

# Kiwi Link

Community Pest Control Area

Year 5 – Final CPCA Report

July 2021



## Table of Contents

Background	1	Appendix 1: Backyard Kiwi Monitoring of Radio Transmitted Kiwi that have moved into the Kiwi Link Area.
Activities	1	
Kiwi Link Groups and Projects	2	Appendix 2: Kiwi Listening Device Results 2020 & 2021
Objectives	4	Appendix 3: Annual Kiwi Call Count Survey Results – Human Listening: 2014 – 2021
Monitoring	7	
Financial Summary	12	
Summary	14	
Appendices	15	

## Background

The vision of Kiwi Link is “Flourishing flora and fauna, with abundant kiwi roaming safely between Taraunui and Ngunguru Ford by 2026”.

The Kiwi Link Community Pest Control Area (CPCA) got underway with Northland Regional Council (NRC) in January 2017.

Community-led conservation groups involved in Kiwi Link have worked together over the past five years to restore biodiversity over approximately 14,000 ha between Taraunui and Ngunguru Ford in eastern Whangarei. This project was named the ‘Kiwi Link’, as the primary goal was to rebuild kiwi populations and connect the kiwi strongholds of the Whangarei Heads peninsula and the Tutukaka Coast.

This report summarises the results and achievements of the Kiwi Link CPCA during its fifth year of operation from July 1 2020– June 30 2021.

This is the final report for Kiwi Link CPCA, completing the five-year agreement with NRC.



## Activities

Over the last five years Kiwi Link has:

- Worked together as communities and land managers to restore native flora and fauna between Taraunui and Ngunguru Ford.
- Deployed new predator traps and bait stations to expand and fill gaps in the ever-growing predator control network
- Coordinated animal and plant pest operations with willing landowners for maximum efficiency and effectiveness.
- Protected the small remnant kiwi populations and assisted their genetic viability by reducing key predators and translocating more and genetically diverse kiwi into the area.
- Implemented robust outcome monitoring measures to track progress towards goals.
- Supplied landowners with resources to help them operate at their full potential.
- Ensured all community-led conservation projects involved could sustain professional predator control.
- Motivated and empowered further landowners to actively participate in environmental stewardship/ kaitiakitanga by holding joint community events and skill building workshops.
- Collaborated with hapū, iwi, Kiwi Coast, NRC, DOC, QEII National Trust and neighbouring projects to progress the creation of NZ’s first kiwi corridor.

Animal and plant pest species controlled through the Kiwi Link project area included:

- Possums
- Rodents
- Mustelids
- Feral cats
- Feral Pigs
- Myna
- Magpies
- Hedgehogs
- Banana passionfruit
- Elaeagnus
- Climbing asparagus
- Taiwan cherry
- Wild ginger
- Moth plant
- Glyceria maxima
- Woolly nightshade

## Kiwi Link Groups and Projects

Initially, the Kiwi Link CPCA involved eight projects working together over 13,624ha.

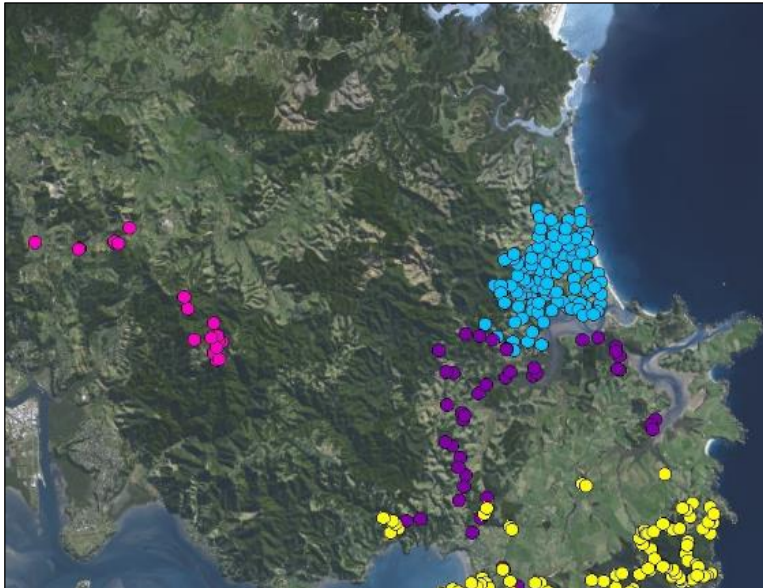
As at June 30, 2021, 14,133 hectares were being collectively managed by 10 projects:

- Harris Rd Area Landcare
- HFM Whanui Project
- Kohinui Stream Landcare
- Ngunguru Ford Landcare
- NRC Mt Tiger Forestry Block
- Owhiwa Landcare
- Pataua North Landcare
- Ross Road Landcare
- Taheke Landcare
- Whareora Landcare

