

RAT CONTROL (100m x 100m) HARTS HILL – FIORDLAND PROJECT REPORT



Project Summary

The Harts Hill 100m x 100m project was established by DOC and Fiordland Conservation Trust in the Trust's "Kids Restore the Kepler" project area with the objective to knockdown and control rats with half the "best practice" density of Goodnature A24 self-resetting rat traps.

Following the success of the Harts Hill 100m x 50m rat control project, in May 2015 the network was extended to 670 Goodnature A24 rat traps over 600 hectares of beech forest at Harts Hill, Kepler Track, Fiordland National Park at half the trap density of DOC best practice guidelines. Prior to establishment, rat numbers in the project area had been measured at a pre-treatment rat index of 44% which is above the species damage threshold. After four weeks, the first post-treatment monitor showed rat numbers had been reduced to 6%. A second post-treatment monitor at 8 weeks showed rats had been reduced to 0% - an undetectable level - while the population in the non-treatment area remained at 71%. A third post-treatment monitor at 12 weeks showed rats had been sustained at 1% with a single rat indication at the perimeter of the project.

The project successfully knocked down and sustained control of an elevated rat population in New Zealand beech forest.

Project Objective

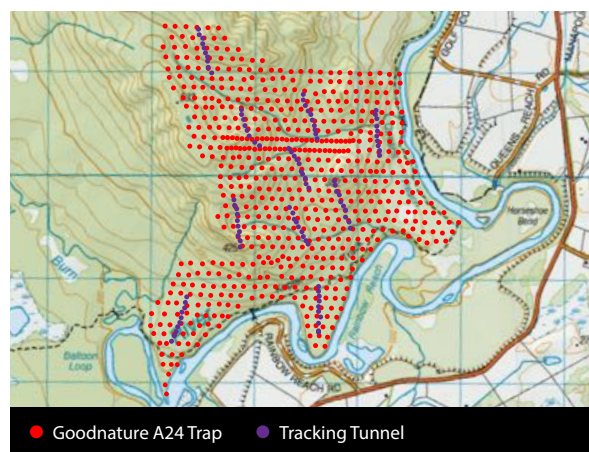
This project was set up to knockdown and control high numbers of rats during a beech mast/rat plague event in South Island beech forest with a network of Goodnature A24 self-resetting traps established on a grid of 100m x 100m - half the current best practice trap density.

Project Design

The network at Harts Hill was established using modified DOC current best practice guidelines for ground-based rat control with traps set at half-density on a wider grid.

Traps were set at 100m intervals on trap lines 100m apart. The trap lines were uncut and trap locations were set on a GPS grid.

Tracking tunnel monitoring was established using DOC tracking tunnel guide v2.5.2.



Harts Hill, Kepler Track

-45.48, 167.67

Dates: April 2015 - July 2015

Area: 600ha

Traps: 670 x Goodnature A24 rat & stoat traps set 700mm high.

Lures: Goodnature chocolate formula.

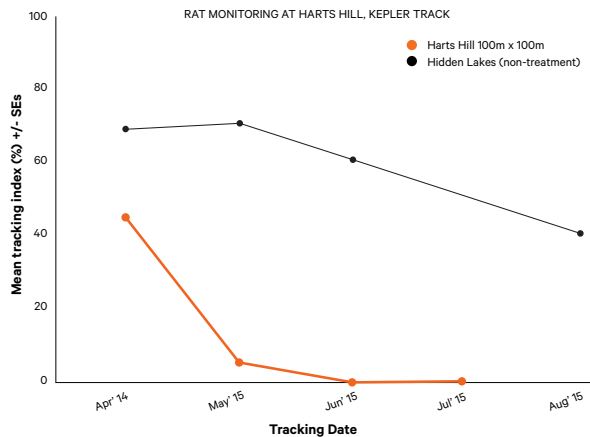
Network Establishment Time: 38 person days.
Maintenance Schedule: 6 person days every 4 weeks to refresh lure. CO₂ replaced every 6 months.

Monitoring Events: Monthly.

Monitoring Method: 10 lines of 10 tracking tunnels.

Results

Objective achieved: Yes



Harts Hill pre-treatment monitor

April 2015 44%

Harts Hill post-treatment monitor

May 2015 6%

Harts Hill post-treatment monitor

June 2015 0%

Harts Hill post-treatment monitor

July 2015 1%

Hidden Lakes non-treatment monitor

Apr 2015 68%

Hidden Lakes non-treatment monitor

May 2015 71%

Hidden Lakes non-treatment monitor

June 2015 60%

Hidden Lakes non-treatment monitor

August 2015 40%

Highlights/Learnings

The network achieved the desired level of rat control when established at a wider spacing than existing current best practice for rat trapping.

Using this lower density of traps the asset cost for the project was decreased by half.

Traps were lifted to 700mm above the ground to ensure no by-catch of non-target species.

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The trap lines were marked with flagging tape and recorded on GPS but remained uncut for the project reducing the project establishment cost.

The project was established and managed by a range of operators including volunteers, some of whom were local school children, confirming the ability for volunteers to achieve success in a project of this type and scale.

References

Gillies, C.A. & Williams, D. 2013. DOC tracking tunnel guide v2.5.2: Using tracking tunnels to monitor rodents and mustelids. Hamilton, New Zealand: Science and Capability Group, Department of Conservation. 14 pp.

Rat Control (100m x 50m) Harts Hill - Fiordland, Project Report, Department of Conservation, May 2015, DOC-2562031



www.goodnature.co.nz

Goodnature A24 rat & stoat trap

Acknowledgements

DOC: Lindsay Wilson, Sam Gibson, George Ledgard, Gerard Hill, Sanjay Thakur, Trevor Pitt, John Carter, Chris Birmingham, Dean Hansen, Pete McMurtrie; Craig Gillies - DOC Inv 4276; Community Trapper: Hunter Shaw; Fiordland Conservation Trust/Kids Restore the Kepler: Laura Harry, Tim Barrow; Volunteer: Rolf Pachlatko; Goodnature.

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