

Kiwi Coast Annual Report 2020



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Front page: Kiwi Coast Trust and Strategy Group visit Bream Tail Farms, December 2019.





Executive Summary

This Annual Report presents key activities and achievements from the seventh year of operation of the Kiwi Coast from July 1, 2019 – June 30, 2020 and a summary of achievements to date against Key Performance Indicators, Objectives and Goals identified in the <u>Kiwi Coast Trust Strategic Plan</u>.

Since getting underway seven years ago, the Kiwi Coast has continuously expanded, as existing projects linked in and new groups started. The Kiwi Coast has grown to operate at a regional scale, linking projects over 291km from Mangawhai at the southern limit of the Northland region to the Aupouri Peninsula in the Far North. As at June 30, 2020, 159 entities have linked into Kiwi Coast, 153 of which are community-led groups and active projects. Collectively, these groups and projects manage approximately 198,300 hectares.

Funding of Kiwi Coast Trust operations and activities significantly increased during the year thanks to a generous grant from Foundation North. Northland Regional Council-Kiwi Coast Partnership Funds continued to ensure a firm base of support for two full-time Kiwi Coast Coordinators.

Kiwi Coast's main priorities are to reduce threats to kiwi survival and engage Northlanders in caring for their kiwi. Kiwi Coast continued to strategically support predator control in key areas to link projects and build continuous trapping networks across landscapes to boost kiwi survival and allow their safe dispersal into new areas.

Monitoring results demonstrate the strength of Kiwi Coast's collaborative approach.
Collated trap catch data shows that 396,634 animal pests were trapped by groups and projects involved in the Kiwi Coast over the last seven years. On average, 1,800 animal pests are now trapped on the Kiwi Coast every week.

The Covid-19 pandemic prevented a number of activities, events and workshops from taking place. However, engagement remained strong via Kiwi Coast communication channels and new ways of working were developed to enable work to continue as much as practically possible. For example, Kiwi Coast shifted focus from large gatherings and training workshops to supporting individual community group members to gain or renew their Controlled Substances Licences so that they could use a full range of toxins for animal pest control, and provided additional pest control products to projects ready to expand or intensify their efforts.

Prior to, or in accordance with, Covid-19 guidelines, 11 skill building and trapper training workshops were still able to be held. A total of 16,187 people attended Kiwi Coast supported events and workshops during the past seven years. These events were also prime opportunities to deliver key messages around kiwi recovery and the importance of good dog control to kiwi survival.

Kiwi populations, breeding success and chick survival were all impacted by an extended 2019/20 drought. This culminated in an emergency kiwi translocation of 19 Northland brown kiwi from the Motuora Island kiwi creche, which Kiwi Coast helped organise, coordinate and deliver.

The Covid-19 pandemic and two successive summers of drought has reinforced the need to build resilient, robust wild kiwi populations across Northland that can withstand extreme events – whether in the natural environment or by the kaitiaki caring for them.

KIWI COAST **GROUPS** 291km

Helping Northland Kiwi Thrive

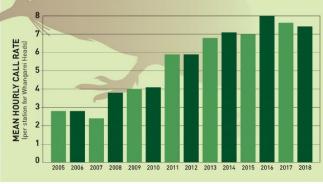
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Call data shows that **KIWI** in managed areas on the Kiwi Coast are

INCREASING,

bucking the national trend of 2% decline.

One longstanding community project
(Backyard Kiwi) have increased their kiwi numbers
over 20 years from 80 to over 800.



Example: Backyard Kiwi Call Count data



Northland is better off with

396,634 animal pests

GONE!

166,099 possums

157,878 rodents

22,846 pest birds

16,346 hedgehogs

12,830 mustelids

11,225 wild rabbits

4,782 feral cats

+ 4,628 other pest species

These figures show pests trapped by Kiwi Coast groups and projects **over the past 7 years**. For annual figures, go to http://www.kiwicoast.org.nz/kiwi-protection/

198,000ha ACTIVE MANAGEMENT

COASTLINE

TIVE GEMENT

WE SUPPORT KIWI COAST GROUPS WITH... Predator Professional Kiwi

Traps

Professional Trappers

Kiwi Events

Monitoring

Skill Building













Strategic Approach

The Kiwi Coast Trusts 5 year Strategic Plan (2017) confirmed its commitment to the following:

- Building capacity and capability across
 Northland's community-led conservation
 projects to sustain the current upward trend
 of kiwi populations.
- Increasing successful kiwi dispersal and movement between distinct populations through establishing linked collaborative predator trapping and social networks.
- Maintaining a high level of communication to celebrate kiwi as a taonga and engage further communities, iwi and hapu in caring for kiwi.
- Holding live kiwi events and skill building workshops to empower active kaitiakitanga/stewardship to protect and nurture Northland's biodiversity for future generations.
- Exploring new ways of resourcing communityled conservation.
- Building the resource capacity of the Kiwi Coast towards financial sustainability.

Kiwi Coast Coordinators

Kiwi Coast coordinators work on-the-ground to help support, enable and sustain the groups and projects involved. Kiwi populations are linked through connecting people, projects and places across Taitokerau. While the work varies and continues to evolve, it includes:

- Coordinating and enabling iwi, hapu and community-led pest control, native species recovery and dedicated kiwi projects.
- Providing on-the-ground support and technical advice for existing projects and assisting new groups to start.
- Supervising contracted professional predator trappers and coordinating the Trapper Mentoring Program.
- Liaising with key organisations, businesses and government agencies.
- Where appropriate, preparing submissions on statutory plans and processes.
- Coordinating the Kiwi Coast monitoring program, including fieldwork and data analysis.
- Organising Kiwi Coast skill building workshops and kiwi events as well as supporting other community events.
- Facilitating community meetings and workshops.
- Communicating community stories, successes, innovations and ideas to help share information, transfer knowledge and encourage communities to learn from one another.



Health and Safety

Kiwi Coast Trust gained *Sitewise* accreditation for its Health and Safety system in 2020. Obtaining this certification assisted the Trust to refine its existing policies and procedures.

Kiwi Coast Coordinators completed Workplace Assessments and Chemical Inventories for both the Whangarei and Bay of Islands storage sheds containing pest control equipment, including hazardous materials. Hazard Identification and Risk Management forms were completed in conjunction with site hosts at all events led by Kiwi Coast.

Incidents reported by Kiwi Coast contractors during the year were logged and raised for corrective and preventative action. Wasp sting incidents continued to be the main type of incident. The Trust also worked closely with NRC to develop consistent Covid-19 operating procedures for contractors.



Financial Summary

Kiwi Coast Charitable Trust continues to both seek and generate funds to enable Northland community and hapu-led kiwi recovery and pest control projects.

Funding of Kiwi Coast Trust operations and activities significantly increased during the financial year thanks to a generous grant from Foundation North. Northland Regional Council-Kiwi Coast Partnership Funds continued to ensure a firm base of support for two full-time Kiwi Coast Coordinators. Additional funds were also received from local sponsors and the Trust's own fundraising activities (See Appendix 1 for a Financial Summary).

The Covid-19 pandemic and lockdown meant Kiwi Coast Trust was unable to complete all of its planned activities. For example, the Regional Pest Control Workshop was postponed, along with most public kiwi release events, a number of local trapping workshops, site visits and community project meetings.

Despite the pandemic, two new part-time Kiwi Coast Coordinators for the Far North and southern areas of Northland were established. Funds earmarked for workshops were reallocated to pest control equipment for projects ready for expansion or intensification of trapping effort. Funds allocated for kiwi release events were instead used for monitoring equipment and the tracking of transmittered kiwi that took advantage of the lockdown to explore new areas.

