DRAFT

Draft Lizard Management Plan for the Point Solar Farm, Twizel

Contract Report No. 6621h-v

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Contract Report No. 6621h-v

February 2026

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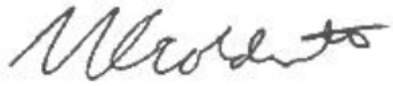

23/02/2026

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Contents

1.0 Introduction

Far North Solar Farms Ltd (**FNSF**) are proposing to construct a solar farm in Twizel near Ōhau C power station, known as The Point (also referred to as **the project**). The Point will be built upon approximately 687 hectares of flat land that is currently used for farming (also referred to as **the site**). The site is flat, with farmland to the north and rivers on the eastern and western boundaries. The Twizel River flows along the western side of the site and the Pukaki and Tekapo Rivers flows along the eastern side. The site is approximately 10 kilometres to the southeast of Twizel township (Figure 1). Far North Solar Farms has previously commissioned Wildland Consultants Ltd (**Wildlands**) to provide an assessment of the site's ecology and potential effects for the project (Wildland Consultants, 2025a)

Far North Solar Farms intend to install 720,048 solar panels across the site, with a minimum 3.8 metre gap between each panel.

An initial site visit to assess and map potential lizard habitats were undertaken on 13 December 2022 in which McCann's skink (*Oligosoma maccanni*; Not Threatened[1]) and Southern Alps gecko (*Woodworthia* "Southern Alps"; At Risk – Declining) were detected on site. Targeted intensive surveys for lizards, using live-trapping methods, were then undertaken in February 2026 therefore triggering the requirement for a Lizard Management Plan (**LMP**, this document).

This draft LMP has been developed to follow the principles provided by the Department of Conservation (**DOC**) in their '*Key principles for lizard salvage and transfer in New Zealand*' guidelines document (Department of Conservation, 2019; Table 1). These principles describe steps to take to enable the outcome of successful lizard management, including undertaking a thorough assessment of lizard values, assessing site significance, and an assessment of the actual and potential effects of the proposed activities on the lizards present. The guidelines also outline the steps for undertaking a lizard salvage, if this is required as part of mitigation. This LMP is included as part of a substantive application for approvals under the Fast-Track Approvals Act 2024.

1.1 Project site and context

The site is currently used for dry stock farming and subdivided into fenced paddocks for rotational grazing and cultivation for grass/hay/baleage production. There is a pivot irrigator offsite to the northwest, which is used for fodder cropping. Most of the site was cultivated and/or drill seeded, as recently as 2018. This has led to a widespread distribution of improved pasture grassland, across the site. However, the eastern part of the site does not appear (from available imagery) to have been cultivated since, and the grassland in this aera is now depleted and dominated by herbaceous pasture weeds (Wildland Consultants, 2024, 2026).

Due to the scale of the site, land use is dynamic and changes over time, which likely influences indigenous ecological values (such as lizards). Where the land use is less dynamic (e.g. uncultivated) including the periphery of the site and central fence lines, lizard habitats are less disturbed and better established.

[1] National threat statuses as per (Hitchmough et al., 2026).

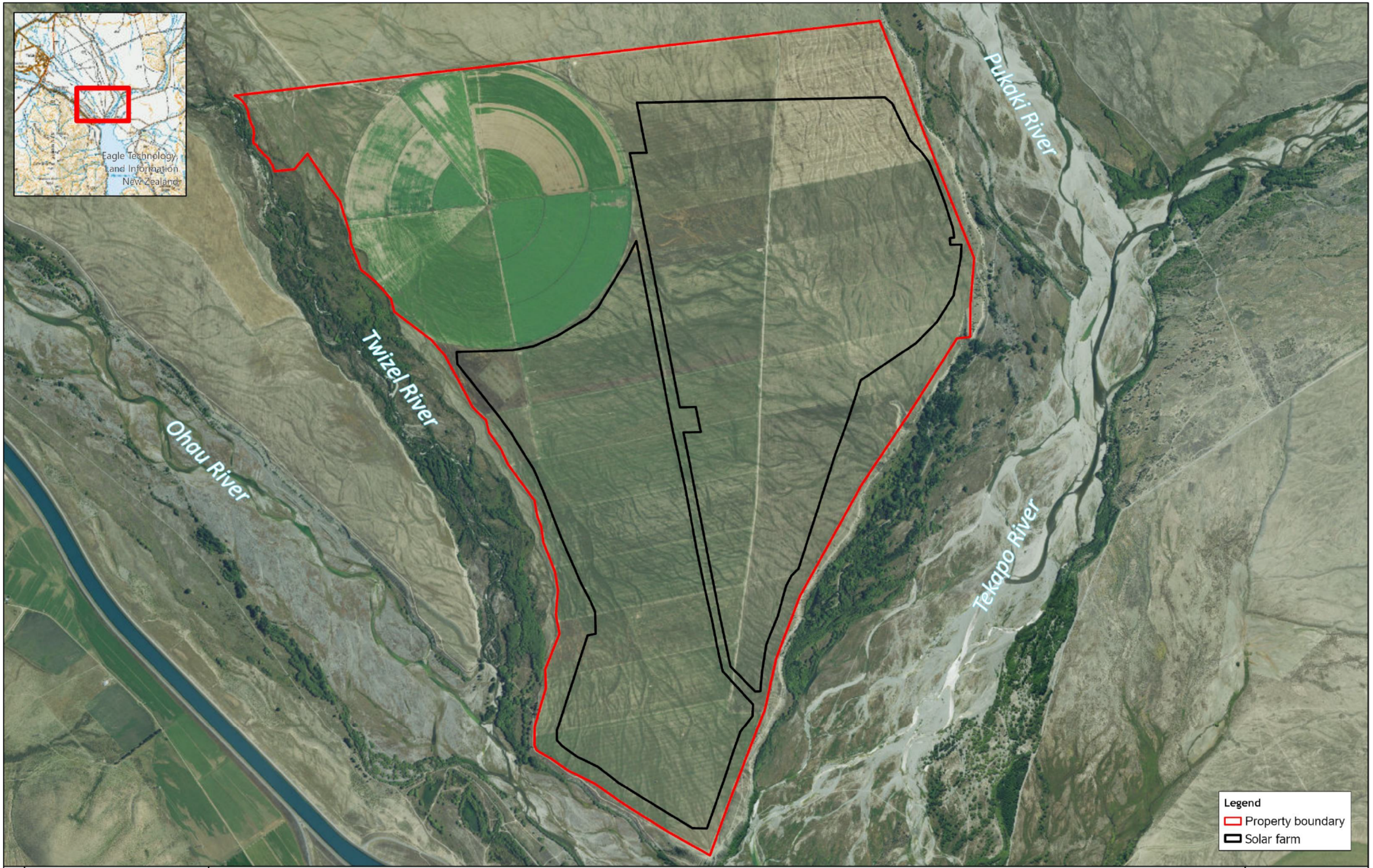

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Figure 1. Location of the proposed Point Solar Farm, MacKenzie Basin

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Table 1 – Key principles for lizard salvage and transfer in New Zealand and corresponding section in this LMP that details the application of each principle.

Key principle	Summary	Section in this Document Addressing the Principle
1. Lizard species' values and site significance must be assessed at both the impact (development) and receiving sites	Two At Risk – Declining and one Not Threatened species are present at the proposed solar farm site. Two species are found within the panel construction area (impact area) and an additional species has been observed on the periphery of the site (outside of the impact area).	Section 54.0
2. Actual and potential development-related effects and their significance must be assessed	Effects include but are not limited to disturbance (including death and injury) to lizards, loss of lizard habitat, fragmentation of lizard habitat, reduction of lizard habitat quality due to shading from panels, operational disturbance to lizards, disturbance of lizards during earthworks, and breeding failure/avoidance.	Section 5.4
3. Alternatives to moving lizards must be considered	All high and most moderate value lizard habitats can be avoided by the proposed solar farm and associated development works. A limited salvage will be required within the impact area, where lizard densities are the highest.	Section 6
4. Threatened species require more careful consideration than less-threatened species	No Threatened species have been detected on site following intensive systematic surveys. While it is unlikely they will be encountered, the Incidental Discovery Protocol will address any unexpected discoveries, including Threatened species.	Section 4.0 and 5.5.32
5. Lizard salvage, transfer and release must use the best available methodology	Lizard salvage will follow standard accepted procedures, as described in the DOC Toolbox for Herpetofauna. Any incidentally captured lizards will be transferred and release following the Incidental Discovery Protocol.	Section 6.3
6. Receiving sites and their carrying capacity must be suitable in the long term	All captured lizards will be released into current high-moderate quality habitat or remediated habitat on site.	Section 6.4
7. Monitoring is required to evaluate the success of the salvage operation	Monitoring of lizard habitat enhancement and lizard populations within the enhanced area will be undertaken, as well as pest plant monitoring, habitat enhancement monitoring, and pest mammal monitoring.	Section 76.0
8. Reporting is required to communicate outcomes of salvage operations and facilitate process improvements	Standard reporting is required to Environment Canterbury, Mackenzie District Council, the Department of Conservation and relevant iwi on the completion of works and monitoring periods.	Section 87.0
9. Contingency actions are required when lizard salvage and transfer activities fail	Contingencies are accounted for if more lizards are salvaged than expected, protection of high-quality habitats fails to reveal increase in populations, habitat enhancement fails or areas to be avoided are impacted by development works. The Incidental Discovery Protocol will also be followed throughout works.	Sections 6.5 and Appendix 2

2.0 Relevant Legislation

2.1 Wildlife Act Approval

Due to the presence of indigenous lizards, the proposed solar farm development requires a Wildlife Act Approval (**WAA**) under Schedule 7 of the Fast-Track Approvals Act (**FTAA**; Ministry for the Environment 2024) which includes approvals relating to the Wildlife Act (1953).

All indigenous lizards are protected under the Wildlife Act and approval under Schedule 7 of the FTAA must be obtained before any indigenous lizards can be disturbed (e.g. due to earthworks or vegetation clearance) or relocated. DOC will require that lizard mitigation work be undertaken by a DOC-approved ecologist who has been authorised to implement lizard management for the project through a WA issued for the project.

