




# Lizard Management Plan

**AMETI Eastern Busway  
Stage 1 –  
Panmure to Pakuranga  
March/2019**

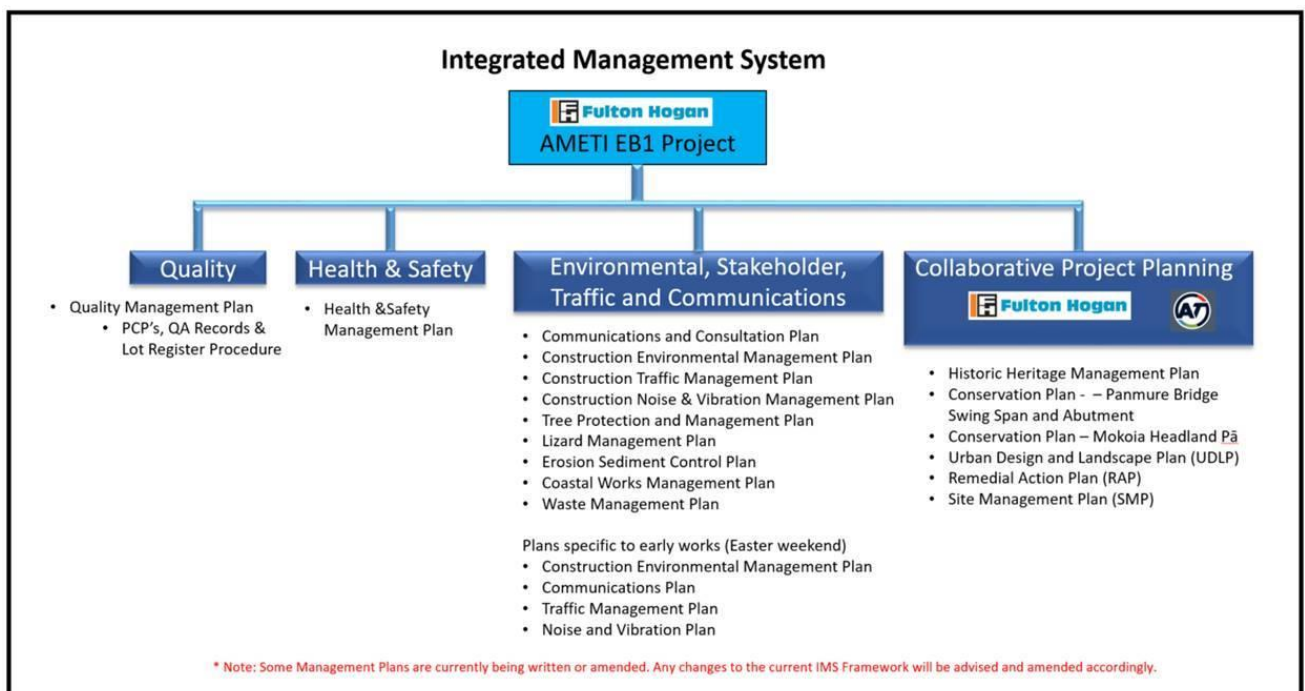


Document Approval				
<b>Title</b>	Lizard Management Plan: AMETI Eastern Busway Stage 1 - Panmure to Pakuranga			
	<b>Name</b>	<b>Position</b>	<b>Address</b>	<b>Contact Details</b>
<b>Author</b>	Chris Wedding (M.Sc. Hons)	Senior Ecologist Biosearches 	68 Beach Road, Auckland	Email: <a href="mailto:Chris.wedding@biosearches.co.nz">Chris.wedding@biosearches.co.nz</a> DDI: 09 367 5287 Mobile: 027 479 5418
<b>Version</b>	4			
<b>Date</b>	27 March 2019			
<b>Document Name</b>	FH AMETI LMP.docx			

#### Revision Details

Revision	Details
1	Sent to Project Manager for Review & Approval
2	Updated to incorporate AT comments
3	Updated by Jacobs to incorporate further AT comments and align with CEMP
4	Includes updates from AC Compliance dated 26 March 2019

