

Annual Summary Report Prepared for:

Auckland Council and the Great Barrier Island Local Board

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## **Mulberry Grove Community Pest Coordinator Project Report 1 July 2015 to 30 June 2016**



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## Contents

	<b>Page</b>
1. Introduction	1
2. Scope of the work	1
2.1 Objectives	1
2.2 Tasks to meet objectives	1
2.3 Items supplied by Contractor	1
2.4 Items supplied by Auckland Council	1
2.5 Work description	1
3. Summary	2
4. Rodent control	2
4.1 The people	2
4.2 Trapping	3
4.3 Monitoring	4
5. Weeds and other undesirables	5
6. Communications and Publicity	6
7. Health and Safety	6
8. Challenges and suggestions for opportunities to maximize value from the project.	6
9. Where to from here- recommendations for the coming year.	7
10. Conclusion	7
Appendix 1. Trap Minder Information	9

## **Acknowledgements**

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## 1. Introduction

The 'Mulberry Grove Community Rat Project' was launched in February 2009. Its primary purpose was to reduce rat predation on native birds and other fauna in the area as well as alleviate the nuisance factor rats pose to households in the area. The idea was developed between the GBI Charitable Trust and the Department of Conservation, the primary drivers being Judy Gilbert and Des Casey (DOC). Mulberry Grove landowners responded positively to the idea of pest control and trap covers were distributed throughout the area.

Auckland Regional Council provided rat traps and the Windy Hill/Rosalie Bay catchment trust provided trap covers and monitoring tunnels for the project. Rodent index monitoring was carried out in 15 tracking tunnels 3 times a year to monitor rat activity.

Since 2009 the type, number and distribution of pests recorded in Mulberry Grove has increased. To assist in addressing this, the Great Barrier Local Board through its Environmental Committee has provided funding to establish a community pest coordinator role in Mulberry Grove based on the 2009 concept.

## 2. Scope of The Work

### 2.1 Objectives

The primary objective of this role is to develop, and lead, a community-based pest control program in recognition that long term solutions to pest control will require a sustained effort from the Great Barrier community.

### 2.2 Tasks to meet Objectives

- Manage volunteer Rodent baiting/trapping and record catches by the residents and ratepayers of the 96 properties in the Mulberry Grove Area.
- Promote the benefits of pest management in the community.
- Store equipment and keep an inventory of equipment on properties.
- Encourage participation through phone calls, visits, meetings, and newsletters as needed.
- Coordinate Pest monitoring twice a year (in this past year monitoring has been undertaken five times).
- Provide advocacy and education for pest control in the area.

### 2.3 Items Supplied by Contractor

- Admin supplies
  - including phone/cell phone calls
  - paper and printing
  - Trap box signage
- Catering
- Travel

### 2.4 Items Supplied by Auckland Council

- All consumables associated with the programs field work
- Information required to facilitate the work described.

### 2.5 Work Description

- Maintain contacts list to facilitate access on to properties
- Contact property owners in order to gain permission for access

- Collaborate with the Great Barrier Local Board, Auckland Council Biosecurity, Local Parks and Auckland Transport in formulating control plans
- Contact community organisations and residents to identify groups and individuals interested in undertaking rat control on public land
- GPS all Rodent trap, bait stations and monitoring tunnels that are currently in use in the area for Biosecurity to map.
- Coordinate rodent monitoring in April and November through the deployment and activation of tracking tunnels. Monitoring will provide other useful information eg the presence or absence of Rainbow Skinks (Plague Skinks) and as well as native herpetofauna and insects
- Become familiar with the Argentine ant program in the Mulberry Grove area in the view of providing future support for the program.
- Carry out rat trapping/baiting on the properties that are unoccupied and where it cannot be done voluntarily (with permission from landowner).
- Assist in coordinating weed control in the area. Moth plant and climbing Asparagus have been recorded in this area and are still part of a targeted program for eradication from the Island. Chinese Privet is also found in this area. Residents should be encouraged to remove these weeds.
- Provide a short monthly progress report
- Provide a comprehensive report at the end of the control program.

## 2 Summary

Envirokiwi Ltd have a contract with Auckland Council to supply a Community Pest Coordinator role for Mulberry Grove and Cathy Scott is employed to undertake this role. Cathy has lived for many years within the project area and now lives close to it. She has an excellent knowledge and understanding of the area and the community.