A LMP is a required supporting document to accompany the WAA. The LMP and WAA must be submitted to DOC and approved, and any lizard management proposed to mitigate adverse effects must be undertaken prior to undertaking any activities that potentially impact on lizard populations. This includes before any indigenous lizard can be disturbed or relocated on site (Schedule 7(2, 2, i)).

3.0 Implementation of the Plan

3.1 Reports to aid implementation

The previous Assessment of Ecological Effects (**AEE**) for the site undertaken by Wildlands includes the following reports:

- (Wildland Consultants, 2023) *Ecological Assessment for Two Solar Farm Sites in the Mackenzie District, South Canterbury*. Wildland Consultants Contract Report No. 6621. Prepared for Far North Solar Farms Ltd. 45pp.
- (Wildland Consultants, 2025a). *Assessment of Ecological Effects for the Proposed Solar Farm Between the Lower Reaches of the Tekapo and Twizel Rivers, Mackenzie District.* Wildland Consultants Contract Report No. 6621c. Prepared for Far North Solar Farms Ltd. 57pp.

Further measures to address effects on lizards are detailed in the following plans, which are intended to be implemented in conjunction with the draft LMP:

- Wildland Consultants. 2026. *Draft Vegetation Management Plan for The Point Solar Farm, Twizel.* Wildland Consultants Contract Report No. 6621h-iii. Prepared for Far North Solar Farms Ltd. 45pp.
- Wildland Consultants. 2026a. *Draft Pest Mammal Management Plan for The Point Solar Farm, Twizel.* Wildland Consultants Contract Report No. 6621h-iv. Prepared for Far North Solar Farms Ltd. 29pp.
- Wildland Consultants. 2026b. *Draft Terrestrial Invertebrate Management Plan for The Point Solar Farm, Twizel.* Wildland Consultants Contract Report No. 6621h-ii. Prepared for Far North Solar Farms Ltd. 31pp.

3.2 Summary of lizard management implementation

Any lizard management must be carried out in consultation with DOC, appropriate iwi representatives Environment Canterbury (**Ecan**), and Mackenzie District Council (**MDC**). We consider that **avoidance and remediation** is a viable option for this site, given the distribution of lizard populations on site and the likelihood of lizards persisting/thriving as a functional population within the remaining habitats on site.

3.3 Roles and responsibilities

Delivery of, and compliance with this draft LMP will be the responsibility of the Project Owner who will liaise with the Project Herpetologist, Site Manager, Site Engineer(s), and any vegetation clearance and earthworks Contractors as required.

All personnel working on site are responsible for alerting the Project Herpetologist, Site Engineer(s) and the Environmental Manager upon discovery of any 'At Risk' or 'Threatened' lizards not otherwise identified in this LMP.

The Project Herpetologist is responsible for reporting the discovery of 'At Risk' or 'Threatened' lizards to the Local Area Manager (DOC) and for maintaining a database with an incident register and file log of actions taken for each discovery of an 'At Risk' or 'Threatened' lizard not otherwise identified in this LMP.

3.3.1 Wildlife Approval holder

Far North Solar Farms will be responsible for compliance with the WAA and implementation of the LMP as the applicant under the FTAA and will therefore act as approval holder. The applicant has never been convicted of any offence under the Wildlife Act, nor has any current criminal charges under the Wildlife Act pending before a court.

3.3.2 Authorised personnel

The authorised personnel for the project will be those suitably qualified as being trained and approved by the DOC lizard Technical Advisory Group and will be implementing lizard management at the site:

- Samantha King – Wildland Consultants Ltd, Senior Ecologist and Herpetologist (**Project Herpetologist**).
- Cameron Thorp – Wildland Consultants Ltd, Herpetologist.
- Jade Christiansen – Wildland Consultants Ltd, Herpetologist.
- Anna Meban – Wildland Consultants Ltd, Ecologist.

Table 2 identifies the roles and responsibilities for the implementation of actions identified in this LMP. Responsibilities for specific actions are also identified in the relevant sections of this document.

Table 2 – Identified project roles and responsibilities for LMP implementation.

Title	Responsibility
Project Owner and Wildlife Approval holder • Far North Solar Farms	• Ensuring consent conditions and draft LMP align. • Project delivery, including overall compliance with resource consents, LMP and subsequent WA conditions to be issued for the project.
Project Engineer(s) • TBD	• Project engineering, project management, and delivery. • Liaison between contractors and ecologists. • Implementing actions where responsibility has been identified. • Confirm implementation of LMP and WA requirements. • Confirm compliance with LMP and WA.
Construction Contractor • Site Manager (TBD)	• Compliance with LMP and subsequent WA issued for the project. • Implementation of actions required by the LMP and WA including the following: - Reading and understanding the LMP and WA requirements. - Maintaining clear lines of communication with both the Project Engineer, Project Herpetologist and Contractors regarding changes to the works schedule. - Implementing actions where responsibility has been identified. - Briefing new personnel about the Contractor's responsibilities under this LMP.
Project Herpetologist • Wildland Consultants Ltd	The Project Herpetologist has been engaged by the Project Owner to provide technical advice to the Project Engineer(s), and to assist the Project Engineer(s) with compliance checks against this LMP and WA. The Project Herpetologist will: • Prepare and update the LMP as required. • Advise on lizard management required. • Where necessary, assist with Contractor training. • Design and undertake post-enhancement monitoring. • Complete the required compliance reporting.
Contractors • Various companies (TBD)	The Contractor(s) will be engaged by the Project Owner to implement the Project. The Contractor(s) will report to the Project Engineer(s) but work daily with the Contractor / Construction Site Manager. The Contractor(s) will: • Undertake landscape/restoration planning (in accordance with this LMP). • Implement habitat enhancement requirements. • Implement remediation requirements, such as rectifying plant establishment failure. Assist the Project Herpetologist with compliance and monitoring reporting.

4.0 Lizard Values

4.1 Desktop assessment

A desktop assessment was completed as part of the AEE for the site (see Wildland Consultants, 2025a). A summarised and updated version of the desktop assessment is provided in Table 3[2]. The species listed have been previously observed on site or are within the possible distribution range of the species.

Six species have been found within the wider vicinity of the site including four species of skink and two species of gecko (Table 3). Following surveys of the site (see Section 4.2), three lizard species have been confirmed on site, with two found within the panel construction area.

Table 3 – Summary of lizard species present or potentially present on site, based on previous surveys and habitat on site. National threat statuses as per (Hitchmough et al., 2026).

Species	Common Name	National Threat Status	Observed Within Impact Site	Likelihood of Occurrence Within Periphery (outside of impact area)
Oligosoma maccanni	McCann's skink	Not Threatened	**Yes**	**Presence confirmed**
Woodworthia "Southern Alps"	Southern Alps gecko	At Risk – Declining	**No**	**Presence confirmed**
Oligosoma chionochloescens	Southern grass skink	At Risk – Declining	**Yes**	**Presence confirmed** A widespread and commonly encountered species which may be confused with McCann's skink but is generally found in damper areas/areas with dense grass).
Oligosoma aff. *chloronoton* "West Otago"	Lakes skink	Threatened – Nationally Vulnerable	**No**	**Unlikely** Potential habitat (rocky terraces) available on-site, but high numbers of predators, and extensive survey efforts have not detected any.
Oligosoma laxa	Scree skink	Threatened – Nationally Vulnerable	**No**	**Unlikely** Potential habitat (rocky terraces) available on-site, but high numbers of predators, and extensive survey efforts have not detected any.
Naultinus gemmeus	Jewelled gecko	At Risk – Declining	**No**	**Unlikely** Minimal appropriate habitat (indigenous shrubland) available on-site.

4.2 Lizard habitats

Lizard habitat of varying quality is present on site and is largely considered to be based on the complexity of the habitat, with more complex habitat providing more abundant refuges and food resources, thus supporting higher lizard densities and species diversity. Lizard habitat quality areas on site are included in Figure 2 and are described in more detail in Wildland Consultants (2025a).

[2] The conservation status of reptiles in New Zealand has been updated since the desktop assessment in Wildlands 2025 (Hitchmough et al., 2026). In addition, the likelihood of occurrence has been updated based on targeted lizard surveys undertaken in 2026.

Lizard species present within the site are likely to be part of wider populations associated with remnant habitats throughout the Mackenzie Basin. Due to the dynamic nature of the vegetation and habitats on site, it is not possible to map the extent of habitats across the impact area. However, all high-quality habitats have been mapped and their size and extent has been calculated. Where small fragments of lizard habitats are present, these remain unmapped.

4.2.1 High-quality lizard habitats

Areas of high-quality habitat, where the highest lizard species diversity and high densities of lizards are present, include:

- Stonefield dryland.
- Sweet briar-matagouri shrubland.

4.2.2 Moderate-quality lizard habitats

Areas of moderate-quality habitat where lizards are present or considered likely to be present in moderate densities include:

- Sweet briar/cocksfoot grassland.
- Densely vegetated swales in ungrazed paddocks (unmapped).
- Isolated sweet briar bushes throughout the site/along fence lines (unmapped).

4.2.3 Low-quality lizard habitats

Areas of low-quality habitat where lizards are present in low densities include:

- Uncultivated brome-hawkweed-sheep's sorrel-haresfoot trefoil grassland/herbfield.

4.2.4 Very low-quality lizard habitats

- Brome-hawkweed-sheep's sorrel grassland/herbfield (grazed).
- Cocksfoot-lucerne-haresfoot trefoil grassland.
- High-producing exotic pasture.

4.3 Field surveys

4.3.1 Overview

Lizard surveys were undertaken by Wildlands Herpetologists to determine the lizard habitats and lizard species present on site, and gain an understanding of their abundances and distributions. A walk over assessment was undertaken in 2022 (see Wildland Consultants, 2025a). A more intensive, targeted lizard survey was undertaken in February 2026 to accurately assess the lizard species, abundances, and areas of lizard habitat on site (Figure 3).