#### Integrated Management Structure



## CONTENTS

<b>CONTENTS</b>	<b>ii</b>
<b>1 Executive summary for contractors</b>	<b>1</b>
<b>2 Introduction</b>	<b>2</b>
2.1 Purpose and Objective	2
2.2 Lizard Management Plan Activities	2
2.3 Roles and responsibilities	3
<b>3 Legislative Requirements</b>	<b>4</b>
3.1 Statutory context	4
3.2 Designation Conditions	4
<b>4 Affected habitat</b>	<b>5</b>
4.1.1 Construction methods and potential habitat overview	5
4.1.2 Lizard habitat values in the surrounding landscape and species covered by Plan	5
4.1.3 Potentially affected habitats – Vegetated cliff face (Lagoon Drive)	5
4.1.4 Potentially affected habitats - Rank grass (Pakuranga Road)	6
<b>5 Potential effects on lizards</b>	<b>7</b>
5.1 Timing	8
5.2 Pre-clearance habitat & destructive searches	8
5.3 Vegetation removal stand-over	8
<b>6 Capture and release methods</b>	<b>9</b>
6.1 Lizard Release Site	9
6.1.1 Mutukaroa Regional Park	10
6.1.2 Contingency Relocation	10
6.2 Contingency plan for captured geckos or 'threatened' species	11
<b>7 Post works enhancement and monitoring</b>	<b>11</b>
7.1.1 Habitat enhancement	11
7.1.2 Pest control	11
7.1.3 Post management monitoring	11
7.1.4 Artificial retreat monitoring method	12
<b>8 Compliance monitoring</b>	<b>12</b>
<b>9 References</b>	<b>13</b>
<b>Appendix 1: Wildlife Authority 37604-FAU Special Conditions</b>	<b>14</b>

## 1 Executive summary for contractors

1. Lizard Management is required under conditions 61-62 of the Auckland Manukau Eastern Transport Initiative (AMETI Eastern Busway Stage 1 - Panmure to Pakuranga) and native lizards are protected under the Wildlife Act (WA, 1953).
2. All sites require a herpetologist and mana whenua cultural monitor to be present during vegetation removal.
3. All affected sites would be blessed by mana whenua prior to capture and release of native lizards.
4. Vegetation removal in the presence of the herpetologist at all sites must be undertaken by pre-clearance habitat searches and during vegetation removal using a root rake or toothed bucket. Mulching may only be undertaken after the above methods have been used.
5. Pest control would be required at any release site that receives any 'At Risk' species, or more than 20 native lizards in total.

## 2 Introduction

### 2.1 Purpose and Objective

Bioresearches were engaged by Fulton Hogan (FH) to prepare a Lizard Management Plan (LMP) for the AMETI Eastern Busway Stage 1 – Panmure to Pakuranga ('the Project').

The following LMP forms a part of the overarching Construction Environmental Management Plan (CEMP) for the construction of the AMETI Eastern Busway Stage 1 – Panmure to Pakuranga (the Project).

The objective of the LMP is to avoid, remedy or mitigate adverse construction effects on native skinks as far as is reasonably practicable. The LMP has been prepared by a qualified herpetologist with Department of Conservation (DOC) authority and covers the following locations (as shown on Figure 1);

The vegetated cliff face on the northern side of Lagoon Drive between Basin View Lane and Church Crescent; and

- a. The rank grass on the northern side of Pakuranga Road at Kerswill Corner and Bus Stop Reserve.

This LMP addresses the following:

- A summary of the affected habitat and species covered by the plan;
- Lizard capture and relocation; and
- Post works management.

This plan was prepared with input from mana whenua, a Project partner. It is noted that mana whenua have stated that cultural monitors are required to be present for lizard capturing and release.



**Figure 1 Locations subject to the LMP**

### 2.2 Lizard Management Plan activities

A summary of the LMP activities have been provided as a checklist in Table 1 below. For details on each of these elements, refer to the appropriate section within the LMP body text.

**Table 1 - LMP activities to be completed**

Project start-up	Requirement of:	Completed
Lizard Management Plan certification	Auckland Council	



Project start-up	Requirement of:	Completed
Pre-works meeting	Herpetologist; FH Project Manager; mana whenua; vegetation clearance contractor	
Demarcation of works footprint	FH/ vegetation clearance contractor	
<b>Works Lizard Management</b>		
Pre-clearance searches and demarcation of areas to be machine searched.	Herpetologist, mana whenua	
Machine assisted lizard capture (where required)	Herpetologist, mana whenua, FH, vegetation clearance contractor	
<b>Post-works</b>		
Works completion report to client, Council and DOC	Herpetologist	
Post-release monitoring (annually) (where required)	Herpetologist, mana whenua	

## 2.3 Roles and responsibilities

The team approach is a concept whereby planning and implementation of all LMP activities are undertaken by an experienced and involved team to ensure that adequate resources, commitment and expertise are provided to lizard capture from start to finish.

This is to be achieved by:

- Using current best practice to capture lizards from vegetation in the identified areas prior to construction and relocate any capture individuals;
- Setting out standard surveying and monitoring protocols that are to be followed, using the Department of Conservation's (DOC) Natural Heritage Management System's Herpetofauna Inventory & Monitoring Toolbox and / or using new advances in tools and techniques not yet incorporated into the toolbox;
- Meeting regulatory requirements relating to the Wildlife Act (WA 1953);

The Environmental Management team will include:

