



# Te Matau a Māui project update Interim report February 2019

*Native species thrive where we live, work and play*



Participants of the Poutiri Ao o Tāne translocation celebration at Tangoio Marae.

*Photo: Melissa Brignall-Theyer*



# Contents

Executive summary.....	5
<b>1. Project management update.....</b>	<b>6</b>
1.1 Project structure update.....	6
1.2 Governance update.....	6
1.3 Milestone review.....	6
1.4 Community advisory group update.....	9
1.5 Big picture update.....	9
1.6 Māori engagement.....	11
1.6.1 The projects from a Māori perspective .....	11
<b>2. Workstream update: 1 July – 31 December 2018.....</b>	<b>13</b>
2.1 Research and monitoring.....	13
2.1.1 Progress towards outcomes.....	14
2.1.2 Significant risks update.....	18
2.1.3 Significant opportunities update.....	18
2.2 Community engagement.....	18
2.2.1 Progress towards outcomes.....	19
2.2.2 Significant risks update.....	21
2.2.3 Significant opportunities update.....	22
2.3 Biodiversity and species.....	23
2.3.1 Progress towards outcomes.....	23
2.3.2 Significant risks update.....	26
2.3.3 Significant opportunities update.....	27
2.4 Habitat restoration.....	27
2.4.1 Progress towards outcomes.....	27
2.4.2 Significant risks update.....	28
2.4.3 Significant opportunities update.....	29
2.5 Pest control.....	30
2.5.1 Progress towards outcomes.....	30
2.5.2 Significant risks update.....	33
2.5.3 Significant opportunities update.....	34
<b>3. Work planned for 1 January – 30 June 2019.....</b>	<b>35</b>
3.1 Research and monitoring.....	35
3.2 Community engagement and education .....	35

3.3	Biodiversity and species.....	36
3.4	Habitat restoration.....	36
3.5	Predator control.....	36
4.	Conclusion.....	37
	Appendix 5: Project outputs so far.....	39

## 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 2018.

The last 6 months has seen the project team focusing on getting the Predator Free Hawke's Bay (PFHB) and Connected to Nature projects up and running, and completing the 2018 Te Matau a Māui milestones. This has included completing PFHB operational, monitoring, research, and health and safety plans, as well as developing milestones, partner relationships, a Memorandum of Understanding with the Air New Zealand Environment Trust, and employing a project manager for the Connected to Nature project.

At publication date, 99% of the 2018 Te Matau a Māui milestones have been completed. The incomplete milestone is to optimise wireless trap networks within Cape to City as a template for very large-scale use. This will be completed in 2019 as part of optimising the trap network in Cape to City under PFHB. The expenditure is on track to be within budget by the end of the financial year in June 2019.

Highlights from the last 6 months.

- Thirteen more research projects have been committed to under the latest Manaaki Whenua - Landcare Research contract. Recently completed research includes recommendations for Kaupapa Māori research, updates on ferret odour trials and education programme review.
- Three successful Hikoi Tutuki (discovery and learning walks/field trips) have been delivered.
- A successful 2-day workshop was run as part of the Connected to Nature Air New Zealand Environment Trust grant. The grant aims to enable teachers to confidently use the environment as a context for their teaching throughout the curriculum.
- At the beginning of December, an event was held at Tangoio Marae to celebrate all the manu/bird translocations that have been part of Poutiri Ao ō Tāne since 2011.
- We captured photographic evidence of seabirds returning to Poutiri Ao ō Tāne for the second year running.
- Optimisation of Poutiri Ao ō Tāne predator control traps and predator knockdown at Lake Tutira has begun as part of PFHB.
- A para-aminopropiophenone (PAPP) control operation between the Hawke's Bay Regional Council and the Department of Conservation was completed over 9,000 ha of Poutiri Ao ō Tāne.
- Ferret odour trials have shown that when ferret odour is combined with an existing bait, the capture rate of stoats was 150% higher than conventional baits alone.

Over the next six months the project team delivery will include: Research projects under 18/19 contract, at least one more hikoi, developing the Connected to Nature partnership, a kākārīki translocation (if rat numbers remain low enough) and starting the possum eradication and predator suppression in Whakatipu Mahia.

# 1. Project management update

In the past 6 months the Te Matau a Māui project team has focused on getting Predator Free Hawke's Bay (PFHB) up and running. A new project team has been created to deliver the Mahia PFHB project milestones, because of the new partners involved and the geographical distance between Mahia and Napier. The new project team includes representation from Rongomaiwahine, DOC (Gisborne and Hawke's Bay), Ngā Whenua Rāhui, Hawke's Bay Regional Council (HBRC) (Wairoa and Napier), Whangawehi Catchment Management Group, and the Mahia farming community.

The Mahia project has also been renamed Whakatipu Mahia – Predator Free Mahia. The first formal Whakatipu Mahia project team meeting was held in November, and meetings are scheduled every two months. It is hoped that the Te Matau a Māui and Whakatipu Mahia project teams will combine meetings at least twice each year.

Some of the project team members have also been involved in establishing the education in the environment collaborative project 'Connected to Nature'. This involved working with the Connected to nature partners to develop milestones, and are developing a project team to deliver the milestones. The partners are: Air New Zealand Environment Trust (Air NZET), Eastern Institute of Technology (EIT), Enviroschools, HBRC, Cape to City, WildLab and Mangarara – The Family Farm.

## 1.1 Project structure update

The PFHB roles have now been added to the project structure (**Figure 1**), and are in the process of being appointed.

## 1.2 Governance update

The new PFHB governance team members were welcomed into the Te Matau a Māui team at the governance team meeting in November. The new members are: Moana Rongo (Chairperson of Rongomaiwahine iwi), Charles Daugherty (Chairperson of the Biodiversity Hawke's Bay Trust) and Pat O'Brien (Mahia farmer and Chairperson of the Whangawehi Catchment Management Group) (see **Figure 1**.)

## 1.3 Milestone review

There are three 2018 milestones, highlighted in the previous report, that the project team would like to request changes to: the kiwi translocation, bat monitoring, and graduating 30% of farmers to maintenance of predator control.

- **Kiwi:** The project team would like to relocate this translocation to Mahia, into the Predator Free Hawke's Bay possum eradication and predator suppression area, where risks of reinvasion are much lower and support from other stakeholders and funders is likely to be greater. This will only be done with community support.

- **Bats:** After much consideration and expert advice, the project team decided that the cost of bat monitoring is prohibitive and will outweigh any environmental and project benefit in this area.
- **Graduating farmers:** The project team has removed ‘graduating 30% of farmers to maintenance of predator control by the end of 2018’ from the 2018 milestones, and kept the 2019 milestone (graduating 50% of landowners). The reason for this change is to make sure that the trapping data capture technology is fit for purpose when we begin graduation of landowners. If the project team tries to graduate farmers without having the technology fit for purpose, we risk alienating farmers which could impact on the reputation, integrity and sustainability of the project.

The project team would also like to remove the second 2019 Research and Monitoring milestone , because electronic tracking pads will not be ready for comparison with camera traps.

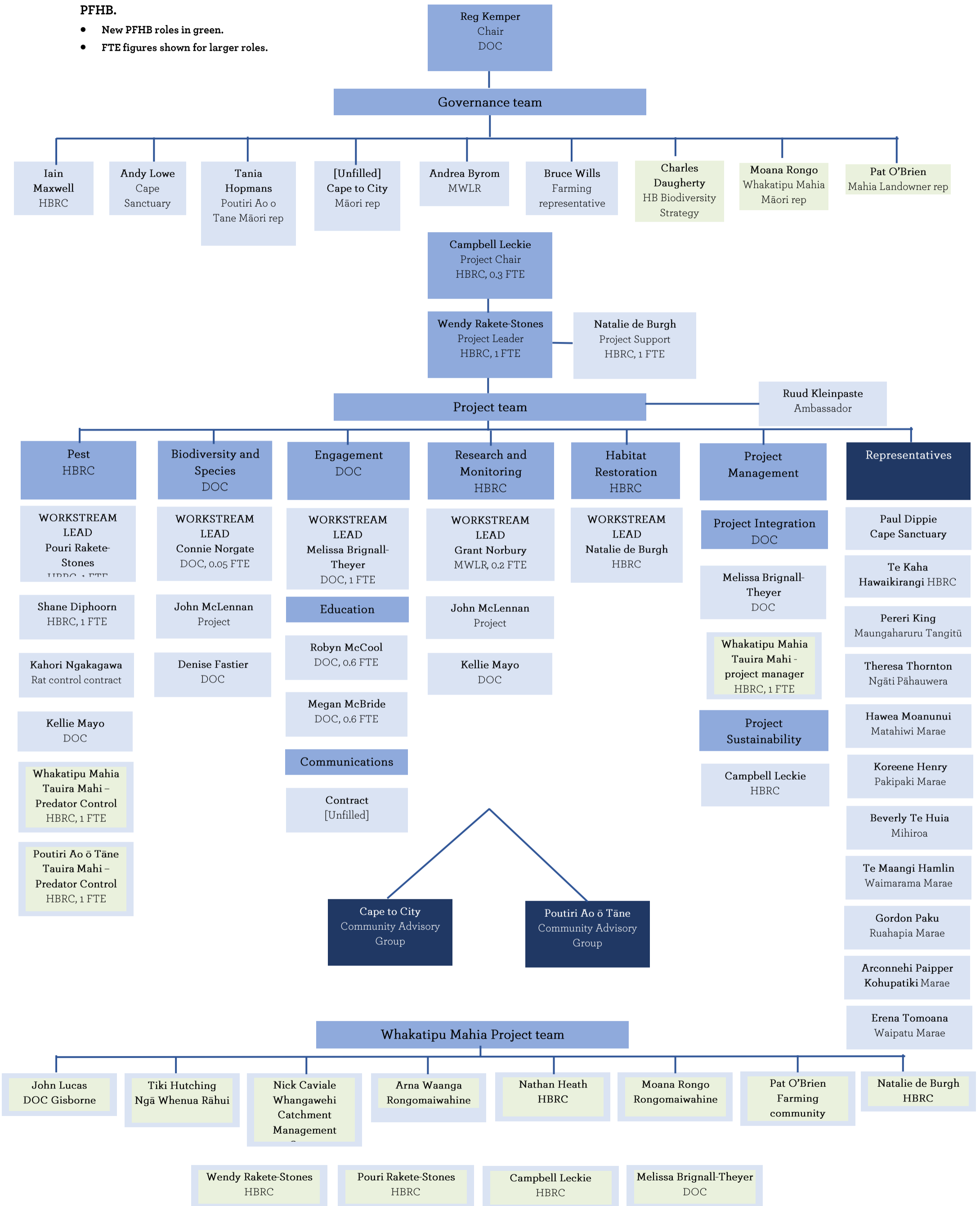


The PFHB Governance team and some Project team members. From back left: Moana Rongo, Andy Lowe, Wendy Rakete-Stones, Bruce Wills, Campbell Leckie, Charles Daugherty, Pat O’Brien. Front left: Melissa Brignall-Theyer, Tania Hopmans, Andrea Byrom, Connie Norgate. Reg Kemper and Iain Maxwell are missing from the photo. *Photo: Natalie deBurgh*

# Cape to City and Poutiri Ao ō Tāne and PFHB project structure

**Figure 1: Project structure to deliver Cape to City, Poutiri Ao ō Tāne and PFHB.**

- New PFHB roles in green.
- FTE figures shown for larger roles.





## **1.4 Community advisory group update**

The Poutiri Ao ō Tāne Community Advisory Group has met a couple of times in the last 6 months. Jo Field – representing Pan Pac – has joined this group.

The Cape to City Community Advisory Group also met a couple of times in this period. At the last meeting Hayden Rees-Jones, representing the Cape to City farming community, joined the group.

## **1.5 Big picture update**

**Predator Free 2050 and Predator Free Hawke’s Bay.**

After an intensive period preparing material, submitting to and negotiating with PF2050 Ltd the team have been working on the range of operational implementation detail and logistics for Whakatipu Mahia. The learning over the next three years on farmland possum eradication is preparing for the potential regional roll out of possum eradication (outside of the Mahia Peninsula) in Cape to City. This is another key phase in the projects’ lifecycle as the eradication of possums will set up the transition to feral cat and mustelid control.

**Zero Invasive predators (ZIP).**

The team have been engaging closely with the ZIP team over the last six months. They have provided valuable support as we build the eradication plan for Whakatipu Mahia, both in terms of the technical eradication context and in terms of understanding the tools and techniques they are developing for eradication. They have agreed that we can have access to their wireless trapping technology including webserver back office software that they have developed to manage wireless trap monitoring. This is a valuable partnership as it allows the team to be aware of and plan for the most cutting-edge predator control technology available in New Zealand.

**Tangata Whenua.**

The team have been actively increasing their engagement with Tangata whenua within the project. Interviews have been held for positions associated with Whakatipu Mahia and Poutiri Ao ō Tāne and two out of the three people appointed trace their lineage to the iwi and hapū of the project area.

**Connected to Nature – Air New Zealand Environment Trust proposal**

Connected to Nature has had a busy six months pulling all the partners together and developing relationships and a structure for working together. This has included consulting user groups, developing milestones and employing a part-time project manager. As part of relationship building Eastern Institute of Technology (EIT) school of education, Enviroschools, University of Waikato, Waikereru Ecosanctuary, Cape to City and Mangarara – The Family Farm came together, to develop a vision where teachers will be able to confidently use the environment as a context for learning throughout the curriculum. This investment has both leveraged in additional funding and it has much more closely partnered the project team with EIT and the other partners under this project. EIT are a provider of teacher training and many of their teacher graduates stay to teach in the Hawke’s bay.

