



Te Matau a Māui project update: interim report February 2016

Native species thrive where we live, work and play



Teacher training workshop at Cape Sanctuary. *Photo: Rebecca Gibson*

This report provides project status information from 1 July to 31 December 2015

Prepared by the Te Matau a Māui Project Management Team

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1. Executive summary

One full year has passed and Te Matau a Māui is in good shape. Cape to City has gone from just a concept to a known brand, and interest in it has come from across New Zealand. Poutiri Ao ō Tāne has continued to provide great solutions for Cape to City and other projects to build on in biodiversity and predator monitoring, wireless technology and species reintroductions.

The project management systems put in place in the first 6 months have enabled good data capture and reporting. There have been some minor role changes within the project team. Governance is strong and the members have been good advocates of Poutiri Ao ō Tāne and Cape to City. Financial reporting has now been aligned to workstreams, which provides additional depth and clarity of financial management. The expenditure is on track and within budget.

The 2015 Te Matau a Māui deliverables have been completed with two minor exceptions. One of the incomplete milestones is due to rat numbers being too high for a safe translocation of kākārīki this year. The other deliverable (bat monitoring plan) will be completed in the first half of next year. This delay was due to serious illness of the senior ranger whose expert knowledge was required.

Some of the workstream highlights include:

- Several pieces of research have been completed to assess camera traps as effective tools to monitor predators at very low densities.
- Nature connection teacher training workshops were developed and delivered. Teaching the teachers will allow for greater in-depth engagement which will continue beyond the next 4 years of the project.
- Biodiversity monitoring has started at Cape to City, Cape Sanctuary and in non-treatment sites.
- Pāteke/brown teal have bred in Poutiri Ao ō Tāne.
- 15,000 plants were planted along the Maraetotara River and are being maintained.
- Eight more wireless trapping trials have been initiated to push the boundaries of the technology and test its limits.
- Significant stakeholders have been engaged and are very interested in the project, including cabinet ministers.

The project team is looking forward to 2016, and the next 6 months will include the Cape to City predator control roll-out, continued petrel translocations, continued biodiversity monitoring in both Cape to City and Poutiri Ao ō Tāne, and at least two school teacher training workshops.

2. Project management update

Over the year the project management team has developed good routines and communication. The project management systems put in place in the first 6 months of the year have paid off, so that data capture and reporting are now more straightforward and provide good clarity of the overall project. Financial reporting has now been aligned to workstreams. This provides additional depth and clarity for financial management.

The year ended with a project team reflecting on the past year. This was very valuable and has given the team a number of areas to work on in 2016. Given the scope of the project and interest in it, the team needs to ensure that time is available to evaluate and reflect on progress. This is also important to balance workloads and reduce the risk of any individual team member burning out. Another task is to put greater effort into communications within our organisations beyond the core project team members.

2.1 Project structure update

There have been three minor changes to the project structure since July 2015 (see Figure 1):

- The Community Engagement and Education workstream has been renamed ‘Community Engagement’.
- Wendy Rakete-Stones now leads the Community Engagement Workstream, as Joyce-Anne Raihania is no longer with DOC.
- Hetty McLennan has replaced Wendy as the lead for the Habitat Restoration workstream.

2.2 Governance update

The Governance team have had three meetings since the inception of Te Matau a Māui. They have provided strong guidance and have been valuable advocates of the project in their areas of expertise, including relationship building at executive levels with key stakeholders.

A Memorandum of Understanding (MOU) has been signed between DOC and Hawke’s Bay Regional Council (HBRC) (see Appendix 6). This provides clarity around expectations and accountabilities for Te Matau a Māui.

Chair Reg Kemper has had a change in role through DOC’s recent realignment. He is now the Director of Operations for the Lower North Island region.

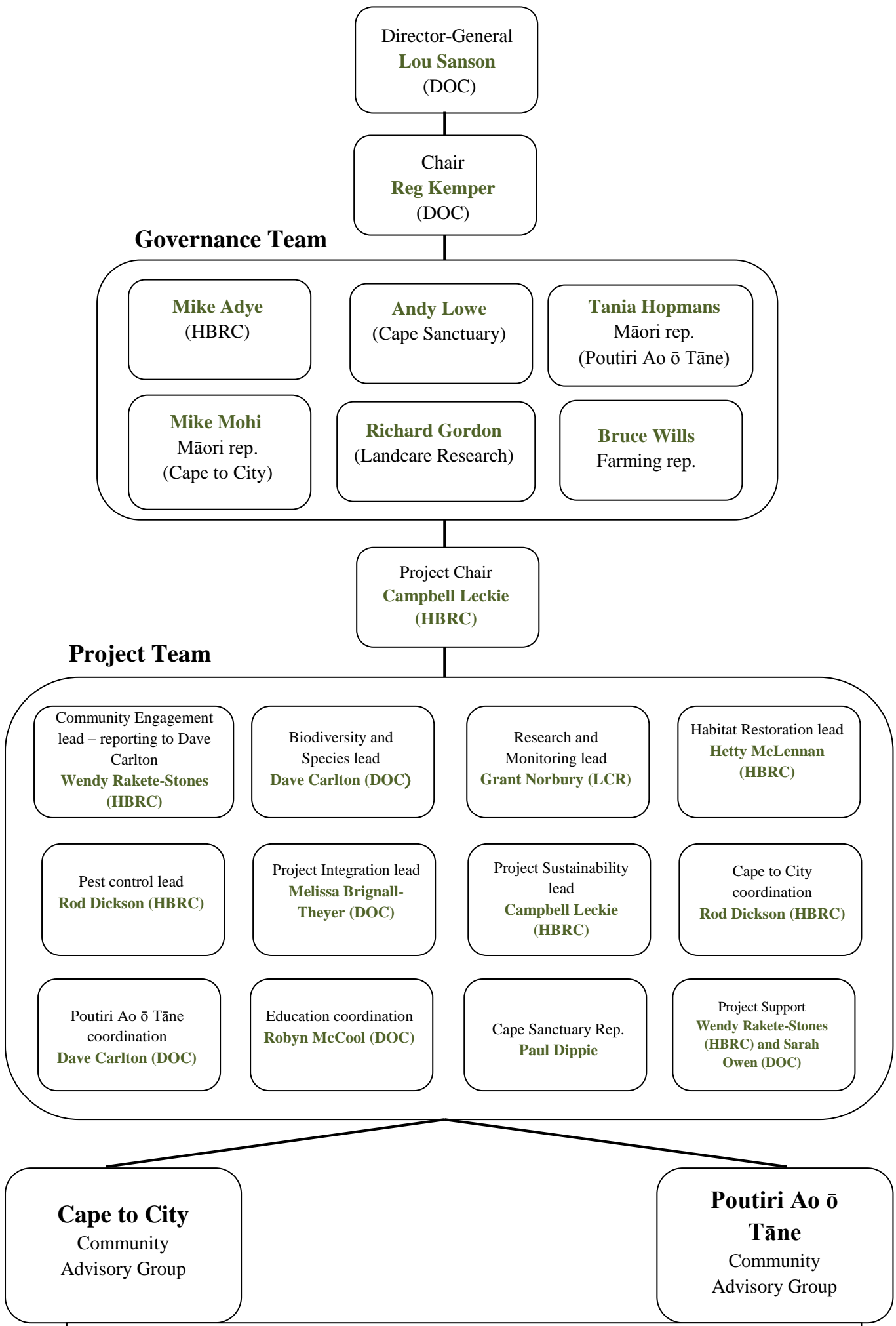


Figure 1. Project structure to deliver the Aotearoa Foundation contract.

2.3 Community Advisory Group update

The Poutiri Ao ō Tāne Community Advisory Group has met a couple of times since the last report. The main areas of discussion include iwi representation and involvement in both Poutiri Ao ō Tāne and Cape to City, and ensuring Poutiri Ao ō Tāne remains relevant. This group meets four times a year. One concern expressed at the Community Advisory Group meetings has been that the project does not have an overarching name that connects the two projects and can be used to publicise the connection. They expressed a view that the two projects were not being adequately connected in the community and that an overarching name would solve that problem. However, Te Matau a Māui is not appropriate: there are many other organisations/projects that use the name, and the meaning of the name does not accurately represent the two projects. Therefore it is only used internally and as part of the contract with the Aotearoa Foundation. The project team is addressing this by making sure all newsletters and media and other outputs in the future show connections by the way they look and what they say.

Potential group members of the Cape to City Community Advisory Group have been identified and contacted with a view to holding the first meeting in early 2016.

2.4 Project sustainability

Project sustainability not only depends on financial resourcing; it also depends on the willingness of the community to buy-in and take the principles of this project into the future. This update includes two sections: financial sustainability and community buy-in (also part of the community engagement workstream update).

