Target 2%:
Working with New Zealanders to grow kiwi populations
Kiwis for kiwi investment strategy
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Current distribution of kiwi in New Zealand (2016). Map provided by Department of Conservation.
Executive summary

This document - *Target 2%: Working with New Zealanders to grow kiwi populations* - outlines Kiwis for kiwi investment strategy over the next five years. It describes how the Trust will prioritize its spending on the different kiwi species, and how it will utilise existing management programmes and infrastructure, funded by others, to leverage its investments and grow kiwi populations cost-effectively and quickly.

*Kiwis for kiwi’s* strength is its connection to the 100+ community and Māori kiwi conservation projects already underway, and its connection to a network of private individuals who have already invested significantly in predator control operations on their own land. The contributions of these landowners, and *Kiwis for kiwi’s* ability to engage with them, is pivotal to the success of this strategy.

*Kiwis for kiwi’s* strategy is underpinned by the successful 2015 DOC and *Kiwis for kiwi* joint bid to Government which delivered $11.2 million for kiwi conservation over the following four years, and $6.8 million each year thereafter. The Trust shares a goal with the Department of Conservation, its long-time partner in the national kiwi recovery programme, to increase each species of kiwi by 2% per annum.

In particular, the work *Kiwis for kiwi* is proposing directly support nine of the national goals from the DOC-led national kiwi recovery plan:

- **Goal 1.1:** To achieve at least a 2% increase per annum for each kiwi species.
- **Goal 1.3:** To expand the current distribution of brown kiwi and little spotted kiwi into areas of previous occupation.
- **Goal 1.4:** To maintain current levels of genetic diversity at a species level.
- **Goal 1.5:** To measure population growth rates for all kiwi species.
- **Goal 1.6:** To reduce the number of kiwi killed by dogs.
- **Goal 3.1:** To increase New Zealanders’ connections with kiwi and the ecosystems they inhabit, thereby increasing their willingness to become kaitaiki of our kiwi and the wider environment.
- **Goal 3.2:** To maximise the effectiveness and impact of community-, whānau-, hapū- and iwi-led projects to meet the management goals for kiwi recovery.
- **Goal 3.3:** To strategically guide the establishment of new kiwi projects to maximise the connectivity between projects and the scale of protected habitat, and to target areas and species in need.
- **Goal 4.1:** To ensure the long-term sustainability of kiwi conservation efforts.

*This document - Target 2%: Working with New Zealanders to grow kiwi populations - outlines Kiwis for kiwi investment strategy over the next five years. It describes how the Trust will prioritize its spending on the different kiwi species, and how it will utilise existing management programmes and infrastructure, funded by others, to leverage its investments and grow kiwi populations cost-effectively and quickly.*
For the next five years, the Trust will focus mainly on NI brown kiwi and great spotted kiwi, the two species most amenable to assistance from communities, landowners and Māori. At the same time, the Trust will continue to support existing community-led and Māori-led kiwi conservation initiatives on public and private land; and fund national programmes that make people more aware of the plight of kiwi and encourage them to save them.

Kiwis for kiwi’s investments in the North Island focus mainly on growing populations of kiwi in fenced sanctuaries and on offshore islands, to create source (kōhanga) populations of kiwi that can later be harvested sustainably and used to start new populations in other places. There is already a demand for ‘kiwi founders’ to re-establish populations in safe places that no longer have them - demand that will increase over the coming decades as the recently announced Predator Free NZ initiative gains momentum. The Trust’s investments in the North Island will ensure that kiwi will benefit from places made safe by others.

Kiwis for kiwi’s investments in the South Island will focus mainly on developing a 20,000 ha ground-based predator control programme for great spotted kiwi in the Heaphy area of Northwest Nelson, the only place within the species’ current range where a large-scale, community-led programme is feasible and practicable. The Trust will also invest in the establishment of source populations of great spotted kiwi, whenever opportunities arise. Other opportunities for community and Māori contribution to South Island projects will be welcome and considered.

This strategy has a 5-year life span, but the programmes it initiates should last for decades. By 2021, NI brown kiwi should have achieved the 2% growth target and great spotted kiwi should be increasing rather than declining.

We look forward to working with our partners – DOC, communities, iwi, whānau and hapū, local government and landowners – to bring the strategy to life.
Introduction

This report describes a new investment strategy for The Kiwi Trust (trading as, and hereafter referred to as Kiwis for kiwi or simply the Trust). The new strategy does not change the mission of the Trust - to support and grow community-led and Māori-led kiwi conservation initiatives on public and private land - but it does change the way the Trust will prioritize its spending on the various kiwi species, regions, and the types of management used to increase kiwi numbers.

