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memorandum

TO	Tim Carter	FROM	Lachie Davidge and Jarred Arthur
	Carter Group Limited	DATE	5 March 2025
RE	104 Ryans Road Development Project – Memorandum of Lizard Habitat Assessment Results		

1.0 Introduction

Carter Group Limited (CGL) requested Pattle Delamore Partners (PDP) to undertake a lizard habitat assessment at 104 Ryans Road, Yaldhurst. This is to support their Fast-track application for a proposed 55.5 ha industrial development at the site.

PDP ecologists (see Appendix A) conducted a desktop assessment and subsequently surveyed the site on 27th November 2024. The purpose of these assessments was to determine whether suitable habitats are present on site that may support a native lizard population. The site visit involved vegetation searches, debris flipping and visual surveys across the site. Detailed baseline lizard trapping surveys will be undertaken prior to April 2025 (inclusive) and before any site works being conducted. Traps for baseline surveys have already been placed to begin the acclimation period.

The Fast-track application includes a Wildlife approval relating to Wildlife Act 1953 in relation to native lizards. Schedule 7, clause 2 *Information required in an application for wildlife approval* of the Fast-track Approvals Act 2024 is addressed in this memorandum and conditions for the approval (Schedule 7, clause 6) are proposed to manage any adverse effects.

2.0 Results

2.1 Desktop Assessment

A desktop search of iNaturalist and the Department of Conservation herpetofauna database was conducted within a 5 km and 13 km radius of the proposed construction site. This determined whether any native lizards had been observed in the vicinity of the development area. Only research-grade iNaturalist observations were included in the search.

Four lizard species have been recorded within a 5 km radius of the site including the northern grass skink (*Oligosoma polychroma*), southern grass skink (*Oligosoma* aff. *Polychroma* Clade 5), McCann's skink (*Oligosoma maccanni*) and Waitaha gecko (*Woodworthia brunnea*). Of these, several have been observed within 2 km (e.g., McCann's skink, northern grass skink and Waitaha gecko) and may be present on the project site, particularly within the abandoned farm buildings at 104 Ryans Road.

Within a 13 km radius, several northern grass skinks, southern grass skinks, McCann's skinks, Canterbury spotted skinks (*Oligosoma lineoocellatum*), Waitaha geckos and jewelled geckos (*Naultinus gemmeus*) have been observed (Table 1). Two plague skinks (*Lampropholis delicata*) have been observed within the 13 km boundary, however this record has been excluded from Table 1 as it is an invasive species.

Table 1: Herpetofauna observed within 13 km of the development site		
Common Names	**Species**	**Conservation Status[1]**
Canterbury spotted skink	*Oligosoma lineoocellatum*	Nationally Vulnerable
Jewelled gecko	*Naultinus gemmeus*	Declining
McCann's skink	*Oligosoma maccanni*	Not Threatened
Northern grass skink	*Oligosoma polychroma*	Not Threatened
Southern grass skink	*Oligosoma* aff. *polychroma* Clade 5	Declining
Waitaha gecko	*Woodworthia brunnea*	Declining

2.2 Field Surveys

No lizards were observed during the site visit on 27th of November 2024. However, some locations onsite contained potential native lizard habitats including rank grass, rock and debris piles, dense foliage, leaf litter and abandoned farm buildings (see Appendix B). Of note were the rock piles and large hay bale stockpiles around the site. These areas provide ideal habitat for native herpetofauna including southern grass skinks and McCann's skinks (Purdie, 2022).

The hedgerows surrounding the open pasture grassland had dense rank grass and shrubs providing potential lizard habitats (see Appendix B-6 to B-8). However, it is unlikely native skinks inhabit these areas due to disturbance from livestock grazing and suboptimal habitat availability. Livestock grazing, or other management activities (e.g., mowing), should continue to maintain low grass heights. This will discourage lizards from colonising these areas before any work commences.

Appendix B shows the areas of potential lizard habitat around the proposed site. The old farm buildings at 104 Ryans Road are of particular importance as this area provides a variety of ideal lizard habitats (see Appendix B-1 to B-5).

3.0 Schedule 7 Fast-Track Approvals Act 2024

An application for a wildlife approval must address the following matters set out in Table 2 below, as per Schedule 7 of the Fast-Track Approvals Act (2024):

Table 2: Descriptions of how Schedule 7, clause 2 (Fast-Track Approvals Act, 2024) conditions have been addressed	
Schedule 7, Clause 2	**Comment/Assessment**
(a) specify the purpose of the proposed activity:	Industrial development including the establishment of logistics, warehousing, light manufacturing, and other airport-related businesses.
(b) identify the actions the applicant wishes to carry out involving protected wildlife and where they will be carried out (whether on or off public conservation land):	Vegetation clearance, building and debris clearance, site earthworks and other operations associated with construction at the site. The site at 104 Ryans Road is not on public conservation land.

[1] Information on lizard conservation status is provided by the New Zealand Threat Classification System, (DOC, 2022).

Table 2: Descriptions of how Schedule 7, clause 2 (Fast-Track Approvals Act, 2024) conditions have been addressed	
Schedule 7, Clause 2	**Comment/Assessment**
(c) include an assessment of the activity and its impacts against the purpose of the Wildlife Act 1953:	Site assessments have identified potential herpetofauna (lizard) habitat, but have not confirmed herpetofauna presence. Detailed baseline lizard trapping surveys will be undertaken prior to April 2025 (inclusive) and before any site works being conducted. Traps for baseline surveys have already been placed to begin the acclimation period. A Lizard Management Plan (LMP) has been prepared as part of the Fast-track application and outlines management interventions proposed to protect lizard populations inhabiting the site (if any). These include trap and transfer of fauna, and deterrent measures. See the LMP in Appendix C for more details.
(d) list protected wildlife species known or predicted to be in the area and, where possible, the numbers of wildlife present and numbers likely to be impacted:	See Section 2.1 and Table 1. Detailed herpetofauna surveys will confirm what species are present at the site prior to April 2025 (inclusive) and any commencement of works. Acclimation trap placement has commenced for these surveys. The results of these surveys will be reported to DOC including the number and species of lizards caught.
(e) outline impacts on threatened, data deficient, and at-risk wildlife species (as defined in the New Zealand Threat Classification System):	Potential impacts include habitat removal and the mortality of lizard specimens as caused by site construction works. These effects will be managed through the implementation of a robust LMP (see Appendix C).
(f) state how the methods proposed to be used to conduct the actions specified under paragraph (b) will ensure that best practice standards are met:	See LMP supplied as part of the Fast-track application (Appendix C).
(g) describe the methods to be used to safely, efficiently, and humanely catch, hold, or kill the animals and identify relevant animal ethics processes:	See LMP supplied as part of the Fast-track application (Appendix C).
(h) state the location or locations in which the activity will be carried out, including a map (and GPS co-ordinates if available):	104 Ryans Road, Yaldhurst, Christchurch. For further site details, see other supporting documents for the Fast-track application.
(i) state whether authorisation is sought to temporarily hold or relocate wildlife:	It is unknown whether lizards are present at the site, but it is assumed they are based on the available habitat present. Baseline herpetofauna surveys will be completed by April 2025 to confirm. In the interim, the applicant seeks authorisation to temporarily hold or relocate wildlife. This includes for any accidental discovery of lizards during construction so that lizard salvage can take place in a timely manner.

Table 2: Descriptions of how Schedule 7, clause 2 (Fast-Track Approvals Act, 2024) conditions have been addressed	
Schedule 7, Clause 2	**Comment/Assessment**
(j) list all actual and potential wildlife effects (adverse or positive) of the proposed activity, including effects on the target species, other indigenous species, and the ecosystems at the site:	Potential impacts include habitat removal and the mortality of lizard specimens as caused by site construction works. The site will long-term consist of a developed industrial landscape with warehouse buildings, roads and other infrastructure making it unsuitable for lizards to colonise. Effects will be managed through the implementation of a robust LMP (see Appendix C).
(k) where adverse effects are identified, state what methods will be used to avoid and minimise those effects, and any offsetting or compensation proposed to address unmitigated adverse effects (including steps taken before the project begins, such as surveying, salvaging, and relocating protected wildlife):	See LMP supplied as part of the Fast-track application (Appendix C).
(l) state whether the applicant or any company director, trustee, partner, or anyone else involved with the application has been convicted of any offence under the Wildlife Act 1953:	No convictions.
(m) state whether the applicant or any company director, trustee, partner, or anyone else involved with the application has any current criminal charges under the Wildlife Act 1953 pending before a court:	No pending charges.
(n) provide proof and details of all consultation, including with hapū or iwi, on the application specific to wildlife impacts:	Consultation with DOC occurred as part of the requirements of the Fast-track application. This concerned aspects of lizard discovery onsite and is contained in Appendix D. Consultation with Te Ngāi Tūāhuriri Rūnanga via Mahaanui Kurataiao Ltd (MKT) has commenced. Preliminary feedback (J7208) has been received. Specifically: *"The consent holder must employ a qualified and experienced herpetologist to survey/scout for native lizards.* *a. This must be undertaken during suitable weather conditions (lizard monitoring is undertaken in Canterbury during the months of Sept/Oct – April to coincide with the warm weather).* *b. The outcomes of this survey must be provided to Mahaanui Kurataiao for assessment before final Mana Whenua advice is provided."* Similar feedback from Te Taumutu Rūnanga was also received via MKT:

Table 2: Descriptions of how Schedule 7, clause 2 (Fast-Track Approvals Act, 2024) conditions have been addressed	
Schedule 7, Clause 2	**Comment/Assessment**
	"The consent holder must employ a qualified and experienced herpetologist to survey/scout for native lizards. *a. This must be undertaken during suitable weather conditions (lizard monitoring is undertaken in Canterbury during the months of Sept/Oct – April to coincide with the warm weather).* *b. Land known to be habitat for lizards must not be impacted by proposed works and must be improved / enhanced to protect and support a locally occurring population of native lizards.* *c. If relocated, lizards must be released into a suitable and recognised habitat.* *d. The outcomes of this survey must be provided to Mahaanui Kurataiao for assessment before final Mana Whenua advice is provided."* Iwi consultation documents are supplied as part of the Fast-track application.
(o) provide any additional written expert views, advice, or opinions the applicant has obtained concerning their proposal.	As per this memorandum and associated LMP (see Appendix C). A pre-consultation meeting with the Department of Conservation has been held (see feedback in Appendix D). Feedback from the Christchurch City Council herpetologist was received at a pre-application meeting in January 2025. This required no further input from Council on the matter, but they stated that DOC should be consulted (as above) and results of baseline surveys and, if applicable, translocation be communicated with relevant authorities.

4.0 Recommendations

We recommend a more detailed baseline lizard survey be conducted at 104 Ryans Road within the area containing the old farm buildings. This will include daytime lizard searches and nocturnal spotlighting searches to confirm whether any native lizard species are present in the area. Daytime surveys should be conducted over up to five days and nocturnal spotlighting searches should occur after dark for three nights. It is noted that the applicant has commenced with progressing these surveys, and traps have been laid at the site as part of an initial acclimation period. Baseline surveys are expected to commence in March 2025 once the acclimation period is complete.

Based on the findings of the habitat assessments conducted to date (see Section 2.0), it is expected that there is a moderate likelihood that lizards will be encountered during the baseline survey expected to take place in March 2025. On this basis, a Lizard Management Plan (LMP) has been prepared and submitted as part of the Fast-track application (see Appendix C). This includes requirements that any captured lizards be trapped and transferred by a qualified herpetologist. A Wildlife Act Authority (WAA) permit has also been requested as part of the application (see Section 3.0) for the capture and relocation of lizards at the site.