Fundraising merchandise and the growing 'Follow a Kiwi' sponsorship scheme continued to build the

Trust's base of independent funding for the Kiwi Coast.

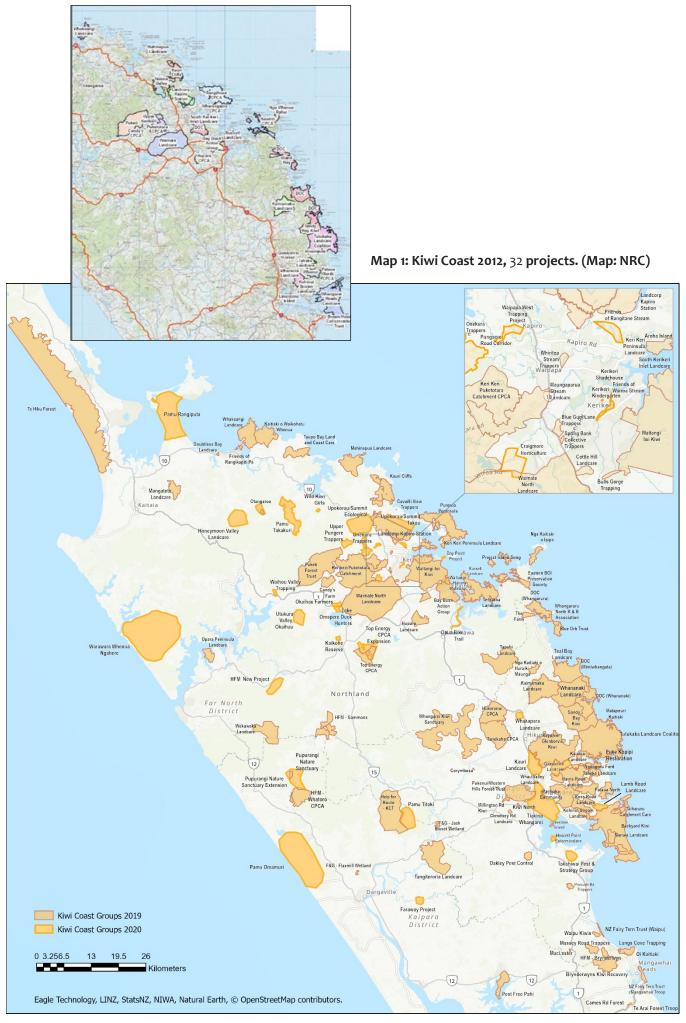


Entities Collaborating in Kiwi Coast

The number of entities collaborating in Kiwi Coast has more than quadrupled, increasing from 32 in Year 1 to 159 entities in Year 7 (See Maps 1 and 2). This includes 153 active groups and projects and six supporting agencies, organisations, businesses and educational institutions. Collectively, these groups and projects manage approximately 198,300 hectares (See Appendix 2).

The momentum of the Kiwi Coast shows no signs of slowing down as more and more Northlanders get involved in actively caring for their kiwi and link into the Kiwi Coast. Supporting groups to connect trapping networks, find efficiencies and maximise ecological gains remains a key focus of the Kiwi Coast Trust.





Map 2: Kiwi Coast 2020: 153 groups and projects (Map: A. Duxfield)

Predator Control

The Kiwi Coast focuses on predator control to ensure kiwi not only survive but can thrive in healthy, robust populations. Kiwi Coast supports and links new and existing community-led projects and gives assistance where invited to do so.

Supporting community leaders to coordinate pest control and kiwi recovery in their areas ensures projects retain autonomy and helps each individual project continue long into the future.

For the past seven years the Kiwi Coast has collated annual trap catch data from all the projects involved. During 2013 – 2019, 396,634 animal pests were caught in traps by groups and projects involved in the Kiwi Coast. 155 Northland projects, groups, and organisations sent in their data, setting a new record with 98,506 pests collectively trapped on the Kiwi Coast in 2019 alone. On average, over 1,800 pests are now trapped every week.

These results not only demonstrate the sheer hard work and scale of effort, but also generate a sense of pride and mana in the work being done and the results achieved. It helps to show that individually, groups are achieving great results, but together they are achieving something truly phenomenal.

The Kiwi Coast has also supported and assisted projects to carry out pest control operations aimed at reducing trap-wise predators through the use of toxins with secondary poisoning effects.

In line with the Kiwi Coast Strategic Plan (2017) Kiwi Coast strategically supports predator control in key areas to link distinct projects and create continuous trapping networks across the landscape that boost kiwi survival and allow their safe dispersal into new areas.

Kiwi Coast Coordinators provided targeted support to help foster, link and amplify community, iwi and hapu-led pest control and



forest recovery across Northland. Four key areas were targeted during 2019/20: the Far North, Mid North-Bay of Islands Area, Whangarei Heads – Tutukaka Kiwi Corridor, and the Piroa – Brynderwyns Landcare project area.

Far North

Lesley Baigent started as the part-time Kiwi Coast Far North coordinator in October, 2019. Being a Certified Conservation Dog Handler, with two specially trained "kiwi dogs", Kiwi Coast is now able to provide additional assistance to permitted groups and projects needing to locate and monitor kiwi.

The focus over the past year has been to strengthen relationships and networking between existing community, iwi and hapu-led projects, agencies and organisations in the Far North. A number of local workshops and information days were held to assist with this, and proved to be very successful, with over 200 keen locals and agency representatives attending the 'Bush Fairy Dairy Day' at Peria in October, 2019.

Having dedicated Kiwi Coast support in the Far North and working with partners to provide traps, toxins, training days, funding advice and monitoring assistance has fostered new community groups to get underway, and encouraged existing projects to expand their area of protection.

The value of strengthening networks is already evident, with several community groups now exploring how to link their projects on-theground and form collective pest control areas.

For example, Otangaroa Landcare, Honeymoon Valley Landcare and the Mangamuka ki roto Awanui Biodiversity Project are planning to link together south of Kaitaia. Further to the east, the Taupo Bay Land and Coast Care Group are extending their project area to north to Waimahanga and south towards the Whangaroa Harbour to link with local iwi projects.

These projects will bring active protection to new areas of native forests with kiwi.

Kiwi Coast is also collaborating with iwi, local farmers, DOC and NRC to establish an extensive trapping network within the Omahuta forest and link in with the Puketi Forest Trust's work in the Mid North. This initiative has been prompted by the recent discovery of the only mainland population of lesser short tailed bats and a remnant kiwi population. Establishing pest control on a large scale to protect the old-growth native forest and taonga species is both urgent and vital.

Future projects involve additional community engagement and pest control in the Mangamuka area through to Warawara in the west and encouraging active stewardship of kiwi present in smaller pockets throughout the Far North.



Far North Kiwi Coast Coordinator, Lesley Baigent with Honeymoon Valley Landcare, Otangaroa Landcare and the Mangamuka ki roto Awanui Biodiversity Project, June 2020.

Mid North - Bay of Islands

The Mid North area of Kiwi Coast completed year two of the NRC High Value Area (HVA) Program and continued to gain momentum towards a connected landscape-scale pest control network (See Maps 3 and 4).

Kiwi Coast Mid North Coordinator Andrew Mentor, chaired the Mid North HVA Steering Group, helped community groups through funding processes and worked with the NRC Biosecurity staff to provide technical pest control advice to ensure coordination of effort and maximum chance of success.

The collation of trap catch data showed that in 2019 a total of 47,495 pests were removed from the Mid North alone.

Traps and pest control equipment were provided to a range of groups and projects, including Waitangi Treaty Grounds, the Waitangi Iwi Kiwi Project and farmers adjacent to the Opua State Forest. The Purerua Peninsula was also a particular focus, with landowners embracing the concept of a pest-free peninsula.