**Table 2 - Roles and Responsibilities**

Role	Name & Phone	Responsibility	Email
Project Manager	James Weller 027 274 2961	Overall project responsibility	<a href="mailto:James.Weller@fultonhogan.com">James.Weller@fultonhogan.com</a>
Construction Manager	David McGoey 027 809 4604	Implementation of the CEMP and sub plans (including the LMP) and ensuring sufficient resources available.	<a href="mailto:David.McGoey2@fultonhogan.com">David.McGoey2@fultonhogan.com</a>
FH Environmental Manager	Jason Haggerty 027 547 0140	FH Environmental Compliance (auditing, monitoring, inspections)	<a href="mailto:Jason.Haggerty@fultonhogan.com">Jason.Haggerty@fultonhogan.com</a>
Project Engineer	Daniel Falakoa 027 702 9840	Coordination of staff to ensure correct implementation of LMP	<a href="mailto:Daniel.Falakoa@fultonhogan.com">Daniel.Falakoa@fultonhogan.com</a>
Project Herpetologist / Biosearches	Chris Wedding 09 367 5287 027 479 5418	Herpetologist / Lizard Specialist (involved in capture and release and monitoring)	<a href="mailto:chris.wedding@biosearches.co.nz">chris.wedding@biosearches.co.nz</a>

Role	Name & Phone	Responsibility	Email
Works Arborist / Franklin Trees	Jason Lord 021 343 721	Vegetation removal in accordance with direction from the herpetologist	<a href="mailto:jason@franklintrees.com">jason@franklintrees.com</a>
Cultural Monitor	TBC	Mana whenua cultural monitor and blessings prior to capture and release	
Auckland Council - Council's Team Leader Southern Monitoring	Isabella Wang 09 301 0101	Auckland Council – Environmental Compliance	<a href="mailto:isabella.wang@aucklandcouncil.govt.nz">isabella.wang@aucklandcouncil.govt.nz</a>

### 3 Legislative Requirements

#### 3.1 Statutory context

Herpetofauna (reptiles and amphibians) comprise a significant component of New Zealand's terrestrial fauna. Over 100 endemic taxa are currently recognised (Hitchmough et al. 2016) and approximately 80% have a conservation threat status of 'Threatened' or 'At Risk' of extinction (Hitchmough et al. 2016). All native reptiles and amphibians are legally protected under the WA 1953, and vegetation and landscape features that provide significant habitat for native herpetofauna are recognised by the Resource Management Act 1991.

Statutory obligations require management of resident reptile and amphibian populations where they or their habitats are threatened by disturbance or development projects. Management recommendations are usually addressed in a Management Plan, which is a site-specific plan prepared to direct development activities to ensure that all necessary measures are identified and implemented to protect native wildlife and/ or their habitats.

This LMP specifically addresses management and mitigation requirements for native lizards only, to ensure the consented activity complies with environmental legislation (particularly the 1953 and RMA 1991). Wildlife management is also consistent with the objectives and policies of the Auckland Unitary Plan (E15 (2.3)).

All lizard handling, salvage, release, monitoring and mitigation measures as outlined within this LMP will be carried out in accordance with Wildlife Authority 37604-FAU held by Biosearches (the Project herpetologist).

#### 3.2 Designation Conditions

The relevant designation conditions, and how they are addressed by the project, are set out in Table 3 below.

**Table 3 - Relevant designation conditions**

Relevant Condition (Condition 61)	LMP Reference
<p>The Requiring Authority must prepare and submit a Lizard Management Plan (LMP) to the Council's Biodiversity Team Manager Biodiversity Central/South for certification. The objective of the LMP is to avoid, remedy or mitigate adverse construction effects on native skinks as far as is reasonably practicable. The LMP must be prepared by a qualified herpetologist with Department of Conservation (DOC) authority and is to cover the following locations:</p> <ol style="list-style-type: none"> <li>The vegetated cliff face on the northern side of Lagoon Drive between Basin View Lane and Church Crescent; and</li> <li>The rank grass on the northern side of Pakuranga Road at Kerswill Corner and Bus Stop Reserve.</li> </ol>	This Plan

Relevant Condition (Condition 61)	LMP Reference
<p>The objective of the LMP is to so far as is reasonably practicable, avoid, remedy or mitigate adverse construction effects on native skinks.</p> <p><i>NOTE - Lizard surveys and salvage (capture and relocation out of footprint) can only be done when lizards are active - the season is generally between September and April.</i></p>	
Relevant Condition (Condition 61)	LMP Reference
This LMP must include (but not necessarily be limited to):	
a) Details of search methods to be implemented for capturing arboreal and ground-dwelling lizards prior to any construction activities in any of the above areas within the project footprint	Section 5
b) Mechanisms for re-establishing affected lizard habitat	Section 7
c) Locations for the potential release of lizards, including whether a pest control programme for before and after the release of lizards is necessary and, if so, the details of such a control programme	Section 6 and Section 7.1.2
d) The methodology for any post-capture release of lizards	Section 7
e) The methodology for captive management of lizards if they are required to be held in captivity	Section 6.1.2

## 4 Affected habitat

### 4.1.1 Construction methods and potential habitat overview

Construction for the Project will involve widening of the existing road along Lagoon Way and Pakuranga Road. This widening would require vegetation removal to allow for earthworks. Two areas are identified in Conditions 61 a & b (Figure 1) that are required to be managed in accordance with this management plan. Vegetation removal could destroy habitats to native lizards and these areas are briefly described below.