A new strategy is required to take full advantage of: 1) the findings of the 2015, Kiwis for kiwi commissioned Landcare Research report on the status of our various kiwi species; and 2) the successful 2015 DOC and Kiwis for kiwi joint bid to Government which delivered $11.2 million for kiwi conservation over the following four years, and $6.8 million each year thereafter.

The Government funding was granted specifically to change the trajectory of all kiwi species from approximately -2% decline per year to +2% growth per year, within a 5-15 year period. Kiwis for kiwi gets $3.5 million of the funding for the first four years, and then $1.25 million each year thereafter. The Trust is required to report annually to Government on the extent to which the funds received from Government have helped achieve the 2% growth target.

Rowi and little spotted kiwi, the rarest of New Zealand’s five species of kiwi, are already growing at 2%+ per year. DOC is managing them virtually on its own and will continue to do so. The remaining three species (North Island brown kiwi, great spotted kiwi, and tokoeka) need a great deal of additional management and a collaborative DOC/Kiwis for kiwi effort to get them over the line. Each of these species has its own specific challenges and no one management prescription fits them all.

This document describes the rationale behind Kiwis for kiwi new investment strategy, how Trust investments will help North Island brown kiwi, great spotted kiwi, and tokoeka achieve 2% yearly growth, how the Trust’s activities will complement but not duplicate those of DOC and other agencies, and how the Trust’s investments will play to community strengths and make the best use of their contributions.
Former and current investment strategy

Since its inception in 1991, Kiwis for kiwi (formerly known as the BNZ Save the Kiwi Trust and the BNZ Kiwi Recovery Trust) has granted more than $7 million to kiwi projects. From the beginning, the Trust has always focused on supporting and growing community conservation initiatives that complement and assist DOC’s kiwi programmes, but the way it has done this has changed over time. In the early years, the Trust invested heavily in research programmes that helped to identify why kiwi were declining and what needed to be done to save them. In latter years, it has invested mainly in programmes that help inspire and equip community groups and Māori to protect kiwi in the wild.

Currently, the Trust invests in both national programmes and regional programmes, each with different objectives (Fig. 1).

The national programmes benefit all kiwi species and apply across wide geographical areas. In general, they aim to educate, train, inspire and connect - to make people more aware of the plight of kiwi, to encourage them to act to save them, to show them how to do it, and to involve them in the wider community conservation initiative (Appendix 1). One of the programmes specifically aims to reduce the impact of dogs on kiwi, and another supports research that will ultimately give communities better tools for protecting kiwi, and better ways of measuring the results of their management.

The regional programmes support initiatives that protect existing populations of kiwi or re-establish them in places they formerly occupied. These initiatives involve predator control and Operation Nest Egg (ONE) singularly or in combination. Community groups and Māori typically kill-trap to control predators, augmented occasionally with ground-based poisoning in bait stations. Few if any community groups control predators with aerial applications of 1080, though some groups operate in locations that benefit from periodic 1080 applications, funded and managed by other agencies. ONE is most often used as a supplement to predator control, though some community groups use it as their main restoration tool. The advocacy benefits of ONE adds to its appeal.

Currently, Kiwis for kiwi supports about 100 community-led and Māori-led kiwi conservation programmes throughout New Zealand. Some 90% of these are in the North Island, where community-led and Māori-led initiatives account for about half of the land managed for kiwi conservation (346,000 ha in total). However, even with this high level of community involvement, NI brown kiwi are still declining, and still in need of extra management effort to achieve 2% per annum growth. The gap between what is being delivered now and what is required for 2% growth is even larger for great spotted kiwi and tokoeka in the South Island.

The 2015 Government funding, though significant and welcome, is not sufficient for the Trust to keep on funding more of the same if it is to help DOC achieve the 2% growth target for all kiwi species. More predator control programmes are required in both the North and South Islands, and community groups and Māori will continue to deliver some of them, with Trust support. But the Trust will quickly exhaust its funding, well before achieving the 2% growth target for any kiwi species, if it simply This is why the Trust needs a new funding strategy and a new approach. The additional management programmes needed to generate 2% growth have to be more cost-effective, on average, than the programmes funded previously. The new approach is described below.

**National Programmes**
- Supporting people at the ‘burrow face’.
- Reducing dogs’ impact on kiwi.
- Engaging and supporting iwi, whānau and hapū.
- Engaging youth and communities.
- Supporting research.
- Monitoring and measuring success.
- Rewarding and recognising those who do the work.

**Regional Programmes**
- Predator control - ground-based trapping and poisoning programmes.
- Operation Nest Egg management programmes.