In addition to standard DOC 200 traps for stoats and SA2 kill traps for possums, field trials of new self-resetting traps and bait stations were carried out, with initial results looking positive.

Z Energy "Good in the Hood" fundraising was obtained through Z Kaitaia and Z Taipa to support Mangatete Landcare (\$840) and Doubtless Bay Landcare (\$829).

A Growsafe course was run in November with eight attendees and a Controlled Substances Licence (CSL) course was held in January 2020.

The Bay of Islands Show was a busy event, with over 500 people coming through the Kiwi Coast site. A special pest control module run for the Young Farmers Contestants (Northland) developed in preparation for the YFC National Finals proved popular.

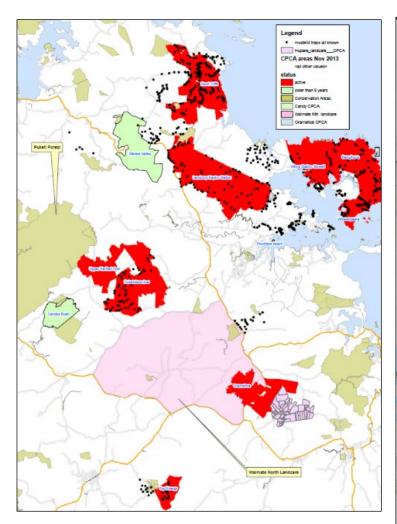


Mid-North Coordinator Andrew Mentor checks the setting of a DOC 200 stoat trap in the Omahuta Forest, June 2020.

The first detection of a kiwi pair in the Puketotara Reserve as part of Kiwi Coast's Kiwi Listening Blitz was a special highlight for the Onekura Trappers Group in Kerikeri.

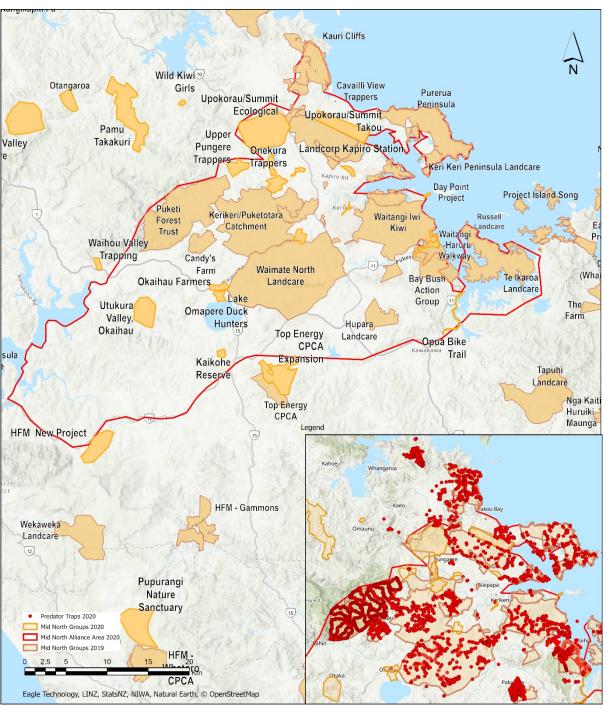
Landowners have observed an increase in local native birdlife, especially fantails but also kaka which have spent some time feeding in the karaka trees.

This confirms that the pest control efforts are starting to pay off.



Map 3: Mid North Groups and Predator Traps, June 2013. (Map: NRC)

Map 4: Mid North Groups and Predator Traps, June 2020. (Map: A. Duxfield)



Whangarei Heads – Tutukaka Coast Kiwi Corridor

This is the First Focus area of the Kiwi Coast. Linking the kiwi strongholds of Whangarei Heads and Tutukaka with a continuous predator trapping network, engaged communities and good dog control will enable the safe dispersal and population growth of kiwi throughout the area. This will create the first functioning part of the Northland kiwi corridor.

Over the past year, the community-led projects on the Whangarei Heads peninsula and the Tutukaka Coast continued to operate extensive trapping networks and work with dog owners, ensuring a range of threatened species could flourish including kiwi, pateke, NI robin, NI kaka, whiteheads and bittern.

Maps 5 and 6 show how the number of predator traps and community groups between these strongholds has increased markedly over the last seven years with the support of Kiwi Coast and Northland Regional Council. This is known as the "Kiwi Link Community Pest Control Area (CPCA)" and involves ten projects working together over 14,133 hectares.

Landowners, land managers and local businesses within the Kiwi Link CPCA contributed over \$333,415 of unpaid labour and direct contributions during the year, showing their commitment and dedication to their native forests, wildlife and kiwi.

An additional 150 predator traps were deployed into key gaps during the year. This increased the total number of predator traps to 1,704 and further linked traplines of neighbouring groups into the ever-growing collective trapping network. Collated pest control results showed that a further 6,596 animal pests were trapped in the Kiwi Link CPCA in 2019, with a total of 20,077 pests trapped since the project started in 2017.

Removing these roaming pests and predators would have benefitted not only the local native wildlife, but also that of the adjoining biodiversity strongholds.

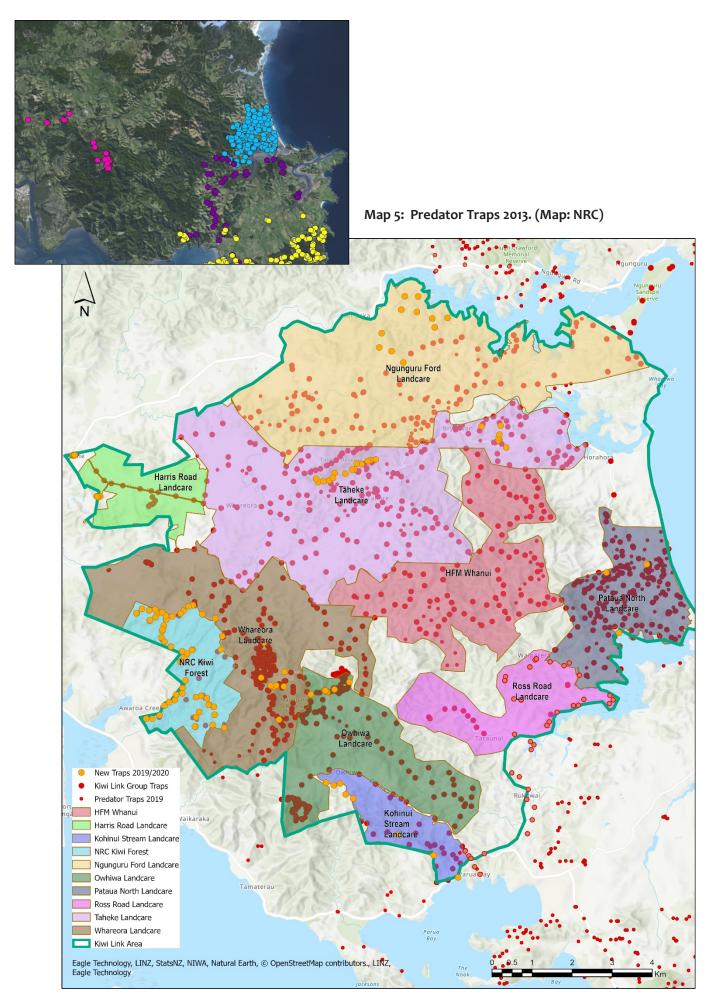
Building capacity of Kiwi Link landowners to carry out their own outcome monitoring continued to be successful, with groups carrying out kiwi, pateke and Five Minute Birdcount monitoring.

Kiwi are going from strength to strength throughout the Whangarei Heads – Kiwi Link – Tutukaka Coast area. The confirmed movement of transmittered kiwi between the Whangarei Heads peninsula and Kiwi Link CPCA showed the kiwi corridor is working.

