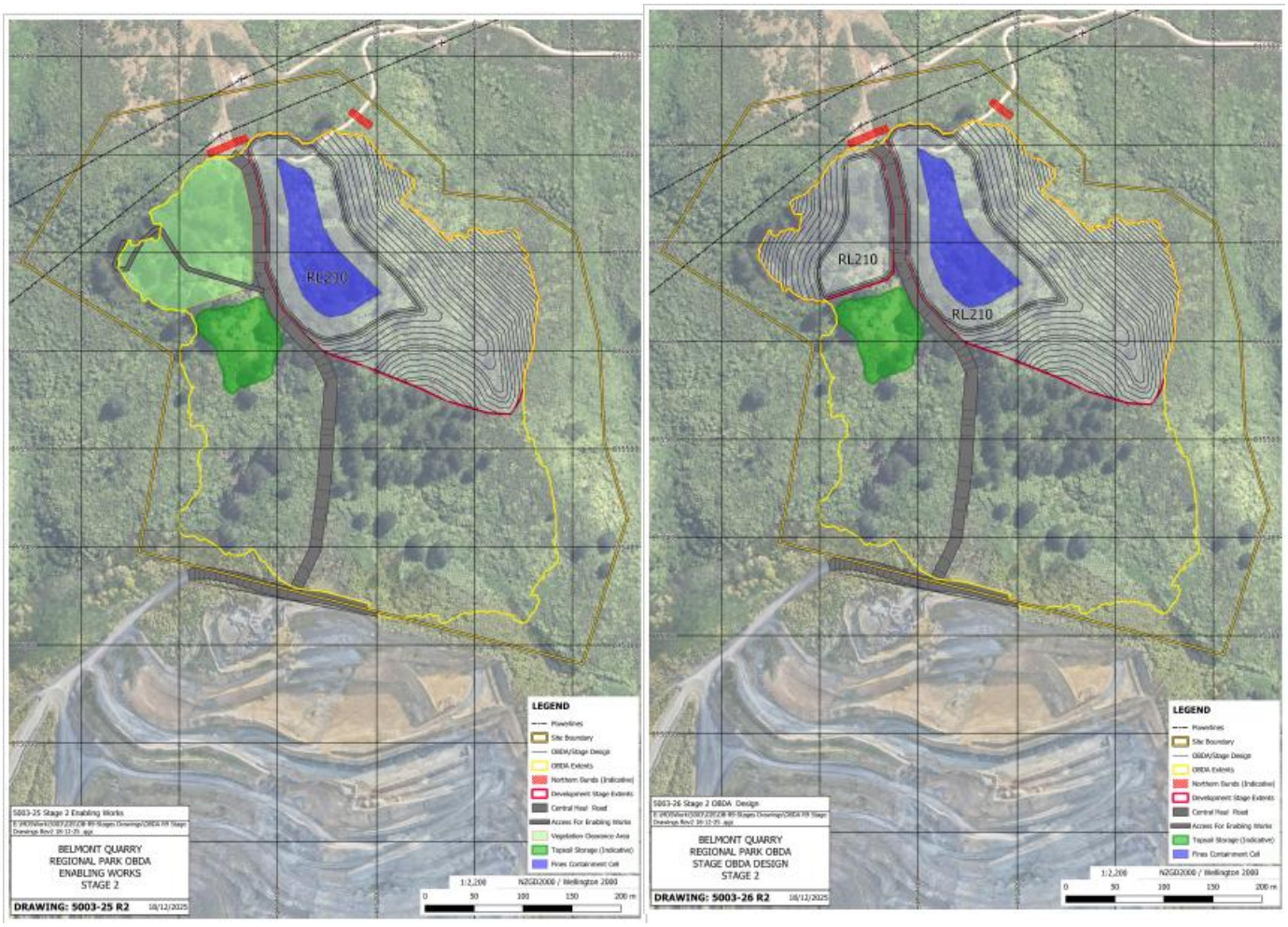


Figure 5: Stage 2 – Enabling and OBDA Design

Progressive rehabilitation begins on northern faces that reach their design heights 210m RL, with stabilisation, hydroseeding to stabilise exposed slopes, topsoil spreading where required, active indigenous planting and managed natural regeneration to integrate completed faces with the adjoining landscape.

4.8 Stage 3

During Stage 3, the OBDA is raised vertically above the Stage 1 and Stage 2 foundations to achieve near-final height of 220m RL in the northern section. Stage 3 is located on the interfluve between small gully heads. The fines containment cell will migrate to the west as it is lifted. Figure 6 shows migration of fines containment cell. External slopes adjoining the park are shaped and profiles to final contours, stabilised topsoil placed, hydroseeded and planted with indigenous vegetation during the next available planting season. Where final drainage paths or stream margins are established within this stage, riparian planting will be implemented to support stream margin stability, shading and naturalisation. This stage marks the first major integration of the OBDA with the surrounding park environment, with completed surfaces tying into adjacent regenerating bush and rehabilitation planting of lower slopes.

Enabling Works **OBDA Design**

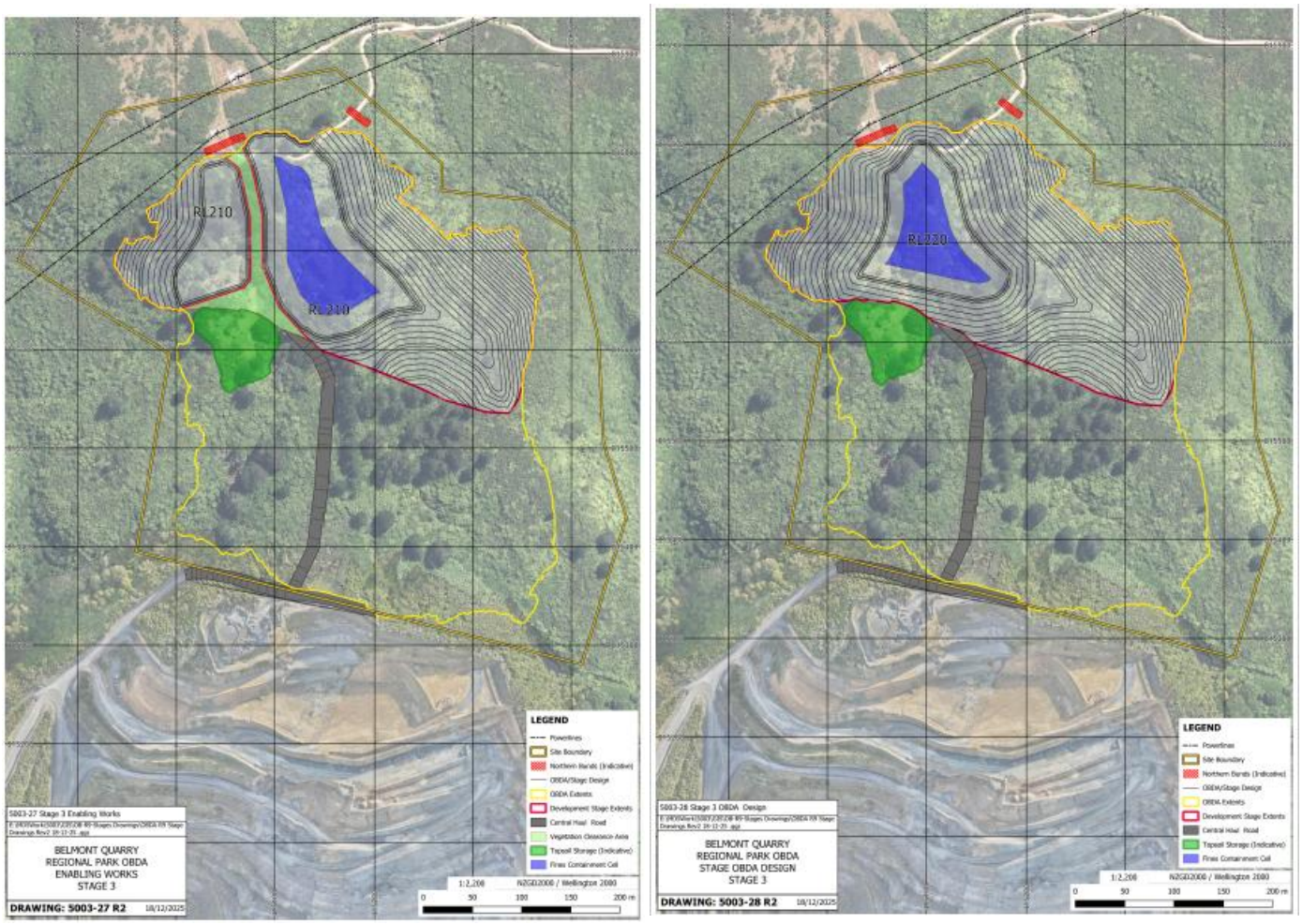


Figure 6 Stage 3 – Enabling and OBDA Design

4.9 Stage 4

Stage 4 initiates construction within the central portion of the OBDA, forming the next foundation catchment to the south of the completed northern area, as shown in Figure 7. This stage drains towards the Firth pond on the southeast of the OBDA. The drainage controls will be designed to maintain existing discharge pathways, where practicable. Temporary works will be required for site establishment. No Archaeological Authority is sought for Stage 4, these will be managed either through a separate Archaeological Authority before works commence, or through Accidental Discovery Protocol where no Authority is in place.

Approximately 4.26 ha of vegetation will be progressively cleared. Prior to stage 4 clearance, ecological pre-checks will be completed (lizard and native bird nesting checks, where required) and special flora survey and marking, including management of any swamp maire and ramarama within the rehabilitated areas. Where practicable, these plants will be directly transferred to suitable receiving areas, with propagation and contingency offset planting implemented if translocation is unsuccessful.

Foundation preparation for the Stage 4 enabling works will involve the removal of unsuitable material until competent foundation material is exposed that satisfies the material parameters adopted in the geotechnical design, including the removal of remnants of historic fines disposal cells, where encountered. The internal haul road is aligned north-south from the southern extent, and new drainage structures are installed to connect with existing controls.

