



Annual Report 2023

ABOUT EAST TARANAKI ENVIRONMENT COLLECTIVE

East Taranaki Environment Collective - ETEC is a community led conservation initiative administered by the East Taranaki Environment Trust. Our mission is to protect the ecosystem and biodiversity in East Taranaki. Our approach to restoring the ecosystem and increasing the native biodiversity of our 18,000-hectare community project is through the control of invasive pest species. Our predator work consists of 1300 DOC 200 and 600 DOC 250 traps targeting mustelids, and more than 1200 resetting traps (A12s and A24s) that target rats and possums. Our pest operations, through our trap network and goat control, provide a place for kiwi, kōkako, New Zealand long-tailed bats and other native species to thrive.

ETEC takes a science-based approach to conservation work, by using several indicator species to demonstrate the effectiveness of our pest control programmes. While pest control is at the core of our work to restore the ecosystem, we monitor kiwi, kōkako, and other species to indicate whether we are successfully reducing predation rates on these species.

Our country's national kiwi recovery plan indicates that New Zealand's total kiwi population is declining at 2% pa. ETEC's project is significantly contributing to recovery of the western North Island brown kiwi in New Zealand. Our project has an estimated western brown kiwi population of 1 pair per 12.5-15 hectares. In 2018 we translocated 20 kōkako into the project area. The goal of this was to establish a self-supporting population which can contribute to the wider kōkako recovery plan and the restoration of the overall ecological system.

Our Trust takes a collaborative approach working side by side with local lwi, Department of Conservation, Taranaki Regional Council, other conservation groups and organisations, as well as with funders and supporters.

The Trust believes to continue the long term success of the project collaboration is key. We believe long term conservation success will be achieved through collaborating and co-operating with a growing number of organisations and individuals who are dedicated to protecting and enhancing Taranaki's ecosystem and biodiversity.



CHAIR'S MESSAGE

In my role as Chair of the East Taranaki Environment Trust, what is really motivating me is awareness that something special is happening within



Aotearoa New Zealand's conservation sector. It's to do with a rapidly growing spirit of co-operation and collaboration, all with the same aim in mind - restoring our native biodiversity and protecting our indigenous wildlife.

Our organisation's Annual Report for the financial year ended June 30 2023 vividly illustrates how we are working hard to be part of this wider conservation initiative. I think it is a fascinating read – I hope you enjoy it.

While all our staff, contractors and volunteers have contributed to what has been a successful 2022/23, I would like to offer special thanks to our General Manager Rebecca Somerfield and Conservation Manager Kat Strang, whose performances throughout the year have been exceptional. The Trust is very lucky to have both of you.

Rob Maetzig Chair East Taranaki Environment Collective

OUR TEAM

Trustees:

Robert Maetzig – Chair Aaron Chambers – Deputy Chair Anaru Marshall John Haylock Gavin Faull Gloria Campbell Jane Bowden - Dobson Gloria Campbell Sam Haultain

Staff:

Rebecca Somerfield – General Manager Kathryn Strang – Conservation Manager Jayden Fabish – Senior Ranger Corbyn Fabish - Ranger Oliver Sleep – Apprentice Ranger Nadine Paterson – Finance and Admin Support Laura Beaty – Finance Officer It takes a whole community to achieve long term conservation success. We are thankful to our very special volunteers who contribute to the success of our project through their passion, sharing of skills and knowledge. Our project wouldn't be the same without you all. To our funders and supporters thank you for believing in what we do and continuing to back our vision and mission. We are thankful for your support!



OVERVIEW OF THE YEAR THAT'S BEEN

This report is a summary of some of the activities undertaken by the East Taranaki Environment Collective (ETEC) during the year ended 30 June 2023.

This year has been the year of connection, engagement, collaboration and completion.

In April 2021, the Trust celebrated the announcement of receiving Jobs for Nature funding through the national kiwi charity Save the kiwi. The Jobs for Nature funding has allowed the Trust to successfully expand our protected area from the original 13,000 hectares to 18,000 hectares this financial year. This expansion in pest management has the potential for large conservation gains through increasing western North Island brown kiwi population numbers and increasing the availability of protected habitat. This expansion has enabled the Trust to engage and connect with new landowners as well as Forestry Companies and tourism operators. The Trust is extremely thankful to the communities, iwi, volunteers and our conservation partnerships for supporting this project and sharing in the Trust's long-term vision to work alongside iwi and other conservation projects to establish a corridor of national significance.

Thanks to the support of the Department of Conservation and Pukerangiora Hapū the Trust took over the pest management plan of Everett Park Scenic Reserve. Everett Park Scenic Reserve is situated 8km east of Inglewood, and is the largest reserve on the Taranaki ring plain outside of the region's national park, Te Papakura o Taranaki. The Trust's focus for Everett Park over the last year has been to implement an intensive pest control programme to reduce the high pest levels in the area, and relieve predation pressure on the native bird populations inhabiting the Reserve. Everett Park has provided the Trust with an easy to access, authentic outdoor classroom to engage and educate the community, volunteers, schools, and businesses in the important work undertaken by the Trust, while also helping to promote behaviour change. Over the last year the Trust has held a number of education programmes at the Reserve including Curious Minds research programme, the Trust's youth kaitiakitanga programme, as well as a number of other educational and field events.



Thanks to the Department of Conservation and Jobs for Nature funding the Trust received funding this year to employ a contractor to audit all of our DOC200 traps within our existing project, and identify and replace old rotted DOC200 trap boxes as well as mechanisms that were rusting and needed to be replaced. Our field team have done an exceptional job bringing the project's trap network up to standard, while spending time with our valued trapping contractors to highlight the importance of being not just a trap checker but a predator hunter.

As Jobs for Nature funding starts to wind down, ensuring the financial sustainability of our longstanding conservation project is a core focus for the Trust's Board. The Trust is continuing to look at ways to diverse its income stream, while working closely with our funders and supporters.

The Trust is working in partnership with the New Plymouth District Council and Pukerangiora Hapū to explore opportunities to utilise a large area of bare land on Inglewood's southern boundary behind Joe Gibbs Reserve, to house facilities for the Trust. The working group is currently working together to establish the core functionality of the centre to ensure the centre meets the needs of all parties as well as the wider conservation community. The Trust's goal is to ensure this is a centre that can be used by the wider Taranaki conservation community, and planning is currently in place to engage all stakeholders and the conservation community in this exciting community initiative. The Trust would like to thank Venture Taranaki for providing funding to undertake a feasibility study on behalf of the working group, as well as acknowledge the continued architectural support of Gibbons Architects.

This year the Trust has implemented new programmes and tools to build on our current education programmes, as well as embrace opportunities to play our part in ensuring we are sharing our expertise and knowledge with our future conservation warriors. Everett Park has provided the Trust with an authentic learning platform, where students have the opportunity to be involved in hands on investigations, while also learning key inquiry skills, such as questioning, decision making and analysing. Our tamariki are enjoying the opportunity to learn about the importance of protecting our environment.

The Trust has also broadened its work this year by partnering with Parininihi ki Waitōtara, Ngāti Maru, and Taranaki Kiwi Trust to study kiwi in pine plantations during different harvesting phases. The Trust is providing technical and research expertise for this project, as well as helping with data collection and tracking the kiwi as needed. With the knowledge and experience that is held within the Trust, this has been a great opportunity to help contribute more to our knowledge on North Island brown kiwi and expand the Trust's conservation work.

To our volunteers and contractors who work alongside us each day. Thank you for continuing to share your expertise, knowledge and passion. This year our volunteers contributed more than 2,000 hours to the Trust. We would be nothing without your support, you have been our secret power behind the continued success of our project. I thank you very much for all you have done.

The Trust's focus this year has been to continue to build strong and respected relationships with all of our stakeholders, partners and community supporters. The Trust knows that working in isolation will not achieve New Zealand and Taranaki's conservation goals. The Trust's continued efforts wouldn't have been achieved without the support of our valued funders and supporters. The Trust would like to extend a heartfelt thanks to all of our funding partners who have continued to back our project and provided us the necessary funding and support to achieve the Trust's mission and goals.

It's been a big year and I couldn't be prouder of our team and the community that continues to support the Trust's important mission and mahi. Team work is at the heart of any great achievement. Big or small thank you for your support and contribution!



BIODIVERSITY OUTCOMES

The Trust aims to restore native biodiversity within the East Taranaki region and provide a protected area for native wildlife to thrive. This is mainly achieved through using an integrated pest management approach, where the main pest species are targeted and control is adapted based on findings. Generally, as you control one pest and lower their numbers, the pressure can be removed from other pests and they may become a new problem. Continually assessing our pest control plan and the ecosystem means that we can adapt with these changes. To ensure that the pest control regime is leading to biodiversity gains, the Trust monitors key indicator species such as kiwi and kōkako.

Our biodiversity conservation action plan, including interactions within the ecosystem, is summarized below: Over the past two years, the Trust's footprint has increased from 13,000 hectares to 18,000 hectares in East Taranaki. The Trust has also been implementing pest control in Everett Park.



