



# **DRAFT**

# **Proposed Predator Control Programme**

**Sleepyhead Estates, Ohinewai**

**Prepared for Ambury Properties Ltd**  
**23 August 2020**



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release:

### Document Control

Revision	Revision Date	Details	Authorised by
Rev0	06 August 2020	Draft	CC

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## 1. INTRODUCTION

This report<sup>1</sup>, prepared by Ecology New Zealand Limited ('ENZL') for Ambury Properties Ltd ('the client'), presents a proposed framework for a strategic level Predator Control Programme (PCP) associated with the proposed Structure Plan and Re-Zoning that will enable the redevelopment of Sleepyhead Estates at 231 Tahuna Road and 52-58 Lumsden Rd, Ōhinewai ('the site'). Specifically, this report details the high level overarching goal, as well as practical objectives and performance measures for predator control as recommended within the Ecological Impact Assessment (EIA) prepared by ENZL (Report 1708254.1-001.Rev0, July 2020) and as identified within the Joint Witness Statement prepared by Chad Croft (for Ambury Properties Limited), Thomas Wilding (for Waikato Regional Council) and David Klee (Auckland/Waikato Fish & Game).

### 1.1. Predator Control Programme Goals and Objectives

The high level, overarching goal of this PCP is to contribute to the restoration and enhancement of indigenous biodiversity on the proposed Sleepyhead Estate site and by extension the adjacent Significant Natural Area around Lake Rotokauwa.

The specific objectives of the PCP include:

- mitigate foreseeable threats to indigenous fauna attributable to the introduction of domestic cats as part of the proposed residential development of the site by ensuring the relative abundance of cats within the PCP area is maintained at a residual trap catch of  $\leq 5\%$ ;
- reduce the threat of predation on indigenous fauna by mammalian predators in general by ensuring the relative abundance of ferrets, stoats, and possums within the PCP area is maintained at a residual trap catch of  $\leq 5\%$  and the relative abundance of rats within the PCP is maintained at a tracking rate of  $\leq 5\%$ ;
- increase public awareness and support for predator control activities by ensuring 90% of Sleepyhead Estate residents are engaged and support predator control programme by 2030.

Ongoing predator re-invasion from adjacent properties, is a near certainty. In this regard, it is unreasonable to expect a complete eradication of predators at this site. However, despite this it is expected that implementation of the predator control measures recommended in this plan can adequately assist in maintaining and protecting indigenous fauna populations which may utilise the site currently or in the future. Figure 1 below summarises the logic model used to design the Sleepyhead Estate PCP.

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<sup>1</sup> This report is subject to the Report Limitations provided in Appendix A.

