



Department of  
Conservation  
*Te Papa Atawhai*

**Community groups—for your information about the translocation process documents**

These documents have been written for Department of Conservation (DOC) staff as well as community groups. As a result, it includes DOC-specific terms (which are usually defined) and references to document numbers (DOCDM-...) for use by DOC staff. The majority of these documents will be available on the DOC website. For further information, please email [sop@doc.govt.nz](mailto:sop@doc.govt.nz).

## Reporting worked example 3:

### North Island robin monitoring report<sup>1, 2</sup>

This is a worked example based on a real monitoring report that was prepared by Judy Gilbert. Note that it has been adapted to match the new requirements of the revised Translocation Standard Operating Procedure (SOP) and therefore the content varies from the original report.

#### Information table

<b>Report title</b>	Monitoring report on the translocation of North Island robin from Mokoia Island to Great Barrier Island (Aotea Island) in March 2009.
<b>Confidentiality of information in this report</b>	
<b>1. Information made available through this report is provided on the basis that it may assist with future translocations, and so that those carrying out translocations and researchers can share the information for that purpose.</b>	
<b>2. Ownership of the information for any other purpose remains with the individual or organisation reporting or contributing this information.</b>	
<b>3. In particular, this information should not be given to the media or used in academic or other publications without the specific and written approval of the original source (owner) of this information.</b>	
<b>Report date</b>	9 August 2010
<b>Report writer</b>	Judy Gilbert Manager, Windy Hill Rosalie Bay (WHRB) Catchment Trust, Great Barrier

<sup>1</sup> There are two types of report to be prepared—transfer reports and monitoring reports. **Monitoring reports** are usually due within two months of the monitoring programme coming to an end. Sometimes it will be logical to combine transfer and monitoring reports into one report.

<sup>2</sup> **Transfer** is the part of the translocation that involves the physical movement of the plants or animals from one location to another and their release or planting at the new site. **Translocation** is defined here as the managed movement of live plants or animals (taonga) from one location to another. Translocation covers the entire process, including planning, the transfer, release, monitoring and post-release management (up to some predetermined end point). A translocation can consist of one or more transfers.

	Island (Aotea Island), hereafter referred to as Aotea ( <i>Contact details confidential</i> )
<b>Project manager</b>	As above
<b>Type of translocation</b>	1. Wild to wild 2. Supplementation (species already exists at the release site)
<b>Species transferred</b>	<ul style="list-style-type: none"> <li>North Island robin (toutouwai, <i>Petroica australis longipes</i>), hereafter referred to as NI robins</li> <li>Status: non-threatened, uncommon endemic</li> <li>50 birds transferred (30 males, 20 females / 31 adults, 19 juveniles)</li> </ul>
<b>Release sites</b>	<ul style="list-style-type: none"> <li>Windy Hill Rosalie Bay Catchment (hereafter referred to as Windy Hill)—south-eastern Aotea (25 birds). Grid ref: E2738225 N6541075</li> <li>Glenfern Sanctuary—northern Aotea (25 birds). Grid ref: E2722155 N6557605</li> </ul>

## 1. Summary

The booster translocation of 50 NI robins was planned with the aim of increasing the number of breeding pairs established in the sanctuaries at Windy Hill and Glenfern on Aotea hereafter referred to as Aotea. The robin populations were initially established by earlier releases of NI robins in 2004 and 2005, when 30 were released at Windy Hill and 27 at Glenfern.

In March 2009, 50 NI robins (sex/age ratio: 30 males, 20 females / 31 adults, 19 juveniles) were captured on Mokoia Island in Lake Rotorua, transferred and released on Aotea—25 birds were released at Windy Hill and 25 were released at Glenfern. The transfer went as planned and was very successful in that there were no problems and all birds survived the journey and were released in good condition.

Most of the birds were released in large groups at each sanctuary. At both sanctuaries, a few birds (of the opposite sex) were also released into or near existing established territories of single birds, as this practice has been successful in the past in helping to form new pairs.

This monitoring report details the outcomes of the first breeding season at Windy Hill following the booster translocation of 25 birds. Information was not available for the purposes of this report for the birds at Glenfern Sanctuary.

At Windy Hill, five of the NI robins transferred in March 2009 (three males and two females) established territories within the Sanctuary area and paired up for the 2009/10 breeding season. Two pairs formed from the transferred birds and one male paired up with an existing resident female.

Six pairs produced 23 young over the season, all of which were banded.