## **Regional Pest Management Plan**

The Hawkes Bay Regional Pest Management plan (RPMP) has been set up to provide a policy and statutory process for securing the gains made in Poutiri Ao ō Tāne and Cape to City predator control over the last eight years. The RPMP also includes the ability to have possum eradication areas which will set the foundation for the incremental roll out of possum eradication in 3-4 years' time. This use of the RPMP to create Predator Control Areas and Possum Eradication Areas is a first in New Zealand. The RPMP was passed without legal challenge on 16<sup>th</sup> January 2019 and is now operative with its provisions for possum eradication and predator control legally binding.

## **Long Term Regional Council Plan (LTP)**

The LTP sets councils funding for a ten year period and is a significant strategic investment document prepared in consultation with the community. In this LTP Council have committed an additional \$6m over the ten year LTP or \$600,000 per annum to regional predator control as a result of the work done in Cape to City and Poutiri Ao ō Tāne. It also includes significant funding in habitat restoration, which will support biodiversity increases resulting from pest control.

## 1.6 Māori engagement

Kaumātua Trevor Taurima has been organising (with support from the project team) a Hikoi Tutuki (discovery and learning walks) programme, to enable hapū and community to reconnect with the whenua (land) stories, and with Poutiri Ao ō Tāne and Cape to City. There have been three hikoi so far:

1. Lake Tūtira, with Maungaharuru Tangitū hapū members
2. Te Haroto and other culturally significant locations, with Ngati Hineuru hapū members
3. Putere Lakes and other culturally significant locations, with Ngāti Pāhauwera hapū members.

These hikoi have increased engagement with hapū members, who greatly appreciated the opportunity to re-connect with their culture and whenua.



Tutira hikoi participants listen to Pereri King talk about cultural history of the lake.

*Photo: Melissa Brignall-Theyer*

### 1.6.1 The projects from a Māori perspective

#### Ngāti Pāhauwera Development Trust – update

Environmental mahi continues in our rohe: tracks cut for stock exclusion fencing of the second lake at Putere are complete, and fencing is due to be completed soon. Site visits, tracks and stock exclusion fencing have been started at Te Awaawa Stream. We have established a second nursery on Rawhiti Station. Lewis Pest Control, a Ngāti Pāhauwera Development Trust (NPDT) partner, continues ground-based possum trapping in the Mohaka Forest, to support employment of our members in environmental mahi in our region aligning with NPDT's environmental and social aims.

Ngā mihi nui to the Poutiri Ao ō Tāne project for its support of the Hikoi Tutuki which was organised by NPDT and the Kai Oranga wananga participants. The Hikoi Tutuki series is hikoi by iwi of Hawke's Bay who whakapapa in to the Poutiri Ao ō Tāne project including Ngāti Hineuru, Maungaharuru Tangitū and Ngāti Pāhauwera to share cultural and environmental learnings. The Pāhauwera hikoi was attended by over 40 people who visited the Putere Marae, Putere Lakes, Rawhiti Station and Mohaka Marae listening to historical, cultural, environmental and community korero. It was a fabulous day that will be remembered by all.



Hikoi Tutuki at Putere Marae: *Photo: Bonny Hatami*

## 2. Workstream update: 1 July – 31 December 2018

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 2018 activities**

Workstream	Number of activities	% complete
Research and monitoring	6	100
Community engagement and education	5	100
Biodiversity and species	5	100
Habitat restoration	2	100
Pest control	6	95

Significant risks and opportunities are reported under each workstream. These have been kept the same as the August 2015 interim report so that progress can be measured against them. New risks and opportunities have been added as appropriate. The full list of risks and opportunities (as provided in the August 2015 interim report) can be viewed if required.

### 2.1 Research and monitoring

The research and monitoring workstream is led by Manaaki Whenua - Landcare Research (LCR). There are four strands to this research: pests, indigenous biodiversity, social research and economic research. This work is substantially delivered through milestones described in two contracts: one between LCR and HBRC, the other between HBRC and John McLennan (private consultant).

## 2.1.1 Progress towards outcomes



Invertebrate monitoring in Cape to City. *Photo: Al Glen*

### Highlights:

- Thirteen research projects have been committed to under the latest LCR contract for the July 2018 to June 2019 period. This includes continuing projects already underway and well as new work including Whakatipu Mahia possum eradication research.
- A Kaupapa Māori research report was submitted giving guidance on how best to engage with Māori in Hawke's Bay through research and Matauranga Māori. This report includes opportunities to explore questions around mahinga kai (wild foods), rongoā (traditional medicine), understanding and using local Māori names for biodiversity, and exploring habitat restoration beyond putting trees in the ground.
- Biodiversity monitoring continues in both Cape to City and Poutiri Ao ō Tāne. A Cape to City progress report was completed, indicating some changes since 2015 but, as predator suppression has not been in place very long, no conclusions can yet be drawn. (<https://capetocity.co.nz/assets/Cape-to-City-Monitoring-Update-2018.pdf>)  
A research paper has been published about the Poutiri Ao ō Tāne monitoring, highlighting initial biodiversity gains with higher trap-checking frequency, but gains at lower trap-checking frequency are not as clear. (<https://newzealandecology.org/nzje/3358>)
- LCR ran a joint PF2050 research meeting with participants from all the PF2050 Ltd projects. The purpose of the meeting was to get everyone together and decide on a few common research themes and methods, including social science. This will enable the best and most efficient research outcomes for PF2050.

**Table 2: Progress on research and monitoring milestones**

Milestone	2018 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"> <li>• 11 research articles published in science journals</li> <li>• 5 manuscripts (either submitted or drafted)</li> <li>• 29 conference presentations</li> <li>• 43 unpublished reports</li> <li>• 6 public lectures</li> <li>• 5 newsletter articles</li> <li>• 3 PhD theses</li> </ul>	100
Methods of monitoring introduced mammalian predators before and after control	No 2018 milestone.	NA	NA
Decision-analysis models for predicting the most cost-effective trapping configurations for managing introduced predators over large areas	Gather sub-sample predator movement data (from trapping/telemetry) to determine optimal trap spacing.	<p>This milestone was completed in 2017 as part of developing an online decision-support tool called TrapSim to simulate trapping of target predators.</p> <p><a href="https://landcare.shinyapps.io/TrapSim_C2C/">https://landcare.shinyapps.io/TrapSim_C2C/</a></p>	100

Milestone	2018 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 Ao ō Tāne and Cape to City monitoring (Poutiri Ao ō Tāne monitoring times may be extended).	<ul style="list-style-type: none"> <li>• Monitoring continues and a research paper has now been published on Poutiri Ao ō Tāne monitoring.</li> <li>• An interim report has been completed on the Cape to City monitoring.</li> </ul>	100
Analysis and reports on the integrated economic benefits of Te Matau a Māui.	No 2018 milestone.	NA	NA
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 a detailed mid-programme research review.	This milestone was completed in 2017 and is reported on in the February 2018 interim report.	100



Milestone	2018 activity	Update	% complete
Use of restored habitat by native wildlife	Conduct occupancy assessment of key indicator species.	<ul style="list-style-type: none"> <li>• A report has been completed on strategies to promote localised planting of the right plants in the right places to maximise benefits for biodiversity (Appendix 5).</li> <li>• Another report has been completed on planned research over the next couple of years on the habitat value of mānuka for invertebrates following the establishment of a mānuka plantation (Appendix 5).</li> <li>• A review of threatened and iconic plant, bat, lizard, frog, terrestrial invertebrate and fungi species in Cape to City and Poutiri Ao ō Tāne has also been completed. This report recommends further surveys, as much of this data is currently lacking for Hawke’s Bay (Appendix 5).</li> </ul>	100
Student participation	Engage two tertiary students in the project per annum.	<ul style="list-style-type: none"> <li>• A PhD student has just finished her degree and is now publishing papers about her kōrure research.</li> <li>• A second-year EIT summer scholarship student is looking into effective ways of integrating education in the environment into teacher training.</li> <li>• In July a couple of international students from Massey University were involved in the projects.</li> </ul>	100

Milestone	2018 activity	Update	% complete
Increasing the participation in pest management and ecological restoration by landowners and the community.	No 2018 milestone.	NA	NA

Note: research progress is also reported in other workstream updates.

### 2.1.2 Significant risks update

- Original    Insufficient pest control intensity to achieve desirable biodiversity outcomes is a potential risk that will be mitigated by monitoring and adaptive management.
- Update     Research continues into pest density impact functions to address this issue. *No change to this update.*

### 2.1.3 Significant opportunities update

- Original    Working closely with the Biological Heritage National Science Challenge (BHNSC).
- Update     We continue to work closely with the BHNSC, with the Director on the Governance team. *No change to this update.*
- Original    LCR is considering aligning another of its core research portfolios (‘Enhancing biodiversity’) to Te Matau a Māui. This work is in progress.
- Update     Research from the Enhancing Biodiversity portfolio continues to be aligned with the project through the 2017/18 LCR contract and will continue into 2018/19. *No change to this update.*

## 2.2 Community engagement

This workstream is led by DOC, but with significant input from other project partners because it is intimately linked to all other workstreams. The workstream has three strands: education (school and curriculum-based), communications, and community engagement in general.

## 2.2.1 Progress towards outcomes



The Nature Shed - Ko Tū koe, ko Rongo koe at the Hawke's Bay A&P show

*Photo: Melissa Brignall-Thayer*

### Highlights:

- Three successful Hikoi Tutuki (discovery and learning walks/field trips) have been delivered.
  1. Lake Tūtira with Maungaharuru Tangitū hapū members.
  2. Te Haroto and other culturally significant locations with Ngāti Hineuru hapū members,
  3. Putere Lakes and other culturally significant locations with Ngāti Pāhauwera hapū members.
- As part of the Connected to Nature AirNZET grant, EIT school of education, Enviroschools, University of Waikato, Waikereru Ecosanctuary, Cape to City and Mangarara – The Family Farm came together, to develop a vision where teachers will be able to confidently use the environment as a context for learning throughout the curriculum, so that our tamariki can once again form an enduring connection with nature.
- The Cape to City education coordinators ran another successful Education in the Environment Early Childhood Education (ECE) professional development workshop, which received great feedback from participants.
- The Cape to City Education coordinators were invited back to Taikura Rudolf Steiner school, which they worked with in 2016, to open and bless the biodiversity project the students instigated and worked on following the Cape to City programme.
- Led by Cape to City – 15 partners came together to deliver this year's nature shed at the A&P show. The theme was Ko Tū koe, ko Rongo koe – framing with nature, and once again the wētā and skinks were a big drawcard. It was also a great display of Hawke's Bay's environment-based organisations working together in partnership for a common goal.

**Table 3: Progress on community engagement and education milestones**

Milestone	2018 activity	Update	% complete									
A marked increase in the number of volunteers participating in the programmes over the next 5 years.	A measured increase in volunteer hours trending upward.	<p>There was significant volunteer effort in the kōruru translocation at Poutiri Ao ō Tāne. Overall 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.</p> <p>Volunteer hours (to Dec 2018):</p> <table border="1"> <thead> <tr> <th></th> <th>2017</th> <th>2018</th> </tr> </thead> <tbody> <tr> <td>Poutiri Ao ō Tāne</td> <td>2,388</td> <td>1636</td> </tr> <tr> <td>Cape to City</td> <td>464</td> <td>35</td> </tr> </tbody> </table>		2017	2018	Poutiri Ao ō Tāne	2,388	1636	Cape to City	464	35	100
	2017	2018										
Poutiri Ao ō Tāne	2,388	1636										
Cape to City	464	35										
Increased involvement of schools in the various conservation initiatives.	Develop a forum or process, in conjunction with schools, to transition school support from Cape to City from being actively managed to being confident at using the environment as a context for learning in the long term.	<ul style="list-style-type: none"> <li>• A professional development workshop for teachers was run with ECE trainee and practising teachers.</li> <li>• A successful strategic development hui was held between ‘Connected to Nature’ partners and EIT staff on 11 and 12 October at Mangarara Farm.</li> <li>• A project manager has been appointed to get the ‘Connected to Nature’ project up and running.</li> <li>• Cape to City Education was presented at the EIT ECE Research Symposium on 15 September.</li> <li>• Cape to City Education and Connected to Nature were presented to EnviroSchool’s hui participants.</li> </ul>	100									

Milestone	2018 activity	Update	% complete
Communications strategy.	Implement communications strategy.	<ul style="list-style-type: none"> <li>In the last 6 months there has been at least two Facebook posts per week, four newspaper articles and numerous presentations (Appendix 5).</li> <li>Cape to City and Poutiri Ao ō Tāne newsletters were completed and dispatched.</li> </ul>	100
Through the social engagement strategy and communication plan, the Hawke's Bay community will value the importance of biodiversity and act accordingly, so that sustainability behaviours become part of the social norm.	Secure a minimum of \$400,000 to match the final year's investment by Aotearoa Foundation.	This milestone was completed in the first half of 2018 with Predator Free 2050 Ltd and AirNZET investments.	100
	Review and implement community engagement strategy.	<ul style="list-style-type: none"> <li>The projects were showcased at the Hawke's Bay A&amp;P show.</li> <li>Kaumātua Trevor Taurima with support from the project team and hapū members organised and delivered three Hikoi.</li> <li>The projects have been presented to a variety of audiences including at Te Mata Peak as part of the Sustainable Backyards series.</li> </ul>	100
	No 2018 milestone.	NA	NA

## 2.2.2 Significant risks update

Original      If we do not engage iwi in a meaningful way, we risk losing a key partner and jeopardising the success of the project. We therefore need to formalise engagement with iwi at a communication and participation level, and make sure engagement is genuine and visible in all our communications.

Update        The project team has now engaged with all marae affiliated with Cape to City. These marae have committed a marae representative to the project.

