

Kaitaia

Kiwi Directory
and guide

August 2008

assisting people and agencies protect Kiwi

Wendy Spode of PITO



Kaitaia Kiwi Directory and Guide

A guiding document to assist agencies, community groups
and landowners involved in kiwi
and kiwi habitat protection in the greater Kaitaia Area



Courtesy of Raymond Ching



Funded by

Biodiversity Advice Fund



Written by

Wendy Sporle of RITO:

Conservation advocacy, education and design

TABLE OF CONTENTS

1.	Introduction	4
2.	How to use this Document.....	4
3.	Term and Review of this Document	4
4.	An Overview of Kiwi in the Far North.....	4
4.1.	Ecology and biology.....	4
4.2.	Status.....	5
4.3.	Past and present known distribution.....	5
4.4.	Agents of decline and threats	6
4.5.	Past and current management	7
5.	Preferred Options of Recovery	8
5.1.	Management to ensure the protection of kiwi habitat	8
5.2.	Protection of kiwi from predation.....	8
5.3.	Protected corridors and natural expansion of kiwi populations.....	8
5.4.	Integrated management	8
6.	Strategic Approach and Priority Areas.....	8
6.1.	Key population clusters	8
6.2.	Moving kiwi.....	9
7.	Partnerships and Roles	9
7.1.	Kiwi Recovery Group	9
7.2.	BNZ Save the Kiwi Trust	10
7.3.	Northland Kiwi Forum (This groups name is not confirmed yet)	10
7.4.	Department of Conservation	11
7.5.	NZ Landcare Trust.....	12
7.6.	NZ Kiwi Foundation	13
7.7.	Northland Regional Council.....	13
7.8.	Far North District Council.....	14
7.9.	Queen Elizabeth II National Trust	15
7.10.	Nga Whenua Rahui.....	15
7.11.	Bank of New Zealand.....	15
7.12.	Vets.....	16
7.13.	Tangata Whenua.....	16
7.14.	Community and individual landowner projects	16
7.15.	Local kiwi contractors and technicians.....	17
7.15.1.	Aversion training for dogs	17
7.15.2.	Kiwi technician and kiwi dog handler	17
7.15.3.	Kiwi call count monitoring contractor	18
7.15.4.	Kiwi first aid, rehabilitation and the temporary housing of kiwi	18

8. Goals.....	18
Long term goal	18
Medium term goals.....	18
9. Management.....	19
9.1. Expansion opportunities	19
9.2. Planning	19
9.2.1. National Kiwi Recovery Plan (2008 – 2018)	20
9.2.2. Best Practice Manual	20
9.2.3. Northland Taxon Plan (in prep)	20
9.2.4. Sustainable Management of Brown Kiwi.....	21
9.2.5. Kaitaia Kiwi Directory and Guide (this document)	21
9.2.6. Project strategic plans.....	21
9.2.7. Review and updating	21
9.3. Survey and monitoring.....	21
9.3.1. Call count monitoring.....	22
9.3.2. Territory mapping.....	22
9.3.3. Kiwi dog survey.....	22
9.3.4. Kiwi sign.....	22
9.3.5. Other monitoring.....	23
Pest presence	23
Project review	23
9.4. Pest and predator control.....	23
9.4.1. Dog control.....	24
9.5. Kiwi and resource management.....	25
9.5.1. Kiwi and forestry or land clearing for pasture	25
9.6. Translocations and moving kiwi or eggs.....	25
9.7. Isolated individual birds or pairs	25
9.8. BNZ Operation Nest Egg™	26
9.9. Advocacy and community engagement	26
9.10. Fences, crèches and kiwi refuges	27
9.11. Data management.....	27
9.12. Sick, injured and dead kiwi and eggs	28
10. Funding	29
11. Networking and Communication	29
References	30
Appendices	31
Appendix 1 Map of Kiwi Projects in Northland - 2008.....	31
Appendix 2. Kiwi Project Information in the Kaitaia Area (as at 2008).....	32
Appendix 3. Summary table of where to go for specific help	35

1. Introduction

The Kaitaia area contains the northern-most population of the Northern North Island Brown Kiwi. Isolated populations of kiwi are scattered throughout the district with densities ranging from very few birds to areas where much higher densities average 30 calls per hour. All of these populations are under threat due to ongoing habitat loss and predation. However, recent experience in kiwi recovery shows that with adequate landowner support and resourcing these populations can be retained.

Kiwi remain in the Far North because of people's past and present commitment to them. This document has been developed to provide some strategic guidance and support to all agencies, individuals, community and landcare groups involved in kiwi protection within the Kaitaia area. This area comprises of the area north of a line that extends from north Hokianga to Mangataniwha and across to Taupo Bay (refer Map 1 '*Known approximate densities, distribution and potential linkages*').

This document is a practical guide and reference booklet and should be read in conjunction with other strategic documents under which it sits.

2. How to use this Document

A summary of the roles of agencies and individuals involved in the protection of kiwi is outlined in this document. It will help you understand what support they can provide and where you can go for information and assistance in kiwi protection. It also provides some ideas for future planning and networking to enhance the recovery of local kiwi populations. Attached to the rear cover is a CD with a PDF version of this document which can be printed and distributed. There are also additional files which provide kiwi recovery references. Appendix 3 contains a quick reference table summarising what support is available and which can be photocopied.

3. Term and Review of this Document

It is intended that this plan has a five year term and remains aligned with the review of strategic documents it sits under. It will be reviewed in 2014.

4. An Overview of Kiwi in the Far North

4.1. Ecology and biology

The Kaitaia area, like other areas of Northland, contains population clusters of the Northland variation of the North Island Brown Kiwi. These kiwi are nocturnal, with the exception of young chicks who occasionally forage in the daytime. Kiwi usually spend the daylight hours under clumps of dense vegetation or piles of slash, in nikau fronds, hollow logs or shallow burrows.

They can live in a variety of habitats from scrub, rough pasture, exotic forest and native bush. Breeding can occur throughout most of the year but the main breeding season starts in late May to early June with the first chicks hatching in September. Two eggs can be laid, around three weeks apart, and commonly a second clutch of eggs is produced.

For more information see the BNZ Save the Kiwi Trust website (www.savethekiwi.org.nz) and DVD *How to Save Kiwi* and the *Northland Taxon Plan*. (in prep.)

4.2. Status

There are five species of kiwi in NZ, all of which have been allocated a threat status ranking. This ranking classifies species according to their threat of extinction and is a measure of the level and nature of that risk.

The North Island Brown Kiwi is formally ranked as “Nationally Vulnerable”. Although it is a population with relatively high numbers of individuals, estimated at some 25,000 birds, they remain in decline at a species level. This is despite decline having been halted or even reversed amongst managed populations.

The total population of North Island brown kiwi is diminishing at around 5% per year. As such the national Kiwi Recovery Plan identifies it as a high priority to secure the population from further decline.

4.3. Past and present known distribution

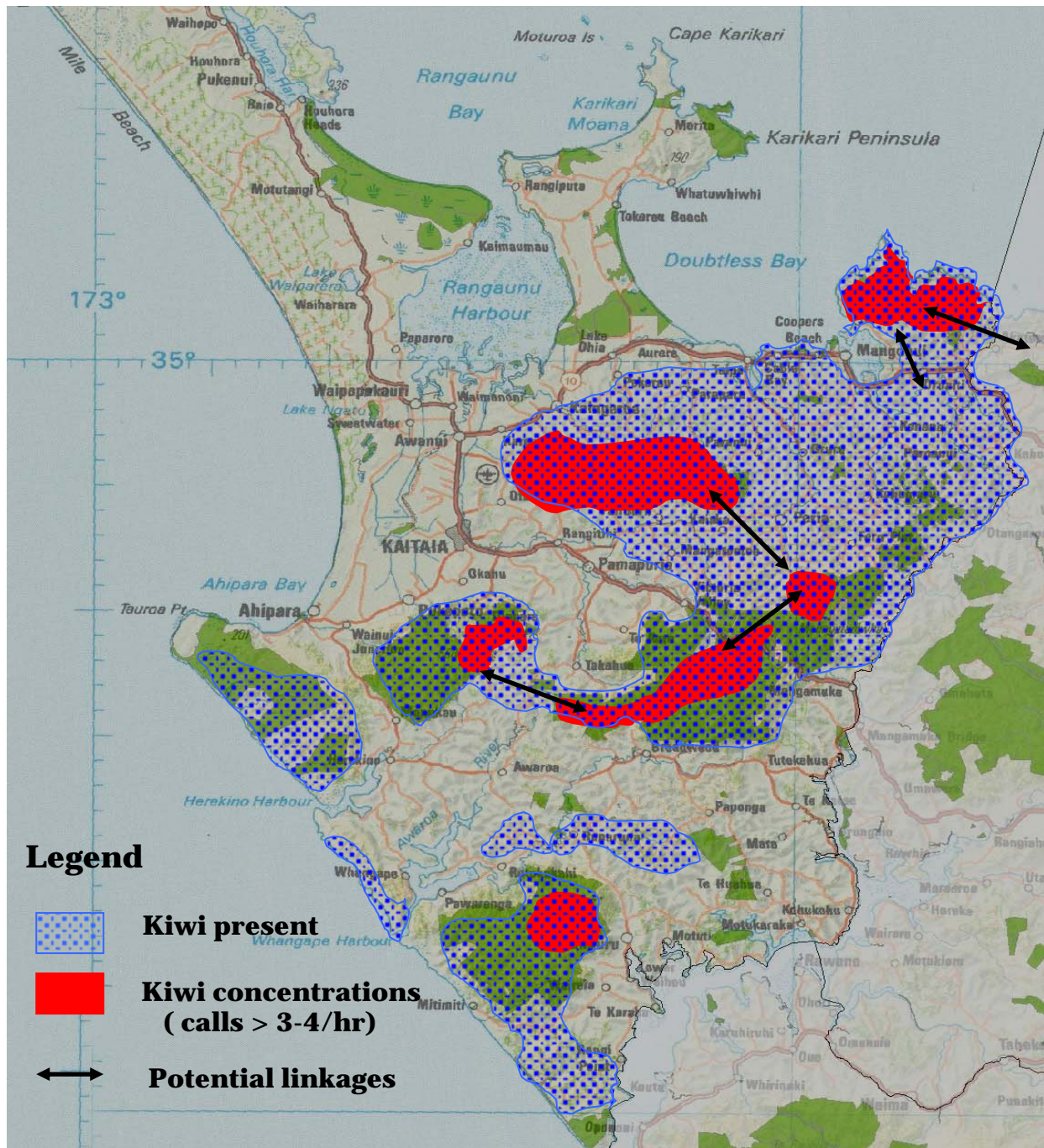
Archaeological and historical records indicate that kiwi were originally widespread throughout the Far North. This included the Aupouri peninsula from where they are now extinct. DNA data also reveals that other species of kiwi were also once present.

