



Goodnature A24 self-resetting traps

Successful results from
three rat projects

Goodnature A24 Rat Trap

DOC OPERATIONAL FIELD RESULTS

5 DOC RAT CONTROL PROJECTS ALL ACHIEVED 0% MONITORING

| | |
|--|----|
| Harts Hill - 200ha - 100m x 50m (during mast event) | 0% |
| Harts Hill - 600ha - 100m x 100m (during mast event) | 0% |
| Native Island eradication - 63ha - 100m x 50m | 0% |
| Boundary Stream - DOC Inv4276 "Greens project" | 0% |
| Te Urewera - DOC Inv4276 "Greens project" | 0% |



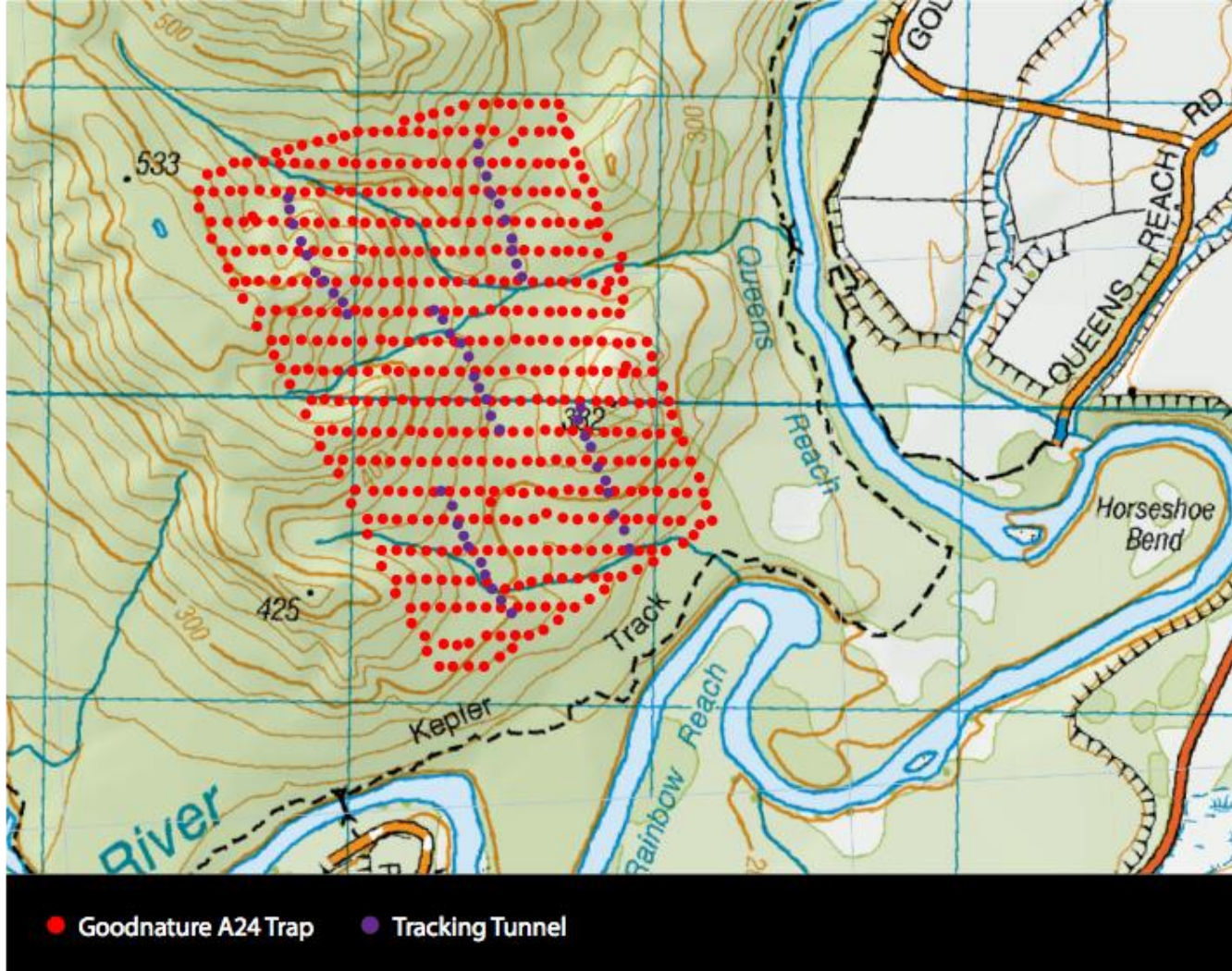
Goodnature A24 Rat Trap

DOC OPERATIONAL FIELD RESULTS

5 DOC RAT CONTROL PROJECTS ALL ACHIEVED 0% MONITORING

- All achieved with fewer checks than traditional best practice trapping - as few as 2 checks.
- Faster layout - ~30 traps per pack, Fiordland lines taped and GPS (not cut).
- All achieved with monthly lure refreshment - peanut formula or chocolate formula.