## 2. Introduction

### Background/context

The purpose of the translocation is to boost the small population of NI robins in the sanctuary areas, which were initially translocated in 2004 and 2005, to ensure the species successfully establishes.

After the initial transfers in 2004 and 2005, five pairs established at each of the sanctuaries and produced good numbers of fledglings during the following breeding seasons. Severe storms in July and August of 2007 adversely affected the birds and numbers of pairs in both sanctuaries, and

resulted in lower breeding outcomes for the 2007/08 season. Despite the reasonably high levels of fledglings produced in some years, the majority of fledglings were dispersing, with only up to three per season remaining in the managed areas. With the effects of the severe weather event, natural mortality (old age) and natural avian predation by morepork (ruru, *Ninox novaeseelandiae*), juvenile recruitments have not been enough to sustain the population during the establishment phase. The population needed supplementation to help get established.

The overall objective of the project is to re-establish the NI robin in a part of its former range. Successful establishment of NI robins on Aotea will increase the number of NI robin populations, thus reducing the threat to the species if catastrophic declines occur in the species' current habitat. Until recent translocations, NI robins were locally extinct north of the Waikato.

The robin translocation is the first of a number of species re-introductions planned for the sanctuaries. Ecological restoration and conservation are core objectives in the management of both Glenfern and Windy Hill. The reintroduction of NI robins forms part of an overall ecological restoration and species reintroduction programme for both Windy Hill and Glenfern. This comprises: ongoing pest animal management including buffer zone poisoning/trapping at both sites and an Xcluder™ pest-proof fence at Glenfern, revegetation, threatened species management and the restoration of locally extinct flora and fauna species. Both sanctuary areas have populations of the rare chevron skink (*Oligosoma homalonotum*). It is expected that there will be other restoration projects on Aotea, and that NI robins will spread, increasing the significance of the role Aotea may play in improving their conservation status.

Other objectives of the project include:

- Enhancing public awareness for conservation of NI robins and other species, through public participation in the release, monitoring and management of the population. The success of this project can help to inspire and encourage other community groups that are considering starting pest control/restoration initiatives. The sanctuaries can be role models and provide examples of species which can potentially be re-established at other restoration sites when their threats are controlled adequately.
- Creating research opportunities on aspects of forest ecology and ecological restoration on Aotea.

## Release sites

Both sanctuaries are private land, with the exception of Kotuku Point Scenic Reserve within Glenfern. Refer to Appendix 1 for a map of the release areas.

### Windy Hill

Windy Hill comprises 450 hectares of managed sanctuary area in south-eastern Aotea, along a long coastal ridge. It has large areas of mature coastal broadleaf-podocarp forest, and 50-year-old regenerating manuka (*Leptospermum scoparium*)/kanuka (*Kunzea ericooides*) forest. The catchment contains approximately 30–40 hectares of farmland. The land around the sanctuary is similar to that within, with some farmland/grassland at either end of the ridge, and contiguous areas of mature forest inland.

### Glenfern Sanctuary

Glenfern Sanctuary is a predator-fenced sanctuary of 240 hectares on the Kotuku Peninsula, Port Fitzroy, in northern Aotea, and includes the DOC-managed Kotuku Point Scenic Reserve (70 ha). Glenfern contains approximately 200 hectares of regenerating manuka/kanuka forest and small areas of grassland within. Two of its three major catchments have areas of mature broadleaf forest present. Outside the fence there are patches of mature forest, regenerating bush, and some pine forest. Glenfern Sanctuary has been propagating and planting a wide range of endemic plant species since 1995.

## Conservation outcomes

- Short term—5 years: a self-sustaining population of NI robins is well established at the two sanctuaries on Aotea, which provide almost predator-free habitat.
- Medium term—10 years: the robin population on Aotea has reached carrying capacity at the two sanctuaries and NI robins are spreading to the adjacent areas and islands of Aotea. A number of other species that had been lost to Aotea have been reintroduced into the sanctuaries and are thriving along with the NI robins.
- Long term—30 years: NI robins and other re-introduced species are common throughout their habitats on Aotea and part of a healthy restored ecosystem. Introduced mammalian predators have been eradicated (or persist only at low levels).