Kiwi abundance surveys were carried out by the Wildlife Service in the late 1970s and were repeated by Department of Conservation in 1992. When the results were compared it was found that kiwi had declined in abundance and range.

A general distribution and relative abundance map was produced for the “*Sustainable Management of Brown Kiwi and Other Species in Northland*” (Pierce, Gardiner, Moodie, Robertson and Sporle: 2006) . An updated map for the Kaitaia area is provided below (Map 1) and identifies where known kiwi populations are, their relative density (high and present) and the location of potential corridors to expand protection management.

It is important to remember that kiwi populations are dynamic and a current population could be absent tomorrow because of one catastrophic event (such as dog predation). It is also important to note that complete data is not available for every area of potential kiwi habitat in the Far North, so kiwi may be present in areas not identified in Map 1.

Map 1: Approximate known densities, distribution and potential linkages



4.4. Agents of decline and threats

The decline of kiwi populations is a direct consequence of human arrival to NZ and the associated effects of settlement and species introductions. This includes loss of habitat arising from land clearance and the introduction of mammalian predators. These threats have continued to the present day where habitat loss as a result of subdivision, forestry and farming practices and predation from introduced mammals continues.

The national survival rate of kiwi chicks is very low with only around 10% of all chicks that hatch surviving up to six months of age. In most parts of the country, stoats are the key agents of (or reasons for their) decline and are responsible for more than half of all kiwi chick deaths. In Northland cats are also a significant predator of kiwi chicks.

Predation of adult kiwi by dogs and ferrets can also cause catastrophic declines in local populations (Taborsky 1988, Pierce & Sporle 1997). In Northland this is considered as serious a threat as stoat predation.

Although habitat loss continues to be a problem there is still a considerable amount of suitable habitat available throughout the Kaitaia area- and kiwi can be very adaptable. Indeed some seem to find the base of pampas bushes a great home, and others thrive in gorse covered hillsides. However it is not only the land clearance that remains a threat to kiwi, but the land clearance techniques themselves. Activities like roller crushing or burning scrub or piles of vegetation can kill kiwi.

Wild native birds are vulnerable to introduced organisms and disease and particularly diseases from other imported ratites (emus and ostriches) or domestic poultry, may also be a future threat.

4.5. Past and current management

Despite widespread historical clearance of indigenous habitat, some landowners retained areas of scrub and regenerating forest for the intrinsic wildlife values they contained. As a consequence there are quite large areas of land in the Kaitaia area which provide valuable habitat for kiwi. However, it is only in relatively recent times that some of these areas have become actively managed for kiwi survival.

When efforts to raise the national awareness of the decline of kiwi populations was increased around 1991, a number of individual landowners began formally protecting kiwi habitat and actively controlling animal pests and predators. Landowners from the Whakaangi peninsula and also the wider Kaitaia area including; Higginson and Khaine, Sporle and Renwick and the Schou family, were among the first to carry out active management of habitat and pests specifically for kiwi.

These landowners have continued to maintain their predator trapping programmes to the present day and numerous other landowners have joined the ranks of individuals involved in the trapping of kiwi habitat. Other landowners have expanded into a formalised landcare trusts or landcare groups and are carrying out animal pest and predator control on their land; either themselves or by contracting trappers. Most of the groups in this area comprise adjoining landowners who have established co-ordinated pest control programmes in order to maximise the effectiveness of their pest management efforts, and to gain external funding assistance to cover some of the costs.

The Department of Conservation has large areas of indigenous habitat throughout the Kaitaia area under their administration but has not had the capacity to implement a kiwi protection project. As such, virtually all of the active kiwi protection projects in the Kaitaia area are undertaken on a voluntary basis.

5. Preferred Options of Recovery

Because many of the kiwi in the region live on private land it is crucial that landowners be inspired and encouraged to take part in kiwi recovery on their land, to ensure the regional survival of kiwi. Without the engagement and commitment of the landowners, all the rules possible wont retain kiwi in the area. Each project will choose the methods best suited to that area and the people implementing the project. Following are options which are being recommended by the *Kiwi Recovery Plan* and draft *Taxon Plan*. (in prep.)

5.1. Management to ensure the protection of kiwi habitat

This includes retaining areas for kiwi to survive and breed when land management options are being discussed and planned. Long term protection options can include legally protecting land through covenanting.

5.2. Protection of kiwi from predation

This primarily involves threat management comprising trapping, poisoning and shooting of animal pests and predators. While this work is benefiting kiwi, it is also important for the survival of other indigenous species sharing the habitat with kiwi. If predator control is undertaken kiwi breeding will be successful. To be effective this work must include components of encouraging appropriate dog control and the trapping of mustelids (ferrets, stoats and weasels) and cats.

5.3. Supporting the establishment of protected corridors and the natural expansion of protected kiwi populations.

Kiwi will naturally disperse from intensively managed sites to adjacent habitats where there are vegetated corridors connecting the areas. If these areas become managed to protect kiwi, a larger landscape will be protected and this will provide safe habitat for dispersing juvenile kiwi.

5.4. Integrated management

Controlling all animal pests and predators in an area will provide benefits to a variety of indigenous species. There are complex interactions between introduced predators and prey in an ecosystem and sometimes removing one pest or predator changes the balance and the animals switch prey. This often results in increased predation of native species and therefore where possible the full suite of introduced pests should be targeted.

6. Strategic Approach and Priority Areas

The areas where kiwi recovery will be most likely to be sustained in the long term are the areas of highest population densities and where there is a commitment by landowners to implement recovery programmes. Other factors which contribute to the likelihood of successful kiwi recovery include habitat size and the potential of linkages to other areas of management. Refer also to the distribution map (Map 1).

6.1. Key population clusters

The recovery aim for brown kiwi within the Kaitaia area is to secure at least one population, of a minimum of 200 pairs, in a site of at least 1000ha of contiguous habitat. Vegetated corridors, where possible, should be established

to expand that area and aid dispersal of birds into the wider managed environment. Other smaller populations should also be established where landowners or community groups are able to achieve kiwi recovery goals. These could be within areas of habitat with corridor potential.

The current highest density population clusters are:

- Whakaangi and down to Taupo Bay
- Eastern Kaitaia
- Kaiaka, Peria, Honeymoon Valley
- Herekino and Raetea
- Warawara (this stands as a more isolated population)

Priority should be given to increasing the areas where kiwi are protected from predation within and adjacent to these population clusters, and formatting linkages between the higher density populations. This should not discourage local management in other areas where there is landowner and community commitment.

6.2. Moving kiwi

Key agencies have considered situations when kiwi may need to be moved from their current territories. The following two points will assist to guide any specific future decisions regarding moving kiwi.

1. Moving kiwi when requested by developers for subdivision or land clearing convenience is not considered a preferred option supported by this guide.
2. If there are kiwi in small landlocked areas where there are no safe retreat corridors, they could, as a last resort, be translocated to safe habitats if no protection management is able to be implemented. Areas where this would be considered include areas with barriers like busy roads, ocean and residential areas where there is no cat and dog control. (Barriers unsafe for kiwi.) Kiwi are territorial and young and juvenile kiwi depend on opportunities to disperse and find new territories. If only a few birds remain in an area they do not have a long-term viable future as they may in-breed.

7. Partnerships and Roles

One of the primary purposes of this document is to collate information about each of the agencies, organisations and people involved with kiwi protection in the Kaitaia area. This will facilitate access to appropriate support and information, and will ensure all groups and individuals involved in kiwi protection understand who can provide what.