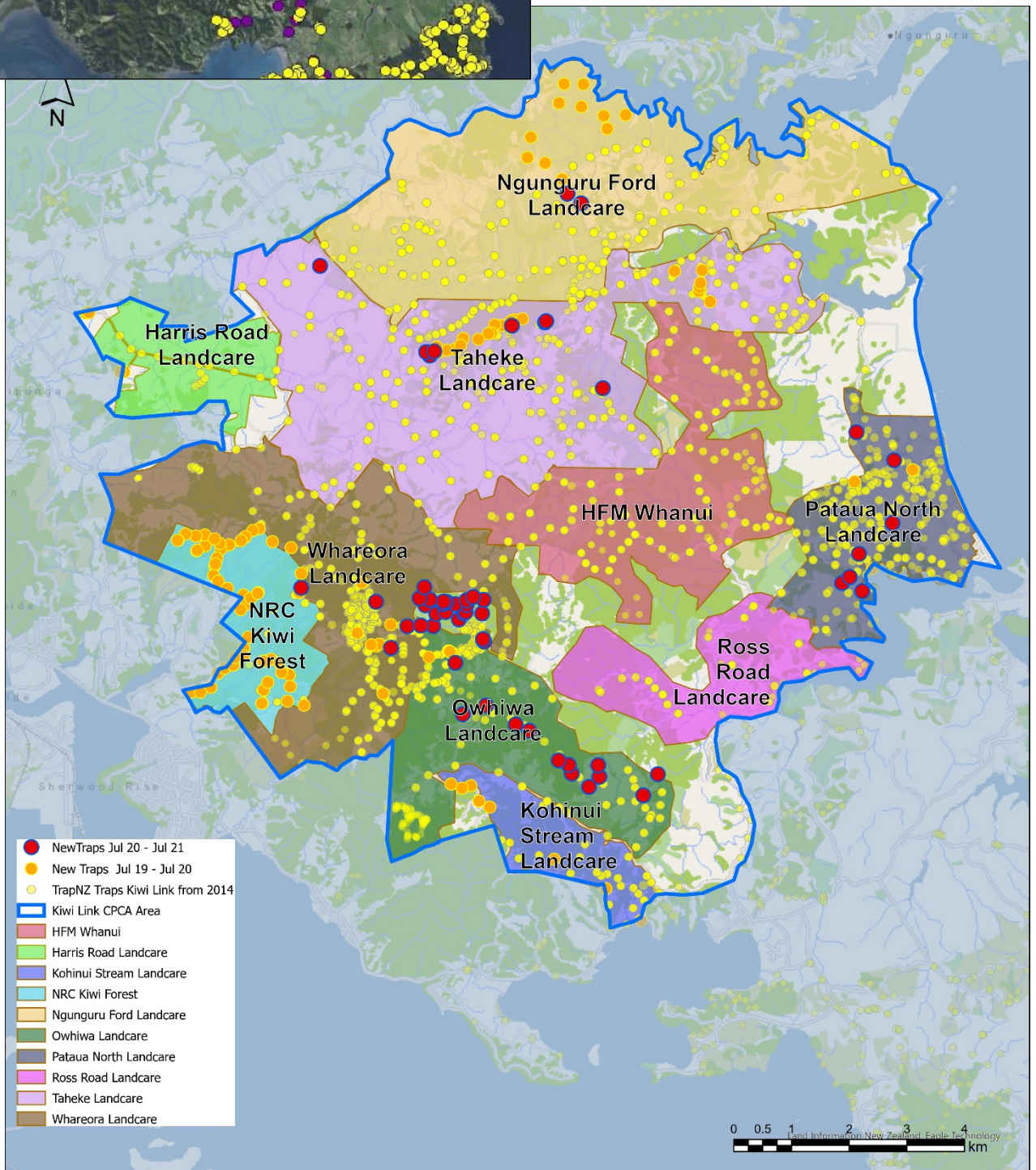
Map 2 shows the location of the project areas.



Accredited Kiwi Handler Cam McInnes shows Takoha the kiwi at Taheke Kiwi Release, April 2021.  
Photo Wendy Bown



**Map 1: Predator traps, 2013.**  
Map: NRC



**Map 2: Kiwi Link CPCA Groups & Predator traps as at June 30, 2021.** Map: A. Duxfield

## Objectives

Kiwi Link CPCA progressed all five key objectives over the last five years.

### Objective 1: Enable the groups to continue their existing work

Resources provided to groups included traps, lures, toxins, bait stations, weed spray, monitoring and safety equipment as requested. For the last three years of Kiwi Link, demand exceeded budget constraints and not all products requested were able to be supplied. This can be seen as a sign of success in terms of the growth of engaged landowners wishing to be actively involved in animal and plant pest control.

Budget priority was given to ensuring professional predator trappers under contract to Kiwi Coast were resourced to complete all trapping rounds for each project to complement the unpaid work of the many landowners involved.

Kiwi Link has been very grateful to NorthTec Hunting and Pest Control tutors and students who assisted with the deployment and servicing of traps in the Maungatika Scenic Reserve, within the Whareora Landcare project area.

In particular, the quick replacement in 2020 of double DOC 200's swept away during the 1-in-500 year Whangarei storm in the heart of the reserve's stream system and establishment of an SA2 trapline for possum control was greatly appreciated and of huge benefit to the native forest and wildlife in the area.

A variety of animal and plant pest control capacity building workshops and fieldtrips have been held over the past five years. These were held on request and tailored to build specific skills and knowledge.

Workshops have included:

- Controlled Substance Licence Courses and Practical Fieldtrip
- Hands-on Trap Training
- Plant Pest Control Workshop with Weed Action Whangarei Heads
- Professional Predator Trapping Mentoring & Skill Development
- Rat and Possum Control Traps & Toxin Workshop
- Trapping For Success



## Objective 2: Fill the gaps to complete a continuous predator control trapping network

The Kiwi Link predator trap network targeting feral cats and mustelids (weasels, stoats and ferrets) has been continually expanded, linked and infilled over the last five years.

