



Te Matau a Māui project update

Interim report

February 2020

Native species thrive where we live, work and play



Kākā being released into the aviary at Boundary Stream.

Photo: Melissa Brignall-Theyer

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Executive summary

This report presents an update on Te Matau a Māui project status and activities for the period from 1 July to 31 December 2019.

Over the last 6 months the focus continues to be on possum eradication at Māhia. The predator control team have been installing the bait stations in the 1st half of the peninsular. The wireless nodes for the leghold traps have been deployed as a monitoring tool in areas already controlled to see if there were any survivors.

Ninety eight percent of Te Matau a Māui 2019 milestones have been completed. The incomplete milestones are a research paper pending publication and the toxoplasmosis analysis, which will be completed by June 2020. Budget and expenditure are on track and reflect the extension of the project into 2020-21.

Some highlights of the period are set out below.

- Preparation for the establishment of a trust “Whakatipu Māhia Trust” which will lead the non-pest eradication elements of the project. The Trust will be run by the community (Rongomaiwahine iwi, the Whangawehi Catchment Management group, and farming community representatives) and will deliver community engagement and native biodiversity enhancement projects.
- Valerie Pinkerton and Christy Loper from the Aotearoa Foundation came in December and were welcomed through a Powhiri at Tangoio Marae followed by a visit to Poutiri Ao ō Tāne.
- A final report has been completed on Te Matau a Māui as a case study on organisation management of complex collaborative large scale ecological restoration projects, a research paper has been published on identifying key criteria using a spatially explicit, agent-based model, and reports have been completed about Cape to City pest and biodiversity monitoring (Appendix 2). The case study provides useful insights and guidelines for other similar projects.
- A report has been completed highlighting the many benefits to conservation that the Te Matau a Māui projects have created (Appendix 2).
- Both the Rural and Community surveys on community awareness and behaviours have been re-run and analysis is underway.
- PFHB website was launched: www.pfhb.nz. Two newsletters have been sent out and regular communication is made on the project Facebook pages.
- The Nature Shed at the Hawke’s Bay A&P show was once again a highlight and opportunity for engaging the wider Hawke’s Bay community into looking after biodiversity in their own ‘backyards.’
- Cape to City education team in partnership with Enviroschools facilitators ran two more successful workshops in a series of four with Early childhood, Primary and Secondary teachers around using the environment as a context for learning.
- A hui was held in Wairoa - starting a conversation about developing environmental education initiatives in Wairoa under the AirNZET/EIT ‘Connected to Nature’ partnership. A video has also been developed under this partnership to promote the Learning space in Napier: <https://www.youtube.com/watch?v=OnopibnKx6A>, and quite a few other EIT faculties are getting involved and using this site for their teaching activities.

- Five more kākā were released in Poutiri Ao ō Tāne bringing the total number released to 26. The release coincided with the final Hīkoi Tutuki for the year, which was well attended and well received.
- Returning tītī/Cook' petrel and kōrure/mottled petrel adults are being monitored. The motion sensitive cameras are showing activity and a ranger doing some night-time monitoring heard up to 10 birds flying around the site.
- Over the last 6 months the pest control focus continues to be on possum eradication at Māhia. The predator control team have been installing the bait stations in the 1st half of the peninsular. The wireless nodes for the leghold traps are being installed to monitor possible survivors in controlled areas.
- Reports have been completed reviewing wireless trap monitoring trials in Te Matau a Māui since 2015 and landowner commitment to the projects (Appendix 2).

Over the next 6 months, the Toxoplasmosis trial will be completed, and results analysed and 2019-20 Manaaki Whenua contract deliverables will be complete. At least 2 more teacher professional development workshops, and education initiatives with EIT faculties will be run. Three more Hīkoi Tutuki will be completed. Possum eradication will continue at Māhia and monitoring will continue for tītī and kōrure returning, with the hope of signs of breeding.

1. Project management update

The project and governance teams are operating well. The Whakatipu Māhia project team have been working on setting up a separate Trust which will oversee community engagement and biodiversity enhancement on the Māhia Peninsular. This will enable long-term sustainability of Whakatipu Māhia.