## Operational targets

1. Up to 25 male and 25 female NI robins are successfully transferred and released at Glenfern and Windy Hill sanctuaries in March 2009.
2. Survival of at least 40% of released birds 12 months after release (12 months after the 2004/05 releases, just over 50% of the NI robins remained at Glenfern and 36% at Windy Hill).
3. 5—10 pairs established and breeding successfully during the next breeding season (2009/10 summer).
4. Locally bred NI robins recruited into the breeding population in spring 2010 and increase in total number of pairs inside the sanctuaries management area (determined by territory mapping and monitoring of breeding pairs).
5. Ongoing monitoring of robin survival, breeding success and juvenile recruitment in the two sanctuaries managed areas. Reports of NI robins seen outside the management areas will also be investigated with the possibility of providing predator control to protect them.

## 3. Methods

### The monitoring programme

6. All suitable habitat areas will be searched inside and on the boundary of the two sanctuary areas between April and September 2009 to check for the presence of founding birds and determine their territories.
7. Breeding will be monitored during the 2009/10 season and young will be individually colour-banded. This monitoring will provide data on nesting success and productivity that can be compared with previous local seasons and other populations (e.g. at Tiritiri Matangi, Wenderholm).
8. Territory mapping in spring 2010 will determine recruitment of young from the 2009/10 season and the location of any new territories.
9. Monitoring of territories and breeding during subsequent seasons will provide data on status of the population and also nesting success and productivity.
10. Three- or five-minute bird counts conducted annually in summer will provide an independent measure of the status of the robin population, along with information on any effects the introduction of NI robins might have on the existing avifauna on Aotea.
11. Independent annual bird counts undertaken by the Aotea Trust may also be useful in picking up dispersed NI robins.

Points 1–3 of the monitoring programme are covered in this report. Points 4–6 will be part of subsequent monitoring.

### Monitoring methods

This report details the monitoring undertaken at Windy Hill Sanctuary.

Monitoring was undertaken by the field team at each site during the winter post-release and the following breeding season. Likely robin habitat was searched within the sanctuary near the boundary after the releases in March (autumn) and during the winter. There were also a number of sightings reported by local landowners outside the sanctuary area and these were followed up.

All pairs that were found during monitoring were checked twice weekly as they came into nesting. GPS locations of nests that were found were recorded, and eggs numbers noted. Juveniles were banded at 11–13 days old (on average). Banding combinations were reported to the DOC Banding Office.

## 4. Results

At Windy Hill, five of the translocated birds established territories. Pairs were formed between four of these birds, and one male paired with an existing resident female. Neither of the two males that had been individually released into existing female territories stayed in the area.

A total of six pairs were found at Windy Hill and monitored over the season. Five of the six pairs bred successfully and fledged 23 young, which were all banded. There were 16 nesting attempts. One pair consistently abandoned their nests and failed to hatch any eggs. Only one nest (out of the 16) was predated; the predator is unknown. Table 1 shows details of the breeding pairs. Table 2 shows an overall summary of robin breeding since the first translocation in 2004.

**Table 1: Breeding summary for NI robins at Windy Hill Sanctuary 2009/10 season.**

Male	Female	No. chicks fledged	Chick colour bands					
			OM-Pu	OM-PuO	OM-PB	OM-PY	OM-PuR	OM-PW
WM-GG	YG-WM	6	OM-Pu	OM-PuO	OM-PB	OM-PY	OM-PuR	OM-PW
WB-WM	No band	3	OM-P	OM-PPu	OM-PG			
WY-WM	YP-WM	3	OM-Y	OM-YG	OM-YR			
BM-R	One band	6	OM-W	OM-WR	OM-WO	OM-WY	OM-WB	OM-WPu
BM-WY	GM-Y	5	OM-G	OM-GR	OM-GY	OM-GW	OM-GB	
WM-YB	GG-WM	0						
	Total:	23						

Key: **Bold** indicates birds released in 2009.

**Table 2: Summary of robin breeding outcomes at Windy Hill Sanctuary 2004/10**

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Pairs	5	5	5	3	2	6
Nesting attempts	9	20	16	14	6	16
Eggs	25	44	41	36	16	39
Eggs hatched	19	21	23	17	13	23

	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
Chicks banded	12	18*	23	12	5	23
Chicks fledged	13	16	23	15	9	23

\*two drowned

By the end of the 2009/10 breeding season, two of the juvenile birds had already paired up and established a territory in a bush area behind Kaitoke; some 5–6 km away. There was another report of a young robin sighted in Cape Barrier Road, also some 5–6 km away. At the time this report was written, no further juveniles had been seen within the sanctuary area.