PEST CONTROL AND MONITORING

Mustelid control

Stoats have been the main mustelid targeted over the original 13,000 hectare project area, though the Trust has been working over the past year to strengthen this mustelid control and include more targeted ferret control too. Ferrets are one of the main predators of adult kiwi, and in recent years they have been expanding their range and increasing in population size. This has resulted in ferrets being caught in areas that they haven't been trapped in previously, and adult kiwi being predated on by ferrets. The Trust catches only a few ferrets each year within the project site, though this could be because the main trap used is the DOC200. Ferrets are larger than stoats, and can't fit easily into the entranceways of a DOC200, and the mechanism is not strong enough to kill the large individuals. . The DOC250 is a slightly larger and more powerful trap, capable of trapping ferrets and stoats.

Due to this, the Trust has been reviewing how to protect the area further from possible ferret incursions. The peripheral traplines around the site have had every third DOC200 replaced with a DOC250. These traplines are close to edge habitat (areas where forest and farmland meet) which are likely to have more ferrets due to higher rabbit populations in these areas. By targeting the ferrets within the periphery (similar to a halo) it will reduce the chances of ferrets moving further into the core part of the forest. Camera traps are also being utilised within the Pouiatoa Conservation Area to detect any ferret incursions that may occur.

Within the original 13,000 hectares, there are 1,075 DOC200s and 111 DOC250s set up across 19 different traplines. The traps are spaced 100m apart, with lines spaced 1km apart. Traps are checked, rebaited, and reset every month by contractors or staff. The team has continued using the rabbit mince made by local company Feral Control due to the higher mustelid catch rates. The team is also trialling other lures alongside this such as blaze, scent lures, and fat to see whether this increases trap catch rates and animal activity around the traps.

For consistency and comparison between each year, the catch data for the mustelid traps have been split into the "Core project" – original 13,000 hectares, and the Expansion project (details in section below) – newly trapped area ~5,000 hectares.







This map outlines the original project area and the expansion area that was funded through Save the kiwi Jobs for Nature, and Everett Park. The Trust's project area with the original 13,000 hectare area in blue between Matau, Purangi, and Okoki, the Save the Kiwi Expansion area in green and white from Matau to Forgotten Highway and Te Wera, and Everett Park just outside of Inglewood.

	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total
Cat	2	1	0	0	0	0	2	4	4	2	2	0	17
Ferret	0	0	0	0	0	0	0	0	0	0	0	0	0
Hedgehog	4	3	4	4	3	6	18	18	14	15	18	11	118
Mouse	1	5	0	0	0	1	2	2	4	10	10	4	39
Possum	1	0	0	0	3	2	1	1	0	0	0	0	8
Rabbit	0	1	1	3	4	1	1	0	0	0	0	0	11
Rat	160	135	79	71	109	84	73	64	93	158	182	148	1356
Stoat	7	6	6	6	11	16	41	19	8	9	3	5	137
Weasel	2	0	3	4	0	3	1	0	0	1	0	1	15

Expansion area 5,000 hectare	s, 14 DOC200 tra	aps and 556 DOC25() traps, total catches.
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	Jul-22	Aug-22	Sep-22	Oct-22	Nov-22	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total
Cat	2	1	0	0	0	0	1	3	2	4	0	0	13
Ferret	0	0	0	0	0	0	0	0	0	1	0	0	1
Hedgehog	0	0	0	6	0	8	22	23	23	30	18	21	151
Mouse	0	0	0	0	0	0	0	3	2	0	0	0	5
Possum	0	0	0	0	0	0	1	0	1	0	0	1	3
Rabbit	0	0	0	1	0	0	3	0	0	2	1	0	7
Rat	17	6	4	5	7	12	16	17	19	23	16	33	175
Stoat	1	1	1	1	5	6	11	6	4	2	2	3	43
Weasel	0	0	0	0	0	0	0	1	0	1	2	1	5

Trap catch data, which is based on the number of nights that the DOC200s are active and the catch rate, shows a catch rate for stoats as less than 1%. Camera traps were set out in 12 different locations throughout the project area. Each location was monitored for three weeks at a time, twice throughout the year (September/October and December/January) which resulted in a camera trap capture rate of 1% (no. of detections/no. of camera trap nights) for stoats.

Rat and possum control

Rats and possums are controlled within 1000 hectares of the Pouiatoa Conservation Area through a number of different methods. The main reason for this is that it is where the reintroduced kōkako have settled, and kōkako need low rat and possum populations to be able to breed and nest successfully.

To help keep rats and possums suppressed yearround, there is a network of 342 A12 and 797 A24 Good Nature resetting traps set up over 1,000 hectares of the Pouiatoa Conservation Area. A12s are mainly set up on the perimeter tracks with 100m spacing and target possums, and A24s are set up on the perimeter and interior lines with 50m spacing and target rats. These are regassed and relured every six months.

In August 2022, 9 volunteers helped the field team for the day to re-gas and re-lure just under 400 of the resetting traps. The field team finished re-gassing and re-luring the remaining traps over July/August. In February 2023, the New Plymouth Boys High prefect team helped the Trust's field team to replenish the resetting traps, with more than 700 traps being done in one day. The field team was joined by staff from Taranaki Regional Council, Taranaki Kiwi Trust, and Department of Conservation to mentor the prefects through this field work.

Following the last ground-based toxin operation, extra lines were cut to place out more bait stations and get more coverage within the area, so the bait stations increased from 328 to 451. Twelve extra lines were cut and marked (10.31km total) and bait stations were installed along these.

For the 2022 ground toxin operation, 451 bait stations were utilised within the 1000 hectare core block within the Pouiatoa Conservation Area. The team carried out a toxin operation from October to December which included two pulses of a non-toxic prefeed (No7 16mm (6g) cinnamon bait) and one pulse of Double Tap (Cholecalciferol + Diphacinone). For both the prefeed and toxin, 300g-500g were put into each bait station depending on the previous year's bait uptake.

The first pre-feed was carried out from 16th-18th October, with 215kg of prefeed put out. Bait uptake for this prefeed for all of the lines was 96.66%. The second pre-feed was 31st October to 4th November (1 day was rained off during this period), with 217kg of pre-feed put out and 100% bait uptake.

The Double Tap toxin was put out into bait stations from 14th-16th November and left out for two and half weeks (toxin retrieval was 1st-3rd December).



Lines where bait stations were set up in the Pouiatoa over 1000 bectares

Above: 2021 Below: 2022



Bait uptake was 57.12% for all lines. The highest uptake was 94.44% and the lowest was 28.57%.

Monitoring was conducted pre- and post- toxin operation to determine rat and possum levels, with the pre-monitor carried out 2-3 weeks before the prefeed, and the post-monitor 2 weeks following toxin retrieval. Tracking tunnels were used to monitor rats – there were 13 lines with 10 tunnels each 50m apart with at least 200m between lines. The same lines as



Bait uptake results of the Double Tap toxin for the different lines. Red = 75% or more, dark orange = 60-74%, light orange = 50-59%, yellow = 40-49%, and green = less than 40%.

the previous year were used. Tracking tunnel cards were baited with peanut butter on the edge of the card and were placed into the tunnels overnight.

During the pre-monitor, the team also trialled 20m vs. 100m chew card set up. This was because the full 200m chew card line could be walked and chewed by one possum, creating an over-representation of the possum abundance in the area. Unfortunately, the weather meant that all of the chew card lines couldn't be brought in after 7 nights resulting in less data available. Because the 100m chew card lines seemed like it represented the area more, the 100m set-up was used for the post-monitor. Chew cards were used to monitor possums and were set up on the same lines as the tracking tunnels, with cards spaced every 100m. Chew cards were left out for 7 nights.

Rats and possums have both increased since the 2021 monitoring, though this is to be expected with it being two years post-1080. Rat tracking tunnel indices dropped following the ground-toxin operation, from 44% to 34%. Though possums were seen visiting bait stations, and there was evidence of poisoned possums in the area, the possum bite-mark index went from (for 100m set-up only) 43% to 75%. This may be due to resident possums being removed and possums moving around more within the area, and encountering chew cards more frequently. It could also be that the chew cards are seen as a food source for possums, and they may learn this from the pre-monitor, and seek out the chew cards during the post-monitor. It is proposed that the following monitoring switch to wax tags to see whether this reduces the chances that one possums interacts with several of the chew cards/wax tags.