Enabling Works **OBDA Design**

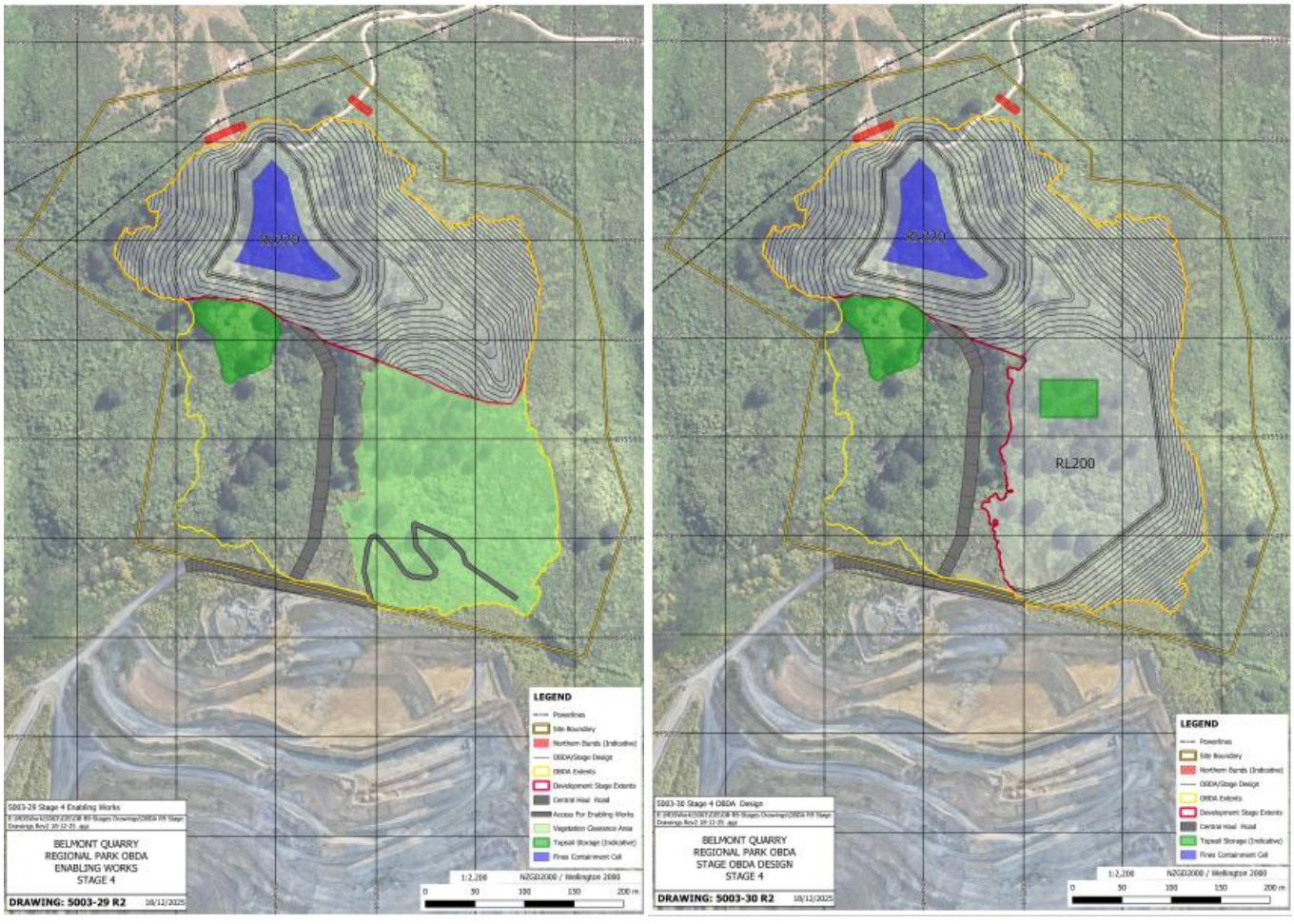


Figure 1 Stage 4 – Enabling and OBDA Design

Overburden placement continues to build the landform and maintain capacity for fines storage. Sediment controls remain in place throughout construction to ensure runoff is contained within the OBDA. Stage 4 OBDA is lifted to near-final height 200m RL. Provision for a secondary stockpile is made on site for Stage 5 enabling works.

As final surfaces and drainage margins are completed within this stage, they will be stabilised and progressively rehabilitated, including hydroseeding, indigenous planting and riparian planting along reinstated drainage pathways where relevant.

4.10 Stage 5

Stage 5, as shown in Figure 8, integrates earlier northern and central works to create the mid-section of the OBDA landform. No Archaeological Authority is sought for Stage 5, these will be managed either through a separate Archaeological Authority before works commence, or through Accidental Discovery Protocol where no Authority is in place Temporary works will be required for site establishment, focused on achieving the central contours and consolidating internal drainage connections. This Staege drains towards the Waikorupupu Stream system. Surface and subsurface drainage controls will be maintained to continue discharge to the existing downstream drainage line and protect downstream receiving environments. Foundation preparation for the Stage 5 enabling works will involve the removal of unsuitable material until competent foundation material is exposed that satisfies the material parameters adopted in the geotechnical design, including the removal of remnants of historic fines disposal cells, where encountered. Two designated stockpile areas have been provided on-site for the storage of topsoil.

Ramarama management will be confirmed before stage 5 clearance. Where Stage 1 or other rehabilitated areas are available, ramarama may be transferred into those areas. If suitable OBDA receiving areas are not available in time, ramrama will be transferred to suitable offset areas adjacent to the site in accordance with the Landscape Rehabilitation Plan.

The fines containment cell maintains sufficient volume for ongoing fines disposal. OBDA is lifted to near-final height 200m RL. As final surfaces and drainage margins are completed within this stage, they will be stabilised, rehabilited with topsoil replacement, hydroseeding, and indigenous planting and riparian planting along reinstated drainage pathways where relevant contributing to long-term slope stability and landscape integration.

Enabling Works **OBDA Design**

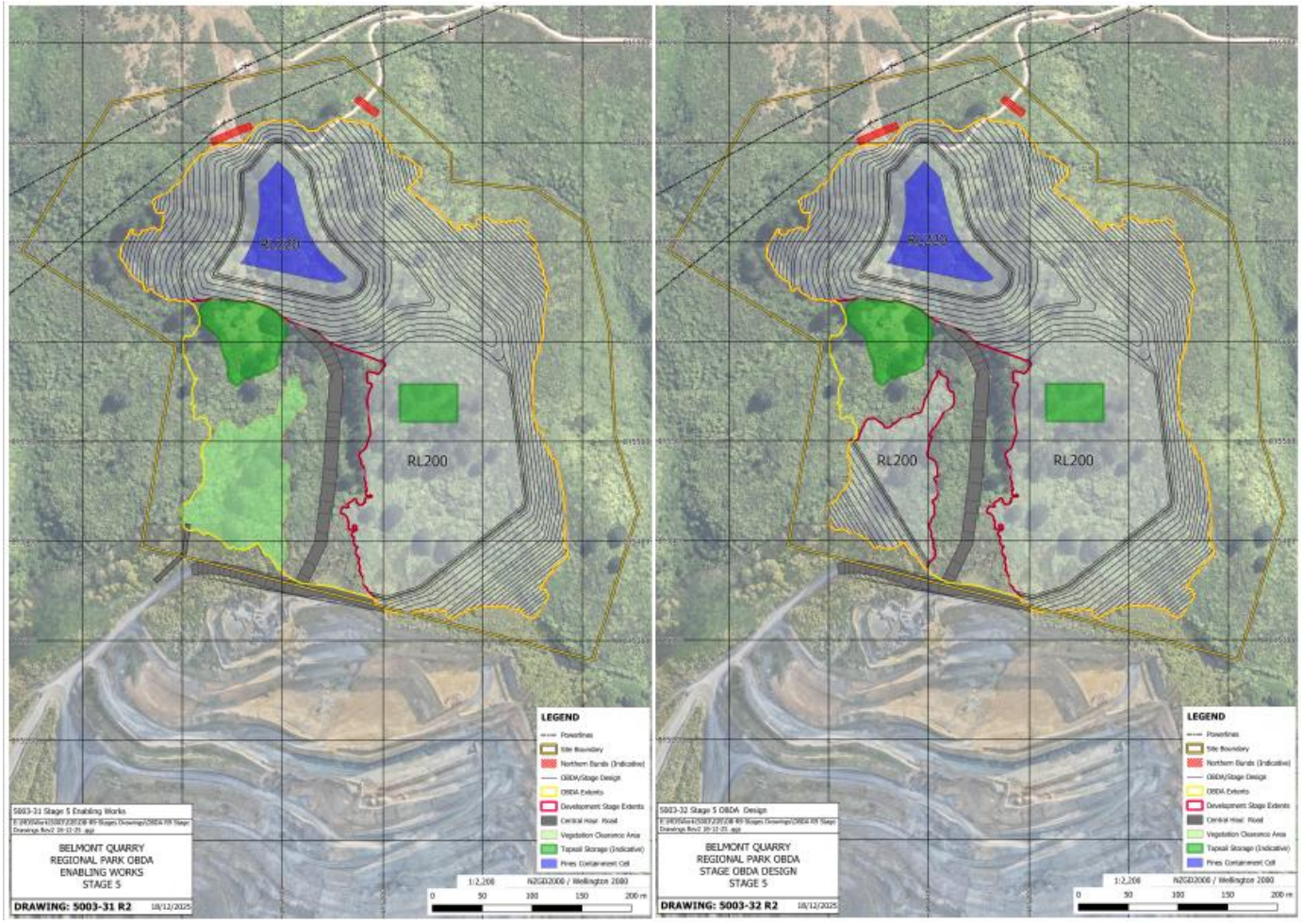


Figure 8 Stage 5 – Enabling and OBDA Design

4.11 Stage 6

Development shifts to the western extent of the OBDA during Stage 6 (Figure 9). No Archaeological Authority is sought for Stage 6, these will be managed either through a separate Archaeological Authority before works commence, or through Accidental Discovery Protocol where no Authority is in place Foundation preparation includes temporary works for site establishment and the formation of southern toe bunds, subsurface drainage, and access road extensions to connect the haul route to the final working area. Approximately 1.95 ha of vegetation is progressively cleared. Overburden placement continues following the established methodology, with close monitoring of drainage and stability. The OBDA is lifted to near-final height of 200m RL. This stage establishes the structural base required for the final western and southern profiling works.