Financial sustainability

Over the past year foundations have been laid for the project to build on over the next 4 years. Appendix 2 provides a table of extra funds generated by the project. Key relationships are being formed and financial avenues explored:

- A database of potential funding agencies has been set up.
- Strategic relationships have been initiated at the executive level with Beef and Lamb, OSPRI, Federated Farmers, Ministry for Primary Industries (MPI) and the NEXT Foundation.
- A potential partnership with a honey company (Comvita) is being negotiated which, if it goes through, is an opportunity to establish mānuka trees for honey production on highly erodible land (class 6 and 7) within the Cape to City footprint. This partnership would see significant funding available for habitat restoration within the project.
- Landcare Research (LCR) has committed \$550,000 to the project for the 2015/16 financial year, which is \$270,000 on top of their original commitment.
- Project and governance team members met with visiting Nature Conservancy managers, who were very impressed and interested in the project.
- Relationships have been formed and communication is ongoing with closely aligned projects, highlighted in the previous report: Zero Invasive Predators (ZIP), Biological Heritage National Science Challenge and Predator Free New Zealand. These relationships are not only important from an information-sharing point of view, but will help build partnerships for potential future funding.

Community buy-in

The vision '*Native species thrive where we live work and play*' can only be achieved if the community embraces the vision and takes it into their future. The Community Engagement workstream mainly holds this task, but the whole project team has a major role to play too. The project team is working towards community buy-in and subsequent sustainability of the principles of the project through:

- Engaging children, teachers, student teachers, school governors and parents through education programmes and training workshops
- Building a relationship with the Eastern Institute of Technology (EIT) about the environmental education training needs of tertiary students. It is a significant win to have an organisation that 'teaches the teachers' include the projects' vision or principles in their curriculum
- Involving hapū groups and supporting them to achieve their kaitiakitanga (guardianship) goals
- Working closely with and informing landowners about the project
- Mapping and documenting the internal workings of running the project from a social science point of view, so that it can be used as a case study for others to use
- Surveying the urban and rural communities over the course of the project, to analyse progress on community buy-in and ownership, and their ability to carry the principles of Te Matau a Māui beyond the timeframe of the project
- The communications strategy and implementation plan.

3. Workstream update: 1 July – 31 December 2015

This section outlines the progress on the activities and objectives outlined in Attachment 1 of the Aotearoa Foundation contract. These have been separated into five workstreams: research and monitoring; community engagement; biodiversity and species; habitat restoration; and pest control. Table 1 provides a summary of progress on activity by each workstream.

Table 1. Progress on 2015 activities

Workstream	Number of activities	% complete
Research and monitoring	8	100
Community engagement and education	6	100
Biodiversity and species	6	97
Habitat restoration	3	100
Pest control	7	100

Significant risks and opportunities are reported under each workstream. These have been kept the same as in 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.

3.1 Research and monitoring

The research and monitoring workstream is led by Landcare Research (LCR). There are four strands to this research: pests, indigenous biodiversity, and social 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).

3.1.1 Progress towards outcomes



Camera trap and footage of a feral cat from a camera trap. *Photos: Al Glen*

Highlights

- All predator monitoring techniques have been compared and have shown that camera traps are an effective tool to measure changes in relative and/or absolute abundance of predators in response to management. Dogs are also effective, but are potentially more expensive over longer time periods.
- LCR has contributed significantly more funding for the 2015/16 financial year (\$550,000), and a new research portfolio ‘Enhancing Biodiversity’ has been aligned to the project. Research in this new alignment will cover invertebrate monitoring techniques, comparing citizen science with traditional methods and researching bird re-colonisation.
- Preliminary findings from the rural survey suggest that the majority of landowners are likely to become engaged in Cape to City’s initial pest control efforts, and a reasonable number of landowners are likely to continue maintenance control after the initial knockdown. Survey respondents believe that stoats and feral cats are the most important predators to control, followed by rats and ferrets, as they spread diseases and pose threats to native biodiversity.
- The community survey was an online survey disseminated to parents via five schools in the Cape to City engagement footprint and four schools outside the footprint. There was a good response rate (591), but the vast majority came from parents within the footprint. Therefore comparisons will be very limited between treatment and non-treatment, but there will be a lot of good information gained about the behaviours and attitudes of Hawke’s Bay residents to environmental restoration in general.

Table 2. Progress on research and monitoring milestones

Milestone	2015 activity	Update	% complete
Research proposals	A minimum of three research outputs, two of which are submitted to peer-reviewed journals.	This year a total of four research papers were published, one was submitted, four are in preparation, five conference papers have been presented, and three research newsletter articles have been published.	100
Methods of monitoring introduced mammalian predators before and after control	Compare camera traps, predator detection dogs and predator tracking tunnels in terms of sensitivity and cost-effectiveness.	All techniques have been compared and have shown that camera traps are an effective tool to measure changes in relative and/or absolute abundance of predators in response to management (see Appendix 4). Camera Traps have been deployed at Cape to City and in the non-treatment area.	100

Milestone	2015 activity	Update	% complete
Decision analysis models for predicting the most cost-effective trapping configurations for managing introduced predators over large areas	Model effectiveness of predator control with varying levels of landholder participation.	Predator control with varying levels of landholder participation has been modelled (see Appendix 4). The model predicts predator control will be successful under a range of scenarios for landholder participation. Non-participation by owners of small properties had a negligible effect on predicted results, and numerous large properties would have to opt out before effectiveness of trapping would be substantially reduced.	100
Reintroduction and re-establishment of mottled petrels	Initiate the 5-year translocation programme of mottled petrel juveniles from Codfish Island/Whenua Hou to Maungaharuru Range following the successful trial in 2014.	Mottled petrels were successfully translocated and fledged in April. Rachael Sagar (PhD student) presented some results at the world seabird conference on understanding the cumulative impacts of handling on chick physiology, growth and condition.	100
Through research and a significant reduction in cat numbers, toxoplasmosis-related lamb abortion rates will be significantly decreased and there will be no need for vaccinations, resulting in a significant economic benefit to the region and nation	Detailed toxoplasmosis research programme designed, with key stakeholders engaged, and necessary baseline data gathered.	The research plan was completed. Blood samples have been taken from sheep from 3 treatment and 3 non-treatment properties and cat and mice samples are being analysed. Early results are showing toxoplasmosis at an average loading of about 27% in sheep. This is a good base to hopefully show a decrease after cat control.	100
Use of restored habitat by native wildlife	Research designed for occupancy assessment of key indicator species.	This is included in the biodiversity monitoring plan. Invertebrate monitoring is also planned along the Maraetotara in areas that have been restored at different times.	100

Milestone	2015 activity	Update	% complete
Student participation	Two tertiary students per annum are engaged in the project.	There are four postgraduate students currently working on various aspects of the projects. One Fulbright fellow and various undergraduates have also been involved throughout the year.	100
Increasing the participation in pest management and ecological restoration by landowners and the community	Baseline surveys on attitudes and barriers to participation completed.	Both rural and community surveys have been completed and results are being written up. Rural survey responses = 66 (28 in the treatment area and 38 in non-treatment). Community survey responses = 591 (544 in treatment, 47 in non-treatment).	100

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

3.1.2 Significant risks update

Original *Insufficient pest control intensity to achieve desirable biodiversity outcomes is a potential risk that will be mitigated through monitoring and adaptive management.*

Update This risk is still largely unquantifiable at Cape to City until after a couple of years of predator control and biodiversity monitoring. However, pāteke losses at Poutiri Ao ō Tāne have provided an understanding of future predator control requirements and increased trapping was implemented to adaptively manage this risk.

3.1.3 Significant opportunities update

Original *Working closely with the Biological Heritage National Science Challenge (BHNSC).*

Update The BHNSC sees the Cape to City project as providing outstanding opportunities for future research under the Challenge. Progress has already been made using eDNA technology to enhance biodiversity sampling, and other opportunities are currently being explored.

Original *LCR is currently considering aligning another of its core research portfolios (Enhancing biodiversity) to the Cape to City project. This is work in progress.*

Update Research from the Enhancing Biodiversity portfolio has been aligned with Cape to City and specific projects are part of the 2015/16 LCR contract, bringing the total LCR contribution to around \$550,000.

3.2 Community engagement

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

3.2.1 Progress towards outcomes



Teacher Training workshop at Cape Sanctuary. *Photo: Rebecca Gibson*

Māori engagement update

In the past 2 years two iwi groups have settled their Treaty of Waitangi claims in Hawke's Bay: Maugaharuru Tangitū and Ngāti Pāhauwera; and three are in the final stages of settlement: Ngāti Hineuru, He Toa Takitini, and Mana Ahuriri. The settlement process is extremely intense for these groups for a long time before and after settlement. These settlements are a great opportunity for meaningful partnerships and greater collaboration, but it will take time to build good relationships, as these groups are still creating and developing their own organisational structures.

Through this changing landscape it has been a challenge for Cape to City to identify and connect with the right people. Over the past 6 months the project team has developed a draft Māori Engagement strategy, which needs to be worked through with the various iwi groups. The Te Matau a Māui Governance team recently identified that a role needed to be developed for the right person to really start making inroads. This role will be critical to help identify a pathway to strengthening relationships. The project team is currently working to fill the role. The project team is also appointing an appropriate iwi representative on the governance team for Cape to City (Mike Mohi will continue to fill that role in the meantime), and a Māori ambassador for the project.