Suggested wording for conditions of consent are included in Section 5.0 below.

5.0 Recommended Conditions

Schedule 7, clause 6 of the Fast-track Approvals Act 2024 states:

1) *A panel may set any conditions on a wildlife approval that the panel considers necessary to manage the effects of the activity on protected wildlife.*

2) *In setting any condition under subclause (1), the panel must*

   a) *consider whether the condition would avoid, minimise, or remedy any impacts on protected wildlife that is to be covered by the approval; and*

   b) *where more than minor residual impacts on protected wildlife cannot be avoided, minimised, or remedied, ensure that they are offset or compensated for where possible and appropriate; and*

   c) *take into account, as the case may be, the New Zealand Threat Classification System or any relevant international conservation agreement that may apply in respect of the protected wildlife that is to be covered by the approval.*

It is recommended that, in accordance with the Schedule 7 provisions, the following are included as conditions of consent.

1. *The results of baseline surveys, conducted to confirm lizard presence at the site, must be provided to Mahaanui Kurataiao[2].*

2. *In the event that herpetofauna are found at the site during baseline surveys, a detailed Lizard Management Plan must be implemented including methods for:*

   a. *capturing and relocating of lizards; and/or*

   b. *deterring populations from inhabiting the site; and/or*

   c. *other management interventions as deemed necessary to protect resident populations.*

3. *Any capture and relocation of lizard fauna must be undertaken in accordance to permits obtained under the authority of the Wildlife Act (1953).*

If lizard salvage and relocation work is required on site, a report summarising the salvage and relocation results will be prepared and submitted to CCC and DOC within 30 days from the completion date of the work (see LMP attached in Appendix C). Specifically, this report will include:

1. Results of lizard salvage and relocation work. Should native lizards be found, then the following will also be included in the report:

   a. Photos of lizard salvage methods utilised;

   b. Photos of lizards captured (including photos of the salvage and relocation areas); and,

   c. A map showing the location of lizard upon capture and upon release.

2. Descriptions of how lizard management activities outlined in the LMP were followed, including conditions detailed in the WAA permit and associated resource consent conditions;

[2] Acclimation trap placement has commenced for baseline herpetofauna surveys, and surveys will be completed by the end of April 2025. It is not recommended that a consent condition be included requiring surveys to be conducted. This is because the results of the surveys will be obtained prior to a decision being made on the Fast-track application.

3. An Amphibian and Reptile Distribution Scheme (ARDS) card detailing information relating to captured lizards; and,
4. A brief summary regarding the outcomes of the LMP, including any improvements/changes that should be implemented in future.

6.0 Conclusions

The development site at 104 Ryans Road contains potential lizard habitat including rank grass, rock and debris piles, dense foliage, leaf litter and abandoned farm buildings. A detailed baseline survey for the presence of herpetofauna specimens is proposed as a condition of consent, and progress has been made by the applicant to commence these surveys. It is expected the surveys will occur in March 2025, prior to any site development works taking place. A WAA permit to capture and translocate lizards is sought as part of the Fast-track application in the event that lizard specimens are found onsite either during baseline surveys or accidentally during works.

If present, adverse effects on native lizards will be mitigated following the recommendations described in Section 4.0. A LMP for 104 Ryans Road has been attached below (Appendix C) and provides full details for the management of lizards, including methods for lizard salvage and relocation, accidental discovery protocol, staff responsible for the work, and the procedure for reporting findings to the relevant authorities. Following the implementation of recommendations outlined in this memo and the project LMP, effects on native lizards will be low.

7.0 References

DOC. (2022). *New Zealand Threat Classification System*. Department of Conservation. https://nztcs.org.nz/

Purdie, S. (2022). *A Naturalists Guide to the Reptiles & Amphibians of New Zealand* (1st ed.). John Beaufoy Publishing.

8.0 Limitations

This memorandum has been prepared by Pattle Delamore Partners Limited (PDP) on the basis of information provided by Carter Group Limited. PDP has not independently verified the provided information and has relied upon it being accurate and sufficient for use by PDP in preparing the memorandum. PDP accepts no responsibility for errors or omissions in, or the currency or sufficiency of, the provided information.

This memorandum has been prepared by PDP on the specific instructions of Carter Group Limited for the limited purposes described in the memorandum. PDP accepts no liability if the memorandum is used for a different purpose or if it is used or relied on by any other person. Any such use or reliance will be solely at their own risk.

Prepared by

Lachie Davidge

Herpetologist – Ecology

Reviewed and Approved by

Jarred Arthur

Technical Director - Ecology

Appendix A: Project Team

The assessments outlined in this memorandum were undertaken by the following qualified ecologists:

Lachie Davidge (Freshwater and Terrestrial Ecologist)

Lachie is an ecologist with three years of experience working in environmental consultancy. He graduated from the University of Otago with a Master of Science (Ecology) in 2023. He is affiliated with the New Zealand Ecological Society (NZES), New Zealand Herpetological Society (NZHS), and Society for Research on Amphibians and Reptiles in New Zealand (SRARNZ).

Lachie has expertise in terrestrial and freshwater ecology, pest plant and animal management, and restoration work. He has been involved in a wide range of work including freshwater assessments, bird surveys, lizard management works, wildlife hazard management, infill and riparian planting plans and implementation. Has been involved in several lizard habitat assessments and a successful lizard salvage and relocation project.

At the University of Otago, Lachie's Master's research focused on developing new tools for studying alpine lizard species under the tutelage of Jo Monks and Carey Knox. Since joining PDP in early 2024, Lachie has been involved with several lizard projects across New Zealand. He has also assisted in other research projects including studies on Hura te ao gecko, orange-spotted gecko and various alpine skink species.

Jarred Arthur (Technical Director – Ecology)

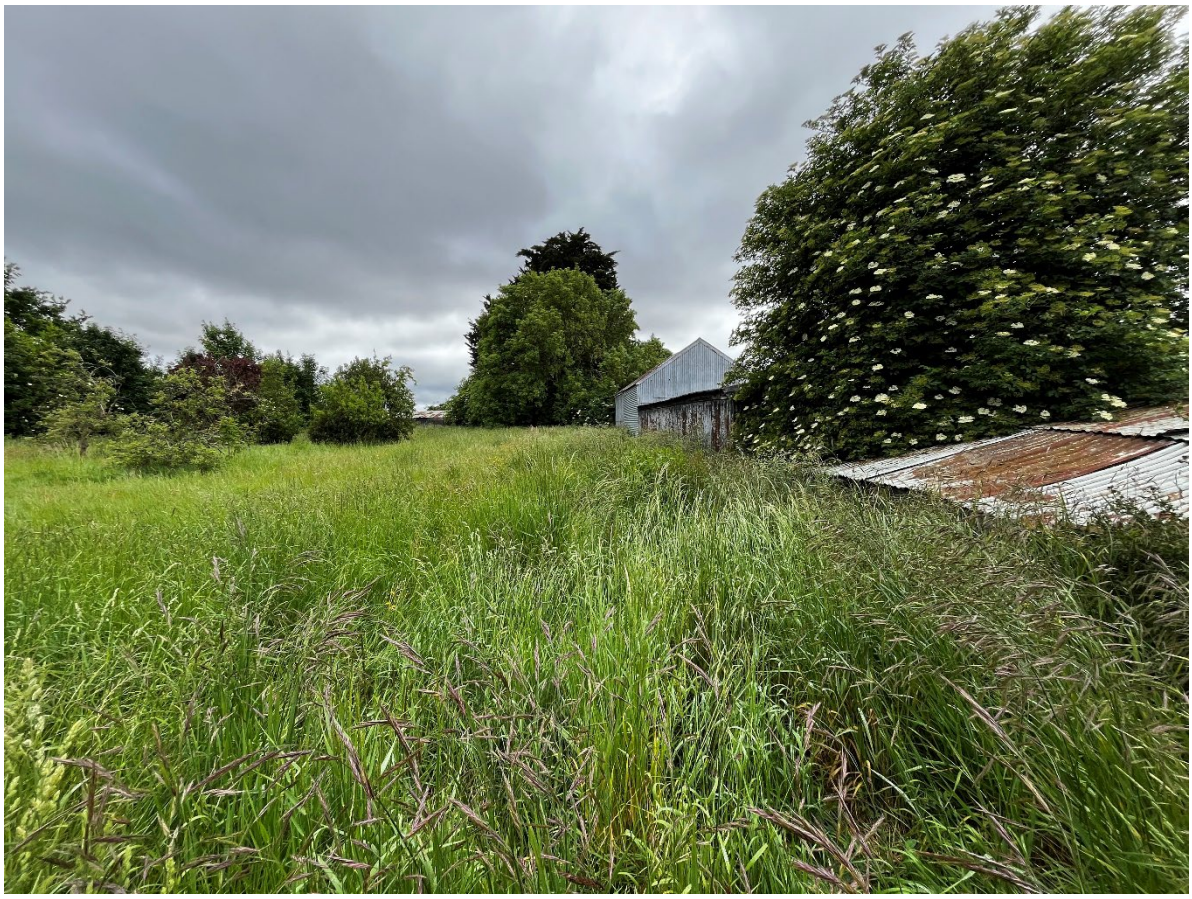
Jarred is a freshwater ecologist with fifteen years experience working in both the public and private sectors. He graduated from the University of Canterbury with a Master of Science (Ecology) in 2010. He is a member of the New Zealand Freshwater Sciences Society (NZFSS).

His previous work as a Regional Council scientist (Environment Canterbury, 2016-2023) involved providing technical support to policy and planning processes, governance and community groups, iwi, and other technical specialists. He has extensive experience informing consent application processes associated with a range of land and water use activities.

