



EPA Report: Verified

Source: Pestlink

Operational Report for Norway rat, Possum, Ship rat Control in the Rotoehu Forest (including Pongakawa Ecological Area)

03 Sep 2017 - 11 Sep 2017

1/02/2018

Department of Conservation
Tauranga

Contents

1. Operation Summary

Operation Name	Norway rat, Possum, Ship rat Control in Rotoehu Forest (including Pongakawa Ecological Area)		
Operation Date	03 Sep 2017 - 11 Sep 2017		
District	Tauranga	Region:	Central North Island
Pestlink Reference	1718TAU01		
Treatment Area	Rotoehu Forest (including Pongakawa Ecological Area)	Size (ha)	2867
Conservation Unit Name(s)		GA Id(s)	
Pongakawa Ecological Area		2793848	
Rotoehu Forest		2793890	
Treatment Block Details			
Treatment Blocks	Size (ha)	Grid Ref	GIS Ref
Rotoehu Forest (including Pongakawa Ecological Area)	2496+82.5 private	BD38	
Contractor Name	Heli Resources (2012)		
Treatment Dates	Start	Completion	
Rotoehu Forest (including Pongakawa Ecological Area)	03 Sep 2017	11 Sep 2017	
Target Pest Details			
Treatment Blocks	Target Pests	Control Method	Name
Rotoehu Forest (including Pongakawa Ecological Area)	Possum, Norway rat, Ship rat	Pesticide Aerial	Pesticide - Aerial in Rotoehu Forest (including Pongakawa Ecological Area) -(3)

Conservation Outcome(s)

A large area of native forest receives animal pest control to protect the resident kokako population, allowing population growth and connectivity between remnants of the fragmented kokako population.

Result Target(s)	Treatment Area/Block	What we got
<ul style="list-style-type: none">RTC of less than 2% by November 1st 2017	Rotoehu Forest (including Pongakawa Ecological Area)	0.4%
<ul style="list-style-type: none">Less than 2% tracking for rats by November 1st 2017	Rotoehu Forest (including Pongakawa Ecological Area)	3%

Outcome Targets

- The number of breeding pairs of kokako in the Rotoehu Forest increases to 100 by 2020.

What we got

2. Introduction

2.1 TREATMENT AREA

Non-target species

Common Name

Dama wallaby

Red deer

Pig

Cat

Mouse

Stoat

Ferret

Weasel

Rabbit

Scientific Name

Macropus eugenii eugenii

Cervus elaphus scoticus

Sus scrofa

Felis catus

Mus musculus

Mustela erminea

Mustela furo

Mustela nivalis vulgaris

Oryctolagus cuniculus cuniculus

Target benefit species

Common Name

Bellbird

Pigeonwood

North Island Fantail,

Piwakawaka

Grey Warbler, Riroriro

Morepork, Ruru

Shining Cuckoo, Pīpiwharuroa

Silvereye

Scientific Name

Anthornis melanura melanura

Hedycarya arborea

Rhipidura fuliginosa placabilis

Gerygone igata

Ninox novaeseelandiae

novaezeelandiae

Chrysococcyx lucidus lucidus

Zosterops lateralis

New Zealand kingfisher, Kotare	Todiramphus sanctus vagans
Tui	Prothemadera novaeseelandiae novaeseelandiae
Whitehead, Popokatea	Mohoua albicilla
North Island Robin, Toutouwai	Petroica longipes
North Island Rifleman, Titipounamu, titipounamu	Acanthisitta chloris granti
Tomtit	Petroica macrocephala
Australasian Harrier, Kahu, Swamp harrier	Circus approximans

Threatened species

Common Name	Scientific Name
North Island Kokako, blue-wattled crow, kokako, hokako, honga, onga, honghe, onge, pakara, werewere	Callaeas wilsoni
Bush falcon, Karearea	Falco novaeseelandiae "bush"
North Island kaka, bush parrot, brown parrot, kawkaw	Nestor meridionalis septentrionalis
Long-tailed bat (North Island)	Chalinolobus tuberculatus (North Island)
Short-tailed bat	Mystacina tuberculata

Geographical location

The Rotoehu Forest (including Pongakawa Ecological Area) is situated 16 km NW of Paengaroa.

TREATMENT BLOCK DETAILS:

Treatment block	Rotoehu Forest (including Pongakawa Ecological Area) includes 82.5 ha's of private land.	
Vegetation type	Rotoehu Forest was logged for podocarps, mainly rimu, in the early 1940s and is now dominated by tawa. The canopy structure is predominately a rata/tawa-kohekohe-kamahi forest association with smaller areas of rewarewa-kamahi and rata/tawa-pukatea forest cover associations.	
Bioclimatic zone	semi-coastal	
Climate characteristics:		
Rainfall	1500 mm	
Temperature:	Average Summer	17.2
	Average Winter	8.1
Snow level	0 m	
Altitude	200-355 m	
Community and Iwi interests	There are no huts or official walking tracks in the area although there are numerous old logging trails throughout the block. Some of the old logging tracks are used by 4-wheel drive groups. Deer and pig hunting is allowed, and the area is popular for game bird shooting, i.e. pheasants. There are no leases within the forest. Plantation forests surround most of Rotoehu Forest as the major adjacent land use.	