Original	There is a lot of interest and excitement about the education programmes. This has created many opportunities for links and involvement outside the project milestones. The risk is that the project team starts working in areas outside the project's deliverables and is unable to meet the contracted deliverables due to resource and time constraints. This risk is being mitigated by assessing all opportunities as a team.
Update	All staff involved in the community workstream are now very good at working within scope. All opportunities are discussed by the whole project team so opportunities can be prioritised. <i>No change to this update.</i>
New (January report)	Delivering the education milestones would be at risk if, for some reason, the project lost the education coordinator. This risk will be mitigated by setting up systems to make it easy for someone to take over in the coordinator's absence, and by teaching other team members some of the necessary skills.
Update	A part-time coordinator has been employed to support Robyn McCool. <i>No change to this update.</i>

### **2.2.3 Significant opportunities update**

Original	An initial presentation and meeting with EIT teacher training faculty staff and students has provided an opportunity to link the teacher training programme with Cape to City. This is a significant step towards the 2017 milestone 'Engage a minimum of six schools in the Cape to City project plus at least one tertiary institute initiative'.
Update	A Memorandum of Understanding (MOU) between the project and EIT has been signed and is now being implemented. The project and EIT have also been successful with a grant from the Air New Zealand Environment Trust to create outdoor learning spaces for teachers and trainee teachers to enable them to become confident in using the environment as a context for learning. This programme is now being implemented.
Original	The Community Conservation Partnerships Fund (\$26 million over 4 years), administered by DOC, is a significant opportunity for community groups to receive funding and align themselves with. Proposals are being considered.
Update	Projects already funded continue. The Maraetotara Tree Trust has just been awarded further funding under the DOC Community Fund. <i>No change to this update.</i>

## 2.3 Biodiversity and species

This workstream is led by DOC but has significant input from John McLennan and LCR. There are two main strands: species reintroductions and biodiversity monitoring.

### 2.3.1 Progress towards outcomes



Waitangi, the returned tītī and friend. *Photo: motion sensitive camera*

#### Highlights:

- At the beginning of December people came from all over New Zealand to Tangoio Marae to celebrate all the manu/bird translocations that have been part of Poutiri Ao ō Tāne. This was a great morning of sharing the journey since 2011 and thanking the many people who have been involved over the years. Volunteers alone have contributed over 15,000 hours of their time to Poutiri Ao ō Tāne since 2011, and most of it would have been to support the translocations in one way or another. <https://www.doc.govt.nz/news/media-releases/2018/returning-wingbeats-to-maungaharuru-worth-celebrating/>
- For the second year running we have photographic evidence of seabirds returning to Poutiri Ao ō Tāne. In fact, a couple were caught on camera on the evening of the celebration. <https://www.facebook.com/poutiri>
- In November a kākā nest was found in Boundary Stream by volunteers. Both parents are unbanded, so are the progeny of birds initially released under Poutiri Ao ō Tāne. The parents are currently very busy feeding the chicks. <https://www.facebook.com/poutiri>
- In total, 2,258 5-minute bird counts have now been collected for the Cape to City project – 627 from Cape Sanctuary, 1,283 from the Cape to City footprint, and 348 from the Cape to City non-treatment area on the western side of the Cape to City footprint. These counts span the period from spring 2015 to autumn 2018. They comprise the baseline data set against which future change will be measured. The intention now is to suspend counting for 3–5 years to

allow the effects of top predator control in the footprint area to materialise, and then to recount again at the sites sampled for the baseline assessments.

**Table 4: Progress on biodiversity and species milestones**

Milestone	2018 activity	Update	% complete
Reintroduction and re-establishment of kōrure/mottled petrels.	Translocations with systematic refinements of husbandry techniques continue. Camera monitoring initiated at Maungaharuru to detect returning adults.	<ul style="list-style-type: none"> <li>99 kōrure were translocated in April. 96 successfully fledged.</li> <li>Monitoring seabird return commenced in October with 15 motion sensitive cameras. Returning birds have been spotted on the cameras.</li> <li>Rachel Sagar has just published a research paper which found handling kōrure chicks daily or every 3 days had no negative effect on the growth or condition of chicks when compared to control chicks.  <a href="https://www.sciencedirect.com/science/article/pii/S0016648017306998?via%3Dihub">https://www.sciencedirect.com/science/article/pii/S0016648017306998?via%3Dihub</a> </li> </ul>	100
Increase in the abundance of introduced and native birds that are already present in the area.	Continue bird monitoring with annual data analysis.	Power analyses show that the current sampling effort has a high probability of detecting a $\geq 20\%$ change in abundance of all these native species in the footprint area in 3-5 years' time, including the rarest ones such as kākāriki.	100



Milestone	2018 activity	Update	% complete
Reintroduction 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.	Continue monitoring of outflow from Cape Sanctuary; analyse species data to determine extent of spread through wider landscape.	Preliminary analyses show that one species – toutouwai/robin – has already established successfully in the Cape to City footprint since predator control began, with population growth resulting from the recent translocation programme at the southern end of the footprint, and from natural outflow from Cape Sanctuary at the northern end of the footprint. Another four species of Cape Sanctuary origin (pāteke, kākāriki, whitehead and tomtit) have also been recorded in the footprint from time to time, although none has yet established there.	100
Successful re-establishment of North Island brown kiwi onto the Maraetotara plateau in the Cape to City footprint.	No 2018 milestone.	The project team would like to relocate this translocation to Mahia, into the PFHB possum eradication and predator suppression area, where risks of reinvasion are much lower and additional support including from other stakeholders and funders is likely to be higher.	NA
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.	If funding is sourced and in-depth analysis recommends to proceed, catch and radio-tag wild whio adults to identify nest locations. Collect whio eggs to be hatched and raised to fledging age in captivity.	This was reported on in the last report and the project team determined that this translocation is not feasible at this time.	100

Milestone	2018 activity	Update	% complete
Improvement in the numbers of long-tailed bats inhabiting Mohi Bush.	Monitor bat population.	After much consideration and expert advice, it has been determined the cost of bat monitoring will be prohibitive and will outweigh any environmental and project benefit in this area. The project team would like to request to remove this milestone.	NA
Reintroduction 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.	<ul style="list-style-type: none"> <li>• 99 kōrure were translocated in April.</li> <li>• In December one adult kōrure and up to 4 adult tītī returned</li> <li>• Kākārīki will be translocated in March 2019 as long as rat numbers remain low.</li> <li>• A kākā nest has been found.</li> <li>• Pāteke are still breeding at Opouahi, but are no longer monitored.</li> </ul>	100

### 2.3.2 Significant risks update

Original It is yet unknown what level of predator control is sufficient for survival of pāteke and whio; there is therefore a risk that control cannot be achieved to levels supporting the survivability of these species. This will be managed through monitoring and adaptive management.

Update After review, it was concluded that it would be unwise to release more pāteke while the current level of predator control is in place. Increasing predator control at this stage would interfere with the wide-scale predator control experimental design. *No change to this update.*

The species team has advised that we should make sure adequate control and planning is put in place for kiwi translocation.

Original If adequately sized founder populations cannot be achieved due to limited numbers of source birds, the project is at risk of not reaching sustainable populations in the release area.

Update This is a long-term risk and can be planned for. *No change to this update.*

### 2.3.3 Significant opportunities update

- Original Techniques developed for petrel translocations will enable further populations to be established elsewhere in New Zealand.
- Update Rachael Sagar's PhD that will inform this opportunity is still to be completed. The first paper from this PhD has been published.  
<https://www.sciencedirect.com/science/article/pii/S0016648017306998?via%3Dihub>

## 2.4 Habitat restoration

This workstream, led by HBRC, is focused on restoring native habitat and water quality through planting.

### 2.4.1 Progress towards outcomes



Planting at the Lake Tutira, as part of the Hikoi Tutuki programme. *Photo Melissa Brignall-Theyer*

#### Highlights:

- Most of the milestones in this workstream are complete. Maintaining the planting areas to ensure plant survival and effective restoration is now the focus.

**Table 5: Progress on habitat restoration milestones**

Milestone	2018 activity	Update	% complete
Improved water quality in the Maraetotara River following stock exclusion and riparian revegetation.	Confirm and implement water monitoring programme.	Water monitoring is carried out under state of the environment reporting by HBRC.	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 land through landscape-scale ecological restoration on private land.	No 2018 milestone.	NA	NA

## 2.4.2 Significant risks update

- Original Not delivering maintenance after planting is a risk that often turns into a reality due to lack of resources for weeding, watering and other maintenance. This is being managed with effective planning and resource allocation.
- Update DOC 'Dirty Dozen' funding is delivering \$30,000 for old man's beard and banana passionfruit control to the Maraetotara. The Maraetotara Tree Trust has also been awarded DOC community funding to infill past plantings. This planting was completed.
- Original Lack of landowner cooperation is another risk; this will be managed through landowner/council agreements and by forming solid relationships with landowners and community groups.
- Update Landowner support is growing as the results of the Maraetotara Tree Trust and Cape to City plantings become more and more visible. Likelihood of being required to fence off (due to HBRC plan changes) is helping increase landowner interest in being involved in programme. *No change to this update.*

New (Aug 2017 report) The myrtle rust incursion has the potential to restrict new and existing plantings of mānuka. Two organisations – Scion, and Plant and Food Research – have launched a research programme, but the effects of the rust are unclear at this stage as the research is not complete. *No change to this update.*

### **2.4.3 Significant opportunities update**

Original HBRC is working on a partnership with Million Metres Streams for Maraetotara River as part of the project. This organisation raises money through sponsorship for riparian restoration.

Update There have been two successful Million Metres Streams projects, highlighted in previous reports. No more Million Metres Streams projects are being planned at this stage. *No change to this update.*

New (Feb 2017 Report) There is an opportunity to establish mānuka for honey production on erodible land (classes 6 and 7) within the footprint. Planting mānuka will provide important habitat and erosion control. This is a partnership between HBRC, Kauri Park, AGS (Afforestation Grant Scheme) and landowners.

Update The mānuka site on Taurapa Station is growing well.

New (Feb 2018 Report) Waimarama Marae applied to the Ministry for the Environment Community Environment Fund for a planting project on the Waingongoro Stream. This application was successful, so Cape to City will partner with the marae by organising HBRC willow removal and funding weed control prior to planting. The decision is due in February.

Update Funding was approved and so Cape to City will partner with the marae to support willow removal.

## 2.5 Pest control

Although led by HBRC, this workstream has substantial input from LCR. It covers wide-scale suppression of predators within Poutiri Ao ō Tāne and Cape to City.

### 2.5.1 Progress towards outcomes



Feral cat in chimney trap as part of recent PAPP trial. *Photo: Motion sensitive camera*

#### Highlights:

- Optimisation of Poutiri Ao ō Tāne predator control traps and predator knockdown at Lake Tutira has begun as part of PFHB. Optimisation is done by using trap-catch data to remove traps which historically do not catch, update traps, and place traps in new locations where there is a better chance of trapping success.
- Poutiri Ao ō Tāne rat tracking tunnel results rose to 13% in May, remained high at 12% in August and then dropped back to 2% in November. There was also a toxin bait station operation in Boundary Stream in August, which will have helped bring rat numbers back down. It is starting to look like the Self Resetting Rat Trap network at BSMI is quite good at keeping rat levels low, but when rats increase dramatically due to other environmental conditions, some toxin is needed for a quick knockdown.
- A joint PAPP control operation between the HBRC and the Department of Conservation over 9,000 ha of the Poutiri Ao ō Tāne project was conducted in July 2018 to manage the high feral cat numbers. The relative abundance of cats was estimated to have been reduced by 34.4%.
- A report was completed on the ferret odour lure trials (see Appendix 5). There have been ongoing trials into the effectiveness and potential of ferret odour as a long-life lure for predators. These trials have shown so far that when combined with an existing bait the capture rates were 150% higher than conventional baits alone. Progress is also being made to synthesise the odour so it can be mass-produced.
- The recruitment process is underway for the PFHB predator control and Whakatipu Mahia project management roles. The successful candidates will start working alongside the team

in early 2019. These are trainee roles and are being recruited through iwi partners to help develop iwi capability in the project areas.

**Table 6: Progress on pest-control milestones**

Milestone	2018 activity	Update	% complete
High-level landowner participation in pest control in the Cape to City area.  'In principle' agreement among participating landowners to continue predator control beyond timeframe of the programme.	Obtain voluntary agreements.	Voluntary agreements have been obtained from all landowners.	100
A marked reduction in introduced predators in the Cape to City area.	Begin graduating 30% of farmers to maintenance of predator control and continue initial control.	<ul style="list-style-type: none"> <li>• Initial live capture control has been completed.</li> <li>• Research continues into synthesising ferret odour as a long-life lure. An interim report has been completed (see Appendix 5).</li> <li>• 'Graduating 30% of farmers to maintenance of predator control' has now been removed from this milestone as highlighted in the previous report.</li> </ul>	100

Milestone	2018 activity	Update	% complete
Use of wireless trap networks to optimise control.	Optimise wireless trap networks within Cape to City as a template for very large-scale use.	The project team has trialled a few options over the last 2 years and has been reviewing the best wireless products and network options for a farmland context. New wireless networks will be deployed in Poutiri Ao ō Tāne and Cape to City in early 2019, and the trap networks will be optimised.	70
Examination of the long-term effectiveness and reliability of self-resetting traps for rat control in Boundary Stream mainland island.	Reduce checking frequency to two times per year and monitor rat density.	Rat tracking tunnel rates went from 13% in May 2018 to 2% in November. There was also a 1080 bait-station operation run in September, which will have helped bring rat numbers down.	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.	In February 2018, predator monitoring showed an increase in predator abundance in Poutiri Ao ō Tāne since the wide-scale predator control (WSPC) was reduced to only four checks per year. This is reflected in an increase in trap catches, which is also being reflected throughout New Zealand. We are still discussing how to respond moving forward to suppress predators and increase biodiversity. Monitoring will be done in February 2019 and decisions about the next steps will be made following the results.	100



Milestone	2018 activity	Update	% complete
Demonstration that effective ongoing predator control in the Cape to City area can be undertaken for less than ~\$3/ha.	No 2018 milestone.	NA	NA
Demonstration that the cost of predator control can be met by transferring resources from possum control programmes, while still maintaining possums at low densities.	No 2018 milestone.	NA	NA
Operational monitoring for predator control.	Undertake monitoring.	Monitoring using motion-sensitive cameras continues. An interim report was completed about the Cape to City monitoring. <a href="https://capetocity.co.nz/assets/Cape-to-City-Monitoring-Update-2018.pdf">https://capetocity.co.nz/assets/Cape-to-City-Monitoring-Update-2018.pdf</a>	100

## 2.5.2 Significant risks update

Original	The perception that rabbits increase after predator control is a risk that will be mitigated with good communications and research. LCR has published a scientifically credible review demonstrating that rabbit numbers are driven by bottom-up influences such as climate, disease and pasture growth, rather than by predators.
Update	There are two landowners with high rabbit numbers. The project and governance teams decided not to do predator control on the two properties, but instead to maintain a cat-trapping buffer around the properties to control reinvasion into the treated area. Monitoring of rabbits will continue; these properties are being considered for a new calici-virus trial in 2017. The virus was released in 2018 but appears to have had minimal effect throughout New Zealand.