Nationally there are many agencies and groups involved in kiwi recovery. The three main groups undertaking or facilitating this work are: The Kiwi Recovery Group, BNZ Save the Kiwi Trust and Department of Conservation. Numerous other groups, committees and organisations then sit under these primary organisations.

7.1. Kiwi Recovery Group

The national Kiwi Recovery Group is a group of individuals experienced in all aspects of kiwi protection. It includes people from the Department of Conservation, BNZ Save the Kiwi Trust, the captive institutes, a kiwi sanctuary representative and community and science representatives. The group meets

to make national strategic decisions and recommendations for the recovery of all kiwi.

The Recovery Group also provides recommendations to the BNZ Save the Kiwi Trust to assist in their allocation of grants. Together with the Trust, it arranges an annual National Kiwi Hui, a gathering of kiwi practitioners who share ideas and information on protecting kiwi.

Contributions to kiwi recovery include:

- Development of the national strategic overview for kiwi
- National guidance on best practice for kiwi management
- Oversee the implementation of the national Kiwi Recovery plan
- Assist in the allocation of funding and prioritisation of kiwi population management
- Coordinate the national Kiwi Hui
- Provide specialist advice to groups and individuals involved in kiwi protection
- Provide guidance to assist with the development of taxon plans (strategic plans which are being developed for each taxon (type) of kiwi)

Contact: Kiwi Recovery Group leader Avi Holzapfel (in Hamilton)
aholzapfel@doc.govt.nz

7.2. BNZ Save the Kiwi Trust

BNZ Save the Kiwi Trust is an independent charitable trust formed by a partnership between Department of Conservation and the BNZ, in association with Royal Forest and Bird. Its aim is to work with iwi, community and conservation groups to help them ensure a future for 'their kiwi'. The Trust carries out national kiwi advocacy, develops resources for kiwi projects to use, has a comprehensive website about kiwi (www.savethekiwi.org.nz) and provides funding for kiwi projects through an annually contestable fund.

The National Mentor for Advocacy is available to provide support and resources to project advocates or representatives to help them engage their communities in kiwi protection.

Contributions to kiwi recovery include:

- Providing funding to groups involved in kiwi protection
- Development of a website with kiwi information, *Save the Kiwi* DVD and the provision of numerous advocacy resources
- Assisting with national training workshops and coordination of the Kiwi Hui
- Raising the public awareness of kiwi through the national media
- Providing support to project advocates through the National Mentor for Advocacy

Contact: Executive Director SavetheKiwiTrust@bnz.co.nz
National Mentor for Advocacy; Wendy Sporle kiwendi@xtra.co.nz

7.3. Northland Kiwi Forum (This groups name is not confirmed yet)

Because of the complexity of kiwi protection efforts in Northland a regional body of people experienced in kiwi protection is being considered to guide

Northland kiwi protection work. This group will oversee the implementation of the Northland North Island Brown Taxon Plan, and provide technical advice to those involved in kiwi protection. At the time of writing this document, this group is just a concept.

Contributions to kiwi recovery include:

- Strategic Northland kiwi advice and guidance (To be confirmed)

Contact: (To be confirmed) In the interim contact Wendy Sporle (kiwendi@xtra.co.nz) Helen Moodie (helen.moodie@landcare.org.nz) or Greg Blunden (Greg@KiwiFoundation.org.nz)

7.4. Department of Conservation

The **Head Office** of the Department of Conservation facilitates research, through its Research and Development unit (R&D), to help increase understanding about kiwi, their threats and how to control those threats. Five Kiwi Sanctuaries have been established to trial kiwi protection and recovery options. A website provides information about indigenous wildlife, introduced pests and pest control options. There are also publications that cover a broad range of environmental topics, available from the Science Publications library. The Biodiversity Advice and Condition Fund programme provides funding for biodiversity protection projects on private land. The Department of Conservation also co-funds, with BNZ Save the Kiwi Trust, the annual national Kiwi Hui.

The **Conservancy office in Whangarei** has a planner who deals with planning and resource management issues such as: subdivision, land clearing and kiwi habitat modification. Queries can be referred to this planner through the Kaitaia receptionist. Recommendations are made to Councils when resource consent applications are submitted.

The Whangarei Area Office manages a kiwi sanctuary and has a 'sanctuary team' to implement kiwi work and research within the sanctuary near Whangarei. Staff in the Whangarei Area office will also oversee the implementation of the *Northland North Island Brown Taxon Plan.* (in prep)

The **Kaitaia Area office** of the Department of Conservation does not have any kiwi funded projects and is therefore currently unable to resource or implement any protection work. They are fully supportive of landowner and community efforts and are able to offer advice on pest control and habitat protection. Their role is also to issue any permits for work which involves handling kiwi, which requires a permit under the Wildlife Act. Injured and dead kiwi are to be handed to them.

Community relations staff are available to help with press releases, displays and events, and can visit schools on request.

Biodiversity staff can provide some protection advice, they co-ordinate the annual national call count monitoring and are part of the team providing kiwi aversion training courses for dogs. Bookings can be made at the Kaitaia Area office.

The Department plans its work a year ahead so any support from them should be requested well in advance.

Contributions to kiwi recovery include:

- Funding through the Biodiversity condition and advice funds
- Assessing and submitting comment and recommendations on resource consent applications where required under the resource management act (RMA)
- Overseeing implementation of the *Northern North Island Brown Taxon Plan* (in prep)

Local

- Providing kiwi protection advice
- Wildlife Act permitting
- Site co-ordination for annual kiwi monitoring
- Processing of sick, injured and dead kiwi
- Advocacy through publications, press releases, events and displays
- School visits
- Supporting the kiwi aversion training courses for dogs
- Provision of traps for loan (with a small deposit required) from a trap “library”

Website: <http://www.doc.govt.nz/>

Contact: Kaitaia office receptionist 09 408 6014

7.5. NZ Landcare Trust

NZ Landcare Trust is a national trust focused on sustainable land management through community involvement. It has regional staff who empower community groups by assisting them in setting up projects. The Landcare Trust are information brokers and have experience in developing and sustaining regional networks and collaboration.

The Trust can continue to play a role in the coordination of projects addressing kiwi recovery. This includes facilitating training opportunities for volunteer groups (especially around pest control techniques) and in arranging regional and local hui for the sharing of project and management ideas.

The Trust has resources to support landcare projects in the Kaitaia area looking at kiwi recovery, along with funding for two workshops and two training opportunities each year for the next three years (from 2008).

The Landcare Trust are founding members of the Northland Biodiversity Enhancement Group (NBEG). NBEG is a networking forum of agencies advocating for the protection of Northland’s biodiversity and has produced a self help landowner biodiversity guide (*Restoring the Balance*) which has broad information from project planning to native planting and pest control. This is available by contacting Helen Moodie or other NBEG members like Department of Conservation, NRC or FNDC.

Contributions to kiwi recovery include:

- Assisting the establishment of community landcare groups and providing them with ongoing support and advice
- Co-ordinating workshops and training in habitat management techniques
- Predator trapping notes currently available on www.savethekiwi.org
- Networking between community groups and the relevant authorities and specialists involved in habitat and species protection

- Information brokering
- Facilitating regional hui
- Providing guidance on where to find funding
- Technical guidelines – currently available on www.pahandford.co.nz/biodiversity-tech-guide.html

Website: <http://www.landcare.org.nz/>

Contact: Helen Moodie 09 435 3863

Email: helen.moodie@landcare.org.nz

7.6. NZ Kiwi Foundation

The NZ Kiwi Foundation is the largest kiwi protection group in the Far North. They are a community project, based in Kerikeri, but also provide a service advising and supporting other landowner and community projects throughout Northland.

The Kiwi Foundation's aim is to assist landowners and community groups to protect their kiwi through advocacy, and designing, implementing and supporting, integrated pest control projects on their land. They can help access traps and materials, set-up projects and then either have the landowners maintain the work or contract Kiwi Foundation trappers to implement the programme.

They provide an advisory role, organise workshops on trapping and information on setting up projects on legally protected land.

Live capture dog cages are available from Kiwi Foundation for loan or hire.

Contributions to kiwi recovery include:

- Provide pest control on contract to landowner or group
- Assist with project design
- Provide integrated pest control setup and implementation assistance
- Advocacy
- Dog cage loan

Website: <http://KiwiFoundation.org.nz>

Contact: Greg Blunden 09407 1119

Email; Greg@KiwiFoundation.org.nz

7.7. Northland Regional Council

The Northland Regional Council is a Northland wide regional authority whose officers work with landowners to target pest plants and animals. They also host seminars and field days, visit schools and produce publications and self-help guides and handouts covering biodiversity protection.

Through regional plans, resource consents and monitoring, they work with the community to care for our environment.

Each year the Council provides a contestable fund to help landowners improve biodiversity on their land. This includes implementing projects like fencing bush, wetlands or steams, or setting up and implementing possum or predator control.