Comparing predator traps in the area in 2013 (Map 1) to those in place at June, 2020 (Map 2) shows the impressive progress made to date.

There is now an extensive collaborative predator trap network covering the 14,000ha project area. Predator traplines of neighbouring projects are back-to-back in many places, ensuring predators have optimal opportunity to encounter devices across the landscape.

Boffa Miskell's review of the wider 60,000ha predator control network between Whangarei Heads and Tutukaka as part of the Predator Free Whangarei initiative will assist with further refinement and improvements of the Kiwi Link network.



Maungatika Scenic Reserve DOC 200 stoat trap.  
Photo: Whareora Landcare

## Objective 3: Establish a combined bait station network

Further bait stations were supplied to landowners to infill and expand the bait station network within the Kiwi Link area. In addition to the popular mini-philproof bait stations, Pied Piper bait stations were added into the networks of a number of blocks, and have proven a successful means of preventing possums and other non-target animals from consuming rat toxin.

Toxins continue to be pulsed and cycled each year, to avoid a build-up of bait shy animals. Each winter special emphasis is put on a coordinated possum and rat knockdown with willing landowners across the Kiwi Link as far as practically possible, and as resourcing allows. In 2020 the knockdown targeted possums and rats with Double Tap.

A number of landowners continued rat control after the knockdown with diphacinone or pindone, many resourcing the toxins themselves once Kiwi Link supplies were exhausted.

## Objective 4: Rebuild Kiwi Populations

Kiwi Link CPCA has utilised a multi-pronged approach to building kiwi numbers and genetics over the last five years.

Firstly, the breeding success and survival of existing kiwi were protected and enhanced with intensive professional predator control. Secondly, kiwi aversion training workshops for hunting and farm dogs were held annually at Taheke and Pataua North.

Kiwi Link CPCA also worked in with Backyard Kiwi, Kiwi Coast, Department of Conservation and Northland Regional Council to support kiwi monitoring, translocations and releases.

### Kiwi Translocations

Kiwi translocations have been held by Pataua North and Taheke Landcare with support from iwi, hapū, Department of Conservation, Kiwi Coast, and NRC. In total, over the past five years 51 kiwi have been translocated into the Kiwi Link CPCA area. This has helped to supplement the small existing kiwi population scattered across the Kiwi Link CPCA and boost genetic variability to ensure long-term population viability.

All kiwi released were fitted with radio-transmitters and tracked for various lengths of time according to the relevant permit held.

Kiwi released on the Kiwi Link CPCA border by Backyard Kiwi were subsequently tracked by Backyard Kiwi Project Manager Todd Hamilton to investigate breeding success and dispersal (See Appendix 1).

## Kiwi Releases and Meet a Kiwi Events

Landowners within the Kiwi Link CPCA have enjoyed annual opportunities to meet wild kiwi up close at 'Meet a Kiwi' events and public kiwi releases held by Backyard Kiwi, Taheke Landcare and Pataua North Landcare.

These events, each attended by hundreds of keen locals, continue to be a cornerstone of community engagement, winning hearts and minds, inspiring further community stewardship, building the social licence for pest control tools and motivating excellent dog control.



## Objective 5: Plant pest control

A potential negative effect of animal pest control is an increase in plant pests. Groups involved in Kiwi Link continued their plant pest control, targeting moth plant, Elaeagnus, wild ginger, climbing asparagus, woolly nightshade, Taiwan Cherry and glyceria. In the past 12 months alone, landowners and managers contributed \$64,771 of plant pest control labour. This demonstrates the huge amount of effort going into the Kiwi Link area to keep invasive plant pests at bay.



## Monitoring

All scheduled monitoring has been completed.

### Animal Pests

All Kiwi Link projects recorded their trap catches and submitted their results to Kiwi Coast as part of the annual collation of data.

Collating the trap catch data gathered since the Kiwi Link CPCA began shows that a total of 27,449 pests have been trapped since 2017 (Table 1).

As stoats kill 95% of kiwi chicks before they reach one year old, the 573 stoats trapped will have increased the likelihood of kiwi chick survival. As stoats are known to range large distances, this may have also assisted kiwi chick survival rates in the neighbouring strongholds of Tutukaka and Whangarei Heads.

Landowners across the Kiwi Link CPCA remain concerned about feral pigs, illegal pig hunting activity, pig damage to native forest health and the risk posed by hunters and pigs in spreading Kauri Dieback Disease (KDB). NRC have continued to monitor the feral pig population and coordinate the collaborative Pig Control Plan developed in 2019 by Good Wood Aotearoa, NRC, Kiwi, Coast, Department of Conservation (DOC), Whangarei District Council (WDC), local Landcare Group representatives and professional pig hunters.