Valerie Pinkerton and Christy Loper from the Aotearoa Foundation came in December and were welcomed through a Powhiri at Tangoio Marae followed by a visit to Poutiri Ao ō Tāne.



Some of the project team with Christy Loper and Valerie Pinkerton from the Aotearoa Foundation when they visited in December 2019. *Photo: Melissa Brignall-Theyer*

1.1 Engagement with Māori

Kaumātua Trevor Taurima, with support from the project team, ran another well received and attended Hīkoi in Poutiri Ao ō Tāne. This Hīkoi included releasing the kākā from the aviary, walks in Boundary Stream and a demonstration and induction for volunteers into tapping at Boundary Stream.

Tyne Nelson is working on a Kaupapa Māori research project, looking into local Māori names for native species and the stories behind them. The vision is to use these stories to engage iwi back into their local environment.



Some of the recent Hīkoi participants under large matai tree at Boundary Stream.

Photo: Melissa Brignall-Theyer

2. Workstream update: 1 July – 31 December 2019

This section outlines progress on the activities and objectives outlined in Attachment 1 of the Aotearoa Foundation contract. These activities and objectives are separated into five workstreams: research and monitoring; community engagement and education; biodiversity and species; habitat restoration; and pest control. **Table 1** summarises progress in each workstream.

Table 1: Progress on 2019 activities

Workstream	Number of activities	% complete
Research and monitoring	7	93
Community engagement and education	6	100
Biodiversity and species	4	98
Habitat restoration	3	100
Pest control	7	97

2.1 Research and monitoring



Morgan Coleman collecting leaf litter from a litter trap as part of the biodiversity monitoring.

Photo: Bradley White

Table 2: Progress towards research and monitoring milestones

Milestone	2019 activity	Update	% complete
Research outputs.	A minimum of three research outputs, two of which are submitted to peer-reviewed journals.	<p>Research outputs since the beginning of Te Matau a Māui:</p> <ul style="list-style-type: none"> • 13 research articles published in science journals • 4 manuscripts (either submitted or drafted) • 29 conference presentations • 50 unpublished reports • 10 public lectures • 5 newsletter articles • 3 PhD theses 	100
Methods of monitoring introduced mammalian predators before and after control.	Compare camera traps with electronic tracking pads being developed by Connovation (if available).	<ul style="list-style-type: none"> • Connovation tracking pads are not ready for trial. • Motion-sensitive cameras are still used in predator monitoring and are becoming the tool of choice in this area nationally. • Software for image recognition is being developed by our researchers and should be publicly available in 2020. 	NA
Decision-analysis models for predicting the most cost-effective trapping configurations for managing introduced predators over large areas.	No 2019 milestone.	A variety of models have been created through this project. These are currently being modified and tested for possum eradication in Māhia.	NA

Milestone	2019 activity	Update	% complete
Increase in skinks, geckos and native invertebrates in the Cape to City area; continued increase in skinks, geckos and native invertebrates in the Poutiri Ao ō Tāne area.	Continue Poutiri and Cape to City monitoring (Poutiri monitoring times may be extended). Data analysed to determine changes in abundance.	This milestone was completed in first 6 months of 2019. See August 2019 report.	100
Analysis and reports on the integrated economic benefits of Te Matau a Māui.	Produce and promote economic benefits report.	A report was completed in 2016. This report has been summarised in the report on broader benefits of Te Matau a Māui projects, which will be promoted and shared widely. (Appendix 2)	100
Decrease of toxoplasmosis-related lamb abortion rates. Because of research and reduction in cat numbers, vaccinations will no longer be necessary, leading to significant economic benefits to the region and nation.	Produce final programme review, including detailed economic assessment, and assessment of toxoplasmosis disease in the landscape.	Data collection is currently underway in keeping with sampling design and a final report is expected in April 2020	50

Milestone	2019 activity	Update	% complete
Use of restored habitat by native wildlife.	Develop template for future projects on optimising habitat connectivity between private and public land.	Summary report completed (Appendix 2). However, a couple of research manuscripts are still pending which are more of a national analysis but use Hawke's Bay data. These will inform this milestone further. Once these are completed a broader summary and analysis can be made and will be reported on in following reports.	100
Student participation.	Engage two tertiary students in the project each year.	This was completed in first half of the year (see August report)	100
Increasing the participation in pest management and ecological restoration by landowners and the community.	Complete surveys on attitudes and barriers to participation to determine changes over the course of the project.	Both urban and rural surveys are complete. Data is currently being analysed. One report has been completed on part of the community survey about perceptions of urban rat control (Appendix 2)	100

2.2 Community engagement



Teacher Training workshop at the Ōtātara Outdoor Learning Centre.