			- 0				J .,		,			
Tracking card Number 1 2 3 4 5 6 7 8 9 10 Total rats	acking card Number	1	2	3	4	5 6	7	8	9	10	Total rats	Rat

Tracking card Number	1 1	2	>	4	3	1 0	/	•	9	10	TOLATIALS	Rat tracking rate
Tracking tunnel line												
A				Rat		Rat	Possum + Rat	Possum + Rat	Rat		5	50.00%
в											0	0.00%
С	Rat	Rat	Rat + Mouse	Rat + Mouse	Rat	Rat	Rat		Rat	Rat	9	90.00%
D	Rat			Rat + Mouse	Rat	Rat	Rat		Rat	Rat	5	50.00%
E											0	0.00%
11		Rat	Possum	Possum	Possum	Rat	Mice and Possum	Mice and Rat	Possum Rat and Mice	Possum	5	50.00%
н	Bait taken		Bait taken			Bait taken	Rat	Rat	Rat	Rat	4	40.00%
PTL	Possum	Possum	Possum	Possum	Possum	Rat	Rat	Rat	Rat and Possum	Rat	5	50.00%
7				Possum	Possum	Possum	Bait taken	Possum	Possum	Possum	0	0.00%
?5	Possum	Possum			Rat	Rat			Rat		3	30.00%
8	Possum	Rat	Rat and Possum	Possum		Possum	Rat and Possum	Possum		Rat	4	44.44%
3						Possum	Possum	Rat	Rat		2	20.00%
I	Rat and mice	Rat			Rat	Rat	Rat		Rat		6	60.00%
											48	44.04%

Table 2: Pre-monitor results for chew cards set out for seven nights in September. Top = 20m set-up, Bottom = 100m set-up

Chew card number (20m)	1	2	3	4	5	6	7	8	3 9	10	Total possums	Possum tracking rate
Chew card line												
A	Possum	Possum + Rat	Rat	Possum + Rat	Possum + Rat	Possum + Rat	Possum + Rat	Possum + Rat	Possum + Rat		8	88.89%
в											0	0.00%
C	Rat	Rat	Rat	Rat	Rat	Rat	Rat	Rat	Possum + Rat	Rat	1	10.00%
D		Rat	Rat + Mouse	Rat	Rat	Possum + Rat	Rat	Rat	Rat	Rat	1	10.00%
E											0	0.00%
G		Mouse	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum	8	80.00%
Н								Rat	Rat	Rat	0	0.00%
1	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum	10	100.00%
K	Possum	Possum	Possum + Rat	Possum	Possum	Possum + Rat	Rat	Possum + Rat	Possum	Possum	9	90.00%
M	Possum	Possum + Rat	Possum + Rat	Possum	Possum	Possum	Possum + Rat	Possum	Possum	Possum + Rat	10	100.00%
2R	Possum + Rat	Rat	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum	9	90.00%
?5	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Rat	Possum	Possum + Rat	9	90.00%
PTL	Possum	Possum	Possum	Possum	Possum	Possum	Possum + Rat	Possum	Possum	Possum	10	100.00%
											75	73.53%
Chew card number (100m)	1	2	3	4	5	6	7	1 1	8 9	10	Total possums	Possum tracking rate
Chew card number (100m) Chew card line	1	. 2	3	4	5	6	7	1 8	8 9	9 10	Total possums	Possum tracking rate
Chew card number (100m) Chew card line A	1 Possum	Rat 2	3 Rat	4 Rat	Rat 5	6	Possum	1 1	8 S	Possum + Rat	Total possums	Possum tracking rate 40.00%
Chew card number (100m) Chew card line A B	Possum Possum	Rat Rat	3 Rat Possum + Rat	Rat Possum	Rat Rat	e Possum + Rat	Possum Possum	Rat	Possum	Possum + Rat	Total possums 4 5	Possum tracking rate 40.00% 55.56%
Chew card number (100m) Chew card line A B C C	Possum Possum Rat	Rat Rat Rat	Rat Possum + Rat Rat	Rat Possum Rat	Rat Rat Rat	Possum + Rat	Possum Possum	Rat Possum	Possum	Possum + Rat Possum	Total possums 4 5 2	Possum tracking rate 40.00% 55.56% 20.00%
Chew card number (100m) Chew card line A B C C D	Possum Possum Rat	Rat Rat Rat	3 Rat Possum + Rat Rat	Rat Possum Rat Rat	Rat Rat Rat	Possum + Rat Possum	Possum Possum Rat	Rat Possum Rat	Possum Rat	Possum + Rat Possum Rat	4 5 2 1 1	Possum tracking rate 40.00% 55.56% 20.00% 10.00%
Chew card number (100m) Chew card line A B C D E	Possum Possum Rat Rat	Rat Rat Rat Possum	3 Rat Possum + Rat Rat Possum	4 Rat Possum Rat Rat Possum	Rat Rat Rat Possum	Possum + Rat Possum Possum+ Rat	Possum Possum Rat Rat	Rat Possum Rat Rat	Possum Rat Rat	Possum + Rat Possum Rat Rat	4 5 2 1 1 5	Possum tracking rate 40.00% 55.56% 20.00% 10.00% 50.00%
Chew card number (100m) Chew card line A B C C D E G G	Possum Possum Rat Rat	Rat Rat Rat Possum Possum + Rat	Rat Possum + Rat Rat Possum Rat	A Rat Possum Rat Possum	Rat Rat Rat Possum Rat	Possum + Rat Possum Possum+ Rat Possum	Possum Possum Rat Rat Possum	Rat Possum Rat Rat Possum	Possum Possum Rat Rat Possum	Possum + Rat Possum Rat Rat Possum	4 5 2 1 1 5 6	Possum tracking rate 40.00% 55.56% 20.00% 10.00% 50.00% 60.00%
Chew card number (100m) Chew card line A B C D E G H	Possum Possum Rat Rat Rat	Rat Rat Rat Possum Possum + Rat Rat	3 Rat Possum + Rat Rat Possum Rat	A Rat Possum Rat Possum	Rat Rat Rat Possum Rat Possum	Possum + Rat Possum Possum+ Rat Possum Possum	Possum Possum Rat Rat Possum	Rat Possum Rat Rat Possum Rat Rat	Possum Rat Rat Possum Possum	Possum + Rat Possum Rat Rat Possum Rat Rat	4 5 2 1 1 5 6 6 3	Possum tracking rate 40.00% 55.56% 20.00% 10.00% 50.00% 60.00% 30.00%
Chew card number (100m) Chew card line A B C D C G G H I I	Possum Possum Rat Rat Rat	Rat Rat Rat Possum Possum + Rat Rat	3 Rat Possum + Rat Rat Possum Rat	4 Possum Rat Rat Possum Mouse	Rat Rat Rat Possum Rat Possum	Possum + Rat Possum Possum+ Rat Possum Possum Possum	Possum Possum Rat Rat Possum	Rat Possum Rat Rat Possum Rat	Possum Rat Rat Possum Possum Mouse	Possum + Rat Possum Rat Rat Possum Rat Mouse	Total possums 4 5 2 1 5 6 6 3 1	Possum tracking rate 40.00% 55.56% 20.00% 10.00% 50.00% 60.00% 30.00% 10.00%
Chew card number (100m) Chew card line A B C C D E G G H I K K	A 1 Possum Possum Rat Rat Rat Possum Possum Rat	2 Rat Rat Possum Possum + Rat Rat Possum	3 Rat Possum + Rat Rat Possum Possum	4 Rat Possum Rat Possum Mouse Possum	S Rat Rat Possum Rat Possum Possum	Possum + Rat Possum Possum Rat Possum Possum Possum Possum	Possum Possum Rat Rat Possum Possum	Rat Possum Rat Rat Possum Rat Rat Rat	Possum Rat Rat Possum Possum Mouse	Possum + Rat Possum + Rat Rat Rat Possum Rat Mouse Possum	4 5 2 1 1 5 6 6 3 1 8 8	Possum tracking rate 40.00% 55.56% 20.00% 10.00% 50.00% 60.00% 30.00% 10.00% 80.00%
Chew card number (100m) Chew card line A B C D E G H H I K M	1 Possum Possum Rat Rat Rat Possum Rat Possum Rat	2 Rat Rat Rat Possum Rat Rat Rat	3 Rat Possum + Rat Rat Possum Possum Possum + Rat	4 Rat Possum Rat Rat Possum Mouse Possum Possum + Rat	Rat Rat Rat Possum Rat Possum Possum Rat	Possum + Rat Possum + Rat Possum + Rat Possum Possum Possum Possum + Rat	Possum Possum Rat Rat Possum Possum Possum	Rat Possum Rat Rat Possum Rat Rat Possum	8 S Possum Rat Rat Possum Possum Mouse Possum + Rat	Possum + Rat Possum + Rat Rat Rat Possum Rat Mouse Possum Mouse + Rat	2 Total possums 4 5 2 1 1 5 6 6 3 1 8 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	Possum tracking rate 40.00% 55.56% 20.00% 10.00% 60.00% 30.00% 30.00% 80.00% 60.00%
Chew card number (100m) Chew card line B C C D E G H H K M 2R	1 Possum Possum Rat Rat Possum Rat Possum Rat Possum Rat Possum	2 Rat Rat Possum Possum + Rat Rat Rat Rat Rat	3 Rat Possum + Rat Rat Possum Possum + Rat	4 Rat Possum Rat Possum Possum Possum Possum Rat	Rat Rat Rat Possum Rat Possum Rat Possum	Possum + Rat Possum + Rat Possum + Rat Possum Possum Possum + Rat Possum + Rat	Possum Possum Rat Rat Possum Possum Possum	Rat Possum Rat Rat Possum Rat Rat Possum Rat Rat Rat	8 S Possum Rat Rat Possum Possum Mouse Possum + Rat Rat	Possum + Rat Possum Rat Rat Possum Rat Mouse Possum Mouse + Rat Rat	Total possums 4 5 2 1 5 6 3 1 8 6 3	Possum tracking rate 40.00% 55.5% 20.00% 50.00% 60.00% 30.00% 10.00% 80.00% 60.00% 30.00% 30.00%
Chew card number (100m) Chew card line A B C C D E G H I K M M 2R 75	1 Possum Rat Rat Rat Possum Rat Possum Rat Possum P	2 Rat Rat Possum Possum + Rat Rat Rat Rat Rat	3 Rat Possum + Rat Rat Possum Possum Possum + Rat Rat	4 Rat Possum Rat Possum Possum Possum + Rat Rat Possum	S Rat Rat Possum Rat Possum Rat Possum Rat	Possum + Rat Possum + Rat Possum + Rat Possum Possum Possum Possum + Rat Possum	7 Possum Possum Rat Rat Possum Possum Possum Possum	Rat Possum Rat Rat Possum Rat Possum Rat Mouse	8 S S Possum Rat Rat Possum Possum Mouse Possum + Rat Possum + Rat	Possum + Rat Possum Rat Rat Possum Rat Mouse Possum Mouse + Rat Rat Possum	Total possums 4 4 5 2 1 1 5 6 6 3 1 1 8 6 6 3 3 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	Possum tracking rate 40.00% 55.56% 20.00% 10.00% 60.00% 30.00% 10.00% 60.00% 30.00% 50.00% 50.00%
Chew card number (100m) Chew card line A B C C D E C G H I K M 2R 2R 75 PTL	1 Possum Possum Rat Rat Rat Possum Rat Possum Pos Possum P	2 Rat Rat Possum Possum + Rat Rat Rat Rat Rat Rat Possum	3 Rat Possum + Rat Rat Possum Possum Possum + Rat Rat Possum	4 Rat Possum Rat Possum Possum Possum Possum Possum Possum Possum	Rat Rat Rat Possum Rat Possum Rat Possum Rat Rat Rat	Possum + Rat Possum Possum Possum Possum Possum Possum Possum Possum Possum + Rat Possum + Rat	7 Possum Rat Rat Possum Possum Possum Possum Possum Possum Possum	Rat Possum Rat Rat Possum Rat Possum Rat Possum Rat Mouse Rat	8 S Possum Rat Possum Possum Mouse Possum + Rat Rat Rat Rat Mouse	Possum + Rat Possum Rat Rat Possum Rat Mouse Possum Mouse + Rat Rat Possum Possum Possum	Total possums 4 5 2 1 1 5 6 3 1 1 8 6 3 6 3 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	Possum tracking rate 40.00% 55.56% 20.00% 50.00% 60.00% 30.00% 60.00% 60.00% 50.00% 50.00% 70.00%