We continue to work closely with iwi groups associated with Poutiri Ao ō Tāne through the Community Advisory Group, and DOC monthly meetings. Relationships with each iwi are at different stages, but they are all progressing in a positive and collegial way. There is still a lot of opportunity

and willingness to strengthen these relationships to enable realisation of both iwi and project aspirations.

Highlights

- Education programmes have been successful, with participating schools now taking on their own environmental projects. In one example the school has partnered with their local marae to enhance the local stream, with the objectives of raising water quality, protecting whitebait spawning, flood control and bringing back the kai (food – in the form of eels, other fish and whitebait).
- The Education Coordinator and Ruud Kleinpaste have also run two very successful teacher training workshops; one with student teachers and another with professional teachers. The feedback has been very positive.
- Cape to City was promoted at the Royal Hawke’s Bay Agricultural and Pastoral days (A&P). This is the biggest community event in the region.
- Media attention has continued to be strong (see Appendix 4), and the Cape to City website is now up and running.

Table 4. Progress on community engagement and education milestones

Milestone	2015 activity	Update	% complete									
A marked increase in the number of volunteers participating in the programmes over the next 5 years	Review what is needed for volunteer management systems and how the project best builds on existing Cape Sanctuary and DOC systems. Volunteer hours baselined for Cape to City and Poutiri Ao ō Tāne.	After reviewing Cape Sanctuary, Poutiri Ao ō Tāne and other DOC volunteer management systems, a programme by SaleForce was chosen to meet the needs of a management system for Te Matau a Māui. Baseline volunteer hours: <table style="margin-left: 20px;"> <tr> <td></td> <td>2014</td> <td>2015</td> </tr> <tr> <td>Poutiri Ao ōTāne</td> <td>1371</td> <td>1062</td> </tr> <tr> <td>Cape to City</td> <td>0</td> <td>192</td> </tr> </table>		2014	2015	Poutiri Ao ōTāne	1371	1062	Cape to City	0	192	100
	2014	2015										
Poutiri Ao ōTāne	1371	1062										
Cape to City	0	192										
Increased involvement of schools in the various conservation initiatives	Total of three schools engaged in the Cape to City project.	A total of six schools have been engaged, three in Cape to City and three in Poutiri Ao ō Tāne.	100									

Milestone	2015 activity	Update	% complete
Communications strategy	Communications strategy finalised.	<p>The Communications strategy has been finalised and is being implemented.</p> <p>Cape to City website went live.</p> <p>Since June 2015, three newspaper articles have been published, one radio interview completed, and the first Cape to City, and another Poutiri Ao ō Tāne newsletter published.</p>	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	Review of all other potential stakeholders including philanthropists	Potential stakeholders including philanthropists were reviewed and a spreadsheet of potential funders created. Relationships with potential investors will be strengthened in 2016 (see section 2.4 for more detail on this).	100
	Review and implement Giblin Group community engagement strategy and scope further education opportunities at Poutiri Ao ō Tāne.	<p>Draft Māori engagement strategy has been completed.</p> <p>Cape to City was promoted at the Hawke's Bay Agricultural and Pastoral days.</p> <p>Three schools have completed programmes through Poutiri Ao ō Tāne.</p>	100

Milestone	2015 activity	Update	% complete
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	Citizen science biodiversity monitoring programme begun to tie into current national programmes	Te Matau a Māui members were involved in a stakeholder workshop held by the Building Trustworthy Biodiversity Indicators project. This provided the team with a lot of research on the utility of citizen science as both a scientific and engagement tool. For Te Matau a Māui, citizen science will be used primarily as an engagement tool and will link in with national initiatives like the NZ Garden Bird Survey and Nature Watch. However, LCR will be doing some preliminary research in 2016 on comparing citizen science with traditional scientific monitoring methods.	100

3.2.2 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 that engagement is genuine and is visible in all our communications. A Māori engagement strategy is being developed.*

Update A draft Māori engagement strategy has been written and a role identified to start really getting into the Māori community and forging relationships with the appropriate community members.

Original *There is a lot of interest and excitement about the education programmes. This has created many opportunities for links and involvement outside of the project milestones. The risk is that the project team starts working in areas outside of the project deliverables and in doing so is unable to meet the contracted deliverables due to resource and time constraints. This is being mitigated by assessing all opportunities as a team.*

Update The community engagement workstream team have done a lot of planning to mitigate this risk, and communication is strong with all members clear about the scope of the project.

New Delivering the education milestones would be at risk if, for some reason, the project lost the education coordinator. This will be mitigated by setting up good systems to make it easy for someone else to take over and other team members will learn some of the skills necessary in the absence of the coordinator.

3.2.3 Significant opportunities update

Original *An initial presentation and meeting with Eastern Institute of Technology (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 Following on from this meeting the education coordinator and Ruud Kleinpaste (ambassador) held a teacher training workshop at a local reserve on nature connection and teaching in the outdoors for second-year teacher training students. This was successful and EIT are looking at including this type of workshop as part of their curriculum.

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 through. Proposals are being considered at present.*

Update In the 2015 round this fund was renamed *DOC Community Fund* and 2 projects associated with Cape to City were funded by DOC, equating to \$40,000.

3.3 Biodiversity and species

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

3.3.1 Progress towards outcomes



Setting up biodiversity monitoring lines in Cape to City (the photo shows a weta house, tree wrap for lizards, frass funnel for invertebrate droppings and a tracking tunnel for rodents, lizards and invertebrates).

Photo: Al Glen

Highlights

- Four pāteke ducklings hatched at Lake Opuahi. They are being closely monitored.
- Bird monitoring is showing some interesting results: a good fītipounamu/rifleman population in 100 Acre bush, some pāteke on the Te Awanga duck pond, and the Maraetotara Plateau has a lot more potential for habitat and biodiversity gains than previously thought.

Table 4. Progress on biodiversity and species milestones

Milestone	2015 activity	Update	% complete
Increase in skinks, geckos, and native invertebrates in the C2C area, and continued increase in skinks, geckos, and native invertebrates in the Poutiri Ao ō Tāne area	Poutiri Ao ō Tāne monitoring continues but monitoring times may be extended out. Specific Cape to City invertebrate monitoring is set up.	Monitoring continues at Poutiri Ao ō Tāne. This is done in February every year. Invertebrate monitoring has been initiated at Cape to City. This includes comparing traditional pitfall and Malaise trapping with new eDNA techniques.	100
Increase in the abundance of introduced and native birds that are already present in the area	Bird monitoring programme established and baseline estimates completed.	Monitoring programme has been designed and monitoring started in October.	100
The 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 they are demonstrated to be self-sustaining	John McLennan-led species monitoring programme for birds/invertebrates overflowing into broader project area outside of Cape Sanctuary is designed. 2016 milestone partly brought forward: Monitor species currently overflowing from Cape Sanctuary (pāteke, red-crowned kākārīki, etc); prepare translocation plans for robins and tomtits.	Monitoring programme has been designed and monitoring started in October. Robin and tomtit translocation plans have been drafted and are being reviewed by DOC.	100

Milestone	2015 activity	Update	% complete
The successful re-establishment of whio/blue duck on the Maraetotara River. The successful colonisation of ponds and wetlands by pāteke in the Cape to City and Poutiri Ao ō Tāne areas	DOC/John McLennan whio Maraetotara translocation plan developed.	The Project team have reviewed the risks and benefits associated with translocating whio. A draft translocation plan has been written and is being reviewed by DOC. However, the team would like to signal that a change in milestone may be requested with a translocation of kiwi (New Zealand's iconic native bird) taking place instead of whio. The detailed reasons will be provided to the Aotearoa Foundation on this possible milestone change in the next 2-3 months.	100
Improvement in the numbers of long-tailed bats inhabiting Mohi Bush	Initial design of monitoring programme completed. Impact of potential threats to the bat population assessed.	Methodology is currently being tested in the field and assessing the population will continue for several months.	90
The reintroduction and re-establishment of mottled petrels, Cook's petrels, kākā, kākārīki, and pāteke in the Poutiri Ao ō Tāne area	Petrels are successfully transferred and fledged. Kākā and kākārīki have been released and a founder population establishes at the location.	Mottled and Cook's petrel and pāteke were successfully translocated to Poutiri Ao ō Tāne. Only four birds remain, but two of those bred. Kākārīki translocation is postponed until rat numbers are very low. This accounts for milestone not being completed.	90

3.3.2 Significant risks update

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

Update This risk became an issue with significant losses from predation. This was adaptively managed by increasing trapping and a review of the reintroduction. The review is ongoing.

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 longer-term risk and is something that can be planned for.