The Predator Free Whangarei project poised to get underway will help amplify existing efforts and boost the projects involved towards pest eradication.



Greg the kiwi at Pataua North on his release day. Photo: Anne Stewart



Map 6: Kiwi Link CPCA Groups and Predator Traps, June 30, 2020. (Map: A. Duxfield)

Southern Area

Amy Kirk started as the part-time Kiwi Coast Southern coordinator in March 2020. This increased resource will provide support, training and assistance to groups and projects in the southern area of Northland.

Piroa - Brynderwyns High Value Area

Piroa-Brynderwyns Landcare (PBL) is a collective of 17 groups and projects who are working together to restore biodiversity over approximately 23,000 hectares in the Brynderwyn Hills range and surrounding area on the southern border of Northland (See Map 7). With a lot of hard work, and resources provided through the Northland Regional Council High Value Area program, PBL has significantly intensified and expanded their trapping network – known as the 'Ring of Steel' – over the past year.

Collectively 4,762 pests were trapped in the PBL project area in 2019/20, including 295 mustelids (stoats, ferrets and weasels). Local sponsors Northpine, ITM, Hammer Hardware and the

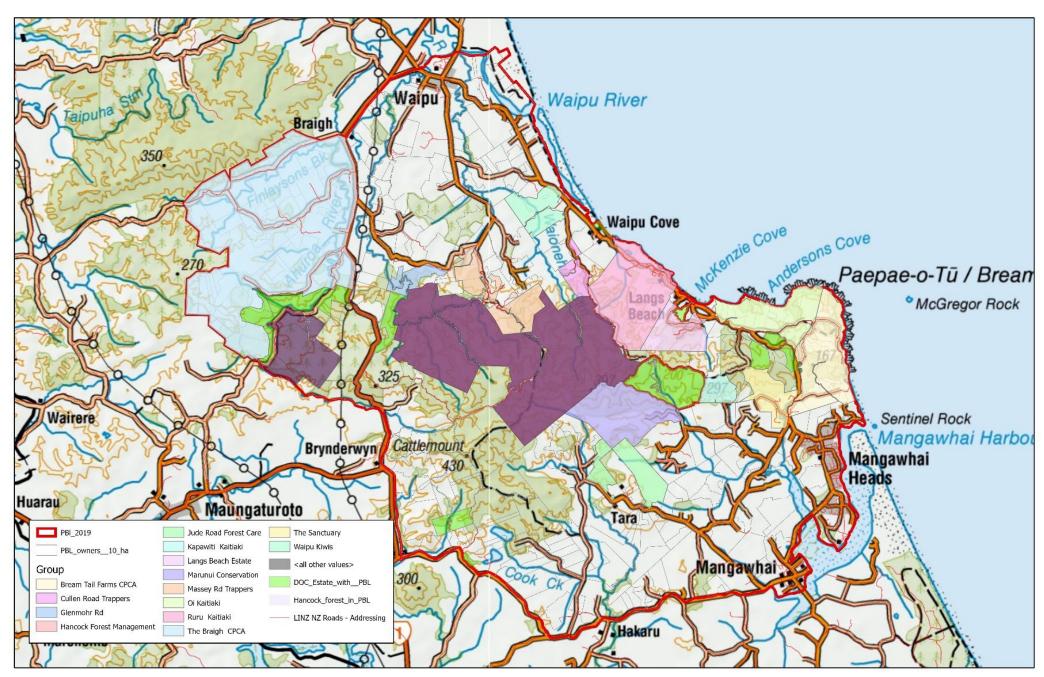
Waipu Men's Shed, have helped to keep the costs down, and the Northland Regional Council funding to go further. This year the number of mustelid traps increased by 300, bringing the total number of mustelid traps in the area to 1,019.

PBL remote trap monitoring with Celium communications doubled during the year. This has led to an increased trap catch of mustelids, as the traps can be cleared and reset more frequently.

PBL engaged with the local community with two information events at the Waipu street market and three educational talks to local schools. This year PBL are going to establish a monitoring programme for native birds and bush regeneration, and continue their dog awareness campaign, workshops and school visits.

PBL's end-of-year report card assessed progress towards goals and milestones identified in its Strategic Plan. This showed that the collective has had a successful second year of operation and are on track to achieving their goals.





Map 7: Groups and Projects Involved in Piroa – Brynderwyns Landcare as at June 30, 2020. (Map: NRC)

Western Area

Kiwi Coast Coordinators also provided support, training and assistance to groups and projects in western Northland.

The growing number of community-led projects linking into Kiwi Coast from the west is helping to protect local kiwi populations that may be genetically distinct from those on the east coast, and establish the first building blocks of a west – east kiwi corridor across Northland.

"Visitors to Northland are often surprised to learn that we have kiwi roaming free in the wild, and that they are not in a zoo or contained within a predator proof fenced sanctuary like some other regions. We need to let people know that kiwi roam free in Northland and dogs need to be under good control to help keep them safe"

Ngaire Sullivan, Kiwi Coast Coordinator

Improving Dog Control and Raising Awareness

Improving dog control is a key issue for kiwi survival in Northland as uncontrolled dogs are the most significant threat to adult kiwi in Northland. Kiwi should live for 50-65 years but have an average lifespan of just 13 years in Northland due to being killed by dogs. Raising awareness of the issue and stressing the need for good dog control was a recurring theme at all Kiwi Coast events, workshops and kiwi releases. As dog control is inherently a human issue the engagement of dog owners with their kiwi is vital.

'Kiwi Live Here' signs, customised with group names and selected dog control messages continue to be popular with community groups, as have fridge magnets for holiday houses. Six 'Kiwi Live Here' roadside billboards are now spread across Northland, with four new billboards in place over the last year at Hihi, Mangamuka, Pakaraka and Russell.



Events & Engagement

Kiwi Coast continued to support, assist and promote community–led biodiversity stewardship/ kaitiakitanga at a multitude of events, workshops, presentations, and A&P shows throughout Northland.

While the Covid-19 pandemic prevented a number of events and workshops from taking place, engagement remained strong via the Kiwi Coast communication channels and inspired new ways of working, such as the use of Zoom for "zui"!

A further 2,814 people attended Kiwi Coast supported events and workshops throughout the year, taking the total number of people over the last seven years to 16,187.

These people came together to celebrate kiwi as a taonga, build skills and deepen their understanding about how to help kiwi thrive. Just as importantly as allowing people to engage with kiwi, these events also provided prime opportunities to deliver key messages around kiwi recovery and the importance of good dog control to kiwi survival.



Mid-North Coordinator Andrew Mentor supervises trapper training at the Wekaweka Landcare Trapping Workshop, Kauri Coast, 2019

Skill Building Workshops

Community leadership and kaitiakitanga have been enabled and supported through a range of skill building workshops. These were provided upon request and tailored to build knowledge and specific skills within the hosting community or project.

A total of 55 workshops have been held since 2013 throughout the Kiwi Coast. Localised 'Trapper Workshops' aimed at building practical pest control skills for landowners continue to be popular.

Each collaborative workshop shared technical knowledge and expertise from a range of sources including local professional predator trappers, community leaders, NRC Biosecurity Staff, Department of Conservation and professional training providers.

Among the workshops postponed or cancelled due to the Covid-19 pandemic was the Kiwi Coast Northland Pest Control Wananga/Workshop. Instead, Kiwi Coast shifted focus from large gatherings and training workshops to supporting individual community group members to gain or renew their Controlled Substances Licences so that they could use a full range of toxins for animal pest control, and providing additional pest control products to projects ready to expand.