Project - Rat Control during mast event/rat plague

Area: 200ha

Trap numbers: 467 x A24 (DOC best practice: 100m x 50m)

Establishment: 20 person days (including monitoring)

Maintenance: Lure refreshed once per month

RAT CONTROL - 100m x 50m HARTS HILL/KEPLER TRACK



OBJECTIVE ACHIEVED: YES

3 check rounds to 0% (first monitoring round)

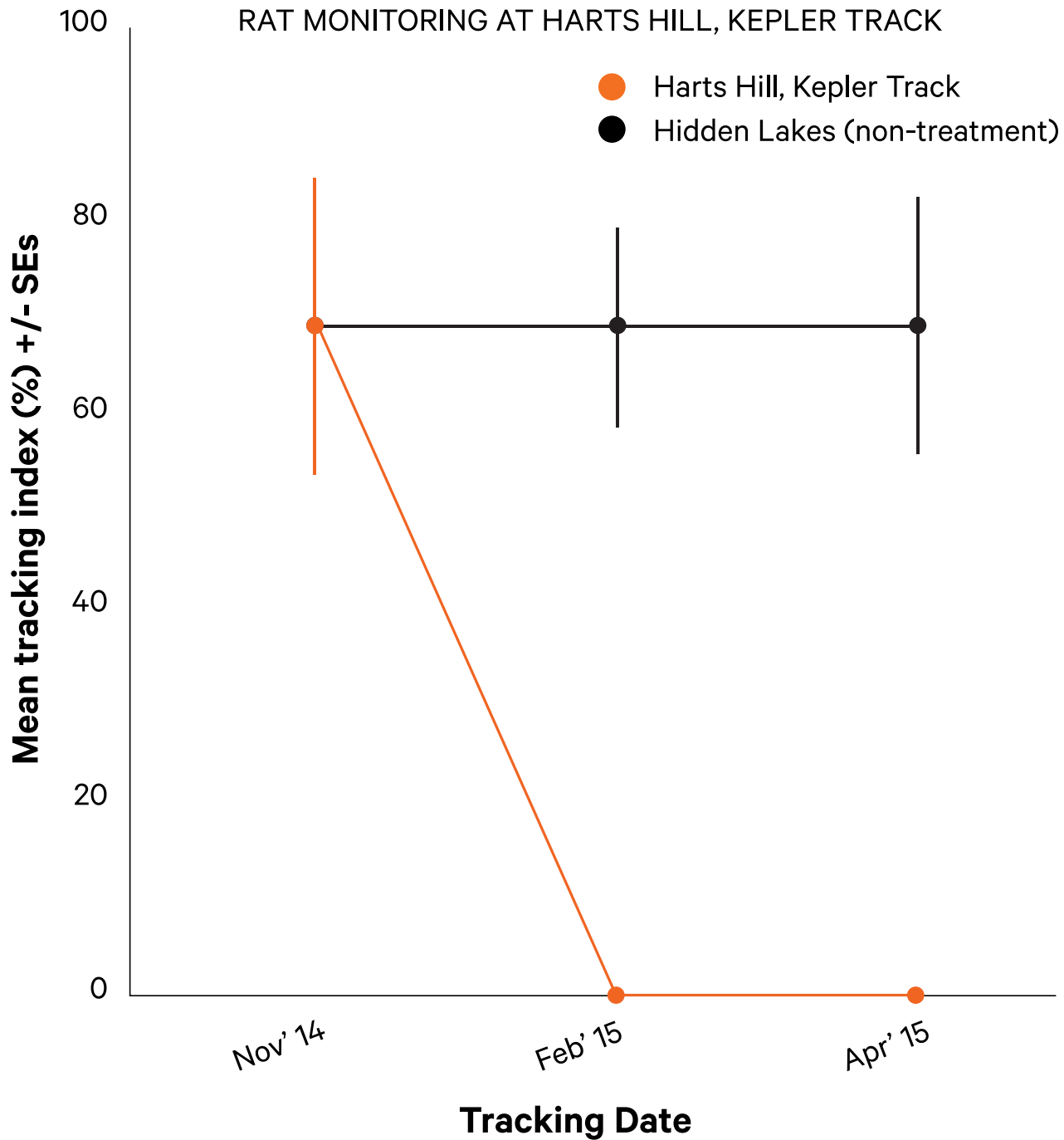
Monitoring

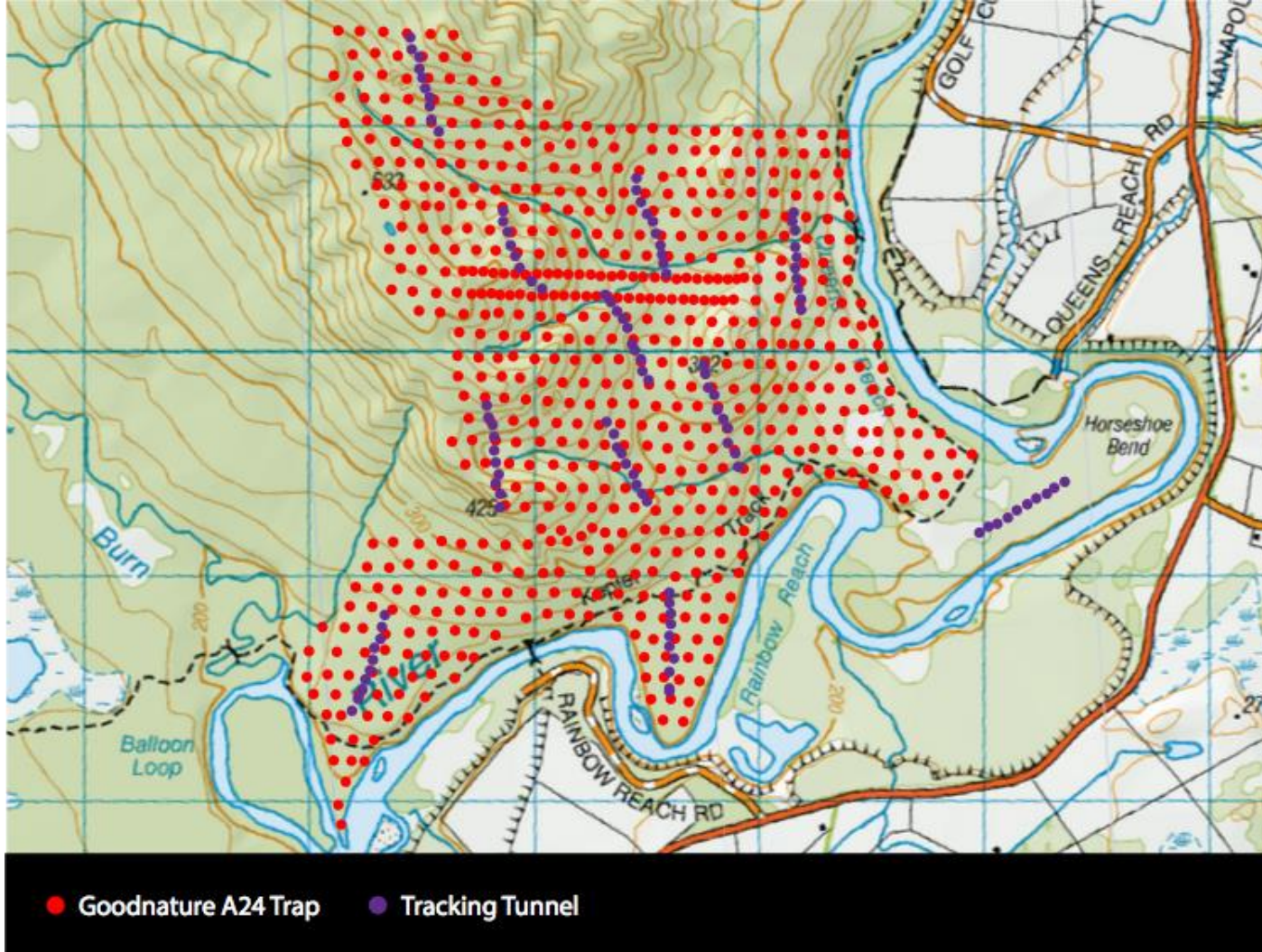
| | | |
|-----------------------------------|------------|------------|
| Harts Hill pre-treatment monitor | Nov 2014 | 68% |
| Harts Hill post-treatment monitor | Feb 2015 | 0% |
| Harts Hill post-treatment monitor | April 2015 | 0% |

Non-treatment monitoring

| | | |
|--|------------|-----|
| Hidden Lakes non-treatment monitor | Nov 2014 | 74% |
| Hidden Lakes non-treatment monitor | Feb 2015 | 68% |
| Hidden Lakes final non-treatment monitor | April 2015 | 68% |

RAT MONITORING AT HARTS HILL, KEPLER TRACK





Project - Island eradication

Area: 600ha

Trap numbers: 670 x A24 (modified DOC best practice: 100m x 100m)