3.3.3 Significant opportunities update

Original *Techniques developed for petrel translocations will enable further populations to be established elsewhere in New Zealand.*

Update

- Rachael Sagar is partway through her PhD on using paleoecology, spatial ecology and ecophysiology to improve the conservation of mottled petrels, *Pterodroma inexpectata*. She has had one paper published and has presented at two conferences.
- A conservation trust in the South Island which wishes to translocate petrels has contacted us for advice.

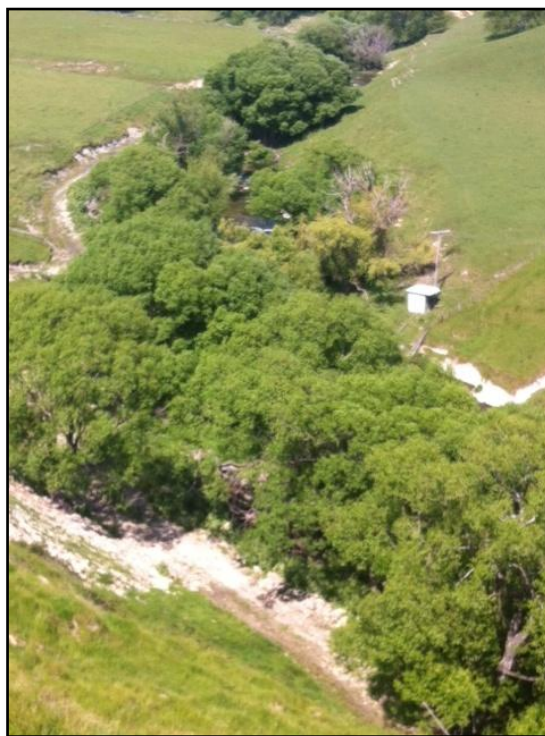


Pāteke ducklings at Lake Opouahi – Poutiri Ao ō Tāne.
Photo: Department of Conservation pāteke camera

3.4 Habitat restoration

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

3.4.1 Progress towards outcomes



Planned willow removal site along the Maraetotara River. *Photo Hetty McLennan*

Highlights

- Hastings District Council (HDC) will hire an old man's beard crew to remove old man's beard in the Maraetotara falls area (Maraetotara River). This work will begin in January 2016 and will cost \$13000 (ex GST), which will be met by HDC.
- There is the potential opportunity to establish mānuka for honey production on highly erodible land (class 6 and 7) within the footprint, which, among other things, would provide important erosion control and habitat. This is a joint relationship between HBRC, Comvita, AGS (afforestation grant scheme) and the landowner.

Table 5. Progress on habitat restoration milestones

Milestone	2015 activity	Update	% complete
Improved water quality in the Maraetotara River following stock	Water quality monitoring programme and monitoring sites established; existing	HBRC water quality monitoring has been integrated with national State of the Environment water monitoring.	100

Milestone	2015 activity	Update	% complete
exclusion and riparian re-vegetation	HBRC water quality monitoring needs integration.	Currently scoping opportunities to identify and fence whitebait spawning sites on streams and rivers in the Cape to City footprint.	
An increase in native habitat in the Cape to City area	HBRC GIS scoping study identifies where habitat would be best placed (including bush remnants that could be fenced); 15,000 plants planted within project footprint by partners or community groups.	HBRC GIS scoping study is complete. 15,000 plants are in the ground and release spraying has been completed. Working through contracts with some landowners to plant mānuka, to enhance biodiversity, reduce erosion and supply food source for bees. Contract has been signed with Hastings District Council to remove willows.	100
Enhancement of DOC's efforts on public land through landscape-scale ecological restoration on private land	Operational assessment of how integration of public and private land within Cape to City project is best achieved and impact monitored	Benefits for public conservation land if predators are maintained at low levels in non-public conservation land have been assessed at a national level. A list of native species (plant and animal) that would benefit has been compiled and financial cost benefits analysed.	100

3.4.2 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 by effective planning and resource allocation.*

Update Release spraying was completed on 15000 plants in October 2015.

Original *Lack of landowner cooperation is another risk and will be managed through landowner/council agreements and forming solid relationships with landowners and community groups.*

Update Landowners on the whole are cooperative. Esplanade strip agreements are being signed by landowners identified with land for planting in 2016.

3.4.3 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 for riparian restoration through sponsorship.*

Update This is not as significant as previously thought, but the project is still retaining this as a low priority opportunity.

New There is an opportunity to establish mānuka for honey production on highly erodible land (class 6 and 7) within the footprint. Among other things, planting mānuka will provide important habitat and erosion control. This is a joint relationship between HBRC, Comvita, AGS (afforestation grant scheme) and landowners

3.5 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.

3.5.1 Progress towards outcomes



Cape to City Pest control launch at Waimarama. *Photo Rod Dickson*

Highlights

- A Pest control launch for landowners was held at Waimarama Community Hall on 27 November 2015 with about 80 people in attendance. It was a very positive and successful evening, hosted by Bruce Wills (farming representative on the Governance team).
- Eight new wireless trapping trials have been initiated with community groups. These have been set up to test the limits of the technology.
- Early indications are that the chocolate lure in the self-setting rat traps is working. The latest tracking tunnel results are at 7%.

Table 9. Progress on pest control milestones

Milestone	2015 activity	Update	% complete
High level landowner participation in pest control in the C2C [Cape to City] area. An ‘in principle’ agreement by participating landowners to continue predator control beyond life of the programme.	50% of landowners agree in principle across sufficient land area to be likely to deliver wide-scale pest control outcomes.	More than 75% have already signed up. This already meets the 2016 milestone deliverable. A successful landowner meeting was held in November 2015. Landowner participation simulations have been run to include pest population limits, and a draft manuscript has been completed.	100
A marked reduction in introduced predators in the Cape to City area.		No 2015 milestone for this – trapping network will be set up, depending on landowner buy-in.	N/A
Wireless trap networks to optimise control	Small-scale operational trials of wireless trap networks are completed.	One wireless trapping trial was completed in the first half of the year. A further eight trials have been initiated in other locations.	100
Examine the long-term effectiveness and reliability of self-resetting traps for rat control in Boundary Stream Mainland Island	Set up trap network over 800 ha, check six times per year and monitor rat population density.	Self-resetting rat trap set-up has been completed; monitoring is ongoing. The chocolate lure seems to be working and latest tracking results are at 7%. This will continue to be monitored once a month until confidence is gained in the lure.	100
Sustained suppression of introduced predators at low densities in the Poutiri Ao ō Tāne pest control area	Contractor control continues at reduced control intensity.	Reduced control is ongoing and effectiveness will be monitored. Draft report completed (milestone 2.6; see Appendix 4).	100

Milestone	2015 activity	Update	% complete
Demonstration that effective ongoing predator control in the C2C area can be undertaken for less than ~\$3 per ha	Systems to analyse control costs in place.	HBRC has systems to analyse control costs in place.	100
Demonstration that the cost of predator control can be met by transferring resources from possum control programmes, while still maintaining possums at low densities	Chew carding completed on 20,000 ha with follow-up compliance where necessary for possums.	Chew carding has been completed on 26,000 ha. Data is being analysed. Will use Kmap to compare predicted possum densities with actual results from the chew cards to identify areas that can be left for longer. Follow-up is undertaken as per HBRC regional pest management strategy.	100
Operational monitoring for predator control is undertaken	Operational monitoring plan for control is completed.	A paper has been completed on predator and possum control in the Cape to City knock-down phase (milestone 2.7, see Appendix 4). Pre-predator control monitoring plan with cameras has been completed.	100

3.5.2 Significant risks update

Original *The perception that rabbits increase after predator control is a risk that will be mitigated with good communications backed up by research. LCR has published a scientifically credible review that demonstrates that rabbit numbers are driven by bottom-up influences such as climate, disease, and pasture growth rather than by predators.*

Update There are still concerns in the community that predator control will increase rabbit numbers. This also came through in the rural survey results. As well as providing research findings to landowners, the team will also do rabbit counts across the footprint to gain baseline data before predator control commences, to try and alleviate concerns.

Original *To get biodiversity and economic gains (through reduction in toxoplasmosis) we need to control feral cats, but this is an emotive subject in New Zealand and there is the risk that a farmer's cat or an urban cat gets caught, prompting negative media coverage. To manage this we have a communication plan in place and traps will be placed in places least likely to trap farm or domestic cats. Where the risk of catching farm or domestic cats is high (i.e. around urban areas) live capture cage traps will be used.*

Update Mitigation of this risk has been communicated to landowners and they are comfortable with it.

3.5.3 Significant opportunities update

Original *Initial meetings have been held with Zero Invasive Predators (ZIP) and the Biological Heritage National Science Challenge to align appropriate parts of each project, or learn from the work these groups are doing.*

Update Regular meetings are held with ZIP and these include sharing research findings and wireless trapping technology.