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1 Operation Nest Egg is a method of protecting chicks during their first 3–4 months of life, the period when they are most vulnerable to stoats. Eggs are collected from the wild and hatched in captivity. Chicks are then usually raised in predator-free creches until they reach a weight of about 1 kg before being returned to the wild.
New investment strategy

The new investment strategy is not all new (Fig.2). The Trust will continue to invest in national programmes that are valued highly by communities and Māori and are critical to sustaining their efforts (Appendix 1). It will also continue to support the successful and effective regional predator control and ONE programmes already underway; the gains from the new growth initiatives cannot be achieved at the expense of those already secured.

In the next five years, the best way for the Trust to help achieve the 2% growth target is to ensure kiwi benefit from predator control operations funded by other people and organisations. Such opportunities are unfolding rapidly in both the North and South Islands, fueled by an increasing acceptance that introduced mammalian predators are harming our native species and economy. The 2016 Government announcement to rid New Zealand of introduced mammal predators by 2050 formalised an aspiration shared by many New Zealanders.

Increasingly, private landowners, Conservation Trusts, Philanthropic Foundations, and City and Regional councils, are initiating new, continuous, multi-species predator control programmes in urban, rural and natural landscapes, effectively making them safe again for occupation by kiwi and other vulnerable native species. These programmes are additional to those already undertaken by DOC and OSPRI, our two largest predator control providers. Especially valuable in this array of contributors are private individuals with large land holdings, made safe for wildlife, by significant personal investments in predator control. These landowners are creating opportunities at no cost to the taxpayer and at a level of investment that Kiwis for kiwi could not afford. Their contribution, and Kiwis for kiwi’s ability to engage with them, is pivotal to the success of this strategy.

The growth in the number of providers in the ‘predator control space’ is being matched by an increase in the scale of the operations themselves. For example, the Next Foundation’s Mounga project aims to eradicate predators in Egmont National Park (34,000 ha) by 2026; and the ‘Cape to City’ programme led by the Hawkes Bay Regional Council has a similar goal for 26,000 ha of coastal farmland in Hawkes Bay. The removal of pest mammals from Rakiura (174,600 ha) within the next 10 years is looking increasingly feasible and probable.

Some of the new predator control initiatives are in places still inhabited by kiwi and some are not. The Trust therefore has an immediate opportunity: 1) re-establish kiwi in safe habitats where they are now locally extinct; and 2) add more kiwi to low-density populations in safe habitats, to improve genetic diversity, improve the cost-effectiveness of control programmes, and accelerate rates of recovery. This ‘niche’ role - of supplying kiwi for release into habitats made safe by others - is urgently required, a highly valuable contribution to kiwi conservation, and the fastest and most cost-effective way for the Trust to help DOC achieve Target 2%.

So where does Kiwis for kiwi get the kiwis from? The opportunities to harvest kiwi from dense populations that are at or near carrying capacity are currently extremely limited in the North Island and nonexistent in the South Island. For the strategy to succeed, the source populations that will ultimately provide kiwi for release elsewhere have to be grown first. Communities are well equipped to complete this task, supported by Trust funding.

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1 Source populations are also sometimes called kohanga populations, endowment populations, or kiwi farms. Such populations are confined by fences or water, and are located in places where predators are controlled or absent altogether. With minimal or no losses to dispersal or predators, the populations grow at maximum rates, eventually reaching carrying capacity.

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### Regional Programmes
- Sustain existing programmes

### Growth Initiatives
- Ensure kiwi benefit from predator control programmes funded by private landowners, councils, and other agencies
- Initiate and support new ground-based predator control programmes in places where they are the most cost-effective management option

### National Programmes
- As per previous page

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Fig. 2: New Funding strategy.
This then is the first step in the Trust’s growth strategy - to fund communities to establish source populations of kiwi that will later be harvested and used to stock places made safe by others (Fig. 3).

Currently, there are many more opportunities to establish source populations in the North Island than the South Island. Costs of establishment are also cheaper in the North Island, simply because NI brown kiwi have higher rates of productivity and population growth than their southern counterparts. The Trust’s growth strategy therefore differs slightly between islands, as outlined below - invest in source population establishment in the North, and a mix of source population establishment and predator control in the South.

**Fig. 3:** The process for generating a supply of kiwi for release into suitable habitats, made safe by others. Kiwis for kiwi engages and funds community groups to initiate new ONE programmes mainly in places where kiwi are otherwise unmanaged. The chicks from these ONE programmes are then released into predator-free fenced sanctuaries on the mainland or offshore islands where they contribute to population growth: the process is repeated for 3-6 years until the source population approaches carrying capacity and stops growing. From thereon, most of the chicks produced by the source population can be harvested and released elsewhere, at no cost to the source population itself. These harvests can continue indefinitely; actual yields are determined mainly by the number of breeding pairs in the source population. The strategy is highly cost-effective for the Trust because it makes use of sanctuaries that exist already but are under-utilised; and it makes use of existing predator control treatment areas that are doing little or nothing to help kiwi. The strategy would be unaffordable if the Trust had to pay for every step in the process.
Trust investments in the North Island

The North Island brown kiwi has four regional populations - Northland, Coromandel, eastern and western - which are managed separately because they differ genetically from each other. This adds substantially to the cost of achieving the 2% growth target for North Island brown kiwi, because the ‘overs’ in one region cannot be used to offset the ‘unders’ in another.