Eleven skill building workshops were either supported or held by Kiwi Coast over the past year:

- 1. Bush Fairy Dairy Day
- 2. Kaingaroa Trapping Day
- 3. Whakapara Trapping Workshop
- 4. Wekaweka Trapping Workshop
- 5. Oakleigh Trapping Workshop
- 6. Whakapara Trapping Workshop #2
- Kiwi Link CPCA Possum & Rat Control Workshop
- 8. PBL Trapping Workshop
- 9. MHRHLG AGM & Trapping Workshop
- Kiwi Listening App Training Workshop-Bay of Islands
- 11. Kiwi Listening App Training Workshop-Whangarei

Communications

Kiwi Coast implements an integrated communications strategy designed to:

- build linkages between projects via sharing information, stories and successes.
- celebrate kiwi as a taonga.
- engage people in caring for kiwi.
- build acceptance of animal pest control practices required to protect kiwi.
- positively encourage good dog control.
- establish the Kiwi Coast as a successful and accessible initiative in which everyone can participate..

Communications included a live, continuously updated website, social media and regular electronic newsletter. Over the last seven years, Kiwi Coast communications have reached tens of thousands of people, both locally and internationally.

As at June 30, 2020:

- An average of 1,042 people visit the Kiwi Coast website every month.
- 788 people subscribe to Kiwi Coast's monthly e-newsletter.
- Facebook 'Follows': 1,888
- Instagram 'followers' (began October 2019):
 247

Kiwi Coast has also enjoyed a strong media presence, with articles featuring in an array of local, regional and national online and printed media including Radio NZ and MORE FM radio stations the, NZ Herald, Northern Advocate, Northland Age and Whangarei Report.

One News coverage of the "Northland kiwi drought" story featured on the 6pm news in January, reaching tens of thousands of viewers.

Results and Monitoring

Kiwi Coast is underpinned by a robust scientific monitoring framework that ensures accurate measurement of outcomes. Table 1 presents a summary of monitoring results and the Kiwi Coast Trust's achievements to date against Key Performance Indicators identified in the 2017 Strategic Plan.

Kiwi

The Kiwi Coast's 'Kiwi Monitoring Plan' (Topia, 2014) is based on best practice kiwi monitoring protocols developed by the Department of Conservation (DOC). It includes Annual Kiwi Call Count Surveys, the use of Kiwi Listening Devices, and 5-Yearly Kiwi Listening Blitz's.

The need to build robust and resilient kiwi populations across Northland was reinforced by the impact of two successive summers of drought on kiwi.

Kiwi populations, breeding success and chick survival were all impacted by the prolonged 2019/20 drought, culminating in the emergency kiwi translocation of 19 Northland brown kiwi from the Motuora Island kiwi creche in June 2020.



Dr Saverimuttu gives fluid to a dehydrated kiwi during the Motuora Island Emergency Kiwi Translocation, June 2020.

Kiwi Call Count Survey 2019

Kiwi call count monitoring has been carried out annually in Northland since 1995. Call count surveys are one of the main tools used for assessing trends in kiwi populations. Kiwi Coast works with DOC each year to encourage, train and coordinate groups to carry out the monitoring, and the data are then analysed by DOC and presented in the following year in the 'Northland Kiwi Call Count Report'.

This year, Kiwi Coast also developed a mobile phone app to make the monitoring simpler, more enjoyable and more efficient (see page 27).

Results from the 2019 Kiwi Call Count Survey linked a marked decrease in kiwi calls across Northland (Figure 1) to drought. The report found that kiwi call rates had decreased at every site surveyed. As all sites were affected, rather than just one or two, a regionwide event affecting kiwi call rates at the time of the survey was suggested as the most logical explanation.

Kiwi Coast is working with DOC, the Kiwi Recovery Group and the Northland Kiwi Forum Working Group to develop plans and procedures for the management of kiwi during drought and protocols for Emergency Kiwi Translocations in preparation for future events.

The report stated:

"The combination of dry and warm climatic conditions probably affected kiwi directly (through dehydration, heat exhaustion etc.) and indirectly (through reduced food availability etc.). The resulting relatively poor condition of the kiwi due to either or both factors likely delayed the start of the breeding season (and therefore also delayed the corresponding higher calling rates during courtship generally seen at the start of the breeding season in May)."

"Although somewhat alarming, it may be of some comfort to kiwi listeners that the pattern of fewer calls in 2019 was not unique to their station or cluster."

(Craig, 2020)

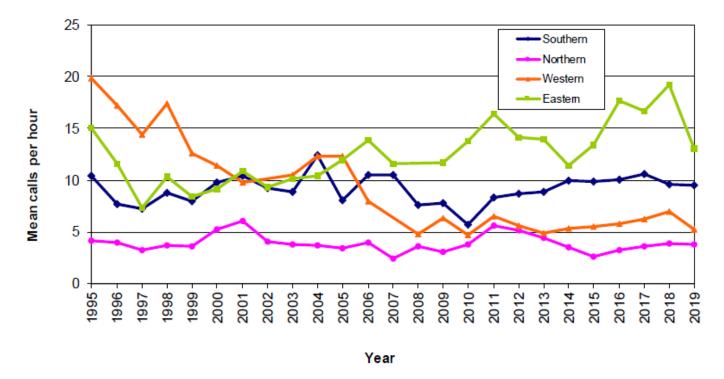


Figure 1: Annual Kiwi Call Count Survey Data, 1995 – 2019 (Craig, 2020)

Kiwi Listening Blitz #2 - fieldwork to date

Kiwi Coast carries out a 'Kiwi Listening Blitz' using acoustic monitoring devices or Kiwi Listening Devices (KLDs) every five years. This monitoring is designed to track changes in the Northland brown kiwi population and distribution, with the assumption that over time, kiwi numbers will increase and expand into new areas in response to sustained pest control and improved dog control.

During the first Kiwi Listening Blitz in 2016, the Kiwi Coast collective project area was 75,000 hectares. Sixty-three KLDs were used to survey 48 areas, and kiwi were recorded at 65% of them.

Fieldwork for the second blitz began in January 2020, led by Dr Karen Verdurmen and a field crew of NorthTec Conservation Management Students. This second blitz will be completed by July 2021.

A pre-survey map prepared by the Department of Conservation and Northland Regional Council assisted with targeting the fieldwork. Survey sites were selected for habitat, land use, ease of access and to fill the gaps in knowledge of kiwi presence in Northland. Existing human kiwi listening stations that monitored as part of the annual Northland Kiwi Call Count Survey were excluded, as were known high kiwi population areas. Data was also collated from KLDs used in Northland to avoid unnecessary re-surveying of sites.

While the Covid-19 pandemic lockdown brought a temporary halt to fieldwork, it allowed early analysis of the data collected to date. All of the sites resurveyed to date that recorded kiwi in 2016, have also recorded kiwi in 2020. In addition, kiwi have also been recorded for the first time at a number of the 2016 sites.

As Kiwi Coast continues to expand as more projects get underway and link in, there is also a lot of new ground to cover. Four years on, the Kiwi Coast now covers approximately 198,000 hectares. To date, 35 new sites have been monitored and kiwi have been detected at some of them, delighting the landowners involved. At other sites, while kiwi may not have been detected this time around, perhaps they will be five years from now, during Kiwi Listening Blitz#3...

Indicator Species Monitoring

In order to document the response of native wildlife other than kiwi to predator control and community stewardship, the Kiwi Coast Indicator Species Monitoring Program studies the populations and distributions of pateke, kaka and bellbird on a regular basis.

Fieldwork for the next Kiwi Coast bellbird and kaka survey is planned for the upcoming 2020/21 summer.

Pateke

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

Analysis of the 2020 Annual Pateke Flock Count data confirmed that pateke are flourishing in eastern Northland, particularly at sites with sustained and intensive predator control. The 2020 survey recorded the third highest flock count on record (Figure 2) and birds counted at new sites indicates that their distribution continues to expand.