Table 3: Post-monitor results for tracking tunnel cards set out for one night, baited with peanut butter, in December.

Tracking card Number		4				0	· · · ·	0		10	101011010	Indi tracking rate
Tracking tunnel line												
A	Possum			Rat	Rat	Rat	Rat	Rat	Rat		6	60.00%
В	Possum	Bait taken	Rat		Rat	Rat	Possum		Rat	Rat	5	50.00%
С	Rat		Rat	Rat	Rat	Rat	Rat		Rat	Rat	8	80.00%
D					Rat	Rat	Rat	Rat	Rat	Rat and Possum	6	60.00%
E	Rat		Bait taken	Rat	Rat	Rat	Rat	Rat	Rat and possum	Rat and Possum	8	80.00%
11	Possum	Possum	Possum	Possum	Possum	Possum	Rat		Possum	Bait taken	1	10.00%
н	Bait taken	Possum	Possum	Possum	Bait taken			Rat			1	10.00%
PTL	Possum	Possum	Rat and Possum	Possum	Possum	Possum	Possum		Rat		2	20.00%
7	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum		Possum	0	0.00%
к									Possum	Possum	0	0.00%
M	Possum	Rat and Possum		Possum		Possum	Rat and Possum	Possum	Possum	Possum	2	22.22%
?5	Rat and Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum	Possum	1	10.00%
1					Rat and possum	Possum	Rat and Possum	Rat and Possum	Rat and Possum	Possum	4	40.00%
[44	34,38%

Table 4: Post-monitor results for chew cards (100m set-up) set out for seven nights in December.

Chew card number (100m)	1	2	3	4	5	6	/	8	9	10	I otal possums	Possum tracking rate
Chew card line												
A	Rat	Rat	Rat		Rat	Rat and possum	Possum	Possum	Possum		4	44.44%
В	Rat and possum	Rat	Rat and Possum	Rat and possum	Rat and Possum	Possum	Possum	Possum	Rat and Possum	Rat and Possum	9	90.00%
с	Rat	Rat	Rat	Rat and Possum	Rat and Possum	Rat and Possum	Rat	Possum	Rat	Rat	5	50.00%
D	Rat and Possum		Possum	Possum	Rat	Rat and possum	Rat	Rat	Rat	Rat and Possum	5	50.00%
E	Rat		Possum	Rat	Rat	Rat	Rat and Possum	Rat and Possum	Rat	Rat and Possum	4	40.00%
G	Possum	Possum	Rat	Possum	Possum	Possum	Possum	Possum	Rat and Possum	Possum	9	90.00%
н	Rat	Rat and Possum	Rat	Possum	Possum	Possum	Rat and Possum	Possum	Possum	Rat and Possum	8	80.00%
1	Rat		Rat	Rat and possum		Rat and possum	Possum	Possum	Rat and Possum	Rat and Possum	6	60.00%
к	Rat and Possum	Possum		Possum	9	100.00%						
M	Possum	Rat and Possum	Possum	Possum	Possum	Possum	Rat and Possum	Rat	Rat and Possum	Rat	8	80.00%
2R	Possum	Possum	Possum	Possum	Rat and Possum	Rat and possum	Possum	Possum	Possum	Possum	10	100.00%
?5	Rat and Possum	Rat and Possum	Rat and Possum	Possum	Rat and Possum	Possum	Possum	Rat and Possum	Possum	Possum	10	100.00%
PTL	Possum	Possum	Rat and Possum	Possum	Possum	Possum	Rat and Possum	Possum	Possum	Rat and Possum	10	100.00%
											97	75.78%

Camera trap results also showed that the number of independent possum and rat videos decreased between the pre- and post-monitor (Table 5). There were very few rat videos recorded, reflecting the low rat abundance that is seen within the forest. Rats were not detected on camera within the toxin area either pre- or post-monitor. The number of independent possum videos from the camera trap data decreased for both the toxin area and outside of the toxin area. This suggests that there could have been a natural reduction in possum abundance or activity that was not caused by the toxin. There was a greater reduction in possum videos within the toxin area though.

 Table 5: Pre- and post-monitoring results from camera traps set up in the toxin area (left) and outside of the toxin area (right). A camera was at each of the locations for three weeks for each of the pre- and post-monitor.

Possum					
Toxin area	Pre	Post	Outside toxin area	Pre	Post
Milk bottle junction	6	5	Chris's top loop 841/842	14	8
I/J line	5	0	Chris's top loop 810	1	1
B line	3	3	Stu's back loop - 721	6	3
Kokako spur	0	2	Stu's back loop - 760	7	2
H line	8	1	Stu's front loop - 517/518	4	3
2nd ridge	31	11	Stu's front loop - 550	15	5
Total	53	17		47	22
Rat					
Toxin area	Pre	Post	Outside toxin area	Pre	Post
Milk bottle junction	0	0	Chris's top loop 841/842	1	0
I/J line	0	0	Chris's top loop 810	0	0
B line	0	0	Stu's back loop - 721	2	1
Kokako spur	0	0	Stu's back loop - 760	0	0
H line	0	0	Stu's front loop - 517/518	0	0
2nd ridge	0	0	Stu's front loop - 550	0	0
Total	0	0		3	1

The Trust is continually assessing their pest control to make sure that it is as effective and efficient as possible. After using Double Tap for the past two years, the Trust will be looking to use a different toxin for the next ground-based toxin operation. With the amount of effort required to put out enough Double Tap toxin and cover a large area, and not achieving a high knockdown of possums, it is not worth the effort for the results that we are currently getting. The nature of the terrain and being able to cover the area as quickly as possible means that toxins such as cyanide (particularly with possums being the main target) could be the most effective without having to carry large amounts of toxin throughout the 1,000ha. With 1080 planned for Winter/Spring 2023, there is time for the Trust to explore different options for groundbased toxin for the 2024 season.

Goat control

The Department of Conservation has again obtained funding and helped with the logistics for goat control to be undertaken within the Pouiatoa Conservation Area. Two different hunting groups are working within the area, with 447 hours of hunting and 756 goats removed from the Pouiatoa Conservation Area or surrounding farmland in the July 2021 – June 2022 financial year.