The project area includes 96 properties, including Mulberry Grove Primary School, a shopping complex and motel accommodation. Forty-two of these properties have permanent residents- either owners or tenants.

The focus of the Pest Coordinator role has been rodent control and working to secure buy in from residents and stakeholders. In addition, weed and pest identification skills have been gained and used while out and about in the community.

## 3 Rodent Control

### 4.1 The people

A total of ninety landowners have been involved with the rodent monitoring program in Mulberry Grove (some own multiple properties in the project area).

- Fifty-six land owners are involved to the extent that they have given permission for Cathy to service traps on their property but do not wish or are unable to undertake work themselves
- Thirty-four landowners (or residents) are checking traps themselves-
  - twenty-seven are trapping when they see rat sign
  - seven are trapping regularly
  - three are looking after traps on land in addition to their own.

Six people are non-participants. This is either because they consider it too difficult (icky) or because they “have cats which do the job perfectly well” or because their neighbours have cats and two people are just not interested.

Cathy is aware of thirteen cats on seven properties. In addition, one person has said they still use poison.

Mulberry Grove residents and landowners are generally happy to support the project to the extent that Cathy is allowed to undertake rodent control with traps on their property but most are either not inclined or not able to undertake trapping themselves and report on a regular basis and as reported above, only a small number won't allow it to occur on their property.

Mulberry Grove School which as an important coastal position in Mulberry Grove have ceased trapping rats while they rebuild the school. However, the rebuild is now complete and Cathy will work with them in the new financial year to establish traps around the school and the foreshore area. It is hoped that the school children will take an active role in servicing the traps.

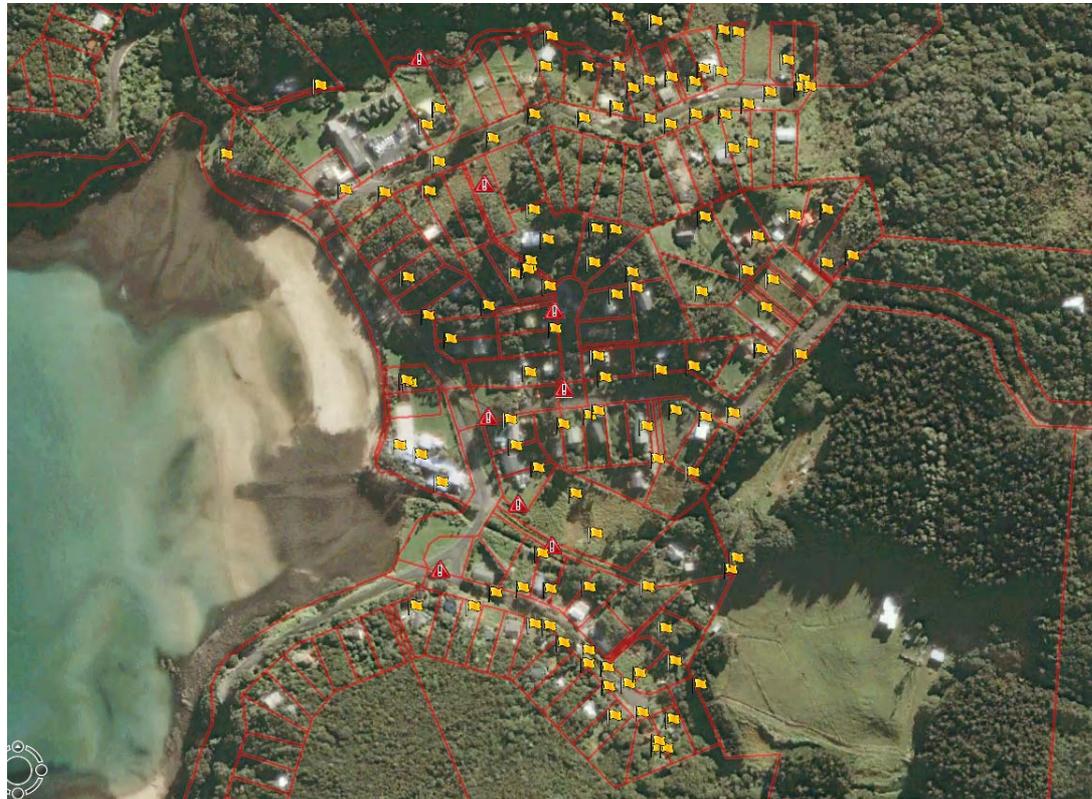
#### 4.2 Trapping

A total of 128 traps are currently in the field and 126 of these are GPSed (one resident prefers not to have the traps on their place GPSed). Seventy of the traps are checked by the thirty-four residents and fifty-eight are checked by the project coordinator. Most boxes now have labels on with Cathy and Envirokiwi's contact details and acknowledging support from the Local Board.