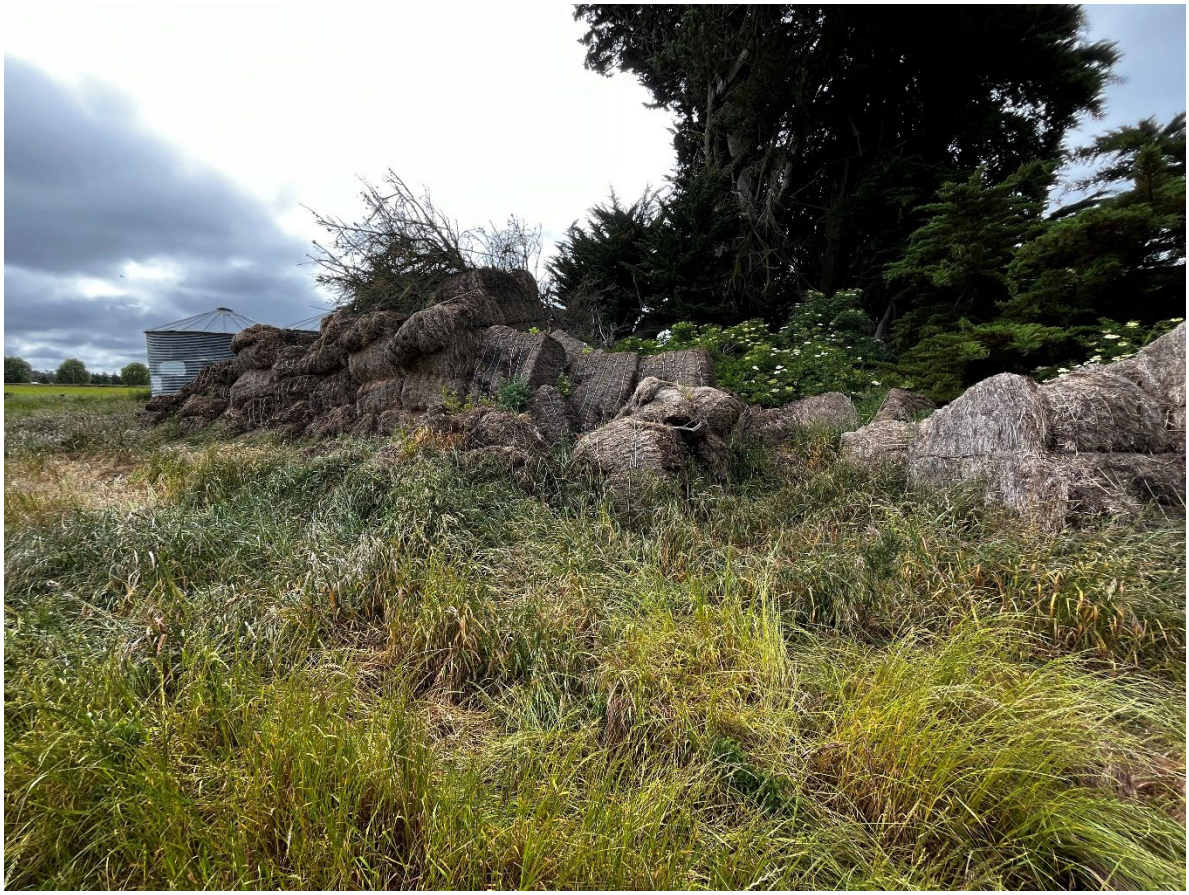
Jarred is well-versed in the monitoring of river ecosystems including water quality and habitat parameters, and macroinvertebrate and fish communities. He has analysed and interpreted ecological datasets, written and peer-reviewed numerous technical reports, and prepared and presented evidence at hearings. His recent work with PDP has involved assessing the environmental effects of construction- and operational-phase activities associated with residential and industrial developments. This has included mitigation and offsetting for waterway and wetland ecosystems.

Appendix B: Photograph Log

Appendix B-1: Rank grass found along the north-east fence line.

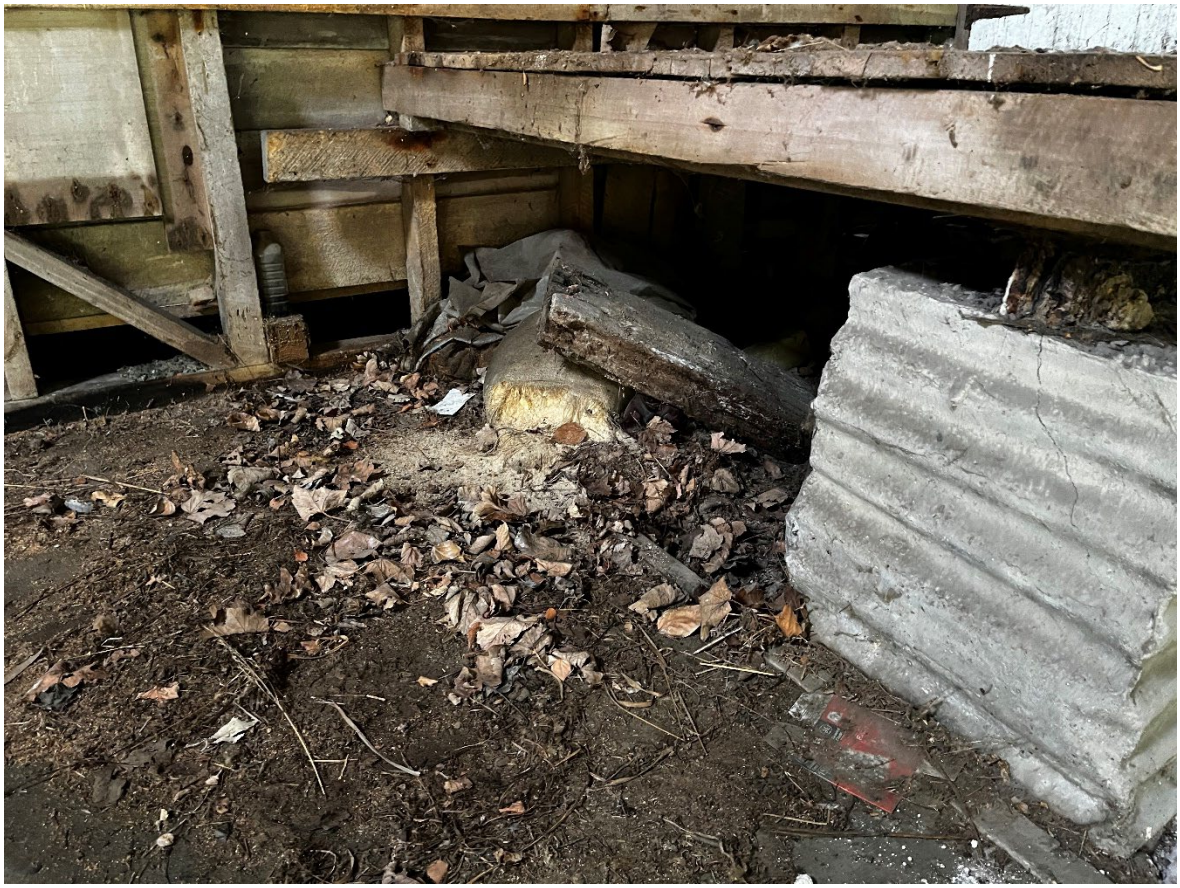


Appendix B-2: Rank grass extent found between the old farmhouse and farm buildings.

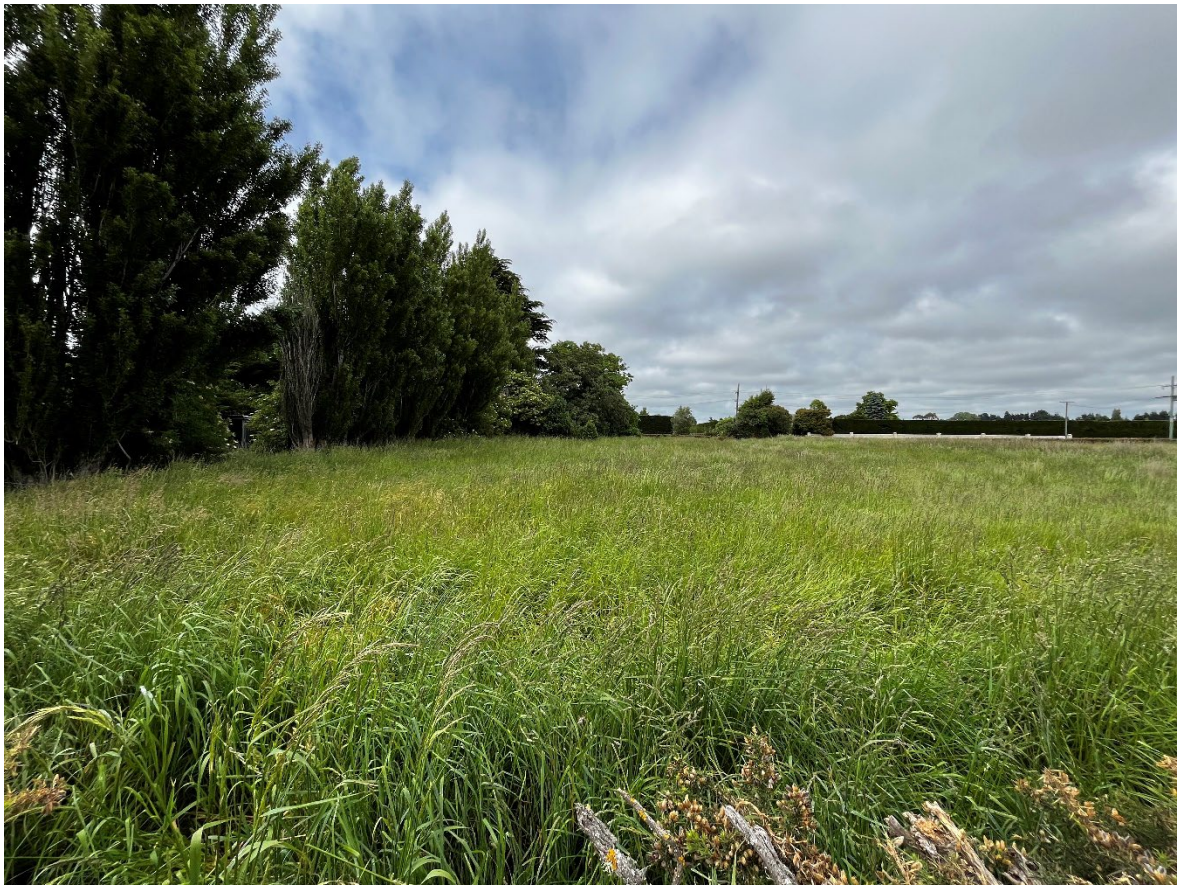


Appendix B-3: Rank grass, hay bales and dense vegetation present along the northern extent of the old farm buildings.

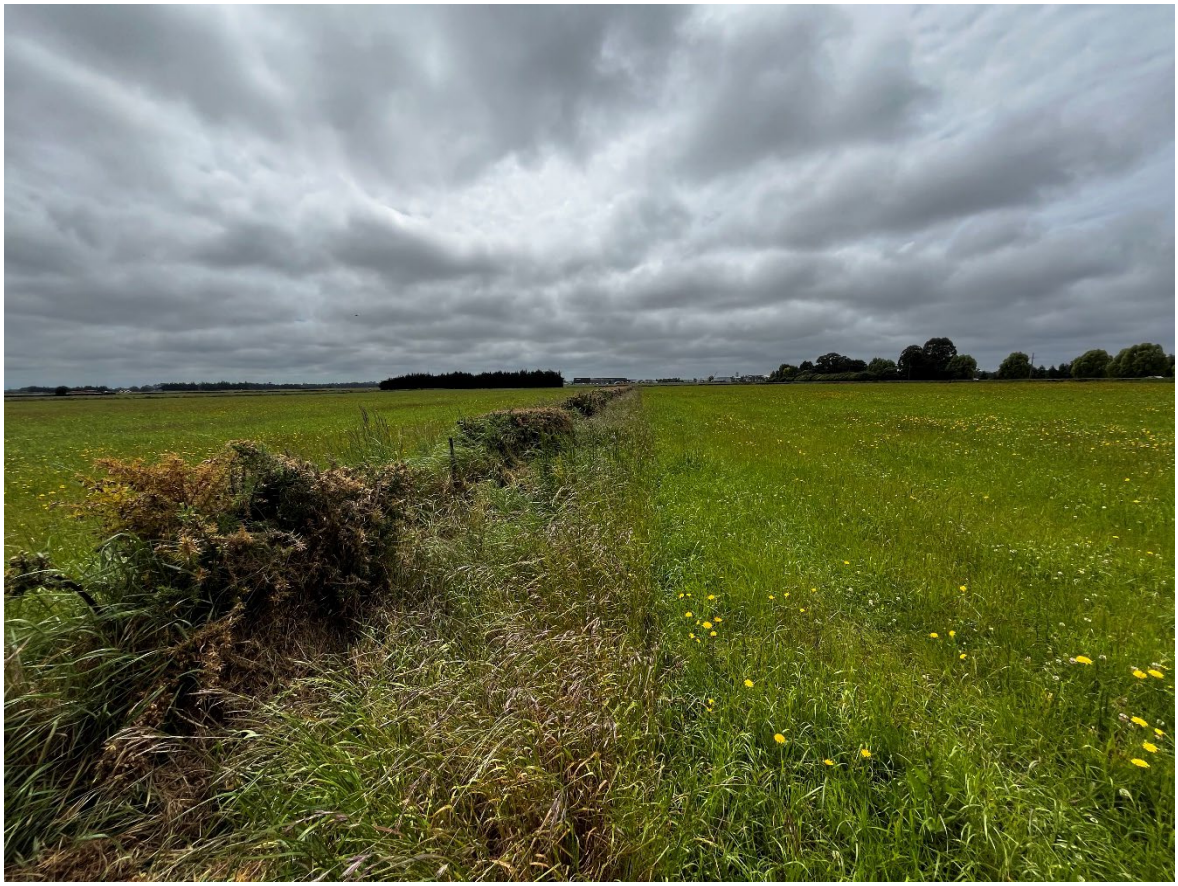
Appendix B-4: English ivy (*Hedera helix*) and leaf litter found along the eastern fence line adjacent to the old farmhouse.