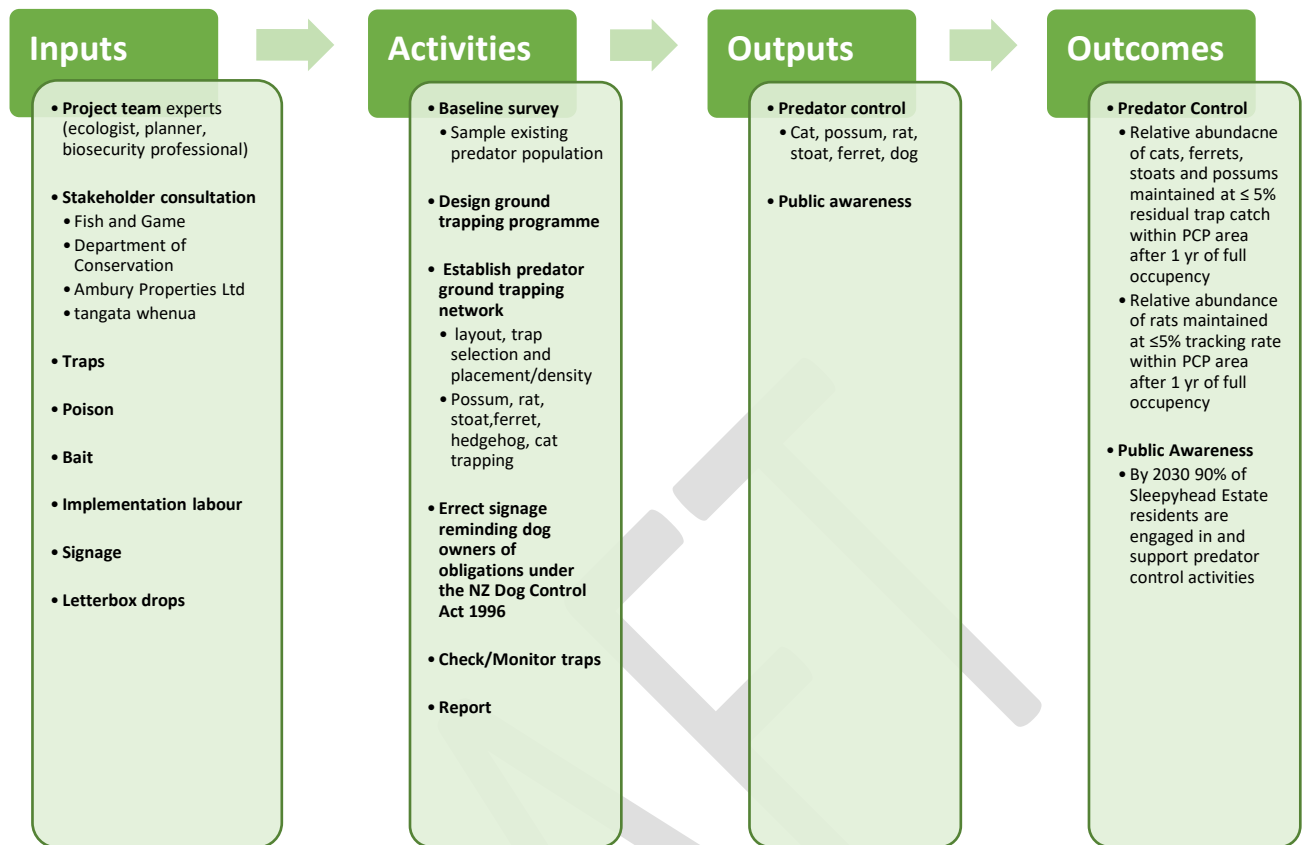


Figure 1: Logic Model for Sleepyhead Estate Predator Control Programme

## 2. PREDATOR CONTROL

### 2.1. Control Methods

There is no single technique for successful predator control and methods can vary between and within each target species. Often a combination of multiple methods can have the best outcome and the recommended plan below takes into consideration the most practical methods to meet the aforementioned expected outcomes (Figure 1). It is recommended that an experienced predator control professional be appointed to implement pest animal control, commencing with trap instalment.

Tables 1 details control strategies for different target predators. The proposed strategies include one or a combination of baiting or trapping.

Records are to be kept detailing trap location / re-location (if moved), dates of servicing, and catch results in alignment with the below methodologies.

#### 2.1.1. Predator control strategy

Given the expected nature of future site conditions (presence of suitable food source), it is reasonable to assume that cats, ferrets, possums, stoats and rats may be present in at least low abundance on-site (Table 1). Dogs are also expected to be present in low numbers as the residential development reaches full occupancy.

Table 1: Predator control strategy

Common Name	Species Name	WRPMP Category	Expected Abundance Low • Med •• High •••	Control Method
Cat (feral/domestic)	<i>Felis catus</i>	Site-led	••	Trapping Network
Possum	<i>Trichosurus vulpecula</i>	Sustained control Site-led	•	Trapping Network
Ferret	<i>Mustela furo</i>	Site-led	•	Trapping Network
Rat (Ship and Norway)	<i>Rattus spp.</i>	Site-led	•	Bait Stations
Stoat	<i>Mustela erminea</i>	Site-led	••	Trapping Network
Dog	<i>Canis familiaris</i>	N/A	•	Existing legislation*

\* New Zealand Dog Control Act 1996, Section 5(1)(b) and (g)

Control of cats is to occur in three stages. Stage One involves the installation of SA2 Kat Traps (1 trap/20 hectares) to reduce feral cat numbers before residents move into the new development. Traps are to be placed every 200m on lines 500m apart and should be placed along fences, bush edges or water edges near other traps. They should be baited with fresh fish or rabbit meat or cat biscuits in peanut butter. Stage Two is an educational phase and begins once residents have moved into the new development. This involves educating residents about the importance of excluding cats from the wetland park and reserve area via a letter drop or similar and temporarily installing live capture traps to avoid harming new residential pets (leaving the SA2 Kat Traps targeting cats unset). **After X amount of time**, once the educational programme is complete, Stage Three will commence, and the live capture traps will be removed and the SA2 Kat Traps are to be activated.

Control of possums is to involve the installation of SA2 Kat Traps or Trapinator Possum Kill Traps (1 trap/hectare) installed 100m apart along lines set 100m apart. These are to be installed as per the manufacturer's guidelines within the target treatment area. Traps should be baited with apple or orange, sprinkled with cinnamon powder.