Original	To get biodiversity and economic gains (through reduction in toxoplasmosis) we need to control feral cats. This is an emotive subject in New Zealand and there is the risk that a farm or domestic cat gets caught, prompting negative media coverage. To manage this risk, we have a communications plan in place, and traps will be placed where they are least likely to trap farm or domestic cats. Where the risk of catching pet cats is high (eg around urban areas) live-capture cage traps will be used.
Update	Buffer zones for kill traps have been created around landowner dwellings. As part of the rollout, vets and the SPCA were consulted and landowners were offered the chance to have their domestic cats photographed and/or microchipped. If landowners are concerned, they can put their cats in a cattery. <i>No change to this update.</i>

### **2.5.3 Significant opportunities update**

Original	Initial meetings have been held with Zero Invasive Predators (ZIP) and the BHNSC to align appropriate parts of each project, or to learn from the work these groups are doing.
Update	<ul style="list-style-type: none"> <li>• The project team and ZIP will partner under Predator Free Hawke's Bay to deliver possum eradication at Mahia. <i>No change to this update</i></li> <li>• The project continues to work in partnership with the BHNSC. <i>No change to this update</i></li> </ul>
New (Feb 2017 report)	In July 2016 PF2050 was announced. Cape to City was used as an example in the announcement and has a very good chance of benefitting from PF2050.
Update	The Predator Free Hawke's Bay proposal was successful and was signed off in late June 2018. This is a \$4.86m project over 4 years. <i>No change to this update.</i>

### **3. Work planned for 1 January – 30 June 2019**

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

#### **3.1 Research and monitoring**

- Optimise configuration of control devices to maximise the probability of possum eradication and to prevent reinvasion in zone 1 of the Mahia Peninsula, based on modelling of possum densities, dispersal, capture probabilities and habitat preferences. Report due by 31 March 2019.
- Design detection network required to demonstrate possum eradication in zone 1 of the Mahia Peninsula. Report due by 31 May 2019.
- Measure home range size and mobility of possums in three habitat types on the Mahia Peninsula. Report due by 30 June 2019.
- Undertake predator and biodiversity response monitoring at Poutiri Ao ō Tāne and Cape to City, including 100 ha of new mānuka plantings on Taurapa station to establish baseline of habitat value. Report on pest and biodiversity responses expected by 30 May 2019.
- Conduct baseline eDNA and carbon surveys of invertebrates in young mānuka plantings, old growth mānuka, and rank pasture with no mānuka. Select sites and report sampling protocols by November 30, 2018. (sampling will be conducted from early December to early January)
- Submit a paper on connectivity between sanctuaries and surrounding landscapes. This includes Cape Sanctuary as one of several national case-study landscapes. Submission by 28 February 2019.
- Write a review paper entitled 'HABITAT: semantics, attributes and importance for bird studies in New Zealand' which explores how habitat fits with predators and other pests as a factor potentially limiting New Zealand birds, especially in fragmented and pastoral landscapes like Cape to City. Review completed by 30 June 2019.
- Finalise case study of Cape to City programme. Conduct third round of interviews with core management team members, including new people recently involved in the project, and run a reflective conversation workshop with members. Report by 30 May 2019.
- Repeat rural survey to measure changes in rural understanding and participation in programme. Report by 30 June 2019.

#### **3.2 Community engagement and education**

- The Cape to City/EIT/University of Waikato Summer scholarship will be completed.
- The education coordinators will have run at least one professional development workshop for teachers.
- A new Predator Free Hawke's Bay website and logo will be developed.
- At least one Hikoi Tutuki will have been completed.
- Development of the outdoor environmental learning site will be underway.
- The education coordinators will have organised and run the Whanau/family orientation day at EIT.
- At least one Early Childhood Education EIT lecture will be run by the education coordinators.

### 3.3 Biodiversity and species

- The kākāriki translocation will have been completed at Poutiri Ao ō Tāne, as long as rat numbers remain low.
- Numbers of seabirds returning to Poutiri Ao ō Tāne will continue to be monitored.

### 3.4 Habitat restoration

- Planting maintenance will continue.

### 3.5 Predator control

- Possum eradication and predator suppression will have started in Whakatipu Mahia.
- Wireless traps will be deployed in Poutiri Ao ō Tāne and Cape to City.
- Poutiri Ao ō Tāne wide-scale predator control extension and trap optimisation will be completed.



Connected to Nature workshop participants at Mangarara – The Family Farm . *Photo Ben Moorhouse*

## 4. Conclusion

Over the last 6 months the project team has focused on getting the PFHB and Connected to Nature projects up and running, as well as completing the 2018 Te Matau a Māui milestones. This has included completing PFHB operational, monitoring, research and health and safety plans, as well as developing milestones, partner relationships, an MOU with the AirNZET and employing a project manager for the Connected to Nature project.

Ninety-nine per cent of the 2018 Te Matau a Māui milestones have been completed. The incomplete milestone is: Optimise wireless trap networks within Cape to City as a template for very large-scale use. This will be completed in 2019 as part of optimising the trap network in Cape to City under PFHB. The expenditure is on track to be within budget by the end of the financial year in June 2019.

There are three 2018 milestones, highlighted in the previous report, that the project team has changed: kiwi translocation; bat monitoring; graduating 30% of farmers to maintenance of predator control (see Section 1.3).

In addition to these the project team would like to remove the second 2019 Research and Monitoring milestone, because it is not applicable anymore.

Some of the highlights from the last 6 months have been:

- 13 more research projects have been committed to under the latest LCR contract. Recently completed research includes recommendations for Kaupapa Māori research, updates on ferret odour trials and education programme review.
- Three successful Hikoi Tutuki (discovery and learning walks/field trips) have been delivered.
- A successful 2-day workshop was run as part of the Connected to Nature Air New Zealand Environment Trust grant, to develop a vision where future teachers will be able to confidently use the environment as a context for learning throughout the curriculum
- At the beginning of December an event was held at Tangoio Marae to celebrate all the manu/bird translocations that have been part of Poutiri Ao ō Tāne since 2011.
- For the second year running we have photographic evidence of seabirds returning to Poutiri Ao ō Tāne.
- Optimisation of Poutiri Ao ō Tāne predator control traps and predator knockdown at Lake Tutira has begun as part of PFHB
- A joint PAPP control operation between the HBRC and the Department of Conservation was completed over 9,000 ha of the Poutiri Ao ō Tāne.
- Ferret odour trials have shown so far that when combined with an existing bait the capture rate of stoats was 150% higher than conventional baits alone.

Over the next 6 months the project team will be involved in completing the research projects under the 2018/19 contract, delivering more hikoi, developing the Connected to Nature partnership, completing a kākārīki translocation (if rat numbers remain low enough) and starting the possum eradication and predator suppression in Whakatipu Mahia.



## Appendix 5: Project outputs so far

Workstream	Title	Status	Description	Interim report date
Community engagement	<i>Backyard Biodiversity</i> teachers' resource for primary and intermediate school students (years 5-8)	Published	Teacher resource that is part of the Backyard Biodiversity education programme.	August 2015
	Cape to City on Nature Watch <a href="http://naturewatch.org.nz/projects/cape-to-city">naturewatch.org.nz/projects/cape-to-city</a>	Published	Cape to City set up as a project on the Nature Watch website.	August 2015
	Project pledges \$6 m for conservation	Published	<i>Hawke's Bay Today</i> 18 December 2014 – article about Te Matau a Māui signing.	August 2015
	Redressing human impact	Published	<i>Hawke's Bay Today</i> 18 December 2014 – editorial about Te Matau a Māui signing.	August 2015
	Hawke's Bay TV presentation	Published	Campbell Leckie gave a presentation on Hawke's Bay TV in June 2015 about Cape to City.	August 2015
	Nature corridor	Published	Short article on Cape to City in May 2015 issue of Bay Buzz magazine.	August 2015
	Back to the way it was	Published	Article on Cape to City in the <i>Profit</i> Magazine – May 2015 issue.	August 2015
	Cape to City on Facebook <a href="http://www.facebook.com/capetocity">www.facebook.com/capetocity</a>	Active	Cape to City Facebook page set up.	August 2015
	Trustworthy Biodiversity measures <a href="http://www.landcareresearch.co.nz/science/plants-animals-fungi/animals/birds/biodiversity-measures/research-updates">www.landcareresearch.co.nz/science/plants-animals-fungi/animals/birds/biodiversity-measures/research-updates</a>	Published	Highlights the results from the Building Trustworthy Biodiversity Measures focus groups.	August 2015

Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Andy Lowe gave a speech at the Deer Industry Conference <a href="http://www.youtube.com/watch?v=tARC D82ACy8">www.youtube.com/watch?v=tARC D82ACy8</a> (4 hr 14 min)	Published	Link to Andy Lowe's speech at the Deer Industry Conference in May 2015.	August 2015
	Sir Jerry visits Sanctuary	Published	<i>Hawke's Bay Today</i> , 11 June 2015, p5. Governor General visited Cape Sanctuary with Andy Lowe and Ruud Kleinpaste; a small part of the article is about Cape to City.	August 2015
	Hawke's Bay DOC update	Completed	Dave Carlton gave a talk to the Napier branch of Forest & Bird about DOC, but focused on Te Matau a Māui.	August 2015
	Pushing for a predator-free New Zealand	Published	<i>Hawke's Bay Today</i> , 4 July 2015, pp12-13. Double-page spread of articles about Cape to City.	February 2016
	Cape to City website	Active	<a href="http://capetocity.co.nz/">http://capetocity.co.nz/</a>	February 2016
	Radio article – Rod Dickson interviewed	Published	Radio New Zealand article on morning rural news, 5 November 2015, about Cape to City (forward to 1 min 28 s). <a href="http://www.radionz.co.nz/audio/player/20177443">http://www.radionz.co.nz/audio/player/20177443</a>	February 2016
	Te Matau a Māui: Māori Communications and Engagement Strategy (Draft)	Draft	Draft Māori Communications and Engagement Strategy.	February 2016
	Pair bring skills to work in Cape to City project	Published	Article in <i>Hawke's Bay Today</i> , 6 January 2016, p4 about the Sir Peter Blake Ambassadors.	August 2016
	Cape to City and Poutiri Ao ō Tāne: Education for our future	Published	An information brochure on the Te Matau a Māui Education programmes, to be distributed to parents and whanau, via schools engaged in the programmes.	August 2016
Project document templates	Completed	A set of templates – Powerpoint, letter, factsheet and banners, designed by DOC's Publishing team – to give all project documents across Te Matau a Māui (Cape to City and Poutiri Ao ō Tāne) a common 'branding' look that transcends those of individual projects and related agencies.	August 2016	



Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Backyard Biodiversity Teachers' Resource for Primary and intermediate school students (Years 5-8)	Published	DOC blog story about school programme done with Te Mata School.	August 2016
	Bugman helps in nature push	Published	Hawke's Bay Today article, 5 March 2016, p.9, about education programmes.	August 2016
	Poutiri Ao ō Tāne and Cape to City overview talk	Presentation	Melissa Brignall-Theyer gave an overview talk to lower North Island Biosecurity Institute meeting - April 14 2016.	August 2016
	Cape to City Newsletter (winter 2016)	Published	Articles include: info from the rural survey, education programmes, mānuka, habitat restoration, cat trapping, toxoplasmosis and bringing nature back into peoples' lives.	August 2016
	Digging deep to create a better world	Published	Article in <i>Hawke's Bay Today</i> , July 2016, advertising the Clifton County Cricket Club planting day.	February 2017
	Planting for the future	Published	Article in <i>Hawke's Bay Today</i> 25 July 2016, regarding the Clifton County Cricket club planting day.	February 2017
	Project overview talk	Completed	NETS conference presentation by Campbell, July 2016.	February 2017
	Project overview talk	Completed	Campbell and Wendy gave a talk at the BHNSC general meeting in August 2016.	February 2017
	Cape to City was included in Lou Sanson speech for Conservation Week 2016	Completed	Cape to City was included in Lou Sanson's speech for Conservation Week 2016.	February 2017
	Poutiri Ao ō Tāne endorsed in Maungaharuru Tangitū newsletter Parikaranga, August 2016	Completed	Poutiri Ao ō Tāne endorsed in Maungaharuru Tangitū newsletter 'Parikaranga', August 2016.	February 2017
Kaitiakitanga Hui at Waimarama	Completed	Hui held at Waimarama Marae 14 September 2016 to gauge how local Hapū want to be involved in Cape to City.	February 2017	

Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Kaitiakitanga Hui mentioned in Hawke's Bay today	Completed	Small piece on page 2 in the "what you need to know" section of <i>Hawke's Bay Today</i> , Thursday 15 September 2016.	February 2017
	Submission on the draft National Strategy for Environmental Education for Sustainability	Completed	Cape to City submission on the draft National Strategy for Environmental Education for Sustainability.	February 2017
	Cape to City and Poutiri Ao ō Tāne brochure	Brochure	Brochure with an overview of the projects to be used at events, etc.	February 2017
	Painting helps restore natives	Published	<i>Hastings Leader</i> p.5. Oct 19 2016. Article promoting Cape to City and Poutiri Ao ō Tāne involvement in the Hawke's Bay A&P show, and prints of 'Boundary Stream' by local artist John Staniford.	February 2017
	A closer look at Cape to City	Published	A DOC blog/intranet story providing an introduction and overview of the Cape to City project. <a href="https://blog.doc.govt.nz/2016/10/31/cape-to-city/">https://blog.doc.govt.nz/2016/10/31/cape-to-city/</a>	February 2017
	Hawke's Bay A&P show exhibit	Completed	Cape to City and Poutiri Ao ō Tāne exhibit at the Hawke's Bay A&P show.	February 2017
	New Cape to City website	Completed	A revamp of the original Cape to City website to improve efficiency, design and user friendliness. Server relocated to HBRC (December 2016).	February 2017
	Cape to City overview talk	Completed	Campbell gave a talk at the New Zealand Association of Resource Managers conference (Napier). Audience of around 150.	February 2017
	Cape to City overview talk	Completed	Campbell gave a talk at the Ecological Resilience Conference in Hamilton in November 2016.	February 2017
	Spotlight: Cape to City, in New Zealand Biodiversity Action Plan 2016-2020	Published	Spotlight: Cape to City, in New Zealand Biodiversity Action Plan 2016-2020. There is an overview of Cape to City on p.35 of the action plan.	February 2017
Tuku Whenua - gifting of treasured lands	Published	Media release about Maungaharuru Tangitu giftback week in Jan 2017, which included Poutiri Ao ō Tāne, <a href="http://community.scoop.co.nz/2017/01/tuku-whenua-gifting-of-treasured-lands/">http://community.scoop.co.nz/2017/01/tuku-whenua-gifting-of-treasured-lands/</a> Also on: <a href="https://blog.doc.govt.nz/2017/01/31/tuku-whenua/">https://blog.doc.govt.nz/2017/01/31/tuku-whenua/</a>	Aug 2017	

Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Conservation at heart of community hui at Matahiwi Marae	Published	<a href="http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11850278">http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11850278</a>	Aug 2017
	National bird survey starts today	Published	Media article about the New Zealand Garden bird survey: <a href="http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11881274">http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11881274</a>	Aug 2017
	Cape to City overview talks by Campbell Leckie and Andy Lowe at the Crazy and Ambitious – Biological Heritage National Science Challenge conference. May 2017	Completed	<a href="https://youtu.be/-PuaqoEK7xM">https://youtu.be/-PuaqoEK7xM</a>	Aug 2017
	Cape to City overview talks by Campbell Leckie to various audiences	Completed	<ul style="list-style-type: none"> <li>• Parliamentary Commissioner for the Environment staff visit 13 December 2016 – Napier</li> <li>• Business and innovation function 2 March 2017 – Napier</li> <li>• Environment and services committee (HBRC) 15 March – Napier</li> <li>• Corporate services group (HBRC) 17 May – Napier</li> <li>• Zero Invasive Predators 18 May – Wellington</li> <li>• OMV Group 7 June – Wellington</li> <li>• Minister for Research and Technology Paul Goldsmith 15 June – Napier</li> <li>• Regional biodiversity Implementation group 15 June – Napier</li> <li>• Annual pest contractors meeting 16 June – Napier</li> </ul>	Aug 2017
	Cape to City and Tumbleweed Ts partnership launched	Online	Cape to City and Tumbleweed Tees went into partnership. Tumbleweed Tees is a t-shirt company which sells t-shirts and gives some of the properties to conservation projects. <a href="https://www.tumbleweedtees.com/pages/long-tailed-bat-conservation">https://www.tumbleweedtees.com/pages/long-tailed-bat-conservation</a>	Feb 2018

Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Volunteers Mulch in for tree planting scheme	Published	<i>Hastings mail</i> article p7, August 2 2017	Feb 2018
	Cape to City bird relocation success	Published	<i>Hawke's Bay Today</i> article p8, 23 August 2017 <a href="http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11908713">http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11908713</a>	Feb 2018
	EIT puts green values at core with partnership	Published	<i>Hawke's Bay Today</i> article 30 Sept 2017 <a href="http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11928164">http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11928164</a>	Feb 2018
	Predator Free by 2050 on Target	Published	<i>Hawke's Bay Today</i> 28 July 2017 <a href="http://www2.nzherald.co.nz/the-country/news/article.cfm?c_id=16&amp;objectid=11895429">http://www2.nzherald.co.nz/the-country/news/article.cfm?c_id=16&amp;objectid=11895429</a>	Feb 2018
	Minister wants wider use of traps in Hawke's Bay	Published	<i>Hawke's Bay Today</i> 9 <sup>th</sup> Sept 2017 <a href="http://www2.nzherald.co.nz/the-country/news/article.cfm?c_id=16&amp;objectid=11918965">http://www2.nzherald.co.nz/the-country/news/article.cfm?c_id=16&amp;objectid=11918965</a>	Feb 2018
	Conservation week Radio Kidnappers articles	Completed	Robyn McCool, Campbell Leckie and Melissa Brignall-Theyer were interviewed on Radio Kidnappers during Conservation week Oct 2017 on various parts of the projects.	Feb 2018
	Hawke's Bay A&P show exhibit	Completed	Cape to City and Poutiri Ao ō Tāne exhibit at the Hawke's Bay A&P show in October 2017	Feb 2018
	Transforming Biodiversity: Challenging the Boundaries Conference	Completed	Cape to City and Poutiri Ao ō Tāne conference 14-16 November 2017 <a href="http://www.capetocity.co.nz/conference/">http://www.capetocity.co.nz/conference/</a>	Feb 2018
	Hawke's Bay showcases transformation for biodiversity	Published	<i>Hawke's Bay Today</i> article 22nd Nov 2017 <a href="http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11946397">http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11946397</a>	Feb 2018
	Twitter Feed from Transforming Biodiversity Conference	Published	<a href="https://storify.com/NZBatman/transforming-biodiversity-challenging-the-boundari">https://storify.com/NZBatman/transforming-biodiversity-challenging-the-boundari</a>	Feb 2018
Te Kaea, Māori TV episode including Poutiri Ao ō Tāne. Part of Conference	Published	Go to 18.47 min into the episode for the article <a href="http://www.maoritelevison.com/tv/shows/te-kaea/S14E320/te-kaea">http://www.maoritelevison.com/tv/shows/te-kaea/S14E320/te-kaea</a>	Feb 2018	

Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Cape to City overview talks by Campbell Leckie to various audiences	Completed	<ul style="list-style-type: none"> <li>Biodiversity implementation planning group Napier – 3rd July</li> <li>Ravensdown management team – 1 August</li> <li>Biodiversity National Policy Statement working group</li> <li>HBRC internal staff presentation – bite-sized lunch time talks – mid August</li> <li>Minister for research, technology and innovation – 7 September</li> <li>Ed Chignall CEO of Predator Free 2050 Ltd – 12 September</li> <li>Mahia – key community members – 13 September</li> <li>ZIP and Taranaki Mounga teams – 18 September</li> <li>Transforming biodiversity conference – Napier (opening address, one talk, two panel discussions and assisting with two other talks) – 13-15 November</li> <li>Spark digital team on Lora wireless technology and Cape to City – 23 November</li> </ul>	Feb 2018
	Cape to City and Poutiri Ao ō Tāne presentation by Wendy Rakete-Stones	Completed	Kohupatiki Marae 18 September 2017	Feb 2018
	Building home for birds and bugs	Published	Press article about the education programme outcomes at Taikura Rudolf Steiner school. <i>Hastings Leader</i> page 5, 20th Dec 2017	Feb 2018
	Poutiri Ao ō Tāne Education Review	Completed	A review of education initiatives in and around the Poutiri Ao ō Tāne project area. Information taken from interviews with education providers.	Feb 2018
	Hawke's Bay Fish and Game – Fish-out Day	Completed	Cape to City was promoted at an event organised by Fish and Game.	August 2018
	Helping the mountains roar again	Published	Article about Poutiri Ao ō Tāne in the MPI newsletter: Biosecurity 2025 (March–April 2018 edition)	August 2018
	Restoring the cloak of Papatuanuku	Published	In Living Hawke's Bay Magazine, Winter 2018 edition. About Poutiri Ao ō Tāne and seabird translocations	August 2018

Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Cape to City and Poutiri Ao ō Tāne short promo film for Fieldays 2018	Completed	Short film about Cape to City and Poutiri Ao ō Tāne produced by DOC promoting Predator Free at the 2018 Fielday DOC pavilion. <a href="https://www.youtube.com/watch?v=HLJWAZ2GFvk&amp;feature=youtu.be">https://www.youtube.com/watch?v=HLJWAZ2GFvk&amp;feature=youtu.be</a>	August 2018
	Cape to City and Poutiri Ao ō Tāne were presented at Fieldays 2018	Completed	Posters and info provided at Fieldays in the DOC Predator Free pavilion	August 2018
	Predator Free projects shown	Published	Hastings leader, page 2, July 4th 2018. Article is about Cape to City and Poutiri Ao ō Tāne being showcased at Fieldays in Waikato	August 2018
	Origin of Poutiri Ao ō Tāne	Presentation	Trevor Taurima presented Poutiri Ao ō Tāne to the Kahungunu fish hook summit. <a href="https://www.kahungunu.iwi.nz/e--fish-hook">https://www.kahungunu.iwi.nz/e--fish-hook</a>	August 2018
	Predator Free Hawke's Bay promo film	Completed	Short film about PFHB – produced for the PFHB launch July 2018 <a href="https://youtu.be/OouMFs16NzU">https://youtu.be/OouMFs16NzU</a>	August 2018
	Govt to put up \$1.6m over four years for predator-free Hawke's Bay	Published	<i>Hawke's Bay Today</i> article 2 July 2018 <a href="https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12081755">https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12081755</a>	August 2018
	Ed Chignell: Predator Free 2050 crucial push	Published	<i>Hawke's Bay Today</i> article 3 July 2018 <a href="https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12081528">https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12081528</a>	August 2018
	Maungaharuru-Tangitu Trust leads the way for a predator free Hawke's Bay	Published	<i>Hawke's Bay Today</i> article 7 July 2018 <a href="https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12083784">https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12083784</a>	August 2018
	Early Childhood – Lifelong learning, by Robyn McCool and Megan McBride	Completed	Information presentation given to Environmental Education Forum participants as part of Early Childhood – Lifelong Learning-themed workshop	August 2018
	Predator Free education workshop	Completed	Napier Intermediate school (PF2050 context) teacher workshop 27 April 2018	August 2018
ECE teacher Workshop	Completed	Workshop for Early Childhood Teachers on teaching in the environment	August 2018	

Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Learning in the environment presentation to EIT students	Completed	Learning in the environment presentation to EIT Bachelor of teaching Primary (BTP) students Science – Year One Candidate teachers	August 2018
	Using the Environment as a context for learning Presentation to EIT students	Completed	Using the Environment as a context for learning Presentation to EIT BTP 7.01 Pedagogy and Curriculum – Year Three Candidate teachers	August 2018
	Enviroschools Hui – Cape to City and the Air New Zealand Proposal – Presentation – 2018	Completed	Presentation on C2C Education and Air New Zealand proposal at Enviroschools’ hui prior to work-shopping feedback from teachers on EIT Nature Time Learning Space site development	Feb 2019
	Cape to City – It’s in our Nature: Nurturing Children’s Wairua	Completed	Megan McBride presented at ECE Research Symposium as a guest speaker (not presenting research) on Cape to City Education: our ECE work in terms of "Nurturing Children's Wairua"	Feb 2019
	Minister endorses Pest-Free goal	Published	<i>Wairoa Star</i> 29 Aug 2018. Article about the Minister of Conservation visit to Mahia	Feb 2019
	Predator-Free Mahia is their aim	Published	<i>Gisborne Herald</i> 29 Aug 2018. Article about the Minister of Conservation visit to Mahia. <a href="http://gisborneherald.co.nz/localnews/3586349-135/a-predator-free-mahia-is-their-aim">http://gisborneherald.co.nz/localnews/3586349-135/a-predator-free-mahia-is-their-aim</a>	Feb 2019
	Cape to City presentation to Predator Free Wellington	Completed	Pouri and Wendy Rakete-Stones presented on 5 September to Capital Kiwi who are part of the PF Wellington project	Feb 2019
	Cape to City and Poutiri Ao ō Tāne presentation to Auckland DOC Partnerships team	Completed	Melissa Brignall-Theyer was invited by the Auckland DOC partnerships team 31 July to talk about what we have learned in the landscape scale restoration project context.	Feb 2019
	A&P Show Nature Shed	Completed	Focus for the Nature shed at the A&P show this year was enhancing biodiversity on farmland – Ko Tū koe, ko Rongo koe. It was a collaboration between 15 organisations. This is a 3-day event.	Feb 2019
Predator Free New Zealand Trust workshop	Completed	Predator Free New Zealand Trust held a workshop on 30th October for all predator free groups to share and learn. Pouri Rakete-Stones, Wendy Rakete-Stones and Melissa Brignall-Theyer attended. Melissa and Pouri presented.	Feb 2019	