Nigel Miller (DOC Senior Biodiversity Ranger and National Pateke Recovery Group Leader), noted:

"Pateke numbers remain stable across Northland, despite the extremely dry conditions.

Notable increases have occurred at the margins of the regional distribution where good predator control is in place such as the Purerua Peninsula and Pataua North.

The combination of good pateke habitat and extensive predator control continue to be the recipe that will return pateke to Taitokerau".

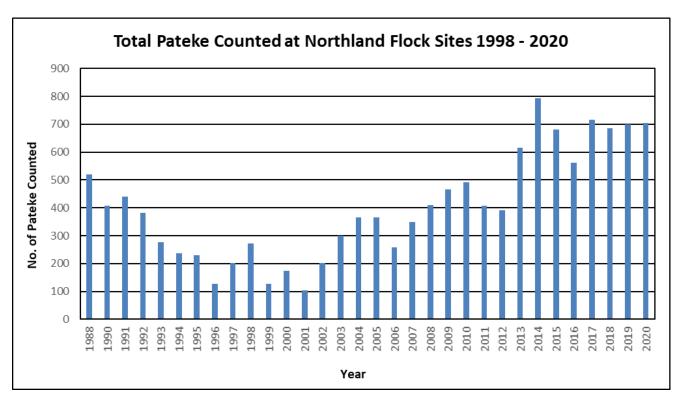


Figure 2: Northland Pateke Flock Count Data (Source, Dept of Conservation, 2020)



Pateke at Woolley's Bay, February 2020. Photo: Malcolm Pullman

Table: 1: Kiwi Coast Key Performance Indicators, Measures and Outcomes

Objective	Key Performance Indicator (KPI)	Source of Measure	Expected Outcome	Baseline Information	Results Summary as at June 30, 2020
Northland brown kiwi populations in eastern Northland are increasing.	An overall upwards trend of kiwi populations in managed sites on the Kiwi Coast.	Annual Kiwi Call Count Survey. Northland brown kiwi distribution map of high and low density kiwi populations (DOC).	Increased kiwi population.	Northland Annual Kiwi Call Count Survey data since 1995. DOC Kiwi Distribution Maps.	Kiwi call count data from 1995 - 2019 shows overall trend of stable or increasing kiwi populations at managed sites. Map updated by DOC in 2016 showing new kiwi populations. No analysis to date of changes in kiwi population density.
Northland brown kiwi are dispersing into new sites.	Northland brown kiwi confirmed at new sites.	Kiwi Coast 5 yearly Kiwi Listening Blitz.	Expanded Northland brown kiwi distribution.	Kiwi Coast Baseline Kiwi Listening Blitz (2016).	Second Kiwi Listening Blitz in progress.
Northland brown kiwi populations are linked via safe kiwi corridors.	Northland brown kiwi are moving between separate populations.	Telemetry monitoring of transmitted kiwi. Possible DNA monitoring as techniques and expense allows.	Kiwi tracked moving safely through and between project areas.	Existing telemetry data. DOC dead kiwi database.	Transmittered kiwi tracked moving between Whangarei Heads and Kiwi Link CPCA.
Northland's biodiversity flourishes.	Increased populations and distribution of key native indicator species.	Kiwi Coast Indicator Species Monitoring Program: Participation in DOC led Annual Pateke Flock Counts Regular bellbird and kaka distribution surveys	Populations of native species increase. Expanded distribution of native species in Northland, including return of species currently restricted to offshore islands back to the mainland.	DOC Annual Pateke Flock Count Survey data since 1993. Kiwi Coast Baseline Kaka and Bellbird Monitoring Survey (2016).	2020 Pateke Flock Count completed. Data shows pateke distribution continues to expand on Northland's east coast and population size is increasing. Baseline of kaka and bellbird distribution established. Next survey scheduled for 2020/21.
Animal pest populations are reduced by landscape scale predator trapping networks.	Animal pests in eastern Northland are being actively controlled to declared levels.	Annual collation of trap catch data. Hectares under pest control.	Kiwi populations increase and can disperse safely into new areas. Populations and distribution of native species increase in Northland.	Annual collation of pest control results and hectares under pest control since 2013. Annual group reporting and GIS analysis of project area extent.	396,634 animal pests collectively trapped over past seven years. Approximately 198,300 hectares collectively under active management by groups and projects.

Objective	Key Performance Indicator (KPI)	Source of Measure	Expected Outcome	Baseline Information	Results Summary as at June 30, 2020
Community, iwi/hapuled conservation projects are linked through the Kiwi Coast.	Numbers of community, iwi/hapuled conservation projects participating in the Kiwi Coast.	Tally of number of entities involved.	Community-led projects work together towards the shared vision of building NZ's first kiwi corridor.	No. of projects involved tallied since Year 1.	159 groups, projects and organisations involved (See Appendix 2).
Community and iwi/hapu have the skills and resources needed to engaged in biodiversity stewardship / kaitiakitanga to the full extent they wish.	Capacity and skill building workshops are held upon request of communities.	Number of skill building workshops held. Number of people attending Kiwi Coast supported events and workshops.	Communities, iwi and hapu are actively and effectively involved in biodiversity stewardship / kaitiakitanga.	Number of workshops held recorded since Year 1. Number of people attending events and workshops recorded since Year 1.	55 workshops held since 2013. Total number of people at Kiwi Coast supported workshops and events since 2013: 16,187
Increased understanding, knowledge and support for kiwi recovery.	Integrated communications system has strong regional and national presence.	Communications reach.	Increased number of people engaged in kiwi recovery and accepting of methods needed for success.	Analysis of communications data since Year 1.	Average monthly visits to website: 1,042. Electronic newsletter: 788 subscribers, 54.5% opening rate (Industry average is 19.02%). Social Media: Facebook 'Follows' as at June 30, 2020: 1,888. Instagram (began October 2019): 247 followers.
Kiwi Coast has a financial mechanism in place to generate independent income.	Financial mechanisms developed and generating income.	Amount of independent funds being generated.	Kiwi Coast has an independent income stream to help sustain communityled kiwi recovery.	No financial mechanism in place in Year 1.	Kiwi Coast online store and merchandise range developed and extended. Charitable Trust status gained in 2017 to enable donations and sponsorship. "Follow a Kiwi" sponsorship scheme launched in 2017.

Research and Technology – Kiwi Listening App Developed

Kiwi Coast has created a mobile app to increase the ease and efficiency of Northland's Annual Kiwi Call Count Survey.

Kiwi Coast created the app in response to requests from groups and projects who were keen to move beyond pencil and paper. Groups had also reported the data entry required after completing kiwi listening each year to be a significant administration burden, taking up considerable time.

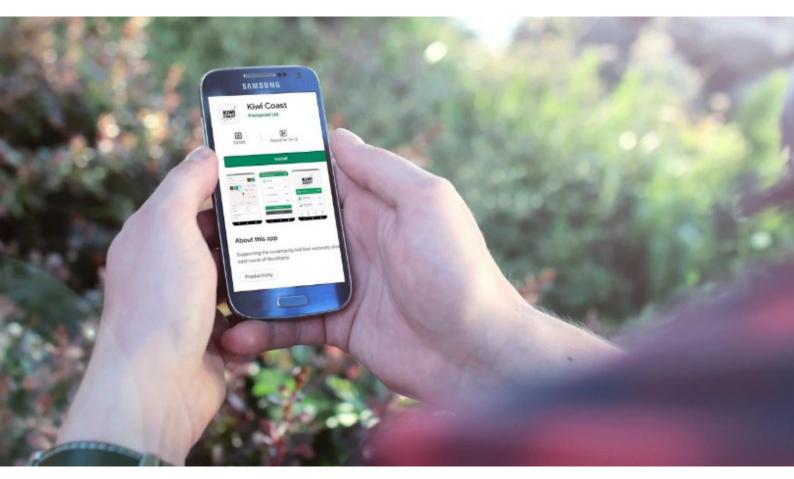
The app has was released in May 2020, in time for the 2020 Annual Northland Kiwi Call Count Survey.