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Figure 2. February 2026 lizard survey habitat quality, The Point, Twizel

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Figure 3. February 2026 lizard survey effort, The Point, Twizel

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4.3.2 Field survey methods

One hundred and thirty-five funnel traps were placed in selected representative habitats across the site between 9 and 11 February 2026. Funnel traps were baited with Juicy Burst lollies, Natural Confectionary Co.™ (known lizard attractants) and were padded with grass or similar vegetation to provide shelter and prevent desiccation, in addition to preventing mice from predating upon caught lizards. The funnel trap was covered with or nestled into the surrounding vegetation or buried in rocks in outwash cobbles as per best practice methodology (Hare, 2012a). Surveys were undertaken over seven days in fine, warm conditions (*c.*14-26 degrees).

4.3.3 Field survey results

2022 walkover assessment

Total effort comprised eight person hours of selected systematic searches in optimal habitats. Lizards detected during the 2022 walkover survey included:

- Two Southern Alps gecko
- Five McCann's skink

2026 targeted lizard survey

Total survey effort included 617 funnel trap checks and 18 person hours of visual and manual (systematic) searches. Lizards detected during the 2026 targeted lizard survey included:

- 49 McCann's skink (22 within the impact area)
- 32 Southern grass skink (six within the impact area)
- Six Southern Alps gecko

Figure 4 and Table shows the lizard survey results from the 2026 targeted lizard surveys.

Unidentified skinks were seen basking but were too quick to catch due to the hot conditions. It is highly likely these were either southern grass or McCann's skinks, based on their size and abundance.

A large population of McCann's skinks, a moderate population of southern grass skinks, and a small population of Southern Alps geckos occur at the site. No other lizard species were detected, and following the intensive survey effort undertaken, no additional lizard species are considered likely to be present on site.

4.3.4 Field survey limitations

Lizard survey methods sometimes have poor detection rates because of typically low population densities, cryptic coloration of some species, difficulty in surveying preferred habitats and behaviour or activity patterns of lizards. As such, even intensive lizard surveys are unlikely to detect all individuals in the population or, possibly, all species present.

Due to the size and scale of the site, and fragmented habitats, only a selected proportion of lizard habitats were surveyed. These habitats were chosen based on their representativeness, size, and ability to detect lizards using the methods available. Where these habitats are present throughout the site, we consider that lizards will also be present.

4.3.5 Summary

Most of the site is considered to provide moderate to low quality habitat for two indigenous lizard species that are classified as 'At Risk – Declining' and 'Not Threatened' (southern grass skink and McCann's skink respectively). Both species are present at moderate to low densities in most areas of the impact area, with higher densities found in habitats within the wider site. In addition, one other species (Southern Alps gecko) is present within the wider site but has not been detected within the impact area.

4.4 Effects on lizards

Effects on lizards from the proposed solar farm have been assessed at a local population scale, using the Quality Planning Extent of Adverse Effects criteria (Quality Planning, 2017). Potential ecological effects on lizards from solar farm development activities have been assessed as part of the AEE for the project (Wildland Consultants, 2025a). While the protection of McCann's and southern grass skink at the site is not important for the persistence of these species as a whole, the scale of the site is likely to reduce habitat availability in the local area, and is likely to result in a cumulative loss of habitat and reduction in populations if other proposed developments occur in the same area. However, the proposed development will avoid areas of moderate to high-quality lizard habitat where lizards are present in higher diversity and densities. The effects and proposed effects management are summarised in Table 4.

Table 4 – Potential significance of effects to lizards and their habitats without mitigation.

Effect	Level of Effect Without Mitigation	Proposed Effects Management
Habitat loss and reduction of habitat quality	Minor	Habitat remediation, the Point Reserve remediation.
Injury/death/displacement	More than minor	Lizard salvage and relocation.
Fragmentation of lizard habitat	Minor	Construct habitat corridors, habitat remediation.
Disturbance during earthworks	More than minor	Lizard salvage and relocation, Earthworks timing.
Breeding failure/avoidance	More than minor	Habitat remediation, timing of management, lizard salvage and relocation.
Reduction of high-quality habitats due to shading	More than minor	Habitat remediation, habitat corridor construction, buffer zones, detailed design.
Ongoing disturbance	Less than minor	Incidental discovery protocol, habitat remediation

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Figure 4. February 2026 lizard survey results, The Point, Twizel

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Table 4 - Summary of lizard survey effort and weather conditions at the site. 'ph' refers to 'person hours'. Outside refers to outside impact area; inside refers to inside impact area.

Date	Weather on Survey Date	Activity and Effort	Species Detected	McCann's Skink	Southern Grass Skink	Southern Alps Gecko	Comments
9-Feb-26	Warm, fine, 22 degrees. High Cloud 5/8	85 funnel traps set	Six McCann's skink detected	Five McCann's skink outside, one McCann's skink inside			
10-Feb-26	22.6C, 59.6% r.h., 6/8 cloud cover, calm, hot - overcast, strong NW, hot, 22.0C, 50% r.h., 6/8 cloud cover	85 funnel traps checked, 1.5 p/h visual search	10 Southern grass skink detected 50 McCann's skink detected One Southern Alps gecko detected Six unidentified skinks	40 outside, 3 inside	Eight outside, 2 inside	One outside	
11-Feb-26	Sunny, calm, warm, overnight showers, 14.7C, 75.2% r.h., 1/8 cloud cover - overcast/fine breaks, 20.7C, 85.2% r.h., calm, 7/8 cloud cover, warm	85 funnel traps checked, 50 funnel traps set, 3.5 p/h visual searches	10 southern grass skinks detected 24 McCann's skinks detected 2 Southern Alps geckos detected	23 outside, one inside	Eight outside, two inside	Two outside	One recapture (SGS), GM079 - 1x mouse - moved trap to new location (GM079b)
12-Feb-26	overcast, cool, light breeze, 8/8 cloud cover, 79.2% r.h., 1.0 kmph avg WS, 17.2C - sunny, hot, light breeze, 1/8 cloud cover, 37.1% r.h., 5.6 kmph avg WS, 26.1C	135 funnel traps checked, 80 funnel traps moved, 11 funnel traps removed	10 southern grass skink detected 11 McCann's skink detected 3 Southern Alps gecko detected	10 outside, one inside	Eight outside, two inside	Three outside	GM160-167 disturbed by cows, GM103-124 disturbed by cows, GM116 and GM120-124 (6 traps) - removed due to cow disturbance
13-Feb-26	2.5 kmph avg WS, 61.3% r.h., sunny, hot with partial cloud 20.5C, light breeze, rained overnight, 5/8 cloud cover - cool, wet (rained during previous hour), 6/8 cloud cover, light wind, 3.5 kmph avg WS, 17.1C, 85.9% r.h.	124 traps checked, 16 traps removed	Two southern grass skink detected Five McCann's skink detected	Five inside	Two inside		GM103-119 disturbed by cows again and removed
14-Feb-26	53% r.h., 1.1 kmph avg WS, 17.1C, cool, sunny with partial cloud, light breeze, 5/8 cloud cover - sunny, hot, light wind, 1/8 cloud cover, 5 kmph avg WS, 52.2% r.h., 19.5C	108 traps checked, 28 traps removed	Three southern grass skink detected Four McCann's skink detected	Four inside	Three inside		GM083-102 and 125-132 removed GM203 - 1 x mouse - moved trap to new location (GM203b) GM132 - 1 x mouse
15-Feb-26	Sunny, hot, light breeze, 1.1 kmph avg WS, 49.2% r.h., 17.2C, 3/8 cloud cover - sunny, hot, light breeze, 36.4% r.h., 1.9 kmph avg WS, 5/8 cloud cover, 22.1C	80 traps checked and removed	One southern grass skink detected 12 McCann's skink detected	12 inside	One inside		One recapture (MS). GM200, GM203B, GM211 - Mice

5.0 Lizard Management {DRAFT}

5.1 Overview

Lizard salvage and transfer is only appropriate if avoidance and remediation measures have not resulted in, or cannot result in, no-net-loss of lizards from the development area (Department of Conservation, 2019). A lizard salvage at a site where lizards are present at low densities over a large area is also likely to be extremely costly, inefficient, and only result in a small number of lizards salvaged, which would not provide protective benefit to the local population or species. Given that most of the lizard habitat proposed to be cleared comprises low or very low quality, where one 'Not Threatened' species is present at low densities, **avoidance and habitat enhancement** is appropriate to address the effects of development activities at the site. In areas where moderate habitats are present, a small-scale salvage and relocation effort will be required in limited areas including some small unmapped habitats, including:

- Sweet briar/cocksfoot grassland.
- Densely vegetated swales in ungrazed paddocks (unmapped).
- Isolated sweet briar bushes throughout the site/along fence lines (unmapped).

5.2 Avoidance and enhancement of high-quality habitats

High-quality habitats for lizards will be avoided, retained and enhanced by FNSF. These habitats are primarly located in two gullies to the east of the site (Figure 5). The habitats will be enhanced through the addition of connected corridors of restored habitat (Section 6.3.6).The gullies will be enhanced through pest plant control (wildling pines and woody weeds; see Wildland Consultants, 2026), aiming to increase light, reduce shading and smothering from ground cover in these areas. The areas that are retained and enhanced will then act as release sites for salvaged lizards. All high-quality habitat that is enhanced will be undertaken in advance of any lizard salvage and relocation actions.

Where possible, during the detailed design phase of the project development, buffer zones will be created around existing habitats which are proposed to be avoided. A minimum of 10 metres wide will be enforced. These areas will be agreed on by FNSF and the Project Herpetologist in advance of construction.

5.3 Lizard salvage

5.3.1 Overview

A salvage and relocation programme will be implemented within all the moderate quality lizard habitats identified, and where any high densities of lizards have been detected within the impact area. This includes any roads or tracks that are likely to be modified for construction purposes. All lizards will be trapped using live capture traps and will be relocated to the release site (Section 6.3.6).

Salvage aims to have a better outcome for the lizards than encouraging lizards out of the area through other mitigation methods, as the surrounding areas are unsuitable for lizard occupation and will likely be subject to ongoing maintenance and potential development in the future.

Timeframes and staging of salvage will be dependent on final construction requirements, seasonal constraints, and contractor availability.

There are inherent risks associated with lizard capture, salvage and relocation as a management tool for mitigation purposes. In particular, there is high risk of poor capture rates for lizards during pre-survey capture and salvage activities. This will be managed by maximising lead-in time for pre-clearance capture and using a range of tools suitable to the species in question.