Making predator traps for Cape to City. *Photo: Rod Dickson*

4. Work planned for 1 January – 30 June 2016

4.1 Research and monitoring

- Biodiversity response monitoring, analysis and write-up of Poutiri Ao ō Tāne research
- Biodiversity response monitoring and analysis of preliminary data from Cape to City footprint.
- Report on toxoplasmosis loading in Cape to City footprint.
- Update trap network configuration model to optimise trapping in Cape to City.
- Apply wireless trap model to Cape to City footprint to optimise use of wireless technology.
- Reduce long-term cost of possum control by determining the effect of varying chew card deployment times on kills per detection, and assess percentage kill achieved using detection followed by informed control.
- Analyse and write up rural and community survey data to determine level of landholder engagement in Cape to City footprint and to gain a better understanding of what motivates landowner involvement.
- Document the Cape to City project as a case study for other agencies to emulate.
- Determine the social, economic and biophysical thresholds that have highest priority for generating the outcomes required in the Cape to City footprint.
- Production of a 3–4 page guide in booklet format that describes eight species of birds within the Cape to City region with a view to recolonisation.
- A short report to outline the design of a future study that would fill some of the knowledge gaps of species identified in the above literature review.
- Production of a 3–4 page guide that summarises the current state of knowledge of invertebrate taxa that contribute to ecosystem services in a production landscape.
- Undertake preliminary work to assess the utility of eDNA in measuring the effects of the predator programme on invertebrate taxa that contribute to ecosystem services in a production landscape by comparing eDNA against conventional monitoring, each with a fixed budget.
- Production of a report to assess the distribution of species over time in terms of the quality of the biodiversity information and the cost of collection that describes 1) how citizen science can be designed to obtain data on species distribution over time, and 2) the value of various data sources (i.e. designed systematic five-minute bird counts being collected as part of Cape to City, Tier 1 data, rural surveys of landowners, and data currently residing in citizen science repositories such as eBird and Nature Watch).

4.2 Community engagement and education

- Implement the volunteer management system.
- Run two full school teacher training workshops.
- Start school programmes with three to four new schools.
- Complete Poutiri Ao ō Tāne website update.
- Hold field and information days with relevant hapū groups.

4.3 Biodiversity and species

- Translocate mottled petrels.
- Translocate Cooks petrels.
- Plan and execute the next pāteke translocation.
- Translocate robins and tomtits to Mohi Bush.

- Set up and begin rat control in Mohi Bush and a 200 ha exotic forest on a private property a kilometre from Cape Sanctuary.
- OSNZ (Ornithological Society of NZ) conference.

4.4 Habitat restoration

- Willow removal.
- Weed control in planting sites.
- Old man's beard weed removal from the Hastings District Council property by the falls.
- 50 000 spray spots.
- Take receipt of 50 000 plants.
- Start planting.

4.5 Predator control

- Continue testing self resetting rat trap network at Boundary Stream.
- Constructing traps for Cape to City.
- Supporting eight community groups for wireless trial.
- March/April Wide Scale Pest Control (WSPC) network rollout.
- Pre-predator control rabbit monitoring in April/May in Cape to City footprint.
- Poutiri maintenance continues.

5. Conclusion

Once again Te Matau a Māui has had a busy and exciting 6 months. The milestones have been completed with two minor exceptions. Many of the 2015 milestones were to deliver scoping studies and gather baseline data to inform and direct the next 4 years in a credible way. The project team is now looking forward to applying the knowledge gained this year in 2016 and beyond.

Some of the highlights along the way have been:

- Several pieces of research have been completed to assess camera traps as effective tools to monitor predators at very low densities. This research has enabled a significant progression in predator monitoring, as it has always been very difficult to monitor predators at low densities using traditional methods, such as tracking tunnels.
- Two teacher training workshops were developed and delivered. One to student teachers and another to professional teachers. This type of training will enable schools to deliver enquiry based environmental education and learning in the outdoors with confidence, and be able to incorporate it into all curriculum areas. Teaching the teachers will allow for greater in-depth engagement which will continue beyond the next 4 years of the project.
- Biodiversity monitoring has started at Cape to City, Cape Sanctuary and at non-treatment sites. This has revealed robins in a pine block that will receive rat control, a good population of tītipounamu/rifleman in One Hundred Acre Bush and a few pāteke on the Te Awanga duck pond.
- Pāteke breeding in Poutiri Ao ō Tāne.
- 15,000 plants were planted along the Maraetotara River and are being maintained.
- There has been quite a lot of interest in the wireless trapping trails. After the initial trial earlier in the year, eight more trials have been initiated to push the boundaries of the technology and test its limits.
- Significant stakeholders have been engaged and are very interested in the project, including cabinet ministers.

The next 6 months will include the Cape to City predator control roll-out, continued petrel translocations, continued biodiversity monitoring in both Cape to City and Poutiri Ao ō Tāne, and at least two whole-school teacher training workshop.

The project team came together recently to reflect on the year, to learn from it and to take the knowledge gained into 2016. This will help us to continue delivering the milestones effectively.

Appendix 2: Extra funds

Extra funds that have been generated due to the profile of the project from partner and other organisations, which were not committed or part of the original budget

Money (\$)	Origin and purpose
\$10,000	Communications contract to develop implementation plan. Paid for by DOC.
\$140.00 (approx)	Raised by Te Mata School Environmental Group since beginning their Backyard Biodiversity Programme in July 2015. Money presented to Tamsin Cape Sanctuary during Te Mata's August field trip to Cape Sanctuary. It will be used to purchase nesting boxes at the aviary site.
\$30,000	This has been committed by regional councils, but not yet received, to invest in the research workstream.
\$50,000 excl GST	DOC Community Fund 2014–17– Clifton County Cricket Club: planting that will create habitat for birds flowing out of Cape Sanctuary.
\$130,000 excl GST	DOC Community Fund 2014–17 – Maraetotara Totara Tree Trust: planting along the Maraetotara, allowing greater restoration along the river.
\$10,000	DOC Community Fund 2015–18 – Havelock North Intermediate School: growing native plants, including kākā beak for Cape to City restoration projects.
\$30,000	DOC Community Fund 2015–18 – Cape Sanctuary: for weed control to enhance native biodiversity at the sanctuary.
\$13,000 ex GST/ year	Hastings District Council will hire an old man's beard crew to undertake old man's beard removal in the Maraetotara falls area (Maraetotara River). This work will begin in January 2016 and will cost \$13000 (ex GST) per year.
\$75,000	There is an opportunity to establish mānuka trees for honey production on highly erodible land (class 6 and 7) within the footprint. Among other things, this will provide important habitat and erosion control . This is a joint relationship between HBRC, Comvita, AGS (afforestation grant scheme) and the landowner.
\$270,000	LCR has committed \$550,000 to the project for the 2015/16 financial year, \$270,000 on top of their original commitment.

Appendix 3: Milestone review

Note: Changes agreed in the first interim report have already been included in this version.

Research and monitoring						
		2015	2016	2017	2018	2019
1	Research outputs	A minimum of three research outputs, two of which are submitted to peer-reviewed journals.	A minimum of three research outputs, two of which are submitted to peer-reviewed journals.	A minimum of three research outputs, two of which are submitted to peer-reviewed journals.	A minimum of three research outputs, two of which are submitted to peer-reviewed journals.	A minimum of three research outputs, two of which are submitted to peer-reviewed journals.
2	Methods of monitoring introduced mammalian predators before and after control	Compare camera traps, predator detection dogs and predator tracking tunnels in terms of sensitivity and cost-effectiveness.	Compare precision of various methods to estimate predator abundance from camera trapping data (e.g. occupancy modelling, mark–recapture modeling).	Gather sub-sample camera trapping data to determine optimal number of cameras per unit area.		Compare camera traps with electronic tracking pads being developed by Connovation (if available).
3	Decision analysis models for predicting the most cost-effective trapping configurations for managing introduced predators over large areas	Model effectiveness of predator control with varying levels of landholder participation.	Refine predator population model to predict outcomes of different trap configurations and frequency of	Refine population model further using real trapping data.	Gather sub-sample predator movement data (from trapping / telemetry) to determine optimal	

Research and monitoring						
		2015	2016	2017	2018	2019
			checking.		trap spacing.	
4	Reintroduction and re-establishment of mottled petrels	Initiate the 5-year translocation programme of mottled petrel juveniles from Codfish Island/Whenua Hou to Maungaharuru Range following the successful trial in 2014.	Continue with Cook's petrel and mottled petrel translocations. Measure survival rates and patterns of weight loss through to fledging.	Continue translocations of mottled and Cook's petrels, and refine feeding regimes, if necessary, to improve fledging rates.	Translocations with systematic refinements of husbandry techniques continue. Camera monitoring initiated at Maungaharuru to detect returning adults.	Continue same work as 2018. Prepare report describing best methodology for seabird translocations.
5	Analysis and reports on the integrated economic benefits of Te Matau a Māui		Produce a scoping report on integrated economic analysis (toxoplasmosis/green credentials/rabbit forage etc.).	Produce a scoping report on integrated ecosystem services analysis.		Produce and promote economic benefits report.