Photo: Melissa Brignall-Theyer

Table 3: Progress on community engagement and education milestones

Milestone	2019 activity	Update	% complete									
A marked increase in the number of volunteers participating in the programmes over the next 5 years.	A 25% increase on baseline in the number of volunteers participating in the programmes over the previous 5 years.	<p>Overall volunteer hours are slightly down due to less translocation activity and habitat restoration this year.</p> <p>The volunteer effort in Cape to City has been mostly through supporting the education programmes and the A&P show.</p> <p>Volunteer hours (to Dec 2019):</p> <table border="1"> <thead> <tr> <th></th> <th>2018</th> <th>2019</th> </tr> </thead> <tbody> <tr> <td>Poutiri Ao ō Tāne</td> <td>1,636</td> <td>869</td> </tr> <tr> <td>Cape to City</td> <td>35</td> <td>82</td> </tr> </tbody> </table>		2018	2019	Poutiri Ao ō Tāne	1,636	869	Cape to City	35	82	100
	2018	2019										
Poutiri Ao ō Tāne	1,636	869										
Cape to City	35	82										

Milestone	2019 activity	Update	% complete
Increased involvement of schools in the various conservation initiatives.	Ensure process is in place with strong commitment from schools to continue their investment in education using the environment as the context.	<ul style="list-style-type: none"> • Two more teacher professional development workshops have been run in partnership with Enviroschools. • Four further engagements this year have been held with EIT staff and students, including a follow-up from last year's workshop at Mangarara with Education staff. This year it included teaching staff from other EIT teaching areas including Primary Industries and Māori Studies. • A promotional video for the Ōtātara outdoor learning site was completed https://www.youtube.com/watch?v=QnopibnKx6A • A preliminary meeting was held in Wairoa under the EIT partnership to initiate discussions about supporting environmental education initiatives in the Wairoa area. • Wendy Rakete-Stones co-presented a talk at an international conference on sustainable campuses on our 'Connected to nature' project with EIT. • Robyn McCool was part of a working party providing expertise for developing the Action plan for the NZ Education for Sustainability Strategy. 	100

Milestone	2019 activity	Update	% complete
Communications strategy.	Implement communications strategy.	<ul style="list-style-type: none"> • Facebook articles continue to be posted at least once or twice a week. • A new PFHB website was launched and replaces the Cape to City and Poutiri Ao ō Tāne websites, so that all projects sit under one site • Two newsletters have gone out using the new PFHB branding. • 2 media releases have been submitted, all of which have been published (see Appendix 2) 	100
Through the social engagement strategy and communication plan, the Hawke's	Continue to attract other investors; target minimum \$300,000.	This milestone was completed in the first half of 2018 with Predator Free 2050 Ltd and AirNZET Investments.	100

Milestone	2019 activity	Update	% complete
<p>Bay community will value the importance of biodiversity and act accordingly, so that sustainability behaviours become part of the social norm.</p>	<p>Review and implement community engagement strategy.</p>	<ul style="list-style-type: none"> • Another successful Nature Shed was run at the Hawke’s Bay A&P show. Engaging thousands of people about the importance of Biodiversity. • One more successful hīkoi was run at the Poutiri Ao ō Tāne as part of the kākā release. • A developmental evaluation research project has begun between EIT. Phase 1 has been completed and phase 2 is being planned. This will be using the research technique called Photo Voice, which will analyse users of the Outdoor learning centre’s experiences of using the space. • Melissa Brignall-Theyer gave a public talk about the opportunities the PFHB projects have brought Hawke’s Bay and New Zealand at Pecha Kucha. 	<p>100</p>
	<p>Review the use of citizen science in Te Matau a Māui</p>	<p>A review was completed highlighting the best uses for Citizen science and which Citizen science tools have been used over the last five years. (Appendix 2) These have included, iNaturalist, Garden Bird Survey, Trap.NZ etc.</p>	<p>100</p>