The stage 6 works are completed close to the central western gully with discharge of erosion and sediment control directed towards the receiving environments. An ecological sediment monitoring will be undertaken in accordance with the Landscape Rehabilitation Plan with regard to the ensuring large sediment discharges do not occur into this system.

As final surfaces and drainage margins are completed within this stage, they will be stabilised and progressively rehabilitated, including hydroseeding, indigenous planting and riparian planting along reinstated drainage pathways where relevant.

Enabling Works **OBDA Design**

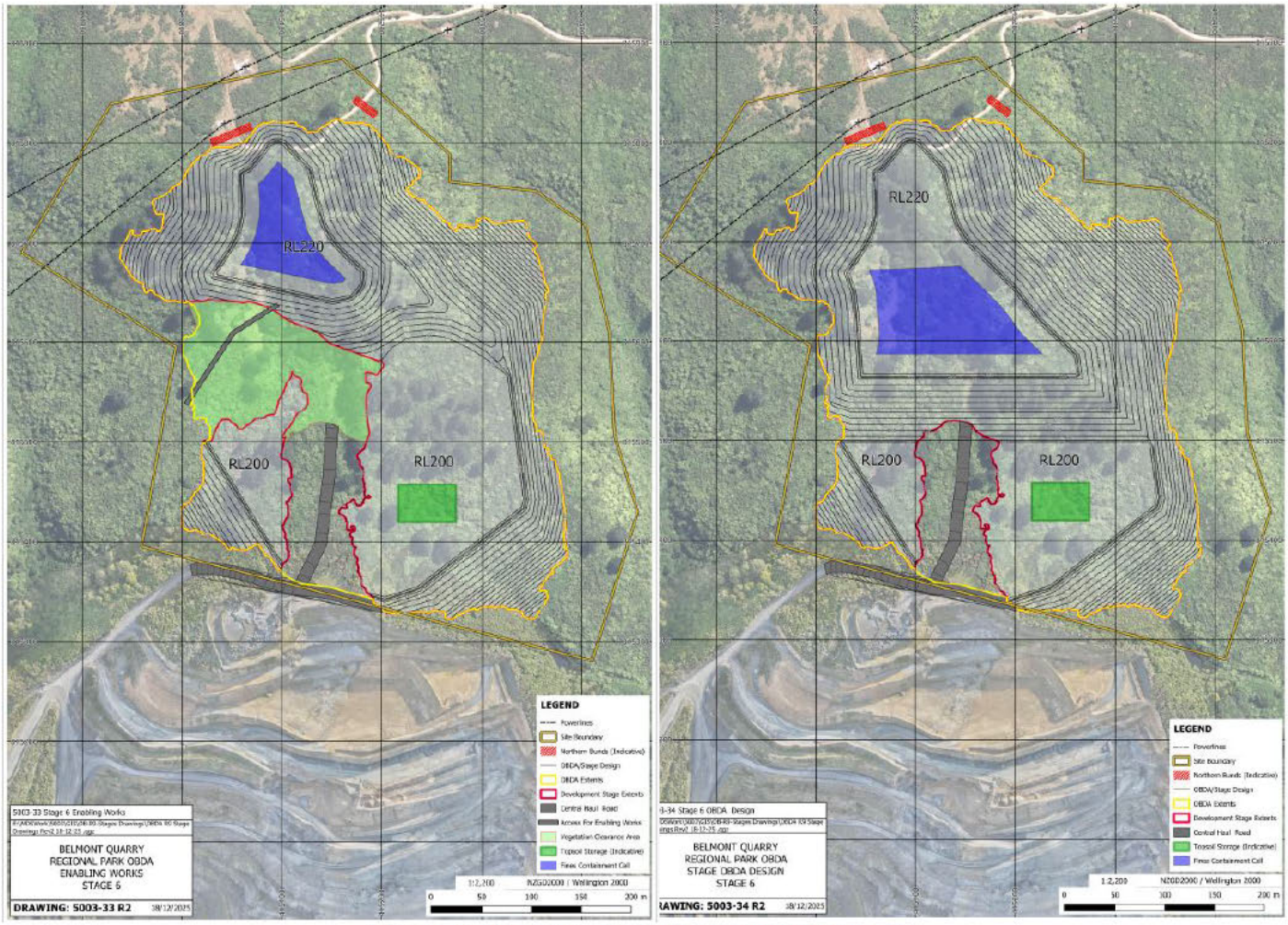


Figure 9: Stage 6 – Enabling and OBDA Design

4.12 Stage 7

Stage 7 builds upon the southern foundations, completing the bulk fill to achieve design elevations (Figure 10). The fines containment cell migrates further southward as filling progresses. Outer faces are graded to merge with the existing topography and are progressively topsoiled, hydroseeded, and planted. Northern face of OBDA raises to 230m RL. Rehabilitation extends to connect with earlier planted areas, linking the entire northern and central zones into a continuous vegetated corridor. This connected rehabilitated area will contribute to the screening and visual integration of later southern and central works when viewed from the Belmont Regional Park.

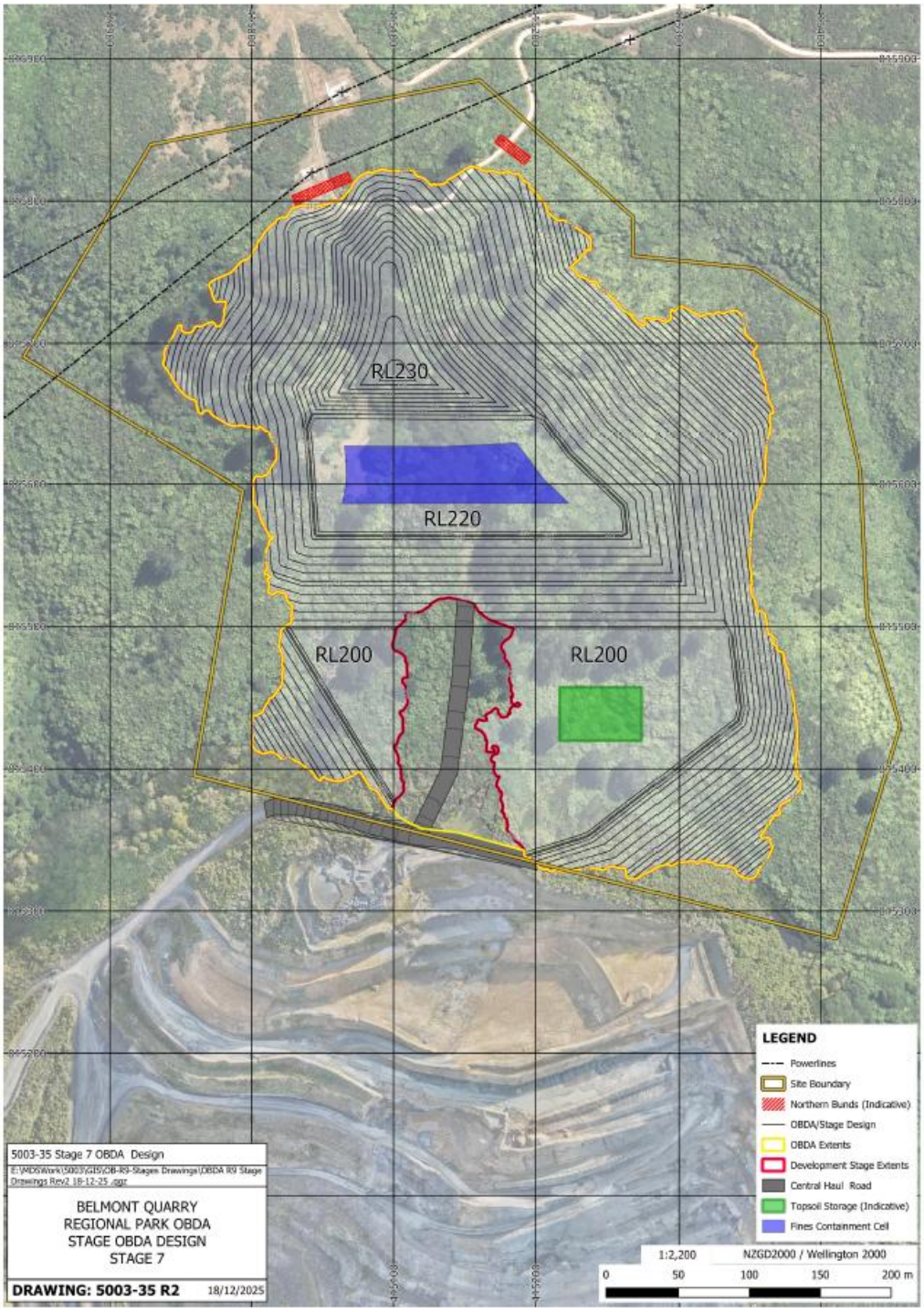


Figure 10: Stage 7 – OBDA Design

4.13 Stage 8

In Stage 8, final shaping and slope trimming occur across the central and southern sections of the OBDA. No Archaeological Authority is sought for Stage 8, these will be managed either through a separate Archaeological Authority before works commence, or through Accidental Discovery Protocol where no Authority is in place Approximately 1.12 ha of vegetation will be progressively cleared (Figure 11). Prior to Stage 8 vegetation clearance, ecological pre-clearance checks, lizard salvage, native bird nesting checks where required, and any special flora management will be undertaken in accordance with the certified Landscape Rehabilitation Management Plan. Foundation preparation for the Stage 8 enabling works will involve the removal of unsuitable material until competent foundation material is exposed that satisfies the material parameters adopted in the geotechnical design, including the removal of remnants of historic fines disposal cells, where encountered. As final surfaces are completed within this stage, they will be stabilised, and progressively rehabilitated, including topsoil placement, hydroseeding and native planting. Monitoring slope performance and vegetation establishment ensures long-term stability before final sign-off of active construction areas.