One of the Councils pest control programmes is called **Community Pest Control Areas (CPCAs)**. These can be established in areas that have been identified by the community as worth protecting and where the community will take responsibility for ongoing control in the long term. A list of pests for control is drawn up and a plan and contract is formulated detailing how these can be controlled. Resources can be supplied for a period of two years free of charge, followed by a further two years at 50% of cost price. There is an expectation that landowners will continue with ongoing maintenance and control. The Council can also provide training in pest control and monitoring techniques. They also sell, at cost, some traps and toxins.

Contributions to kiwi recovery include:

- Pest and predator control advice and training
- Production of guiding publications
- Environmental education
- Funding assistance
- Sale of some traps and toxins

Website: <http://www.nrc.govt.nz/>

Contact: Kaitaia office receptionist: 4086600 Tollfree: 0800 002004

7.8. Far North District Council

Creating and maintaining a planning environment that is conducive to a sustainable kiwi population in the Kaitaia area is a crucial role of the Far North District Council. It does this through Objective, policies, methods and rules in the District Plan. Methods may particularly focus on requirements for cat and dog free subdivisions in areas of high kiwi numbers via conditions on subdivision.

The Far North District Council has a Significant Natural Areas (SNA) team of ecologists who are available to visit properties to provide advice on how to retain habitat and protect the species they contain.

They have Animal Control officers whose role is to implement the Dog Control legislation and advocate for broad dog control. They can assist with wandering dogs and lend dog cages.

There is an annual contestable fund available to help landowners carry out conservation protection work on their land.

Contributions to kiwi recovery include:

- SNA ecologists visits and advice
- Dog control help
- Funding assistance
- Processing of resource consent applications and establishing conditions of consent for the protection of kiwi under the RMA

Website: www.fndc.govt.nz

Contact: 0800 920 029

7.9. Queen Elizabeth II National Trust

This Trust is a national organisation with a regional representative who can help landowners formally and legally protect areas of bush, wetlands and landscape features. A covenant is formed which is legally binding and protects the land in perpetuity while it remains in control and ownership of the landowners. The Trust co-funds, with the landowner, the cost of fencing the covenant and also helps set up pest control. Often rates remission for these areas of land can be sought from the District Council.

Contributions to kiwi recovery include:

- Legal protection of habitat
- Assisting with half the costs of fencing
- Providing pest control support
- Rates remission support

Website: www.openspace.org.nz

Contact: Northern representative Dr Greg Blunden - 09 407 1119

gblunden@openspace.org.nz

7.10. Nga Whenua Rahui

Nga Whenua Rahui is a national fund which provides assistance to Maori landowners to help them identify and protect biodiversity values on their land. This is achieved through the creation of a kawenata or Maori reserve. Nga Whenua Rahui takes into consideration the cultural and spiritual importance of the whenua to the landowners and their retention of tino rangatiratanga (ownership and control). This fund enables voluntary and formal protection of habitats and can provide resources for fencing, pest and predator control.

Contributions to kiwi recovery include:

- Legal protection with tangata whenua considerations
- Funding assistance
- Assistance with pest and predator control

Website: <http://www.doc.govt.nz/templates/page.aspx?id=43144>

Contact: the Kaitakawaenga Phone: 0800 112 771

Email: kaitakawaenga@doc.govt.nz

7.11. Bank of New Zealand

As primary sponsor of BNZ Save the Kiwi, the Bank and it's staff are interested in supporting kiwi work around NZ. Bank staff have volunteer days and are available to assist kiwi projects with tasks such as kiwi monitoring, advocacy, pest control and any other work projects require. It is preferred that projects are long term so staff can adopt them in a meaningful way.

The BNZ will also promote local kiwi work and allow displays to be erected in the branches.

Contributions to kiwi recovery include:

- Volunteers
- Display venues

Contact: Kaitaia BNZ Manager via 0800 800 468 or visit the branch.

7.12. Vets

Injured kiwi require immediate treatment if they are to survive. Vets are available to treat kiwi but they are unable to do so without some form of cost recovery. The Department of Conservation does not have a specific budget to cover this but is usually able to find the resources for kiwi treatment (refer also to section 9.12 - Sick, injured and dead kiwi and eggs). Major injuries will require transportation (usually by plane) to Massey University Vet hospital after the birds have been stabilised. A voluntary rehabilitation service in Kaitaia is provided, under permit, by Wendy Sporle.

Contributions to kiwi recovery include:

- Kiwi treatment
- Humane euthanasia
- Kiwi rehabilitation

Contact: Top Vets - 406 2216
Wendy Sporle – 408 4241
Lesley Baigent (private vet with kiwi experience) 408 7800

7.13. Tangata Whenua

Iwi Maori in the Far North region have invited kiwi projects on private land to make contact with their local hapu and update them on progress to protect kiwi. They are concerned about the plight of kiwi and though they may not be currently implementing any projects themselves, they have an interest in what is being carried out locally. Some iwi are planning kiwi protection work once Treaty of Waitangi claims are processed.

The Department of Conservation discusses any considerations for kiwi permits with the appropriate iwi.

7.14. Community and individual landowner projects

Many people in the Far North are lucky enough to still have wild kiwi on their land and are ensuring they remain there through protection of habitat and predator control. As such, there are a number of community and landowner kiwi protection projects that have developed in the Kaitaia area, many of these taking a 'landcare' approach.

Landowner projects are where individual landowners are protecting kiwi and other values on their land independently. Community projects consist of a group of usually adjoining landowners, co-ordinating pest control to protect the habitat values on their collective lands. Often this extends into areas of adjoining public land also. In other areas of NZ some community groups work solely on public land.

The part each project is able to play in protecting kiwi at a regional level will depend on the specific project and it's capacity. Most projects function largely on voluntarily contributed time and are focused on the success of their individual projects.

Often projects are willing to share knowledge and ideas on how they initially set up, how they function, trapping information, advocacy ideas, where to find funding information and kiwi knowledge.

Whakaangi Landcare Trust is currently the largest project in the region and its website www.whakaangi.com, provides an overview of how this community project is working to save 'their kiwi'. They are also planning a programme aimed at extending support and advice to other kiwi projects in the area.

There have also been a small group of individual landowners carrying out pest and predator control to benefit kiwi and other native species in the Kaitaia area for many years.

(For more information on projects see Appendix 1 *Map of kiwi projects in Northland - 2008* and Appendix 2 *Kiwi project information*)

7.15. Local kiwi contractors and technicians

7.15.1. Aversion training for dogs

A local, private, contractor is planning to provide a training programme to increase kiwi awareness with dog owners and kiwi aversion in dogs, to assist kiwi protection in the area. This service is due to start in late 2008 and the programme will include at least six courses per year .

It is always best to avoid having a dog enter a kiwi area but this is not always practicable and some working and hunting dogs may encounter kiwi. The aversion training reduces the risk of the dog attacking a kiwi if this happens. Basic dog obedience and control at all times must still be important aspects of dog ownership and training. Further, it is not recommended that this aversion training be a replacement for encouraging dog-free subdivisions in areas of high kiwi populations. Dogs must be retrained and refreshed every six months.

Trained dogs are not guaranteed to be safe with kiwi.

Bookings can be made through The Department of Conservation: 09 408 6014

7.15.2. Kiwi technician and kiwi dog handler

A local kiwi technician and dog handler is currently undergoing training to support kiwi projects and landowners with kiwi on their land. This is a specialist role which requires training, certification and permits to handle kiwi.

Contributions to kiwi recovery include:

- Identifying where kiwi live
- Finding kiwi with a kiwi dog to confirm presence for RMA or land management purposes
- Carrying out population surveys to estimate age structures of the population
- Finding kiwi prior to forest harvesting in kiwi areas
- Support of any BNZ Operation Nest Egg™ programmes
- Assistance with any kiwi translocations
- Assessing the viability of any kiwi eggs found
- Support kiwi advocacy

It is not anticipated that this service will be available until 2009.

For more information contact Wendy Sporle 408 4241 or Lesley Baigent 408 7800

James Fraser is a contractor working throughout NZ and based in Whangarei.
(ph 09 437 7322)

7.15.3. Kiwi call count monitoring contractor

Lesley Baigent is also available to confirm kiwi presence by undertaking site visits to look for kiwi sign and to carry out call count surveys.

She is also able to train people from community groups or schools who want to learn how to monitor kiwi.

Contact Lesley at 408 7800

7.15.4. Kiwi first aid, rehabilitation and the temporary housing of kiwi

When kiwi are injured they usually require a period of rehabilitation prior to release. There are facilities available to do this where a permit holder supervises their care and recovery.

Contact Wendy Sporle regarding temporary relocation of kiwi.
Phone 408 4241

8. Goals

The goals recorded below are consistent with the goals of the draft *Taxon Plan* (in prep) and national *Kiwi Recovery Plan*. They provide some general guidance for recovery programmes.

Long term goal

To restore and where possible enhance the abundance and distribution of Northland North Island Brown Kiwi in the Kaitaia area.

Medium term goals

Kiwi recovery

- To secure, within a managed site, at least one population of a minimum of 200 pairs of kiwi. The management program for this site will have factors which ensure it is sustainable and will comprise a site of at least 1000ha of contiguous habitat
- To establish smaller populations which are receiving long term protection. It is envisioned that these sites will become nursery sites (kiwi kohanga) for later natural dispersal to surrounding areas. This natural dispersal will be achieved through habitat corridors which may have to be established or enhanced.