There has been dispersal followed by some successful breeding in areas outside of the Sanctuary area, with up to 10 birds established at Hirakimata (Mt Hobson) (H. Jamieson, Department of Conservation, pers. comm. 2012). The young pair with a territory at Kaitoke will also be monitored over the coming season, along with NI robins that have been reported recently at Medlands and Cape Barrier Road. One identified pair has established a territory approximately 4–5 km from the Sanctuary and the landowner has been provided with mealworms to assist with monitoring the birds and to encourage them to stay in the territory. Assistance will also be given with nest location and protection when the time comes.

Most of the operational targets (as stated in Section 2) were achieved:

- The robin population was boosted by the successful March 2009 translocation, and new breeding pairs were formed.
- Of the 25 birds released, 5 remained at Windy Hill at the start of the 2009/10 breeding season, suggesting survival of 20%. This is lower than the target of 40%, although natural dispersal is occurring and pairs are forming elsewhere on the island.
- The target of 5–10 pairs was met, with six pairs established and five of those breeding successfully.
- Locally bred NI robins from the 2009/10 season were not recruited into the breeding population at Windy Hill; however, some have dispersed outside the sanctuary and paired, and they will be monitored through the 2010/11 breeding season.

### **Elizabeth Parlato's report on the NI robin population at Windy Hill**

*Note: Parlato's full report was included in the original monitoring report.*

Data collected on the breeding population at Windy Hill from 2004–2010 was analysed by Elizabeth Parlato, who is currently completing her Doctorate Thesis on translocated NI robins. She reported on the breeding outcomes in her August 2010 report, and compared the data with results from 15 other translocation sites. The report included the following key results:

- Post-release monitoring of the NI robins reintroduced to Windy Hill in 2004 indicates that, compared with other sites, a relatively low proportion (30%) of birds released remained in the managed area<sup>3</sup> by the start of the first breeding season. Of the 25 birds released in a 2009 follow-up translocation, 20% were known to be present at the start of the 2009/10 breeding season<sup>4</sup>. Similarly low levels of establishment have been found at Ark in the Park (25%) and the Hunua

<sup>3</sup> The managed area was 250 ha at the time of initial reintroduction.

<sup>4</sup> The managed area was 700 ha at the time of the follow-up translocation.



Ranges (30%), whereas some sites had very high levels of establishment (e.g. 96% at Tawharanui)—these are all sites within the Auckland Region.

- Site connectivity to surrounding forested areas had a significant influence on the proportion of released birds known to establish in the release area, with more connected sites associated with a lower proportion of birds establishing.
- Nests were found to be more likely to fail at the incubation stage than once nestlings hatched. Overall nest success (from 2004 to 2010) was estimated at 0.37, which is slightly below average when compared with other translocation sites. Estimates for other sites ranged from 0.13 (Bushy Park<sup>5</sup>) to 0.76 (Tawharanui).
- Across all years, the overall fecundity (number of fledglings produced per female) at Windy Hill was 3.4 fledglings per female, which is just above average for all translocation sites. Fecundity estimates for the other sites ranged from 1.5 fledglings per female at Paengaroa to 6.5 fledglings per female at the Hunua Ranges.
- The annual survival estimate for adult NI robins was 0.73, which is relatively high when compared with other translocation sites. Adult survival estimates across sites ranged from 0.46 at Waotu to 0.81 at Boundary Stream.
- Survival estimates for juvenile NI robins (from fledging to adulthood, calculated over 7 months from January to September) were obtained for the years 2005–2007. Overall juvenile survival was estimated at 0.18, indicating that only a low proportion of juvenile NI robins remained in the managed area at the start of the next breeding season. This could be due to juveniles not surviving to adulthood and dispersal out of the sanctuary. However, while juvenile ‘survival’ at Windy Hill is low, it is around average when compared with other reintroduction sites for which survival data is available.
- In summary, initial population establishment and nest success were lower than average across reintroduction sites. However, relatively low nest success has been made up for by slightly above average fecundity which is, ultimately, a more meaningful measure of productivity. Adult and juvenile survival rates are above and close to average, respectively, when compared with other sites and both are clearly important contributors to the population’s ability to persist.

### **Post-release management**

Mammalian predators at Windy Hill continue to be controlled to low levels. Of 16 monitored nest attempts by the NI robins, only one nest was preyed on, suggesting that the predator control is working well to protect the birds within the managed area.