2.3 Biodiversity and species



Seabird detection dog at the Poutiri Ao ō Tāne seabird site detecting tītī presence. *Photo: Denise Fastier*

Table 4: Progress on biodiversity and species milestones

Milestone	2019 activity	Update	% complete
Re-introduction and re-establishment of kōruru/mottled petrels.	Continue same work as 2018. Prepare report describing best methodology for seabird translocations.	Monitoring started in September 2019, and a detection dog was utilised in December. The Dog showed interest in both kōruru and tītī areas, but no birds were found. However, the motion sensitive cameras are showing activity and a ranger doing some night-time monitoring heard up to 10 birds flying around the site.	100

Milestone	2019 activity	Update	% complete
Increase in the abundance of introduced and native birds that are already present in the area.	Continue bird monitoring; analyse data to determine changes in abundance over the preceding 4 years in rural and urban landscapes.	Monitoring continues and a miromiro/tomtit was seen on the Maraetotara plateau, presumably one which was translocated a couple of years ago.	100
Re-introduction and establishment of several threatened bird species into the Cape to City area. Some species will spread from Cape Sanctuary; others will be reintroduced and actively managed until self-sustaining.	Prepare publication for a peer-reviewed journal, describing the 'halo effect' of Cape Sanctuary and its influence on wildlife communities in the surrounding hinterland.	A paper has been drafted that explains this 'halo effect' of sanctuaries. This paper is now awaiting publication.	90
Successful re-establishment of North Island brown kiwi onto the Maraetotara plateau in the Cape to City footprint.	Scope kiwi translocation to Māhia following possum eradication and predator control.	This is being looked into, but will ultimately be up to the Māhia community.	NA

Milestone	2019 activity	Update	% complete
Successful re-establishment of whio/blue duck on the Maraetotara River (subject to risk analysis and resourcing). Successful colonisation of ponds and wetlands by pāteke in the Cape to City and Poutiri Ao ō Tāne areas.	Introduce first whio juveniles into the Maraetotara River. Continue egg collection from wild pairs; successful colonisation of ponds and wetlands by pāteke in the Cape to City and Poutiri Ao ō Tāne areas.	This was reported on previously, and the project team determined that this translocation is not currently feasible.	NA
Improvement in the numbers of long-tailed bats inhabiting Mohi Bush.	Monitor bat population and review success.	It has been determined the cost of bat monitoring is prohibitive and will outweigh any environmental and project benefit in this area. The project team asks to remove this milestone.	NA
Re-introduction and re-establishment of kōrure/mottled petrels, tītī/Cook's petrels, kākā, kākārīki, and pāteke in the Poutiri Ao ō Tāne area.	Transfer and successfully fledge petrels. Petrels from previous releases are returning to breed.	<ul style="list-style-type: none"> • Petrels are returning and are being monitored on motion sensitive cameras. No evidence of breeding has been detected yet. • Five kākā were translocated to the Boundary Stream aviary and then released in November. This brings the total number of released kākā to 26. 	100

2.4 Habitat restoration

Table 5: Progress on habitat restoration milestones

Milestone	2019 activity	Update	% complete
Improved water quality in the Maraetotara River following stock exclusion and riparian revegetation.	Complete detailed 5-year review of water quality trend data.	A summary report has been completed (Appendix 2). Some water quality indicator measures have increased, while others have decreased. It is probably too early to tell whether planting is making a measurable difference to water quality along the Maraetotara. HBRC will continue this monitoring programme long term, so any changes will be detected.	100
Increase in native habitat in the Cape to City area.	Ensure a minimum of 50,000 plants planted within project footprint by partners or community groups.	This milestone was completed in June 2017 and reported on in August 2017 interim report. Weeding and general maintenance of the plantings continues.	100
Enhancement of DOC's efforts on public conservation land through landscape-scale ecological restoration on private land.	Conduct 5-year analysis of benefits to conservation programmes in terms of conservation outcomes and operational savings.	A qualitative report has been completed looking at the benefits that the Te Matau a Māui projects have created for conservation in general (Appendix 2). These included local as well as national benefits.	100