Mt Tiger forest. Photo: Whareora Landcare. Animal pest silhouettes: Full Circle Design & Creative Web Ideas

**Table 1: Kiwi Link Total Collective Pest Control Results, 2017 – 2020**

Year	Possums	Rats	Ferrets	Stoats	Weasels	Feral Cats	Wild Rabbits & Hares	Feral Pigs	Magpie	Myna	Hedgehog	Mice	Other catches	Total
2017	3,692	2,379	1	164	127	48	111	71	11	115	210	291	17	7,237
2018	2,535	2,607	0	178	134	46	69	99	26	76	183	208	83	6,244
2019	2,641	2,761	0	125	103	58	186	224	30	74	210	162	22	6,596
2020	3,843	2,313	0	106	95	67	395	144	7	66	230	102	4	7,372
<b>Grand Totals</b>	<b>12,711</b>	<b>10,060</b>	<b>1</b>	<b>573</b>	<b>459</b>	<b>219</b>	<b>761</b>	<b>538</b>	<b>74</b>	<b>331</b>	<b>833</b>	<b>763</b>	<b>126</b>	<b>27,449</b>

NB: Trap catch results only - actual tally will be higher as does not include pests controlled with toxins

## Kiwi

All Kiwi Link projects participated in the Annual Kiwi Call Count Survey, either with human listeners or with Kiwi Listening Devices (KLDs) at less accessible sites or where no kiwi were known to be present. Results are presented in Appendices 2 and 3.

Kiwi Link also participated in Kiwi Coast's second Kiwi Listening Blitz aimed at tracking changes in kiwi distribution over time, via a survey every five years.

This kiwi monitoring has shown that kiwi are now present at new sites, where five years ago they were unable to be detected. This coupled with annual Kiwi Call Count Survey data suggests that kiwi numbers are slowly increasing at some sites within the Kiwi Link CPCA. However, it is concerning that some sites (e.g. Maungatika Scenic Reserve) appear to have lost kiwi pairs and kiwi are still being killed by dogs in the area.

### Monitoring of radio-transmitted kiwi

Monitoring by Backyard Kiwi of radio transmitted kiwi has shown that kiwi are moving into the Kiwi Link Area from the Whangarei Heads (Appendix 1).

While there was some excitement in November 2020 that the first transmitted kiwi in the Kiwi Link area was nesting, hopes were later dashed. Teina the kiwi "nested" for 97 nights until it was found that he had been incubating a rock!

Todd from BYK who monitors Teina said:

"Although he didn't get it quite right this time, Teina has shown he will be a great nester. While we'll never know what triggered him to incubate a rock for 97 nights, what we do know is that Teina has proven he can last the distance. He will be a great nester when he gets the chance – a real Rock star kiwi!"



Teina's rock Vs a real kiwi egg – not too far off the mark!  
Photo: Todd Hamilton

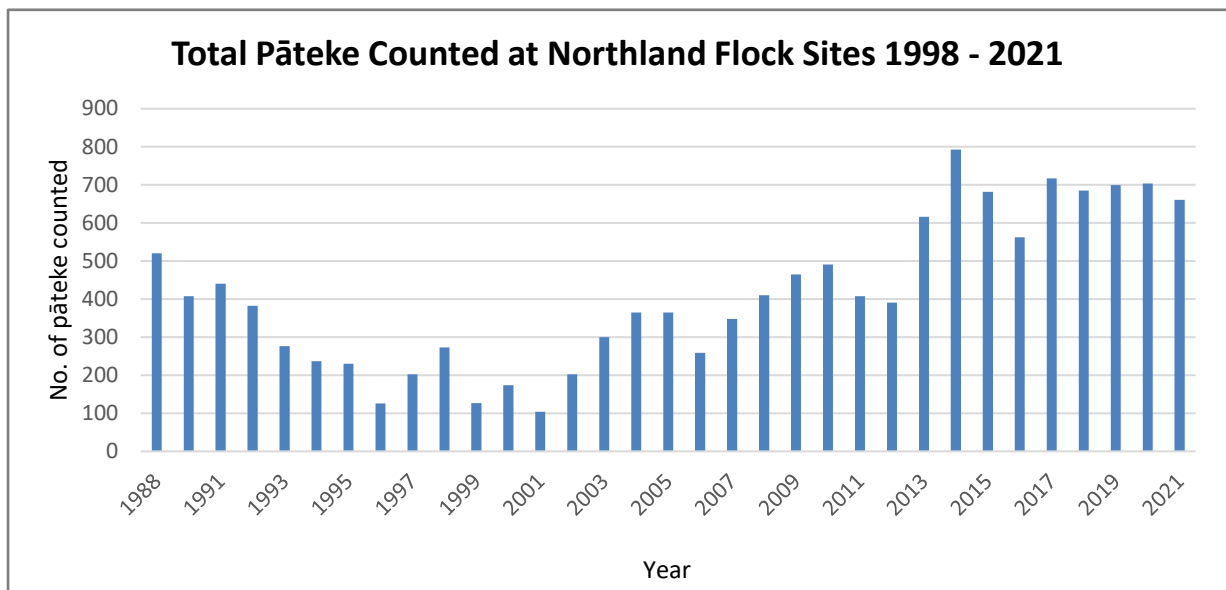
## Pāteke

Pāteke (brown teal) are the rarest mainland duck in New Zealand. Kiwi Link groups have worked each year with Kiwi Coast, specialist staff at the Department of Conservation (DOC) and NorthTec to assist with the Annual Northland Pāteke Flock Counts and investigate new sites.

Analysis of the Annual Pāteke Flock Count data confirms that while pāteke continue to flourish in the Kiwi Link CPCA, there was a slightly reduced number of brown teal recorded overall in Northland in 2021 (661, down from 704 in 2020) – see Figure 1.