The species as a whole is still shy of the 2% growth target, but the Coromandel regional population and the Northland regional population have either achieved it or are close to it. The western and eastern populations are the ones most in need of additional management, and are the main focus of the Trust’s growth investments in the North Island.

Figure 4 – Current and historic range of North Island Brown kiwi.
Map courtesy Department of Conservation
Western population

What we have

The western population comprises about 7500 kiwi, nearly one-third of all North Island brown kiwi. The population is centred mainly in rough hill country in inland Taranaki, Whanganui and the Central Plateau, with some outliers in coastal regions. The current range is about 860,000 hectares; it has contracted significantly within living memory, especially in the Waikato region and northern Taranaki.

Kiwi of western provenance (whole or part) have also been established in managed sanctuaries in the nearby Wellington and Wairarapa regions, and on Little Barrier (Hauturu) and Pounui Islands.

About 44% of western kiwi currently benefit from management, mainly DOC’s large-scale 1080 operations. The population as a whole is stable, with the gains in managed areas almost exactly offsetting the losses in unmanaged areas.

The western population needs to produce an additional 134–144 kiwi each year to grow at 2%.

Opportunities for growth

The western region has an unusually large number of fenced sanctuaries, including the largest in New Zealand (3400 hectares) at Maungatutari, near Cambridge. Sanctuary Mountain Maungatutari (SMM) currently supports about 60 kiwi, about 4% of its potential carrying capacity (about 680 pairs plus immatures). The population in the smaller fenced sanctuary (230 ha) at Rotokare, Taranaki, is closer to carrying capacity, with an estimated population of 17-19 breeding pairs and 20+ juveniles. The fenced sanctuaries at Wairakei (near Taupo) and Warrenheip (near Cambridge) are currently being used as creches, protecting and nurturing young kiwi until they are big enough to be released to the wild. Neither have a permanent population of breeding adults.

SMM is the main opportunity for growth in the western region. Its potential to support and protect a very large population of western kiwi has scarcely been tapped; and its potential to produce kiwi for release elsewhere is years away from being realised if no more founders are added to the existing population.

In the western region, large suitable safe recipient sites already exist in Egmont National Park and Mount Pirongia - with each site capable of supporting more than 1000 adults. The National Park currently has few kiwi and Mt Pirongia has none; the only thing holding them back is an absence of releasees.

Kiwis for kiwis’ role

- To generate additional founders for SMM, via community-led ONE programmes, as depicted in Fig. 3.
- To fund an investigation into the genetics of the Hauturu kiwi to determine their suitability for harvest and release back into the western population. The Hauturu population would become a valuable source population for the western region if its members prove to be both genetically diverse and of pure western provenance.
**How Kiwis for kiwi’s investments will help achieve Target 2%**

The Trust's investments in ONE programmes in the western region will ensure the source population at SMM reaches harvestable size by 2021/22 — some 20-24 years earlier than it otherwise would have. The new ONE programmes, funded partly or wholly by Kiwis for kiwi, will take 2–3 years to establish and deliver their target production rate of 120–150 juveniles per year. The ONE chicks will go straight from the incubation centres to SMM, bypassing the need for an interim stop in a predator-free crèche, a usual step in most Operation Nest Egg programmes. This will reduce their exposure to parasites and disease, a potential hazard when crèche sites are intensively stocked and used frequently.

If all existing kiwi conservation initiatives in the western region remain at or above their current size, the new Trust-funded ONE programmes will provide all the extra kiwi needed to achieve the target of 2% growth for the whole population (Table 1). When the harvests from SMM begin, growth rates will exceed 2%. The harvests will be small to begin with (about 30 juveniles per year) but will then increase steadily over the following 10 years to a sustainable maximum of about 500 juveniles per year (0.75 juveniles per pair per year).

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<td>820</td>
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<td>No management</td>
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<td>3320</td>
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<td>Total</td>
<td>7500</td>
<td>8340</td>
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Table 1: Expected changes in population size and number of western kiwi benefiting from various forms of management over the next 5 years. Kiwis for kiwi investments in the western region will help sustain existing community-led kiwi conservation programmes and accelerate the establishment of source (kōhanga) populations in fenced sanctuaries. The 2% p.a. growth target will be achieved if the western population increases from 7500 in 2016 to 8340 in 2020/21.