Management

- To increase the understanding and co-ordination between all agencies and peoples interested in protecting Far North kiwi. This will facilitate more effective management of kiwi habitat and increased kiwi protection throughout the area.

Community engagement

- To reduce the threats to kiwi by increasing the number of landowners carrying out kiwi protection on their land.
- To increase the commitment by dog owners to avoid having their dog attack and/or kill kiwi

9. Management

This section includes how the goals above could be achieved.

9.1. Expansion opportunities

Many of the kiwi in the Kaitaia Area are on private land and kiwi recovery in the region depends on the awareness and engagement of landowners and communities. They are able to make a difference and kiwi numbers will increase if threats are managed. This management includes preventing kiwi chicks from being predated by cats or mustelids, and enabling adult kiwi to live their potential 60+ years. If core, intensively managed areas are sustained there will be a natural dispersal of juvenile kiwi looking for new territories. Linkages can be created by expanding management areas once they are in a maintenance phase (Refer Map 1).

Two possible opportunities to fulfil the kiwi recovery goals and secure kiwi populations in the Kaitaia area, are identified as follows:

The initial opportunity is from Whakaangi south to the Whangaroa harbour and inland towards Puketi Forest. This area has large areas of suitable kiwi habitat and large numbers of kiwi present and is already partially managed by the Whakaangi Landcare Trust.

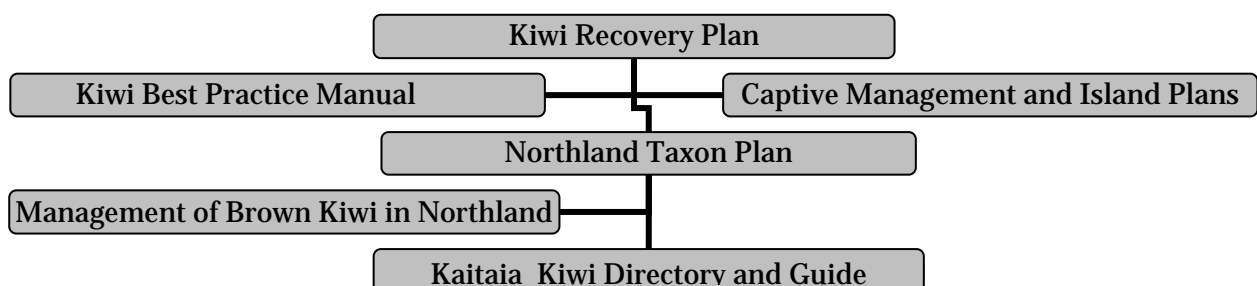
If landowners in the eastern Kaitaia area combined and co-ordinated their efforts, this population cluster could expand further and grow to meet with the Kaiaka/ Peria and Honeymoon Valley area.

9.2. Planning

Strategic planning is an important aspect of any management. Thought must be given to objectives, tasks, opportunities and then who and how objectives are to be achieved.

Kiwi protection in NZ is complex and involves many people, agencies and aspirations. A layer of planning documents has been created to guide kiwi work so it achieves its goal of 'saving kiwi'. Following is an outline of what each of the critical planning documents contain.

Figure 1: Flow chart showing the interaction between kiwi documents



9.2.1. National Kiwi Recovery Plan (2008 – 2018)

All other kiwi plans must align to this document. It is developed by the Kiwi Recovery Group and is reviewed and updated every ten years.

This plan provides information on the actions needed to secure and recover all five recognised kiwi species and includes public awareness, education and community involvement, along with habitat restoration and protection. It is strategic, but general in nature as it covers the national setting.

The focus for this, the third recovery plan for kiwi, has shifted towards increasing the efforts in management by using the knowledge and tools that have developed to halt the overall decline of species; whilst still refining further management prescriptions for those species where existing methods are not yet fully effective.

View at: www.savethekiwi.org.nz

9.2.2. Best Practice Manual

This document provides information and resources on the best techniques currently available to manage and research kiwi. It has been developed to ensure there is consistent management practices across all types of kiwi throughout the country and to provide a mechanism for communicating the continuous improvement of kiwi conservation management and research. It is a companion document to the *Kiwi Recovery Plan* and the *Kiwi Captive Management Plan*. *The Best Practice Manual* is developed by the Kiwi Recovery Group.

View at: www.savethekiwi.org.nz

9.2.3. Northland Taxon Plan (in prep)

The national *Kiwi Recovery Plan* provides strategic direction but does not prescribe specific management for each taxon (singular term for taxa or species) to a level of detail required to guide work-plans and therefore implement successful recovery. This will instead be achieved through individual taxon plans developed in a regional level while aligning with the national recovery plan.

The accountability for this plan rests with the Northland Conservancy of the Department of Conservation, in consultation and guidance with the Kiwi Recovery Group. Taxon plans around NZ are being developed in collaboration with key stakeholders including iwi, landowners and community-led kiwi projects.

Due to the complexity of kiwi protection work in Northland this will be a regional rather than local plan. (i.e. it covers all populations north of Auckland and including some of the Island in the Hauraki Gulf)

View at: www.savethekiwi.org.nz

9.2.4. Sustainable Management of Brown Kiwi

This also is a regional rather than local document. The booklet was written in 2006 and was developed to guide kiwi work in all of Northland. It was a precursor to the *Taxon Plan* and provides a similar level of detail.

View at: www.savethekiwi.org.nz

9.2.5. Kaitaia Kiwi Directory and Guide (this document)

This guide is able to provide local detail, context and contacts. It will sit under the regional *Taxon Plan* as an informal document providing local guidance and co-ordination of kiwi work in the Kaitaia area. The development of this document was partially funded by the Biodiversity Advice Fund. It is available as a hard copy, or PDF and will be sited on the BNZ Save the Kiwi website.

Contact: Wendy Sporle at kiwendi@xtra.co.nz

9.2.6. Project strategic plans

Kiwi projects applying for external funding or sponsorship are usually required to have developed strategic plans. Strategic plans outline what the kiwi project is proposing to do, why, what methodologies they plan to follow and how they will know if they have achieved their goals. These strategic plans should be aligned with the plans above them.

NZ Landcare Trust, BNZ Save the Kiwi National Mentor for Advocacy and NZ Kiwi Foundation are able to help guide projects in the development of these plans.

9.2.7. Review and updating

The development and implementation of strategic plans should be followed by a review process which makes recommendations so the plans can be kept up to date and achievable. Reviews should be carried out annually.

9.3. Survey and monitoring

Kiwi presence and population trends can be identified and confirmed through a variety of monitoring methods. None of the methods provides exact results so a number of different methodologies may be used to provide a clearer picture about kiwi densities and home ranges.

Comprehensive monitoring techniques are found within the *Best Practice Manual* and in the call count monitoring training pack that can be ordered free from www.savethekiwi.org.nz.

The website also contains audio files of kiwi calls and calls of birds with similar sounds which may be confused with kiwi calls at night, the *Kiwi Survival Guide* booklet in PDF form and access to BNZ Save the Kiwi's DVD *How to Save Kiwi* which has a chapter kiwi monitoring.

A kiwi technician can teach community groups how to listen for kiwi and to provide a service, under contract, surveying and monitoring kiwi populations for RMA and land or habitat management.

9.3.1. Call count monitoring

Most Northland kiwi population monitoring is based on call count monitoring. This is where a person (preferably the same person each year) listens for kiwi calls for the first two hours after dark for four nights at the beginning of the breeding season. This is undertaken during the dark phase of the moon in May or early June. Information is collected on the sex of the bird calling, compass bearing from the listening location, distance and time of the call. Forms and an excel spreadsheet are used to record the information. Population trends are measured by comparing call rates from each year.

This is a useful method of monitoring population trends, but as kiwi do not call until they are 2-3 years of age it is less useful to accurately gauge total population numbers.

There are five sites in the Kaitaia area (Diggers Valley, Kaiaka, Gartons, Takahue and one Whakaangi site) that have been monitored by the same people since 1995. Whakaangi has ten annual monitoring sites across the 1600ha management area. Other projects are encouraged to set up annual monitoring sites.

9.3.2. Territory mapping

In addition to collecting call-count records, the locations of birds can be recorded on a map, which will help to determine the number of pairs in each listening area. In medium to high populations it can be assumed that each male will call at least once during the four monitoring nights and that each male will have a mate. In low populations, kiwi tend to call less consistently.

9.3.3. Kiwi dog survey

In some projects it may be worth determining the age structure of kiwi populations if there is uncertainty about the effectiveness of predator trapping. This can be achieved using a certified kiwi dog and handler to find and age a sample of 20-30 kiwi. The survival of kiwi chicks and juveniles can be determined by identifying the percentage of young birds in the population. The presence of juvenile kiwi indicates effective control of chick predators. This could be repeated at three to five yearly intervals. It is best carried out in areas which have moderate to high kiwi numbers so that a statistically robust number of detections are made.

Having a kiwi technician and certified kiwi dog implement a survey in an area to be cleared, harvested or subdivided, also provides more data about kiwi numbers present so management and mitigation can be more accurately planned.