Nigel Miller, Senior Ranger Biodiversity for DOC commented:

“The slight reduction in the 2021 flock counts in some locations is being compensated to some degree by the population expanding southwards into new sites (Tapps’ ponds, Pataua North), so the extensive predator control being done by the Kiwi Coast initiative is really helping pāteke re-establish in areas [where] they have been virtually absent for decades.”



**Figure 1: Northland Pāteke Flock Count Data. Source: Dept of Conservation, 2021**

## Five Minute Bird Counts

One of the aims of the Kiwi Link CPCA is to have flourishing fauna across the management area. To track progress towards this goal, annual targeted Five Minute Bird Counts have been carried out for the past three years, using special methodology developed by Dr Dai Morgan, NorthTec Conservation Management Tutor.

Eight key native bird species were monitored: tūi, kingfisher/kōtare, waxeye/riroriro, kūkupa, tomtit/miromiro, fantail/pīwakawaka, kākā and bellbird/korimako.

Each year the results were analysed by Dr Morgan as shown in Figure 2, with the latest data indicating that these bird species are indeed increasing across the Kiwi Link CPCA.

Dr Morgan stated:

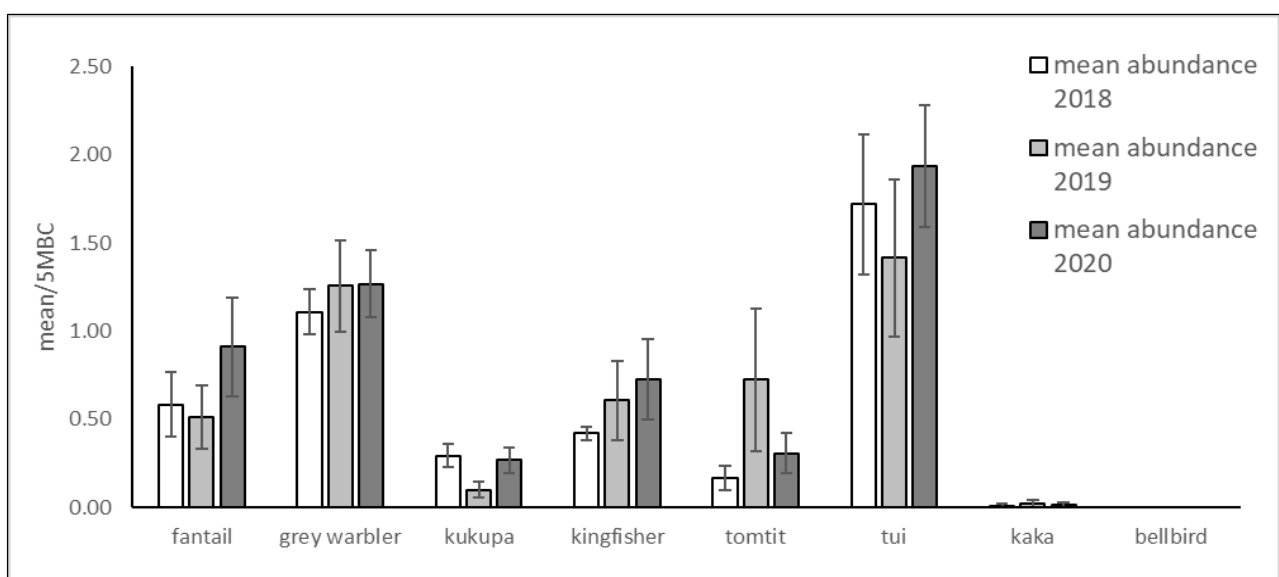
“Despite some variability in the mean abundances across the three years of data, there was a general trend showing that most species were either increasing in

population size or have remained relatively stable.

Population increases were especially noticeable for fantail, kingfisher, and tūi; the latter having a mean relative abundance of 1.93, which means that just under two tui were detected in every five-minute bird count.

Those species that have remained relatively stable in population size were either difficult to detect using the five-minute bird count method (kūkupa), or known to be relatively rare in the Kiwi Link area (kākā).

Only tomtit populations appear to have decreased in size; however, this decrease was relative to the comparatively high abundance that was recorded in 2019. If the 2019 data is omitted, the 2020 tomtit abundance is slightly higher than 2018. Bellbirds have not been detected during surveys across any year but there are known resident populations in the adjacent Whangarei Heads area and we are hopeful that our annual monitoring will eventually detect this species in the Kiwi Link.”



**Figure 2: Mean abundance (SE) of key species across Kiwi Link sites in 2018 – 2020.**  
**Source: Dr Dai Morgan, NorthTec Conservation Management**

## Kākā and Korimako 5-Yearly Surveys

Kiwi Coast has completed two five-yearly Kākā and Korimako Surveys, in 2016 and 2021, in conjunction with NorthTec. Both surveys included the Kiwi Link CPCA area.

The aim of the monitoring was to determine if the distribution of these species is increasing, decreasing or remaining static.

While rare on the mainland, kākā and korimako exist in good numbers on the offshore islands off Northland's east coast. It is hoped that they will naturally return to the mainland in response to the significant and growing amount of pest control being carried out

Kākā and bellbird currently visit some Northland areas sporadically – especially in winter when island food sources are low. However, by conducting the survey in summer, it is expected that any birds detected will be permanent residents rather than temporary visitors.