These forests are currently managed by Timberlands Limited and PF Olsen Ltd for Ngati Makino's Te Kohanga block. Ngati Markino are supportive of this operation. There is a community group, Rotoehu Ecological Trust who work in the area, and are support/involved with the operation.

Historic sites Nil

2.2 MANAGEMENT HISTORY

Management history was not chosen to be shown in this operational report. This history is, however, available via Pestlink

3 Outcomes and Targets

3.1 CONSERVATION OUTCOMES

A large area of native forest receives animal pest control to protect the resident kokako population, allowing population growth and connectivity between remnants of the fragmented kokako population.

3.2 TARGETS

3.2.1 Result Targets

The result targets for the treatment area were:

- RTC of less than 2% by November 1st 2017
- Less than 2% tracking for rats by November 1st 2017

3.2.2 Outcome Targets

The outcome targets for the treatment area were:

- The number of breeding pairs of kokako in the Rotoehu Forest increases to 100 by 2020.

4 Consultation, Consents & Notifications

4.1 CONSULTATION

See DOC-3052585

Consultation outcomes

Apology letter to one member of the deer stalkers association for late timing of notification. Added this group to early notification list for future operations.

Lessons learned

Include local branch of Deerstalker association in consultation very early on. If possible allow time for a meeting with the group. Essential to have a though communications plan so it can be referred to when externals ask questions.

4.2 CONSENTS

Consent	Consent date	File Reference	Permission ID
Timberlands Landowner Consent	08/02/2017	DOC-3115363	
Timberlands Landowner consent	08/02/2017	DOC-3052795	
Ngati Markino Landowner Permission	04/05/2017	DOC-3027194	
Ngati Makino Landowner Permission	17/08/2017	DOC-3153861	
DOC Consent	04/08/2017	DOC-3146091	

Lessons learned

Ensure permissions are sought early as often more than one person need to approve/give permission with an organisation

4.3 NOTIFICATION

See DOC-3052585

Lessons learned

leave ample time for notification as additional people will need notification as a result of the first round of notification.

5 Methods

5.1 TARGET SPECIES

Treatment Block		Rotoehu Forest (including Pongakawa Ecological Area)	
Control method	Name	Target pest species	
Pesticide - Aerial	Pesticide - Aerial in Rotoehu Forest (including Pongakawa Ecological Area)-(3)	Possum Norway rat Ship rat	
Treatment Block	Control Method	Name	Target Pest Species
Rotoehu Forest (including Pongakawa Ecological Area)	Pesticide - Aerial	Pesticide - Aerial in Rotoehu Forest (including Pongakawa Ecological Area)-(3)	Possum Norway rat Ship rat
Trade name of pesticide		0.15% 1080 Pellets #7	
Name of pesticide		Sodium fluoroacetate	
Type of bait		Cereal pellet	
Toxic loading		1.5 g/kg	
Bait quality sampling		Not Conducted	

Bait Details

	Pre-feed	Toxic
Bait type	Cereal pellet	Cereal pellet
Lure/ mask/ deterrent	Cinnamon	Cinnamon
Lure/ mask/ deterrent	0.30%	0.30%
Dye	Green	Green
Individual Bait Weight	6.0g	12.0g

Sowing Rate Details

Pre-feed

Date	Rate(kg/ha)	Wind Speed	Direction
03/09/2017	1.50	Light	South

Toxic

Date	Rate(kg/ha)	Wind Speed	Direction
11/09/2017	2.50	Light	West

Time between pre-feed and toxic	8
End of Caution Period Date	31/03/2017
Aircraft type	Squirrel AS 350
Number of Aircraft	1

Sowing gear details

Description	Capacity
Bucket with retractable legs, swath width 180m for pre-feed and 200m for toxic	7 kg

Type of navigational guidance system used TracMap Pro

Loading Method Hiab Truck - loading directly into the bucket with 300kg bags

Complaints and Incidents

Nil

Other Details about this method

GPS lines checked on site after 1st load to verify swath width and accuracy of sowing rate.

Deviations from planned operation

Nil

Lessons Learned

Nil

5.2 ENVIRONMENTAL EFFECTS

5.2.1 Effects on Non-Target Species

No non target native species deaths have been reported.