Kiwi Coast worked in DOC and experienced Northland kiwi listeners to ensure the app mimicked the official DOC 'Kiwi Call Card'. However, instead of recording the info with pencil and paper, kiwi listeners were able to use their phones for the first time to record the required information while listening at their sites.

Additional features of the app include on-thespot date and time stamps and automatic GPS location recording. Listeners can also record kiwi calls - taking the uncertainty out of the monitoring for new listeners.

Data from the app is summarised and exported into the official DOC excel spreadsheet format, checked and either submitted to a local Kiwi Call Count Coordinator for collation or submitted directly to DOC for inclusion in the Annual Call Count Survey for Northland.

The App has been specifically designed for the Northland Kiwi Call Count Survey and is available free for groups and projects linked into Kiwi Coast.



Summary

Kiwi Coast's momentum continues to grow, with kiwi leading the charge.

The formation of new groups, expansion of existing projects and linking of discrete pest control patches into collaborative networks is building an increasingly cohesive cloak of protection for Northlands native forest and wildlife.

The resources brought in by the Kiwi Coast Trust through the NRC Partnership and Foundation North grant are making a tangible difference onthe-ground and helping to sustain the hard-won gains built up from over two decades of community-led conservation in Northland.

Despite the Covid-19 pandemic, hundreds of new traps were still added into Northland's predator trap network, and an increased crew of Kiwi Coast Coordinators still provided a raft of support, training and practical workshops to help build the skills and capacity of the groups and projects involved.

The 396,634 pests trapped over the last seven years are testament to the ongoing hard work of Northlanders on the farms, forests and private blocks. Kiwi Link CPCA landowners and managers contributed over \$333,415 of unpaid labour and direct contributions to their project – just one example of how the resources provided by funders, agencies and organisations to support community-led projects is a worthy investment yielding good returns and results.

Kiwi remain their own best ambassadors – winning hearts and minds, motivating action and inspiring improved dog control at public kiwi releases.

Expanding populations of rare taonga species such as pateke, and the successful tracking of monitored kiwi through distinct project areas, signals that the sustained pest control, communications and engagement are yielding the desired results.

Seeking efficiencies, maximising gains and ensuring upward trends of kiwi populations are sustained remain key strategic priorities of the Kiwi Coast Trust. With the first predator-free initiative poised to get underway in Whangarei, mindsets are shifting from endless pest suppression to eventual eradication.

Building the Kiwi Listening App to help projects monitor kiwi more easily and efficiently has seen Kiwi Coast Trust step into the developing technology and further opportunities are now being explored.

The Kiwi Coast Trust again thanks all the groups and projects for their enduring and relentless hard work. Many thanks also to our partners Northland Regional Council, principal funders Foundation North, the keen 'Follow a Kiwi' fans, Key Industries and local sponsors Airzone and Gilbert Pest Traps. We are privileged to work with you all on this amazing initiative.

References

Craig, E. 2020. Call Count Monitoring of Northland Brown Kiwi 2019. Department of Conservation.

Kiwi Coast Trust. *Kiwi Coast Strategic Plan* 2017 – 2022. Unpublished report.

Topia, M. 2014. Kiwi Coast Kiwi Monitoring Plan. Unpublished report.

Appendix 1: Kiwi Coast Trust Financial Summary*

July 1, 2019 - July 15, 2020**

Income

Foundation North Grant	\$235 , 000
NRC-KC Partnership Funds	\$188,480
Sponsorship and Donations	\$2,298
NRC New Project Start-Up Fund	\$2,000
Sales - Pest Control Equipment	\$730
Sales - Fundraising Merchandise	\$401
Total Income	\$428,909

	Expenditure
Accountancy	\$12,382
Administration	\$4,184
Communications	\$10,520
Dog Owner Engagement & Awareness	\$5,638
Engagement, Incl. Kiwi Releases / School Visits	\$16,210
Kiwi Coast Coordinators	\$224,923
Meeting, Hui and Travel Costs	\$3,078
Merchandise Expenses - Cost of Goods Sold	\$2,508
Monitoring Equipment	\$14,756
Kiwi Monitoring	\$33,060
Pest Control Equipment	\$64,258
Research & New Technology	\$15,173
Resources for Workshops and Events	\$8,568
Training Courses for Community Groups	\$7,930
Trapper Training, Mentoring & Workshops	\$4,385
Total Expenses	\$427,571

Net Profit \$1,337

Notes: *Does not include funds or expenses of umbrellaed projects

^{**}Extended date range due to timing of Foundation North grant

Appendix 2: Entities, projects and groups involved in the Kiwi Coast as at June 30, 2020

No. Entities	Name	Location	Project Area (ha)
1	Aroha Island	Kerikeri	18
2	Backyard Kiwi	Whangarei Heads	5,845
3	Bay Bush Action	Opua, Bay of Islands	1,724
4	Blue Gum Lane	Kerikeri	10
5	Blue Orb Charitable Trust	End of Whangaruru Peninsula	413
6	Bream Head Conservation Trust	Bream Head	861
7	Brynderwyns Kiwi Recovery (Marunui)	Brynderwyns	1,377
8	Bulls Gorge Pukewhau Trappers	Kerikeri	19
9	Candy's Farm	Okaihau	598
10	Cavalli View Trappers	Takou Bay	1
11	Cemetery Road Landcare	Maunu	80
12	Corymbosa Charitable Trust	Ruatangata West	8
13	Cottle Hill Landcare	Kerikeri	50
14	Craigmore Horticulture	Kerikeri	173
15	DOC Whangarei Kiwi Sanctuary and Pateke projects	Various	13,268
16	Doubtless Bay Landcare	Taipa, Cable Bay and Coopers Beach	10
17	Eastern Bay of Islands Preservation Society	Eastern Bay of Islands	n/a
18	Faraway Project	Arapohue	250
19	Fish & Game - Flaxmill Wetland	Dargaville	69
20	Fish & Game - Greenheart Wetland	Poroti	33
21	Fish & Game - Jack Bisset Wetland	Poroti	80
22	Friends of Matakohe/ Limestone Island	Matakohe/ Limestone Island, Whangarei Harbour	39
23	Friends of Rangikapiti Pa & Mangonui School	Coopers Beach	247
24	Gilbert Pest Traps	Ngunguru	1
25	Glenbervie Landcare	Glenbervie	10

26	Hancock Forest Management: Brynderwyn Kiwi Project	Brynderwyns	1,800
27	Hancock Forest Management: Gammons Block	Mangakahia	1,368
28	Hancock Forest Management: Rakautao	Kaikohe	647
29	Hancock Forest Management: Whanui Project	Pataua North	927
30	Hancock Forest Management: Whatoro CPCA	Kaihu	1,414
31	Harris Rd Area Landcare	Glenbervie	452
32	Hewlett Point Exterminators	Mata	120
33	Honeymoon Valley Landcare	Peria	1,386
34	Hupara Landcare	Hupara	821
35	Hukerenui CPCA	Hukerenui	100
36	JH Dowell Trust	Day Point	25
37	Jude Rd Forest Care	Mangawhai	350
38	Kaiatea Landowners	Ngunguru	320
39	Kaimamaku Landcare	Kaimamaku – Kaikanui	3,126
40	Kaipara Forest Restoration Trust	Houto	5,000
41	Kauri Landcare	Kauri	1,176
42	Kauri Cliffs	Matauri Bay	2,172
43	Kerikeri Kindergarten	Kerikeri	1
44	Kerikeri Peninsula Pest Control	Kerikeri Peninsula	504
45	Kerikeri-Puketotara Catchment CPCA	Kerikeri - Puketotara	5,792
46	Key Industries	Auckland	n/a
47	Kiwi North Pest Patrol	Whangarei	25
48	Kiwis for Kiwi Trust	New Zealand	
49	Kohinui Stream Landcare	Kohinui Stream Catchment	354
50	Lake Omapere Duck Hunters	Lake Omapere	139
51	Lamb Rd Landcare	Parua Bay	345
52	Langs Cove Trapping Group	Langs Cove	27
53	Living Waters	Tangatapu Catchment, Bay of Islands	4
54	Maclester Group	Brynderwyns	25