Research and monitoring						
		2015	2016	2017	2018	2019
6	Decrease of toxoplasmosis-related lamb abortion rates as a result of research and reduction in cats, vaccinations will no longer be necessary, leading to significant economic benefit to the region and nation	Design a detailed toxoplasmosis research programme, with key stakeholders engaged, and necessary baseline data gathered.	Produce an annual review of the research programme.	Produce a detailed mid-programme research review.	Produce an annual review of the research programme.	Produce final programme review including detailed economic assessment, and assessment of toxoplasmosis disease in the landscape.
7	Use of restored habitat by native wildlife	Design research for occupancy assessment of key indicator species.	Complete pre and post habitat meta-connectivity study for the project to determine benefits of habitat to key species.	Produce midpoint review on habitat connectivity and outcomes.	Conduct occupancy assessment of key indicator species.	Develop template for future projects on optimising habitat connectivity between private and public land.
8	Student participation	Engage two tertiary students in the project per annum.	Engage two tertiary students in the project per annum.	Engage two tertiary students in the project per annum.	Engage two tertiary students in the project per annum.	Engage two tertiary students in the project per annum.
9	Increasing the participation in pest management and ecological restoration by	Complete baseline surveys on attitudes and barriers to				

Research and monitoring						
		2015	2016	2017	2018	2019
	landowners and the community	participation.				

Review of research and monitoring:

- Milestone 4: This would be better placed under the Biodiversity/Species workstream as it is led by Dave Carlton rather than Grant Norbury and is more related to the biodiversity workstream
- Milestone 9: Add to 2019 milestone *Complete surveys on attitudes and barriers to participation to determine changes over the duration of the project*

Community/social engagement and education						
		2015	2016	2017	2018	2019
1	A marked increase in the number of volunteers participating in the programmes over the next 5 years	Review needs for volunteer management systems and how the project best builds on existing Cape Sanctuary and DOC systems. Measure baseline for volunteer hours for Cape to City and Poutiri Ao ō Tāne.	Increase volunteer hours by 10%.	Increase volunteer hours by 10%.	Increase volunteer hours by 10%.	Increase volunteer hours by 10%.

Community/social engagement and education						
	2015		2016	2017	2018	2019
2	Increased involvement of schools in the various conservation initiatives	Engage a total of three schools in the Cape to City project.	Engage a total of six schools in the Cape to City project.	Engage a minimum of six schools in the Cape to City project and at least one tertiary institute initiative.	Develop a forum or process, in conjunction with schools, to transition school support from Cape to City from being actively managed to being self-sustaining in the long term.	Ensure process is in place with strong commitment from schools to continue their investment.
3	Communications strategy	Finalise communications strategy.	Implement communications strategy.	Implement communications strategy.	Implement communications strategy.	Implement communications strategy.
4	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	Review all other potential stakeholders including philanthropists.	Approach other investors in a prioritised way.	Continue to attract other investors; target \$300,000 per year for the final 3 years.	Secure a minimum of \$400,000 to match the final year's investment by Aotearoa Foundation.	
5		Review and implement Giblin Group community	Review and implement	Review and implement	Review and implement	Review and implement

Community/social engagement and education						
		2015	2016	2017	2018	2019
		engagement strategy and scope further education opportunities at Poutiri Ao ō Tāne.	community engagement strategy.	community engagement strategy.	community engagement strategy.	community engagement strategy.
6		Develop citizen science biodiversity monitoring programme begun to tie into current national programmes				

Review of community engagement milestones:

- Milestone 1: Change to: *Increase volunteer hours by 10% on baseline* in years 2017–2019.
- Milestone 2: ‘*Engage a total of six schools in the Cape to City project*’ has been interpreted as: six schools will be engaged and will be made up of recruiting three to four new schools and doing at least two full school outdoor-nature teacher training workshops with schools who have already been part of our education programme, to ensure schools can be less reliant on external coordination for environmental education in the future.
- Milestone 3: Change to: *Implement communications strategy and review strategy* to 2017.
- Milestone 4: Change 2017 and 2019 to: *Continue to attract other investors; target \$300,000.*
- Milestone 5: Add *review education initiative at Poutiri Ao ō Tāne* to 2017 milestone.
- Milestone 6: Add to 2017 and 2019 *Review the use of citizen science in Te Matau a Māui.*

Biodiversity/species						
	2015		2016	2017	2018	2019
1	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 monitoring (monitoring times may be extended out). Specific Cape to City invertebrate monitoring is set up.	Continue Poutiri and Cape to City monitoring (Poutiri monitoring times may be extended).	Continue Poutiri and Cape to City monitoring (Poutiri monitoring times may be extended).	Continue Poutiri and Cape to City monitoring (Poutiri monitoring times may be extended).	Continue Poutiri and Cape to City monitoring (Poutiri monitoring times may be extended).
2	Increase in the abundance of introduced and native birds that are already present in the area	Establish a bird monitoring programme and complete baseline estimates.	Carry out bird monitoring, including questionnaire surveys, to determine bird abundance in rural and urban gardens.	Continue bird monitoring with annual data analysis.	Continue bird monitoring with annual data analysis.	Continue bird monitoring; analyse data to determine changes in abundance over preceding 4 years.
3	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	Design John McLennan-led species monitoring programme for birds/invertebrates overflowing into broader project area outside of Cape Sanctuary. Prepare translocation plans	Monitor species currently overflowing from Cape Sanctuary (pāteke, red-crowned kākārīki, etc.).	Translocate robins and tomtits from Cape Sanctuary to Mohi Bush to assist the spread of native insectivores through the Cape to City area.	Continue monitoring of outflow from Cape Sanctuary; analyse species data to determine extent of spread through wider	Prepare publication for a peer-reviewed journal describing the halo effect of Cape Sanctuary and its influence on wildlife communities in the surrounding

Biodiversity/species						
		2015	2016	2017	2018	2019
		for robins and tomtits.			landscape.	hinterland.
4	Successful re-establishment of whio/blue duck on the Maraetotara River. Successful colonisation of ponds and wetlands by pāteke in the Cape to City and Poutiri Ao ō Tāne areas	Develop DOC/John McLennan whio Maraetotara translocation plan.	Ensure translocation plan approved by DOC, iwi, landowners and Blue Duck Recovery Group.	Catch and radio-tag wild whio adults to identify nest locations. Collect whio eggs to be hatched and raised to fledging age in captivity.	Introduce first whio juveniles into the Maraetotara River. Continue egg collection from wild pairs.	Introduce second group of whio into the Maraetotara River.
5	Improvement in the numbers of long-tailed bats inhabiting Mohi Bush	Complete initial design of monitoring programme. Assess the impact of potential threats to the bat population.	Implement measures that will improve conditions for a population increase. Implement long-tailed bat monitoring programme.	Monitor bat population.	Monitor bat population.	Monitor bat population and review success.

Biodiversity/species						
	2015		2016	2017	2018	2019
6	Reintroduction and re-establishment of mottled petrels, Cook's petrels, kākā, kākārīki, and pāteke in the Poutiri Ao ō Tāne area	Kākā and kākārīki have been released and a founder population establishes at the location. Transfer pāteke successfully.	Transfer and successfully fledge petrels. Kākā and kākārīki populations have established and are self-sustaining.	Transfer and successfully fledge petrels. Transfer pāteke successfully.	Transfer and successfully fledge petrels. Transfer pāteke successfully.	Transfer and successfully fledge petrels. Petrels from previous releases are returning to breed. Self-sustaining population of pāteke has been established.

Review of biodiversity/species milestones:

- Milestone 1: Add *Data analysed to determine changes in abundance* to 2019 milestone.
- Milestone 1: This milestone would be better suited under the Research and Monitoring Workstream, because it is led by Grant Norbury, not Dave Carlton.
- Milestone 3: Due to bringing robin and tomtit translocations forward, the following year's milestones need to be brought forward as well.
 - 2016 add *Translocate robins and tomtits to Mohi Bush to assist spread of native insectivores through Cape to City area.*
 - 2017 replace with *Monitoring of outflow from Cape Sanctuary and translocated robins and tomtits continues.*
- Milestone 4: Add *Successful colonisation of ponds and wetlands by pāteke in the Cape to City and Poutiri Ao ō Tāne areas* to 2019 milestone
- Milestone 6: 2016–2019 – There are some unknown factors with regard to pāteke and kākārīki involved in these deliverables and so in the next review these may alter slightly.