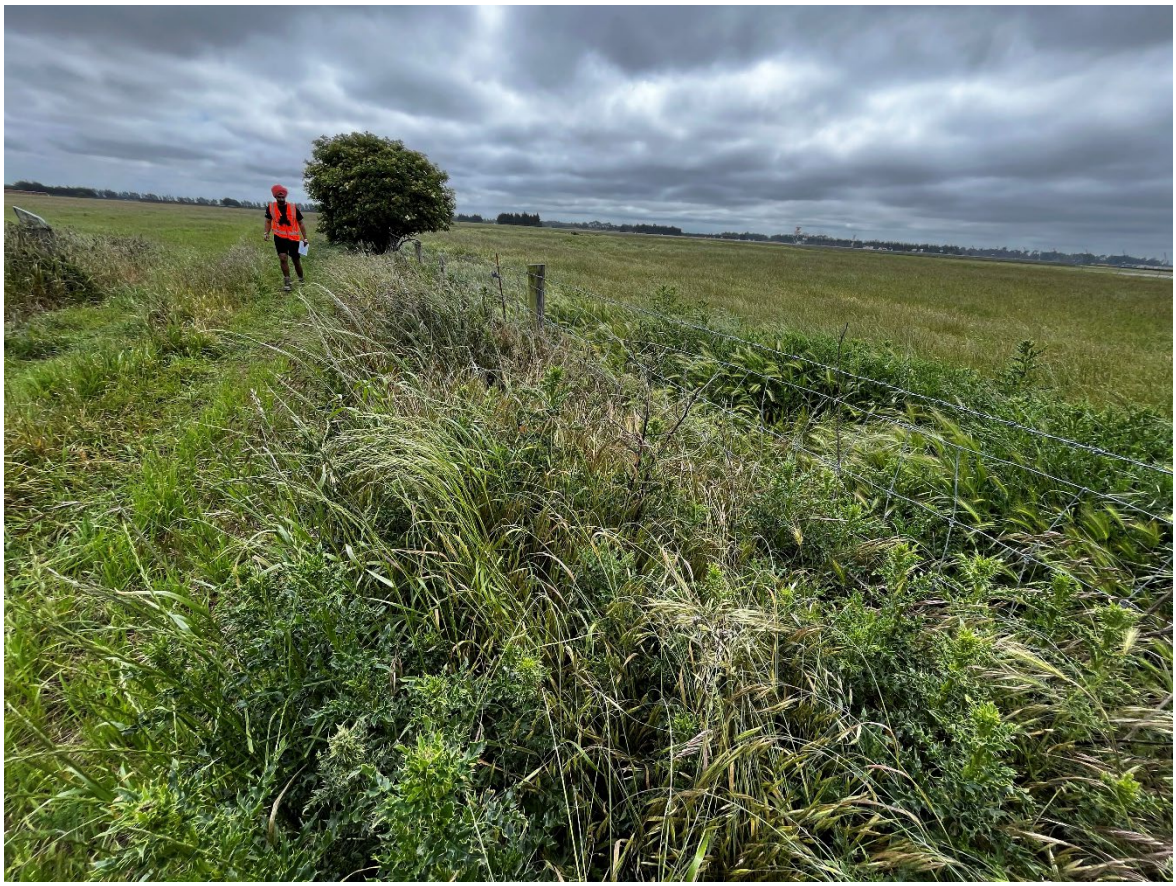
Appendix B-5: Leaf litter, woody debris and other materials found in an old farm building.



Appendix B-6: Extensive rank grass adjacent to open pasture farmland provides a potential lizard habitat.



Appendix B-7: Rank grass found along the northernmost fence line within the existing open pasture farmland.



Appendix B-8: Hedgerows and rank grass found along fence lines within existing open pasture farmland.

Appendix C: Lizard Management Plan

Lizard Management Plan – 104 Ryans Road

Prepared for

Carter Group Limited

March 2025

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Quality Control Sheet

TITLE	Lizard Management Plan – 104 Ryans Road
CLIENT	Carter Group Limited
ISSUE DATE	5 March 2025
JOB REFERENCE	C052850002R001

Revision History

REV	Date	Status/Purpose	Prepared By	Reviewed by	Approved
1	21/02/25	Draft	Lachie Davidge	Nicki Papworth	Jarred Arthur
2	5/03/25	FINAL	Lachie Davidge	Nicki Papworth	Jarred Arthur

DOCUMENT CONTRIBUTORS

Prepared by

SIGNATURE

Lachie Davidge

Reviewed by

SIGNATURE

Nicki Papworth

Approved by

Jarred Arthur

Limitations:

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1.0 Introduction

1.1 Background

Carter Group Limited (CGL) are applying for Fast-track consent to develop a 55.5 ha site for industrial warehousing and logistics purposes at 104 Ryans Road, Christchurch (herein referred to as 'the site'). As part of the Fast-track application, CGL has requested Pattle Delamore Partners (PDP) to prepare a Lizard Management Plan (LMP).

This LMP is required to address and manage potential and actual effects on lizard values associated with the site. These effects may arise through earthworks activities and the removal of vegetation and existing buildings and structures during the development. The LMP details management measures to avoid, remedy or mitigate effects associated with the proposed industrial development. It also outlines methodologies to be used if native lizards are discovered before or during construction, and personnel responsible for completing the lizard management activities following the procedures described.

1.2 Wildlife Act Authority Requirements

All native reptiles are legally protected under the Wildlife Act 1953 and the protection of habitats used by populations of native lizards (particularly threatened species) is considered a matter of national importance under the Resource Management Act (MfE, 2024). An LMP must be actioned by a suitably qualified and experienced ecologist (see Section 3.0) and work must be conducted under a valid permit granted as per the Wildlife Act Authority (WAA) 1953. A WAA permit to handle and relocate lizard specimens may be granted as part of the development's consent as per Section 42(4)(h) of the Fast-track Approvals Act 2024.

2.0 Scope and Purpose

The main purpose of this LMP is to detail the methods involved with native lizard salvage and relocation should species be discovered at the site prior to or during development works. It follows Department of Conservation (DOC) Lizard Technical Advisory Group guidelines (Lizard Technical Advisory Group, 2019) and has been informed by a desktop review and site investigation of habitat availability (PDP, 2025).

Baseline surveys for lizard specimen presence will be carried out in March 2025 with a trap 'acclimation period' having already commenced. In the interim, and for the purpose of this LMP, it is assumed that lizards are present at 104 Ryans Road.

The LMP includes the information outlined below:

- Responsibilities and competencies of persons involved in the implementation of this LMP.
- Current lizard ecological values of the site and the actual and potential effects of proposed works to native lizards.
- Methodologies associated with the implementation of this LMP, including baseline lizard surveys, and lizard salvage and relocation (if required).
- Process for determining the relocation site, including whether pest management and/or habitat enhancement is necessary.
- Reporting, including annual monitoring and incident reporting requirements (if lizards are relocated during the project).

3.0 Project Responsibilities

3.1 Roles and Responsibilities

The **WAA Permit Holder** is the individual or organisation (e.g., CGL) named on the WAA permit (requested to be granted with the Fast-track consent) who is responsible for ensuring that all management activities and other conditions outlined in the WAA permit are correctly administered.

A **Project Manager** (e.g., CGL Site Manager) will be responsible for ensuring the delivery of and compliance with this LMP and will liaise with the Project Ecologist to undergo the work. The Project Manager is also responsible for ensuring all personnel working onsite adhere to this LMP. Should native lizards be discovered onsite during development activities, the Project Ecologist must be informed a minimum of seven days before areas of potential lizard habitat are cleared.

A **Project Ecologist** will be responsible for overseeing the correct delivery of the lizard management activities described in this LMP. This person will be suitably qualified and experienced in the field of herpetology and will follow guidance of the WAA permit holder.

3.2 Accidental Discovery Procedure and Responsibilities

All personnel working onsite (e.g., site contractors) are responsible for informing the Project Manager, Project Ecologist and/or WAA permit holder if any lizards are found onsite and the Project Ecologist will be contacted to help identify the species. Personnel must communicate accidental discoveries to these parties on the same working day as they occurred. If it is discovered that the species is of an 'At-Risk' or 'Threatened' conservation status and are not described in this LMP the DOC Local Area Manager must be notified as soon as possible. Management actions will be determined by the Project Manager and Project Ecologist in consultation with DOC to ensure 'At Risk' or 'Threatened' lizards are appropriately managed.

4.0 Project Site - Lizard Values

4.1 Field Survey

A site visit was conducted by PDP ecologists on 27th November 2024 to assess whether the site contained potential lizard habitat (PDP, 2025). It was determined that suitable habitat was present at the site that could support a native lizard population, although no lizard specimens were observed during the site visit.

Potential lizard habitats included rank grass, rock and woody debris piles, dense shrub and understory foliage, leaf litter, mature trees, and old farm buildings (Appendix A). The rock and woody debris piles, hay bale stockpiles, old farm buildings, and rank grass around the site provide potential habitat for native skinks and Waitaha geckos. The mature trees and old farm buildings also provide habitat for jewelled geckos (Purdie, 2022). Dense rank grass and hedgerows surrounded the open pasture grassland, providing habitat for native skink species (see Table 1) observed during the desktop assessment (Appendix A).

4.2 Desktop Assessment

In addition to the field survey, a desktop assessment evaluated database records within a 13 km radius of the site boundary (Table 1). The assessment found several native lizard species records within 2 km of the site, including:

- McCann's skink (*Oligosoma maccanni*),
- Northern grass skink (*Oligosoma polychroma*), and
- Waitaha gecko (*Woodworthia brunnea*).

Southern grass skink (*Oligosoma* aff. *polychroma* Clade 5) have also been found within 5 km of the site. These four taxa may be present on the project site, particularly within the abandoned farm buildings and rank grasses. Within a 13 km radius of the site, Canterbury spotted skinks (*Oligosoma lineoocellatum*) and jewelled geckos (*Naultinus gemmeus*) have also been observed (Table 1).

Of particular importance are species such as the Canterbury spotted skinks, jewelled geckos, southern grass skinks and Waitaha geckos. Each of these species are categorised as 'At Risk' or 'Threatened' (Hitchmough et al., 2021; Table 1).