Establishment: 38 person days

Maintenance: Lure refreshed 4 weekly

RAT CONTROL - 100m x 100m HARTS HILL/KEPLER TRACK



OBJECTIVE ACHIEVED: YES

2 check rounds to 0%

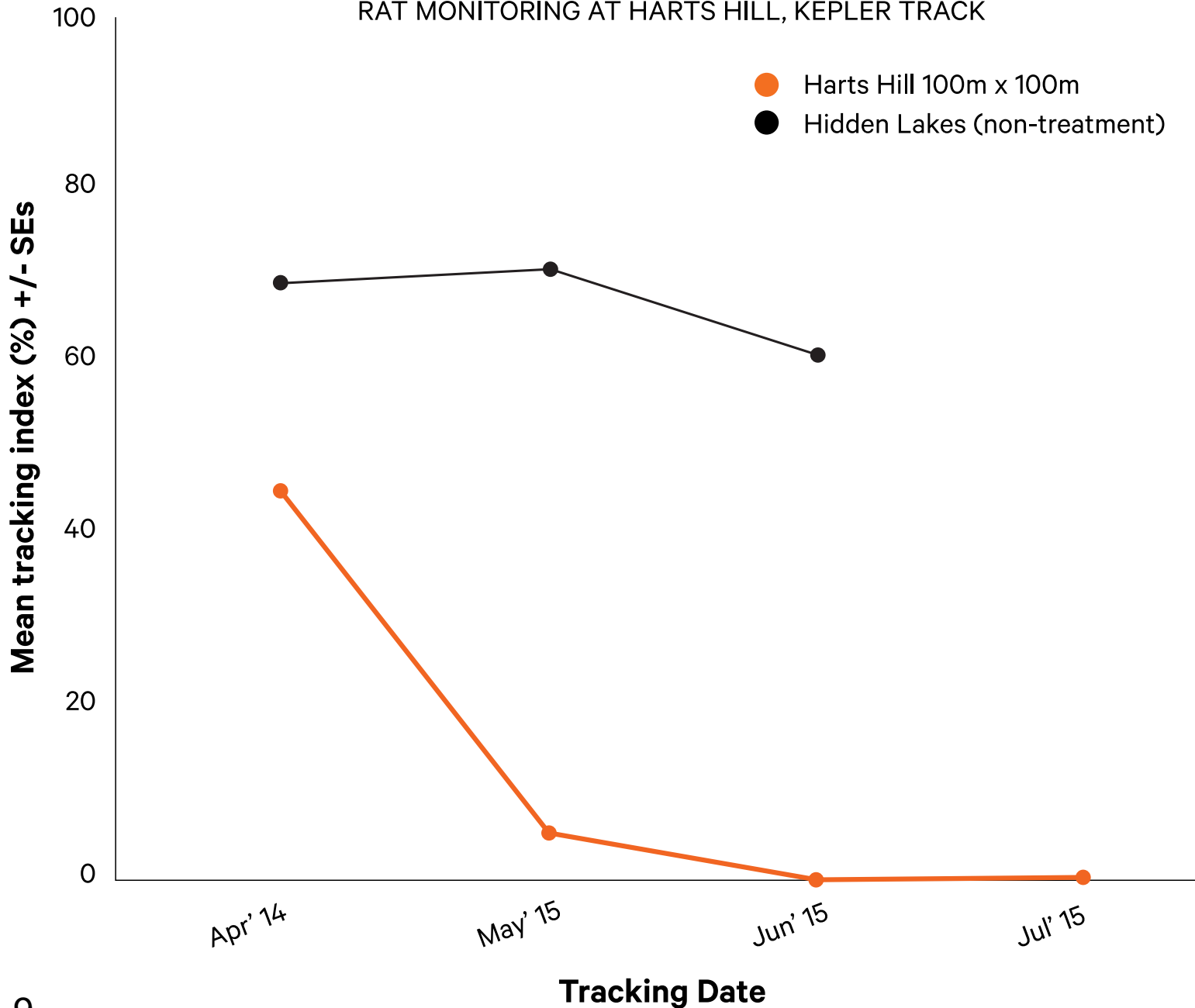
Monitoring

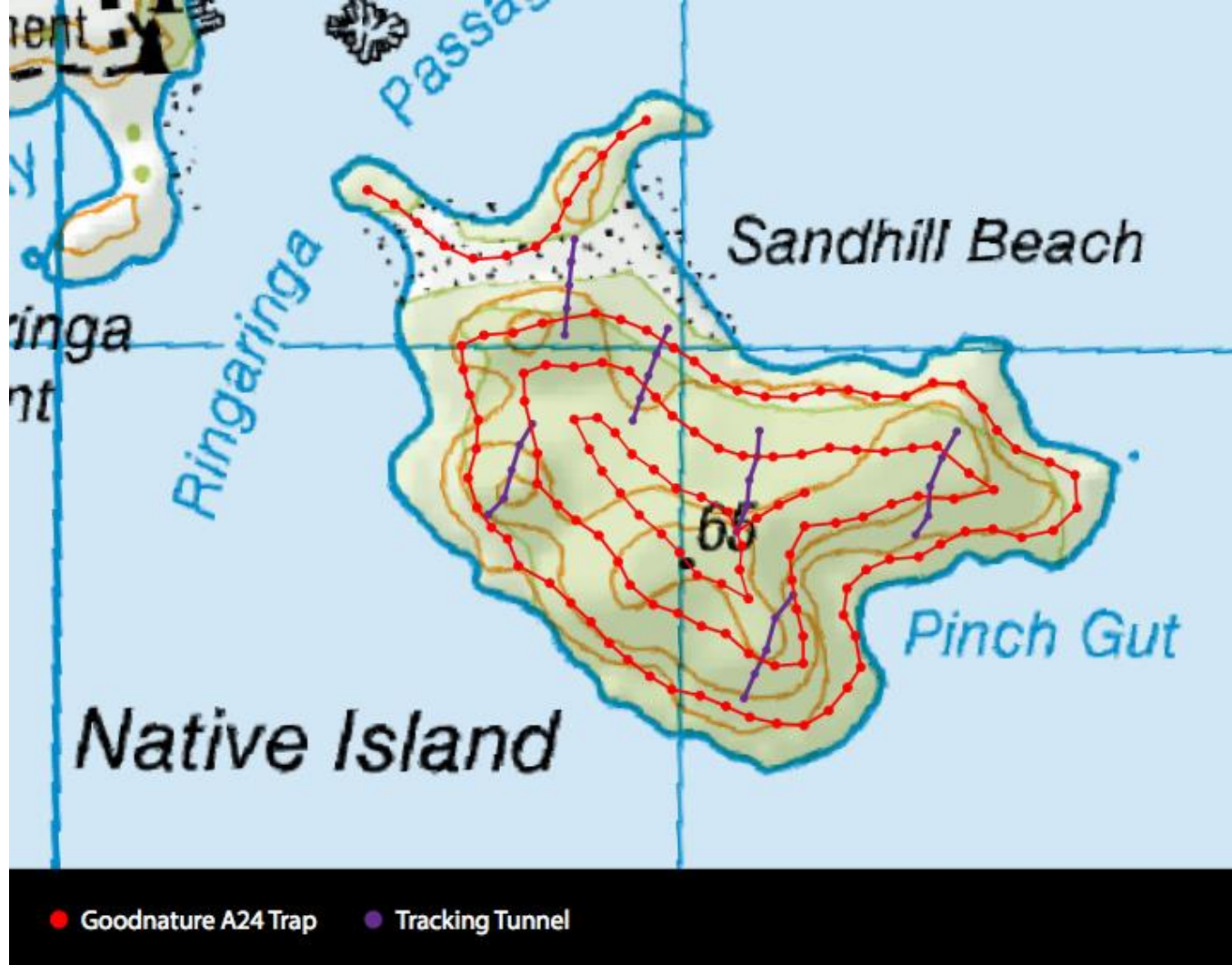
| | | |
|-----------------------------------|------------|------------|
| Harts Hill pre-treatment monitor | April 2015 | 44% |
| Harts Hill post-treatment monitor | May 2015 | 6% |
| Harts Hill post-treatment monitor | June 2015 | 0% |
| Harts Hill post-treatment monitor | July 2015 | 1% |

Non-treatment monitoring

| | | |
|------------------------------------|-------------|-----|
| Hidden Lakes non-treatment monitor | April 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% |

RAT MONITORING AT HARTS HILL, KEPLER TRACK





Project - Island eradication

Area: 63ha

Trap numbers: 120 x A24 (DOC best practice: 100m x 50m)