Figure 1. shows trap and monitoring station locations in the project area and Figure 2 provides data on rat captures using those traps. The majority of catches consistently occur around the margins- the edge of the trapping area, in the bush and overgrown areas. Data is collected for each trap and recorded on a spreadsheet as captures per month for each trap.

**Figure 1.**

**Trap and Monitoring Station locations in the Mulberry Grove Community Pest Coordinator Project**

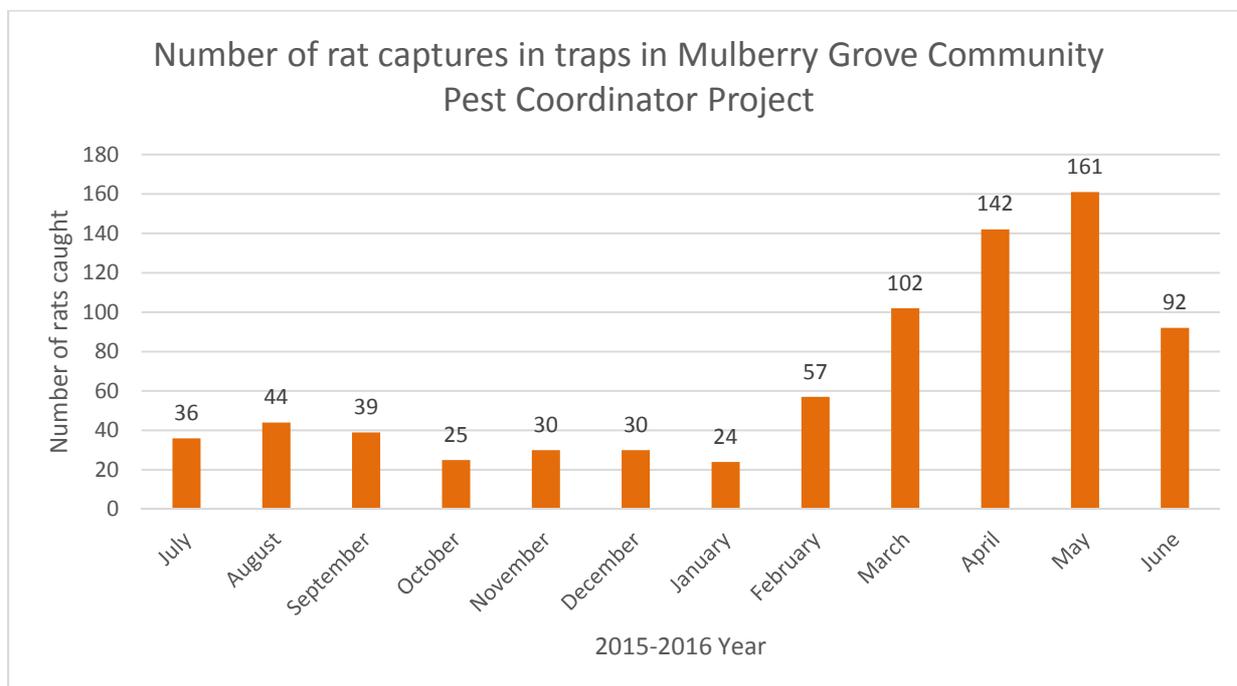


Key

 Rodent Monitoring Tunnel location

 Rodent Trapping Station location

**Figure 2.**  
**Rat catch for the previous 12 months**



#### 4.3 Monitoring

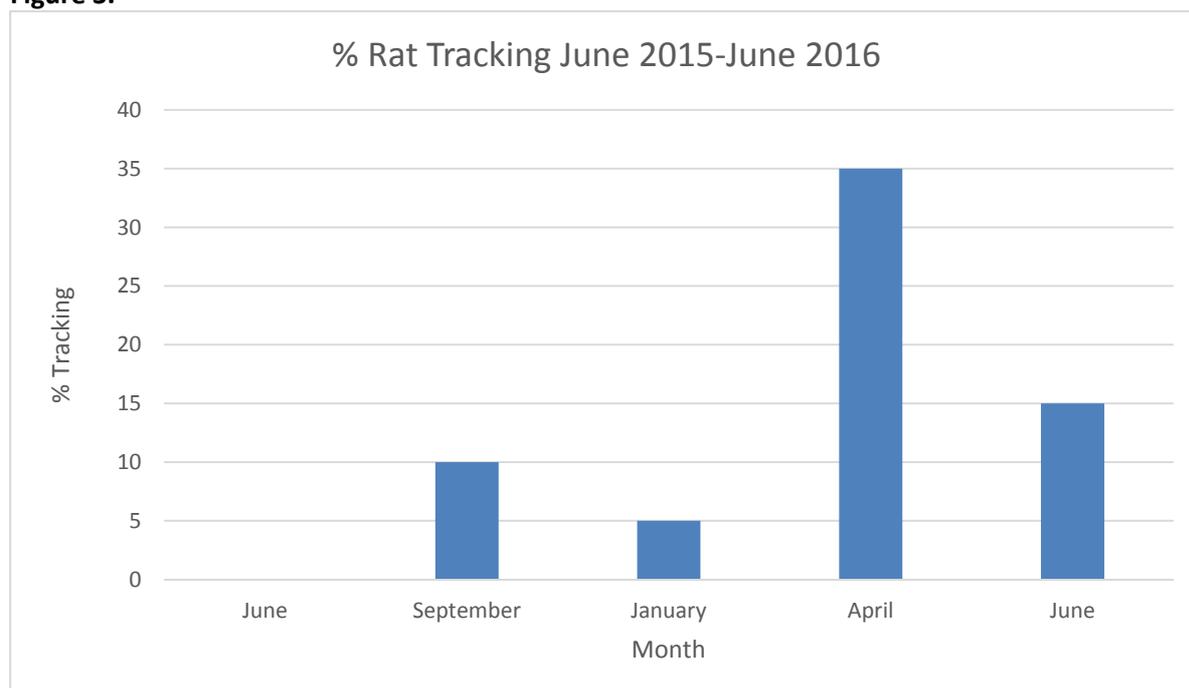
Monitoring has occurred in June, September January and April and June in line with monitoring occurring at the adjacent Windy Hill Sanctuary. Wooden monitoring tunnels are used and Trakka cards– cards with black ink are placed in for twenty-four hours to track activity through the tunnels. Peanut butter is used as a lure in the middle of the tunnel. Note; in writing this report, it has become evident that GPS data for one line of monitoring tunnels is not available and it will be collected as soon as possible.

Monitoring was initially undertaken using ten tunnels approximately fifty metres apart in a line. The number has been increased to twenty tunnels in two lines to get a better picture of what is happening.

In June no tunnel showed tracking and in September one tunnel had tracking. This is equivalent to a 10% tracking rate.

In January, after the number of tunnels had been increased to twenty, again only one tunnel showed tracking (the same tunnel), bringing the tracking rate down to 5%. In April seven tunnels showed tracking which is equivalent to a 35% tracking rate and in June, three cards showed tracking out of twenty- a 15% tracking rate (see Figure 3). It may be interesting to note that in addition to the rat tracking in April, one tunnel also had bird tracking (possibly a rail) and several had ant prints.

Figure 3.



## 5. Weeds and Other Undesirables

All vacant land has been inspected for the weeds Climbing Asparagus, Chinese Privet and Mothplant and residents have been given pictures to help with identification and canvassed. Chinese Privet has been identified on one vacant property in Rosalie Bay Road. It is well smothered under a large amount of Jasmine and Cathy is attempting to contact the owner about it.

There is a bit of contrast between what residents perceive as problem weeds and those that Council target. When the issue of weeds is raised, residents are usually keen to see input to control Jasmine or other very common weeds such as Aluminium plant (*Plectranthus ciliatus*). These weeds are widespread in the community, including on vacant sections and seen as a significant issue. Some residents undertake control on their own properties but there is ongoing spread from vacant land. Cathy has raised the possibility of applying for funding to undertake a community led weed control initiative but currently there is little interest from residents in undertaking control on a community scale due to lack of ability for some, time or presence for others and some others are just not interested.

Cathy is taking opportunities to go out in the field with others more knowledgeable about certain pests, to boost her knowledge which she is then able to share with residents. This year she spent some time out with the Argentine ant control team but unfortunately it was on a day when no Argentine ants were found so she wasn't able to brush up her field id skills.