Habitat protection and enhancement/restoration (primarily fencing, planting, maintenance, weed control)						
	2015		2016	2017	2018	2019
1	Improved water quality in the Maraetotara River following stock exclusion and riparian re-vegetation	Establish water quality monitoring programme and monitoring sites; integrate existing HBRC water quality monitoring.	Confirm and implement water monitoring programme.	Confirm and implement water monitoring programme.	Confirm and implement water monitoring programme.	Complete detailed 5-year review of water quality trend data.
2	Increase in native habitat in the Cape to City area	Conduct HBRC GIS scoping study to identify where habitat would be best placed (including bush remnants that could be fenced); 15,000 plants planted within project footprint by partners or community groups.	Ensure a minimum of 50,000 plants planted within project footprint by partners or community groups.	Ensure a minimum of 50,000 plants planted within project footprint by partners or community groups.	Ensure a minimum of 50,000 plants planted within project footprint by partners or community groups.	Ensure a minimum of 50,000 plants planted within project footprint by partners or community groups.
3	Enhancement of DOC's efforts on public land through landscape-scale ecological restoration on private land	Conduct operational assessment of how integration of public and private land within Cape to City project is best achieved and impacts monitored.		Conduct midterm analysis of benefits to conservation programmes in terms of conservation outcomes and operational savings.		Conduct 5-year analysis of benefits to conservation programmes in terms of conservation outcomes and operational savings.

Review habitat restoration milestones:

- No changes recommended.

Pest control (contractor delivery, predator initial control and infrastructure set up and maintenance)						
	2015		2016	2017	2018	2019
1	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 agreement in principle from 50% of land owners across sufficient land area to be likely to deliver wide scale predator control outcomes.	Obtain agreement in principle from 75% of land owners across sufficient land area to be likely to deliver wide scale predator control outcomes.	Conduct feasibility report (Go/no go) on whether wide scale predator control maintenance ability to deliver outcomes.	Obtain voluntary agreements.	Obtain voluntary agreements; review landowner commitment.
2	A marked reduction in introduced predators in the Cape to City area		Establish 4,000 ha of predator control infrastructure.	Establish minimum of 14,000 ha of predator control infrastructure; continue initial predator control.	Graduate 30% of farmers to maintenance of predator control.	Graduate 50% of farmers to maintenance of predator control.
3	Use of wireless trap networks to optimise control	Complete small scale operational trials of wireless trap networks.	Install additional wireless trap networks within the Cape to City project footprint.		Optimise wireless trap networks within Cape to City as a template for very large-	

Pest control (contractor delivery, predator initial control and infrastructure set up and maintenance)						
		2015	2016	2017	2018	2019
					scale use.	
4	Examination of the long-term effectiveness and reliability of self-resetting traps for rat control in Boundary Stream Mainland Island	Install trap network over 800 ha, check six times per year and monitor rat population density.	Reduce checking frequency to four times per year and monitor rat density.	Reduce checking frequency to three times per year and monitor rat density.	Reduce checking frequency to two times per year and monitor rat density.	
5	Sustained suppression of introduced predators at low densities in the Poutiri Ao ō Tāne pest control area	Continue contractor control at reduced control intensity.	Continue contractor control at reduced control intensity.	Continue contractor control at reduced control intensity.	Continue contractor control at reduced control intensity.	Continue contractor control at reduced control intensity.
6	Demonstration that effective ongoing predator control in the Cape to City area can be undertaken for less than ~\$3 per ha	Establish systems to analyse control costs.		Analyse initial control costs.		Analyse final maintenance control costs across programme.
7	Demonstration that the cost of predator control can be met by transferring resources from possum control programmes, while still maintaining possums at low densities	Complete chew carding on 20,000 ha with follow-up compliance where necessary for possums.	Optimise large-scale delivery of chew cards for possums based on research by Landcare Research.	Assess risk of chew card concept failing and possum numbers recovering is made based on past 2 years of data.		Monitor project possum programme to establish if there are any early trends for possum numbers increasing as a result of more

Pest control (contractor delivery, predator initial control and infrastructure set up and maintenance)						
	2015	2016	2017	2018	2019	
						targeted control.
8	Operational monitoring for predator control	Complete operational monitoring plan for control.	Undertake monitoring.	Undertake monitoring.	Undertake monitoring.	Undertake monitoring.

Review of pest control milestones:

- Milestone 3: Add to 2019 *Review wireless trapping trials.*
- Milestone 4: Add to 2019 *Review effectiveness and reliability of self-resetting rat traps.*
- Milestone 8: Add to 2019 *Analyse data to determine changes over the preceding 4 years.*

Appendix 4. Project outputs so far

Workstream	Title	Status	Description	Interim report date
Community engagement and education	<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.	July 2015
	Cape to City on Nature Watch naturewatch.org.nz/projects/cape-to-city	Published	Cape to City has been set up as a project on Nature Watch.	July 2015
	Project pledges \$6m for conservation	Published	<i>Hawke's Bay Today</i> 18 December 2014 article about Te Matau a Māui signing.	July 2015
	Redressing human impact	Published	<i>Hawke's Bay Today</i> Editorial 18 December 2014 article about Te Matau a Māui signing.	July 2015
	Hawke's Bay TV presentation	Published	Campbell Leckie gave a presentation on HBTv in June 2015 about Cape to City.	July 2015
	Nature corridor	Published	Short article on Cape to City in May 2015 issue of Bay Buzz magazine.	July 2015
	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> .	July 2015
	Back to the way it was	Published	Article on Cape to City in the <i>Profit Magazine</i> May 2015 issue.	July 2015
	Cape to City on Facebook www.facebook.com/capetocity	Active	Cape to City Facebook page is set up.	July 2015
	Trustworthy Biodiversity measures www.landcareresearch.co.nz/science/plants-animals-fungi/animals/birds/biodiversity-measures/research-updates	Published	Highlights the results from the Building Trustworthy Biodiversity Measures focus groups.	July 2015

Workstream	Title	Status	Description	Interim report date
	Andy Lowe gave a speech at the Deer Industry Conference www.youtube.com/watch?v=tARC D82ACy8 (4 hr 14 min)	Published	Link to Andy Lowe's speech at the Deer Industry Conference in May 2015.	July 2015
	Sir Jerry visits Sanctuary	Published	<i>Hawke's Bay Today</i> , 11 June 2015, p 5. Governor-General visited Cape Sanctuary with Andy Lowe and Ruud Kleinpaste; a small part of the article is about Cape to City.	July 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.	July 2015
	Pushing for a predator-free NZ	Published	<i>Hawke's Bay Today</i> , 4 July 2015, pp 12–13. Double page spread of articles about Cape to City.	February 2016
	Cape to City website	Active	http://capetocity.co.nz/	February 2016
	Radio article – Rod Dickson interviewed	Published	RNZ article on morning rural news, 5 November 2015, about Cape to City (forward to Minute 1.28). http://www.radionz.co.nz/audio/player/201777443	February 2016
	Hi-Tech Traps Target Possums	Published	<i>Hawke's Bay Today</i> , 5 November 2015, p 17 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, p 7. Article about the toxoplasmosis trial.	February 2016
	Te Matau a Māui: Māori Communications & Engagement Strategy (Draft)	Draft	Draft Māori Communications & Engagement Strategy	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
	Cat hunt after toxoplasmosis found	Published	<i>Hastings Mail</i> , 2 December 2015, p 15. Newspaper article about the toxoplasmosis trial.	February 2016
Biodiversity and Species	Pāteke fly home after time away	Published	<i>Hastings Leader</i> , 27 May 2015, p 6. Article about the pāteke release.	July 2015
	Norbury, G. and McLennan, J. (2015) Biodiversity and predator monitoring for Cape-to-City, Hawke's Bay Project. Report (LC2237) prepared for Hawke's Bay Regional Council, June 2015.	Completed	Biodiversity monitoring plan for Cape to City.	February 2016
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.	July 2015
	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: storify.com/Seabirders/wstc1	July 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.	July 2015

Workstream	Title	Status	Description	Interim report date
Research and monitoring (cont.)	Glen, A; Dickson, R. 2015: Wide-scale predator control for biodiversity in Hawke's Bay. <i>Kararehe Kino/Vertebrate Pest Research 25: 6–7.</i>	Published	Newsletter article on wide-scale predator control.	July 2015
	Jones, C; Norbury, G; Glen, A; Dickson, R. 2015: Predator control benefits native species but not rabbits. <i>Kararehe Kino/Vertebrate Pest Research 25: 14–15.</i>	Published	Newsletter article on effects of predator control on native birds and rabbits.	July 2015
	Glen, A; Perry, M; Ruscoe, W. 2014: Wide-scale trapping suppresses predators and promotes biodiversity in Hawke's Bay. Proceedings of the 28th Australasian Wildlife Management Society Conference. Brisbane, AWMS.	Conference	Effects of wide-scale predator control on biodiversity.	July 2015
	Ruscoe, W; Glen, A.S; Perry, M; Forrester, G. (In prep): Impacts of rabbit grazing on pasture in Hawke's Bay, New Zealand. <i>New Zealand Journal of Ecology.</i>	In prep	Rabbit grazing impacts on pasture production.	July 2015
	Norbury, G; Jones, C 2015: Pests controlling pests: does predator control lead to greater European rabbit abundance in Australasia? <i>Mammal Review 45: 79–87.</i>	Published	Predator and rabbit interactions.	July 2015