### 4.1.2 Lizard habitat values in the surrounding landscape and species covered by Plan

The Mount Wellington-Pakuranga area is highly modified with urban, commercial and industrial land uses in the immediately surrounding area. Potential habitats within these areas are largely associated with esplanade reserves or small fragments that buffer other open spaces, such as recreational reserves.

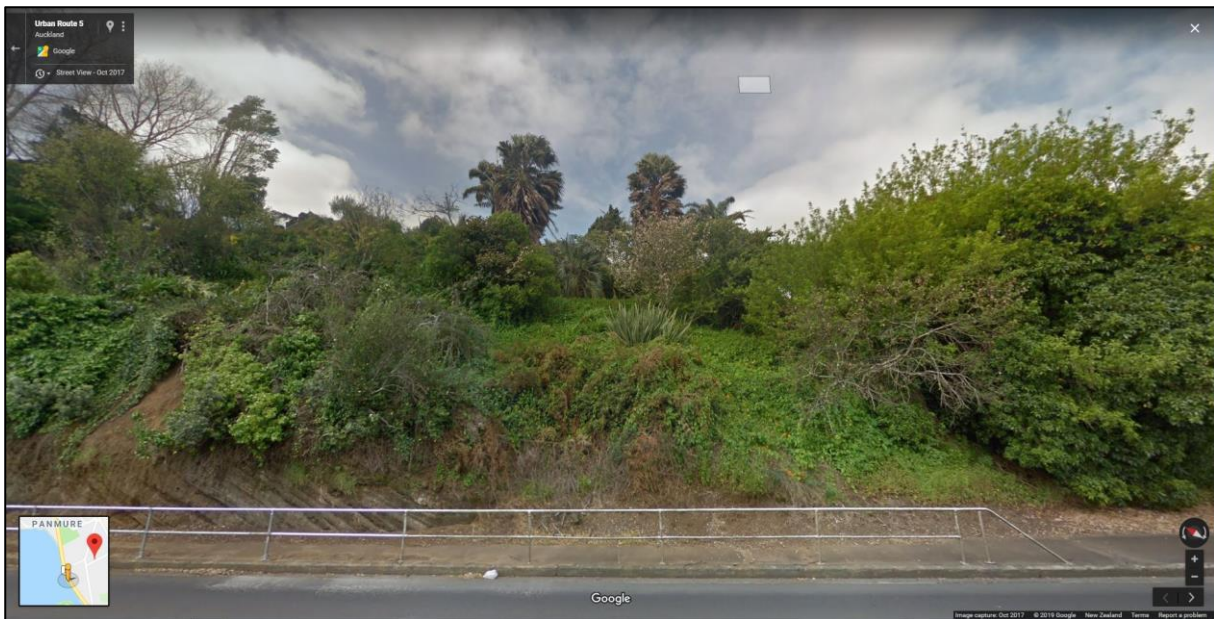
Within these areas, copper skink (*Oligosoma aeneum*) and potentially ornate skink could be present. The Copper skink is not threatened however the Ornate skink (*Oligosoma ornatum*) has a conservation status of 'Nationally At Risk' (Hitchmough et al. 2016). Moko skink (*Oligosoma moco*) are highly unlikely however are listed because the vegetation type within the affected area could support this species.

Common Name		Threat Status	Rough grassland	Shrubland
Copper Skink	<i>Oligosoma aeneum</i>	Not Threatened	✓	✓
Ornate skink	<i>Oligosoma ornatum</i>	At Risk- declining	✓	✓
Moko skink	<i>Oligosoma moco</i>	At Risk- relict	✓	✓

### 4.1.3 Potentially affected habitats – Vegetated cliff face (Lagoon Drive)

A vegetated cliff face between Basin View Lane and Church Crescent on Lagoon Drive supports dense ground cover vegetation (Figure 2 and 3). Potential habitat for skinks within the predominantly exotic and weedy understory would be machine searched as detailed in section 5.3.





**Figure 2 Vegetated cliff face on northern side of Lagoon Drive**



**Figure 3 Vegetated cliff face on northern side of Lagoon Drive**

#### **4.1.4 Potentially affected habitats - Rank grass (Pakuranga Road)**

A narrow strip of rank grass is present on the northern side of Pakuranga Road at Kerswill Corner and Bus stop Reserve, at the edge of an inlet of the Tamaki River (Figure 4 and 5). Potential habitat for skinks within this area would be machine searched as detailed in section 2.5.