From July 2022 – June 2023, there were 548 hours of goat hunting with 952 goats shot within the Pouiatoa Conservation Area and surrounding farmland.

ETEC will be working with the Department of Conservation to continue this goat control work to ensure the long-term survival of the forest and increase the regeneration of vegetation.

NATIVE SPECIES

Kiwi monitoring

The Trust has had seven kiwi on transmitter during the past year July 2022 – June 2023. However, these kiwi are different to the kiwi reported on in July 2022. The kiwi that are now being monitored by the Trust were being monitored previously as part of the Kōhanga ONE project that was a partnership between ETEC, Save the Kiwi and Ngāti Maru. The Trust has also continued to monitor Kotikara because he resides within a pine forest that has been recently harvested, and with questions being raised on how harvesting effects kiwi within pine plantations, continuing to monitor Kotikara will add valuable data.

From the transmitted males, the number of clutches are detailed below. Dates given are for when the male started incubating. Two males (Pakiki and Utus the Brutus) did not incubate this year.



Jayden and Corbyn with Anxter the Prankster and his girlfriend.

Kiwi	1 st clutch	2 nd clutch
Korokoru	10 July 2022	2 November 2022
Kotikara	31 July 2022	18 November 2022
Anxter the Pranskter	21 July 2022	30 November 2022
Hoa-nui	7 August 2022	30 December 2022
Hideini	25 August 2022	

Kiwi catching for annual health checks and transmitter change/removal

Due to some of the kiwi having their previous year's transmitter changes done in January (second clutch uplift), their transmitters were running out of battery in March 2023. Due to this, and the significant amount of rain that was falling over summer and autumn, the team needed to make the call to go in and do the annual transmitter changes in March (once the kiwi had finished incubating) to not risk the transmitter running out of battery on the kiwi and not being able to find them again.

All of the kiwi were in really good condition, even with two of the kiwi (Korokoru and Hoa-nui) having recently finished incubation. One kiwi that had signs of feather mites (Utus) last year was in better body condition this year and his feathers were also in better condition. Most of the kiwi were found in burrows, though two were on the surface under treefalls. Kotikara, who is on the Matau Saddle which had a pine plantation recently harvested, was found on the edge of the harvesting site and a native forest gully, under a fallen pine tree. He is a smaller male, but he had a good body condition score and had successfully hatched two clutches (within the native forest gully) in the breeding season despite the harvesting operations occurring around him. Information collected from Kotikara's movements during that pine harvesting operation will be used to supplement other work in the area that is being carried out on kiwi inhabiting pine plantations.



Kat trying to get Kotikara out of his burrow under a fallen pine tree – often how kiwi catching looks.



Operation Nest Egg – Kōhanga Project

In April and May 2021, six male kiwi (those reported on above) were caught on Ngāti Maru Block C and had transmitters attached for ONE. This work (a collaboration between Save the Kiwi, Ngāti Maru, and ETEC) was part of the Kōhanga project by Save the Kiwi who are building up a population of kiwi within Sanctuary Mountain Maungatautari (a predatorproof fenced sanctuary in the Waikato) to then be translocated back into predator controlled areas within the western North Island brown kiwi range. While the kiwi chicks within ETEC's project area are relatively safe from predation due to low predator numbers, eggs were uplifted from these male kiwi and the chicks released into Maungatautari to increase genetic diversity and the number of genetic founders within the population.

During the 2022/2023 kiwi breeding season, there was only one clutch that was uplifted. This was due to Maungatautari being close to capacity and not needing any more founders at the moment. Korokoru's first clutch for the breeding season was uplifted and there were three eggs. This is similar to one of his clutches last season that also had three eggs, and similar to this clutch, one of the eggs was infertile. One of the chicks, named Toa, was released into Rotokare as its 40th founder for genetic diversity.



Jess from the Taranaki Kōhanga Kiwi at Rotokare project (collaboration between Taranaki Kiwi Trust and Rotokare Scenic Reserve Trust) with Toa who came from Korokoru, one of the kiwi that ETEC monitors. Korokoru's eggs were uplifted at 60 days of incubation, and the eggs were hatched at the Crombie Lockwood Kiwi Burrow. Once old enough, Toa came back to Taranaki and was released into Rotokare (fenced sanctuary) as its 40th founder for genetic diversity.

Kōkako Monitoring

Over a period of nine days from September-November 2022, the team surveyed the Pouiatoa Conservation Area (and its surrounding areas) for kōkako territories. In total, 1450 hectares and 39 km of tracks were surveyed. Six pairs were found, along with four single birds seen. One pair was heard but not contacted during the survey (seen before surveys) and another five single birds were heard, also not contacted. Of the 16 birds seen, three were identified as being banded, twelve un-banded and one unable to be confirmed either way. Eight of these un-banded birds were in a pair, including three pairs of un-banded birds.

Total findings: Six pairs seen, four singles seen, one pair heard & five singles heard.

The team found that their kōkako surveys conducted in mid-September that the kōkako did not seem very responsive to the calls. The surveys that were conducted in October elicited more responses from the kōkako. An exciting observation was that a pair of kōkako were seen on the ground along PTL track at 4pm. Kōkako surveyors Dave Bryden and Amanda Rogers volunteered their time to come out into the Pouiatoa in February 2023 to see the area and help the field team with their kōkako surveying skills. They recorded some new Pouiatoa kōkako songs that can be used by the team for the 2023 census surveys. The J line pair, H line pair, and 2nd Valley pair were all contacted, with two of the pairs seen, and J line pair responding but not coming close enough to be seen.



Figure 3: Locations of kōkako heard or seen during the census survey. H = single heard, PH = pair heard, S = single seen, P = pair seen. The tracks in pink are the tracks that were surveyed.

CURIOUS MINDS

Curious Minds is a Participatory Science Platform with funding distributed through Venture Taranaki. This year the Trust worked with Norfolk School, Taranaki Regional Council, and Department of Conservation to expand on the previous year's project, where the students had identified that there needed to be intensive trapping in Everett Park that also targeted the possums. There are many different possum traps on the market, and they can have varying results in different habitats. The project aimed to test four different traps within Everett Park to see which trap was the most effective at capturing possums, as well as looking at how possums interacted with the different traps.

Our research questions were:

- Which kill-trap design catches the most possums?
- How much time is spent by the possum investigating or approaching the trap before it interacts with it?

The project tested four different types of traps that ranged in their set up, angle, and entrance sizes, with cameras set up on each of the traps. Four traps of each type were set up (16 traps in total) – Goodnature A12, Sentinel, Trapinator, and Steve Allen traps (SA2). Camera traps were also set up on the traps so that possum interactions could be recorded. Traps were baited every 5 days with a mix of peanut butter and clove oil/icing sugar/flour mix, with all traps baited with the same bait at the same time, with the cameras brought in for analysis after three weeks.

Over the three weeks, there were a total of 10 possums caught. Over half of the possums were caught in SA traps (six possums), with the Sentinels catching two possums, and the A12s and Trapinators catching one possum each.

The interactions were broken down into the time that the possum looked at the trap, time spent approaching the tree, and time spent climbing the tree to the trap. The possums spent the most time interacting with the traps for both the A12s and the Trapinators, which were also the traps that caught the least amount of possums. The possums spent the least amount of time investigating the Sentinel traps.

From the results of this study, the students concluded that the possum traps that would be the most effective for possum control in Everett Park would be the SA trap, and they recommended to ETEC to use these traps for their possum control within the area. Students also learnt how monitoring pest species is quite important and that trap data does not always reflect what is happening within the ecosystem, because often possums will pass by the traps without going into them.



One of the students from Norfolk School helping Department of Conservation Ranger Greg install a Trapinator possum trap as part of the Curious Minds project.



Norfolk School students at Everett Park.

EXPANSION – SAVE THE KIWI JOBS FOR NATURE

As part of the Save the kiwi Jobs for Nature funding, the Trust received funding to extend their mustelid trapping footprint. Before traps were installed, the Trust worked with Taranaki Kiwi Trust to conduct an Acoustic Recorder Device (ARD) survey to determine the call rates of the resident kiwi population within the expansion site. From 50 recorder sites, kiwi were detected at 31 sites, with both male and female kiwi heard at 26 sites.

All of the trap boxes (over 500 traps) were made in the ETEC workshop with the help of volunteers, with 225 hours of volunteer hours spent building traps. Stage A was completed between January-December 2021, with 180 DOC250 traps installed in the area. Fourteen DOC200s were also installed within the Stage B area in the Te Wera Forest during this phase due to stoats being seen.

Stage B was completed from January-December 2022, with another 377 DOC250s installed within the area. This included from Junction Road in Matau to SH43, along the SH43 railway, along Mohakau Road, and the rest of Matau Road to the Kiore Tunnel. Internal lines were installed along Quarry Road, Mangamaire Road and throughout farmland, as well as utilising the forestry tracks within the Te Wera Forest.