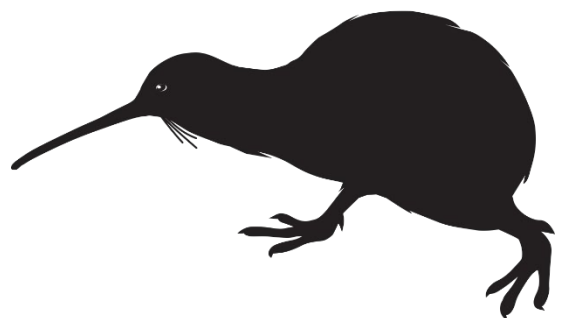
Unfortunately, while landowners within the Kiwi Link CPCA (particularly in the Owhiwa and Mt Tiger areas) are reporting increased sightings of kākā, the Kiwi Coast surveys did not detect any residents during the two summer surveys.

## Financial Summary

A total of \$803,354 resourced Year 5 activities and events of the Kiwi Link CPCA (see Table 3).

In addition to the \$70,000 NRC CPCA funds, unpaid labour by the landowners involved amounted to \$248,690. The Kiwi Coast Trust also supplied resources and support worth \$69,500.

Other contributions were made by Hancock Forest Managers, Martin Trust, Airzone, NorthTec, Tahi estate and generous local sponsors keen to help and get involved.



**Table 3: Financial Summary: Kiwi Link Group/Project Resources and Unpaid Labour (1 July 2020- 30 June 2021)**

Activity/Fund Source	NRC Kiwi Link CPCA Funds	Kiwi Coast	Unpaid labour (\$30/hour)	Contribution by Landowner/Manager	DOC	Hancock Forest Management	Martin Trust	Tahi	Other sources*	Totals
Administration/Project Management	9,315	9,000	21,910	8,300	0	1,560	720	75,000	0	125,805
Animal Pest Control - labour	47,220		135,090	7,600	8,432	6,000	14,553	37,000	0	255,895
Plant Pest Control - labour	0	0	34,380	0	0	0	12,391	18,000	0	64,771
Pest Control Products - toxins, traps, herbicides	4,432	26,500	0	0	1,217	0	3,397	9,000	0	44,546
Native Tree Planting	0	0	2,750	0	0	0	6,149	158,000	0	166,899
Engagement, Education and Communications	4,506	10,500	23,360	0	8,214	0	0	5,000	10,000	61,580
Monitoring	4,159	22,500	29,730	2,000	832	0	0	7,200	13,248	79,669
Workshops and Training	368	1,000	1,470	100	650	0	0	600	0	4,188
<b>Totals</b>	<b>70,000</b>	<b>69,500</b>	<b>248,690</b>	<b>18,000</b>	<b>19,345</b>	<b>7,560</b>	<b>37,210</b>	<b>309,800</b>	<b>23,248</b>	<b>803,354</b>

\* Includes donations and sponsorship

NB: All figures exclude GST

## Summary

Over the past five years the Kiwi Link CPCA has been a success with good progress made towards all five objectives. All groups involved have worked well together, carrying out animal and plant pest control and monitoring over 14,133 hectares.

In addition to funds provided during the 2020/21 financial year by NRC and Kiwi Coast Trust, local land managers, businesses and private landowners contributed over \$663,853 of unpaid labour and resources. This significant contribution demonstrates their outstanding commitment and dedication to their native forests, wildlife and kiwi.

New predator traps deployed into key gaps have linked further traplines of neighbouring groups together into a growing combined predator trapping network between Whangarei Heads and Tutukaka.

The removal of 27,449 roaming animal pests has improved forest health and helped to restore birdsong to the once near-silent forests. Monitoring data, including five-minute birdcounts, pāteke counts and kiwi monitoring show upward trends in populations as a direct result of the hard work being carried out by the many local landowners and land managers involved.

These results will not only have benefitted local native forests and wildlife, but also that of the adjoining Whangarei Heads and Tutukaka biodiversity strongholds.

Kiwi are going from strength to strength throughout the Whangarei Heads – Kiwi Link – Tutukaka Coast area. The confirmed movement of translocated kiwi between the Whangarei Heads peninsula and through the Kiwi Link CPCA shows the kiwi corridor is beginning to work.

Kiwi Link thanks NRC for the last five years of support and resources. A strong working relationship has formed with NRC Biosecurity officers and managers, providing a strong foundation for the success of the project.

Huge thanks are also due to all the private landowners, professional predator trappers and land managers who have been servicing traps, filling bait stations, counting birds and collecting data for the past five years (and more!). The immense community effort and leadership remains the key to success. Without it, our local native forests and wildlife would have remained in decline.

Kiwi Link looks forward to continuing its operations and pursuit of goals as it takes the next step to become Northland's 6<sup>th</sup> High Value Area and plays its part in the ambitious Predator Free Whangarei project.



## **Appendix 1: Backyard Kiwi Monitoring of Radio Transmitted Kiwi that have moved into the Kiwi Link Area.** Todd Hamilton, Backyard Kiwi Project Manager, June 2021

---

Monitoring by Backyard Kiwi of radio transmitted kiwi has shown that kiwi are moving into the Kiwi Link Area from the Whangarei Heads:

- 2003: **Vinnie** was released by DOC at the Nook and travelled north to the middle of Campbell Road before dropping his transmitter.
  - 2007 Adult female **Melville** travelled North from Timperly Rd and was located by DOC right at the end of Taraunui Rd in the Pataua North area on 30/10/2007 before contact was lost.
  - 2006 Adult male **Darwin** walked from southern Manaia to Lamb Road and settled there. He did not breed until 2011 but since then has successfully hatched over 20 chicks - most of them transponded (ID chipped). One of those chicks "**James**" was found drowned in a lifestyle block stock trough at Owhiwa Rd in January 2014.
- 

In 2018 five kiwi were released by Backyard Kiwi north of the Parua Bay village.