Enabling Works **OBDA Design**

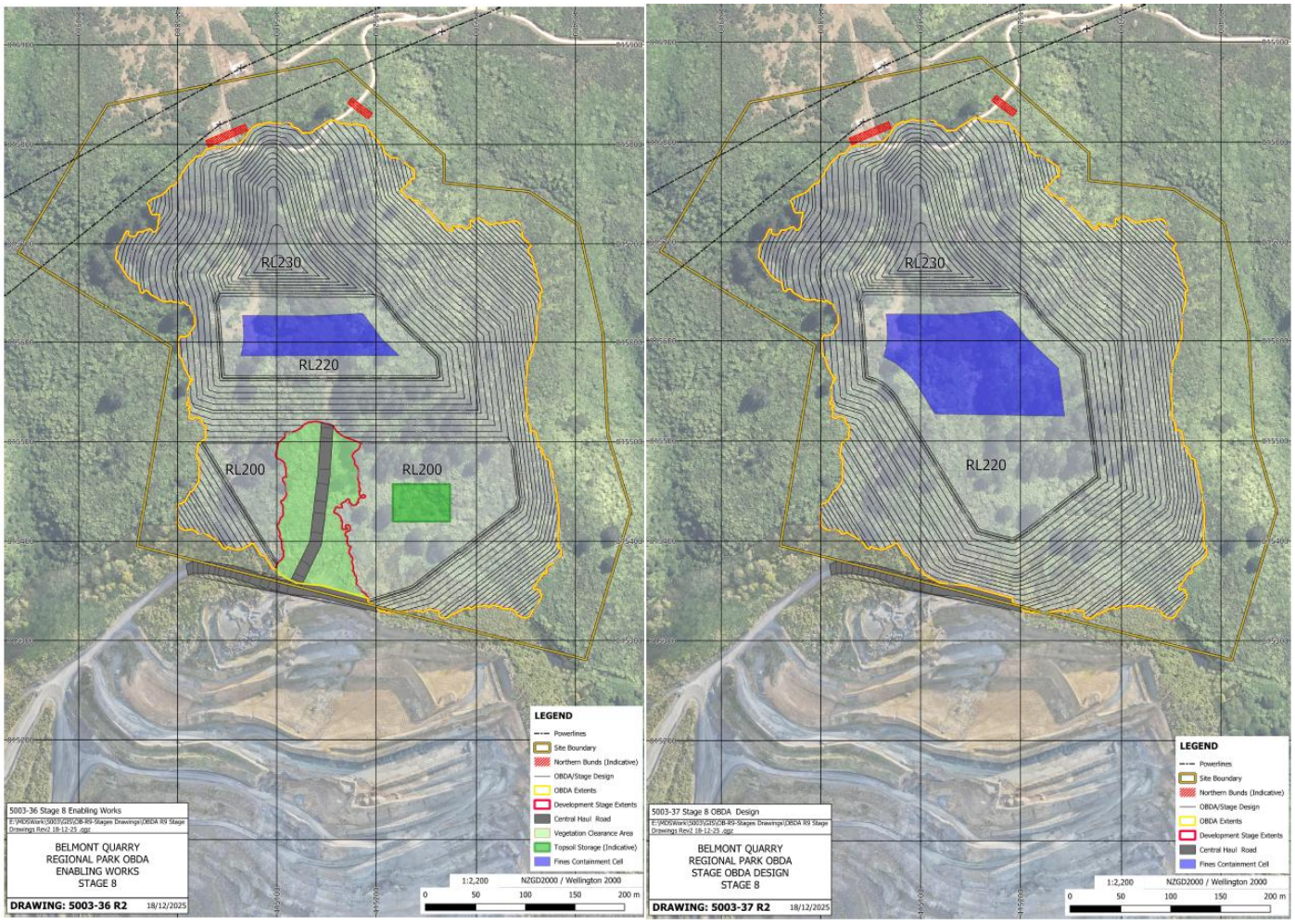


Figure 11: Stage 8 – Enabling Works and OBDA Design

4.14 Stage 9

Stage 9 completes the overall landform, with final surface drainage connections established to permanent outlets and sediment ponds (Figure 12). Remaining areas of the fines containment cell are capped, and incorporated into the final landform with final drainage connections, surface shaping, stabilisations. The fines pond slowly migrates south and shaped in preparation for closure. Final contour adjustments are carried out where required to meet design levels, and planting of any remaining bare surfaces is completed.

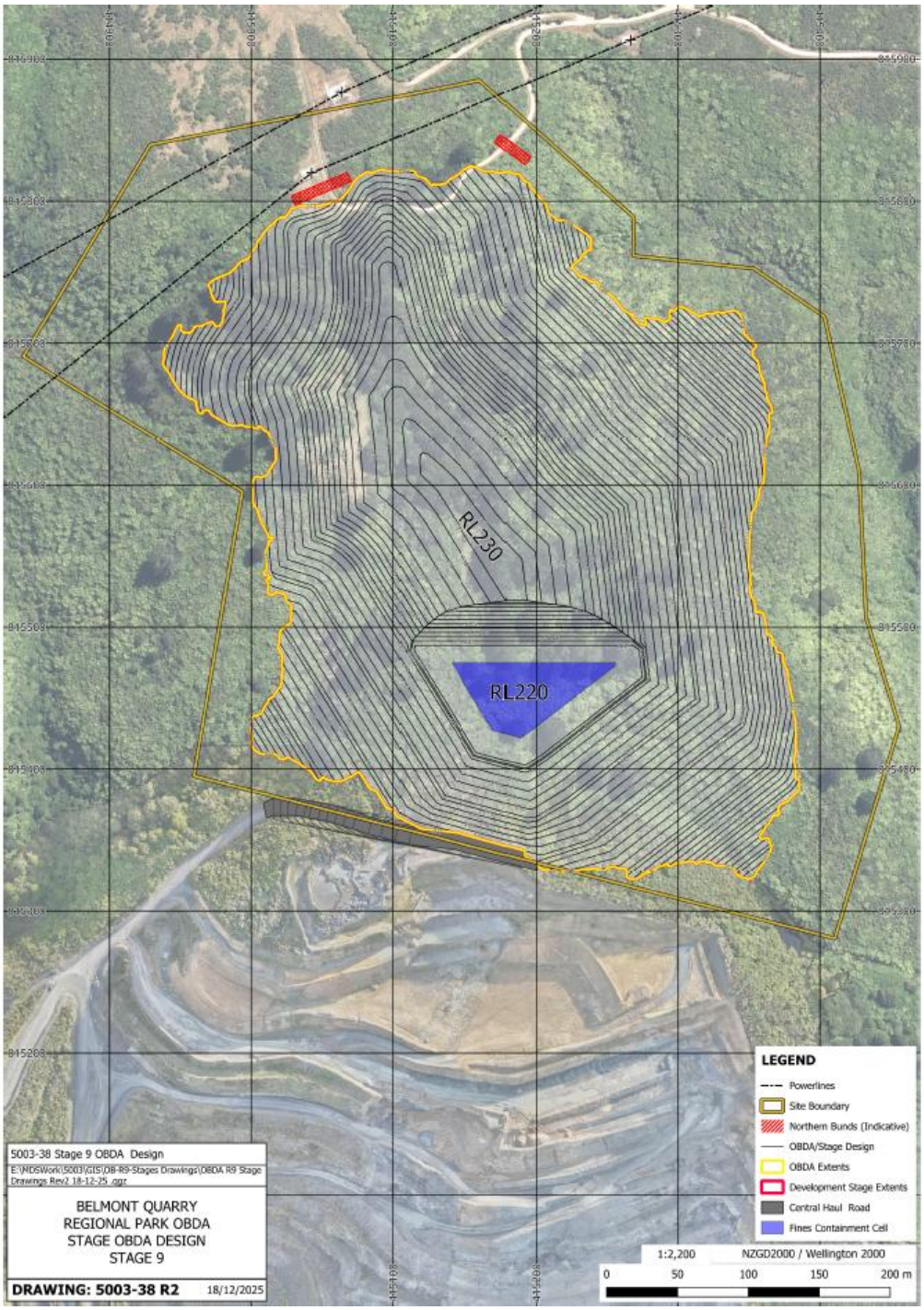


Figure 12 Stage 9 - Enabling works and OBDA Design

4.15 Stage 10 Rehabilitation and Closure

In the final stage as Figure13, when all surface treatment across the OBDA is completed. The fines containment cell is fully capped and incorporated into the landform. The remaining final profile of the OBDA is topsoiled, planted and placed into a long-term maintenance and monitoring under a Rehabilitation Plan.