5.3.2 Salvage methods

Funnel traps will be padded with grass to provide shelter and prevent desiccation, in addition to preventing mice from predating upon captured skinks. The funnel trap with be covered with or nestled into the surrounding vegetation (as per the DOC Herpetofauna Monitoring Toolbox for Funnel Trapping; Hare, 2012a).

Pitfall traps consist of a plastic container (>2 litre depth) dug into the ground, which lizards may fall into and be unable to exit. The pitfalls will be covered with Onduline to provide additional thermoregulatory advantages and attract more lizards to the traps. Pitfall traps will be filled with grass and a damp sponge, in addition to the Onduline artificial cover to provide shelter and prevent desiccation of skinks within the trap. Pitfall traps will be installed one week prior to lizard salvage and will be closed during this time to allow for lizards to become habituated to the traps and for the traps to weather in (as per the DOC Herpetofauna Toolbox for Pitfall Trapping; (Hare, 2012b).

All traps will be baited with canned pear or Juicy Burst lollies.

Salvage conditions

Many lizard species are inactive below 16°C. Hot summer temperatures (>25°C) also reduce lizard emergence and detectability. Because of these constraints, salvage will be undertaken between October-April (inclusive), when:

- The temperature is between 16°C and 25°C, and
- Rain is no heavier than 0.1 – 2.0 mm per hour.
- The wind is not strong.

Pre-salvage grazing

Prior to trap installation, salvage areas will be intensively grazed by the farmer so that as much habitat will be reduced across the site as reasonably possible. This will be undertaken including in areas where landscape screening planting is likely to occur, and any salvage sites.

Salvage effort

Total salvage effort is outlined in Table 7. Pitfall and funnel traps will be placed at <5-10 metre spacings prior to earthworks commencing. To prevent harm to lizards, pitfall traps will be closed when not in use (either with a sealed lid and/or by filling them with rocks) and funnel traps will be removed when not in use. Traps will be checked at least every 24 hours when in use. No estimated number of traps has been provided due to the dynamic land use and changes likely to occur in the site prior to commencement of works. It is likely that traps will be centred in smaller areas within the mapped habitats. The exact number of traps will be determined by the project Herpetologist.

Data Acknowledgment
Map contains data sourced from LINZ
Crown Copyright Reserved

Report: 6621i
Client: Far North Solar Farms
Ref: 12573-2024
Path: \\vs4gis\gis2\gis\Ohau Solar farm\mxd\
File: Lizard_habitat_enhancement.mxd

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0 500 1,000 m

Figure 5. Indicative lizard habitat enhancement corridors, The Point, Twizel

Wildlands
www.wildlands.co.nz, 0508 WILDNZ

Scale: 1:8,192
Date: 20/02/2026
Cartographer: HM
Format: A3R

Table 5 – Trapping requirements and contingency for additional trap days.

Habitat Quality	Minimum Salvage Effort	Trap Spacing	Salvage Conditions Met	Area Affected	Contingency
Moderate quality habitat	Ten days	≤5 metres	No skinks after day seven, or ≤ 3 McCann's skink	25 hectares[3] (plus unmapped swales)	If live capture traps continue to get the same **or** high numbers of skinks over ten days **(>5 McCann's skink per day),** trapping will continue for **three-day** increments until the threshold is met, or until no more skinks are caught.
Low quality habitat	Seven days	10 metres (or 1-2 traps per briar rose bush)	No skinks after day five	Unmapped individual bushes	If live capture traps continue to get the same or high numbers of skinks over this time **(>3 McCann's skink per day**), trapping will continue for **three-day** increments until the threshold is met, or until no more skinks are caught.

Responsibility: Project Herpetologist.

5.3.3 Limitations of estimates for salvage

No estimate of salvaged lizard numbers is provided, as site surveys could not reliably determine lizard abundance. As a result, the actual number of lizards salvaged is likely to be much higher than the number of skinks caught on site during the surveys.

5.3.4 Data collection

Lizard capture data will include species identity, sex, body length, and any tail regeneration. Each stage of salvage will be recorded, including start/stop time, GPS coordinates and a habitat description for the capture location, date and time. Weather conditions will be recorded during and at the beginning and end of each salvage event.

Responsibility: Project Herpetologist.

5.3.5 Temporary holding of lizards

All captured lizards will be temporarily placed in clean individual lizard cloth bags, and stored in ventilated, hard-sided containers (to prevent accidental crushing), in cool, full shade until release. A small amount of damp leaf litter or vegetation from the capture site will be placed inside the cloth bags with the lizard to provide cover and prevent dehydration. Lizards will be released within eight hours of capture into the pre-selected release area.

[3] This is the total area estimated of large contiguous habitats comprising moderate quality. However, due to the habitat matrix within each of these areas, the actual area of habitats to be salvaged is actually likely to be significantly less than 25 hectares.

Responsibility: Project Herpetologist.

5.3.6 Release methods

Skinks will be transported by car or on foot to the enhanced habitat corridors to the east of the site (the gullies). The hard sided containers that skinks are temporarily held in will be placed in larger bins (fish bins) securely in the car (seat belted) so movement is limited. The most direct route will be taken to the release site to limit the amount of time the lizards spend in the car. Lizards will be checked on release for any signs of stress or illness.

When lizards are first released, they will be unfamiliar with the landscape and may be unable to find suitable refugia to hide from predators and competitors, and they may therefore potentially disperse away from the release site. By releasing lizards into the habitat units first this may help to orientate and maintain released individuals at the site.

McCann's skink will be released into cobble piles, and southern grass skinks will be released into vegetation, or areas of the site with dense cover.

Five to ten skinks (depending on the numbers caught) will be released into each cobble pile or 10 m^2 area of vegetation to avoid unnecessary competition. Where any lizards are found together (i.e. multiple captures in one trap) they will be released in groups together.

Responsibility: Project Herpetologist.

5.3.7 Habitat clearance – All lizard habitats

All vegetation and lizard habitats found within delineated lizard habitats, including shrubs, trees and grass, will be removed post-salvage without supervision. All unsupervised vegetation will occur within two weeks of the salvage[4], to ensure any remaining lizards do not move back into the habitats. The Incidental Discovery Protocol (Section **Error! Reference source not found.**6.5.3 and **Error! Reference source not found.** 2) must be followed.

Responsibility: FNSF, Contractor.

5.4 Lizard habitat corridors –enhancement plantings

{DRAFT FOR CONSULTATION}

5.4.1 Overview

Lizard habitat corridors will be created on the eastern side of the site, with a buffer of 10-20 metres adjacent to any corridor and solar array. The corridors will aim to increase habitat connectivity between the two eastern gullies with plantings and rock piles to increase the quality of the habitat in these areas (indicative locations are displayed in Figure 5). Lizard habitat corridors (including biodiversity nodes) will be a minimum of five-metres wide. Where the grasshopper reserve is situated, the habitat corridors will be constructed adjacent to and surrounding this reserve.

Biodiversity nodes will be established at regular intervals throughout the lizard habitat corridors. Approximately 16 corridors will be created. Biodiversity nodes will consist of small, planted areas (*c.* 100 m^2) that provide small "islands" of habitat, every 20-50 metres where other areas of lizard habitat corridor are left to regenerate naturally over time but facilitate movement between habitats. The total

[4] The timeframe allows for any unforeseeable delays, which may prevent vegetation removal immediately following salvage.

area of biodiversity nodes will be determined in consultation with FNSF. Every effort will be made to source the plants in the lists provided but the confirmed species to be planted will depend on the availability of plants at nurseries. Nurseries may need to collect seed from site, and therefore the final composition of plants will depend on the success of the seed growth.

5.4.2 Embedded cobble piles

A minimum number of cobble piles will be placed into each corridor by utilising existing and trenching shallow depressions (*c.*1 metre-deep minimum) using a small excavator in areas where there are no existing habitat features (i.e. within bare ground or areas where no invertebrate or lizard values have been identified). The depressions will be trenched to allow for drainage and to enhance survival of lizards over winter by mimicking existing habitat features. All cobbles should be thoroughly washed then placed into the depressions to prevent unwanted seed dispersal. Embedded cobbles can be placed in areas such as at the base of terraces or slopes where these habitats were likely present prior to land conversion. The cobble piles should be monitored long-term for invasion by pest plants or ground-cover species that are unsuitable for lizards or attract mammalian predators (e.g. mice).

Lizard species such as McCann's skink often begin to occupy rock piles nearly immediately following creation but other species (such as Southern Alps gecko) are less likely to occupy rock piles unless within close proximity to existing habitats, or only after several years (Herbert *et al.*, 2023). The exact number and extent (size) of rocky refuge will be determined in consultation with FNSF, but the specifications for the cobble piles are below.

Cobble piles will consist of the following:

- Washed river/glacial outwash rock/stone
- Pebbles consisting of 20-60 mm (20% of the mix)
- Cobbles consisting of 100-250 mm (80% of the mix)
- Trenched ≥ 1 metre deep
- Meandering piles between 1-2 metres long
- A minimum 0.75 metres high

Cobble piles will be created on site using rocks excavated during development works. Cobble piles must be free-draining and should comprise only coarse rocks with minimal soil and gravel, which is more likely to be colonised by weeds.

Stones will be of varying size dependent on the rocks excavated during earthworks. The mixed grade selected above will be used to provide optimal interstitial spaces amongst the rock piles for lizard occupation. Rocks will be sourced locally. All rocks will be washed and free from soil to avoid unwanted grasses/invasive plants growing in the spaces. The success of rock piles for lizard habitat enhancement will be monitored (see Section 6.3). DOC provides guidance on habitat enhancement that can be used to assist with rock placement (DOC 2023). Once rock piles have been created, plantings will then also be undertaken around rock piles to fill in any gaps between initial plantings and rock piles.

5.4.3 Planting

Initial lizard habitat corridor planting will occur prior to the installation and development of the solar farm, allowing additional lizard habitat to establish[5] (see Table 8). The planting windows in the Mackenzie Basin are shorter than other areas. Planting will need to take place in:

(i) Early autumn (March–April), once summer-dry conditions have passed and ideally six weeks before the very cold winter temperatures arrive; or

(ii) In mid spring (generally October) after most of the hard frosts have finished but there is still adequate soil moisture to allow the plants to establish before dry summer conditions return. The region is prone to drought and other weather extremes, and assessment of planting suitability will be made prior to undertaking any planting.