Overall, the expansion area now consists of 571 mustelid traps, with eight new contractors checking these traplines and new partnerships being formed within this area. This includes with Parininihi ki Waitōtara (PKW) and Forgotten World Adventures (FWA) who are checking traplines. Taranaki Kiwi Trust was contracted to help install traps into the expansion area, along with help from the ETEC field team, Taranaki Mounga Project, and PKW. Railway carts were also donated for the day from Forgotten World Adventures to help install traps along the railway line.

These traps are also checked and rebaited every month by contractors. Catches have been fairly steady with 66 mustelids captured since the traps were installed. The trap catches for the July 2022 to June 2023 period are summarised in the table in the Mustelid Control section above.







EVERETT PARK

The Trust signed the community agreement to conduct pest control within Everett Park Scenic Reserve. The Trust developed an intense pest control programme to target the rats, possums, and mustelids within the reserve. Installing rat traps was the first priority within Everett Park to reduce the number of rats that would take bait from possum and mustelid traps, which would reduce the chances of catching those pests.

A24 traps started to be installed in Everett Park from September to November 2022, with 161 A24 traps deployed within the area. The traps are about every 100m along the internal lines and every 50m around the perimeter. These are being regassed and relured every three months for the first year to serve as an initial knockdown, and this may be reduced to every six months in the years following this depending on monitoring results.

Mustelid traps were installed in November 2022 with the help of Taranaki Kiwi Trust and Rewild. ETEC is helping to trial the F-bomb trap that is manufactured by Rewild, which was designed for ferrets but is also NAWAC approved for stoats, Norway rats and ship rats. There are 40 F-bombs and 33 DOC250s on the internal and perimeter lines in Everett Park, spaced every 100m. The traps alternate between DOC250s and F-bombs. This is so that the catches between the DOC250 and F-bomb traps can be compared in real-time. These traps were initially checked every two weeks when they were first installed, and are now checked and rebaited every month.

In December 2022, Steve Allen traps (SA2) were installed with ramps within Everett Park on the internal and some of the perimeter lines. A total of 47 SA traps are now deployed, and are being rebaited and checked every month. SA traps were installed in areas where there were no other possum traps in the area such as Warrior traps or the possum traps set up for the Curious Minds project. The Warrior traps that were installed in the past by Department of Conservation are also being rebaited and checked every month. Ramps have also been installed under the traps to help increase the possum catch rates.

The catches from the SA, Warrior, DOC250, and F-bomb traps for each month and since the traps were installed are summarised below:

	Dec-22	Jan-23	Feb-23	Mar-23	Apr-23	May-23	Jun-23	Total
Cat	0	0	1	1	2	2	Ó	6
Ferret	0	0	0	1	1	1	0	3
Hedgehog	5	3	7	5	4	6	1	31
Mouse	0	0	0	0	0	0	Ó	0
Possum	13	8	5	10	3	8	4	51
Rabbit	0	0	0	0	0	0	0	0
Rat	4	5	8	12	6	11	2	48
Stoat	Ó	1	Ó	0	Ó	0	Ó	1
Weasel	0	0	0	0	0	0	0	0

Almost 8km of tracks were marked and cut throughout Everett Park where the traps are located. This was to make it easier to move throughout the area, and to help volunteers who would be helping with trap checks to find their way around Everett Park. Predators and pests also utilise tracks to move through an area, which would increase the chances of them coming in contact with a trap. There are now seven volunteers that are checking and rebaiting the SA, DOC250 and F-bomb traps in Everett Park each month. ETEC staff are rebaiting and checking the Warrior traps for possums



Some of our newest volunteers checking their trapline and an F-bomb trap in Everett Park.

JOBS FOR NATURE DOC200 TRAP REPLACEMENT

The Trust was successful in receiving the Jobs for Nature Private Fund that was distributed by Department of Conservation which was for replacing old DOC200 boxes within the Core project (13,000 hectares) that were on private land. The ETEC field team also used this as an opportunity to audit all of the 1300 DOC200 trap boxes (those on both public and private land) and bring them up to standard while assessing which ones were degraded and needed to be replaced. Some of the trap boxes had been out in the field for more than 10 years and the bottoms were rotted which meant that the trap mechanisms could not be attached safely within the boxes. The boxes also had mesh replaced where needed and mesh entrances were filed down so they were smooth. Trap mechanisms were also replaced where needed. The opportunity was also taken to replace every third DOC200 trap with a DOC250 in areas to help strengthen the site against ferret incursions.

A total of 599 trap boxes and mechanisms were replaced with new ones for this work.



RESEARCH PROJECT

Study on harvesting effects on kiwi inhabiting pine plantations – partnership between Parininihi ki Waitōtara, Ngāti Maru, Taranaki Kiwi Trust, and ETEC.

The Trust has entered into a partnership with Parininihi ki Waitōtara, Ngāti Maru, and Taranaki Kiwi Trust to study kiwi within pine plantations around harvesting operations.

The study proposes to investigate how the use of pine forests changes for kiwi during the different harvesting phases, and how clear-felling harvesting techniques can impact kiwi. The potential impacts identified from previous studies are on kiwi movements, breeding, survival, and foraging. The possible outcomes of this study are to provide updated information on kiwi inhabiting pine forests, and potential mitigation that could help reduce any impacts of pine forest harvesting on kiwi. ETEC will be providing technical and research advice for this study and designed a research proposal and literature review for the project, and will be reviewing the data collected in line with the research questions. ETEC will also be helping to monitor the kiwi when required.

ADVOCACY AND EDUCATION

The Trust relies on grants, donations and sponsorship for covering operational costs and the pest control work. The Trust's advocacy work includes public and school talks and events which highlight the conservation work that the Trust carries out. This includes explanations of the pest control the Trust implements, traps used, kiwi and kōkako monitoring, and pest monitoring. The Trust has an Adopt a Kiwi scheme where people can help support the work that we do by adopting/ sponsoring a kiwi for \$100.00. This helps to go towards the kiwi monitoring costs and the pest control work. We have people from all across the world that sponsor our kiwi – Germany, Spain, Italy, United Kingdom, China, Australia, and the Switzerland to name a few. We also have many people from across New Zealand that sponsor our kiwi too.

	Jul '22 – Jun '23	Funding received	Notes:
Sponsor a kiwi	32	\$3,200	 Most of these have been birthday gifts to people, with a couple of kiwi adoptions purchase from oversees supporters including Germany and Switzerland.

The Trust is often approached by schools and groups about giving talks about the work that we do. Advocacy is an important part of conservation work, particularly to help provide a connection between people and the environment. This year the Trust implemented our youth kaitiakitanga program which gives local tamariki the opportunity to attend quarterly workshops and key events in the hope they will become great ambassadors of conservation and spread the word of the importance of protecting and restoring Taranaki and New Zealand's native biodiversity. We had 9 local schools - Inglewood Primary, St Patricks Inglewood, Waitara Central, St Joseph's Waitara, Kaimata, Waitoriki, Egmont Village, Norfolk School and Huirangi School jump at the opportunity to be part of this exciting education initiative, with two children from each school attending.

Everett Park has provided the Trust with an accessible as well as safe and easy terrain to engage the community and local tamariki. A community day was held out at the Reserve in August 2022 to engage the community on the Trust's plans to restore and protect the Reserve's ecosystem and biodiversity. The Community Event was well supported with more than 50 locals and their tamariki attending this event. Over the last year our field team, with the support of a number of volunteers, have done an exceptional job cutting over 7.7km of track, and installing over 300 traps in the Reserve. Over the last year, the Trust has held a number of education programmes at the Reserve including Curious Minds research programme with Norfolk School, the Trust's youth kaitiakitanga programme which engages and educates tamariki from 9 local schools on the importance of looking after our environment, and Francis Douglas Memorial College year 7 and 8 students helped our field team re-gas and re-lure the Trust's resetting trap network in the reserve while learning about the importance of pest control.

Over the past year we have worked with more than 10 schools reaching almost 900 students through different events and talks. These events and talks are used as an opportunity to talk about the Trust's conservation work and the importance of it, as well as how people can help. The Trust has also been partnering with other organisations to share resources. Trust carries out. This includes explanations of the pest control the Trust implements, traps used, kiwi and kōkako monitoring, and pest monitoring.



	No. of people	Notes:
Curious Minds	15	The Trust carried out a Curious Minds research project that focused on how possums interact with different traps in Everett Park alongside Norfolk School, Department of Conservation, and Taranaki Regional Council. The Trust talked about the work that is carried out in both Everett Park and the Pouiatoa Conservation Area including pest control to protect kiwi and kōkako.
Resetting trap volunteer day	9 Vol, 5 Staff	In August 2022 9 volunteers contributed a total of 92 hours of time helping our field re-gas and re-lure our A12 and A24 trap network within the Pouiatoa. Our field team took the time during this activity to explain the Trust's pest control operations and why we do what we do.
NPBHS prefect trip	21 Students, 5 Staff, 5 Vol	Every year, the prefects from NPBHS help the field team with regassing and reluring the A12 and A24 trap network in the Pouiatoa. This year the prefects stayed at the base of the Pouiatoa, and the event started with a brief summary of the work the Trust carries out, including kiwi and kōkako work. Kiwi and kōkako calls were played for the prefects so that they could listen out at night for any kiwi calling and during the day for kōkako calling in the Pouiatoa.