Table 1: Native herpetofauna observed within 13 km of the development site		
Common Name	**Species**	**Conservation Status (Hitchmough et al., 2021)**
Canterbury spotted skink	*Oligosoma lineoocellatum*	Threatened – Nationally Vulnerable
Jewelled gecko	*Naultinus gemmeus*	At Risk – Declining
McCann's skink	*Oligosoma maccanni*	Not Threatened
Northern grass skink	*Oligosoma polychroma*	Not Threatened
Southern grass skink	*Oligosoma* aff. *polychroma* Clade 5	At Risk – Declining
Waitaha gecko	*Woodworthia brunnea*	At Risk – Declining

Two plague skinks (*Lampropholis delicata*) have been observed within the 13 km boundary. Plague skinks are defined as an 'Unwanted Organism' in the Biosecurity Act 1993 (MPI, 2023) and therefore was not included in Table 1.

5.0 Actual and Potential Effects on Lizards

5.1 Effects on Lizards

The proposed works will involve the development of 55.5 ha of land, resulting in the removal of approximately 4 ha of potential lizard habitat across the site. Habitats include rank grass, dense foliage (e.g., shrubs), leaf-litter, rock and wood piles, old farm buildings and mature trees (Appendix A). Removal of these habitats and site works (e.g., earthworks) may cause adverse effects to native lizards in the area, including habitat destruction, loss of foraging sites and refugia, and may potentially result in injury or mortality.

5.2 Managing Effects

The following measures will be taken to avoid, remedy or mitigate potential negative effects of lizard values in the area:

- Vegetation clearance to deter lizards will occur between October to April (inclusive), when temperatures are warmer and native lizards are more active. This will better allow lizards to avoid pre-development activities. Low impact methods such as livestock grazing or mowing areas of rank grass should be used alongside eco-piles (see Section 6.1.2) to deter lizards from the area.

- Lizard tracking and trapping surveys will be conducted before development works commence. If native lizards are discovered onsite, then salvage and relocation works will need to be carried out before construction works may commence. If vegetation clearance of large trees and/ or shrubs is required post-discovery, then the Project Ecologist must be onsite to oversee vegetation removal. This will involve searching vegetation for lizards before it is removed from the site.
- Accidental discovery of lizards during development works will follow the procedures outlined in Section 3.2 of this LMP.
- Captured lizards will be relocated to an area outside of the site. This area will be determined by the Project Ecologist, following advice from the local territorial authority and DOC.
- Depending on the relocation site, habitat enhancement measures may be undertaken.

6.0 Methodology

6.1 Pre-works Vegetation Management

6.1.1 Livestock Grazing

If possible, livestock grazing should be undertaken in areas of rank grass (examples provided in Appendix A) to reduce the amount of potential habitat available for native lizards. Livestock grazing should occur a minimum of three days before development work commences to allow any lizards in the area to relocate offsite. It is recommended that this method is used in combination with eco-piles (Section 6.1.2) and vegetation searches (Section 6.3.4) for improved effectiveness.

6.1.2 Eco-piles

Eco-piles are used as a management technique alongside livestock grazing to provide new habitat for lizards to relocate into during staged vegetation clearance. Eco-piles are made using woody debris, rock and/or other materials on site that are piled together to create lizard refugia and foraging habitat that help to attract lizards offsite (e.g., Herbert et al., 2023).

6.2 Pre-Development Baseline Lizard Surveys

As per the recommended condition of consent by PDP (2025), a baseline lizard survey will be conducted prior to the commencement of development works. This will involve the placement of Artificial Cover Objects (ACOs), pitfall traps and Gee minnow traps around the site along areas of potential lizard habitat. An acclimation period (see below) of inactive trap placement has already commenced.

Traps will be left inactive for four weeks to allow lizards to acclimate to their presence, after which they will be baited with food (e.g., fruit and a wet sponge) and checked daily for five days. Additionally, nocturnal spotlighting will be conducted after for three nights to determine whether any native geckos are on site. Any captured lizards will be identified to species level, weighed, measured, and a GPS point recorded of their capture location. Baseline surveys are planned to take place in March 2025.

6.3 Lizard Salvage and Relocation

The methods described below are only relevant should native lizards be discovered onsite before (i.e., baseline survey) or during (i.e., accidental discovery) the proposed construction works.

6.3.1 Timing

Vegetation clearance should be conducted from October to April (inclusive) and during suitable weather conditions (warm and low wind). Lizard salvage work is not undertaken during winter months as lizards will likely be in a lowered state of torpor (mild hibernation) and/or are inactive so will be detected less often during salvage efforts.

6.3.2 Salvage Footprint

If lizards are found during pre-development baseline surveys or during construction activities, a salvage footprint will be decided by the Project Ecologist. The areas proposed for vegetation clearance will be clearly indicated before works begin, and lizard salvage and relocation will be conducted within the marked site.

6.3.3 Pre-clearance Salvage and Relocation

Pitfall traps (installed under Artificial Cover Objects (ACOs)) and Gee minnow traps will be installed throughout the salvage footprint in suitable habitats. They will be left for a minimum of four weeks prior to the commencement of lizard salvage works. These traps will be left inactive so native lizards may escape. Upon initiation of salvage works, traps will be activated, and trapping will commence for five days or until no native lizards are captured for three days in a row. If high numbers of native lizards are being captured on day five, then additional trapping effort may be required. This will be determined by the Project Ecologist.

Additionally, the manual disestablishment of habitats will be conducted by suitably qualified ecologists and overseen by the Project Ecologist. This will involve rock and log flipping, raking of leaf-litter, systematic habitat searches (including destructive habitat searches) and removal of large habitat objects and materials to deter lizards from re-inhabiting the site.

6.3.4 Supervision of Vegetation Removal

If lizards are found during pre-clearance baseline surveys, then the Project Ecologist must be present on site during vegetation removal to ensure lizards are not harmed or killed during works (i.e., vegetation is searched during removal and any lizards found relocated safely offsite). The Project Ecologist will be responsible for working with machine operators to remove the upper layer of vegetation and trees. Vegetation will be searched to remove any native lizards not captured during pre-clearance salvage and relocation works and will include searches of large mature tree branches where native geckos (specifically jewelled geckos) may be taking refuge (species outlined in Table 1). Additionally, the clearance of buildings and other structures will be supervised by the Project Ecologist.

Large trees should be felled and piled off site and will be used to create habitat features at the relocation site should any native lizards be captured and relocated.

6.3.5 Lizard Relocation Protocol

To ensure the appropriate care is taken to minimise disturbance, injury or mortality to capture lizards, the Project Ecologist will ensure the following protocols are followed:

- Animals must be appropriately prepared for transport, including the provision of sufficient food and water as appropriate to the species, condition of individuals, and expected length of the journey, to avoid pain, injury or distress. Lizards should be transported in a ventilated plastic container or a cloth bag (only during salvage, not relocation). Containers and/or bags will be kept at ambient temperature and out of direct sunlight, and vegetation will be added to provide shelter during the relocation process.
- Individuals handling lizards will sterilise their hands and all equipment used during the salvage and relocation work.
- Native lizards should not be physically contained for longer than three hours during relocation.
- The relocation site will be as close to the original area as possible to reduce unnecessary stress to captured individuals. However, the site must not be so close as to allow translocated lizards to return to the development area.
- The relocation site will be appropriately prepared for the lizard species being relocated, including pest trapping and habitat enhancement if necessary.

- Lizard handling will be kept to a minimum to reduce unnecessary stress and disturbance to captured individuals.

The translocation of lizards must follow the Animal Welfare Code of Welfare for Transport Within New Zealand (MPI, 2018) and any conditions detailed in the project WAA permit.

6.3.6 Data Collection

All captured lizards will be numbered, and the following data will be collected and submitted to DOC for addition to the herpetofauna database:

- Date and time of capture.
- Weather conditions upon capture.
- Capture methodology (i.e., trap type or search method).
- Lizard species, age, sex and life stage, presence of tail (i.e., original or regrowing/ regrown), snout-to-vent length and vent-to-tail length.
- Photograph of each individual, including dorsal and ventral surfaces.
- Photograph of the capture location and release point at relocation site.

6.3.7 Accidental Injury and/or Death of Lizards

Should an injured or dead native lizard be found during salvage and relocation work, vegetation clearance or during construction work, the Project Ecologist is responsible for informing DOC and the WAA permit holder within 24 hours of the event. It is the responsibility of the WAA permit holder to inform the Project Ecologist of the next step (as detailed in the WAA permit).

6.4 Relocation Site

The re-establishment and long-term protection of displaced lizards relies on a suitable release site(s) being chosen. A release site should offer similar or better habitat to the original site, to ensure survival and long-term persistence of the lizard population translocated to the new site.

A relocation site will only be determined should native lizards be found at the project site during pre-development surveys or through accidental discovery. A Habitat Enhancement Plan may be required to improve existing conditions at the relocation site. However, this is unlikely as the relocation site will be selected for its ability to provide the desired habitats of a similar or higher quality. This will be determined by the Project Ecologist in consultation with CCC and DOC.

If a large number of 'Threatened' or 'At-Risk' lizards are relocated, an Annual Monitoring Plan may be required. This is dependent of the requirements of the WAA permit granted as part of the Fast-track consent. If required, this plan will assess the relative abundance of lizards at the relocation site and commence

one-year post-relocation. It will outline the monitoring methods to be used and timeframe of monitoring program (monitoring conducted between October to April, inclusive). A report summarising the findings of the annual monitoring program will be submitted to the relevant authorities (CCC and/or DOC).

6.5 Adaptive Management

To achieve a net-positive outcome for any native lizards potentially onsite, changes to this LMP may be required. The LMP is therefore considered a "living document". Any changes will follow best practise guidelines as recommended by DOC and CCC.

7.0 Reporting

7.1 Salvage and Relocation

If lizard salvage and relocation work is required on site, a report summarising the salvage and relocation results will be prepared and submitted to CCC and DOC within 30 days from the completion date of the work. Specifically, this report will include:

1. Results of lizard salvage and relocation work. Should native lizards be found, then the following will also be included in the report:
    a. Photos of lizard salvage methods utilised;
    b. Photos of lizards captured (including photos of the salvage and relocation areas); and,
    c. A map showing the location of lizard upon capture and upon release.
2. Descriptions of how lizard management activities outlined in this LMP were followed, including conditions detailed in the WAA permit and associated resource consent conditions;
3. An Amphibian and Reptile Distribution Scheme (ARDS) card detailing information relating to captured lizards (see Appendix B); and,
4. A brief summary regarding the outcomes of this LMP, including any improvements/changes that should be implemented in future.

7.2 Incident Monitoring and Reporting

An incident report will be provided to CCC and DOC within five working days of its occurrence and will include the following details:

- Any occurrences of lizard injury or mortality; and,
- Measures to avoid, remedy or mitigate.

7.3 Annual Monitoring

Should annual monitoring be required (see Section 6.2), an Annual Monitoring Report will be prepared and submitted to CCC and DOC detailing:

- Monitoring methods used.
- Assessment of habitat and food availability at site.
- Weather data across the monitoring period, and
- Monitoring results and recommendations.

8.0 References

Pattle Delamore Partners (PDP) (2025). *104 Ryans Road Development Project – Memorandum of Lizard Habitat Assessment Results*. PDP technical memorandum prepared for Carter Group Ltd.

Herbert, S., Knox, C., Clarke, D., & Bell, T. (2023). Use of constructed rock piles by lizards in a grassland habitat in Otago, New Zealand. *New Zealand Journal of Ecology*, *47*(1), 1–7. https://doi.org/10.20417/nzjecol.47.3543

Hitchmough, R., Barr, B., Knox, C., Lettink, M., Monks, J., Patterson, G. B., Reardon, J. T., van Winkel, D., Rolfe, J., & Michel, P. (2021). *Conservation status of New Zealand reptiles, 2021* (New Zealand Threat Classification Series 35). Department of Conservation.