Site preparation

If necessary, ground cover vegetation in planting areas will be cleared in a lizard friendly manner (through use of hand weeding or use of a weed eater on warm, fine weather days). Spot-spraying may be used, if determined necessary. This will be decided at the discretion of the Contractor who will be preparing the site.

Plant species

Lizard-friendly plantings will be undertaken to increase the complexity of the habitat and resources (refuges and food) for lizards. Species selected are local species which are found in the wider ecological district, present nearby or within the site. Planting will be undertaken by a suitably qualified professional contracted by FNSF. An indicative planting schedule is outlined below in Table 8.

Plant protection

Plant guards will be required to protect plants from rabbit and hare browsing.

Responsibility: FNSF, Contractor, Project Herpetologist.

5.4.4 Planting maintenance

Plant maintenance and monitoring will be commissioned by FNSF and implemented by a suitably qualified Contractor for 24 months after planting or until the plants have established. This plant maintenance will include monitoring visits every one to two months over spring and summer to ensure the uptake and survival of plantings and determine what maintenance is required. Post-planting maintenance will include:

- Plants kept free of weeds by means of hand-weeding only or weed eaters when absolutely necessary. Weeding will be undertaken three to four times a year (or as required) to ensure that weeds do not compromise plant growth.
- Hand-weeding around the plants will allow for better establishment of the plants and limits disturbance to skinks.
- Replacement planting will be undertaken if plant losses exceed 10 percent.

[5] To give the nursery the best chance of supplying all plants and ensure that the plants have been eco-sourced appropriately, 18-24 months' notice may be needed to source the seed and grow the plants to acceptable size for planting.

Maintenance will take place on warm, sunny days when the daily temperature exceeds 16°C as this is when skinks are most active. Contractors will also refrain from using sprays in and around lizard habitats, as the effects of herbicides and insecticides have on lizards are largely unknown.

Planting maintenance and monitoring will be commissioned by FNSF and implemented by a suitably qualified Contractor.

Responsibility: FNSF, Contractor.

Table 6 – Proposed planting schedule for lizard biodiversity node habitat enhancement.

Species	Common Name	Estimated Time Required from Seed Source / Ordering to Planting	Establishment / Grade	Spacing (metres)	Estimated Percentage of Mix
Carmichaelia australis	Common native broom	18-12 months	0.5L/RX90	1	15
Coprosma petriei	Turfy coprosma	24-18 months	0.5L/RX90	0.75	5
Coprosma propinqua	Mikimiki	12 months	0.5L/RX90	1	20
Discaria toumatou	Matagouri	24-18 months	1 L	1	10
Melicytus alpinus	Porcupine shrub	24-18 months	1 L	1	5
Muehlenbeckia axilliaris	Creeping pōhuehue	18-12 months	0.5L/RX90	1	10
Muehlenbeckia complexa	Small-leaved pohuehue	12 mouths	0.5L/RX90	1	10
Olearia odorata	Scented tree daisy	18-12 months	1 L	1	5
Pimelea oreophila subsp. *oreophila*	Pimelea	18-12 months	0.5L/RX90	1	5
Poa cita	Silver tussock	12 months	0.5L/RX90	1	3
Poa colensoi	Blue tussock	12 months	0.5L/RX90	1	10
Sophora prostrata	Prostrate kowhai	12 months	1 L	1	5
					100

5.4.5 Pest plant control

Pest plant control will be implemented following the Vegetation Management Plan (VMP) for the site (Wildland Consultants 2026). Pest plant control methods are detailed in Section 4.2 of the VMP. These include:

- Manual pulling, cutting and pasting or drilling for wilding conifers and other woody pest plants.
- Other appropriate methods for other pest plant species, noting that chemical sprays should be avoided in areas of high and moderate quality lizard habitat.

As per Section 8 of the VMP, pest plant monitoring will be undertaken annually, with control as required, commencing one year after development begins.

Responsibility: FNSF, Project Herpetologist

5.4.6 Pest mammal control

While both skink species, and to a lesser extent Southern Alps gecko, are relatively abundant within high-quality habitats on site in the absence of predator control, the control of introduced mammalian predators may provide further protective benefit to lizard populations on site in addition to habitat enhancement.

Pest mammal management at the site will utilise a combination of traps and poison to reduce pest mammal numbers. Regular ongoing monitoring will be undertaken by suitably qualified ecologists to gauge the success of the control methods and identify points of weakness for improvement. Pest management will cover the entire site

Pest mammal control will be implemented as per the measures prescribed in the Pest Mammal Management Plan (PMMP; Wildland Consultants, 2026a).

Responsibility: FNSF, suitably qualified contractor.

The indicative timing for the implementation of lizard habitat corridor creation is outlined below in Table 9.

Table 7 – Indicative timeline for lizard habitat corridor enhancement.

Corridor Enhancement Meaures	Timing
Sourcing plants for site	At least two years in advance of site preparation.
Site preparation (trench excavation, determining sites)	At least one year in advance of development works commencing.
Cobble piles	Before planting, following site preparation. At least one year in advance of works commencing.
Planting	Following the placement of cobble piles, at least one year in advance of works commencing.

5.5 Contingencies and risks associated with proposed management

5.5.1 Risks associated with salvage and release

Potential risks to lizards as a result of the proposed salvage and management actions to reduce these risks are provided in Table 8.

Table 8 – Risks associated with lizard salvage as a management method and actions to be taken to reduce risks.

Risk	Issue	Action
Overheating	Lizards may overheat when temporarily held in containers during salvage.	Lizards will be placed in individual containers, kept cool, and handled minimally to reduce stress. Traps will be checked at least once daily, and more frequently when temperatures exceed 25°C.
Overcrowding, competition and displacement	Releasing lizards into an already occupied site may lead to competition, predation, or displacement.	Habitat enhancement (planting, weed control, pest management, and new habitat creation) will increase carrying capacity and reduce these risks.
	More lizards than expected are salvaged	- In low quality habitat, salvage will continue for a minimum of seven-days until **three or less** skinks are captured, or until no skinks are captured during the latter stages of salvage (around day 5; see Section 5.3.2). - In medium quality habitat, salvage will continue for a minimum of ten days until **less than five** McCann's skinks are captured, or until **three** skinks are captured during the latter stages of the salvage (around day 7; see Section 5.3.2). If high numbers of southern grass skink continue to be captured (more than three after day 7), salvage will continue until no more southern grass skinks are caught.
		If more than skinks are salvaged, post-release monitoring and pest mammal control will be extended by five years each for a total of 10 years of management (Section 7).
Injury/Death	Incorrect trapping or handling by untrained staff may harm lizards.	All capture and handling will be done or directly supervised by qualified and authorised herpetologists, using best practice and hygiene protocols to minimise injury, death, or disease.
	Predation within traps	All traps will be padded with thick grass/vegetation to provide a barrier between mice and skinks (if both caught in traps). Where mice are caught in the same trap as a skink, the mouse will be humanely euthanised and the trap removed. Any signs of predation will be recorded, and any injured or dead skinks will be reported to DOC.

5.5.2 Contingencies

There is often inherent uncertainty in the outcomes of lizard mitigation due to the complexities of the process and long-term management of habitat enhancement sites. In some cases, Threatened species may be discovered on site, or habitat enhancement may not be viable in the long term.

The main risks and resulting contingencies relating to the proposed management include (see Table 9 for more details):

- Additional lizard species encountered other than those known to be on site (unexpected discovery).
- Lizards are present in areas to be developed.
- Habitat enhancement is unsuccessful (lizard-friendly plants recommended for enhancement planting are unavailable or plantings do not survive).

Table 9 – Risks associated with proposed management.

Risk Associated with Management	Detail	Contingency
Additional lizard species encountered	Southern Alps gecko	Release all Southern Alps geckos into the northern or southern gullies.
	Although unlikely, if any other species is encountered at any time on site.	Follow Incidental Discovery Protocol. Stop works, notify DOC, and develop further instructions (see Section 6.5.3).
Enhancement site failure	Recommended plants are unavailable.	Any plants that are unable to be sourced in the planting season prior to release will be sourced in advance for infill/replacement planting as in the following seasons. Unavailable plants will be substituted with available plants for that season and planted as recommended, leaving space for infill/replacement planting in the following years (thus keeping a complex diversity of plants across the entirety of the site).
	Plant survival is not sustained.	If more than 25% plant mortality occurs, plants will be replaced at the cost of FNSF. This will be determined through post-planting monitoring (see Section 7.4.4).
	Lizards are not detected during monitoring.	Complete follow up monitoring to determine next steps. Seek advice from DOC.
Areas to be avoided are disturbed or cleared	In the instance that areas to be avoided are cleared during development works.	Undertake additional habitat enhancement to offset for the loss and disturbance to lizards and their habitats. Notify DOC immediately and develop further instructions. It is likely that this may include providing compensation for disturbance to lizards.

Notable changes to the LMP will be undertaken in consultation with DOC. Any changes and updates to the LMP, following consultation with DOC, will be effective upon notification of all respective groups (unless a WA variation is required by DOC).

5.5.3 Incidental Discovery Protocol

Incidental discovery protocols are provided in the Appendix 2 for solar farm Contractors and are to be followed if any lizards are discovered in areas to be developed during construction of the solar farm.

6.0 Monitoring

6.1 Overview

DOC's lizard mitigation guidelines (DOC 2019) recommend monitoring to evaluate the success of salvage operations. Monitoring of lizard salvage will be undertaken in habitat enhancement areas. This is necessary to assess the success of the habitat enhancement and trends in lizard population abundance, as well as the success of the salvage operation.

Monitoring may not detect any changes in the population of lizards in the short term and may need to be carried out for at least five years. Therefore, monitoring will be established during the first lizard active season post-lizard salvage and will be undertaken by a suitably qualified herpetologist every year. Monitoring will also be undertaken within the gullies. This post-enhancement monitoring will be commissioned by FNSF.

6.2 Goals and objectives

The purpose of long-term monitoring is to ensure the success of the habitat enhancement and predator control program, and ensure that the high-quality lizard habitats remain free of pest plants.