2.5 Pest control



ZIP and Predator Free 2050 Ltd members with some of the PFHB project team at Māhia. Bait station and wireless leghold trap to the right. *Photo: Melissa Brignall-Theyer*

Table 6: Progress on pest-control milestones

Milestone	2019 activity	Update	% complete
<p>High-level landowner participation in pest control in the Cape to City area.</p> <p>‘In principle’ agreement among participating landowners to continue predator control beyond timeframe of the programme.</p>	<p>Obtain voluntary agreements; review landowner commitment.</p>	<ul style="list-style-type: none"> • The mechanism (the Regional Pest Management Plan) to secure investment in possum eradication and predator suppression long term is now in place. The vision is once a cost-effective and efficient template for possum eradication from Whakatipu Māhia, and further funding is found, a regional rollout programme much like the original Possum programme can begin for predators. • Currently our predator control team maintain the podiTRAP (maintenance) network in the Predator Free Hawke’s Bay projects. Some individuals check traps on their individual properties. We anticipate that expectations on landowners and managers will stay at this level of participation until a region wide possum eradication programme is rolled out, and conversations with individual landowners and managers regarding sign up to the new PEA and PSA areas will begin. (Review in Appendix 2) 	<p>100</p>

Milestone	2019 activity	Update	% complete
A marked reduction in introduced predators in the Cape to City area.	Graduate 50% of farmers to maintenance of predator control.	This milestone has been deferred, as Māhia is now being used to trial signing up landowners to the Regional Pest plan to take over maintaining low predator numbers after initial knockdown.	NA
Use of wireless trap networks to optimise control.	Review wireless trapping trials	A review has been completed (Appendix 2). The Team has learned a lot about using wireless trap monitoring in a primary productive landscape and technology has advanced over the last five year. The technology is currently mainly being used as a monitoring tool on live capture leg-hold traps in Māhia as part of the Possum eradication programme.	100

Milestone	2019 activity	Update	% complete
Examination of the long-term effectiveness and reliability of self-resetting traps for rat control in Boundary Stream mainland island.	Review effectiveness and reliability of self-resetting rat traps	<ul style="list-style-type: none"> • The latest rat tracking results in November showed a decrease from May results – from 14% to 2%. This financial year we including an extra lure change and by June 2020 should know if increased lure change frequency maintains lower rat numbers. • A review of effectiveness and reliability since 2014 has been completed (Appendix 2). The fluctuation in rat population indices indicate that while the A24's are able to suppress the rat population, a suite of tools are needed to retain sub-5% monitoring. 	100
Sustained suppression of introduced predators at low densities in the Poutiri Ao ō Tāne pest-control area.	Continue contractor control at reduced control intensity.	<ul style="list-style-type: none"> • Maintenance checks of traps continues. The Poutiri Ao ō Tāne trap network has been extended and is now over 12,000ha. • The PFHB website now has a current project map and numbers of predators trapped for the projects https://www.pfhb.nz/poutiri-ao-o-tane/ • Natalie de Burgh gave a presentation on the PAPP trial at Poutiri Ao ō Tāne at New Zealand Ecological Society conference. 	100

Milestone	2019 activity	Update	% complete
Demonstration that effective ongoing predator control in the Cape to City area can be undertaken for less than ~\$3/ha.	Analyse final maintenance control costs across programme.	Analysis shows that using HBRC staff the maintenance control costs are ~\$6-7 per ha, and for external contractors ~\$3-4	100
Demonstration that the cost of predator control can be met by transferring resources from possum control programmes, while still maintaining possums at low densities.	Monitor project possum programme to establish if there are any early trends for possum numbers increasing as a result of more targeted control.	<ul style="list-style-type: none"> Monitoring is ongoing, but it is probably too early to determine if there are any early signs of possum numbers changing as a consequence of increased predator control. While we still believe transition of resources is achievable and the long-term solution for the region, there is still work to do before we are able to move to transferring resources from possum control to predator control 	100
Operational monitoring for predator control.	Undertake monitoring. Analyse data to determine changes over the preceding 4 years	A report is due in May 2020 as data is collected in the first couple of months each year.	80

3. Work planned for 1 Jan – 30 June 2020

In the next 6 months the project team will focus on:

3.1 Research and monitoring

- Work will continue to complete current contract research projects.
- Pending reports and papers will be completed.