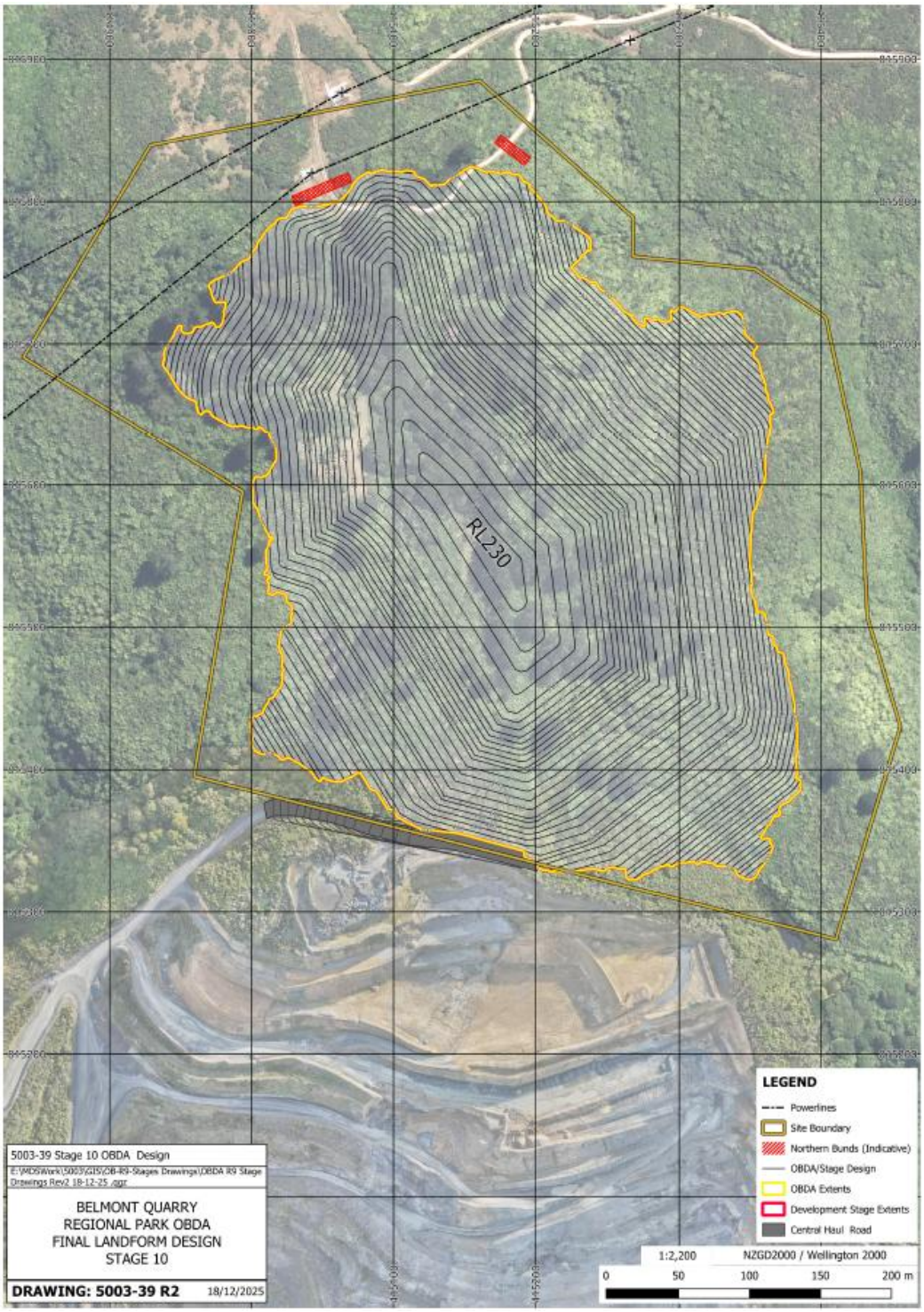


Figure 13 Stage 10 - Rehabilitation

The long-term Rehabilitation Plan prepared prior to commence of this stage which will seek to integrate the landscape and ecological outcomes into the final landform. The plan will be developed in partnership with mana whenua. Key considerations of this plan are geotechnical stability, restoration of ecological values, enabling future land use where practicable, and removing construction infrastructure. Final external slopes relied on for rehabilitation planting will be formed to be plant-able and maintainable, generally no steeper than 1V:2H unless otherwise certified as suitable, and the final ridgetop will be rounded and naturalised to avoid an overly engineered or benched appearance.

The Rehabilitation Plan provides for groundcovers, shrubs, trees, and canopy species to support slope stability and ecological connectivity. Targeted pest plant and animal control will assist vegetation establishment. Erosion and sediment controls will be removed once vegetation is established, and the surface is certified stable by a suitably qualified professional, with notification to Greater Wellington Regional Council. All health and safety fencing around the bunds, silt fencing, signage, and access controls will be removed unless required for ongoing safety or property boundaries

Annual rehabilitation reporting will be undertaken for the life of the consent and until closure sign-off. Reports will identify stages completed, areas stabilised, hydroseeded and planted, maintenance and pest control undertaken, monitoring results against rehabilitation performance standards, and any remedial or adaptive management actions proposed or completed.

5 Ecological Offset

The ecological effects management package has been developed in accordance with the effects management hierarchy. The OBDA design has avoided and minimised effects where practicable, including by avoiding the central western swamp maire gully, avoiding mature pukatea forest in the lower south-western gully, avoiding most eastern natural inland wetland areas, and minisming wetland loss to approximately 0.07 ha. Residual effects remain because of the time lag between vegetation clearance and the re-establishment of comparable ecological values through onsite restoration.

The Heffernan Block has been identified as the principal ecological offset site for the residual adverse ecological effects associated with the Belmont Quarry OBDA. The site is located within Belmont Regional Park, approximately 2 km south-west of Belmont Quarry. The offset area will be managed through an Ecological Offset Plan, which will confirm the final offset area, baseline ecological conditions, target vegetation communities, planting methods, plant species, pest and animal control, monitoring requirement, performance standards, remedial triggers and reporting requirements. The offset planting and management will be staged to ensure ecological gains are delivered. The ecological assessment identifies an offset package that includes approximately 18 hectares of additional restoration in Belmont Regional Park, together with wetland creation and stream enhancement measures where required.

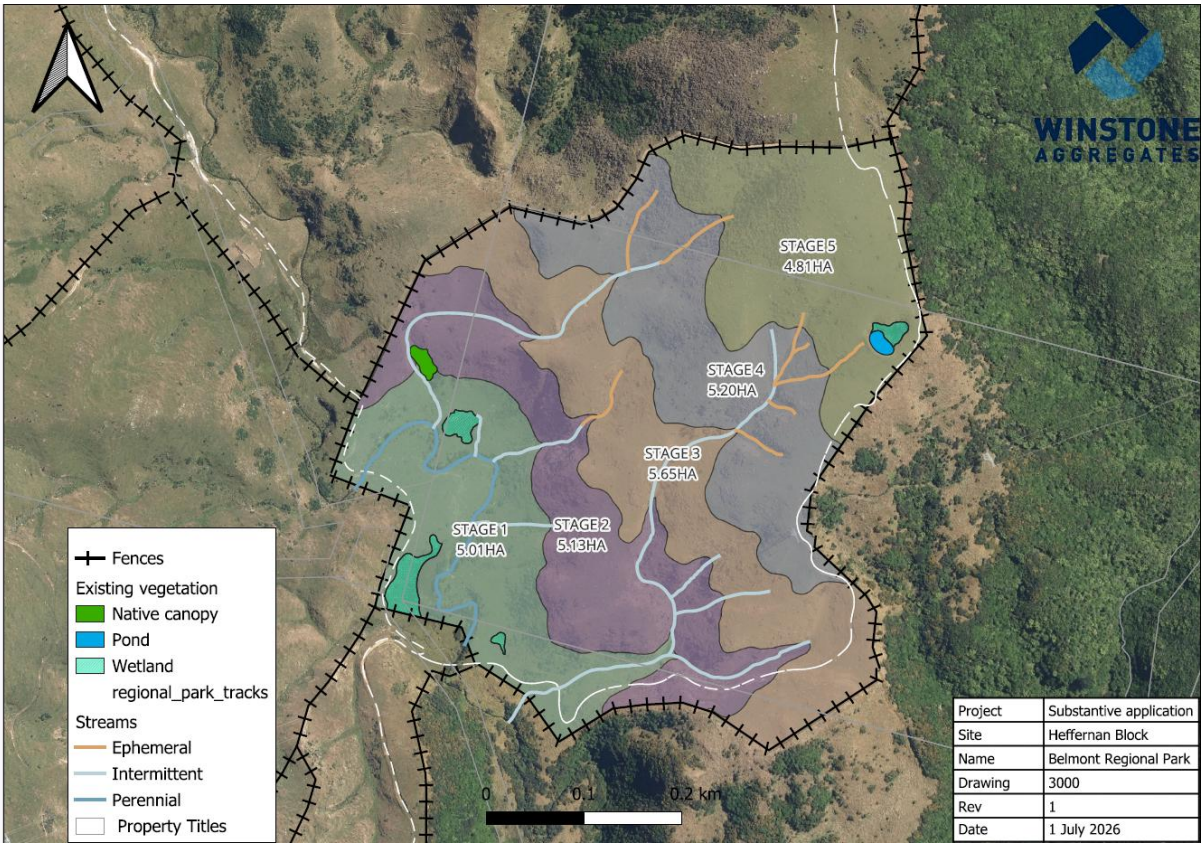


Figure 14 Heffernan Block Offset Location, Belmont Regional Park

5.1 Offset components

The Heffernan Block offset will include the following components.

Indigenous vegetation restoration

A comprehensive ecological restoration and offset package is proposed to address residual adverse ecological effects associated with the stage development of the OBDA. The ecological assessment identified that approximately 15.7 hectares of vegetation habitat will be affected within the OBDA footprint, including approximately 9 ha of indigenous seral broadleaf shrubland / forest and associated fauna habitat, together with exotic-dominated pine treeland, gorse and pasture. The OBDA will also be progressively restored to indigenous vegetation cover of the life of the project.

A 18 ha area is proposed to be revegetated over the 25 years and completed in a 5 yearly staging period to coincide with the vegetation removal from the OBDA.

Wetland offset

The wetland offset package will include creation and restoration of approximately 0.2ha of wetland habitat, to be secured and managed through the Ecological Offset Plan. The final wetland offset design will confirm the location, hydrological inputs, planting palette, establishment methodology, maintenance requirements, weed and pest control, performance standards and monitoring requirements. The wetland offset will be designed to establish indigenous wetland vegetation and ecological function and to compensate for the permanent loss of wetland extent within the OBDA footprint.

Stream enhancement

The OBDA will affect ephemeral and intermittent headwater tributaries within the site. The ecological assessment identifies that approximately 416m of mostly intermittent stream will be reclaimed or otherwise affected, with stream and drainage functions to be reinstated progressively as the final OBDA landform is completed. The affected tributaries generally have low aquatic value within the OBDA footprint, with downstream perennial reaches having higher ecological function and requiring protection from large sediment discharges and hydrological change.