- One, **Rukuwai**, headed east to the Kerr road/ Kauri Mt area but the others have all remained in the Kiwi Link area or on its border:
  - **Harikoa** –after time on Taraunui Road she is now half way down Campbell Road.
  - **Mokopuna** is a female who headed to the north end of Campbell Road and found a mate "**Wally**" (who unknown to us had walked out of the BYK area in 2009). This pair have now had four successful nests together.
  - **Mia** was in the pines north of her Parua Bay release spot when her transmitter failed
  - **Ross** - an adult male, headed west and after spending time in the Kohinui Valley and Parua Bay is now settled at Pepi Road. He is the most westerly of the known kiwi.
- 

In February 2019 four more kiwi were released north of the Parua Bay village.

- **Teina** - an adult male who headed NW and has settled in the large pine block on the east side of Owhiwa Road.
- **Malaika** - a young female spent time at Taraunui Road before heading over to the same pine block on Owhiwa road as Teina
- **Awhi** - an adult female- travelled south to the Parua Bay village, then east as far as Kohinui Valley (opposite the pub) where she spent several months before walking back to her release site in the pines at Taraunui Road. She then headed North-East down the end of Campbell Road, where settled and her transmitter was allowed to fall off in 2021.
- **Pakiri** - a young kiwi headed north and spent time at Ross road and the northern end of Taraunui road before turning up in the Whanui pine plantation. This guy was found dead in 2019 - possibly killed by a dog.

---

In February 2020 a further five kiwi were released by BYK north of the Parua Bay village

- **Hancock** – an adult female who worked her way towards the top end of the Kohinui valley (between Franklin Road and Owhiwa Road)
- **Taonga** – another adult female who was fitted with a temporary transmitter was tracked to the pines east of Owhiwa Road.
- **Kohi**- an adult male named by Kohinui Landcare was proving to be a great kiwi ambassador by first moving down Taraunui Road and then heading across to Owhiwa Road. Unfortunately, he was run over there on the last night before the 2020 Covid lockdown.
- **Jemima**- a young female kiwi who just kept heading north until she settled in the HFM Whanui Pine plantation.
- **Kaitiaki**- This girl had headed westward to Owhiwa Road before using the quiet roads of the lockdown period to head through the Parua Bay village area and then south to Mt Manaia.
- In late May 2020 **Beach Girl**, a malnourished adult female, was released into a wetland on Taraunui Road after being rescued from a drought stricken Motuora island. She settled in well and recovered significant weight and condition.
- Likewise, another kiwi rescued from Motuora Is., a young male **Ngaehe**, was nursed back to health and released in July 2020. Unfortunately, a poorly controlled pet dog from Ross Road killed him a week later.

---

## 2021 Update

- **Hancock** – settled at the top end of the Kohinui valley (between Franklin Road and Owhiwa Road) before dropping her transmitter.
- **Malaika** – is 3.5 years old now and after travelling 10km north to the Whanui forestry block she has made her way back to settle at Martins' Forestry block east of Owhiwa Road. She may have paired up with the 2021 released male Chookie.
- **Teina** – is well settled at Martins' Forestry block east of Owhiwa Road. He made a nesting attempt in late November 2020 that lasted 97 days until in March 2021 it was found that he had be incubating a rock! This just shows how keen that he is to nest.
- **Ross** – still settled at the top of Pepi road but he is yet to breed.
- **Wally** – is well and truly making up for lost breeding time and had two back to back nests producing 4 chicks at the end of Campbell Road this year
- **Beach Girl**- seems to have recovered after her 2020 rescue transfer and is now over 2500g in weight cf under 1500g on rescue from Motuora Is. She is settled north west of Ross Road.

---

In February 2021 a further five kiwi were released by BYK north west of the Parua Bay village

- **Cook** – an adult female named after Owhiwa Landcare Group founder Neil Cook. She settled in well at Martins' Forestry block east of Owhiwa Road after first going for a wander through Kohinui Valley up to Franklin Road and back. Once settled her temporary transmitter was allowed to fall off.
- **Aroha** – an adult female who was released with the male Chookie as a pair but she headed south to the pines at the southern end of Owhiwa Road where her temporary transmitter fell off as planned.
- **Matarae**- an adult female who initially settled into Martins' Forestry block east of Owhiwa Road before heading west to Kohinui Valley where her temporary transmitter fell off as planned.
- **Valentine**- a young female kiwi who has wandered around the pine blocks east of Owhiwa road before heading east to settle in a large dog free property on Taraunui Road.
- **Chookie**- is an adult male named after Chookie Martin whose large forestry and bush block he was released on. He has settled there and has just made his first nesting attempt.

There will be other kiwi without radio transmitters that have moved from the Backyard Kiwi managed area into the Kiwi Link area as the estimated population at the Whangarei Heads has grown from approximately 80 in 2001 to over 1,000 in 2021 and the kiwi there expand outwards.