3.2 Community engagement and education

- There will be at least two more professional development teacher workshops.
- There will be at least two workshops with EIT students.
- Three Hikoī are scheduled.
- At least one newsletter will be delivered, and communications will continue through facebook, website and media releases.
- The outdoor learning site toilet and shelter will be completed.

3.3 Biodiversity and species

- Numbers of seabirds returning to Poutiri Ao ō Tāne will continue to be monitored over the summer months.
- kākā will continue to be supplementary fed.

3.4 Habitat restoration

- Planting maintenance will continue.

3.5 Predator control

- Possum eradication on Māhia will continue, including monitoring for survivors in areas which have been controlled.
- Predator suppression on Māhia will continue with a permanent network laid out as the team move across the peninsula
- Maintenance control in Poutiri Ao ō Tāne and Cape to City will continue.
- The Māhia based team will support the Whakatipu Māhia Trust with their aspirations for Māhia i.e. shore plover protection support and urban rat control

Appendix 2: Project outputs over last six months

Note: For full list of project outputs between January 2015 and August 2019 see August 2019 Interim report.

Title	Description
Research and monitoring	
Community and Rural Surveys on environmental attitudes and behaviours	The re-run of the Cape to City Surveys has been completed. This was originally done in 2015, so this information will enable us to understand if attitudes and behaviours have changed in the last 4 years. The data is currently being analysed
An application of the I3 framework to rat control in Hawke's Bay	Kaine, G. An application of the I3 framework to rat control in Hawke's Bay. Manaaki Whenua - Landcare Research Contract Report: LC 3 646. https://www.pfhb.nz/resources/ This output was part of the community survey.
Predator and biodiversity response monitoring in Cape to City and Poutiri Ao ō Tāne	Predator and biodiversity response monitoring in Cape to City and Poutiri Ao ō Tāne. Al Glen, Grant Norbury and Corinne Watts, Manaaki Whenua - Landcare Research
Pest control at a regional scale: Identifying key criteria using a spatially explicit, agent-based model	Lustig, A., A. James, D. Anderson, and M. Plank. 2019. Pest control at a regional scale: Identifying key criteria using a spatially explicit, agent-based model. Journal of Applied Ecology 56:1515-1527.
Power analysis for biodiversity monitoring in Cape to City	M. C. Latham, A. Glen 2019. Power analysis for biodiversity monitoring in Cape to City. Contract Report: LC3556 Manaaki Whenua - Landcare Research
Implementing landscape transformation	Greenaway, A. Implementing landscape transformation: insights from the project management of Cape to City and Poutiri Ao ō Tāne. Manaaki Whenua - Landcare Research Contract Report: LC3645. https://www.pfhb.nz/resources/
Benefits to conservation programmes	Internal report on Benefits to conservation programmes. https://www.pfhb.nz/resources/
Citizen Science in Predator Free Hawke's Bay 2019 Update	Internal report on Citizen Science in PFHB. https://www.pfhb.nz/resources/
Review of wireless trap monitoring in PFHB projects	Internal review of wireless trap monitoring in PFHB projects. https://www.pfhb.nz/resources/
Engagement	