The primary freshwater effects management response is onsite stream and drainage-path reinstatement. As stages of the OBDA reach final landform, drainage paths and stream margins will be formed to mimic or simulate existing ephemeral flow paths as far as practicable, with riparian planting undertaken to support channel stability, shading, organic matter inputs and naturalisation of the reinstated drainage system.

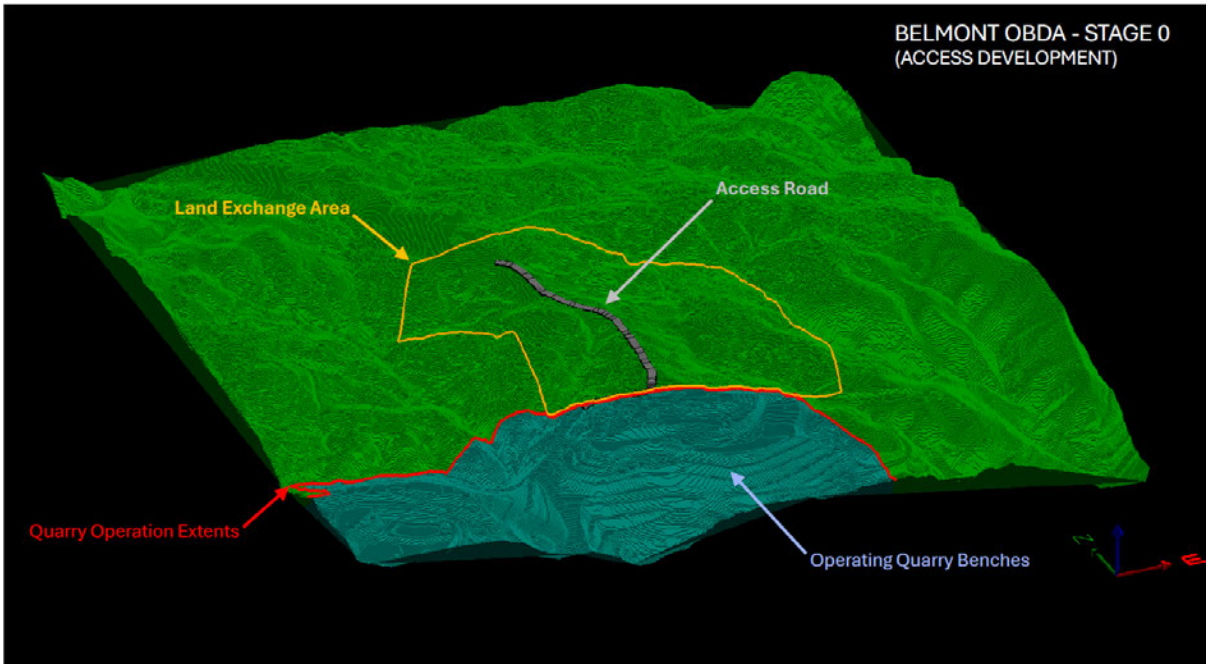
The ecological assessment identifies a contingency stream offset framework based on a 4.3:1 SEV-derived ratio if onsite stream reinstatement is not successful. The Ecological Offset Plan and Stream Reinstatement Methodology will set out the monitoring criteria, performance standards and triggers for determining whether the contingency stream offset is required.

A key freshwater management requirement is to avoid adverse sediment and hydrological effects on downstream wetlands and streams, particularly the central western swamp maire gully. Sediment monitoring will include baseline sediment deposition measures, vegetation condition monitoring and photographic records of swamp maire root zones. If sediment deposition is detected as a result of failure of erosion and sediment controls, remedial actions will be implemented, including careful hand removal of sediment where appropriate and any additional ecological response required by the Ecological Offset Plan.

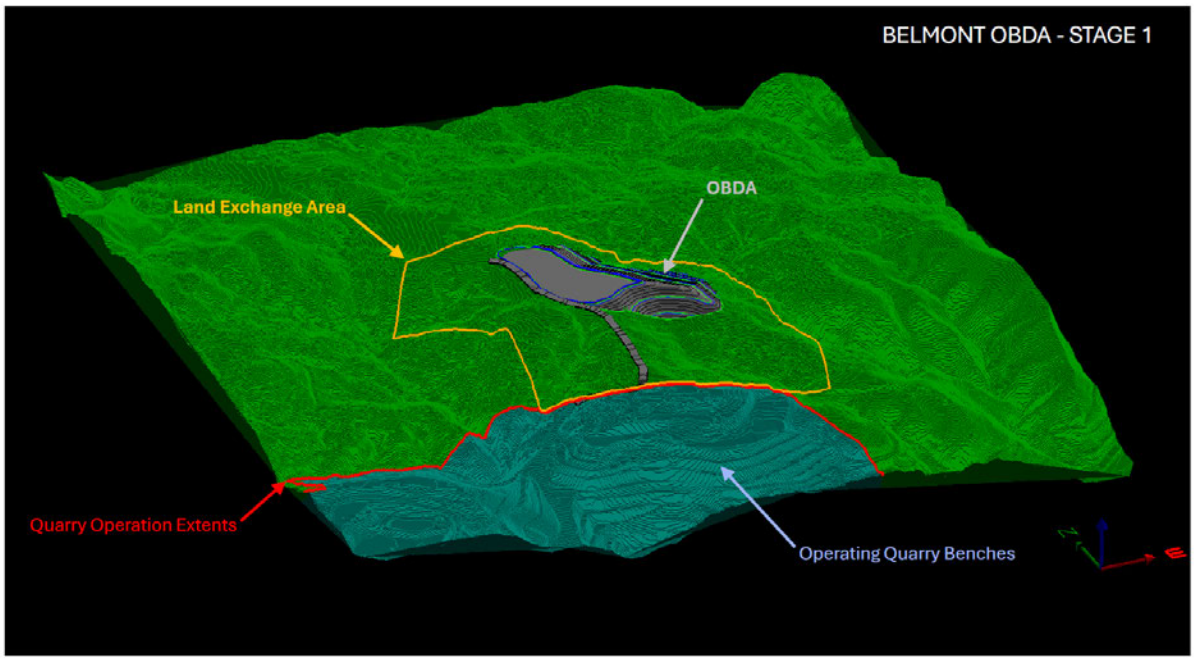
The freshwater offset package will operate alongside the indigenous vegetation and wetland offset components. Together, the package will restore indigenous vegetation, reinstate drainage and stream functions, enhance riparian margins, improve habitat quality, and support long-term ecological integration of the OBDA and Heffernan Block restoration areas within the wider Belmont Regional Park ecological setting.

APPENDIX A: Spatial Perspective Diagrams (FOR INFORMATION ONLY)