The objective of long-term monitoring for lizards at the proposed Point Solar Farm are:

- Objective 1: Lizard population persistence and uptake of habitat enhancement areas.
  - Monitor skink persistence within the newly created habitat corridors, post-release.
  - Determine (at a minimum) a 10% increase in lizard population abundance within the habitat corridors.
- Objective 2: Ensure a 75% survival rate of plantings and effective control of pest plants in lizard habitat corridors and high and moderate value lizard areas (scarps and the central southern old river terrace) on the proposed solar farm.
  - Monitor planting growth and establishment, and connectivity between habitats.
  - Determine success of plantings.
- Objective 3 – Pest plant control
  - Determine the presence of pest plants requiring control (See VMP).
  - Undertake surveillance and control.
- Objective 4 - Reduction of pest mammals
  - Ensure a reduction of pest mammals and ensure pest mammals are not impacting lizard abundance.

6.3 Objective 1 – Lizard population increase in lizard habitat corridors

6.3.1 Post-release monitoring

Post-release monitoring will be established at the release site during the first lizard active season post-salvage and will be undertaken by a suitably qualified herpetologist annually for five years. The aim of the post-release monitoring is to show a 10% increase in lizard populations within the habitat corridors following five years of monitoring.

Monitoring of relocated individuals for survivorship and establishment is not practical without toe clipping for this species as they cannot be reliably identified to an individual level from their natural markings. However, this method will not be used as it is widely considered to be unethical. Therefore, the design of the post-relocation monitoring work will be focussed on achieving population persistence at the site over five years following lizard release.

Post-release monitoring will consist of a mark-recapture live capture survey over one week during fine weather between November and February annually. Pitfall traps will be placed at 10-15 metre spacings throughout each habitat corridor (the exact number of pitfall traps will be determined following the creation of the habitat corridors). The pitfalls will be covered with an ACO to provide additional thermoregulatory advantages and attract more lizards to the traps. The pitfall traps will be left in place for the entire monitoring period (five years). However, the ACOs will be removed between each year of monitoring as not to influence population dynamics. All skinks captured and measured (snout-vent length, tail vent length, regen tail length), sexed, photographed, and marked with an ID number.

Numbers detected during each monitoring session can be compared over time to provide some indication as to how skinks are faring at the site. These methods will not provide accurate estimates of population size or trends over time. However, these methods will determine skink persistence at each pile and can inform the ongoing management prescribed for the site.

6.3.2 Adaptive management

If capture rates are determined to be declining during the initial lizard monitoring period at the release site, post-release monitoring will continue for another five years to determine if (any) management interventions are required. Management interventions may include increased predator control or increased habitat enhancement. These interventions will be determined in consultation with FNSF, MDC, and DOC, on an as required basis, based on follow-up monitoring in the same season (i.e., October or March) and a review of predator control success and habitat enhancement.

6.4 Objective 2 – Plant survival

Plantings should be successful throughout lizard habitat enhancement areas and have a survival rate of over 75%. If the survival rate of plantings drops below 75%, these plantings will be replaced (as detailed in Section 5.4.4 of this LMP).

6.4.1 Plant maintenance

For the first two years following planting, the plantings will be maintained 1-3 times per year, with maintenance needs assessed during the first maintenance trip. Annual maintenance trips should be scheduled for the following three years. During these visits, plants will be released (weeding around plantings) from exotic vegetation by the spraying of herbicide in a 30-centimetre radius around each guard to ensure they are not outcompeted by surrounding exotic vegetation. As the plants become established (i.e. once they achieve >75% canopy cover), they will begin to out-compete other exotic species and the amount of maintenance required will decrease significantly.

6.4.2 Watering

The planting window in the Mackenzie Basin is very limited and rainfall can be fickle. Therefore, watering maybe required initially (first two years) when plants are establishing to avoid high mortality rates. If watering is required, it needs to follow the strict guidelines detailed in the proposed consent conditions for the landscape planting (refer RMM Landscape Management Plan). All irrigation water should be directed into the site and away from its boundary, avoiding high wind days, when water may drift over the site boundary.

6.4.3 Infill planting

Infill planting to replace plants that have died may be required and should be undertaken in years two and three after the original planting, as necessary. The number and species of infill plants should be identified in the February or March proceeding the planting season (refer Table 11).

Supplementary plantings of indigenous climbing species, especially those in the genera *Rubus*, and *Clematis* [6]and should be considered once the initial restoration plantings form a canopy (3-5 years after initial planting). These species should be planted at a density of 15-20 plants per hectare.

6.4.4 Monitoring

Monitoring will determine whether planting maintenance requirements are being met. To ensure the establishment of lizard habitat enhancement plantings in high and moderate value lizard habitat, together with plantings, vegetation growth, and rock piles in lizard habitat corridors (including biodiversity nodes), photos will be taken at specific photopoints within the site. Several photopoints will be chosen within these areas. Photos will be taken at these points before planting as soon as possible (within two months) after planting, and then during years 1, 3 and 5 post-habitat enhancement. These photos will illustrate the rate of establishment of plantings and growth of vegetation over time and provide additional information regarding the presence of any pest plants that require control (in addition to monitoring included within the VMP).

6.5 Objective 3 - Pest plant monitoring and control

6.5.1 Pest plant monitoring

Pest plant and target ecological weed (refer VMP) monitoring and control will ensure that lizard habitat enhancement areas are successful (Objective 1), i.e. not overrun with pest plants which outcompete plantings or reduce the habitat quality of rock piles for lizards.

Pest plant monitoring and control is included within Section 8 of the VMP for the site (Wildlands 2026). Pest plant monitoring includes:

- Undertaking a vascular plant survey one year following the commencement of solar panel installation and then additional surveys every three years.
- Undertaking pest plant and ecological weed control as required one year following the commencement of solar panel installation and then additional surveys every three years.
- Designating six photopoints across the site (VMP Figure 2), with photos to be retaken annually at these locations.

6.6 Objective 4 - Pest mammal monitoring

Pest mammal monitoring will ensure that pest mammal populations are sufficiently low that they are not considered to be a significant factor in preventing an increase in lizard abundance in enhanced habitats on site (Objective 1).

Pest mammal monitoring is included within Section 8 of the PMMP for the site (Wildlands 2026a). Pest mammal monitoring includes:

- Tracking tunnels for mustelids and rodents.

[6] These have not been included in the initial planting schedule.

- Night counts for feral cats, rabbits, and hares.
- Wax tags for possums.
- Residual trap catch for mustelids, feral cats, and possums.
- Bait take for rodents.

These methods will be undertaken along transects established across the site (PMMP, Figure 3).

7.0 Reporting

7.1 Salvage report

A salvage report will be prepared, including details of the lizards, capture locations, and number of individuals salvaged and released into the habitat corridors. This report will provide detail on compliance with the WAA issued, including information regarding the success of the lizard salvage and any adaptive management that was required. It is likely that salvage reporting will be required each year until salvage is completed.

Lizard and location details will be provided to DOC within six months of salvage completion as part of the Wildlife Act obligations. ARDS cards will be completed and submitted to DOC.

This report will be provided to MDC, ECan, DOC, and mana whenua as required.

7.2 Monitoring reports

A monitoring report will be produced following each monitoring period, detailing outcomes of the habitat enhancement and monitoring on site. The report will contain information regarding the success of the habitat enhancement (from photopoints) and the results of lizard monitoring. The report will suggest any adaptive management that may be required. Lizard species and location details will be provided to DOC as part of the WAA obligations. ARDS cards will be completed and submitted to DOC.

Monitoring reports will be provided to Mackenzie District Council, DOC and relevant iwi, as required. Details for correspondence will be provided to the Project Herpetologist by FNSF, once obtained.

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Appendix 1

Authorised personnel – relevant experience

Wildland Consultants Ltd will provide a highly skilled team with extensive and long-term experience in lizard monitoring, relocations and implementation of Lizard Management Plans. **Cameron Thorp** will lead the project, working closely with **Samantha King**, **Jade Christiansen** and **Anna Meban**, who are all highly experienced in implementing Lizard Management Plans.

Cameron Thorp

Herpetologist – Dunedin

Cameron Thorp has seven years' experience working as a herpetologist in New Zealand. Cameron previously worked for EcoGecko Consultants (2018-2019) before joining Wildland Consultants in 2019. Cameron is experienced in the set up and implementation of lizard surveys, monitoring programmes and lizard salvages across New Zealand, and writing Lizard Management Plans, and Assessments of Ecological Effects (AEEs)/Ecological Impact Assessments (EcIAs). Cameron has worked with a wide range of species across the country, including in alpine environments and with Nationally Critical species. He is currently serving on the Council for the Society for Research on Amphibians and Reptiles in New Zealand (SRARNZ).

Set out below are the following details regarding Cameron Thorp in order to meet the criteria that the Lizard Technical Advisory Group applies.

Appropriate qualifications as an ecologist

- Master of Science with Honours, Ecology, University of Otago.
- Post-graduate Diploma, Endangered Species Recovery, Durrell Wildlife Conservation Academy (Mauritius), 2014.

Suitable and relevant field skills from New Zealand and NZ lizard species. Experienced in the conservation management and/or ecological requirements of most/all NZ Not Threatened and At Risk lizard species (and many Threatened or endangered species).

- Experience surveying, including spotlighting, hand-searching, funnel traps (Gee's minnow traps and other forms of funnel trap), pitfall traps and artificial cover objects (such as Onduline and closed-cell foam covers), handling, recording morphometrics, monitoring (including mark-recapture studies), and translocating New Zealand lizards.
- Department of Conservation: surveys for Data Deficient lizard species, including alpine rock skink (Canterbury 2022), awakopaka skink (Fiordland 2020-2023) and hura te ao gecko (Otago 2020-2022), post-translocation monitoring for ornate skink and ngahere gecko on Matiu/Somes Island (Wellington 2018-2020), supervised vegetation clearance for McCallums Mill Road Widening/Ōpārara Arches Lizard Management (West Coast 2022).
- Rangitāne o Manawatū lizard handling and surveying training (Matiu/Somes Island and Manawatū 2023).
- Porirua City Council: surveys of six council reserves (2020-2021).
- Wellington City Council: surveys of two council reserves (2020), Miramar Peninsula surveys at Moa Point (2022).
- Greater Wellington Regional Council: long-term monitoring programme at Baring Head (2018-2021).
- Whanganui District Council: Plan Change 58 lizard survey, including discovering the largest known population of a Nationally Critical species (2021).
- Hawke's Bay Regional Council: survey of Napier population of northern spotted skink (2021).