**Figure 4 Rank grass on northern side of Pakuranga Drive at Kerswill Corner and Bus Stop Reserve. Note narrow strip of grass area just visible at CMA interface**



**Figure 5 Aerial view of rank grass on northern side of Pakuranga Drive at Kerswill Corner and Bus Stop Reserve**

## 5 Potential effects on lizards

Construction activities will require clearance of potential lizard habitats during vegetation removal at the two identified areas. Clearance of this vegetation without mitigation measures has the potential to result in direct mortality and injury, as well as loss of habitat and biodiversity values.

This Plan requires pre-clearance habitat and destructive searches prior to and during vegetation removal to capture and relocate any native skinks captured from affected habitats. These methods would be undertaken with mana whenua and prior to construction activities, as required by Condition 62. The methods are detailed below.

It is noted that all areas of affected habitat would be blessed by mana whenua prior to any lizard capture commencing.

## 5.1 Timing

All lizard capture, vegetation removal and lizard release would be undertaken between September and May inclusive, when native lizards are most active and when relocation would provide sufficient time for lizards to disperse at the release site.

*Note that Auckland is a warm, sub-humid temperate macroclimatic zone (Singers & Rogers 2014), and therefore lizard management is considered appropriate during residual warm temperatures of autumn, outside of winter.*

## 5.2 Pre-clearance habitat & destructive searches

Trapping tools (e.g. pit traps, Artificial retreats (ARs), funnel traps) would be difficult to implement along the densely vegetated slopes above the rock wall and ARs have poor success in shady environments. Therefore, a pre-works destructive search approach would be undertaken by the Project herpetologist prior to vegetation removal. During this process, hand searches of all vegetation, logs, debris and tree bark would be undertaken to capture lizards and to identify important areas that should be targeted for machine / excavator searching (raking).

## 5.3 Vegetation removal stand-over

- Removal of all identified scrub and tree vegetation would be undertaken in the presence of the project herpetologist and cultural monitor.
- Vegetation must be scraped back with an excavator fitted with a toothed bucket or rake (machine / excavator searching).
  - Mulching may be undertaken after vegetation has been scraped and searched.
- Where an excavator cannot access and it is safe for access by the herpetologist, these areas would be hand raked (refer to images 6 and 7).

**Advice note:** Trapping is not provided for under this plan because traps are better suited to non-destructive surveying and monitoring in easily accessible locations, and because the narrow areas of grass at Kerswill Corner and vegetation along the slope above the rock wall has low habitat value for native lizard species which could otherwise warrant a more conservative approach to capture. The machine / excavator searching technique is a standard method for lizard rescue, and it is an effective and rapid method of lifting thick vegetation mats (particularly those present on the northern side of Lagoon Drive) in the presence of the herpetologist to enable a clear view of any lizards present. This facilitates quick hand-capture for relocation. Machine / excavator searching also provides for a more comprehensive search of all ground habitats, compared to a more restricted range for a trap and broad lizard-behaviour assumptions that trapping relies on.





**Figure 6.** Example of potential habitat within Project area that is suitable for hand raking.



**Figure 7.** Example of an area searched fully by raking.

## 6 Capture and release methods

All lizards would be hand captured and placed immediately into a breathable, cloth bag to minimise handling. Lizards would then be transferred to a box with a clip-on mesh lid that would be furnished with leaf litter and stored in a shady place until transfer to the release site or captive facility (see sections 6.1.1 and 6.1.2) on the same day.

### 6.1 Lizard Release Site

The lizard release sites would be blessed by mana whenua prior to any lizards being released into new habitats.



All captured lizards are generally required to be released into suitable habitat, as defined by the following criteria (and as determined by special conditions of WA 37604-FAU, Appendix 1):

- Habitat that is assessed by an experienced herpetologist as being of similar or better quality compared to the source location, and being capable of supporting the lizard species.
- Habitat that is within five hundred (500) metres of the development footprint or otherwise with consultation and agreement with the relevant DOC Services Manager<sup>1</sup>.
- Habitat that is enhanced, using accepted techniques such as provision of extra refuges suitable for the species or long-term predator control; this enhancement must be undertaken and approved prior to the relocation taking place.
- Habitat that has long-term security from further development or modification, such as DOC or Council-managed reserves, or legal protection through covenanting or District Plan rule provisions (e.g. SEA).

### 6.1.1 Mutukaroa Regional Park

Mutukaroa Regional Park is a large (49 ha) green space of grazed and restored land. A substantial amount of revegetation (over 20 years old) has been undertaken and there is currently at least 12 ha of suitable potential habitat, including restoration plantings and 3.4 ha of Significant Ecological Area (SEA, AUP). The potential habitat includes retired pasture with infill plantings as well as a thick leaf litter layer under an established canopy of kanuka (*Kunzea ericoides*), karo (*Pittosporum crassifolium*), puriri (*Vitex lucens*) and other native trees. The habitats available for native lizards at Mutukaroa are suitable for all of the species covered in this Plan.

Some pest control is currently undertaken however this may require localised intensification if native lizards would be successfully relocated and requirements will be confirmed with the landowner prior to release.