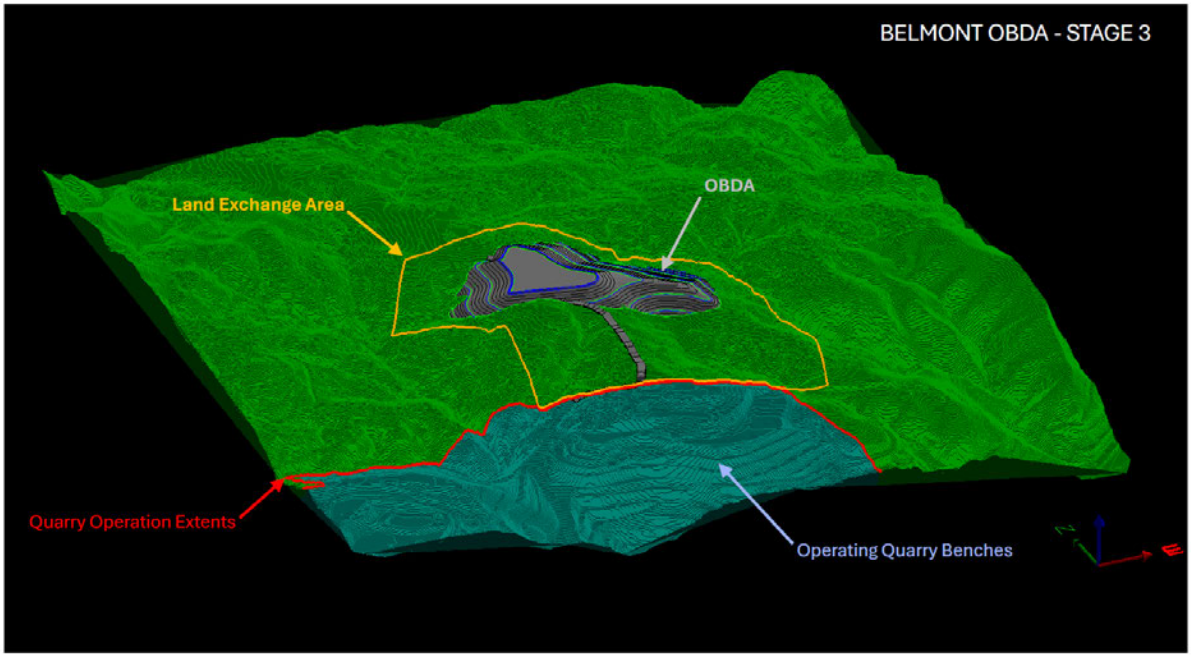
STAGE 1



STAGE 2



STAGE 3



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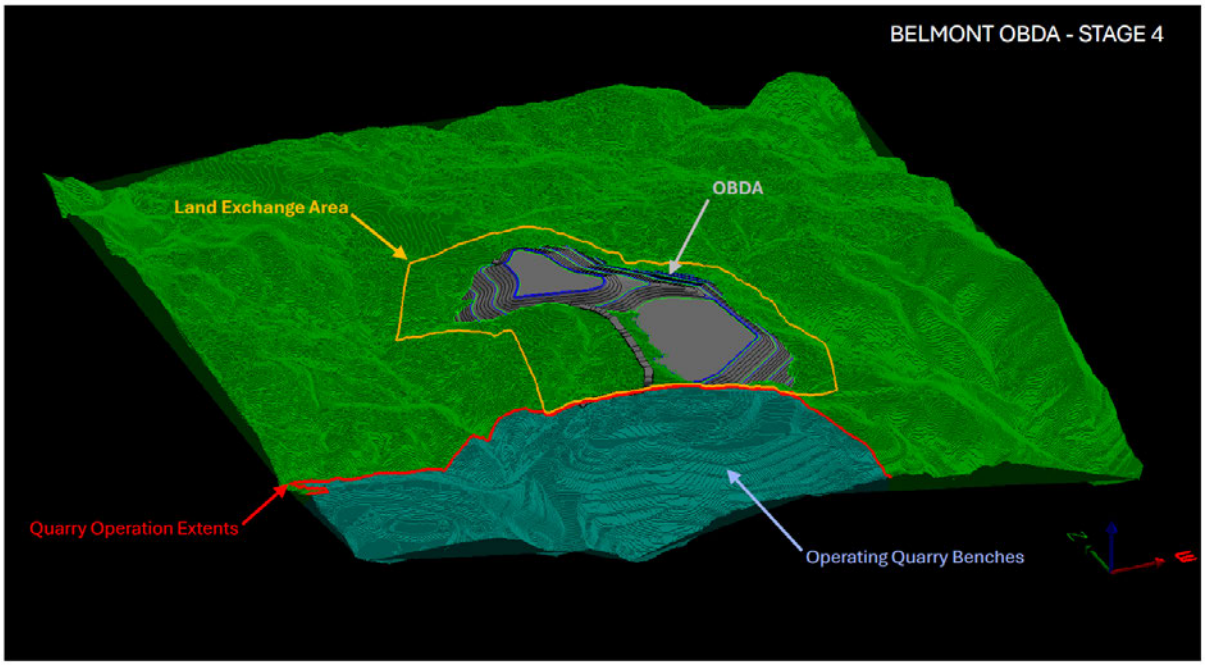
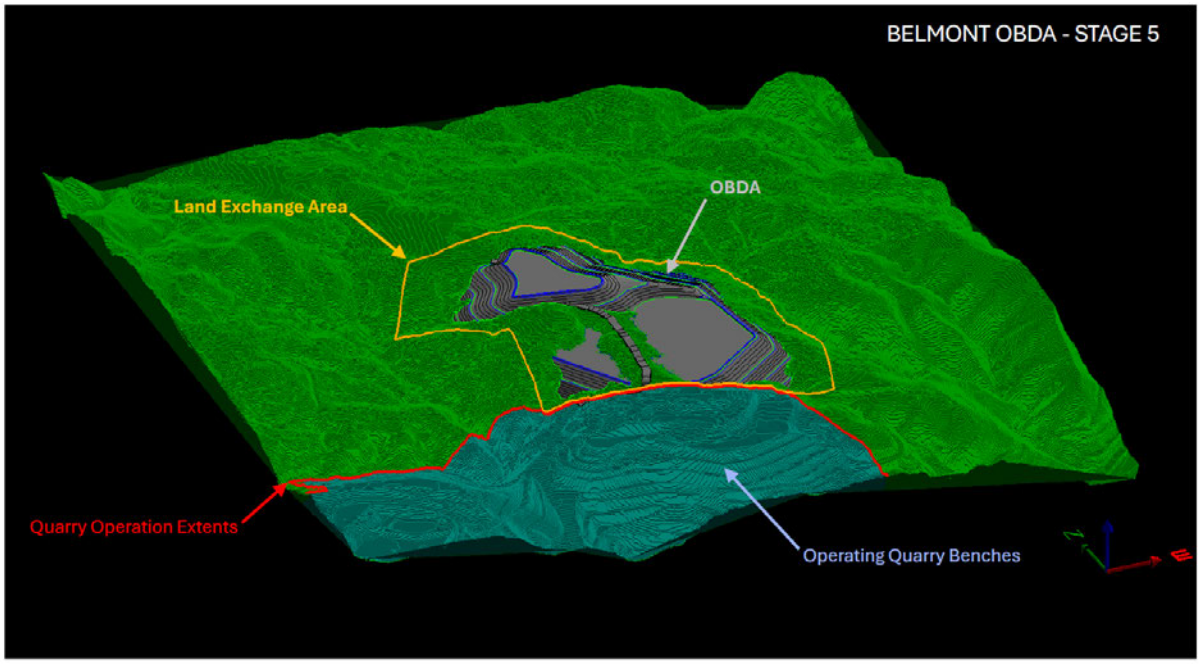
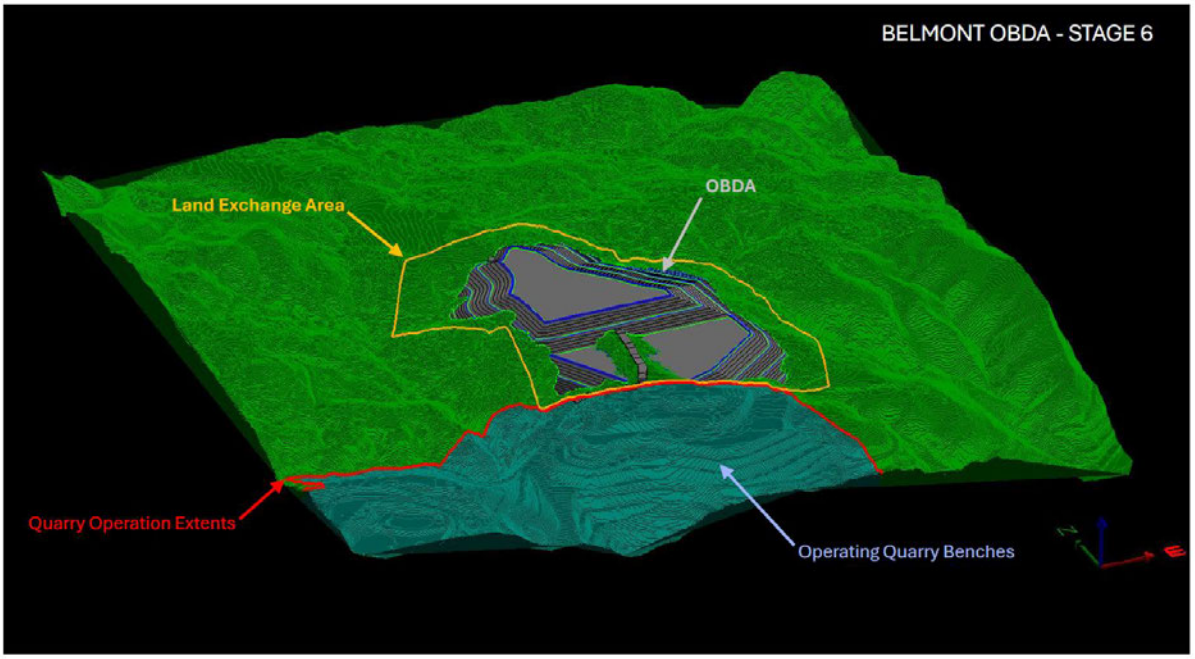