Establishment: 32 person days

Maintenance: Lure refreshed 5 weekly

RAT ERADICATION NATIVE ISLAND



OBJECTIVE ACHIEVED: YES

Monitoring

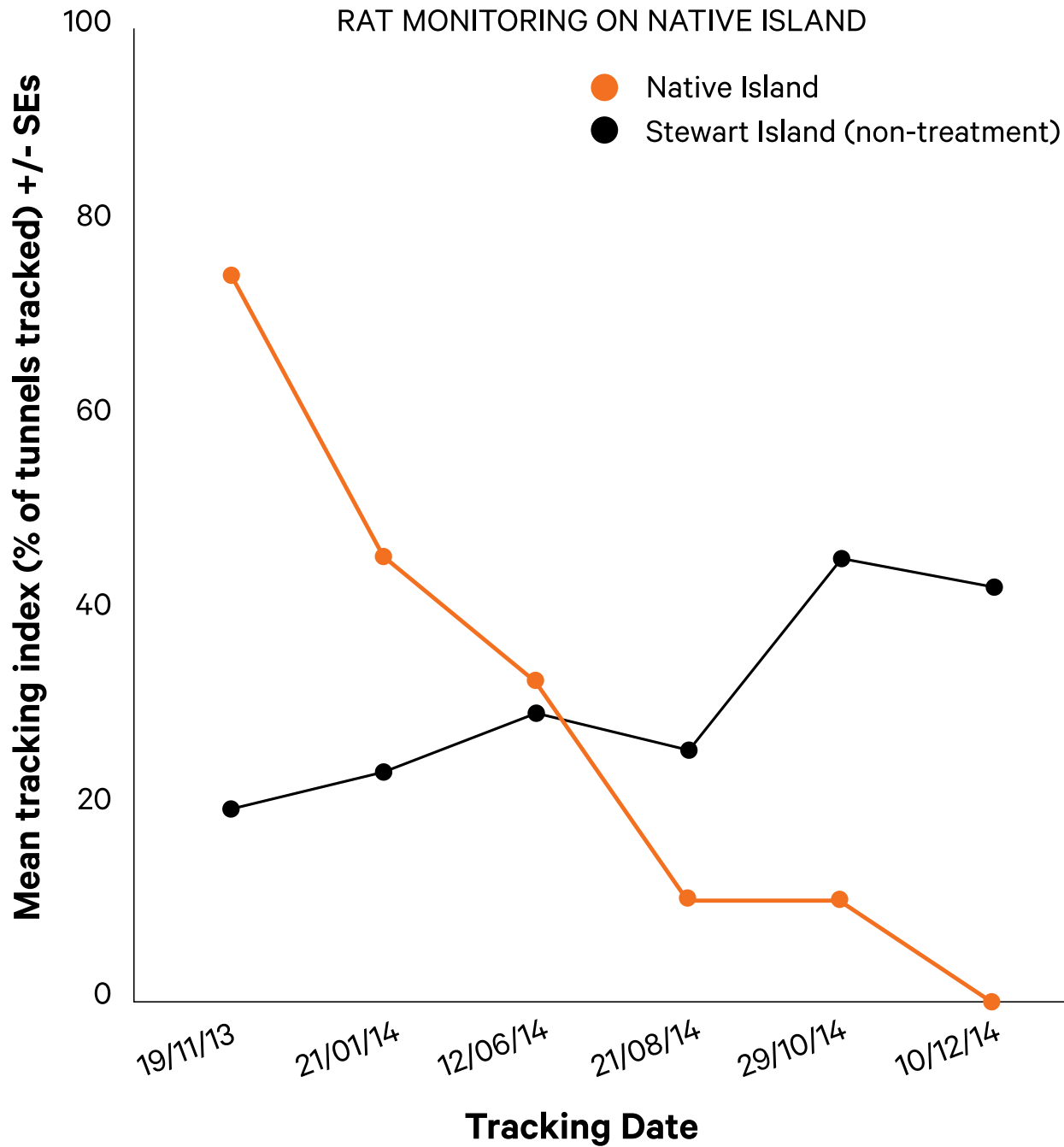
| | | |
|--------------------------------------|-----------|------------|
| Native Island pre-treatment monitor | Nov 2013: | 73% |
| Native Island post-treatment monitor | Dec 2014: | 0% |