Sparky the Kiwi	9 Vol, 6 Staff, 762 Students, 50 Corporate	In September 2022 the Trust in partnership with support from Greymouth Petroleum brought Sparky the kiwi to Taranaki. Sparky is under the care of Whangarei Native Bird Recovery Centre's Robert Webb, who is a living public relations ambassador for conservation work. Sparky visited Inglewood Primary School and Puketapu School, as well as attended a corporate event at the TET stadium in Inglewood. ETEC with the support of TRC, DOC, Taranaki Kiwi Trust and Te Kōhanga Ahuru provided education sessions and demonstrations on the important conservation work happening within the region.
Kaitiakitanga	March: 19 Students, 5 Staff June: 19 Students, 5 Staff	Youth Kaitiakitanga ambassadors for East Taranaki Environment Collective. The program consists of 4 workshops engaging Year 6, 7 and 8 children – from Inglewood, St Patrick's Inglewood, Waitara Central, St Joseph's Waitara, Kaimata, Waitoriki, Egmont Village, Norfolk and Huirangi – workshops are run by ETEC staff to teach our future generations about the importance of protecting and restoring our region's native biodiversity.
Forgotten World Adventure	10 staff	The team visited Forgotten World Adventures (FWA) team who are a new partner within the expanded pest control area. Employees of the tourism company are checking a new trapline for us, and the team met with the FWA team and talked about the work the Trust does.
Towards Predator Free Taranaki Expo	50	The Taranaki Regional Council recently held a Towards Predator Free Expo in Inglewood for the public to learn about the work being carried out in the area. The Trust took the opportunity to engage the public in the work we do and talk about trapping and kiwi monitoring.

Everett Park Community Day	50 Attendees	In August 2022 we held a Community Day at Everett Park in partnership with Pukerangiora. We had over 25 volunteers attend plus their families. The purpose of the day was to inform the community about ETEC's joint partnership with the Department of Conservation and Pukerangiora Hapū to protect the reserve's ecosystem and biodiversity. ETEC is responsible for the pest control management throughout the Reserve.
Setting traps up in Everett Park	3	Staff from Taranaki Kiwi Trust, Rewild and a Trust volunteer helped to set up the mustelid traps and A24s in Everett Park alongside the Trust's field team.
Waitoriki School Presentations	Whole school (60-70 students)	Staff from ETEC and TRC attended the school's presentations on ways to improve the area and to help engage the community in Everett Park.
Inglewood After 5	40-50	Staff and Trustees from ETEC attended the Inglewood After 5 presentation to the local Inglewood community. ETEC, New Plymouth District Council, and Pukerangiora Hapū presented to the community the plans for the Inglewood centre.
Feat's Forestry Course	15 Students	
4 Staff	In June 2023 three of our field rangers, apprentice and our general manager went to Feat's and talked through the various roles and opportunities in the conservation space to students undertaking a Forestry course at Feat's.	
Methanex visit	10 staff	Methanex are supporting ETEC's conservation work, and their finance team recently came out to Everett Park to regas and relure the resetting traps. The team talked about the work that the Trust does, including mustelid trapping and kiwi monitoring.

Francis Douglas Memorial College	12 students	Teachers from the Francis Douglas Memorial College reached out to ETEC for opportunities for some of their students to help with conservation work. The students helped the field team in Everett Park to regas and relure the resetting traps. The team talked about the work that the Trust
		does, including mustelid trapping and kiwi monitoring.

It is an important value of the Trust that we play our part in ensuring we are sharing our knowledge, expertise and skills to help develop a strong conservation workforce here in Taranaki. This year thanks to the Predator Free New Zealand Apprenticeship Scheme the Trust was able to employ local youth Oliver Sleep. Olly has a real love for the outdoors, and is passionate about controlling pests, and has embraced all areas of the Trust's work since starting in the role. Well done Olly, we are delighted to have you join us





The Trust is also providing a place for local Inglewood high school student Mackenzie Leathers to partake in the New Zealand Gateway programme. Gateway is designed to support school students' transition into the workforce by offering them workplace learning while at secondary school. Mackenzie spends each Wednesday with our team learning about the importance of pest control, and pest and native species monitoring. The Trust provides Mackenzie with a hands on experience both out in the bush or in our workshop. Mackenzie is a keen learner, and the Trust looks forward to continuing to support Mackenzie in her educational journey.

VOLUNTEERS PARTICIPATION

Over the 2022-2023 year our volunteers continued to support our efforts, with the Trust recording more than 2,000 hours of volunteer time and support. This is the highest amount of hours contributed by volunteers to the Trust since formation of the Trust in 2004, and is a reflection of the Trust's achievement this year. The Trust wouldn't have been able to achieve what we have achieved over the last year without the continued support of our volunteer network. Our volunteers have been the core to the Trust's success, and we thank our existing and new volunteers for the skills, expertise, hard work, enthusiasm and passion they bring to our project.

The expansion of our predator control network increased our protected area from the original 13,000 hectares to 18,000 hectares this financial year. With over 377 DOC 250 boxes built for stage B of the expansion, our workshop was a hive of activity thanks to the help of both new and longstanding volunteers. We would also like to acknowledge the help of rangitahi completing the WITT level 3 pest control course which included rangatahi from Taranaki Kiwi Trust and the Taranaki Mounga Project. The Trust is thankful for the team at WITT for using our workshop and staff's expertise to teach our future conservation warriors how to build both DOC250 and DOC200 traps while helping our Trust with our important mahi. Thanks to the Department of Conservation and Jobs for Nature Funding the Trust this year has been able to identify and replace old rotted DOC200 trap boxes as well as mechanisms that are no longer effective at capturing pest species, creating the opportunity for over 300 DOC200 and 300 DOC250 traps to be built by both our Jobs for Nature contractors and volunteers. Thank you to all the wonderful individuals who helped the Trust build over 1,000 traps this financial year.

We are extremely thankful for the willing local residents, funders, organisations and volunteers for their time and support to allow our trapping network to expand. Over 377 DOC250 traps were installed in Stage B of the expansion including more than 140 traps in the Te Wera forestry block. A huge thank you to NZ Forestry and Ngāti Maru for their support to make this happen. A unique collaboration was also formed between the Trust and Forgotten World Adventures. Forgotten World Adventures runs converted golf carts along the former Stratford-Okahukura rail line, and thanks to this newly formed partnership the Trust has been able to place 69 DOC250 traps along a 10 kilometre stretch of rail through rugged hill country at Te Wera. The line runs alongside State Highway 43 which is actually the southern boundary of our expansion site. This collaboration with Forgotten World Adventures will









allow our contractor (who is an employee of Forgotten World Adventures) to use the rail carts to check the traps, which will be a lot safer and logistically far more convenient, while at the same time promoting the important work of the Trust to tourists and adventurers exploring the forgotten highway. The installation of the traps in stage B wouldn't have been possible without the help of Taranaki Kiwi Trust, Taranaki Mounga Project and the Forgotten World Adventure team. We thank you for your continued support and sharing of resources.

With the expansion and Everett Park the Trust now has over 3,200 traps (which includes DOC200, DOC250, resetting traps, and possum traps) within our project area. Our field team may be small but thanks to the help of our volunteer network and contractors we are able to achieve great things. The Trust would like to give a big shout out to all our volunteers and contractors that help us check traps on a regular basis. Thanks to Frank de Lange who completes monthly trap checks along Tarata Road, PKW Taiao Cadets who check traps in the PKW Mangaoapa block, and Katrina Boon who volunteered her time checking traps in the Te Wera forestry block. This year we also have 7 new volunteers take over the DOC250, F-bomb, and SA2 traps at Everett Park, thanks to Allan Nokes, David Jull, Nathan Hall, Sean and Colt Gardiner, Kevin Payne, and Henry and Bodhi Somerfield. We would also like to acknowledge all the volunteers that helped our field team cut almost 8 kilometres of track within Everett Park, to make it more accessible and safe for our volunteers to access the trap network.

This year our education volunteer Kaye Corlett has been busy visiting schools and playcentres throughout Taranaki, taking the children through a one-hour programme designed to instil the value of conservation. Kaye has also played a key role in helping our team deliver our Curious Minds project – Did curiosity kill the possum? Kaye, thank you for continuing to support the Trust with your expertise.

A new partnership was formed this financial year with the team at Menz Shed New Plymouth. Menz Shed played a key role in helping the Trust to build specially-designed wooden boxes to transport kiwi throughout the North Island. National organisation Save the Kiwi reached out to the Trust to help build boxes which were used to translocate more than 100 birds from Sanctuary Mountain Maungatautari in the Waikato. MenzShed underlines the value of voluntary organisations, and the Trust is thankful for Menz Shed support in helping the Trust complete this project and looks forward to working together in the future.