### **Consultation and community relations**

Since the time of the robin release in March 2009, which was attended by local people, there have been ongoing reports in the Aotea Trust Environmental newsletter about the progress of the birds. A number of sightings of NI robins have been reported to Judy Gilbert and followed up. People are on the lookout for the NI robins and landowners are keen to get involved in monitoring if any birds establish territories on their properties. The WHRB Catchment Trust has initiated a community awareness programme through the local radio and may be able to assist with protecting nests outside the Sanctuary area where pairs are identified by the community. This will help towards our aim of establishing self-sustaining robin populations on Aotea.

The local radio station is to adopt the robin as its ‘totem’ bird and will play a robin call at the beginning of each day, starting this month (August 2010). The Trust has provided the station with equipment and recorded robin calls. Judy Gilbert has also had two time slots on the radio talking

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<sup>5</sup> This estimate is from 2001 to 2002 and 2002 to 2003, before the predator proof fence was erected.

about the NI robins and asking for people to let her know if they sight or hear them. The daily recorded robin call will raise people's confidence in recognising the bird's song.

Communication regarding the robin population's progress is ongoing, with various members of Ngāti Rehua. Talk is often informal, though frequent, and sometimes part of other hui and meetings. The Trust has a strong support relationship with the Katherine Bay Restoration Trust.

A profile interview with Judy Gilbert, as part of the Spectrum programme on National Radio, went to air in July 2010, with the show repeated three times over a week, and the interview included discussion of the NI robins. There was considerable positive feedback from this 22-minute interview and follow-up programmes on Aotea also drew positive responses.

## 5. Costs

No specific budget has been assigned to the robin monitoring programme. Monitoring the NI robins is just part of the job descriptions of the people employed in the field team at Windy Hill and the cost of robin monitoring is incorporated into the overall wages budget. There is no cost to the Windy Hill Trust for the research by Elizabeth Parlato.

## 6. Discussion and recommendations

This was a most successful transfer followed up by comprehensive monitoring during the breeding season. It is useful to have an academic input into this work (Elizabeth Parlato), as it provides depth of analysis of outcomes and a clear link to what is occurring in other translocated robin populations.

It is disappointing to have such low recruitment after both translocation and breeding; however, this appears to be one of the drawbacks experienced by other sanctuaries similarly located in contiguous bush. Improving detection of breeding pairs outside the managed area and assisting landowners to protect nests may overcome this to a limited extent.

The NI robins at Hirakimata (Mt Hobson) appear to be a growing population and it would be prudent for DOC to consider managing predators this area. Not only would this assist the NI robins, but also the small number of tomtits (toutouwai, *Petroica australis*) and kakariki (red-crowned parakeets, *Cyanoramphus novaezelandiae*) that inhabit that area. At the very least it should be included as a special area in the new CMS.

It is too early to predict likely robin population trends for the future. Elizabeth's report indicates that release sites connected to surrounding bush habitat, as is the situation at both Windy Hill and Glenfern, suffer from a low level of recruitment both from translocations and of juveniles after fledging. However, the breeding outcomes are above average and this is encouraging.

Monitoring of the NI robins will need to continue for a further two to three seasons before it will be clear whether the population will become self-sustaining or need another booster translocation. If future translocations are needed, the low juvenile survival rate<sup>6</sup> both Mokoia and Tiritiri Matangi suggests that young birds are readily available from these sources and removing them has no detrimental impact.

Our monitoring programme is regarded by Elizabeth Parlato as one of the most effective of the groups that are participating in her doctorate programme, and this will continue as long as the Windy Hill Trust has the funding to employ field workers with a high level of expertise. The Trust supports her research work and is open to other research opportunities.

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<sup>6</sup> Birds are successfully breeding on these predator free sites, however due to competition for habitat with other NI robins the survival rate for juveniles is low.



It was disappointing that the single males released in single female territories did not pair up; however, this has worked elsewhere and would be worth repeating in the future.

There is currently discussion with Glenfern Sanctuary about the possibility of applying to translocate whiteheads (popokatea, *Mohua albicilla*). This is another regionally extinct species which appears to respond well to translocation.

Consultation and communication with the community is ongoing, and innovative ways of engaging the community to help keep track of NI robins are being trialled, such as the use of the local radio station to promote the robin project. The local community is engaged with the NI robins and becoming more so as birds are sighted on their properties. It is heartening to have a number of robin sightings being reported, as it indicates plenty of interest and knowledge within the community.