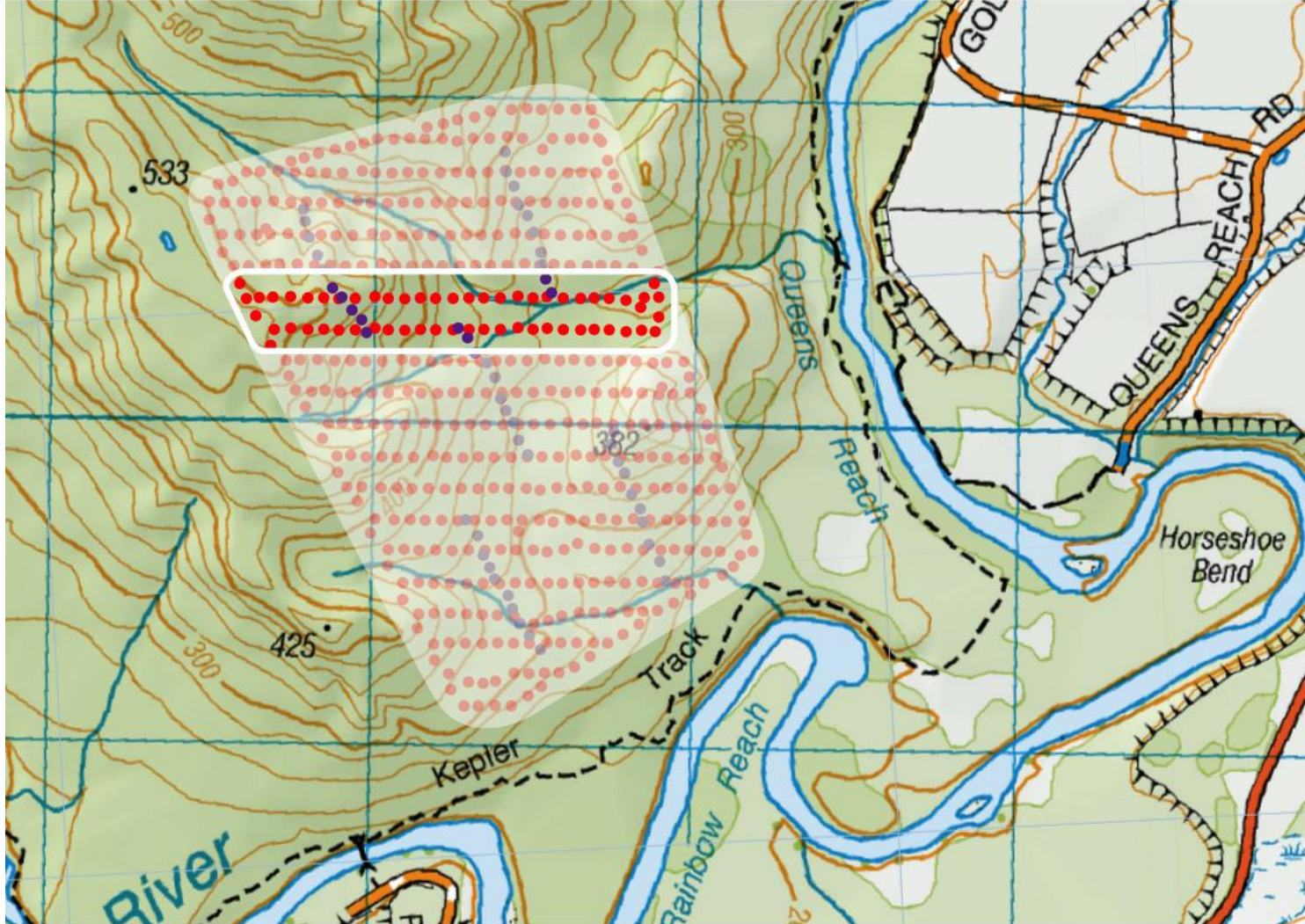
Non-treatment monitoring

| | | |
|--|-----------|-----|
| Stewart Island initial non-treatment monitor | Nov 2013: | 22% |
| Stewart Island non-treatment monitor | Dec 2014: | 38% |

Set up to remain as biosecurity tool for inevitable re-invasion.
Next Island: 100ha Matapara/Pickersgill, Marlborough Sounds