Landowner approval: Auckland Council has agreed in principal to Mutukaroa Regional Park as a receptor site for native lizard relocation subject to finalising agreement on pest control and monitoring.



**Figure 8. Mutukaroa Regional Park**

### 6.1.2 Contingency Relocation

Should agreement with Auckland Council and the Department of Conservation for use of the Mutukaroa Regional Park as the Project release site not be received prior to works proceeding, the following contingency will take place;

Lizards will be temporarily held in captive management. Note: Bioresarches' Wildlife Authority 37604-FAU permits temporary captive management of native lizards for up to 12 months. This option is not preferred,

<sup>1</sup> The Department of Conservation would require a Wildlife Authority variation to approve relocations beyond 500m and has approved such variations previously. A variation is currently being sought by Bioresarches with the preferred release site at Mutukaroa Regional Park (see Section 5.1.6 below).



however, would enable works to commence on time. Following approvals, any native lizards held in captive management would be released in May, or after winter during warm settled weather conditions in September 2019.

The location of captive management would be Massey University's Reptile Facility in Auckland (MURF) in accordance with its DOC-approved protocols.

## 6.2 Contingency plan for captured geckos or 'threatened' species

It is noted that the consent conditions concern potential skink habitat. The potential for geckos or threatened species to be present is very low. However, in the unlikely event that a gecko or threatened species is discovered during the vegetation removal, the Project herpetologist would hold that animal in temporary captivity until suitable habitat can be identified and approved. Such habitat is not considered to be within close proximity of the project Area and therefore additional approvals from the Department of Conservation would be required along with notification to the Auckland Council Biodiversity team.

It is noted that DOC advice may require temporary cessation of vegetation clearance works to ascertain whether capture methods require intensification and whether a specific Wildlife Authority needs to be issued to continue.

## 7 Post works enhancement and monitoring

### 7.1.1 Habitat enhancement

Woody material would be sourced from the release site to provide refuge for native lizards relocated. The quantity and location would be determined by the Project herpetologist to ensure that each lizard has suitable refugia at an appropriate location within the release site and at the time of release. All lizards would be released into provided refugia.

### 7.1.2 Pest control

Where any 'At Risk species', or 20 or more 'Not Threatened' lizards are captured a pest control programme would be initiated at the release site. The initiation and maintenance of pest control is the responsibility of the Consent holder and should be undertaken by a Council-approved pest control provider.

The following recommendations are provided for a suitable pest control programme to assist with establishment of relocated lizards. Any pest control programme would be subject to agreement with Auckland Council's Operations Management team.

- Pest control should target rats and involve managed bait stations or self-resetting instant kill traps for rats at 50 x 50 m spacing throughout the release site area. These should be operational for a minimum of 3 years as follows:
- Pest control should be undertaken over two 'pulses' each year. Each pulse would consist of an eight-week period through August-October and January-March inclusive. During each pulse period, rodent bait stations would be maintained with fresh cereal baits or paste and checked three times over the first week, and then once-weekly until bait take ceases. Self-resetting trap types should be checked weekly over each pulse to remove carcasses and ensure traps are operational.
- Where bait stations are used, these should be baited with diphacinone. Diphacinone cereal baits would be contained within lockable, tamper-resistant bait stations and pulse baited twice throughout each year.
- Diphacinone products, such as Ditrac, are preferred as they are less persistent in the environment than other toxins.
- Where bait take remains high throughout a pulse baiting period, the pest control operator may use an alternative toxin, such as brodifacoum, to achieve control.

### 7.1.3 Post management monitoring

Post management monitoring, if required, would be undertaken by the Project herpetologist.

Post-release population monitoring can be important to determine the responses of animals to management. However, while native lizard populations can be slow to respond to management (population-level responses may often take in excess of 5 years), monitoring can still be a useful tool to determine the effectiveness of revegetation and/or habitat enhancement measures that aim to benefit relocated and resident lizard populations.

Post-works monitoring will take place to determine survivorship of relocated skinks where 20 or more lizards are released.

Monitoring would be undertaken using artificial retreats, in accordance with DOC best practice:

<https://www.doc.govt.nz/globalassets/documents/science-and-technical/inventory-monitoring/im-toolbox-herpetofauna-artificial-retreats.pdf>

Skinks should be photographed prior to release so that individual survivorship can be determined as a parameter of success (see Figure 10), in addition to number of captures, presence of gravid females or juveniles.

A single post release monitoring survey would be undertaken at the release site at 1, 2, and 5 years post release. The fifth year of monitoring would determine the outcome of the relocation success following cessation of three-year pest control.



**Figure 9. Examples of photograph ID images for a copper skink.**

#### 7.1.4 Artificial retreat monitoring method

Artificial retreats (ARs) would be deployed to monitor release site habitats where skinks have been relocated. The number of ARs used would depend on the number of animals released and the area as determined by the Project herpetologist.