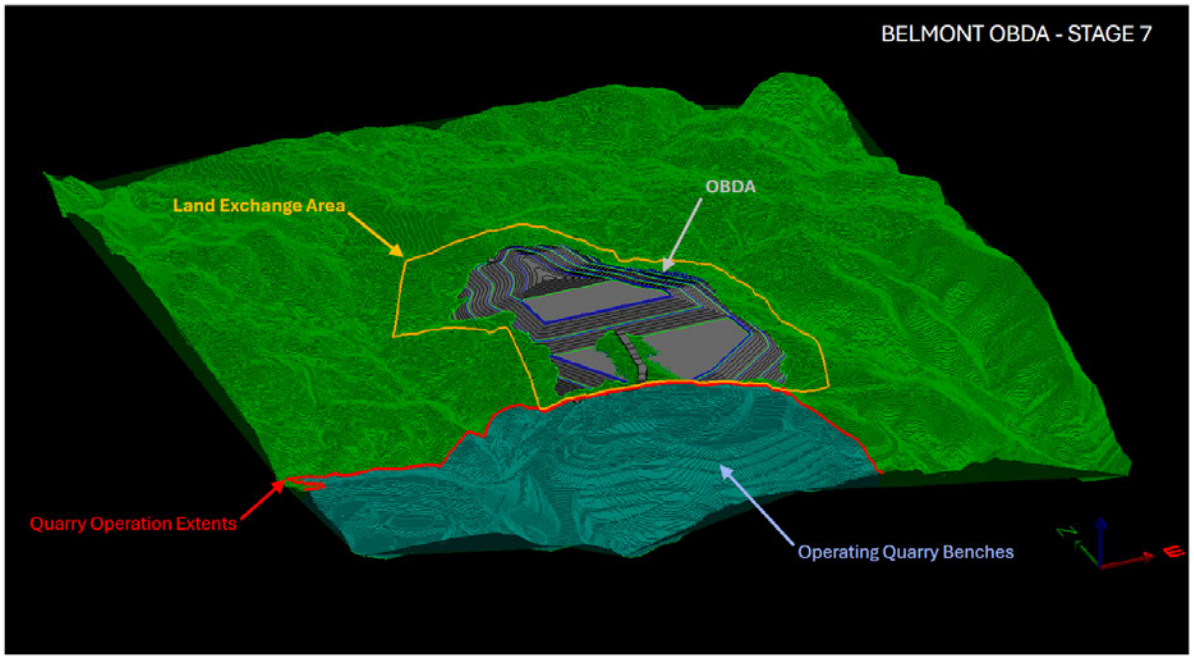
STAGE 5



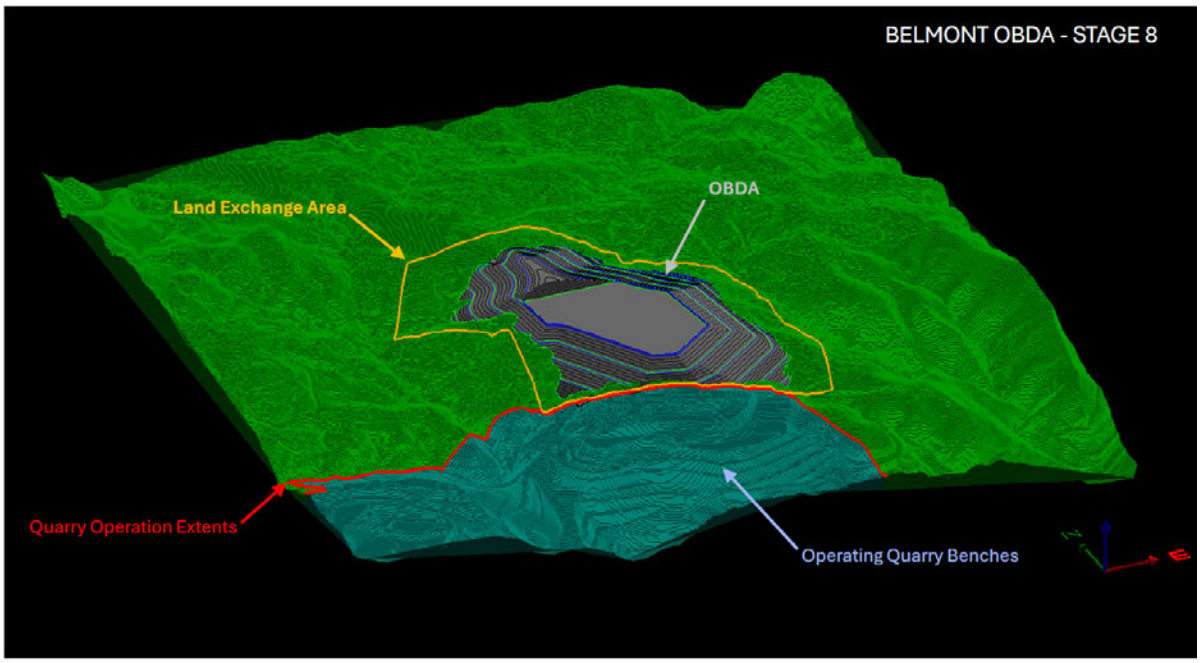
STAGE 6


BELMONT OBDA - STAGE 6
Land Exchange Area
OBDA
Quarry Operation Extents
Operating Quarry Benches

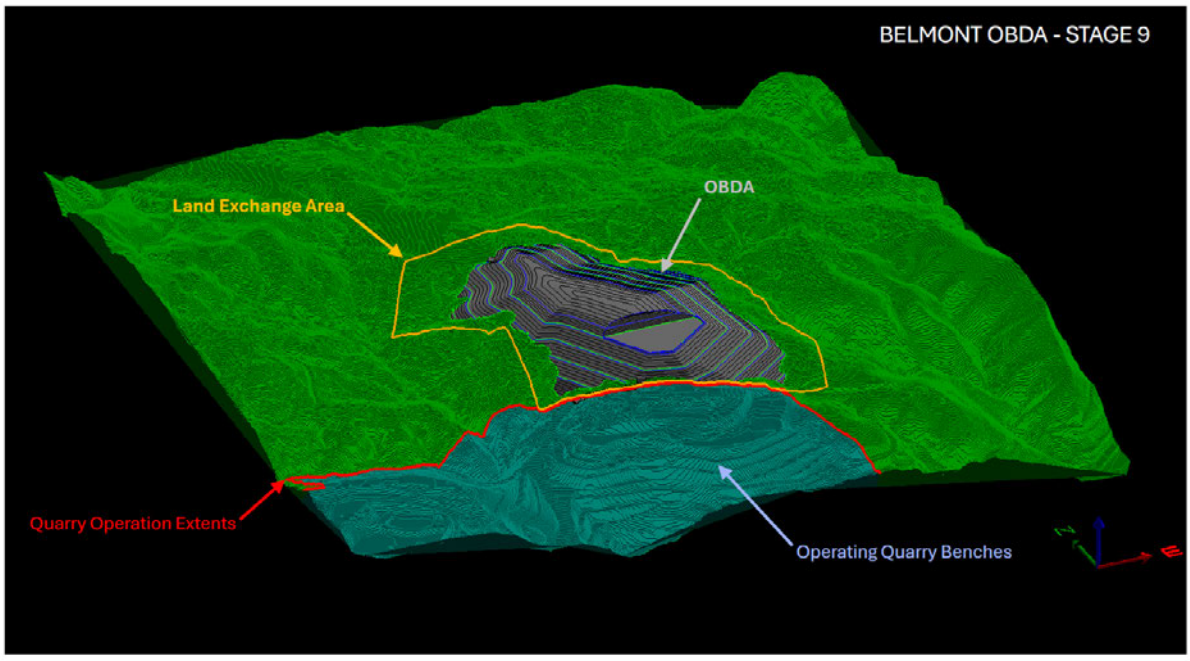
STAGE 7


BELMONT OBDA - STAGE 7
Land Exchange Area
OBDA
Quarry Operation Extents
Operating Quarry Benches

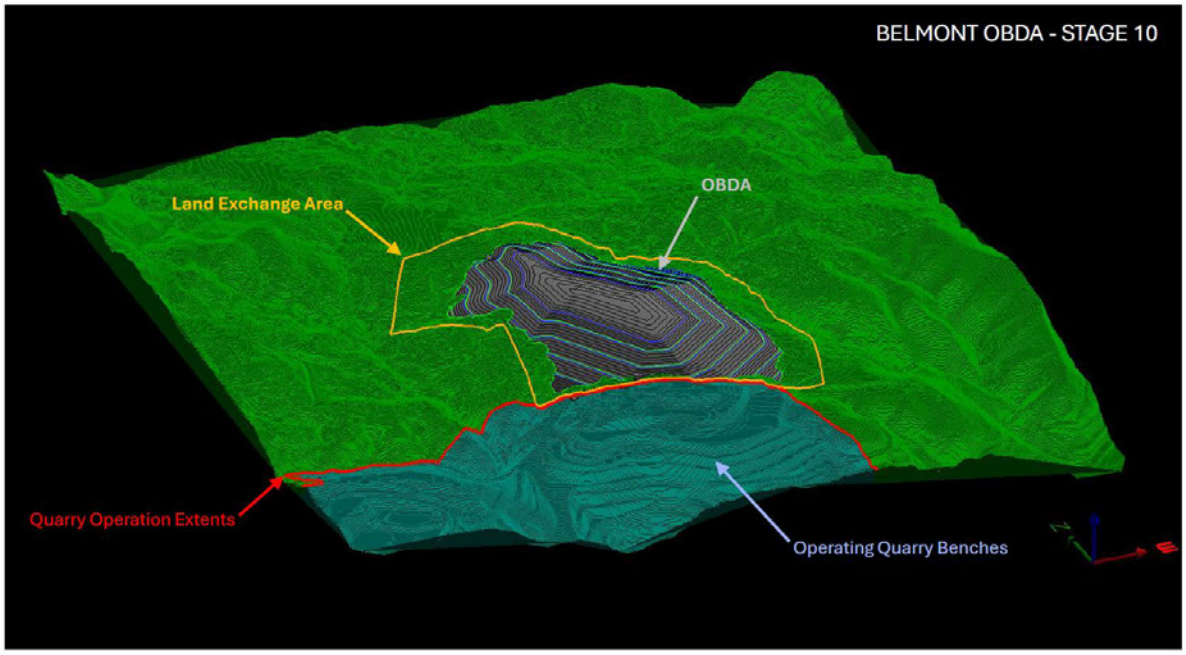
STAGE 8



STAGE 9



STAGE 10


BELMONT OBDA - STAGE 10
Land Exchange Area
OBDA
Quarry Operation Extents
Operating Quarry Benches

Appendix B: Lizard Effects Assessment

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

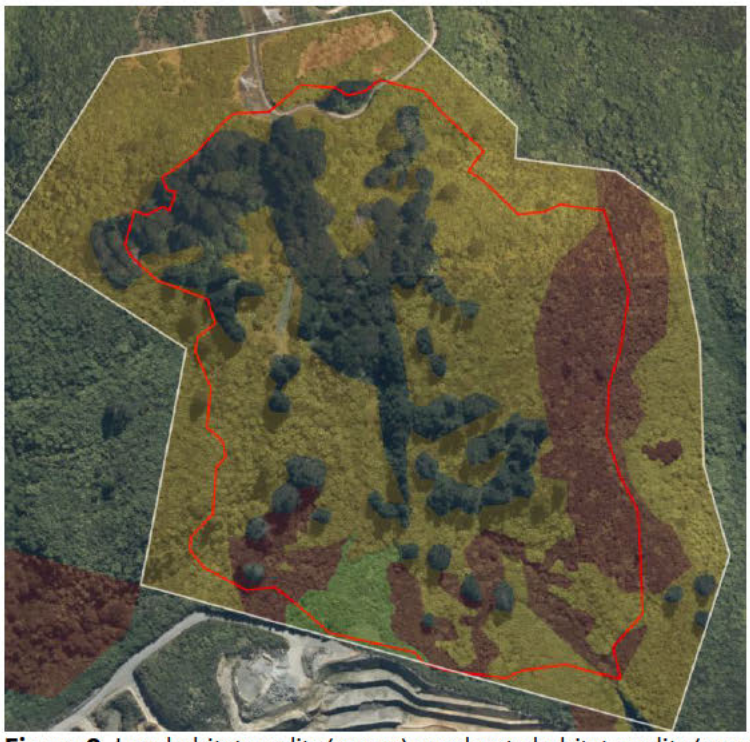


Figure 2. Low habitat quality (green), moderate habitat quality (orange), high habitat quality (red), OBDA (red line) site boundary (white line).

[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://lris.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,

[redacted]

Tony Payne

Principal Ecologist[7]

Blueprint Ecology Ltd

[7] This report has been prepared for the benefit of our Client with respect to the particular brief given to us and it may not be relied upon in other contexts or for any other purpose without our prior review and agreement. Any use or reliance by a third party is at that party's own risk. Where information has been supplied by the Client or obtained from other external sources, it has been assumed that it is accurate, without independent verification, unless otherwise indicated. No liability or responsibility is accepted by Blueprint Ecology Limited for any errors or omissions to the extent that they arise from inaccurate information provided by the Client or any external source.