Lizard Technical Advisory Group. (2019). *Key principles for lizard salvage and transfer in New Zealand*. Department of Conservation.

MfE. (2024). *Resource Management Act 1991*. New Zealand Government. https://www.legislation.govt.nz/act/public/1991/0069/latest/DLM230265.html

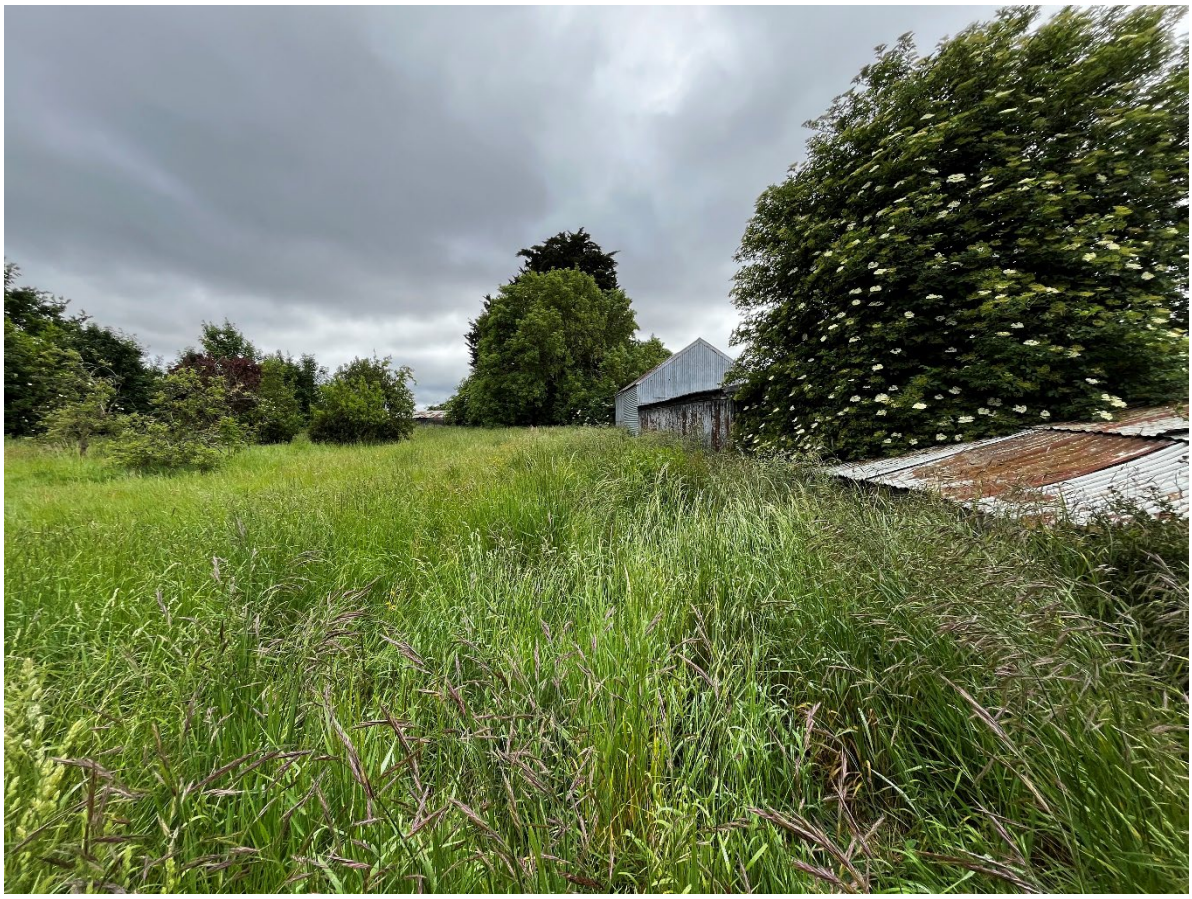
MPI. (2018). *Code of Welfare: Transport within New Zealand*. Ministry for Primary Industries. https://www.mpi.govt.nz/dmsdocument/46015-Code-of-Welfare-Transport-within-New-Zealand

MPI. (2023). *Biosecurity Act 1993*. New Zealand Government. https://www.legislation.govt.nz/act/public/1993/0095/latest/DLM314623.html

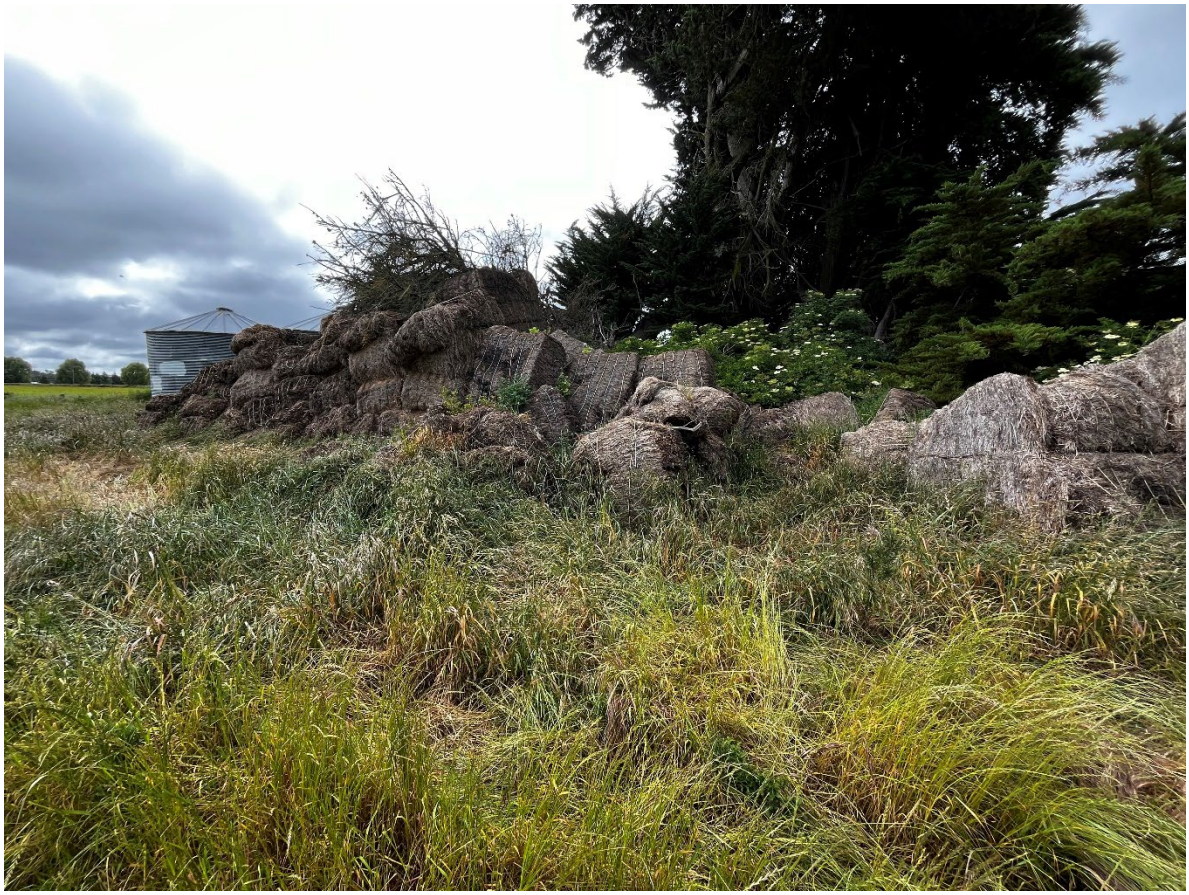
Purdie, S. (2022). *A Naturalists Guide to the Reptiles & Amphibians of New Zealand* (1st ed.). John Beaufoy Publishing.

Appendix A: Site Photographs

Appendix A-1: Rank grass found along the south-east fence line.

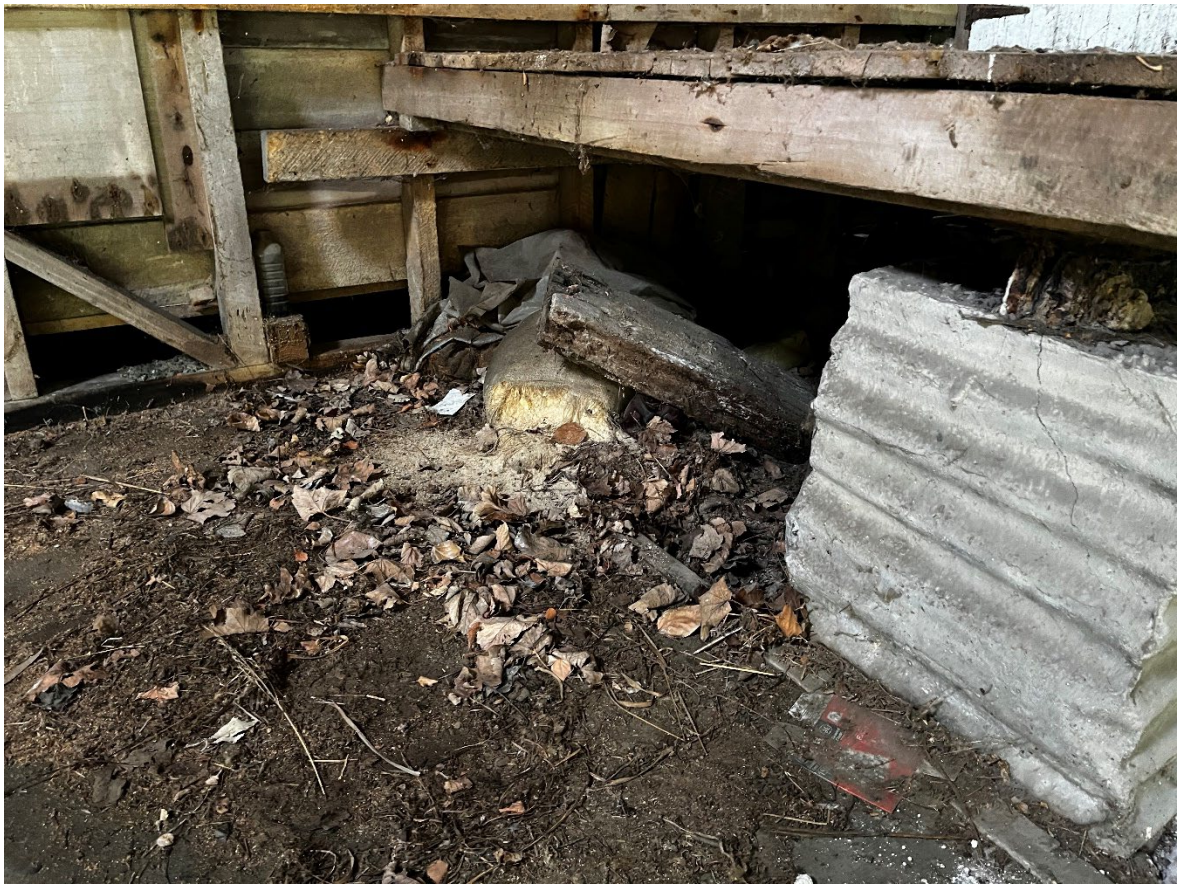


Appendix A-2: Rank grass extent found between the old farmhouse and farm buildings.