Cathy has kept an eye out for Argentine ants, Plague skinks and any other suspicious creatures and promptly reported to Envirokiwi or Auckland Council. One suspicious looking skink brought in by a cat and handed to Cathy turned out to be a shore skink. Several reports of Argentine ants proved to be other species.

## 6. Communications and Publicity.

Communication occurs with the residents of the project area and also involves keeping the sponsors of the project- Great Barrier Local Board and Auckland Council informed about progress. To this end Cathy has:

- attended two local board Environmental meetings during the year.
- Delivered one mail out to all stakeholders
- Placed one Barrier Bulletin Article
- Written an article for Environews
- Held a gathering for trappers in December to exchange information and reinforce the need to trap regularly. This was also an opportunity to thank the contributors for their participation with drinks and nibbles supplied. Thirteen residents attended. Joanne O'Reilly spoke about weeds, Argentine ants, Plague skinks and waste minimisation and answered any questions. Jars of peanut butter lure were distributed for all who wanted.

Cathy is currently working with Emma Cronin, Scott Sambell and Matt Way to trial the use of the 'Trap Minder' system (Econode) into the project area (see Appendix 1.). These devices have been received favourably by many and are showing good potential, although without a suitable long life lure to go with them, are not yet reducing the work load.

## 7. Health and Safety

There have been no incidents, accidents or near misses with this project. Cathy wears appropriate PPE gear, including gloves and sturdy footwear and is always considerate of not just her safety but those in the community. Where a risk is perceived, it is addressed eg by moving traps to more safely accessible areas.

## 8. Challenges

A number of physical and social challenges are associated with this project and the physical challenges are currently proving easier to overcome than the social.

The use of the Trap Minder Econodes is showing great potential to reduce both physical and social issues with some residents really interested in the technology (only a small minority won't allow it on their property).

Physical challenges relate to maintaining access to trap and monitoring locations on often vacant land with rank vegetation, including Kikuyu grass. The summer months were particularly warm and trapping was made more difficult by the extraordinary growth on unoccupied sections. As a result, Cathy moved many traps closer to the road or fence lines in order to make them more accessible and reduce the risk involved in walking through rough terrain covered in kikuyu.

Social challenges include developing buy in from all members of the community to ensure success of the project. Currently some people will move traps without letting Cathy know, undertake only occasional servicing and Cathy struggles to get the results in a timely way from many. Ways to address these issues are provided in the next section.

While there is currently a focus on rats, it is acknowledged that there are other pests in the environment and it is important not to treat one problem in isolation from other related problems. There are a lot of cats in the area- domestic and wild and these present a significant threat to biodiversity values but are also highly valued either as pets or/and as convenient rat and mice killers.

## 9. Where to from Here- Recommendations for The Coming Year

Over the coming year, Cathy intends to focus on achieving more buy in from residents and landowners within the programme area. This will be achieved with newsletters (one due out shortly), more regular gatherings of those involved in the project and consideration of other ways to improve buy in. It may be that the timing of trapping can be amended to improve efficiency and buy in. Currently residents are asked to check and report trapping results throughout the year. Similar results for biodiversity may be achieved if perimeter trapping is maintained throughout the year (these traps catch rats the most consistently) and traps within the perimeter area are activated around bird breeding season and when rats are active and starting to move into houses etc. A continuing focus on the 'Trap Minder' research and potentially more inclusion into the project along with long life lures may also encourage more interest from residents.

Cathy will also work with the school to develop a programme that involves the local school children in the project- around the school grounds and waterfront and this may also raise more interest in the broader community, in part because it is hoped children will go home and talk with their parents about it and maybe even take on the role of rat trapper for their own homes.

If the Island wide weed survey undertaken for Auckland Council continues this year, Envirokiwi proposes to spend some of the time budgeted, undertaking survey in the Mulberry Grove area. This will enable Cathy to upskill on weed identification skills and will also raise community awareness of weeds and weed issues and may improve the potential for community involvement in or at least awareness of weed control initiatives. In addition, Cathy will keep on hand a sample of Argentine ants and we hope to source a Plague skink also. She will use these to assist her in identification while out in the community checking traps and engaging with residents and also will share with community members to increase the number of potential "eyes in the field".