* Information from Landcare Research Report.
Eastern population

**What we have**

The eastern population of North Island brown kiwi inhabits Hawke’s Bay, East Cape and the Bay of Plenty. Most of its 7150 members live at low density in remote, steep, bush-clad hill country in the Kaweka Ranges, Whirinaki forest, Urewera, and the Raukumara Ranges. Eastern kiwi still have a relatively extensive distribution (1,400,000 hectares) but it has contracted markedly in recent decades. Small populations have been established on two islands in the Bay of Plenty.

About 80% of eastern kiwi are currently unmanaged, making the eastern population the least managed and fastest declining of the four regional populations. Community-led and Māori-led initiatives account for most of the 1500 eastern kiwi currently under management.

The eastern population needs to produce an additional 214–220 kiwi each year to grow at 2%.

**Opportunities for growth**

The opportunities for growth in the eastern region are virtually identical to those in the western region:

- **grow the population of kiwi in Cape Sanctuary (2600 ha) - the eastern region’s largest fenced sanctuary - to harvestable size,**
- **establish a source population within the 420 ha fenced area on Whareama Peninsula, Lake Waikaremoana, and grow it to harvestable size,**
- **with iwi consent, establish a source population of kiwi on Tūhua (formerly Mayor Island) in the Bay of Plenty, the only island in the eastern region large enough to support a self-contained, viable population of kiwi.**

**Kiwis for kiwi’s role**

*Kiwis for kiwi* will wholly or partly fund the ONE programmes required to accelerate the growth of source populations in the eastern region. The Trust will initially focus on expanding two large ONE programmes that already exist within the eastern region, rather than establishing new ONE programmes in currently unmanaged areas.

**How Kiwis for kiwi’s investments will help achieve Target 2%**

Target 2% should be achieved in the eastern region within five years, by 2021 (Table 2). Just over half of the recruits will come from *Kiwis for kiwi’s* investments in expanded ONE programmes (100 kiwi per year). The remaining recruits will come from new 1080 programmes (funded by TBFree NZ and DOC), from harvests from Puketutukutuku Peninsula, from new trapping programmes funded mainly by Māori (20 kiwi per year) and from the release of captive-bred juveniles, surplus to the requirements of the National breeding programme².

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<td>Yield from Puketutukutuku and the National captive populations</td>
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<td>New 1080 programmes</td>
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<td>3080</td>
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<td>Total</td>
<td>7150</td>
<td>7900</td>
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*Information from Landcare Research Report.

Captive-bred juveniles which are not required for breeding are released into the wild.

Table 2: Expected changes in population size and number of eastern kiwi benefiting from various forms of management over the next five years. Kiwis for kiwi’s investments in the eastern region will help increase the scale of existing ONE programmes, accelerate the growth of source populations, and develop systems for harvesting.
Coromandel population

What we have

With about 1700 adults, the Coromandel population is the smallest of the four regional populations of North Island brown kiwi. Coromandel kiwi were once spread along the full length of the peninsula, and perhaps beyond it into the Bay of Plenty, but their range has contracted by about 40% in the last 20 years, and remaining kiwi are now confined to about 125,000 hectares on the northern end of Coromandel Peninsula.

DOC is currently establishing an ‘insurance’ population of Coromandel kiwi on Te Motutapu-o-Taikahu Island (Motutapu Island, 1509 hectares) in the Hauraki Gulf.

About 75% of the Coromandel population is currently benefiting from management and the population as a whole is growing at 4% per year. Community initiatives account for about half of the hectares under management. DOC initiatives account for the remainder, with the largest being the Moehau Kiwi Sanctuary (36,000 hectares) at the tip of the peninsula. This sanctuary, established in 2000, underpins the regional conservation effort.

Opportunities for growth

No additional management is required for the Coromandel population because it is already achieving the 2% target. But this pleasing outcome results in part from the recent population collapse at the southern end of the peninsula, leaving a remnant, unrepresentative of the population as a whole. In reality, a great deal of extra effort is required to restore the Coromandel regional population to its pre-1990 size within the next 30-50 years.

The growth opportunities are:

- accelerate population establishment on Motutapu Island so that it becomes a source population for the wider region as quickly as possible,
- enlarge existing ONE programmes on the peninsula to meet the immediate demand for founders for a new population in the Hunua Ranges. This population is probably outside the traditional range of Coromandel kiwi, but Coromandel kiwi are now the closest and most suitable colonists.

Kiwis for kiwis’ role

Kiwis for kiwis will help fund the ONE programmes required to supply colonists for the Motutapu Island and Hunua Ranges programmes.