- Waka Kotahi NZTA: Otaki to North of Levin motorway surveys (Kapiti Coast/Horowhenua 2021-2022), Takitimu North Link lizard salvage (Tauranga 2021), State Highway 58 Safety Improvements lizard salvage (Wellington 2019-2020).
- Mercury Energy's Turitea Wind Farm lizard survey and salvage of barking gecko, ngahere gecko and ornate skink (Palmerston North 2019-2020).
- OceanaGold's Macraes Phase III and Coronation Projects lizard monitoring (Otago 2018-2019), and Deepdell, Camp Creek and Cranky Jim's covenant lizard monitoring (2023).
- Lizard surveys for community groups, including: Kaipupu Wildlife Sanctuary and Picton Dawn Chorus (Marlborough 2019), Makara Peak Supporters (Wellington 2020), Sustainable Wairarapa (Onoke Spit and Ocean Beach 2020, Castlepoint 2021), ZEALANDIA wildlife sanctuary (Wellington 2019).
- University of Otago study: monitoring and radio-tracking of translocated ngahere geckos (Mana Island 2018).
- Various surveys for subdivision, afforestation and other development projects particularly in the Wellington, Christchurch, and wider Otago regions between 2018-2024.

Have complied with all permit conditions of pervious permits, including reporting:

- Cameron has always complied with permit conditions of pervious permits, including reporting.
- Author on compliance reports, including lizard salvage and monitoring reports (e.g., *Chard Farm, Gibbston lizard salvage* (100542-FAU)).

Evidence of Lizard Management Plans:

- LMP for a subdivision at 49 Cleat Street, Whitby, Porirua (97664-FAU).
- LMP for Styx Mill Road subdivision, Casebrook, Christchurch (108830-FAU).

Samantha King

Senior Herpetologist and Ecologist - Christchurch

Samantha King has more than eleven years of experience working on a diverse range of herpetofauna projects, and completed her MSc in Conservation Biology studying the genetics and morphology of a rare species of South Island green gecko. Samantha's field experience includes lizard surveys, salvage, release and monitoring using a range of species-specific methods (including lizard radio tracking and tail tipping for genetic analysis). Samantha also has extensive experience preparing and implementing Lizard Management and Conservation Plans, Compliance Reports and Monitoring Reports.

Samantha has worked under several survey permits:

- South Island survey permit (excluding PCL; 96003-FAU).
- Auckland(82063-FAU) and Canterbury (81898-FAU) region survey permits.
- MSc research permit (63428-FAU).
- Cypress mining wildlife permit (WC-31903-FAU) (Solid Energy).
- Rockies and Millerton mines, (WC-32714-FAU).
- Under Marieke Lettink's permit (35196-FAU).
- The Escarpment Mine authority (36887-FAU).

Set out below are the following details regarding Samantha King in order to meet the criteria that the Lizard Technical Advisory Group applies.

Appropriate qualifications as an ecologist

- MSc, Conservation Biology, Massey University, 2018. Thesis: Genetic and phenotypic variation used to identify populations of endangered green gecko (*Naultinus*) found in the north-west South Island, New Zealand.
- Postgraduate Diploma Science, University of Auckland, Environmental Management, 2017
- BSc, Environmental Studies, Victoria University of Wellington, 2011
- Completed online Department of Conservation training courses:
  - Bird identification.
  - Wildlife health.
  - Introduction to natural heritage.

Suitable and relevant field skills from New Zealand and NZ lizard and frog species. Experienced in the conservation management and/or ecological requirements of most/all NZ Not Threatened and At Risk lizard species (and many Threatened or Endangered species).

- Herpetofauna management including searching, handling, monitoring, attaching small radio transmitters, and tail tipping for genetic analysis. (36887-FAU), (63428-FAU).
- Diurnal green gecko searches on West Coast, Golden Bay and Takaka Hill, Boyle River, Hanmer, Waiau Valley, Kaikoura Range, Leetham Valley, Wairau Valley, and Rakaia Gorge. (96003-FAU, 35196-FAU).
- Pitfall trapping for annual scree skink surveys in Mt Somers. (35196-FAU).
- Funnel trapping for Roamatimati and white-bellied skinks in the Rangitata head waters. (35196-FAU).
- Spotlighting for green geckos in Abel Tasman National Park. (35196-FAU).
- Field project leader for Escarpment Mine lizard salvage and management, with a leadership role in site hazard and risk assessments, creating efficient and novel species-specific survey techniques (36887-FAU).
- Spotlighting and manual searches for Archey's and Hochstetter's frog in Coromandel, Auckland.
- Undertaking biodiversity inventories for Oceana Gold WKP expansion – Coromandel including for forest gecko, and two frog species 2018-2021.
- Providing expert advice for surveying lizards on post-rehabilitated vegetation of Stockton Mine – March 2019.
- Providing expert advice on green gecko habitat preference and surveys on Denniston and Stockton plateaux – March 2019 (36887-FAU).
- Surveys and conservation management advice for green geckos in the Nelson region for Nelson City Council and Tasman Pine ltd.
- Contributing to the Nelson City Council resource management plan on habitat requirements for Nationally Endangered or At Risk lizard species, with specific regard to green geckos. March-April 2019.
- Leading field surveys for lizards, using a variety of techniques in Kahurangi National Park, January 2021.
- Herpetologist for Coleridge Downs Irrigation Pipeline Lizard Salvage
- Lizard Management Plans for complex projects such as McCallums Mill Road, and Kawatiri Coastal Trail, 2021.
- Undertaken lizard salvage and consent monitoring of a sandmine in Auckland with spotlighting for *Dactylocnemis pacificus* and *Naultinus elegans,* 2021. (Surveys under 82063-FAU).
- Spotlight and pitfall surveys for lizards at Stillwater for Penlink roading project (82063-FAU).
- Pitfall trapping for grass skink in Canterbury.
- Lizard survey for Mackenzie District Council, 2023.

- Designed and established the NZDF Tekapo Military Training Area lizard monitoring, 2025.
- Tree ACO surveys for Tautuku gecko, broad-cheeked gecko and Waitaha gecko, 2023-2025.
- Set up and monitoring for Nationally Critical and Threatened species including harlequin gecko, West Coast green gecko, Southland green skink, and small-eared skink 2022-2025.
- Population distribution surveys for Alborn skink, including at Mahoneys Pakihi, Slab Hut Pakihi and Big River, 2021-2025.

Have complied with all permit conditions of pervious permits, including reporting.

- Sam has always complied with permit conditions of pervious permits, including reporting. In her capacity as field leader Sam has had to ensure that conditions of permit are upheld by all workers.
- Annual reporting for WAA:
  - Annual reporting for 96003-FAU.
  - Auckland and Canterbury regions and end of survey summaries, including ARDS reporting.
- Writing scientific and advisory reports specifically for clients such as the Department of Conservation, Bathurst Resources Ltd and Solid Energy.
- Annual Lizard Salvage and Monitoring Report contributing author – Escarpment Mine Bathurst Resources Ltd, 2014. (36887-FAU)
- Annual wildlife permit reporting for Cypress Mine WC-31903-FAU (Solid Energy), and Rockies and Millerton mines, WC-32714-FAU (Solid Energy) between 2012 and 2015.
- Annual wildlife permit reporting for Coleridge Downs Irrigation Pipeline Lizard Salvage.
- WAA compliance reporting for LMPs following salvage.

Evidence of Lizard Management Plans:

- Kawatiri Coastal Trail Lizard Management Plan – Kawatiri Coastal Trail Trust - 90101-FAU.
- Oparara Arches Lizard Management – McCallums Mill Road LMP – DOC.
- Coleridge Downs Irrigation Pipeline WAA Variation – Private.
- Te Arai South LMP – Private.
- Smooth Hill LMP – GHD / Dunedin City Council.
- 34 Kauri Point Road LMP – Private.
- Faringdon Oval LMP - 102434-FAU.
- 235 Kanohi Road LMP – Transpower.
- Westland Mineral Sands LMP – 9 Mile.
- Southland Wind Farm LMP – Contact Energy.
- Mornington Rd LMP – Dunedin.
- Corban Reserve LMP – Watercare (Auckland Council).
- Hanmer Elevations LMP.
- 130 Styx Mill Rd Subdivision 108830-FAU.

Reviewed and signed off on the following LMPs:

- Nevis Valley Gold LMP.
- Coronet Peak LMP.
- NZDF pipeline LMP- 117243-FAU.

- Tosswill Rd LMP – Ngai Tahu Properties Ltd– 118761-FAU.
- 121 Halswell Junction Road LMP – 118123-FAU.
- Hororata Pipeline LMP – Canterbury Plains Water Ltd.

Jade Christiansen

Herpetologist – Christchurch

Jade Christiansen has five years of experience working with lizards in New Zealand. Jade has a Master's of Science in Zoology (2023) from the University of Otago investigating the translocation and habitat preferences of Kapitia skink (*Oligosoma salmo* – Nationally Critical). During her studies (between 2018 and 2023), Jade was involved in a range of herpetological work which included monitoring a range of lizard species, specifically those found in the Otago region. Since 2023, Jade has been employed as a herpetologist, where she has experience in the preparation and implementation of Lizard Management Plans, primarily within the Canterbury region.

Jade's field experience includes lizard surveying, translocation, salvage and monitoring using a range of methods including hand capture, visual searching, spotlighting, burrow-scoping and radio tracking, as well as, trail camera and tracking tunnel monitoring.

Set out below are the following details regarding Jade Christiansen in order to meet the criteria that the Lizard Technical Advisory Group applies.

Appropriate qualifications as an ecologist:

- MSc, Zoology, University of Otago, 2022. Thesis: Habitat use and translocation techniques for the critically endangered Kapitia skink, *Oligosoma salmo*.
- BSc, Zoology and Ecology, University of Otago, 2020.