9.3.4. Kiwi sign

Identifying kiwi faeces (scats) feathers, probe holes or footprints will confirm kiwi presence (See the BNZ Save the Kiwi DVD).

Measuring the length of the footprints will indicate the size and possibly the age of the kiwi who has made the prints. Footprint lengths of c.50-80 mm represent young kiwi. Footprints over 90 mm in length are likely to be adults. This approach will provide an indication as to whether young birds are being recruited into a population.

9.3.5. Other monitoring

Pest presence

Projects carrying out animal pest and predator control can also undertake monitoring of pest presence as an indication of the effectiveness of the control techniques. This data also contributes to the review of management plans to enable improvement of methodology and focus.

Recommended monitoring techniques include:

- The trap catch method or wax tags for identifying possum presence.
- Tracking tunnels with ink pads and wax tags for detecting the presence of rats.
- Other small mammals like mustelids are also monitored using tracking tunnels.

See the BNZ Save the Kiwi DVD (ordered off the BNZ Save the Kiwi website www.savethekiwi.org.nz) where you can also find the tracking tunnel instructions and example footprints. Wax tag instructions can be found at <http://www.formak.co.nz/webfolder.html>

Project review

Kiwi projects should also plan regular monitoring and review of how the project is running and if goals and objectives are being met. These reviews then enable management efforts to be altered appropriately.

9.4. Pest and predator control

Each kiwi project will design a pest and predator programme which is achievable and realistic for their situation. Most of the projects are currently implementing programmes aimed at the restoration of the ecosystem. This benefits multiple species and involves targeting possums, rats, feral cats, mustelids and uncontrolled dogs. Some projects are also targeting hedgehogs and feral pigs.

For kiwi to thrive, their main predators need to be controlled at the times they are making the most impact. In particular:

- Chicks are most vulnerable from stoat and cat predation in spring when they hatch through to late summer, until they reach at least 1kg in weight (September to March). This is the time for concerted stoat and cat control; with attention to trap placement, trap checks and re-baiting at a minimum of three weekly intervals.
- Adult kiwi are vulnerable to predation from ferrets and dogs all year round.

Ferrets have been infrequently recorded in the wild in the Far North but trappers must remain vigilant as they could reach the densities they now have in southern Northland. This would create a significant additional pressure on the breeding populations of kiwi in this region.

For pest and predator control information see:

- The Save The Kiwi DVD
- Several files of information, including Trapper Guidelines, on the BNZ Save the Kiwi Trust website

- Department of Conservation for pest control information on <http://www.doc.govt.nz/templates/summary.aspx?id=33388>
Best practice pest control fact sheets can also be sourced from Department of Conservation staff – ask them for a copy from the DOC intranet.
- Landcare Research also has best practice fact sheets (http://possumdss.landcareresearch.co.nz/possum_dss/info/Bestpracticeindex.html)
- Northland Regional Council has basic pest control fact sheets

9.4.1. Dog control

Large numbers of kiwi are killed by uncontrolled dogs and cats. Of 194 kiwi deaths documented in Northland during the 1990s, more than 75% were caused by a range of dog breeds (e.g. German shepherd, poodle, and fox terriers). These attacks occurred under a variety of circumstances, including pets being taken for a walk, wandering dogs, duck hunters' dogs, pig dogs, farm dogs, and semi-feral dogs (Pierce and Sporle 1997).

Uncontrolled dogs are the main reason kiwi in Northland have an average life expectancy of around 15 years instead of the potential 60 plus years.

Effective management of dogs and cats is important for the long-term survival of local kiwi populations. Most opportunities to overcome this problem have an advocacy component which will:

- Raise public awareness about the threat all dogs pose to kiwi
- Reduce the number of dogs accessing kiwi areas
- Support management of uncontrolled dogs
- Encourage kiwi avoidance training of working and hunting dogs which go into kiwi areas. The Department of Conservation can be contacted for information on where and when the next training day is planned.

Trapping can also be carried out to control dogs and cats. Live capture traps can be borrowed from the FNDC animal control officer or NZ Kiwi Foundation.

Ensuring that everyone in the area is aware of the kiwi population, and what they can do to maintain it is important to ensure kiwi are safe from dogs and as such all kiwi protection projects are encouraged to talk to residents in kiwi areas. A few practical dog control messages are:

- Do not take your dog into areas where kiwi live
- Tie your dog up at night
- Keep your dog under control at all times
- Never dump unwanted dogs – deliver them to the SPCA

New Zealand dog control legislation now covers the need for people to control their dogs so they don't attack or harm threatened wildlife.

Increasingly, pet-free restrictions or covenants to protect kiwi are being sought for subdivisions in areas of known kiwi populations.

BNZ Save the Kiwi is planning a dog control campaign which will have ideas to minimize the threat dogs pose to kiwi recovery on the website.

9.5. Kiwi and resource management

The Far North District Plan includes policy that places dog ownership restrictions on subdivisions in high density kiwi areas. This is in order to avoid an escalation of dog numbers that may increase the pressure on local kiwi.

The Council also has controls on clearance of kiwi habitat. For more information contact Council Planners or the Department of Conservation planner in Whangarei.

To confirm kiwi presence in an area contract someone to listen for calls or to survey the area with a certified kiwi dog.

9.5.1. Kiwi and forestry or land clearing for pasture

Kiwi require secure habitat in order for the population to survive. Because kiwi can live for 60+ years they will outlive any commercial exotic forest rotation. Some simple measures can be practically applied when clearing land; be it as a harvesting programme or for initial planting of forests or development of pasture.

First confirm kiwi presence and where they are by a dog survey or call count monitoring. Then ensure some habitat is retained for them. The most practical areas are steep less productive lower slopes, and wetland and riparian areas. Kiwi use these areas more in dry summers. Kiwi may be relocated, by a kiwi technician, to safe areas within the block. Guidelines for managing kiwi in exotic forests are available. Contact Wendy Sporle: kiwendi@xtra.co.nz A kiwi technician will be available to help with this work from 2009.

Roller crushing and especially fires should be avoided as kiwi sleeping in shallow burrows or under fern will be killed.

A *Kiwi and Exotic Forestry* chapter is on the *Save The Kiwi DVD* and BNZ Save the Kiwi Trust has developed a *Forest Management* booklet.

9.6. Translocations and moving kiwi or eggs

Currently no formal translocations of kiwi are carried out or planned for the Kaitaia area. However there is the potential to establish new populations of kiwi in predator cleared and intensively managed areas in the future. Source sites will need to be identified as part of these plans and recommendations can be provided by Northland Kiwi Forum. A kiwi technician will be available for this work in 2009. Permits will be required from Department of Conservation.

9.7. Isolated individual birds or pairs

In some areas kiwi densities are low and few birds remain. Kiwi can naturally disperse over several kilometres, therefore if isolated individuals or pairs have safe habitat corridors they can naturally disperse through; then this plan recommends leaving them in situ.

If ongoing protection cannot be implemented in their original habitat, if there are only a few kiwi and they are unable to retreat because of barriers to movement such as major highways, ocean or settlements with pets; kiwi could then be translocated to safe habitats. Again this process involves permits from Department of Conservation and a consultation process.

9.8. BNZ Operation Nest Egg™

BNZ Operation Nest Egg™ or BNZ Operation Nest chick™ are programmes where eggs or chicks are moved to temporary incubation or crèche facilities. This is not currently planned by any kiwi project in the Kaitaia Area but the technical experience will be available in late 2009.

9.9. Advocacy and community engagement

Many kiwi in this region live on private land and it is up to landowners and people who visit these areas to ensure that the kiwi are safe. This does require raising peoples awareness and ability to make a difference. Advocacy can be carried out by anyone who cares about kiwi and wants to help to protect them.

Teachers can order the education resource *Kiwi Forever* from the BNZ Save the Kiwi website and teach about kiwi.

BNZ Save the Kiwi National Mentor for kiwi advocacy is available to support local people to carryout advocacy and to develop national resources all advocates can use. The CD accompanying this booklet includes a file detailing the resources available. Contact Wendy Sporle (kiwendi@xtra.co.nz) if you want to be on kiwi databases and receive updates and kiwi information.

BNZ Save the Kiwi has a website www.savethekiwi.org.nz with comprehensive information about kiwi which you can use when doing advocacy. This includes:

- *How to Save Kiwi DVD* with lots of information about kiwi and different aspects of kiwi protection
- Technical and scientific information about kiwi and protection methods
- Kiwi recognition calls and monitoring training information
- Trapping information
- General kiwi information and protection options
- A major school and education section and much more.

NZ Landcare Trust facilitates workshops along with NZ Kiwi Foundation who also carries out local advocacy.

Department of Conservation community relations staff have offered to help with press releases and school visits subject to the availability of staff.

Kiwi aversion training days for dogs will be combined with kiwi awareness raising.

The Whakaangi Landcare Trust carries out some advocacy in the east coast region Contact June Salt: studio95@ihug.co.nz.

Advocacy opportunities

Following are some local opportunities for kiwi advocacy.