How Kiwis for kiwi’s investments will help achieve Target 2%

Kiwis for kiwi investments will add another 40–70 kiwi each year to the Coromandel population, increasing growth from 4% per year to more than 7.0% (Table 3). If 50 juveniles are added to the Motutapu population each year for five consecutive years from 2017 onwards, harvests should begin in 2025. Yields are likely to start at about 70 juveniles per year, then build steadily to 220 a year - more than enough to restore populations on the southern end of Coromandel Peninsula.

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<td>370</td>
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Table 3: Expected changes in population size and number of Coromandel kiwi benefiting from various forms of management over the next five years. Kiwis for kiwi investments in the Coromandel region will help provide additional founders for the Motutapu Island and Hunua Ranges establishment programmes.
Northland population

What we have

The Northland population of about 8200 kiwi (33% of North Island brown kiwi) is spread over 700,000 hectares. Northland kiwi also live on various offshore islands, and in the fenced sanctuary at Tawharanui, near Warkworth.

Northland leads the way for community-led kiwi conservation initiatives; there are currently more than 60 in the region, more than in all other regions combined. Between them, they cover about 95,000 hectares and protect nearly 50% of the regional kiwi population. The Northland population is increasing slowly, with losses on the western side being offset by strong population gains on the eastern side.

An additional 41 kiwi each year would achieve the 2% target for Northland brown kiwi.

Opportunities for growth

The main growth strategy for Northland and the way it will be achieved is the same as that for other regions - to accelerate the development of source populations in fenced sanctuaries and offshore islands, by supplementing them with juveniles sourced from other parts of the region. The three most promising opportunities for growth are:

- Help Auckland Council accelerate the growth of the fenced population at Tawharanui,
- Help community groups develop procedures and protocols for harvesting and transferring kiwi from high-density populations to low-density ones in other parts of the region. This opportunity utilises local kiwi populations, mainly on peninsulas, that communities have already restored to carrying capacity.

Kiwis for kiwi’s role

Kiwis for kiwi will help fund the development of source populations and the techniques for harvesting kiwi from populations already at carrying capacity.

How Kiwis for kiwi’s investments will help achieve Target 2%

Kiwis for kiwi investments in the Northland region will add another 40 kiwi each year to the regional total, achieving Target 2% by 2021 (Table 4). It is also highly likely that new landscape-scale predator control programmes, funded by other agencies, will roll out at the same time, boosting annual growth rates across the entire region to more than 4%. With its water barriers on both sides and relatively narrow width, Northland Peninsula is a prime candidate for selection as the first large test site for the Government’s PFNZ initiative, which aims to remove pests from entire regions.

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</tr>
<tr>
<td>Total</td>
<td>8200</td>
<td>9558</td>
</tr>
</tbody>
</table>

Table 4: Expected changes in population size and number of Northland kiwi benefitting from various forms of management over the next five years. New predator control programmes are assumed to bring 400 kiwi under management each year for the next five years and generate growth of 2% per annum. Kiwis for kiwi investments in the Northland region will help restock sites where kiwi are now extinct and provide founders for endowment populations on islands.

* Information from Landscape Research.

Trust investments in the southern region

What we have

For various reasons, it is more difficult to achieve the 2% growth target for the southern species of kiwi than for NI brown kiwi; and - within the southern species - the target is more difficult to achieve for great spotted kiwi than tokoeka.

Tokoeka (total 25,900 adults, separated into four genotypes) is being successfully managed by DOC in several places in Fiordland, including the Murchison Mountains, Resolution Island and Secretary Island. The isolated population at Haast (about 400 individuals) is now growing at 3%-4% per year; and the fortunes of the large tokoeka population on Rakiura will improve when feral cats are eradicated on this island, probably within the next 5-10 years. Additional populations of tokoeka (all Haast genotype) have also been established recently on Coal Island in Fiordland, Pomona Island in Lake Manapouri, and in Orokonui Ecosanctuary, a fenced sanctuary near Dunedin.

The story is less favourable for great spotted kiwi at the other end of the South Island. (See Figure 5). It is perhaps the most difficult of all kiwi to save, and is the only species of kiwi exposed to predators in all parts of its range. It has no breeding populations on offshore islands, and no populations in fenced, predator-free sanctuaries. It is still relatively numerous (14,800 adults) but only 13% of the population is currently benefitting from any form of management, making great spotted kiwi the least managed of all kiwi species. To compound matters, preliminary trials by community groups indicate that great spotted are not particularly amenable to ONE management, with juveniles suffering high rates of mortality following their return to the wild. This problem may eventually be overcome, as it was for rowi - but in the meantime, ONE is not an especially useful tool for growing great spotted kiwi populations.