## Appendix 2: Kiwi Listening Device Results 2020 & 2021

Site Information					2020					2021				
Project Name	Site Name	Location	Easting	Northing	SPAN in hrs	Total calls	M	F	Duets	SPAN in hrs	Total calls	M	F	Duets
HFM Whanui	Oyster	Whanui Forest	1771533	6048344	28	49	43	6	5	20	35	28	7	7
HFM Whanui	Toheroa	Whanui Forest	1731365	6047152	28	3	3	0	0	20	16	14	1	2
HFM Whanui	Mussell	Whanui Forest	1732093	6048344	28	72	54	18	12	20	44	35	9	8
Harris Rd LC	Easterbrook	Harris Rd	1724091	6049649	70	0	0	0	0	60	0	0	0	0
Kohinui Stream LC	Bixleys	Te Rongo Rd	1730179	6041701	n/s	-	-	-	-	84	0	0	0	0
Kohinui Stream LC	Kauri Villas	Owhiwa Rd	1726717	6045466	n/s	-	-	-	-	60	5	2	3	1
Kohinui Stream LC	Joblin	Te Rongo Rd	1730271	6041483	n/s	-	-	-	-	90	0	0	0	0
Ngunguru Ford Rd LC	Steve McQuoids	Ngunguru Ford	1732878	6053691	70	26	22	4	3	0	f/k	-	-	-
Ngunguru Ford Rd LC	Robbiesdriveway	Ngunguru Ford	173737	6052541	70	2	0	2	0	0	f/k	-	-	-
Ngunguru Ford Rd LC	Millview	Ngunguru Ford	-	-	n/s	-	-	-	-	-	f/k	-	-	-
NRC Mt Tiger Kiwi Project	Site1- Original - Ngaire	Mt Tiger Road	1725897	6045680	38	7	6	1	0	60	14	12	2	0
Owhiwa Landcare	Mullooly	Owhiwa	1729124	6043295	70	3	0	3	1	84	0	0	0	0
Owhiwa Landcare	Bob & Carol	Franklin Rd	1727987	6042334	70	17	14	3	2	84	8	8	0	0
Owhiwa Landcare	Petersons	Owhiwa Rd	1730981	6044157	n/s	-	-	-	-	50	17	17	0	0
Taheke Landcare	Saparelli	Taheke	1732764	6051755	70	23	18	5	4	-	n/s	-	-	-
Taraunui Landcare	Lifshutz	Taraunui Rd	1726713	6045461	50	8	8	0	0	60	25	20	5	2
Whareora Landcare	RobandRosie	MtTiger Rd	1726877	6045318	70	0	0	0	0	-	n/s	-	-	-

Site Information continued...					2020					2021				
Project Name	Site Name	Location	Easting	Northing	SPAN in hrs	Total calls	M	F	Duets	SPAN in hrs	Total calls	M	F	Duets
Whareora Landcare	MSR 1: Listening Site Bluff	Maungatika SR	1727254	6045154	70	0	0	0	0	84	0	0	0	0
Whareora Landcare	MSR 2: Reg & Kahu's Log	Maungatika SR	1728043	6045201	70	0	0	0	0	60	0	0	0	0
Whareora Landcare	MSR 3: Above Home Stream	Maungatika SR	1727284	6044474	70	0	0	0	0	60	0	0	0	0
Whareora Landcare	Holwell Ridge	Mt Tiger Forest	1726944	6046407	70	0	0	0	0	60	0	0	0	0
Whareora Landcare	Simon & Sue - he Knob	MtTiger Rd	1728639	6045678	70	0	0	0	0	60	0	0	0	0
Whareora Landcare	Simon & Sue - deck	MtTiger Rd	1728798	6045542	n/s	-	-	-	-	60	0	0	0	0
Whareora Landcare	Brodie's Place	MtTiger Rd	1728066	6046137	n/s	-	-	-	-	66	0	0	0	0
Whareora Landcare	Paper Rd Near Slip	Mt Tiger Rd	1727465	6046185	n/s	-	-	-	-	89	0	0	0	0
Whareora Landcare	Holwell Ridgearm1 - rimu forest	Mt Tiger Rd	1727839	6046466	n/s	-	-	-	-	89	0	0	0	0
Whareora Landcare	Holwell Ridgearm2 - big log	Mt Tiger Rd	1727428	6046664	n/s	-	-	-	-	89	0	0	0	0

n/s = not surveyed

f/k = faulty kld

LC = Landcare

**Appendix 3: Annual Kiwi Call Count Survey Results – Human Listening: 2014 – 2021**

Project/Group	Site Name	Location	Easting	Northing	Human Listening: Kiwi Call Count Survey Average No. Calls Per Hour							
					2014	2015	2016	2017	2018	2019	2020	2021
Kohinui Stream Landcare	Kauri Villas	Kauri Villas	1726717	6045466	-	-	-	0.375	0.375	-	-	-
Pataua North Landcare	Kumara Pit	Tahi	1735036	6047730	-	-	-	-	-	-	-	2.25
Pataua North Landcare	Ohuatahi	Tahi	1734754	6047333	-	-	-	-	-	-	-	2.63
Pataua North Landcare	Sue's bus	Sue Bell's property	1736104	6046851	-	-	-	-	-	-	-	2.88
Whareora Landcare	MSR1: bluff ridge	Maungatika Scenic Reserve	1727254	6045154	1	0.88	0.66	0.75	0.125	-	-	-



Report prepared by Ngaire Sullivan,  
Kiwi Coast Trust, July 2021. Design by Abby Davidson.