RAT MONITORING ON NATIVE ISLAND



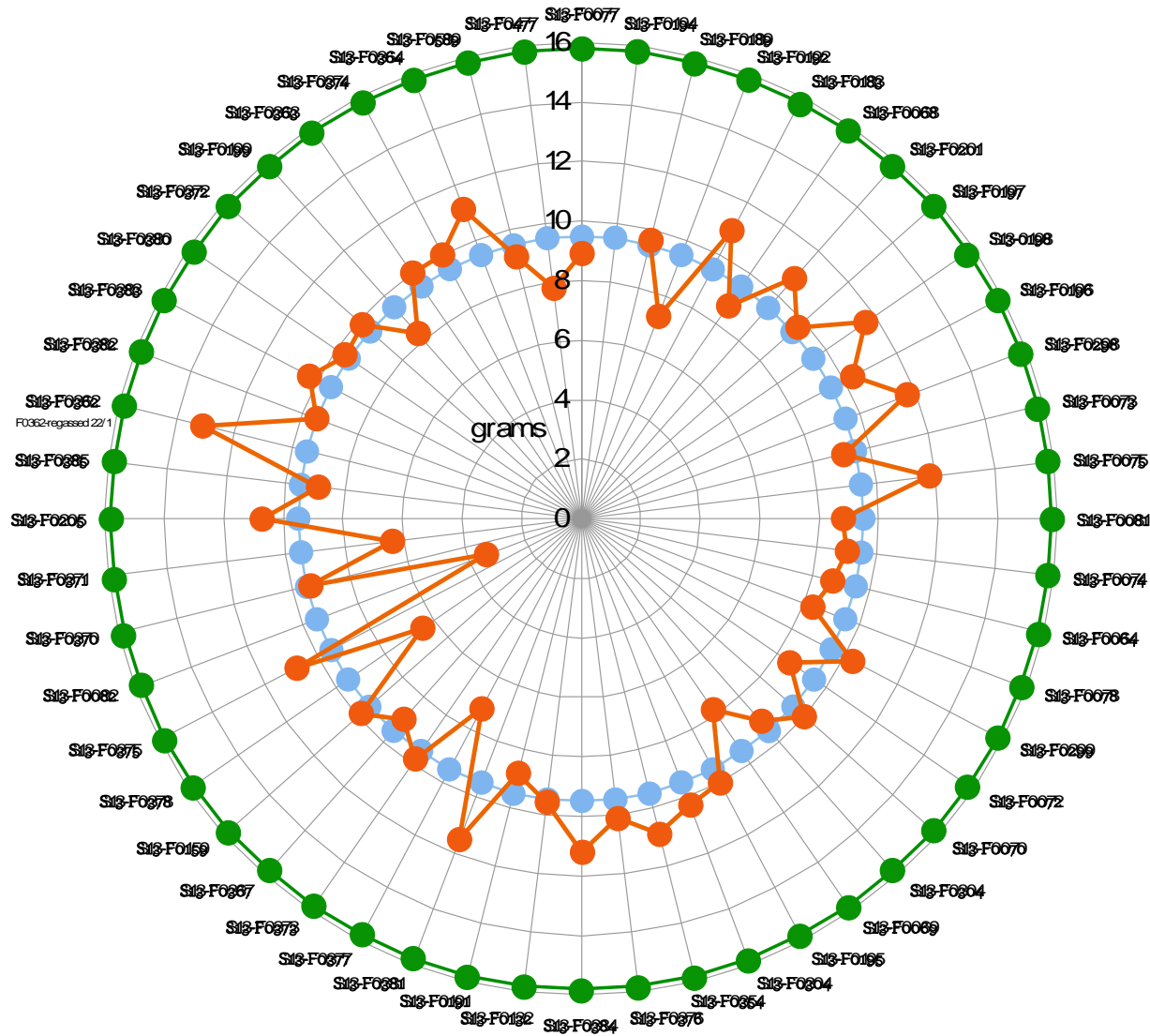


● Goodnature A24 Trap

● Tracking Tunnel

Study Area

Harts Hill gas use sample data: Lines M and N. May 2015



- Measured available CO2 at 180 days (gm.)
- Average available CO2 at 180 days (gm.)
- Average available CO2 at day 1 (gm.)



A24 MECHANICAL RELIABILITY HARTS HILL/KEPLER TRACK

Objective achieved: Yes

Average available CO2 on establishment: **15.9 grams**

Average CO2 remaining at 6 months: **9.49 grams**

Max/min CO2 remaining at 6 months:

| | |
|------------|-------------------|
| Min | 3.4 grams |
| Max | 11.8 grams |

NB. A24 average CO2 use per kill 0.52 grams

Percentage A24s used all available CO2: **0%**

Percentage A24s which successfully re-gassed: **100%**



PLANNED PROJECTS

New species protection

DOC: archies frogs, whio, bats

Island eradication/biosecurity

Pickersgill/Matapara Island - ship rats

Cooper Island - stoats

New target species

Kiore on Windy Hill, Great Barrier Island

Mouse control for lizards at Whitireia



OPERATIONAL COST EXAMPLES

SOUTHLAND REGIONAL COUNCIL

Table 1: Breakdown estimated costs for two trapping options over five years in Stirling block. Figures are GST exclusive.

| | a) Anticoagulant poison | Total | b) A24 Goodnature® | Total | c) DOC200 | Total |
|--|--|-------------|--|-------------|---|-------------|
| Purchase baitstation/traps | 17 philproof baitstations x \$12.50 | \$212.50 | 50 x \$130.00 incl. CO ₂ cylinder and lure | \$6,500.00 | 50 x \$80.00 | \$4,000.00 |
| Baitstation/trap line cutting | 2 man days at \$400/day | \$800 | 4 man days at \$400/day | \$1,600.00 | 4 man days at \$400/day | \$1,600.00 |
| Installation | 2 man days (staff) | \$0 | 4 man days (staff) | \$0 | 6 man days (staff) | \$0 |
| Bait / CO ₂ cylinder / lure | <i>Best practice: Fill baitstations, after 3 days remove surplus bait. Repeat after 7-10 days.</i> | | 50 x \$12.57 (lure and CO ₂ cylinder) for 4 years | \$2,504.00 | Estimated cost for peanut butter, eggs, rabbit meat, solid lure long life bait etc. for 5 years | \$1,000.00 |
| | 12.5kg brodifacoum pellets at 3.69/kg (\$46.00) for 5 years | \$230.00 | | | | |
| | 600 x \$0.50/block diphacinone bait for 5 years | \$1,500.00 | | | | |
| Control devices servicing | 20 man days annually at \$400/day for 5 years (conservative estimate) | \$40,000.00 | 5 man days annually at \$400/day for 5 years | \$10,000.00 | 10 man days annually at \$400/day for 5 years | \$20,000.00 |
| Track maintenance | 1 man days annually at \$400/day for 5 years | \$2,000.00 | 1 man days annually at \$400/day for 5 years | \$2,000.00 | 1 man days annually at \$400/day for 5 years | \$2,000.00 |
| Cost for 5 years | | \$44,742.50 | | \$22,604.00 | | \$28,600.00 |
| Cost for first 2 years | | \$17,092.00 | | \$12,900.00 | | \$14,800.00 |
| Annual cost | | \$8,671.70 | | \$4,520.80 | | \$5,720.00 |



goodnature[®]
advanced pest control technology – proven in ecology.

A24 MULTIPLE STOAT KILLS