Workstream	Title	Status	Description	Interim report date
Community engagement cont.	Garden Project Ready	Published	Article in Hastings Leader 7 Nov 2018, p1. about the blessing of the Biodiversity project developed by Taikura students after the Cape to City education programme. <a href="http://hastingsleader.communitynews.co.nz/hastings-leader/20181107">http://hastingsleader.communitynews.co.nz/hastings-leader/20181107</a>	Feb 2019
	Connected to Nature 2 day workshop	Completed	As part of the Connected to Nature Air New Zealand Environment Trust grant, EIT school of education, Enviroschools, University of Waikato, Waikereru Ecosanctuary, Cape to City and Mangarara – The Family Farm came together, to develop a vision where future teachers will be able to confidently use the environment as a context for learning throughout the curriculum	Feb 2019
	Cape to City talk at Te Mata Peak	Completed	Cape to City was presented by Melissa Brignall-Theyer at Te Mata Peak as part of the Hawke’s Bay Environment Centre series on Sustainable backyards	Feb 2019
	Cape to City newsletter (Summer 2018)	Completed	<a href="https://www.capetocity.co.nz/resources/good-reads/article/33/cape-to-city-newsletter-summer-2018">https://www.capetocity.co.nz/resources/good-reads/article/33/cape-to-city-newsletter-summer-2018</a>	Feb 2019
	Poutiri Ao ō Tāne Newsletter (November 2018)	Completed	<a href="http://www.poutiri.co.nz/wp-content/uploads/2012/05/Poutiri-Ao-o-Tane-Newsletter-Nov-2018_small.pdf">http://www.poutiri.co.nz/wp-content/uploads/2012/05/Poutiri-Ao-o-Tane-Newsletter-Nov-2018_small.pdf</a>	Feb 2019
Pest Control	Trapped pests will trigger text message	Published	<i>Hawke’s Bay Today</i> article 30 April 2015, about the launch; article syndicated by the <i>Dominion Post</i> and <i>Farmers Weekly</i>	August 2015
	Hi-tech traps target possums	Published	<i>Hawke’s Bay Today</i> , 5 November 2015, p17. Article about wireless predator traps – not possums (that was a mistake in the title).	February 2016
	Farmer war on feral cats	Published	<i>Hawke’s Bay Today</i> , 19 November 2015, p7. Article about the toxoplasmosis trial.	February 2016
	Cape to City: Next phase – predator control goes wireless	Published	Article in <i>Our Place</i> newsletter, November 2015 issue, p8 (HBRC publication).	February 2016



Workstream	Title	Status	Description	Interim report date
Pest Control	Cat hunt after toxoplasmosis found	Published	<i>Hastings Mail</i> , 2 December 2015, p.15. Article about the toxoplasmosis trial.	February 2016
	Traps target feral cats	Published	<i>Hastings Mail</i> , 13 April, 2016, p.8. Newspaper article about cat trapping in Cape to City.	August 2016
	Catching more rats using run-through tunnel traps	Published	ZIP article about trapping at Poutiri Ao ō Tāne. <a href="http://zip.org.nz/findings/2016/2/catching-more-rats-run-through-vs-single-entry-traps">http://zip.org.nz/findings/2016/2/catching-more-rats-run-through-vs-single-entry-traps</a>	August 2016
	New podiTRAP a long time in the making	Published	PFNZ article on PodiTRAP. November 30th 2017 <a href="https://predatorfreenz.org/new-poditraps-long-time-making/">https://predatorfreenz.org/new-poditraps-long-time-making/</a>	Feb 2018
Biodiversity and Species	Pāteke fly home after time away	Published	<i>Hastings Leader</i> , 27 May 2015, p.6. Article about the pāteke release.	August 2015
	Norbury, G; McLennan, J. (2015) Biodiversity and predator monitoring for Cape to City Hawke's Bay Project. Report (LC2237) prepared for Hawke's Bay Regional Council	Completed	Biodiversity monitoring plan for Cape to City.	February 2016
	Mohi Bush rodent control operation 15/16	Completed	Report on the rat control and monitoring at Mohi Bush for the robin and tomtit translocation.	August 2016
	Kōrure settling into new home	Published	<i>Hawke's Bay Today</i> article on kōrure translocation, 18 April, p.6.	August 2016
	Massive effort to restore Maungaharuru for endangered Kōrure	Published	Te Kaea, Māori TV article, 17 April 2016, on kōrure translocation. <a href="http://www.Māoritelevison.com/news/regional/massive-effort-restore-maungaharuru-endangered-korure">http://www.Māoritelevison.com/news/regional/massive-effort-restore-maungaharuru-endangered-korure</a>	August 2016
	Release returns robin's song to former homes	Published	Article in <i>Hawke's Bay Today</i> 9 July 2016, regarding the toutouwai release to Cape to City.	February 2017

Workstream	Title	Status	Description	Interim report date
Biodiversity and Species cont.	The Cape to City Project: Baseline bird counts in treatment and in non-treatment area. Unpublished report by John McLennan, March 2017.	Completed	Baseline report on initial bird survey data	Aug 2017
	Re-establishing mottled petrels in the Bay	Published	Media release about the kōrure release in <i>Hawke's Bay Today</i> , 12 April 2017, p7.	Aug 2017
	Cape-to-City bird relocation success	Published	Article in <i>Hawke's Bay Today</i> 22 August 2017. <a href="http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11908713">http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=11908713</a>	Feb 2018
	Tītī discovered at nesting site	Published	Article in Hasting leader. 24 Jan 2018, p11.	August 2018
	Project returns native seabirds to Hawke's Bay range near Napier	Published	Article in <i>Hawke's Bay Today</i> 28 February 2018. <a href="http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12003550">http://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12003550</a>	August 2018
	Critter of the week	Published	Radio New Zealand article about seabirds returning to Poutiri Ao ō Tāne. <a href="https://www.radionz.co.nz/national/programmes/afternoons/audio/2018634442/critter-of-the-week-mottled-petrel">https://www.radionz.co.nz/national/programmes/afternoons/audio/2018634442/critter-of-the-week-mottled-petrel</a>	August 2018
	Kōrure Translocation	Published	DOC Blog on Kōrure translocation – series of 3. <a href="https://blog.doc.govt.nz/tag/korure-translocation/">https://blog.doc.govt.nz/tag/korure-translocation/</a>	August 2018
	New kōrure chicks relocated to Hawke's Bay's Maungaharuru Range	Published	<i>Hawke's Bay Today</i> , 17 April 2018. <a href="https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12034132">https://www.nzherald.co.nz/hawkes-bay-today/news/article.cfm?c_id=1503462&amp;objectid=12034132</a>	August 2018
	<i>BayBuzz</i> kōrure article	Published	Short article on the kōrure translocation in May–June 2018 <i>BayBuzz</i> magazine, May–June 2018	August 2018

Workstream	Title	Status	Description	Interim report date
Biodiversity and Species cont.	Shifting seabirds inland Hawke's Bay shows results	Published	This article was on TV1 6 pm news. It is about the kōrure translocation. <a href="https://www.tvnz.co.nz/one-news/new-zealand/shifting-sea-birds-inland-hawkes-bay-shows-results">https://www.tvnz.co.nz/one-news/new-zealand/shifting-sea-birds-inland-hawkes-bay-shows-results</a>	August 2018
	Sagar, R. et al (In Press): Regular handling reduces corticosterone stress responses to handling but not condition of semi-precocial mottled petrel ( <i>Pterodroma inexpectata</i> ) chicks. <i>General and Comparative Endocrinology</i> .	In Press	Regular handling reduces corticosterone stress responses to handling but not condition of semi-precocial mottled petrel ( <i>Pterodroma inexpectata</i> ) chicks	Feb 2019
	Celebration for all the translocations to Poutiri Ao ō Tāne	Completed	On 1 Dec 2018 a special event was held at Tangoio Marae to celebrate all the translocations and thank all who have been involved over the years. People came from all over the country	Feb 2019
	Returning wingbeats to Maungaharuru worth celebrating	Published	Media release about the celebration event for all the Translocations to Poutiri Ao ō Tāne. <a href="https://www.doc.govt.nz/news/media-releases/2018/returning-wingbeats-to-maungaharuru-worth-celebrating/">https://www.doc.govt.nz/news/media-releases/2018/returning-wingbeats-to-maungaharuru-worth-celebrating/</a>	Feb 2019
Research and monitoring	Milestones 1.1 and 1.2 report on integrated research workstream of Te Matau a Māui activities	Completed	The report summarises the main activities within the research workstream, including aligned components that are not directly related to this contract.	August 2015

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Optimising translocation efforts of mottled petrels ( <i>Pterodroma inexpectata</i> ): growth, provisioning, meal size and the efficacy of an artificial diet for chicks	Published	Link to Rachael Sagar's presentation at inaugural world seabird twitter conference: <a href="https://storify.com/Seabirders/wstc1">storify.com/Seabirders/wstc1</a> .	August 2015
	MacLeod, L.; Dickson, R.; Leckie, C.; Stevenson, B.; Glen, A.S. 2015: Possum control and bird recovery in an urban landscape, New Zealand. <i>Conservation Evidence</i> 12: 44-47.	Published	Bird recovery in an urban landscape.	August 2015
	Glen, A.; Dickson, R. 2015: Wide-scale predator control for biodiversity in Hawke's Bay. <i>Kararehe Kino/Vertebrate Pest Research</i> 25: 6-7.	Published	Newsletter article on wide-scale predator control.	August 2015
	Jones, C.; Norbury, G.; Glen, A.; Dickson, R. 2015: Predator control benefits native species but not rabbits. <i>Kararehe Kino/Vertebrate Pest Research</i> 25: 14-15.	Published	Newsletter article on the effects of predator control on native birds and rabbits.	August 2015
	Glen, A.; Perry, M.; Ruscoe, W. 2014: Wide-scale trapping suppresses predators and promotes biodiversity in Hawke's Bay. Proceedings of the 28 <sup>th</sup> Australasian Wildlife Management Society Conference. Brisbane, AWMS.	Conference	Effects of wide-scale predator control on biodiversity.	August 2015

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Ruscoe, W.; Glen, A.S.; Perry, M.; Forrester, G. (in prep): Impacts of rabbit grazing on pasture in Hawke's Bay, New Zealand. <i>Wildlife Research</i>	Submitted	Rabbit grazing impacts on pasture production.	August 2015 updated Aug 2016
	Norbury, G.; Jones, C. 2015: Pests controlling pests: does predator control lead to greater European rabbit abundance in Australasia? <i>Mammal Review</i> 45: 79-87.	Published	Predator and rabbit interactions.	August 2015
	Glen, A.S.; Anderson, D.; Veltman, C.J.; Garvey, P.M.; Nichols, M. 2016: Wildlife detector dogs and camera traps: a comparison of techniques for detecting feral cats. <i>New Zealand Journal of Zoology</i> , 43, 127-137	Published	Comparing techniques for detecting cats.	August 2015 - updated Aug 2016
	Nichols M, Glen AS, Garvey P, Ross J (2017). Influence of horizontal versus vertical camera placement to detect feral cats and mustelids. <i>New Zealand Journal of Ecology</i> 41, 145-150	Published	Camera-trap orientation and predator detection.	August 2015 - updated Feb 2018
	Nichols, M.; Gormley, A.; Garvey, P.; Glen, A.S.; Ross, J. (in prep): Estimating abundance of feral cats: a comparison of techniques. <i>Methods in Ecology and Evolution</i> .	In prep	Feral cat abundance estimates.	August 2015

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Garvey, P.; Nichols, M.; Glen, A.S.; Pech, R.P.; Clout, M.N. (in prep): Response of mesopredators to removal of feral cats. <i>Journal of Applied Ecology</i> .	In prep	Response of mesopredators to the removal of feral cats.	August 2015
	Glen, A.; Dickson, R.; Leckie, C. 2015: Wide-scale predator control and fauna recovery: Lessons from Hawke's Bay. NETS conference.	Conference	Biodiversity recovery following predator control.	August 2015
	Glen, A. 2014: Camera traps for monitoring pest animals. In: <i>Abstracts, NETS Conference</i> . NPCA, New Plymouth.	Conference	Camera traps.	August 2015
	Perry, M.; Glen, A.; Ruscoe, W. 2014: Quantifying rabbit damage to pasture in Hawke's Bay, New Zealand. <i>Proceedings of the 16th Australasian Vertebrate Pest Conference</i> (ed. M. Gentle). VPC, Brisbane, p.115.	Conference	Rabbit damage to pasture.	August 2015
	Milestone 2.1 (LCR contract)	Completed	Proposed strategy for radio tagging possums in the Cape to City footprint to generate detection probability data used for identifying areas of low, medium, and high possum numbers. This will enable forecasting of where and when control should be applied.	August 2015
	Milestone 2.3 (LCR contract)	Completed	The feasibility of the 'Ramsey' model (which uses occupancy data to estimate population density) for use in analysis of Poutiri Ao ō Tāne camera trap data to generate go and sigma values for feral cats is determined.	August 2015