ARs should be deployed at least three weeks prior to monitoring survey and survey should comprise a minimum of four AR checks on separate day, during fine, settled weather between September and May.

## 8 Compliance monitoring

A works-completion report would be prepared by the Project herpetologist within 1 month of completion of all vegetation removal. The report would detail the number of lizards captured and the locations they were captured

from. The report would also detail whether any follow up pest control or monitoring is required and the timing for this.

The works completion report would be submitted to Auckland Council Biodiversity Central / South.

## 9 References

Hitchmough, R.; Barr, B.; Lettink, M.; Monks, J.; Reardon, J.; Tocher, M.; van Winkel, D.; and Rolfe, J. (2016). *Conservation status of New Zealand reptiles, 2015*. New Zealand Threat Classification Series 2. Department of Conservation, Wellington.

Singers, NJD; Rogers, GM. 2014. A classification of New Zealand's terrestrial ecosystems. *Science for Conservation* 325. Department of Conservation, Wellington.

## Appendix 1: Wildlife Authority 37604-FAU Special Conditions



## Wildlife Act Authority for wildlife on non-public conservation land

Authorisation Number: 37604-FAU

**THIS AUTHORITY** is made this 10<sup>th</sup> day of August 2018

### PARTIES:

**The Director-General of Conservation and where required the Minister of Conservation (the Grantor)**  
**AND**

**Bioresearches Group Limited (the Authority Holder)**


### BACKGROUND:

- A. The Director-General of Conservation is empowered to issue authorisations under the Wildlife Act 1953.
- B. The Authority Holder wishes to exercise the authorisation issued under the Wildlife Act 1953 subject to the terms and conditions of this Authority.

### OPERATIVE PARTS

In exercise of the Grantor's powers the Grantor:

**AUTHORISES** the Authority Holder under Section 53, and 56 of the Wildlife Act 1953, section 5 of the National Parks Act 1980, section 38 of the Conservation Act 1987, and 49 of the Reserves Act 1977, subject to the terms and conditions contained in this Authority and its Schedules.

  
SIGNED on behalf of the Grantor by David Speirs, Operations Director, Hauraki-Waikato-Taranaki acting under delegated authority

in the presence of:

  
Witness Signature

Witness Name: Bry Lamb

Witness Occupation: Personal Assistant

Witness Address: 73 Rostrevor St, Tāmaki Makaurau

A copy of the Instrument of Delegation may be inspected at the Director-General's office at 18-32 Manners Street, Wellington.



Authorisation Number: 37604-FAU

## SCHEDULE 1

1.	<b>Authorised activity (including the species, any approved quantities and collection methods).</b> (Schedule 2, clause 2)	Activities and the land on which they are authorised to occur is set out in Schedule 4.
2.	<b>The Land</b> (Schedule 2, clause 2)	Activities and the land on which they are authorised to occur is set out in Schedule 4.
3.	<b>Personnel authorised to undertake the Authorised Activity</b> (Schedule 2, clause 3)	<ul style="list-style-type: none"> <li>a. Chris Wedding</li> <li>b. Dylan van Winkel</li> <li>c. Mark Delaney</li> <li>d. All persons under the direct supervision of personnel listed in Schedule 1 Clause 3 a-c.</li> </ul>
4.	<b>Term</b> (Schedule 2, clause 4)	Commencing on and including 10 August 2018 and ending on and including 31 October 2019
5.	<b>Authority Holder's address for notices</b> (Schedule 2, clause 8)	<p>The Authority Holder's address in New Zealand is:</p> <p>Level 4 Quay Park Building 68 Beach Road Auckland Phone: 09 379 9417 Email: chris.wedding@bioresarches.co.nz</p>
6.	<b>Grantor's address for notices</b>	<p>The Grantor's address for all correspondence is:</p> <p>Permissions Team Level 4 73 Rostrevor Street Hamilton 3240 Email: permissionshamilton@doc.govt.nz</p>