## 10. Conclusion

This year has seen progress in the project with the level of knowledge and understanding of the coordinator and other members in the community continuing to grow. It is reassuring that even though many residents are not setting their traps consistently throughout the year, they are at least doing so when they notice rats and this may be instead of introducing toxins to the environment. The introduction of the 'Trap Minder' technology provides exciting possibilities for the future which we believe will assist to maintain motivation. The value of having a member of a community dedicated to promoting support for efforts to improve biodiversity on Aotea and reduce the incidence of unwanted organisms that present both a human and environmental nuisance cannot be over stated. As a Community Pest Coordinator, Cathy has filled a vital role of communication between Auckland Council/Local Board and the local community of Mulberry Grove.

Maintaining and building motivation for the project and community buy in- not just verbal but practical support as well- is the biggest challenge for the project. The coming year will see a focus on improving buy in by providing more information, more opportunities for the community to come together and discuss and maybe more user friendly technology.

Appendix 1.  
Trap Minder Information

Letter sent to Residents from the GIB Environmental Trust

Dear

The GBI Environmental Trust recently received funding via the GB Local Board towards improving rodent control using recent advances in technology. Put simply, we are trying to make rat control a whole lot more efficient. We are wanting to trial remote sensing on rat traps to inform owners/organisers when they have been triggered, which will mean they can then be revisited on a needs basis, potentially increasing the rate of capture and effectiveness of the trapping network.

This type of remote sensing has the potential to change the way we do pest control in NZ, as it will enable devices (traps, tracking tunnels etc.) to be monitored from afar, reducing the need for tedious on-ground monitoring, and focussing this effort on actual responses to pests.

We are wanting to trial this network on the existing Mulberry Grove Community Rodent Control Project. A number of landowners have already been involved and we are seeking more participants.

What does it involve?

Locals, Matt Way, Scott Sambell and Gian Badraun have developed this technology which utilises a range of different sensors to trigger 'nodes' located on traps. If a trap is sprung, the node is activated, and a signal is sent to a central database. Any incoming information can be configured to send an alert or to any number of mobile devices or computers so you know what's happening to your trap, and (with permission) other traps within the rodent control area. It will hopefully provide a better means of managing our rodent problem.

What do I have to do?

Nothing really. Matt, Scott or Gian will visit and set up the node on your existing trap. You can opt for receiving notifications of what happens, or not. It's up to you. We are trialling the system for one year and would like to begin asap. We are after your consent to have the nodes installed on your existing trap.

Please can you reply to Kay by phone or email if you are willing to be involved? If you would like more information, please phone Emma on 09 4290091 or 0212676213.

Kindly,

Emma

## Tryphena Pest control remote sensing pilot

### Background

The Trapminder concept won the WWF 2014 Conservation Innovation awards and a small scale prototype trial has been successfully completed at Glenfern Sanctuary.

The development team consists of three local Great Barrier Island residents who are looking to create a larger scale field trial to further develop the system.

### Concept

A "trapminder" is a remote sensing node which attaches to any type of pest control unit currently in use in New Zealand. It records when an event has occurred at that station and reports it to a cloud server.

The cloud server can be configured to report to any database or stand-alone device. The Glenfern system is currently being displayed on an online interactive map which can be accessed and queried using any browser.

Any data can automatically report to any platform eg Mobile phone, email, social media post, etc.

### Proposal

The trapminder team wish to deploy nodes on the existing traps currently in use around Shoal bay, Tryphena to trial a multi-hub system using about 40 nodes.

The trial will incorporate local people as much as possible as they will be hosting a physical trap and will be able to see real time results and analyse the data themselves on their computers or smart phones.

This will raise awareness about pest control and also how locally developed technology is being used for conservation. The system has enormous potential to minimise or eliminate the use of toxins in pest control for appropriate systems.

### Potential

Remote sensing is going to be the next giant step for conservation in New Zealand and, with the appropriate backing, a product out of Great Barrier Island will be at the fore-front of this movement.

Trapminder is currently way ahead of any other remote sensing prototype system in NZ and it is being developed by three passionate GBI locals on a shoe-string budget.

Aside from the obvious economic and social benefits to the island of this product "taking off" there is also the very real potential to use it as the baseline system for a full island eradication, using local labour and skills.

### Links

Desktop browser Glenfern GIS system	<a href="http://arcg.is/1JcEDTL">http://arcg.is/1JcEDTL</a>
Mobile GIS application	<a href="http://arcg.is/1JcEKi0">http://arcg.is/1JcEKi0</a>
Conservation Innovation Awards	<a href="http://www.wwf.org.nz/what_we_do/community_funding/innovation/">http://www.wwf.org.nz/what_we_do/community_funding/innovation/</a>

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