To achieve target 2% for great spotted kiwi, an extra 550 individuals have to be recruited to the population each year, the single biggest ask for any kiwi species. It is a target that requires a genuine team effort to achieve.

Over the next 5 years, the Trust will focus mainly on great spotted kiwi in the southern region, with the aim of improving their prospects with ground-based predator control - the only community-friendly management tool currently available for this species. Ironically, the species most in need of help is the most difficult to help.

Opportunities for growth and Kiwis for kiwi’s role

The strategy adopted for North Island brown kiwi of building source populations in places made safe by others has little or no immediate application for great spotted kiwi because no safe places are currently available for their occupation - within or near their natural range.

Abel Tasman National Park (22,500 ha) is on the radar as a potential safe place, thanks to Project Janszoon, but concerns over its ability to provide sufficient food for great spotted kiwi have to be resolved first before releases can begin.

The recently established Brook Sanctuary, near Nelson, is to be used for rowi conservation.
In most parts of their range, great spotted kiwi live in landscapes too mountainous and remote to be suitable for community-led and Maori-led ground-based predator control programmes. But there is one notable and unique exception - the Heaphy area of Northwest Nelson, in heartland great spotted country, where the birds live in elevated, tussock and shrublands, accessible to people on foot. The undulating and relatively benign terrain makes continuous, ground-based predator control possible, on a 10,000 ha - 20,000 ha scale.

The best growth options for the Trust in the southern region are:

- Helping communities and/or Māori establish a large-scale ground-based predator control programme in the Heaphy area, (fig 6)
- Helping community groups refine and improve ONE as a management tool for great spotted kiwi,
- Helping the Project Janszoon team test whether Abel Tasman National Park is a suitable release site for great spotted kiwi.

**How Kiwis for kiwi’s investments will help achieve Target 2%**

A 20,000 ha ground-based predator control programme in the Heaphy area will generate about 85 recruits each year, about 15% of Target 2%. It is a seemingly small return on such a large and ambitious programme, but is a valuable contribution in a species where even the smallest population gain is difficult to achieve. Great spotted kiwi will likely be the last of our kiwi species to reach 2% growth and may be the only one that requires the development of new predator control technology to get there.
The costs of implementing this strategy over the next five years has been presented to Trustees in the Kiwis for Kiwi Action Plan.
Measuring progress toward the 2% growth target

The Trust will measure how its investments benefit kiwi by:

- monitoring kiwi abundance in areas benefitting from Trust-funded predator control programmes
- counting the number of kiwi produced by Trust-funded ONE programmes,
- counting the number of kiwi harvested from Trust-funded source (kōhanga) populations,
- recording the number of hectares under community or Māori management.

The Trust will collate the results annually and report them to Government, sponsors, and to groups running kiwi conservation projects throughout New Zealand.
The final word

These are exciting times for *Kiwis for Kiwi* and the groups it supports, the turning point when collective effort and strategic investment changes the kiwi conservation story from loss to gain, from despair to hope.

We are privileged to support the thousands of New Zealanders who are giving their precious time, energy and money to saving kiwi. It takes a very big team to achieve Target 2% for all kiwi species, and we are truly grateful that so many caring New Zealanders want to be part of it. We are also privileged to help our partner, the Department of Conservation, achieve a goal that neither of us could achieve on our own.

Twenty years ago, it was difficult to imagine that Target 2% would ever be attainable for any kiwi species on mainland New Zealand. In 20 years’ time, kiwi will be plentiful in many places and part of our everyday lives. The Trust’s vision of kiwi from *endangered to everywhere* is fast becoming a reality.
Appendix 1: The National programmes

Kiwis for kiwi supports a number of national programmes that are not specific to a region or species, but rather benefit more broadly the collective effort.

These programmes connect communities and Māori projects with one another, and with local and central government agencies, scientists and researchers. Although it is more challenging to measure the direct contribution to achieving Target 2%, we know they are critical.

Our 5-year strategy sees Kiwis for kiwi continuing to support and sustain these programmes, which fall loosely into the following eight themes.

Supporting people at the ‘burrow face’

A tonne of skill, passion and commitment is needed to initiate and sustain community, iwi, whānau and hapū kiwi projects. Our success relies on the success of these groups, and our role is to ensure they have access to the skills, training and information they need. We will continue to offer opportunities to network, to build capability and capacity and to have a nimble team of knowledgeable people to offer support.

Reducing the impact of dogs on kiwi

We know a single roaming dog can devastate a kiwi population. In Northland, for example, monitoring tells us dog attacks reduce the average life expectancy of an adult kiwi from 60 years to 13 years. Progress in addressing this issue over the past decade has been limited and the solution will be multi-faceted.