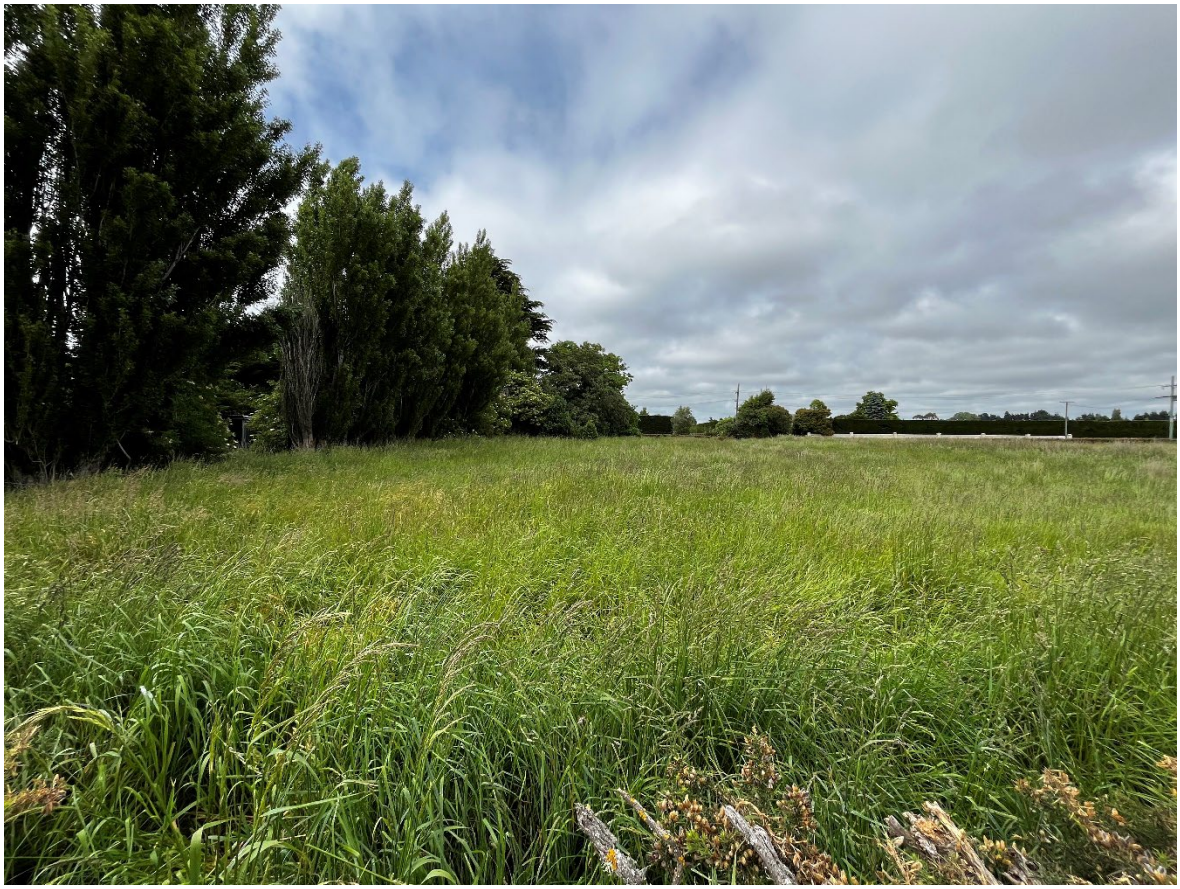


Appendix A-3: Rank grass, hay bales and dense vegetation present along the northern extent of the old farm buildings.

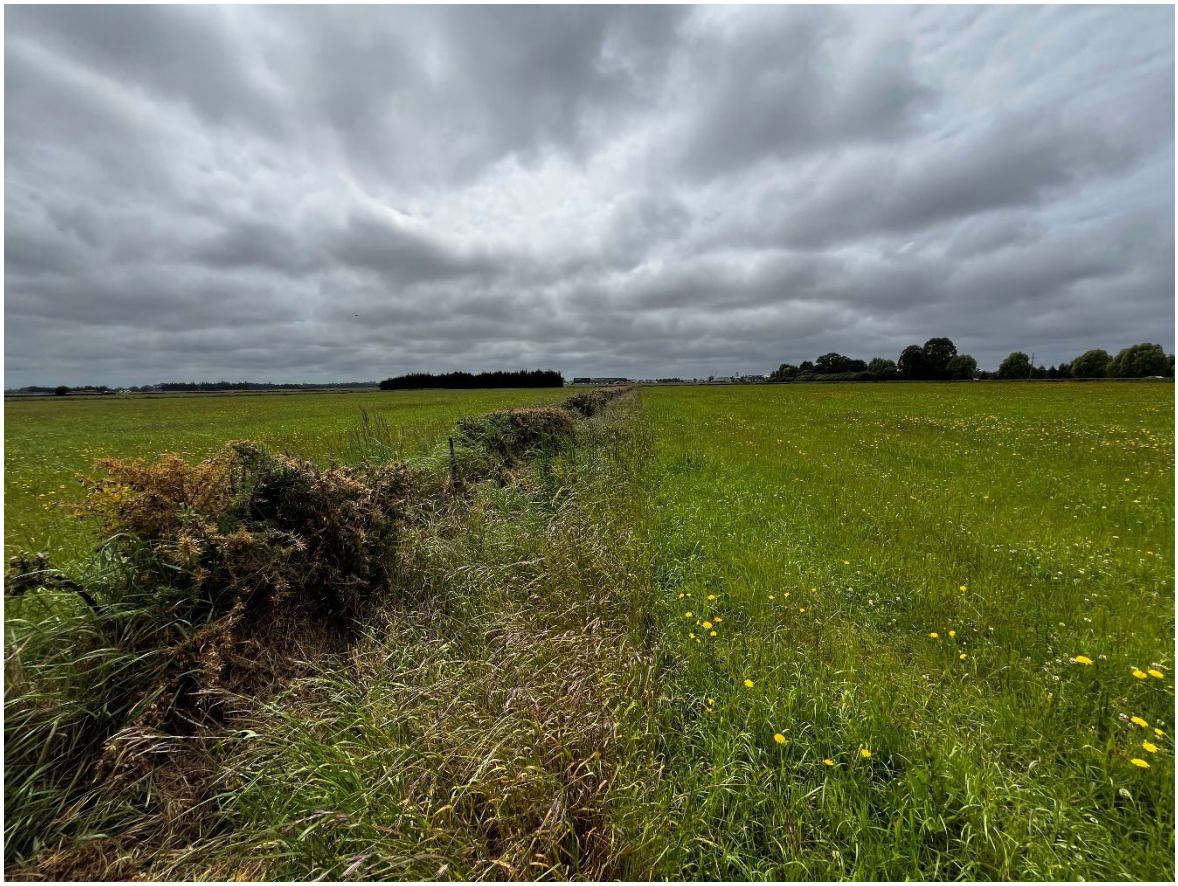
Appendix A-4: English ivy (*Hedera helix*) and leaf litter found along the eastern fence line adjacent to the old farmhouse.



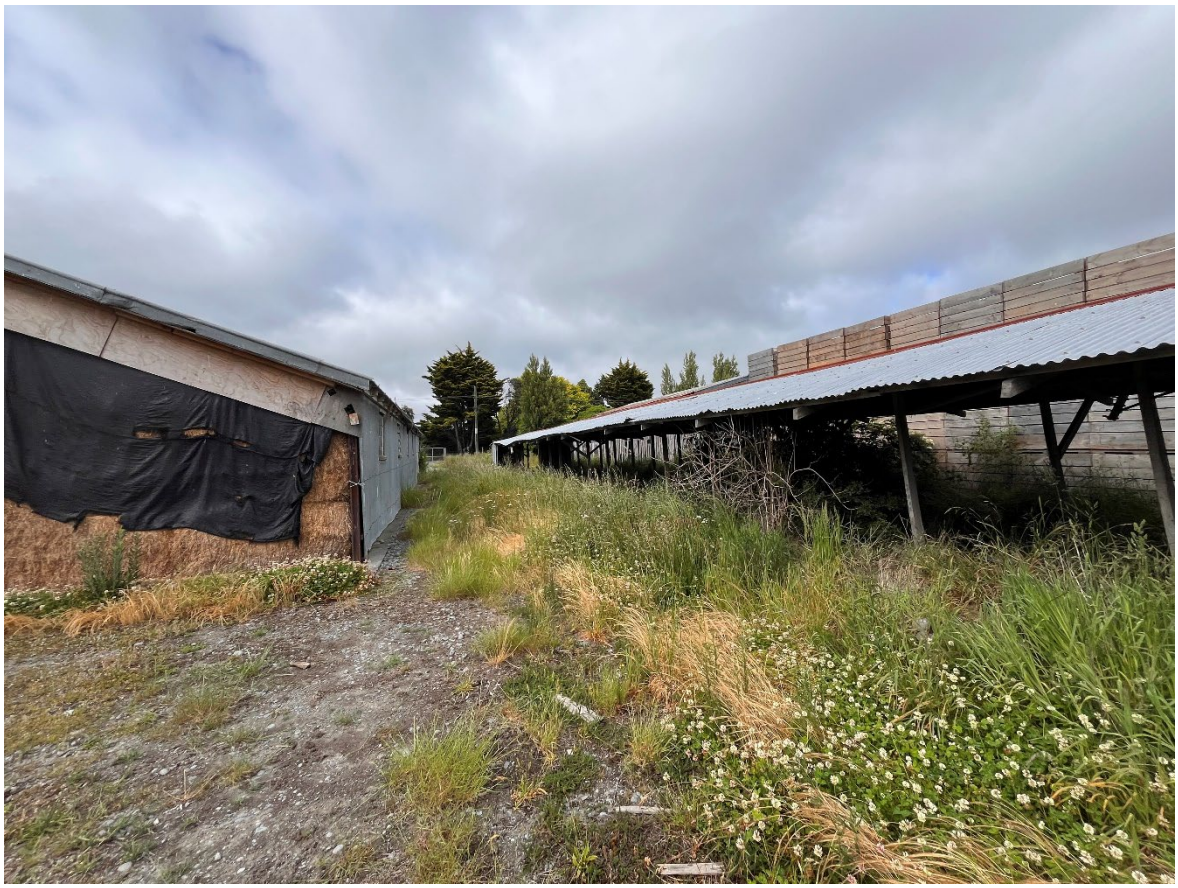
Appendix A-5: Leaf litter, woody debris and other materials found in an old farm building.