Teacher professional development workshops	Cape to City education team in partnership with Enviroschools facilitators ran the last two workshops in a series of four with Early Childhood, Primary and Secondary teachers around using the environment as a context for learning.
PFHB Website was launched	A new website was launched which houses all the PFHB projects, The Cape to City and Poutiri Ao ō Tāne websites have now ceased. The old URLs still work by are directed to the new website: www.pfhb.nz
Technology driving Predator Free Hawke's Bay success	Media release: https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&objectid=12277195&ref=CE-HBT-DNR
Poutiri Ao ō Tāne presentation	Trevor Taurima, Maungaharuru Tangitū Kaumatua presented Poutiri Ao ō Tāne to a new community group project at Waipatiki – so that the visions of the two projects can be aligned as they will connect the Mountains to the Sea.
AirNZET EIT partnership Promo video for educators	A video has been created to promote the use of the Ōtātara Outdoor Learning Centre https://www.youtube.com/watch?v=QnopibnKx6A
PFHB Newsletters	Two newsletters were delivered using new mailchimp template. https://www.pfhb.nz/resources/newsletters/
Nature Shed	Another successful Nature Shed was run at the Hawke's Bay A&P show. Engaging thousands of people about the importance of Biodiversity and PFHB.
Poutiri Ao ō Tāne Hīkoi	A final Hīkoi for 2019 was run in conjunction with the kākā release at Poutiri Ao ō Tāne.
AirNZET EIT partnership webpage	A webpage has been created for the Ōtātara Outdoor Learning Centre. https://www.eit.ac.nz/campus/otatara-outdoor-learning-centre/
Mangarara workshop under AirNZET EIT partnership 'Connected to nature'	There was a follow-up workshop from last year's at Mangarara with EIT Education staff. This year it included teaching staff from other EIT teaching areas including Primary Industries and Māori Studies. This was to plan how EIT will use the environment as a resource in the courses they run.
ZIP and PF2050 Ltd visit November	ZIP and PF2050 visited Māhia in November and were shown around the Possum eradication programme.
Aotearoa Foundation visit December	Valerie Pinkerton and Christy Loper from the Aotearoa Foundation came in December and were welcomed through a Powhiri at Tangoio Marae followed by a visit to Poutiri Ao ō Tāne
Five more kākā welcomed to Hawke's Bay	Media release about the kākā translocation: https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&objectid=12278408
Tuning in to galaxiids	Media article about Cape to City work with Tamatea Intermediate Freshwater Programme fieldtrip to Clive River and Waitangi Wetland. Napier Courier, June 19th, 2019
Developing an Environmental Education 'Mind Space'	Wendy Rakete-Stones co-presented a talk at the ACT's conference (Australasian Campuses Towards Sustainability) on our 'Connected to nature' project with EIT.
Opportunities for biodiversity and community that collaborative	Melissa Brignall-Theyer gave a public talk about the opportunities the PFHB projects have brought Hawke's Bay and New Zealand at a Pecha Kucha event.

landscape-scale restoration projects bring	
Species and biodiversity	
Kākā translocation	Five kākā were translocated to the Boundary Stream aviary and then released in November. This brings the total number of released kākā under Poutiri Ao ō Tāne to 26.
Transfer of mottled petrel (<i>Pterodroma inexpectata</i>) from Whenua Hou/Codfish Island to Maungaharuru/Boundary Stream Mainland Island	Mitchell, C.M. 2018: Internal Report on fifth and final transfer of mottled petrel (<i>Pterodroma inexpectata</i>) from Whenua Hou/Codfish Island to Maungaharuru/Boundary Stream Mainland Island. https://www.pfhb.nz/resources/
Habitat restoration	
Optimising habitat connectivity	Internal report on optimising habitat connectivity. https://www.pfhb.nz/resources/
Maraetōtara River Quality Trends	Internal report on Maraetōtara River Quality Trends. https://www.pfhb.nz/resources/
Predator control	
Evaluating feral cat control	The research on PAPP as a control for feral cats was summarised in a ‘easy read article’ https://www.pfhb.nz/resources/newsletters/
ZIP visit in August	The ZIP team visited the PFHB pest control team at Māhia and provided timely and useful advice, which has been implemented.
Farmer commitments in Cape to City and Poutiri Ao ō Tāne	Internal report on Farmer commitments in Cape to City and Poutiri Ao ō Tāne. https://www.pfhb.nz/resources/
The effectiveness and reliability of self-resetting rat traps in Boundary Stream	Internal review on the self-resetting rat trap trial in Poutiri Ao ō Tāne. https://www.pfhb.nz/resources/
Using para-aminopropiophenone (PAPP) as a tool to control feral cats in Hawke’s Bay	Natalie deBurgh gave a presentation on the PAPP trial at Poutiri Ao ō Tāne at New Zealand Ecological Society conference.