55	Mahinepua/Radar Hills Landcare	Mahinepua – Radar Hills	1,150
56	Manaia Landcare	Whangarei Heads	484
57	Mangatete Landcare	Fisher Riley Rd, Kaitaia	750
58	Massey Road Trappers	Massey Road, Waipu	100
59	Matapouri Kaitiaki	Whale Bay - Matapouri	25
60	Maungaparerua Stream Landcare	Kerikeri	648
61	Millington Rd Kiwi Group	Maunu	40
62	Nga Kaitiaki o Huruiki Maunga	Mt Huruiki between Whangapara and Whangaruru	315
63	Nga Kaitiaki o Ipipiri	Cape Brett peninsula	2,300
64	Ngati Wai Trust Board	Ngati Wai rohe	
65	Ngunguru Ford Landcare	Ngunguru Ford	730
66	Ngunguru Sandspit Protection Society	Ngunguru	103
67	Ngunguru School: Restoring Food Chains	Ngunguru	3
68	Northland Regional Council	NRC Mt Tiger block	500
69	NorthTec		
70	NZ Fairy Tern Trust	Auckland, Northland	1,044
71	Northland Forest Managers	Northland (Waikaraka Forest)	
72	Ocean Beach Landcare	Ocean Beach, Whangarei Heads	73
73	Oi Kaitiaki	Langs Cove to Bream Tail Farms	600
74	Okaihau Farmers	Okaihau	156
75	Onekura Rd Trappers	Waipapa	419
76	Opara Kiwi Conservation Estate	Opara Peninsula, Hokianga	559
77	Opua Bike Trail	Opua	86
78	Oromahoe Road Trappers	Oromahoe	38
79	Otangaroa Landcare	Otangaroa	105
80	Owhiwa Landcare	Owhiwa	819
81	Pamu Kapiro-Takou Bay	Takou Bay	3,195
82	Pamu Mangatoa	Southern Hokianga	4,660
83	Pamu Omamari	Omamari	2,364
84	Pamu Puketotara	Puketotara	1,339
85	Pamu Rangiputa	Karikari Peninsula	4,955

86	Pamu Takakuri	Takakuri	1,652
87	Pamu Titoki	Titoki	1,002
88	Papakarahi Landcare	Whangarei Heads	
89	Papa Taio Wainui Project	Wainui	2
90	Parihaka Community Landcare	Mt Parihaka, Whangarei	453
91	Parua Bay School Wildlife Walkway	Parua Bay	5
92	Parua Cemetery Road Landcare	Parua Bay	50
93	Pataua North Landcare	Pataua North	796
94	Pest Free Mangapai Group	Oakleigh/Mangapai	400
95	Pest Free Pahi	Pahi Peninsula, Paparoa	879
96	Prescott Road Trappers	Ruakaka	35
97	Project IslandSong	Islands in the Bay of Islands	436
98	Puke Kopipi Restoration Group	Ngunguru	6
99	Pukenui/Western Hills Forest Trust	Whangarei	2,043
100	Puketi Forest Trust	Puketi	5,600
101	Pungaere Road Corridor	Kerikeri	322
102	Pupurangi Nature Sanctuary	Kaihu	1,294
103	Purerua Peninsula	Purerua Peninsula	3,337
104	QEII National Trust	New Zealand	n/a
105	Rangitane River Group	Kerikeri	88
106	Rayonier Matariki Forests – Glenbervie Forest Project	Glenbervie	6,088
107	Reotahi Landcare	Whangarei Heads	82
108	Retreat Rd Trappers	Haruru - Puketona	205
109	Riverlands Landcare	Ngunguru river	365
110	Ross Road Landcare	Taraunui	337
111	Rukuwai Gateway Landcare	Owhiwa	44
112	Russell Landcare	Russell, Bay of Islands	1,600
113	Russell-Orongo Bay Holiday Park	Russell, Bay of Islands	1
114	Sandy Bay Kiwi	Sandy Bay	3,590
115	South Kerikeri Inlet Landcare	South Kerikeri Inlet	660
116	Skudders Beach	Kerikeri	10
117	Springbank Collective	Kerikeri	7

118	Summit Omahuta	Omahuta	1,063
119	Taheke Landcare	Centered around Taheke Scenic Reserve	2,000
120	Taiharuru Catchment Care Group	Taiharuru, Whangarei Heads	322
121	Takahiwai Pest Control Group	Takahiwai	480
122	Tanekaha CPCA	Hikurangi	2,919
123	Tangiteroria School	Tangiteroria	3
124	Tapuhi Landcare	Tapuhi	2,911
125	Taupo Bay Coast and Landcare	Taupo Bay	1,850
126	Taurikura Ridge Landcare	Taurikura, Whangarei Heads	255
127	Teal Bay Landcare	Teal Bay	25
128	Te Arai Forest Troop	Te Arai	100
129	Te Hiku Forest	Aupouri Peninsula, Far North	18,683
130	Te Ikaroa Landcare	Bay of Islands	53
131	Te Tangi o Te Ata	Eastern Bay of Islands	970
132	The Farm	Whangaruru	259
133	The Shadehouse Volunteers	Kerikeri	1
134	Tiakina Whangarei	Whangarei	4,557
135	Top Energy CPCA	Ngawha	1,109
136	Tutukaka Landcare Coalition Trust	Tutukaka	8,000
137	Upokorau Summit Ecological Project	Upokorau	2,166
138	Upper Pungaere Trappers	Pungaere	319
139	Utukura Trappers	Utukura Valley, Okaihau	717
140	Vision Kerikeri/Friends of Wairoa Stream	Kerikeri	25
141	Volunteering Northland	Northland	n/a
142	Waihou Valley Trapping	Puketi	92
143	Waimate North Landcare	Waimate North	9,400
144	Waipapa West Trapping Project	Waipapa	64
145	Waipu Kiwis	Waipu	128
146	Waitangi Iwi Kiwi Project	Waitangi, Bay of Islands	4,747
147	Waitangi-Haruru Walkway	Waitangi, Bay of Islands	174
148	Warawara Whenua Ngahere	Warawara	11,051

		Total area managed in ha	198,306
159	Wild Kiwi Girls	Kaeo	40
158	Whiritoa Stream Trappers	Waipapa	29
157	Whau Valley Landcare Group	Whau Valley, Whangarei	15
156	Whareora Landcare	Whareora/Mt Tiger	2,159
155	Whangaruru Nth Residents & Ratepayers	Whangaruru Peninsula	284
154	Whangarei District Council	Whangarei	n/a
153	Whananaki Landcare	Whananaki	4,624
152	Whakapara Pest Control Group	Whakapara	217
151	Whakaangi Landcare Trust	Hihi peninsula	2,400
150	Wekaweka Landcare	Wekaweka Valley, Kauri Coast	1,542
149	Weed Action Whangarei Heads	Whangarei Heads	



Direct funders and sponsors



