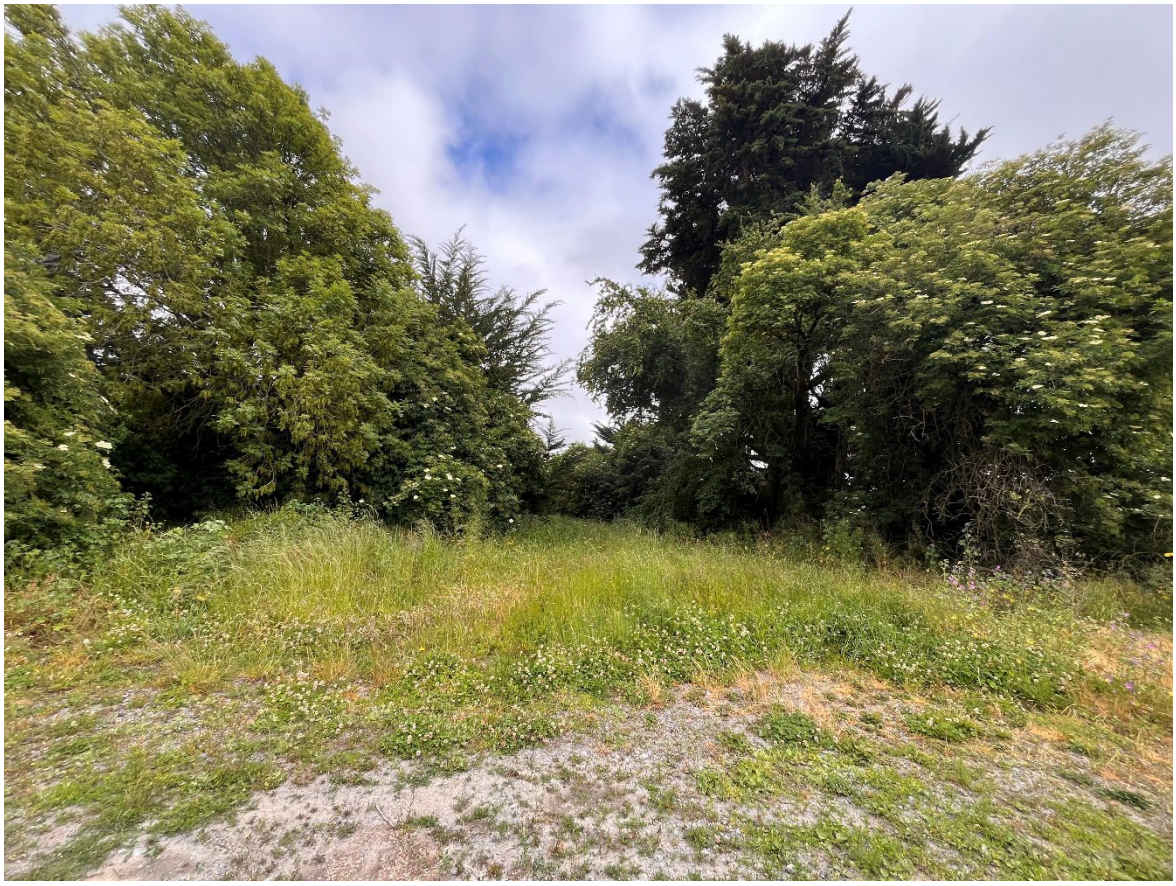
Appendix A-6: Extensive rank grass adjacent to open pasture farmland provides a potential lizard habitat.



Appendix A-7: Rank grass found along the northernmost fence line within the existing open pasture farmland.



Appendix A-8: Old farm buildings provide ideal habitat for native lizards including hay bale stacks and rank grass.



Appendix A-9: Mature canopy trees, understory plants and rank grass.

Appendix B: Example of an Amphibian and Reptile Distribution Scheme Card

ARDS CARD

NEW ZEALAND AMPHIBIAN/REPTILE DISTRIBUTION SCHEME

Herpetofauna Administrator, RD&I, Department of Conservation, P.O. Box 10420, Wellington.

Card No:

Observer: Initials Surname

Date:

Alt (m):

Locality Name:

Address:

GPS Easting Northing

Series Map No. Easting Northing

Affiliation:

Area Office: Conservancy: Ecol. District:

Species name	No.	Time	Habitat	Weather
e.g. *Hoplodactylus maculatus*	6	18:00	16, D, E	6,2,1

Voucher specimen(s) Yes/No Specify:

Photograph(s) Yes/No

Extra notes on reverse side Yes/No

Notes:

Identified by:

Authority used:

Weather

Light
1 Fine/Sunny
2 Part Cloudy
3 Overcast
4 Showers
5 Rain
6 Night
7 0-½ Moonlit
8 ½-1 Moonlit

Temperature
1 Hot
2 Warm
3 Moderate
4 Cool
5 Cold

Wind
1 Calm
2 Light breeze
3 Mod breeze
4 Gusty
5 Strong winds

Major Habitat Types

1 Beech Forest
2 Podocarp forest
3 Broadleaf forest
4 Exotic forest
5 Scrub
6 Sub-alpine
7 Alpine
8 Undeveloped tussock land
9 Developed farmland
10 River terrace
11 Fresh water
12 Wet land
13 Coastal
14 Scree
15 Bare rocks
16 Beach
17 Urban
18
19
20

Micro habitats

A Foliage
B Trunk
C Branches
D Under stones
E Under wood
F Open ground
G Crevices
H

ARDS CARD

NEW ZEALAND AMPHIBIAN/REPTILE DISTRIBUTION SCHEME

Herpetofauna Administrator, RD&I, Department of Conservation, P.O. Box 10420, Wellington.

Card No:

Observer: Initials Surname

Date:

Alt (m):

Locality Name:

Address:

GPS Easting Northing

Series Map No. Easting Northing

Affiliation:

Area Office: Conservancy: Ecol. District:

Species name	No.	Time	Habitat	Weather
e.g. *Hoplodactylus maculatus*	6	18:00	16, D, E	6,2,1

Voucher specimen(s) Yes/No Specify:

Photograph(s) Yes/No

Extra notes on reverse side Yes/No

Weather

Light
1 Fine/Sunny
2 Part Cloudy
3 Overcast
4 Showers
5 Rain
6 Night
7 0-½ Moonlit
8 ½-1 Moonlit

Temperature
1 Hot
2 Warm
3 Moderate
4 Cool
5 Cold

Wind
1 Calm
2 Light breeze
3 Mod breeze
4 Gusty
5 Strong winds

Major Habitat Types

1 Beech Forest
2 Podocarp forest
3 Broadleaf forest
4 Exotic forest
5 Scrub
6 Sub-alpine
7 Alpine
8 Undeveloped tussock land
9 Developed farmland
10 River terrace
11 Fresh water
12 Wet land
13 Coastal
14 Scree
15 Bare rocks
16 Beach
17 Urban
18
19
20

Micro habitats

A Foliage
B Trunk
C Branches
D Under stones
E Under wood
F Open ground
G Crevices
H

Appendix D: DOC Fast-Track Pre-Lodgement Feedback

Fast-Track Pre-Lodgement Consultation Information

Purpose - This document provides a summary of information from DOC following a pre-lodgement consultation request.

Project Details

Project name:	Ryans Road Industrial Development
Engagement type:	Substantive Application
Applicant/agent:	Carter Group /NovoGroup (agent) – Clare Dale, Senior Planner
Proposal overview:	Subdivision (over 55ha) of 126 lots of varying sizes is proposed in two stages, for the development of defined industrial uses. The fast-track application will include a complete set of consents covering District, Regional and National Environmental Standard requirements as well as a Wildlife Act approval. These consents will enable the construction, subdivision, land use, and operation of infrastructure services for the site. Specific expert consultant reports and the full fast-track application are currently being collated over the next few weeks leading up to the lodgement date. Project listed in Schedule 2 of the FTAA 2024, agent now seeking pre-lodgement consultation.
Location:	104 Ryans Road, Christchurch (Lot 3 DP 22679, Lot 4 DP 22679 and Pt Lot 1 DP 2837)
Date pre-lodgement request received:	27/01/2025
Information received from Applicant	PDP – Memorandum – Lizard Habitat Assessment (Dated 12/12/2024) Fast Track Application Consultation Letter (Dated 27/01/2024) Ryans Road Capture Scheme Plans Concept (Dated 22/02/2025)
Summary of pre-lodgement Consultation	
Fast track project lead DOC:	Marie Payne– Senior Fast Track Consents Advisor (National Office)
DOC specialist input required:	Fast Track Project Lead RMA Planner

	Permissions Advisor - Wildlife Statutory Manager (Regional Office)
DOC Permissions/ Approvals Identified by applicant in pre-lodgement request as potentially required:	The consultation request letter requests '*Feedback on the Wildlife Act specific aspects of the development'.* The PDP attachment provided specifically identifies '*If native Lizards are found onsite a Lizard Management Plan (LMP) will need to be prepared and submitted to the council for approval and a Wildlife Act Authority (WAA) permit must be held for the capture and relocation of lizards at the site'*

DOC Commentary on Permissions/ Approvals identified by applicant:	**Wildlife Act 1953 Permissions/Permits**
	
	The information provided to date sets out that:
	
	• No specific lizard surveys have been undertaken on site to date.
	• Based on a desktop assessment and site visit:
	  o No lizards have been observed on the site
	  o Several onsite locations contain potential lizard habitat
	  o Four lizard species have been recorded within a 2-15km radius of the site including declining and nationally vulnerable species
	• *'The existing artificial water race along the development frontage of Ryans Road will be piped to facilitate the upgrading of Ryans Road to an industrial standard with kerb and footpath. An ecologist recommended 'fish management plan' will be in place for the duration of the diversion of the race and construction of the pipe'.*
	• *'An Avifauna assessment with a focus on reducing birdstrike risk at Christchurch International Airport has also been undertaken. Four endemic species counted during avifauna counts were two swamp harriers (not threatened), a single pūkeko (not threatened), long-tailed cuckoo (nationally vulnerable) and a South Island pied oystercatcher (declining). There were no signs of these species breeding onsite'.*
	
	Based on the information provided DOC advises that:
	
	• A Wildlife Approval is only required if there is sufficient information that protected species are present.
	• To inform if protected species are present on-site DOC advises that the applicant:
	  o Progresses a *'more detailed baseline lizard survey' as* recommended in the PDP memorandum. - DOC considers a more in-depth consultant level survey would be appropriate.
	  o Is informed by a broader expert ecological assessment and surveys (as appropriate), if any other protected species requiring a Wildlife Approval are present e.g native birds/bats the applicant may wish to include a Wildlife Permit for any relevant activities as part of the fast-track application.
	  o Considers if a Fish Passage Authority is required Freshwater Fisheries Regulations 1983 (FFR) e.g. if the proposed works

	in the application will disturb fish or impede the movement of fish in a natural river, stream or water. • If a survey determines Lizards are present DOC would recommend the preparation of a LMP to support the information requirements prescribed in clause 2 of Schedule 7 of the Act. Information we would expect in an LMP includes (but is not limited to): o Duration – we would anticipate for the duration of the construction phase o Translocation – identifying suitable methods and habits for relocation. • The information required for a Wildlife Approval is prescribed in clause 2 of Schedule 7 of the Act.
Treaty Settlement obligations/considerations:	In the time available, DOC has not carried out a process to identify Treaty settlement obligations specifically relevant to this site but notes for the applicant that this will form part of the section 18 report prepared by MFE. We encourage the applicant to engage directly with Iwi as required by section 29 of the Act.
Potential Resource Management Act (RMA) considerations and effects: *Note: DOC's role in relation to 53(2)(m)(i) FTAA*	DOC would anticipate that the relevant biodiversity and environmental effects are considered fully as part of the full AEE application.
DOC Statutory Planning Document considerations in relation to site (e.g. CGP/CMS/CMP):	The alignment of the proposed project's impacts on wildlife with statutory planning documents should be considered as part of the overall assessment. Noting the site is not Public Conservation Land (PCL) our comments relate to impacts on Wildlife which are not limited to PCL.
Any specific information requests to applicant(s)/agent for pre-app engagement at this point:	As above DOC would anticipate a full lizard survey is conducted and if Lizards are determined to be present subsequently a LMP. If the applicant identifies any other species onsite which a Wildlife Authority is required for in relation to the proposed activities DOC is happy to re-engage.
Any further information/considerations:	N/A
Additional Notes:	While DOC will assist applicants as much as we can when they engage in pre-lodgement consultation, it is the applicants' responsibility to comply with the FTAA and to ensure they have applied for all permissions they need. Note that a panel will invite the statutory bodies listed in clause 4 of Schedule 7 to comment on the application (NZCA, conservation boards, Fish and Game

	Council, and Game Animal Council). We encourage applicants to engage with these bodies in advance of filing a substantive application