Performance standard(s)	Followed ?	Monitored ?
As per DOC P/S #6 for Aerial Ops	Yes	No

Effectiveness of performance standards

Performance Standard #6, the baits must be dyed green or blue, appears to be effective in protecting non-target species

By kill of non-target species

One Tui has been collected to be tested for 1080 contamination, results are not yet available.

5.2.2 Effects on Soil and Water Quality

Water sampling in the Whakahaupapa Stream down stream of the control block where one landowner takes drinking water. Bottled water was supplied to one neighbour who takes water from the stream until the water samples returned with no trace of toxin

Performance standard(s)	Followed ?	Monitored ?
Landcare Research Protocol for sampling and testing water for 1080	Yes	Yes

Effectiveness of performance standards

Water samples were taken on the Monday directly after the drop and the following Tuesday morning. Both samples came back clear.

5.2.3 Effects on Ecosystems

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Effects on Ecosystems Not Applicable

5.2.4 Effects on Human Health

Warning Signs at all public entry points met SOP Standards and MOH requirements. Clearing of road and 4WD tracks for public safety as per MOH condition 16.

Performance standard(s)	Followed ?	Monitored ?
DOC SOP and MOH Standards 19 & 20	Yes	Yes
MOH Standard 16	Yes	Yes

Effectiveness of performance standards

All warning signs were made to the required standard. Warning signs have not been vandalised to date, a log is being kept of all checks, replacement signs are available if needed. All required roads were cleared of baits on the day of the operation, gloves and masked were used during road/track clearing.

6 Monitoring Results and Outcomes

6.1 RESULT MONITORING - TARGET SPECIES

Result target(s)

RTC of less than 2% by November 1st 2017

Less than 2% tracking for rats by November 1st 2017

6.1.1 Target Species Monitoring

Method:	Residual trap-catch index (RTCI)
Species monitored	Possum - <i>Trichosurus vulpecula</i> in Rotoehu Forest (including Pongakawa Ecological Area)

Monitor method details

For this operation 16 lines of 10 leg hold traps will be randomly spaced in accordance with the NPCA A1 POSSUM POPULATION protocol published November 2015.

Deviations

N/A

Target pest result details

	Pre	During/Post
Monitoring dates	30/07/2017	12/10/2017
Results	7%	0.4%

Result target met? Yes

Lessons Learned

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6.1.2 Target Species Monitoring

Method:

Species monitored

Tracking tunnels

Norway rat - *Rattus norvegicus*, Ship rat - *Rattus rattus* in Rotoehu Forest (including Pongakawa Ecological Area)

Monitor method details

For this operation 16 lines of 10 tracking tunnels will be installed at random places and directions in accordance with DOC best-practice and advice from the technical support team.

Deviations

For this operation, the recommended number of lines were randomly selected and mapped (29 lines). Due to capacity, it is not possible for us to run the full 29 lines. Based on advice from the technical support team 16 of the 29 lines were selected randomly by generating a random number in excel. All Tracking tunnels were replaced this year with the new wooden based tunnels as per BfoB protocol. Lines P3, P5, P8, and P 10 are existing lines that were not be used.

Target pest result details

	Pre	During/Post
Monitoring dates	23/08/2017	17/10/2017
Results	83%	3%

Result target met? No

Lessons Learned

NIL

6.2 RESULT MONITORING - ENVIRONMENTAL EFFECTS

6.2.1 Non Target Species

No monitoring of non target species was undertaken.

6.2.2 Soil and Water Quality

Monitoring of:

Water Samples were taken from the Whakahaupapa Stream

Monitor Method details

The following protocol was used and followed:

<https://www.landcareresearch.co.nz/resources/laboratories/toxicology-laboratory/services/advice-and-protocols/protocol-for-sampling-and-testing-water-for-1080>

Deviations

Nil

Monitoring dates 11th and 12th September 2017

Results Both water sample came back clear of 1080

Lessons Learned

Easy process to complete to give landowners piece of mind around the effects of 1080 in waterways

6.2.3 Ecosystems

No monitoring of ecosystems was undertaken.

6.2.4 Human Health

Monitoring of: **Public Warning Signs. Road and Tracks in the operation area.**

Monitor Method details

All warning signs are checked regularly and are always checked before public holidays. Roads and tracks were cleared of all baits immediately after the aerial operation.

Deviations

Nil for warning signs. In addition to the MOH consent specified roads, extra roads were cleared that are used by the 4WD club.

Monitoring dates Signs: ongoing. Roads: Completed 11/09/2017

Results To date no signs have been vandalised. All roads were cleared of baits, with no feedback from the public that bait had been missed.

Lessons Learned

Warning signs: NIL Road Clearing: MOH have given feedback to ensure all roads to be cleared are specified in the MOH application.

6.3 OUTCOME MONITORING

Outcome targets

The number of breeding pairs of kokako in the Rotoehu Forest increases to 100 by 2020.

No monitoring of outcomes was undertaken