Kiwis for kiwi’s role will focus on advocacy, drawing on our considerable expertise in publicising the plight of kiwi and raising awareness about kiwi conservation. We will also continue to support and refine the existing programme to train dogs to avoid kiwi – known as Avoidance Training for Dogs.

Engaging youth

Research suggests a growing disconnection between people and the natural environment, especially young people whose lives are increasingly dominated by urban environments and technology. Research also identifies myriad positive benefits of re-connecting people with nature.

Kiwis for kiwi does not expect to play a major role in the education space, as many organisations are more ably suited to this task. Our strategy is to maximise our impact through a targeted approach that embeds the kiwi conservation story into existing education programmes and initiatives. The entire curriculum can be taught with kiwi at its core – biology, history, finances, reading, writing, mathematics, science, etc. We will offer this by updating and promoting our curriculum-aligned resource, Kiwi Forever.
Engaging and supporting iwi, whanau and hāpu

Kiwis for kiwi takes a ‘flax roots’ approach to supporting iwi, whānau and hāpu-led projects – both current and potential. Our role will be one of support rather than leadership and it will be driven by a dedicated person (in the role of Kaitautoko Kaupapa Kiwi) to support these projects.

Our initiatives will help project leaders develop clear strategic directions and robust plans to achieve their goals. We will support and encourage mentoring from within. Our biggest impact will be in helping more projects achieve the necessary organisational capability, capacity and processes (including succession management) that allow them to exercise their role as kiwi kaitiaki.

Connecting New Zealanders with kiwi

Allowing New Zealanders to meet a live wild kiwi is one of the greatest advocacy tools we have. Because opportunities are almost as rare as the birds themselves, they can deliver an exciting and treasured experience, with a powerful impact.

Drawing on our vast experience, we will take a leadership role (working with DOC) to develop a programme of kiwi encounters that minimises risks to birds, while maximising the positive impact for people.

Supporting research

Kiwis for kiwi will not develop a proactive research strategy. Instead, each year we will reserve a small amount of money (up to 10% of available funds) to respond to funding requests, with the proviso that our contribution will add significant value and that the research is directly relevant to kiwi conservation.

Monitoring and measuring success

Kiwis for kiwi is obliged to report to our funders on the overall impact of our investments. That is, just how many kiwi have we helped produce, toward the target of a 2% annual increase in the population of each kiwi taxa.

Measuring the exact growth or decline in the number of birds is challenging, but we do have some meaningful measurements that will provide a picture of what is happening on the ground. We will collect call count data from community projects doing predator control, which will indicate trends over time, and we will work with DOC to develop a more robust monitoring system that we will use collectively to report on progress towards 2% growth.

Rewarding and recognising those who do the work

Across New Zealand, thousands of people volunteer their time, skills, money and enthusiasm to help kiwi populations survive and grow. These are the unsung heroes of kiwi conservation, and we need to recognise them.

To that end, we will create an annual national awards programme with categories for kiwi projects and the individuals involved, and for businesses and industries that support kiwi conservation. Likewise, we will take advantage of existing awards programmes where appropriate (ie Minister for the Environment’s Green Ribbon Awards) to ensure nominations and recognition for kiwi practitioners are submitted.
Appendix 2:

Links to the National Kiwi Recovery Plan

This strategy directly supports the main long-term recovery goal of the national kiwi recovery plan (2017-27):

To reach 100 000 kiwi by 2030 through:

- Growing populations of all kiwi species by at least 2% per year,
- Restoring their former distribution and
- Maintaining their genetic diversity.

It also directly supports nine of the recovery plan period goals:

- Goal 1.1: To achieve at least a 2% increase per annum for each kiwi species.
- Goal 1.3: To expand the current distribution of brown kiwi and little spotted kiwi into areas of previous occupation.
- Goal 1.4: To maintain current levels of genetic diversity at a species level.
- Goal 1.5: To measure population growth rates for all kiwi species.
- Goal 1.6: To reduce the number of kiwi killed by dogs.
- Goal 3.1: To increase New Zealanders’ connections with kiwi and the ecosystems they inhabit, thereby increasing their willingness to become kaitaiki of our kiwi and the wider environment.
- Goal 3.2: To maximise the effectiveness and impact of community-, whānau-, hapū- and iwi-led projects to meet the management goals for kiwi recovery.
- Goal 3.3: To strategically guide the establishment of new kiwi projects to maximise the connectivity between projects and the scale of protected habitat, and to target areas and species in need.
- Goal 4.1: To ensure the long-term sustainability of kiwi conservation efforts.

Of the 45 action items in the national plan either wholly or in part allocated to Kiwis for kiwi, this strategy (which includes BAU activities) the Trust’s plans for the next five years directly addresses all but 8 of these actions.