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Milestone 2.4 (LCR contract)	Completed	A scoping report on optimising a monitoring design for Cape to City using cameras. Includes a critical review of potential gaps that should be addressed, using initial data from the Poutiri Ao ō Tāne camera trap work to date, to minimise risks associated with the use of this method.	August 2015
	Milestone 3.1 (LCR contract)	Completed	Identifies four or five possible scenarios for predator control to test, based on the actual property footprint for Cape to City. Includes the implications of 'friction surfaces' (eg poorly accessible areas) for contractors (in consultation with contractors in the project).	August 2015
	Milestone 4.4 (LCR contract)	Completed	Based on lessons from the Poutiri Ao ō Tāne project and other wide-scale predator control initiatives (eg the Aorangi proposal being developed by LCR for OSPRI), a 10-page scoping document was produced (linking to the high-level milestones developed for the Aotearoa Foundation) outlining the design for biodiversity monitoring in the Cape to City footprint.	August 2015
	Glen AS, Latham MC, Anderson D, Leckie C, Niemiec R, Pech RP, Byrom AE (2016). Landholder participation in regional-scale control of invasive predators: an adaptable landscape model. <i>Biological Invasions</i> 19, 329–338.	Published	This research models a range of landowner participation rates on the success of predator control.	February 2016 Updated August 2017
	Milestone 4.2 (LCR Contract)	Completed	Brief options paper that scopes the development of coupled social-ecological models for the Cape to City footprint in tandem with the Biological Heritage National Science Challenge.	February 2016
	Milestone 2.5 (LCR Contract)	Completed	Review of the wireless trial results (Feb/March 2015) from the perspective of operational delivery of wireless technology into the field, and analysis of the ability of wireless technology to reduce operational costs.	February 2016

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Milestone 2.6 and 2.7 (LCR Contract)	Completed	Determined how the Poutiri Ao ō Tāne trap network might be optimised for the maintenance control phase by using existing Poutiri Ao ō Tāne trap data in a simulation model, including three or four scenarios for optimal trap spacing and frequency of checks.	February 2016
	Milestone 4.3 (LCR Contract)	Completed	Report on the findings of the Biodiversity Trustworthy indicators focus groups.	February 2016
	Jones, C.; Warburton, B.; Carver, J.; Carver, D., 2015. Potential applications of wireless sensor networks for wildlife trapping and monitoring programmes. <i>Wildlife Society Bulletin</i> 39: 341-348.	Published	Potential applications of wireless sensor networks for wildlife trapping and monitoring programmes.	February 2016
	Ozarski, J. 2015: Cooperation for Mutual Benefit: Opportunities for Primary Industry and the New Zealand Department of Conservation.	Published	Report by Jill Ozarski (Fulbright fellow), who uses Poutiri Ao ō Tāne as a case study. <a href="http://www.fulbright.org.nz/publications/cooperation-for-mutual-benefit-opportunities-for-primary-industry-and-the-new-zealand-department-of-conservation-to-operate-public-private-partnerships/">http://www.fulbright.org.nz/publications/cooperation-for-mutual-benefit-opportunities-for-primary-industry-and-the-new-zealand-department-of-conservation-to-operate-public-private-partnerships/</a> . Her presentation is at: <a href="http://www.fulbright.org.nz/news/video-ian-axford-new-zealand-fellowship-seminar-jill-ozarski/">http://www.fulbright.org.nz/news/video-ian-axford-new-zealand-fellowship-seminar-jill-ozarski/</a> .	February 2016
	Nichols, M.; Glen, A. 2015: Camera trapping to monitor the results of predator removal on Waitere station	Completed	This report assessed the ability of camera traps as a non-invasive method for monitoring the presence of feral cats. Another objective was to determine the optimal statistical approach to estimating cat abundance from the camera trapping data.	February 2016
	Landcare Research 2015: Predator busters: Hawke's Bay predator control project. <i>Discovery</i> 40.	Published	Article in <i>Discovery</i> (issue 40, Nov 2015) about Cape to City, includes a video. This is an LCR publication: <a href="http://www.landcareresearch.co.nz/publications/newsletters/discovery/discovery-issue-40/Predator-busters">http://www.landcareresearch.co.nz/publications/newsletters/discovery/discovery-issue-40/Predator-busters</a>	February 2016



Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Lowe, A. 2015: Cape Sanctuary. <i>NZES 2015 Talk Abstracts</i> . Talk during plenary symposium 'Non-government conservation initiatives'. New Zealand Ecological Society Conference, Christchurch, November 2015: p60.	Conference	Andy Lowe's talk at the Ecological Society conference.	February 2016
	Sagar, R.L.; Leseberg, A.; Hunt, K.; Nakagawa, K.; Dunphy, B.; Rayner M.J. 2015: Optimising translocation efforts of mottled petrels ( <i>Pterodroma inexpectata</i> ): growth, provisioning, meal size and the efficacy of an artificial diet for chicks. <i>Emu 115 (2)</i> : 137-145.	Published	Paper on optimising translocation efforts of mottled petrels	February 2016
	Sagar, R.L. 2015: Cumulative impact of handling on chick physiology, growth. World Seabird Conference 2015.	Conference	Results of the study of the cumulative impact of handling on chick physiology, growth and condition were presented at the Second World Seabird Conference, Cape Town, in October 2015.	February 2016
	Milestone 7.1 Community Survey Brief report	Completed	Brief report by Pike Brown on the Cape to City community survey done end 2015.	August 2016
	Shiny App	Completed	Prototype 'shiny app' has been developed to allow managers to predict trap catch by altering trap configurations online.	August 2016

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Pech R and Maitland M (2016) Conservation of native fauna in highly invaded systems: managing mammalian predators in New Zealand. <i>Restoration Ecology</i> 24, 816-820.	Published	Conservation of native fauna in highly invaded systems.	August 2016
	Niemiec, R.M., Pech, R., Norbury, G., Byrom, A.E. (2017). Landowners' Perspectives on Coordinated, Landscape-Level Invasive Species Control: the Role of Social and Ecological Context. <i>Environmental Management</i> 59, 477-489.	Published	This paper uses the data from the Cape to City rural survey.	August 2016 Updated February 2017
	Garvey, P.M., Glen, A.S., Clout, M.N., Wyse, S.V., Nichols, M., Pech, R.P., (2017). Exploiting interspecific olfactory communication to monitor predators. <i>Ecological Applications</i> 27, 389-402.	Published	This paper looks at using sense of smell as communication between species as a way of monitoring predators.	August 2016 Updated February 2017
	Gormley, A.M.; Warburton, B. (in prep): Optimising a kill-trap network for cost-effective predator control.	In Prep	Optimising a kill-trap network for cost-effective predator control.	August 2016

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Glen, A.S.; Perry, M.; Yockney, I.; Cave, S.; Gormley, A.M.; Leckie, C.; Dickson, R.; Rakete-Stones, W.; Rakete-Stones, P.; Norbury, G.L.; Ruscoe, W.A. (in prep). Wide-scale predator control for biodiversity conservation: a case study from Hawke's Bay, New Zealand.	Submitted	A look at wide-scale predator control for biodiversity, using Cape to City as a case study.	August 2016 Updated February 2017
	Byrom, A.; Brignall-Theyer, M.; Brown, P.; Dickson, R.; Glen, A.; Leckie, C.; Millard, P.; Norbury, G.; Pech, R.; Warburton, B. 2015: Managing pest mammals in a whole-of-system context: a case study from Hawke's Bay. NETS conference	Conference	Managing pest mammals in a whole-of-system context: a case study from Hawke's Bay.	August 2016
	Cowan, P.; Glen, A.; Norbury, G.; Byrom, A.; Dickson, R.; Leckie, C. 2015: Scaling up: From Island to Mainland Eradication. Proceedings of Vth International Wildlife Management Congress. Sapporo, Japan.	Conference	Scaling up: From Island to Mainland Eradication.	August 2016

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Glen, A.; Anderson, D.; Veltman, C.; Garvey, P.; Nichols, M. 2015: Canine vs camera: comparing camera traps with sniffer dogs for detecting feral cats. P43 in: <i>Abstracts of the 28th Australasian Wildlife Management Society Conference</i> . Australasian Wildlife Management Society, Perth.	Conference	Comparing camera traps with sniffer dogs for detecting feral cats.	August 2016
	Innes, J.; Fitzgerald, N. 2016: Possible bird-related research in the Hawke's Bay Cape to City project. Unpublished report to Hawke's Bay Regional Council, June 2016.	Completed	Possible bird-related research in the Hawke's Bay Cape to City project.	August 2016
	Brown, S.J.; Latham, C.; Warburton, B. 2016: Cape to City Chew Card Analysis. Unpublished Landcare Research Contract Report LC2582, prepared for Hawke's Bay Regional Council.	Completed	Cape to City chew card analysis.	August 2016
	Gormley, A.M.; MacLeod, C.J. 2016: Assessment of data sources for monitoring birds in Cape to City. Unpublished Landcare Research Contract Report LC2622, prepared for Hawke's Bay Regional Council.	Completed	Assessment of data sources for monitoring birds in Cape to City.	August 2016

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Watts, C.; Holdaway, R.; Davis, C.; Wood, J.; Dickie, I.; Thomson, F.; Thornburrow, D. 2016: Novel invertebrate monitoring opportunities within Cape to City: Research Synthesis 2015/2016. Unpublished Landcare Research Contract Report LC2541, prepared for Hawke's Bay Regional Council.	Completed	Invertebrate monitoring opportunities within Cape to City.	August 2016
	Byrom, A.E. 2016: The Cape to City project and its relationship to New Zealand's Biological Heritage National Science Challenge. Invited presentation, Hawke's Bay branch of the Royal Society of New Zealand, June 2016.	Presentation	Public lecture on Cape to City.	August 2016
	Innes, J.; Fitzgerald, N. 2016: Restoring birds in Cape to City. Four-page infographic for Hawke's Bay Regional Council, June 2016.	Completed	Infographics on restoring birds in Cape to City.	August 2016
	Glen, A. 2016: Cape to City predator monitoring: initial knockdown. Unpublished Landcare Research Contract Report, prepared for Hawke's Bay Regional Council.	Completed	Report on initial knockdown phase of Cape to City.	February 2017

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Glen, A.; Norbury, G. 2016: Biodiversity monitoring in Cape to City: lizards and invertebrates. Unpublished Landcare Research Contract Report, prepared for Hawke's Bay Regional Council.	Completed	Lizard and invertebrate monitoring in Cape to City.	February 2017
	Cape to City: Pest management and restoration science at scale	Lecture	LINK Seminar in Wellington, by Campbell and Grant in July 2016. <a href="http://www.landcareresearch.co.nz/about/news/events/link-seminars">http://www.landcareresearch.co.nz/about/news/events/link-seminars</a>	February 2017
	Norbury, G.; Leckie, C.; Dickson, R.; Glen, A.; Byrom, A.; Pech, R. 2016: Regional-scale biodiversity restoration: towards a Predator-Free New Zealand, in Conference Programme and Abstracts of the 2016 Australasian Wildlife Management Society Conference, Auckland. 29 Nov – 1 Dec, 2016.	Conference	Regional-scale biodiversity restoration using Cape to City and Poutiri Ao ō Tāne as examples.	February 2017
	Norbury, G.; Glen, A.; Pech, R.; Byrom, A.; Leckie, C.; Dickson, R. 2016: Regional-scale biodiversity restoration in Hawke's Bay: towards a Predator-Free New Zealand. Kararehe Kino Vertebrate Pest Research Newsletter, Issue 28, pp7-8.	Newsletter	Regional-scale biodiversity restoration in Hawke's Bay using Cape to City and Poutiri Ao ō Tāne as examples.	February 2017

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Warburton B, Leckie C, Rakete-Stones W. 2017. Remote monitoring traps using wireless networks. 17th Australasian Vertebrate Pest Conference. Canberra. May 1-4.	Conference	Remote monitoring traps using wireless networks	Aug 2017
	Warburton B, Jones C, Ekanayake J (2017). The economics of using wireless networks for monitoring traps. Kararehe Kino – Vertebrate Pest Research 29.	Newsletter	The economics of using wireless networks for monitoring traps	Aug 2017
	Glen A, Norbury G, Warburton B, Pech R. 2016. Predator monitoring for compliance in Cape to City: Discussion paper. Unpublished Landcare Research Contract Report, prepared for Hawke's Bay Regional Council.	Completed	Predator monitoring for compliance in Cape to City	Aug 2017
	Glen A, Norbury G, Garvey P, Dickson R. 2017. Effectiveness of feral cat control using para-aminopropiophenone (PAPP) on Toronui Station, Hawke's Bay. Unpublished Landcare Research Contract Report LC2743, prepared for Hawke's Bay Regional Council.	Completed	Effectiveness of feral cat control using para-aminopropiophenone (PAPP) on Toronui Station, Hawke's Bay	Aug 2017

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	White, D. (2016). <i>Toxoplasma gondii</i> screening in cats and mice using PCR as part of the Cape to City Initiative. Unpublished Landcare Research Report, prepared for Hawke's Bay Regional Council.	Completed	<i>Toxoplasma gondii</i> screening in cats and mice using PCR as part of the Cape to City Initiative.	Aug 2017
	Flood S. 2017. Education review for TMAM – Cape to City and Poutiri Ao ō Tāne. Project discussion document. Unpublished Landcare Research Report prepared for Hawke's Bay Regional Council.	Completed	Education review for TMAM – Cape to City and Poutiri Ao ō Tāne.	Aug 2017
	Norbury G, Glen A, Pech R. 2017. Linking predator camera trap monitoring to biodiversity and economic benefits: density-impact functions in principle. Unpublished Landcare Research Scoping Report, prepared for Hawke's Bay Regional Council.	Completed	Linking predator camera trap monitoring to biodiversity and economic benefits: density-impact functions in principle.	Aug 2017



Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Norbury G.; Pech R.; Glen A. (2017). Linking predator camera trap monitoring to biodiversity and economic benefits: how to derive density-impact functions for Cape-to-City. Unpublished Landcare Research followuUp report, prepared for Hawke's Bay Regional Council.	Completed	Linking predator camera trap monitoring to biodiversity and economic benefits: how to derive density-impact functions for Cape to City.	Aug 2017
	Cowan P, Warburton B. 2016. Economic outcomes of broadscale predator control in the Hawke's Bay region. Unpublished Landcare Research Contract Report LC2738, prepared for Hawke's Bay Regional Council.	Completed	Economic outcomes of broadscale predator control in the Hawke's Bay region.	Aug 2017
	Niemiec, R.M., Pech, R., Norbury, G. and Byrom, A. 2017. Policy recommendations based on landholder's perspectives on coordinated pest control. Hawke's Bay Regional Council Policy Brief 2_1_2017.	Completed	Policy recommendations based on landholder's perspectives on coordinated pest control.	Aug 2017
	Glen, A. and Norbury, G. 2017. Cape to City and Poutiri Ao ō Tāne: pest and biodiversity responses. Unpublished Landcare Research Progress Report, prepared for Hawke's Bay Regional Council.	Completed	Cape-to-City and Poutiri Ao ō Tāne: pest and biodiversity responses.	Aug 2017

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Norbury, G., Campion ,WM., Brown, S., Garvey, P. 2017. Milestone 1.5 Conduct a ferret body odour longevity trial to determine how long odour lasts, and therefore how often it needs to be refreshed in the field. Unpublished Landcare Research Progress Report, prepared for Hawke’s Bay Regional Council.	Completed	Ferret body odour longevity trial to determine how long odour lasts, and therefore how often it needs to be refreshed in the field.	Aug 2017
	Latham ADM, Latham MC, Warburton B 2017. Effect of predator control at Poutiri Ao ō Tāne on Boundary Stream Mainland Island.	Completed	Effect of predator control at Poutiri Ao ō Tāne on Boundary Stream Mainland Island.	Aug 2017
	Burge OR, Innes J, Fitzgerald N, Richardson SJ 2017. Habitat availability for native New Zealand bird species within the Cape-to-City footprint – a preliminary assessment.	Completed	Habitat availability for native New Zealand bird species within the Cape to City footprint	Aug 2017
	Gormley AM, Warburton B. 2017. TrapSim: A decision-support tool for simulating predator trapping. Unpublished Landcare Research Contract Report LC2993, prepared for Hawke’s Bay Regional Council.	Completed	TrapSim: A decision-support tool for simulating predator trapping.	Aug 2017

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Flood S 2017. HBRC Aotearoa PFNZ: Project 5.1: Education review for TMAM – Cape to City and Poutiri Ao ō Tāne: Report on initial data analysis. Unpublished Landcare Research Contract Report, prepared for Hawke’s Bay Regional Council.	Completed	Education review for TMAM – Cape to City and Poutiri Ao ō Tāne: Report on initial data analysis.	Aug 2017
	Watts C, Dopheide A, Holdaway R, Davis C, Wood J, Thornburrow D, Dickie IA 2017. DNA metabarcoding as a new tool for invertebrate community monitoring – a case study comparison with conventional techniques. Restoration Ecology.	Submitted	Comparing eDNA with conventional invertebrate sampling techniques.	Feb 2018
	Glen A 2017. Controlling feral cats on farmland with a new toxin: PAPP. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Controlling feral cats on farmland with PAPP.	Feb 2018
	Glen A 2017. Using cameras for operational and compliance monitoring. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Using cameras for operational and compliance monitoring.	Feb 2018

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Glen A 2017. Outcomes of predator control: responses of lizards and invertebrates. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Responses of lizards and invertebrates to predator control.	Feb 2018
	Warburton B, Leckie C 2017. Transformational levers – wireless trap monitoring. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Wireless trap monitoring.	Feb 2018
	Watts C 2017. Invertebrate monitoring using conventional methods and eDNA. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Invertebrate monitoring using conventional methods and eDNA	Feb 2018
	Gormley A, Warburton B 2017. Fewer traps but still delivering large scale success-optimising trapping. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Fewer traps but still delivering large scale success-optimising trapping	Feb 2018

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Norbury G 2017. Linking predator camera trap monitoring to biodiversity benefits. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Linking predator camera trap monitoring to biodiversity benefits	Feb 2018
	Garvey P 2017. Long life lures – how close to reality for field use? Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Long Life Lures	Feb 2018
	Burge O, Innes J, Fitzgerald N, Richardson S 2017. Joining the dots on habitat. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017. Presented by G Norbury	Conference	Habitat connectivity	Feb 2018
	Pech R 2017. It's about people and outcomes – landowner participation modelling. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Socio-ecological modelling participation	Feb 2018

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Warburton B 2017. Economic outcomes of predator control. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Economic outcomes of predator control	Feb 2018
	Norbury G, Latham D, Binny R 2017. The importance of the right foundation for predator catch data. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	The importance of the right foundation for predator catch data	Feb 2018
	Greenaway A 2017. Insight into the team - Cape to City case study. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Insight into the Cape to City and Poutiri Ao ō Tāne Project team	Feb 2018
	Byrom A. 2017. The problem with rabbits and other perverse outcomes. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	The problem with rabbits and other perverse outcomes	Feb 2018

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Flood S 2017. Measuring education outcomes. Transforming Biodiversity Conference: 'Challenging the boundaries', Napier, 14-16 November 2017.	Conference	Measuring education outcomes	Feb 2018
	Warburton B. 2017. Economic assessment of using wireless monitoring for managing large-scale trap networks. Unpublished Landcare Research Contract Report LC2915, prepared for Hawke's Bay Regional Council.	Completed	Economic assessment of using wireless monitoring for managing large-scale trap-networks	Feb 2018
	Reynolds F, Greenaway A. 2017. Implementing social-ecological transformation through Cape-to-City and Poutiri Ao ō Tāne: an interim case study report. Unpublished Landcare Research Contract Report, prepared for Hawke's Bay Regional Council.	Completed	Implementing social-ecological transformation through Cape to City and Poutiri Ao ō Tāne	Feb 2018

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Watts C, Dopheide A, Holdaway R, Davis C, Wood J, Thornburrow D, Dickie IA 2017. DNA metabarcoding as a new tool for invertebrate community monitoring – a case study comparison with conventional techniques. Unpublished Landcare Research Contract Report, prepared for Hawke’s Bay Regional Council.	Completed	DNA metabarcoding as a new tool for invertebrate community monitoring – a case study comparison with conventional techniques	Feb 2018
	Norbury G, Binny R, Latham D. 2018. Milestone 3.3 National framework for pest density-impact functions. Unpublished Landcare Research Report, prepared for Hawke’s Bay Regional Council.	Completed	The importance of developing a national framework for pest density-impact functions. These functions show the level of pest control required for to get biodiversity gains for different native species.	August 2018
	Latham ADM, Binny RN, Norbury G. 2018. National framework for predator monitoring using trap-catch data. Unpublished Landcare Research Report LC3112, prepared for Hawke’s Bay Regional Council.	Completed	Report on using trap catch data as a monitoring tool and the need for a national framework, so that data is captured consistently.	August 2018



Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	White, D.; Tompkins, D. (2017). Progress report on impact of cat trapping on prevalence of <i>Toxoplasma gondii</i> in 1-year-old ewes as part of the Cape to City Initiative. Unpublished Landcare Research Report, prepared for Hawke's Bay Regional Council.	Completed	Progress report on impact of cat trapping on prevalence of <i>Toxoplasma gondii</i> in 1-year-old ewes as part of the Cape to City initiative.	August 2018
	Garvey, PM, Glen, AS, Clout, MN, Nichols, M and Pech, RP (submitted). Niche partitioning in a guild of invasive mammalian predators. <i>Journal of Animal Ecology</i> .	Submitted	Research paper on niche partitioning in a guild of invasive mammalian predators. Submitted to <i>Journal of Animal Ecology</i> .	August 2018
	Nichols, M, Glen, AS, Ross, J and Garvey, PM (submitted). A comparison of statistical modelling methods for evaluating the effectiveness of a feral cat control operation using camera traps. <i>Wildlife Research</i> .	Submitted	Research paper on a comparison of statistical modelling methods for evaluating the effectiveness of a feral cat control operation using camera traps. Submitted to <i>Wildlife Research</i> .	August 2018
	Glen A, Norbury G, Warburton B. 2018. Socially acceptable compliance monitoring of predators. Unpublished Landcare Research Report LC3160, prepared for Hawke's Bay Regional Council.	Completed	Report on socially acceptable compliance monitoring of predators.	August 2018

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Greenaway, A., July 2018. Exploring NZ's capacity to care for the environment. NZGS-IAG Conference 'Creative conversations, constructive connections'. The University of Auckland, New Zealand.	Conference presentation	Presentation which included the Cape to City social transformation case study.	August 2018
	Norbury, G. (2018). Pest projects – Cape to City and Taranaki Mouna. Invited speaker at Department of Conservation Lower South Island Partnerships Team Meeting. Alexandra, April 17.	Completed	Talk on Pest projects – Cape to City and Taranaki Mouna to DOC partnerships team.	August 2018
	Garvey, P. M. (2016). Interspecific competition and olfactory communication between New Zealand's invasive predators. PhD Thesis, University of Auckland, Auckland	PhD thesis	Communication through olfaction between New Zealand invasive predators.	August 2018
	Nichols, M. (2017). Optimal monitoring and statistical modelling methods for feral cats and other mammalian predators in a pastoral landscape. PhD Thesis, Lincoln University, Lincoln	PhD thesis	Mostly based around using motion sensitive cameras as a monitoring tool.	August 2018

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Garvey, P., Glen, A., Clout, M., Nichols, M., and Pech, R. (2018). Alien encounters: Community ecology in a system dominated by invasive mammalian predators. In 'Proceedings of the Gordon Research Conference on Predator-Prey Interactions.' (Ventura)	Conference presentation	Alien encounters: Community ecology in a system dominated by invasive mammalian predators.	August 2018
	Flood S, Brignall-Theyer M, McBride M, McCool R. Empowering students, teachers and communities in conservation: a review of the cape to City environmental education programme. New Zealand Association for Environmental Education (NZAEE) 9th Biennial Conference: An Ecosystem for Environmental Education – He Pūnaha Hauropi mō te mātauranga a taiao), Wellington, April 2018.	Conference presentation	Empowering students, teachers and communities in conservation: a review of the cape to City environmental education programme.	August 2018

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Glen AS, Perry M, Yockney I, Cave S, Gormley AM, Leckie C, Dickson R, Rakete-Stones W, Rakete-Stones P, Norbury GL, Ruscoe WA (2018). Wide-scale predator control for biodiversity conservation: a case study from Hawke's Bay, New Zealand. <i>New Zealand Journal of Ecology</i> . 43: 3358	Completed	A research paper using the Poutiri Ao ō Tāne biodiversity and predator monitoring data from the widescale predator control.	Feb 2019
	Watts C, Dopheide A, Holdaway R, Davis C, Wood J, Thornburrow D, Dickie IA (accepted). DNA metabarcoding as a new tool for invertebrate community monitoring - a case study comparison with conventional techniques. <i>Restoration Ecology</i> .	Completed	DNA metabarcoding as a new tool for invertebrate community monitoring - a case study comparison with conventional techniques.	Feb 2019
	Glen A, Norbury G 2018. Biodiversity monitoring in Cape to City and Poutiri Ao ō Tāne: Summer 2018 progress report. Unpublished Landcare Research Report prepared for Hawke's Bay Regional Council.	Completed	Biodiversity monitoring in Cape to City and Poutiri Ao ō Tāne: Summer 2018 progress report.	Feb 2019

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Lustig A 2018. Progress on socio-ecological modelling of Cape to City project. Unpublished Landcare Research Report prepared for Hawke's Bay Regional Council.	Completed	Progress on socio-ecological modelling of Cape to City project.	Feb 2019
	Watts C 2018. Review of threatened and iconic plant, bat, lizard, frog, terrestrial invertebrate, and fungi species in Cape to City and Poutiri Ao ō Tāne. Unpublished Landcare Research Contract Report LC3283, prepared for Hawke's Bay Regional Council.	Completed	Review of threatened and iconic plant, bat, lizard, frog, terrestrial invertebrate, and fungi species in Cape to City and Poutiri Ao ō Tāne.	Feb 2019
	Nelson T. 2018. Te Matau a Māui: Kaupapa Māori research to restore biodiversity in Hawke's Bay. Unpublished Contract Report, prepared for Hawke's Bay Regional Council.	Completed	Te Matau a Maui: Kaupapa Māori research to restore biodiversity in Hawke's Bay.	Feb 2019
	Garvey P, Norbury G 2018. Development of ferret lure for wildlife management. Unpublished Landcare Research Report LC3375, prepared for Hawke's Bay Regional Council.	Completed	Development of ferret lure for wildlife management.	Feb 2019

Workstream	Title	Status	Description	Interim report date
Research and monitoring cont.	Flood S (edited by Kannemeyer R) 2018. Cape to City environmental education programme review. Unpublished Landcare Research Report LCxxxx, prepared for Hawke's Bay Regional Council.	Completed	Cape to City environmental education programme review.	Feb 2019
	Watts C, Richardson S, Dopheide A, Thronburrow D 2018. The habitat value of mānuka for invertebrates following the establishment of a mānuka plantation: project plan. Unpublished Landcare Research Contract Report LC3341, prepared for Hawke's Bay Regional Council.	Completed	The habitat value of mānuka for invertebrates following the establishment of a mānuka plantation: project plan.	Feb 2019
	Howard S, Gormley A. 2018. TrapSim for Whakatipu Mahia. Unpublished Landcare Research Contract Report LCxxxx, prepared for Hawke's Bay Regional Council.	Completed	TrapSim for Whakatipu Mahia.	Feb 2019
	Norbury G. 2018. Predator Free NZ. Invited speaker at University of the Third Age. Alexandra, August 3.	Completed	Predator free NZ.	Feb 2019