### **SCHEDULE 3**

#### **SPECIAL CONDITIONS.**

##### **Relocation and habitat enhancement**

1. The Authority Holder is only permitted to release lizards:
  - a. That are classified as Not Threatened or At Risk species under the current threat classification system, and
  - b. Into release site(s) that support habitat that is assessed by a qualified herpetologist as being of similar or better habitat compared to the source location, and being capable of supporting that lizard species, and,
  - c. Into release site(s) that are within five hundred (500) metres of the development footprint or with consultation and agreement with the relevant DOC Services Manager), and
  - d. Into release site(s) where habitat for that species of lizard is enhanced using accepted techniques such as provision of extra refuges suitable for the species or long-term predator control, and that this enhancement is undertaken and approved prior to the relocation taking place, and
  - e. Into release site(s) where the site has long-term security from development or modification, for example Council or DOC- managed Reserves, legal protection through covenanting or legal protection through District Plan rule provisions).
2. The Services Manager(s) are to be contacted immediately for further advice if lizard species classified as Threatened are located within the footprint of the proposed development or within the proposed release site. This permit does not permit movement of Threatened species. A separate application to translocate Threatened species may be required.
3. The Services Manager(s) are to be contacted immediately for further advice if any of the conditions outlined in 1) above are not able to be met.
4. Where Threatened lizards are found within the footprint of the site during lizard salvage operations during construction, the Authority Holder shall contact the Services Manager(s) and transfer the lizard(s) to an approved lizard holding facility until a suitable release site is identified by DOC.
5. The Authority Holder must engage with the relevant tangata whenua prior to any relocation of lizards taking place in their rohe. Advice on engagement with tangata whenua should be sought from the Department of Conservation, Services Manager(s).
6. Any salvage operation for lizards shall be accompanied by a Lizard Management Plan that outlines, as a minimum, capture and handling techniques to be applied, the proposed relocation release site, management of the release site including provision for protection of relocated lizards, provision of post-release monitoring, and actions that will be followed in the event that Threatened lizard species are found within the development footprint.
7. Subject to holding an appropriate captive permit, the Authority Holder may hold any of the removed lizards in captivity for up to twelve (12) months then release them within five hundred (500) metres of the site where they were originally found once a Lizard Management Plan has been prepared and approved by DOC. The relevant DOC Services Manager must be notified within 48 hours if any lizards are placed into captivity.
8. Any offspring born in captivity must be released, together with the original animals collected, in accordance with the requirements of 1) above.

### **Lizard capture and handling**

9. Lizards must only be handled by people who are appropriately trained and experienced in lizard capture and handling, or under direct supervision of someone who is. Only non-destructive search methods may be used unless the Area is to be impacted and is the subject of a consented or permitted activity under the Resource Management Act 1991 or Conservation Act 1987.
10. Capture and handling of lizards must use techniques that minimise the risk of infection or injury to the animal.
11. If traps are used they must be covered to protect lizards from exposure and minimise stress. A small amount of damp leaf litter, or similar material, should be placed in the bottom to provide hiding places and reduce the risk of desiccation. Traps should be secured onto a secure surface to avoid disturbance from predators. Traps may be baited. All traps **must** be checked at least every 24 hours.
12. Lizard capture, handling and relocation should be undertaken at a suitable time of year when lizards are active, as advised by an experienced herpetologist

### **Reporting**

13. A report is to be submitted in writing to the Director-General of Conservation, Services Manager, Auckland District Office as well as the Warkworth District Office, by 01 July each year for the life of this permit, summarising outcomes in accordance with the Lizard Management Plan. Each report must:
  - a. include the species and number of any animals collected and released, and the GPS location (or a detailed map) of the collection point(s) and release point(s).
  - b. include completed Amphibian and Reptile Distribution System (ARDS) cards (<http://www.doc.govt.nz/conservation/native-animals/reptiles-and-frogs/species-information/herpetofauna-data-collection/ards-card/>) to Herpetofauna, Department of Conservation, National Office, PO Box 10420 Wellington 6143 or [herpetofauna@doc.govt.nz](mailto:herpetofauna@doc.govt.nz) for all herpetofauna sightings and captures.

## SCHEDULE 4

Table 1: Land on which each activity is authorised: Department administered land

✓ indicates that the corresponding activity is authorised on the corresponding land  
\* indicates that the corresponding activity is NOT authorised on the corresponding land

Activity		i. Catch, handle, and release any New Zealand herpetofauna on site for the purpose of survey and identification.	ii. Catch and handle and temporarily hold in captivity reptile and amphibian species for the purpose of species management.	iii. Small-scale relocations of native reptiles within a site as a cost-effective measure of mitigating harm to native reptile species found within the footprint of proposed development sites	iv. Temporary holding of lizards and amphibians in captivity until a suitable release site is found for species rescued from development sites
<b>Land administered by the Department, excluding Nature Reserves and Scientific Reserves, within:</b>					
i.	Kauri Coast District	✓	*	*	*
ii.	Whangarei District	✓	*	*	*
iii.	Bay of Islands District	✓	*	*	*
iv.	Kaitiaki District	✓	*	*	*
v.	Warkworth District	✓	*	*	*
vi.	Auckland District	✓	*	*	*
vii.	Waikato District	✓	*	*	*
viii.	Wellington District	✓	*	*	*
ix.	Hawkes Bay District	✓	*	*	*
x.	Manawatu District	✓	*	*	*
xi.	Wairarapa District subject to Schedule 3 Clause 3.4	✓	*	*	*
xii.	Taranaki District subject to Schedule 3 Clause 3.3	✓	*	*	*

Authorisation Number: 37604-FAU

xii.	Wairarapa District subject to Schedule 3 Clause 3.4	✓	x	x	x
xiii.	Taranaki District subject to Clause 3.3	✓	x	x	x
xiv.	South Island	✓	x	x	x