Control of ferrets and stoats is to involve the installation of DOC200 and 250 Kill Traps (1 trap/20 hectares) installed 100m apart along lines set 500m apart and ideally place along fences lines, water edges and/or bush edges. These are to be installed as per the manufacturer's guidelines. They are to be baited with fresh chicken eggs initially to avoid catching small cats during the live capture stage. Once the cat kill programme has commenced, bait should be switched to dehydrated rabbit meat<sup>2</sup>.

The traps will be serviced as part of a pulse cycle, being set during February, May, August, and November (see Programme of Works). The traps will be checked every 2-3 nights for a period of two weeks. The traps will be left unset on-site between trapping pulses. During the live capture stage of the cat trapping programme, traps must be checked every day, within 12 hours of sunrise.

Control of rats is to be via a bait station network of mini-philproof bait stations (2 bait stations/hectare) spaced 50m apart along lines spaced 100m apart. The bait stations should be installed as per manufacturers' guidelines. The bait stations should be placed along bush fences, water edges and bush edges where possible. The mini-philproof bait stations should be filled with Brodifacoum bait (waxed type) or a suitable alternative recommended by the implementing professional. It is expected that the stoat network will also capture rats. The baiting network will be serviced at the same frequency as the trapping network.

The New Zealand Dog Control Act 1996 stipulates the obligations of dog owners. The obligations imposed on dog owners by this Act include:

*Section 5 (1):(b) to ensure that the dog is kept under control at all times;*

*(g) to take all reasonable steps to ensure that the dog does not injure, endanger, or cause distress to any stock, poultry, domestic animal, or protected wildlife;*

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<sup>2</sup> R.J. Pierce et al. (2007) *Field trials of fresh and long-life stoat baits in Northland, New Zealand*. DOC Research & Development Series 262. Department of Conservation.

These statutory obligations regarding dogs are expected to be adequate to ensure that predation on indigenous fauna is controlled across the Sleepyhead Estate site without any additional control measures put in place.

### 2.1.2. Predator Monitoring

To ensure that the control programme above is effective in suppressing predator populations sufficiently to achieve biodiversity gains, it is recommended that predator monitoring is carried out. Monitoring should be carried out every year during the August pulse. Monitoring will include residual trap catch, and a network of tracking tunnels to track rats and stoats. Chew cards or wax tags to track possums and cats set up every 50m (minimum of 20 monitoring devices) and distributed along two existing bait lines and collected after 7 days (and or as per the manufacturers' guidelines) can be used to supplement residual trap catch data. Bait should alternate between peanut butter (rats) and raw meat (stoats) along bait stations within a line. The results of the predator monitoring should be compared each year to ensure the predator control programme is sufficiently effective in reducing the number of predators within the PCP area. A more detailed methodology for monitoring PCP performance can be developed once a specific predator control network design is finalised in coordination with detailed design of the wetland park reserve, and consultation with Fish and Game, DOC and tangata whenua.

## 2.2. Public Awareness

Presentation and distribution of the predator control programme goals, objectives and strategies to Sleepyhead Estate residents is expected to effectively introduce the programme and resident obligations. Signage and letter drops will be used to further highlight the goals, objectives and strategies of the programme, including opportunities for community involvement in cat and dog control and trap monitoring.



### 3. PROGRAMME OF WORKS

Table 2: Programme of works for Sleepyhead Estates predator control programme

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
<b>Year 0</b>												
<b>Year 1</b>		Predator control network installation and maintenance			Predator control maintenance				Predator control maintenance		Predator control maintenance	
<b>Years 2 - 5</b>		Predator control maintenance			Predator control maintenance			Predator control maintenance			Predator control maintenance	
<b>Year 6 - 20</b>		Predator control maintenance			Predator control maintenance			Predator control maintenance			Predator control maintenance	

# APPENDIX A

## Report Limitations

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- ix) Where lengths or other measurements have not been provided by a surveyor, ENZL has used basic GIS mapping and measurement systems to estimate these numbers. These should not be taken as surveyor-level accuracy for the purposes of decision making.

## APPENDIX B

### Monitoring Forms

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**Predator Control**

<b>Location:</b>	<b>Commencement Date:</b>	<b>Completion Date:</b>	<b>Company:</b>
<b>Target Species</b>	<b>Trap/Toxin Used</b>	<b>No. Caught/Bait Taken (g)</b>	<b>Notes</b>

**Extra Information (notable observations, future recommendations, etc)**

# APPENDIX C

## Indicative predator control area and network layout