Media

- Annual call count monitoring time and results
- Scheduled project updates and good stories
- If injured or dead kiwi are found
- Event and display reports
- On receipt of funding or support

Events and displays

- Annual shows
- Aversion training days
- Christmas parade
- In local BNZ bank
- At other agency or groups events or field days
- Talks to schools and service clubs
- World environment day
- Conservation week

One on one and to small groups

- Visit agencies and ensure they know about local kiwi
- Talk with other local landowners about dog control and trapping of predators
- Invite people to experience kiwi by listening or discretely seeing them
- In the classroom

Who to target

- General public
- Neighbours and local landowners
- Children
- Tangata whenua, hapu
- Potential funders
- Tourists
- Real estate agents, developers, planners
- Forest managers and farm foresters
- Training programmes for adults
- Service groups

9.10. Fences, crèches and kiwi refuges

There are no predator or anti-dispersal fences planned for known kiwi populations within the Kaitaia area. However the Whakaangi Landcare Trust is planning to contract a feasibility study to scope fencing and future options.

9.11. Data management

Kiwi projects are encouraged to compile data on call count records, trap catch and pest control results, pest monitoring results and other project management information. BNZ Save the Kiwi National Mentor (Wendy Sporle) can provide form templates to record the information. A Forest Health monitoring website (FORMAK) <http://www.formak.co.nz/> contains a monitoring toolkit and a download facility to store the data. NZ Kiwi Foundation is preparing a GIS database so projects can insert information free of charge. Contact Greg Blunden at greg@kiwifoundation.org.nz.

Copies of kiwi call count monitoring results should be sent to the Department of Conservation who will forward them to the national kiwi database co-ordinator.

9.12. Sick, injured and dead kiwi and eggs

If you have a sick, injured or dead kiwi or eggs record the name and phone number of the person who found it, the location and the time. Also record if you know any details of what happened and what has been done subsequently.

Ring Department of Conservation (09 408 6014), or Wendy Sporle (09 408 4241), or local vet, and warn them that you are bringing the kiwi to them (Wendy has a permit, and facilities, to carry out kiwi treatment and rehabilitation). If the kiwi is bleeding heavily ask for additional advice.

Dead kiwi are to be handed in to the Department of Conservation and feathers will be available for allocation to iwi for weaving.

Injured kiwi

All injured kiwi must receive treatment ASAP as injuries rapidly become infected and kiwi can also die from stress and 'shock'. Assume all injured kiwi are in shock: low body temp, dehydrated, stressed, malnourished and may be in pain. Initial first aid is essential to rectify these problems.

Get a transport box, with air openings, ready and lined with old clean towels prior to picking up the bird. Warmth and quiet is important. Handle active kiwi by their unfeathered legs and cradle "like a baby" upside down in your arms. If the kiwi is not moving actively or a leg is damaged, it can gently be picked up around the body. Wrap in a towel. Kiwi use their bill for feeding not defence and it can be easily damaged. They will use their feet and sharp claws to fight and kick.

Deliver the kiwi for treatment. Department of Conservation is able to pay vet bills. Major injuries will mean the kiwi will need to be transferred by plane to the Massey vet ward in Palmerston North.

Kiwi eggs

Kiwi eggs handed in from abandoned nests should be assumed to be alive unless they are smelly or sticky to touch. Look for a second egg. If one smells the other may be okay.

Note the position of the egg before moving it. Mark the top with a pencil. If it has been moved sit the egg on a flat surface and let it roll and balance so the air cell is upright. Mark this as the top. Handle carefully and keep upright and level.

Keep warm and securely packed in a box or chilly bin. Transport carefully and deliver to Department of Conservation or Wendy Sporle. Eggs will need to be examined by an expert for their viability, and if fertile they will be sent to Whangarei for incubation at the Bird Recovery Center (09 438 1457).

Release of treated kiwi or hatched eggs

It is preferable to release treated kiwi and hatched eggs back into the territory they were taken from. If this is not a safe option because there are still threats such as uncontrolled dogs and other predators, or ground set traps; they should be released into a safe site which is receiving long term, intensive predator control. These kiwi will be vulnerable for a period after treatment and will need a safe environment in which to fully recover. The Department of Conservation will advise where the kiwi are to be released.

10. Funding

For individual landowners

Northland Regional Council has an annual *Environment Fund* that grants up to about \$5000 (generally for the purchase of materials such as traps and toxins) for environmental projects in the area. This is open in June/July each year.

The Far North District Council has a *Conservation Fund* open May/June each year and this can provide up to \$5000.

For community groups

Groups can also apply to the above funding providers, but by creating a legal entity they increase their access to additional funding options. NZ Landcare Trust can offer support and guidance to community groups on funding applications. BNZ Save the Kiwi Trust can also offer funds and funding guidance to kiwi community groups.

11. Networking and Communication

Opportunities for networking and training have to be strategically coordinated so groups don't get overwhelmed, especially when time is short and petrol expensive. BNZ Save the Kiwi have email networking databases and if you wish to be added to these contact the National Mentor at kiwendi@xtra.co.nz.

NZ Landcare Trust and NZ Kiwi Foundation keep in touch with kiwi projects they are supporting and the Northland Kiwi Forum will facilitate communication throughout the area.

There is a national kiwi hui where all kiwi practitioners around NZ meet. It is held alternately in the South Island and North Island. In the years the national hui is in the South Island, it is intended to hold a Northland hui. Each year there will also be trappers training workshops and other regional workshops and gatherings. Contact Helen Moodie of NZ Landcare Trust at helen.moodie@landcare.org.nz, Greg Blunden of NZ Kiwi Foundation Greg@KiwiFoundation.org.nz, or Wendy Sporle of BNZ Save the Kiwi Trust kiwendi@xtra.co.nz for more information.