This year the Trust has gained the skills and expertise





of four new Trustees; Sam Haultain, Gloria Campbell, Jane Bowden-Dobson, and Rob Maetzig. Our Trustee's play a key role in setting and delivering the Trust's strategy and mission. The Trust continues to have a strong board dedicated to restoring and protecting the native biodiversity within East Taranaki, while taking a collaborative approach to achieve this vision. I thank all of our Trustees; Rob Maetzig, Aaron Chambers, Anaru Marshall, John Haylock, Gavin Faull, Chris French, Sam Haultain, Gloria Campbell and Jane Bowden-Dobson for sharing their expertise, energy, wisdom and passion. Our team feel extremely fortunate to be supported by such a hardworking and dedicated board.

Volunteers are special people who not only dedicate their time but also share their knowledge and skill sets, while sometimes also jumping out of their comfort zone to learn new skills. As a Trust we pride ourselves on providing a place for individuals to learn new skills while keeping socially connected. For this reason, I would like to acknowledge our team for sharing their knowledge and expertise to our wonderful volunteers, to not only help our volunteer community grow but also to keep our volunteers connected and inspired.

The Trust values the input of our volunteers, and we wouldn't be able to achieve our outstanding results in conservation without their contribution. Thank you for all that you do. Over the year we have had volunteers help out in many areas and the team would like to thank the following volunteers and acknowledge the following activities that have taken place:

- Our newly appointed Trustee and now Chair of the Trust Rob Maetzig for providing outstanding support to our team as well as sharing your communication and media expertise.
- The dedicated Frank de Lange, PKW Taiao Cadets, and Katrina Boon for their time and commitment to predator trapping.
- The knowledgeable Kaye Corlett for her education skills and help provided to our team to deliver our Curious Mind programmes at Everett Park, and also taking the time to educate our local tamariki on the important work of the Trust.
- To Wendy and Russell Hale for always being there for our field team when they need help.
- All the amazing volunteers that helped us build over 720 DOC250 boxes, and 300 DOC200 boxes.
- To the volunteers who helped our team cut close to 8km of track at Everett Park and install over 300 traps at the reserve.
- To our new volunteers that are committed to checking traps at Everett Park; Allan Nokes, David Jull, Nathan Hall, Sean and Colt Gardiner, Kevin Payne, and Henry and Bodhi Somerfield.
- Wayne Herbert for his artistic flair of creating stunning native bird wood carvings that he has both donated and loaned to the Trust for display.
- Our wonderful Trustees who volunteer their time to support and steer the direction of our Trust.
- Our backcountry volunteers with a landscape sized project, and some pretty challenging terrain we are extremely thankful for these back country superstars.

- Our backcountry volunteers, Taranaki Regional Council and the Department of Conservation team who assisted with the New Plymouth High School Prefects trip. We thank you for support to help mentor, lead and inspire our younger generation to be actively involved in conservation work.
- TGM for their support to design and create the Trust's quarterly newsletter, and also support to develop signage.
- Moxwai for their support to keep our website up to date.
- Philip Armitstead and the team at Thomson O'Neil for their support and assistance with legal services.
- Rumatiki Timu, Anaru Marshall and Ngāti Maru for providing the Trust with both cultural and iwi support.
- Taranaki Mounga Project and Taranaki Kiwi Trust apprentices and their organisations for volunteering their time to help install DOC250 traps in our expansion area.
- Anaru White and Jaqui from Pukerangiora Hapū for providing cultural support and iwi support for our project at Everett Park and the proposed Inglewood Centre.
- The team at Taranaki Kiwi Trust for always being there to help us out.
- Daniel Reardon for all his practical advice and time to ensure our workshop is running effectively and efficiently. We are so lucky to have you join our team.
- Our wonderful volunteer base for everything you do!

Alone we can do little, together we can do so much!

Thank you to all of our volunteers, stakeholders and the community for your continued support!!



VOLUNTEERS PARTICIPATION

Our records show that this year was a busy year. We have estimated the value of work in-kind and volunteer hours for this year is \$104,827. This included more than 2,032 volunteer hours, equipment use, travel, donated equipment and trade personnel time. In addition is the time donated by Taranaki Regional Council and Department of Conservation staff.















MANAGER'S REPORT

Wow, we thought last year was a busy year, but we have backed it up again. I couldn't be more thankful or proud of the hardworking and dedicated individuals I get to call my team. To our field team; Kat, Jayden, Corbyn, Ash, Daniel and Olly "Great teamwork is the only way we create the breakthroughs that define our careers", and this year you have truly pulled together as a team to continue to protect and restore the biodiversity of our project and our region.

With the Trust experiencing exceptional growth this financial year, through increased funding, the expansion of our footprint, the takeover of the pest management plan at Everett Park, progress and support of the Inglewood Environment Centre, and growing volunteer numbers, management and success of these initiatives and projects wouldn't have been possible without the administration and finance support of Karen Moratti, Nadine Patterson and Laura Beaty. Thank you ladies for all your hard work and support this year.

I would also like to take the time to thank Karen Moratti who finished up at the Trust at the end of this financial year. Karen has been with the Trust for the past seven years and has been an invaluable member of our team. We will miss Karen's strong work ethic, kindness, commitment and passion, and we wish her all the best on her new adventure.

This year thanks to Jobs for Nature funding we were fortunate to have Ashley Bates and Daniel Reardon join our team on a one year contract. Ash and Daniel have done an exceptional job leading our Jobs for Nature trap replacement project as well as helping out the field team with a number of other important projects. Thank you Daniel and Ash for your contribution to the Trust's achievement this year. You have been extremely reliable and diligent workers.

"The strength of the team is each individual member. The strength of each member is the team"

I'd like to personally thank the Trustees for their support this year. You have all walked alongside our team this year to help us achieve these outstanding results. We feel extremely privileged to be supported by such a knowledgeable and well-rounded board of Trustees. Your skills, dedication and passion for the project have been instrumental in driving our project forward.

A big heart-warming thank you to the Taranaki conservation community for your ongoing support of our project. I also would like to personally acknowledge the Team at Taranaki Kiwi Trust for always being there when we needed an extra hand. To our funders, supporters and volunteers I can't thank you enough. A big thank you to Ngāti Maru and Ngāti Mutunga for their continued support of our project, and providing the Trust with cultural support, advice and knowledge. Collaboration achieves long term results and success.

Thank you to everyone for your contribution to make this year so successful. I look forward to continuing to work with you all in 2023/2024, and here's to another successful year of restoring and protecting the biodiversity of Taranaki for our future and generations to enjoy.

Rebecca Somerfield

General Manager East Taranaki Environment Collective July 2023





















Year Ended 30 June 2023

Revenue	2023	2022
Grant Income	708,652	564,407
Sponsorship	26,275	9,250
Bequest	100,000	-
Donations	8,789	12,598
Contractor Work	10,344	2,576
Rent	10,400	10,400
Retail & Trap Sales	1,068	1,246
Interest Received	4,646	247
Wage Subsidies & Resurgence Support Payments (Covid-19)	1,200	15,738
Sundry Income	77	486
Total Revenue	871,451	616,948
Expenses		
ACC	330	5,596
Accounting Fees	5,782	5,342
Contractors	45,813	44,173
Depreciation, Impairment & Loss on Sale of Assets	24,801	21,411
Education Expenses	9	-
Event Costs	5,546	2,542
Field Materials	35,078	24,217
General Expenses	3,294	3,566
Insurance	6,381	6,963
Maintenance	4,525	3,789
Motor Vehicle Rental	300	9,859
Office Consumables	2,596	3,982
Power	2,012	1,791
Rates	2,332	2,215
Rent	31,200	29,033
Retail Purchases & Expenses	1,340	2,252
Review Fees	3,425	3,175
Staff & Volunteer Expenses	3,012	2,604
Staff Training	3,533	1,464
Staff Travel	9,854	7,867
Telephone, Internet & Satellite	1,294	897
Traps & Parts	77,085	33,054
Wages	445,312	376,408
Total Expenses	714,854	592,200
Surplus/(Deficit) for the Year	156,597	24,748

Property, Plant and Equipment

	Opening			Closing	
	Value	Additions	Sales	Impairment	Value
Buildings	74,027		300	13,645	60,082
Furniture & Fittings	10,293			1,647	8,646
Motor Vehicles	21,678			6,060	15,618
Office Equipment	3,177			1,008	2,169
Plant & Equipment	7,441	2,331		2,429	7,343
Total	116,616	2,331	300	24,789	93,859

SPONSORS AND SUPPORTERS

Over the year we have had support from the following organisations and businesses. We are extremely thankful for both new and continued support.



SPONSORSHIP/SUPPORTERS:

- TGM Design
- Auctus
- Baker Tilly Staples Rodway
- Rotary Club of New Plymouth North
- Bidfoods
- Cut price rentals

- Johnstons Motors
- Moxwai
- Combined Motors
- Derek Andrews
- Thompson O'Neil
- Timberco
- Russell and Wendy Hale
- Mark Hale Hale Contracting