## 7. Acknowledgements

Thank you to the field team at Windy Hill (Kevin Parsons, Rachel Wakefield, and Mick Butterworth) for their dedication to establishing the NI robins.

Thank you to the Aotea community for their participation in reporting sightings and managing established pairs. Thank you to Aotea radio for the support in ‘advertising’ the NI robins.

Thank you to Elizabeth Parlato for the expertise she brings to our project and shares with the field team and the Trust.

Thank you to the supporters of the Trust—the landowners within the sanctuary area, the Biodiversity Condition Fund, Lotteries Environment, ARC EIF, ACC Heritage Fund, and the Pacific Development and Conservation Fund.

## 8. References

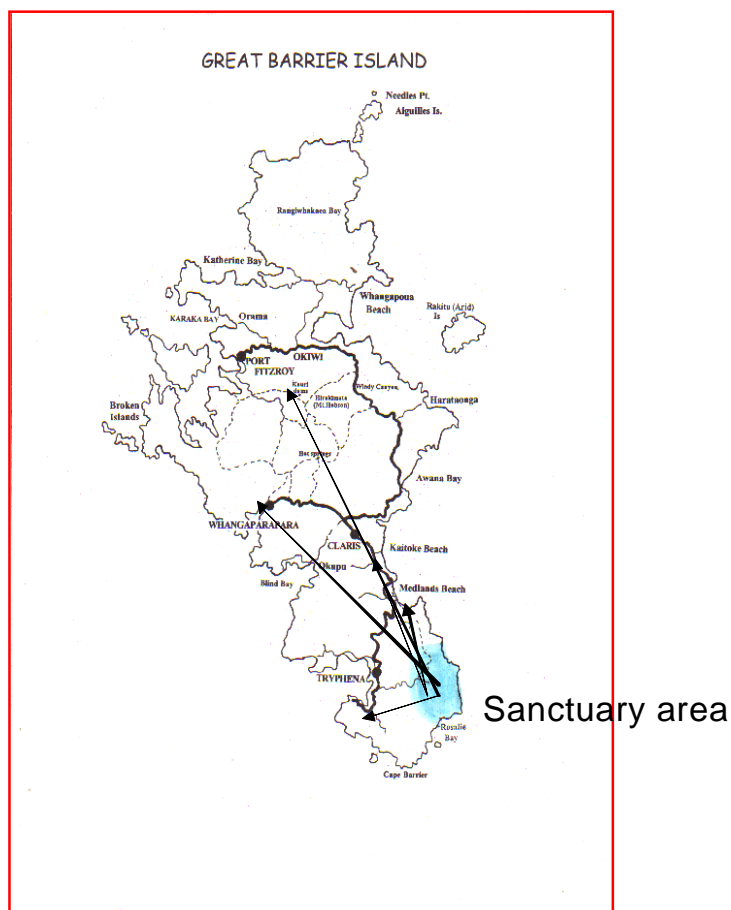
<b>Translocation proposal</b>	Translocation proposal worked example 3—North Island robins from wild to wild (a community group proposal) ( <a href="#">DOCDM-399715</a> , plus website link)
<b>Workplan (DOC reports only)</b>	N/A
<b>Transfer report(s)</b>	Worked example 4—North Island robin transfer report ( <a href="#">DOCDM-632593</a> )
<b>Other</b>	Elizabeth Parlato, August 2010: Report on the North Island robin population at Windy Hill Rosalie Bay Sanctuary. Ecology Group, Institute of Natural Resources, Massey University.

## Appendices

### Appendix 1

#### Map of robin dispersal from Windy Hill Sanctuary 2004-2010

# Windy Hill NI robin dispersal 2004-2010



## Go to:

- Translocation proposal worked example 3—North Island robins from wild to wild (a community group proposal) ([DOCDM-399715](#), [plus website link](#))
- Reporting instructions for 2011 Translocation SOPs/Guide ([DOCDM-166659](#), [plus weblink](#))
- Reporting worked example 1—shore plovers transfer and monitoring report ([DOCDM-165359](#), [plus weblink](#))
- Reporting worked example 2—North Island robin transfer report ([DOCDM-632593](#), [plus weblink](#))
- Translocation SOP ([DOCDM-315121](#))
- Return to Translocation Guide for Community Groups ([DOCDM-363788](#), [plus website link](#))
- Processing translocation proposals SOP ([DOCDM-315123](#), [plus website link](#))