  Suitable and relevant field skills from New Zealand and NZ lizard species. Experienced in the conservation management and/or ecological requirements of most/all NZ Not Threatened and At Risk lizard species (and many Threatened or endangered species).
- Tuatara monitoring at Orokonui ecosanctuary (hand capture, trail camera monitoring, burrow scoping, and spotlighting, as well as, artificial retreat and tracking tunnels for hatchlings), 2018-2023.
- Teaching, advocacy and research of captive lizards at University of Otago (lizard handling – korero gecko, jewelled gecko, Otago skink), 2020-2022.
- Kapitia skink translocation monitoring and habitat assessment – Masters research and annual population monitoring (Artificial retreats (ground and arboreal), tracking tunnels, fluorescent powder, trail cameras, tail tipping), 2020-2022.
- Research assistant on kōrero gecko research (hand capture, rock turning, radio tracking), 2018-2019.
- Surveys and long term-monitoring for grass skink in Canterbury.
- Surveys for *Naultinus* sp. (jewelled gecko, rough gecko and barking gecko).
- Salvage and release for grass skink in and around Christchurch.
- Supervised progressive vegetation clearance for northern grass skink, 2024 and southern grass skink, 2025.
- Surveys for roamatimati and Mackenzie skink for NZDF, Tekapo Military Training Area, 2025.
- Supervised vegetation clearance for West Coast green gecko, 2024.
- Population distribution surveys for Alborn skink at Big River, 2025.
- Arboreal artificial retreat surveys for Tautuku gecko, 2024-2025.

Have complied with all permit conditions of pervious permits, including reporting.

- Jade has always complied with permit conditions of pervious permits, including reporting.
- Contributing author on different compliance reports:
  - Creamery Ponds, Halswell (94672-FAU).
  - Bellgrove, Rangiora lizard salvage reports (100703-FAU).
  - Faringdon Oval (102434-FAU).
  - Kawatiri Coastal Trail - Section 6 (90101-FAU).

Evidence of Lizard Management Plans:

- Styx Mill subdivision LMP – 108830-FAU.
- Tekapo Military Camp pipeline LMP – 117243-FAU.
- 179 Milns Road subdivision LMP – 117499-FAU.
- 121 Halswell Junction Road subdivision LMP – 118123-FAU.
- 93 Tosswill Road subdivision LMP – 118761-FAU.

Anna Meban

Ecologist – Christchurch

Anna Meban has three years' of experience working with lizards in New Zealand. Anna has a Masters of Science in Conservation and Ecology (2024) from Lincoln University investigating the bait preferences in rabbits in the Mackenzie and Otago districts. During her studies Anna has been involved with a range of herpetological work as a student intern at the Department of Conservation and Wildlands as a casual employee. Anna's field experience includes lizard surveying, salvage and monitoring using a range of methods including, spotlighting, tracking tunnels and visual searches

Set out below are the following details regarding Anna Meban in order to meet the criteria that the Lizard Technical Advisory Group applies.

Appropriate qualifications as an ecologist:

- MSc, Conservation and Ecology, Lincoln University, 2024. Thesis: Bait preferences in rabbits (*Oryctolagus cuniculus*) and non-target species in rabbit-prone areas of New Zealand's South Island
- BSc, Conservation and Ecology, additional major Parks and Outdoor Recreation, Lincoln University, 2021
- Internship with Department of Conservation, Mahaanui Office, Canterbury, 2021

Suitable and relevant field skills from New Zealand and NZ lizard species. Experienced in the conservation management and/or ecological requirements of most/all NZ Not Threatened and At Risk lizard species (and many Threatened or endangered species).

- Experience surveying, using a range of different techniques including spotlighting, hand-searching, funnel traps (Gee's minnow traps), pitfall traps and artificial cover objects (such as Onduline), handling, monitoring, and salvage and release of New Zealand lizards.
- Species specific work undertaken as part of field surveys or monitoring programmes with New Zealand herpetofauna includes the following species: *Oligosoma* aff. *polychroma* 'Clade 5', *Oligosoma* aff. *polychroma* 'Clade 4', *Oligosoma maccanni, Oligosoma aeneum, Oligosoma* aff. *longipes* "southern", *Woodworthia* cf. *brunnea, Woodworthia chrysosiretica,* and *Naultinus gemmeus.*
- Lizard surveys and habitat assessments for subdivisions and development projects, particularly in Christchurch, the wider Canterbury region and North Island (e.g. Bowenvale, Cunliffe Road, Milns Road, Tekapo Military Camp, SH3 New Plymouth, Pound Road, Woodend Bypass) (2022-2025).

- Lizard salvage fieldwork around Christchurch (e.g. Creamery Ponds, Bellgrove, Farringdon Oval, Styx Mill Road) (2023-2025).
- Habitat assessments (e.g. Amberly Beach, Leistrella Road, Johns Road) (2023-2025).
- Department of Conservation jewelled gecko monitoring (2021).

Have complied with all permit conditions of pervious permits, including reporting.

- Anna has always complied with permit conditions of previous permits, including reporting.
- Contributing author on different compliance reports, including lizard salvage and monitoring reports (Styx Mill Road Lizard Salvage, 179 Milns Road).

Contribution to and author of Lizard Management Plans:

- Ashley Solar Farm.
- CPWL Hororata River.
- Cashmere Estates Stage 5 & 6.

Appendix 2

Lizard protocols

Incidental Discovery Protocol

Overview

Incidental discovery protocols are set out below for development contractors, and are to be followed if any further lizards are discovered, post mitigation, during the Project works.

Name	Role	Contact
Samantha King	Senior Herpetologist – Project Herpetologist	Samantha.King@wildlands.co.nz
Cameron Thorp	Herpetologist	Cameron.Thorp@wildlands.co.nz
Jade Christiansen	Herpetologist	Jade.Christiansen@wildlands.co.nz
Anna Meban	Ecologist	Anna.Meban@wildlands.co.nz

Preparation for incidental discoveries

Contractors must carry and/or keep a hard sided container with air holes (such as an ice cream container) on site at all times, in case of lizard discovery. Refer to the potential species that may be encountered (below) for more detail on what to look out for. All new contractors/site employees should be familiar with this Incidental Discovery Protocol.

Where lizards might be found

Lizards could be present in and on vegetation such as within mixed exotic scrub, grassland, exotic hedgerows/shelterbelts, ornamental domestic gardens or within debris. They may also bask in sunny exposed spots, such as in/on debris piles. They may be uncovered when disturbed by habitat clearance or earthworks.

Species likely to be encountered

Lizard Identification	Description
	McCann's skink – Medium bodied, dark brown, notched edges/sides. Light/white belly.

Lizard Identification	Description
	Southern grass skink – Medium bodied, light brown colouration, smooth edged (mostly), striped sides. Generally dull belly – yellow/brownish.
	Southern Alps gecko – Small/Medium bodied grey/brown.

Following the incidental discovery of a lizard

Immediately (as soon as discovery of a lizard is made) cease any activities within 10 metres of the place of discovery. If the species encountered is a species with a Threat Classification status of 'Threatened' then all works must cease immediately, until an assessment is made of the works programme risk for that species, and any specific management identified, including avoidance.

If possible, capture the lizard and place in a container with grass/leaf litter/moss. Ensure to create breathing holes in the container for the lizard. Hold in captivity in a **cool, shady** location out of sun until a decision is made.

- Immediately inform the Project Herpetologist and Site Manager.
- Document:
- Date and time.
- Weather conditions.
- Observer name(s).

- Photographs of the animal and the location where it was found. Photograph the lizard from above trying to show the head and any markings on the upper body or back. A cell-phone picture is adequate for this and will help with identification of species.
- Location (GPS coordinates).
- Species.
- If injured:
  - What part of the animal is injured? (Photograph the injury).
  - Time since injury (if known).
  - Probable cause of injury (if known).
  - Immediately (within one hour) contact a local veterinarian and the local DOC office (Mahaanui or Rangiora Office), and arrange for the injured lizard to be delivered to the veterinarian. This may require a monetary contribution for care.
- If a carcass is found:
  - Condition of carcass (see below).
  - Approximate time since death (if known).
  - Probable cause of death (if known).
  - Notify the project herpetologist at Wildland Consultants immediately. The Project Herpetologist will notify DOC and ask for advice on how to proceed.
  - Arrange for the carcass to be sent to Wildbase (06 350 5329), Massey University, in Palmerston North, unless advised otherwise by DOC.

If lizards are unable to be captured and/or photographed, note as much detail as possible: what colour was it; what colour patterns; how big was it; whether it was robust or slender; what habitat was it found in? You may need to describe these details to the project herpetologist and the Department of Conservation (DOC).

Should a nationally 'Threatened' lizard species be encountered during construction, the Project Herpetologist will immediately consult with DOC to ask for advice on how to proceed. Further works may not proceed until approval has been granted to continue by the Project Herpetologist and DOC

Lizard Release

All incidentally captured lizards will be released on site following the below release protocol:

- Release lizards into the areas of high-quality rocky habitat found within The Point reserve (see Figure 5). Once additional rock piles have been created within The Point grasshopper reserve, lizards can also be released into these rock piles.
- At a minimum of five metres from other released lizards (except for multiple lizards that are captured together at the same location, in which case they should be released together).
- At a minimum of 100 metres from the original capture location (to prevent possible homing behaviour).

Releasing captured lizards individually at least five metres away from each other will minimise overcrowding and competition for refuge sites, apart from lizards that have been captured together should be released at the same location, so as to maintain cohesion of established lizard social groups.

Protocols for Injured Lizards

Following the incidental discovery of an injured lizard:

- Follow the above procedures.
- Immediately (within one hour) contact a local veterinarian, and arrange for the injured lizard to be delivered to the veterinarian. This may require a monetary contribution for care.

Protocols for Lizard Carcasses

Following the incidental discovery of a lizard carcass:

- Notify the Project Herpetologist at Wildland Consultants within eight hours. The Project Herpetologist will notify the Department of Conservation and ask for advice on how to proceed.
- Arrange for the carcass to be sent to Wildbase (06 350 5329), Massey University, in Palmerston North, unless advised otherwise by the Department of Conservation.

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