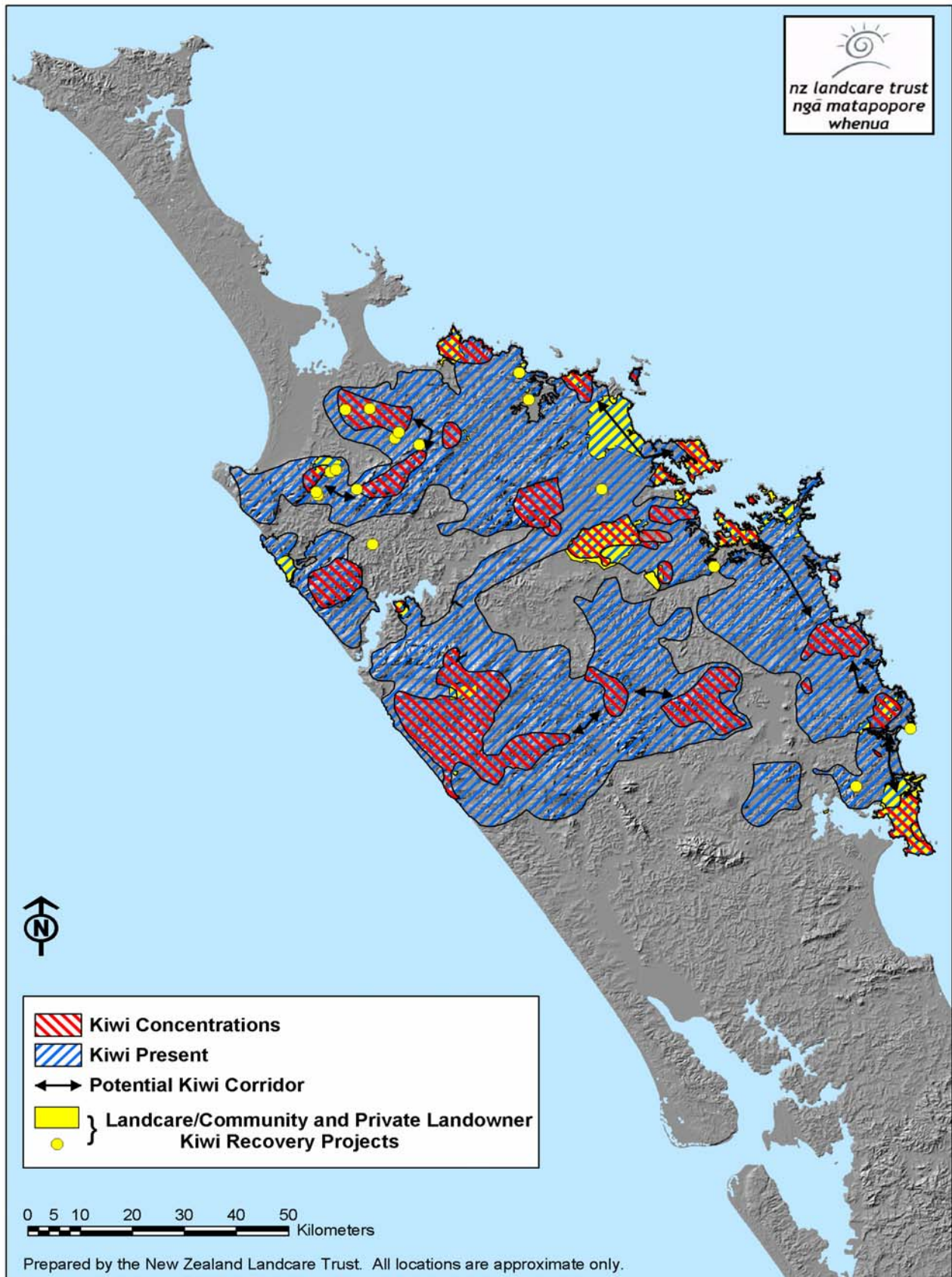
References

- BNZ Save the Kiwi Trust and Department of Conservation: author 2006 *Kiwi Survival Guide* booklet based on work by Sporle W. and Aqualine Promotions
- Craig E. 2008: *Draft Northland Taxon plan*
- Holzapfel S., Robertson, H., Colbourne R. 2008: Best Practice Manual. DOC Wellington
- Holzapfel S., Robertson H., McLennan J., Impey M., Sporle W., Hackwell K. 2008: *Kiwi (Apteryx spp.) Recovery Plan 2008 – 2018*. in print DOC, Wellington
- McLennan J., et al. 1992: *Role of predation in the decline of kiwi, Apteryx spp.* NZ Journal of Ecology 20: 27-35
- Miller P., Pierce R., 1995: *Distribution and decline of North Island Brown kiwi in Northland*. Notornis 42: 203-11
- Mullooly G. 2007 *Towards a Strategic Direction for Biodiversity Enhancement*. NZ Landcare Trust
- NBEG 2004: *Restoring the Balance Biodiversity Self help toolkit*. Northland Biodiversity Enhancement Group
- Pierce R., Sporle W., 1997: *Causes of kiwi mortality in Northland*. Conservation advisory Science Notes 169 DOC, Wellington
- Pierce R., Gardiner C., Moodie H., Robertson H. and Sporle W: 2006 *Sustainable Management of Brown Kiwi and Other Species in Northland Wildlands* contract report 1193
- Robertson, H. 2005: *Are Northland Kiwi Doomed?* Unpublished Power Point presentation
- Tarborsky M. 1988: *Kiwis and dog predation: Observations in Waitangi State Forest*. Notornis 35: 197-202

Appendices

Appendix 1 Map of Kiwi Projects in Northland - 2008

(contributed by NZ Landcare Trust and based on Pierce et al)



Appendix 2. Kiwi Project Information in the Kaitaia Area (as at 2008)

Kiwi Community Projects

Name	Covenants	Size	Predator trapping	Other work	Kiwi density est.	Future plans	Ownership
Whakaangi Landcare Trust	QEII OSC Council Unprotected DOC	1600 800ha buffer	Fenns DOC 200 SA cat Live C cat Timms Pig trap	Full protection and integrated management	High	Expand buffer Help adjacent projects set up Reintroduction of other species Ecotourism See website: www.whakaangi.com	Private, crown, council
Sawyers Road	Unprotected	< 400ha		Low level management	Medium		Private
Kohumaru	Unprotected			Relatively new Individuals currently active	Medium		Private
Herekino	Unprotected			Low level management	Medium	Increase co-ordination & area	Private
Honeymoon Valley	Unprotected	< 250ha		Low level management	Medium		Private

Kiwi Individual Landowner Intensive Projects

Name	Covenants	Size	Predator trapping	Other work	Kiwi density est.	Future plans	Ownership
Renwick & Sporle	QEII OSC & Unprotected	15 ha 35 ha buffer	Fenns DOC 200 SA cat Live C cat Timms Pig trap	Full protection and integrated management	low	Expand and connect with adjacent landowners	Private

Higginson & Khaine	QEII OSC Unprotected	19ha	Fenns, DOC 200s, SAs		Low		Private
Schou family	Unprotected	124 ha	Fenns, possum trap, cat traps		Medium		private
Baigent family	QEII OSC (planned) & Unprotected		Setting up		Medium	Full integrated management planned	Private

NZ Kiwi Foundation projects (landowner names removed for confidentiality)

	Covenant or otherwise	General area	Size (ha.)	Predator trapping	Other work	Kiwi Density est.	Future plans	Ownership
1	QEII OSC	Duncan Rd	13	Fenns, DOC 200s, SAs	Pestoff, cyanide	Medium	Create bigger contiguous area	Private
2	9 QEII OSC, unprotected & corporate	NE & SE flanks of Herekino Forest	800	Fenns, DOC 200s, SAs	Pestoff, cyanide	Low	Extend where possible to include quarry on the ntn side and link to OS Covenants on Diggers Valley Road Also a trap line through DOC area.	Private & corporate
3	QEII OSC	Duncan Rd	40	Fenns, DOC 200s, SAs	Pestoff, cyanide	Medium		Private
4	QEII OSC	Honeymoon Valley Rd	120	Fenns, DOC 200s, SAs	Pestoff, cyanide	Medium	Create bigger contiguous area	Private
5	QEII OSC	Wells Road	19	Fenns, DOC 200s, SAs	Pestoff, cyanide	Low		Private
6	QEII OSC	Paponga	90	Fenns, DOC 200s, SAs	Pestoff, cyanide & Phosphorous	Low	Hoping to eventually include neighboring property to the west (135 ha.)	Private
7	QEII OSC	Fisher Riley Rd	9	Fenns, DOC 200s, SAs	Pestoff, cyanide	Medium	Manage DoC reserve next door & extend OSC over part of neighbours	Private

8	QEII OSC	Mangatotoe Road	14	Fenns, DOC 200s, SAs	Pestoff, cyanide	Low		Private
9	QEII OSC	Honeymoon Valley Rd	240	Fenns, DOC 200s, SAs	Pestoff, cyanide	Medium	Create bigger contiguous area	Private
10	QEII OSC	Pekerau Road	35	Fenns, DOC 200s, SAs	Pestoff, cyanide	Medium		Private
11	QEII OSC	Honeymoon Valley Rd	15	Fenns, DOC 200s, SAs	Pestoff, cyanide	Low	Create bigger contiguous area	Private
12	QEII OSCs	Whangape	840	Fenns, DOC 200s, SAs	Pestoff, cyanide & Phosphorous	Low	Include neighboring farm and land to south head of Harbour - possible CPCA over this area	Corporate
13	QEII OSC	Fern Flat Road	120	Fenns, DOC 200s, SAs	Pestoff, cyanide	Low	New OSC - project work will start shortly	Private
14	QEII OSC	Shepherd Road	75	Fenns, DOC 200s, SAs	Pestoff, cyanide	Medium	Adjacent to neighbor, and treated as one block	Private
15	Unprotected	Shepherd Road	125	Fenns, DOC 200s, SAs	Pestoff, cyanide	Medium	Adjacent to neighbor and treated as one block	Private

Appendix 3. Summary table of where to go for specific help

(This table can be photocopied and kept on hand so agency front people or receptionists can refer to it when members of the public ask for help to protect kiwi. It contains a list of the most common requests and what local support is available.)

Help requested		Agency to refer to	Help available	Contact details
About kiwi	All about kiwi & protection What do they sound like?	BNZ Save the Kiwi	General information and advocacy support	www.savethekiwi.org.nz kiwendi@xtra.co.nz
Confirming kiwi presence	Call count monitoring	Private	Monitoring service or training groups	Lesley Baigent 408 7800
	Kiwi dog surveys	Private (from 2009)	Monitoring service	Lesley Baigent 408 7800
How to protect kiwi	Information on threats and pest and predator control	BNZ Save the Kiwi Trust, NRC, DOC		See sections in directory
	Where can I get traps and poisons?	K Foundation, DoC, NRC		See sections in directory
	Help to set up trapping on my land?	Kiwi Foundation		Greg@KiwiFoundation.org.nz
	Who can provide trapper training?	Kiwi Foundation, NZ Landcare Trust		Greg@KiwiFoundation.org.nz helen.moodie@landcare.org.nz
Increasing local awareness of kiwi	Resources for advocacy Being added to advocacy networks	BNZ Save the Kiwi	Provide resources	kiwendi@xtra.co.nz
Forest harvesting or land management	Identify where kiwi are and develop plans to ensure their safety	Private (from 2009)	Kiwi technician, dog handler support	Lesley Baigent 408 7800
Subdivisions	Identify where kiwi are and develop plans to ensure their safety	Private (from 2009)	Kiwi technician, dog handler support	Lesley Baigent 408 7800
Land legal protection	Where to go for information	Qu E II National Trust Nga Whenua Rahui		gblunden@openspace.org.nz kaitakawaenga@doc.govt.nz
Aversion training	What is it and where can I go?	Private	DOC does bookings	DoC 408 6014
Kiwi groups	Setting up, finding funding, support.	NZ Landcare Trust NZ Kiwi Foundation	Guidance, networking, training	helen.moodie@landcare.org.nz Greg@KiwiFoundation.org.nz
Individuals	Project setup	NZ Kiwi Foundation	Guidance, contracts establishment, training,	Greg@KiwiFoundation.org.nz
Sick or injured kiwi	Where to take it and what to do	Vet, DoC, Wendy Sporle	Treatment Rehabilitation	DoC 408 6014 09 408 4241
Where to get money for kiwi protection	Landowners	NRC, FNDC Biodiversity fund	Funding applications	See sections in directory

