



# ENVIRONMENT SOUTHLAND QEII COVENANT RAT CONTROL

Environment Southland have succeeded with consecutive 0% rat monitors at their project site in the Lower Matura Floodplain.

📍 Lower Matura, Southland 📅 January, 2016



Goodnature A24

## Summary

Following an analysis of labour and financial costs for different rat control options for a five year period, Environment Southland chose to introduce A24s to the Lower Matura pest control programme. While Stirling Block was fitted with Goodnature A24s, the nearby Smith Block was left without any pest animal management to act as a control for the trial.

Consecutive 0% rat monitors in the Stirling Block in August and November 2015 illustrated the success of the rat control operation. This incredible result was in stark comparison to the steadily increasing rat activity in the nearby Smith block which reached 90% rat monitoring in November 2015.

Environment Southland deployed Goodnature A24 traps in the 20 ha Stirling Block, Lower Matura, Southland in March 2015 with the goal to enhance the biodiversity values of QEII covenanted bush through sustained predator control and to demonstrate the benefits and importance of forest-remnant restorations to the public.



Robbie and Robert project planning.

## Objectives

Environment Southland's goal for this project is to enhance biodiversity values through sustained predator control and to demonstrate the benefits and importance of forest-remnant restorations to the public.

Forest fragments can act as key ecological "stepping stones" in a pasture dominated environment, providing food and shelter for native plant and animal species as they disperse and move throughout the landscape. However, pest species such as rats can also use these fragments as havens in which the concentrations of native plants and animals provide ample food for the pest species to increase in numbers.

Rats, together with stoats, are the most serious introduced nest predators in New Zealand. Rats predate on the offspring and frequently also kill the female on the nest. Reducing rats and stoats to non-detectable or extremely low numbers will therefore increase nesting success and female survival.

## The Project

Environment Southland owns a group of forest fragments in the Lower Matura region of Southland ranging from 3 to 24 ha in size.

To manage the pests present in the forest blocks in the Lower Matura Region, Environment Southland has established trapping regimes for possums, mustelids and rats using DOC200s, Timms traps, leg-hold traps and now Goodnature A24 traps.

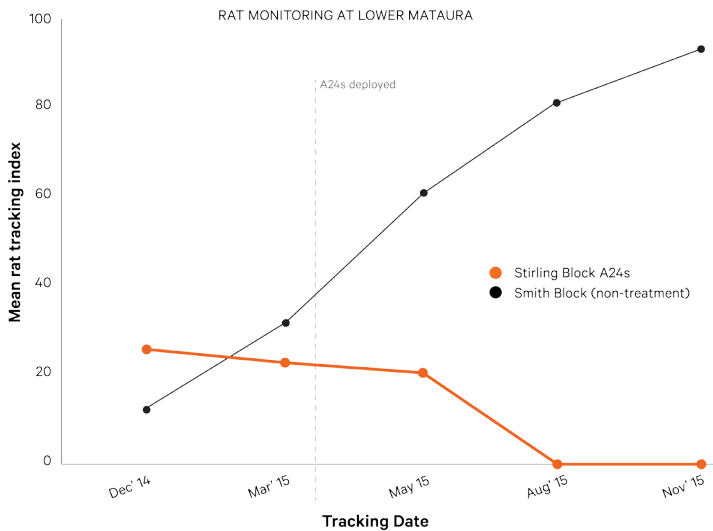
In March 2015, 50 Goodnature A24 traps were set up in a 50x100m grid in the Stirling Block to simultaneously attempt to reduce pest impacts in the bush and also provide an example of a small-scale restoration project for the public.

While Stirling Block was fitted with A24s, the nearby Smith Block was left without any pest animal management to act as a control for the trial. Smith Block was elected as the non-treatment site because of its geographic remoteness to the pest control site, making it a true independent site from Stirling.

The blocks are monitored for rodents using tracking cards at quarterly intervals.

Rodent tracking tunnel result monitoring is proposed four times a year to measure the effectiveness of the proposed rodent trapping efforts in Stirling.





## Why Goodnature Traps?

Along with the proven effectiveness in Department of Conservation rat control projects to reduce and sustain low rat numbers, Environment Southland chose Goodnature A24 traps for the project because of the long-term cost benefit calculated through analysis of labour and financial costs for different rat control options over a five year period.

It was important to Environment Southland to choose a tool to control rats and mustelids intensively and sustainably during the bird season from late August till February each year across the entire 20 ha of the Stirling block. Three options were originally considered to achieve this:

- Using vertebrate poison in bait stations
- Trapping using DOC200 trap boxes
- Trapping using self-setting A24 Goodnature traps.

Toxins were ruled out early as Environment Southland wanted to look at an alternative control method to compare with the various other areas and projects relying on toxins in Southland.

The key difference between the two remaining trapping methods was that the Goodnature traps do not require frequent trap servicing and therefore maintenance costs are significantly lower despite the initial higher per unit purchase price. The cost savings across five years would be significant. Additionally the Goodnature A24 self-resetting trap option is the only method that can apply continuous control pressure on rats throughout the entire breeding season, as each single trap is operational (ready to kill) at all times.

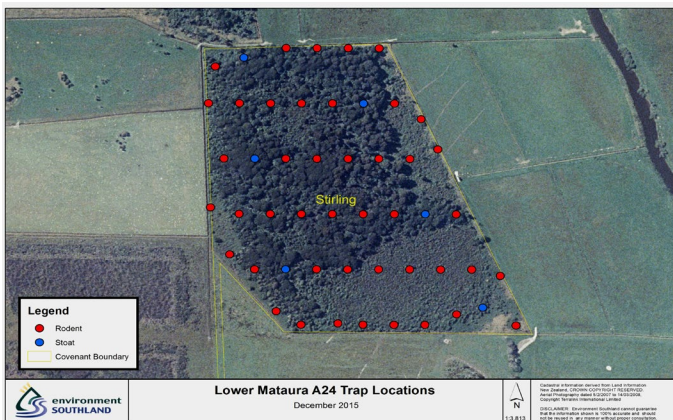
Traps were spaced at current agreed best practice for rat trapping - 100m x 50m trap grid. This ensures the entire pest population are exposed to a control device.

## Results

The results have surpassed all of Environment Southland expectations, with rodent tracking in Stirling Block reaching zero by August and recorded again at that level in the November monitoring results.

In stark comparison, pest activity in the unmanaged Smith Block has steadily increased. In November 90% of all tracking cards had rodent tracks on them.

Environment Southland is looking ahead at further pest control options involving Goodnature traps around the Lower Mataura area.



Lower Mataura A24 Trap Locations in the Stirling Block.

