



WINDY HILL - ROSALIE BAY CATCHMENT TRUST

Windy Hill Sanctuary Goodnature A24 Trap Project



Report 4 – 15 November, 2016

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The Goodnature trap project is a collaboration between the Great Barrier Local Board, Auckland Council, DOC, Goodnature Ltd, and the Windy Hill Sanctuary. Its purpose is to establish how effectively the Goodnature A24 trap is in reducing both ship rat and kiore densities within a managed Sanctuary. This objective supports the local community aspirations to find ways to manage these pests with non-toxic methods.

Two hundred and ninety three A24 Goodnature traps were established in the Big Windy Hill Pest Managed Area between February 22 and 24, 2016. Between March and August traps were checked monthly, bait refreshed, and traps set off to check reliability. The number and species of rats observed under the traps was noted each check.

In August 2016, after six months in the field, the static bait lure was replaced with an Auto Lure Pump (ALP – pictured below) and all gas cylinders were replaced in keeping with the established protocols.



The ALP is a pressurized system whereby bait is released in a slow trickle for up to six months. This system could significantly reduce the labour time to check traps to as little as once every six months.

Outcomes to date

- The reliability of the traps has been high - a small number of issues have related to cylinders gassing out, one trap breaking (replaced immediately by Goodnature), 3 traps incorrectly set up, and a number of traps with the new ALP bait clogging up.
- Since March, a total of 149 rat bodies have been counted under traps during checks – 13% of which were kiore. It is difficult to identify decomposed animals – 22 of the 149 rats (15%) were not identifiable, potentially a number of these would have been kiore.
- **Rat Tracking Tunnels and Chew card monitoring**

In the Goodnature project area 35 rat tracking tunnels and 200 chew cards were undertaken in January 2016 (after a two month period of no pest management) and prior to the establishment of the Goodnature traps.

Tracking tunnels were undertaken again in April, July, September, and November in keeping with the Sanctuary tracking tunnel programme. Chew card monitoring was undertaken again in September.

Results:

	Jan/Feb 16 (pre management)	Apr 16	Jul 16	Sep 16	Nov 16
Tracking Tunnels	24%	24%	24%	20%	40%
Chew Cards	0%			2%	

2016 has been an exceptional year for rats and we could not have given these traps a tougher test -with high levels of natural food abundance rats have been present in high numbers. However, the rat tracking tunnel results are poor for the Goodnature area compared with two other pest managed areas in the Sanctuary as indicated in the graph below.

One hundred and fifty-five rat tracking tunnels are undertaken in February, April, July, September and November annually throughout the Sanctuary and unmanaged Control sites. Tracking tunnels are the best indication of how well any particular methodology is working.

In the Windy Hill pest managed area shown on the above graph, rat levels peaked mid-year and the current methodology, an even split between trapping and Rat-Abate (50 gram diphacenone) was successful in bringing the tracking tunnel index down to 2.5% in November. This was assisted by a trail placement over the winter months of bait stapled into trees to provide bait in a more 'natural' way for rats versus them having to enter a station. Research indicates that rats are hesitant to enter any type of station, even more so when natural food availability is high.

The Benthorn Bush pest managed area tracking tunnel index was reduced to 5% using a split between trapping and Feracol (20gram cholecalciferol) which was also presented in trees over the winter.

Changing methodology to the conditions created by the climate, such as high food abundance, is essential when 'hunting' such an adaptable mammal.

Goodnature Operational Review

On 27th and 28th October Goodnature Technician, Nick Graham, worked with the Windy Hill field team to undertake an Operational Review of the Goodnature project area. This occurred in response to the field team concerns about bait in the new ALPs appearing to block the unit and the higher than expected tracking tunnel indices.

The full report is attached.

A number of the points raised in the report have already been addressed:

1. Network Non-conformities :
 - a. Incorrect Static Lure use. This has not proved to be so – fresh lure was tapped out every month until August when they were replaced with the ALP's. Several field cameras recorded the field team carrying out this activity.
 - b. ALPs not activated – three units were found to have been incorrectly installed – our field team error. This represents a tiny fraction of the balance of functioning units and would have had a negligible impact on the tracking tunnel results.

2. Network Opportunities for Improvement :

- a. Tracking Tunnel Placement - the tracking tunnel placement was approved by Darren Peters (DOC Senior Technician) and is considered to be consistent with DOC best practice. One tracking tunnel on line BW2 is within 40metres of a perimeter track and could be biased from rat reinvasion, however, a review of the tracking pads from that tunnel shows that out of five tracking tunnel monitors, only one, in February, prior to the installation of the GNs, had rat prints. The moving of this unit is subject to ongoing discussion.
- b. Pre-Feed – this suggestion will be acted on when the bait and gas is refreshed in February 2017.
- c. Trap Height – this is subject to discussion and, if agreed, trap heights will be adjusted in February 2017.
- d. Trap Placement – the field team will re-establish traps off ponga and on to more robust trees over the next month. Adjustments will also be made to the angle of some traps.

Next Steps

Traps will be checked again in February 2017 and the gas cylinders and lures replaced.

A change to a nut based lure in the ALPs is also being considered as this is the lure used most successfully in the rest of the Sanctuary.

A team from Goodnature and DoC will assist with the changeover in February and follow up on any other review suggestions.

Thank you to Goodnature, Darren Peters (DOC), and Auckland Council through the Great Barrier Local Board for your support of this very worthwhile project.

Judy Gilbert

Sanctuary Manager