Workstream	Title	Status	Description	Interim report date
Research and monitoring (cont.)	Glen, A.S.; Anderson, D; Veltman, C.J; Garvey, P.M; Nichols, M. Wildlife detector dogs and camera traps: a comparison of techniques for detecting feral cats. <i>New Zealand Journal of Zoology</i> .	Accepted	Comparing techniques for detecting cats.	July 2015
	Nichols, M.; Garvey, P; Glen, A.S.; Ross, J. (In prep): Influence of camera trap orientation on detection rates of invasive predators. <i>New Zealand Journal of Ecology</i> .	In prep	Camera trap orientation and predator detection.	July 2015
	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.	July 2015
	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 removal of feral cats.	July 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.	July 2015
	Glen, A. 2014: Camera traps for monitoring pest animals. In: <i>Abstracts, NETS Conference</i> . NPCA, New Plymouth.	Conference	Camera traps.	July 2015

Workstream	Title	Status	Description	Interim report date
Research and monitoring (cont.)	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.	July 2015
	Milestone 2.1 (LCR contract)	Completed	Proposed strategy for radio-tagging possums in the Cape to City footprint that will generate detection probability data used for identifying areas of low, medium, and high possum numbers that will enable forecasting where and when control should be applied.	July 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 g0 and sigma values for feral cats is determined.	July 2015
	Milestone 2.4 (LCR contract)	Completed	A scoping report on optimising a monitoring design for Cape to City using cameras including a critical review of potential gaps that should be addressed, using initial data from the Poutiri Ao ō Tāne camera trap work to date, in order to minimise risks associated with the use of the method.	July 2015
	Milestone 3.1 (LCR contract)	Completed	Identifies 4 or 5 possible scenarios for predator control to test based on the actual property footprint for Cape to City. Includes the implications of 'friction surfaces' (e.g. poorly accessible areas) for contractors (in consultation with contractors in the project).	July 2015
	Milestone 4.4 (LCR contract)	Completed	Based on learnings from the Poutiri Ao ō Tāne project and other wide-scale predator control initiatives (e.g. 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 .	July 2015

Workstream	Title	Status	Description	Interim report date
Research and monitoring (cont.)	Glen, A.S.; Latham, M.C.; Anderson, D.; Leckie, C.; Niemiec, R.; Pech, R.P.; Byrom, A.E. 2015: Landholder participation rate in regional-scale control of invasive predators: a spatial model for an agro-ecosystem (unpublished),	In prep	This research models a range of landowner participation rates on the success of predator control.	February 2016
	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
	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 programs. <i>Wildlife Society Bulletin</i> 39: 341–348.	Published	Potential applications of wireless sensor networks for wildlife trapping and monitoring programmes.	February 2016

Workstream	Title	Status	Description	Interim report date
Research and monitoring (cont.)	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 use Poutiri Ao o Tane as a case study. 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/ Her presentation is at : http://www.fulbright.org.nz/news/video-ian-axford-new-zealand-fellowship-seminar-jill-ozarski/	February 2016
	Nichols, M and 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 estimate cat abundance from the camera trapping data.	February 2016
	Landcare Research. 2015: Predator busters: Hawkes Bay predator control project. <i>Discovery 40</i> .	Published	Article in <i>Discovery</i> (issue 40, Nov 2015) about Cape to City, includes a video. This is a Landcare Research publication: http://www.landcareresearch.co.nz/publications/newsletters/discovery/discovery-issue-40/Predator-busters	February 2016
	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: p 60.	Conference	Andy Lowe's talk at the Ecological Society conference.	February 2016

Workstream	Title	Status	Description	Interim report date
Research and monitoring (cont.)	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> : 137-45.	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

Appendix 5: Project team roles and responsibilities

Hawkes Bay Regional Council	
Campbell Leckie	<ul style="list-style-type: none"> • Chair of Te Matau a Māui project management team. • Overview of the delivery of Aotearoa Foundation contract and other project objectives. • Works with Cape Sanctuary (Andy Lowe and Paul Dippie) and DOC (Dave Carlton) to collectively ensure the project is delivering. • HBRC Stakeholder engagement and project decision making at the higher level where there is significant budget or project risk. • Accountable for HBRC's budgets. • Connects to governance group. • Connects to Melissa on overall project reporting and linkages/alignment of the project across agencies.
Rod Dickson	<ul style="list-style-type: none"> • Day-to-day coordination of Cape to City. • Rod reports directly to Campbell for this project. • Project delivery/project workstream integration/stakeholder engagement. • Overseeing HBRCs project reporting to ensure Melissa gets what she needs. • Ties in with DOC Poutiri Ao ō Tāne and Cape to City coordinators. • Will act as joint support to Cape to City Community Advisory Group when it's up and running.
Wendy Rakete-Stones	<ul style="list-style-type: none"> • Community Engagement Workstream lead – reporting to Dave Carlton. • Provide administrative and general support to project team. • Be familiar and current with all project workstreams. • Attend all HBRC workstream-related meetings as requested including minute taking for (but not limited to) governance group meetings, project team meetings, education and community engagement meetings. • Engage with stakeholders. • Pest management data management and collation.
Pouri Rakete-Stones	<ul style="list-style-type: none"> • Responsible to Rod for all aspects of the rollout and delivery of the WSPC workstream including logistics, farmer uptake, trap infrastructure rollout, related research inputs. • Will assist Robyn McCool as the schools' engagement predator control specialist for the Cape to City education workstream. • Connects the project team to relevant ZIP activities.
Hetty McLennan	<ul style="list-style-type: none"> • Leads habitat protection and restoration workstream. • Planning and delivering the Habitat restoration milestones.

Other	<ul style="list-style-type: none"> • Other HBRC staff are involved, but to a lesser extent.
Ambassador roles	
Ruud Kleinpaste	<ul style="list-style-type: none"> • Ambassador for Te Matau a Māui, especially for the education programmes.
Department of Conservation	
Dave Carlton	<ul style="list-style-type: none"> • Biodiversity/species workstream lead. • Health and safety lead. • Financial accountability for Poutiri Ao ō Tāne and overall Te Matau a Māui budget. • Overseeing the community engagement workstream.
Melissa Brignall-Theyer	<ul style="list-style-type: none"> • Project integration workstream lead. • Ensuring quality reporting to the project team, governance team and the Aotearoa Foundation. • Highlights coordination or integration opportunities, issues or risks across Cape to City and Poutiri Ao ō Tāne to the project team with recommendations. • Tracks project timeline for Te Matau a Māui. • Supports community engagement workstream.
Robyn McCool	<ul style="list-style-type: none"> • Education coordinator. • Designs and delivers education programmes. • Works closely with programme partners.
Denise Fastier	<ul style="list-style-type: none"> • Bird translocation coordinator for Poutiri Ao ō Tāne.
Ray Flemming	<ul style="list-style-type: none"> • DOC business accountant, Lower North Island – provides financial support to project team.
Sarah Owen	<ul style="list-style-type: none"> • Project management assistance. • Setting up documents and templates. • Q and A of reports. • Overview of project. • Draft comms strategy. • Provide advice on roles and tasks required.
Other	<ul style="list-style-type: none"> • Other DOC staff are involved, but to a lesser extent.
Cape Sanctuary	
Paul Dippie	<ul style="list-style-type: none"> • Volunteer – Cape Sanctuary capital projects. • Cape Sanctuary governance. • Cape to City project team.
Tamsin Ward-	<ul style="list-style-type: none"> • Cape Sanctuary manager.

Smith	<ul style="list-style-type: none"> • Cape Sanctuary liaison with Cape to City; wildlife, predator control, and education workstreams.
Landcare Research	
Andrea Byrom	<ul style="list-style-type: none"> • Works with HBRC and DOC to deliver high level outcomes.
Grant Norbury	<ul style="list-style-type: none"> • Research and monitoring workstream lead.
Al Glen	<ul style="list-style-type: none"> • Pest and biodiversity outcome research and monitoring.
Bruce Warburton and Andrew Gormley	<ul style="list-style-type: none"> • Pest monitoring and surveillance research and modelling.
Cecilia Arienti	<ul style="list-style-type: none"> • Pest spatial modelling.
Roger Pech	<ul style="list-style-type: none"> • Biodiversity outcomes and systems modelling.
Alison Greenaway	<ul style="list-style-type: none"> • Qualitative social research.
Pike Brown	<ul style="list-style-type: none"> • Quantitative social research.
Catriona MacLeod	<ul style="list-style-type: none"> • Biodiversity monitoring and citizen science.
Dan Tompkins	<ul style="list-style-type: none"> • Wildlife and livestock disease epidemiology.
Maggie Nichols	<ul style="list-style-type: none"> • Lincoln Uni student (pest monitoring).
Becky Niemec	<ul style="list-style-type: none"> • Stanford Uni student (quantitative social research).
Patrick Garvey	<ul style="list-style-type: none"> • Auckland Uni student (pest monitoring).

Appendix 6: Memorandum of understanding

MEMORANDUM OF UNDERSTANDING

Between the Department of Conservation and the Hawke's Bay Regional Council

1. *Purpose*

To provide:

- (i) the framework for a professional relationship between the Hawke's Bay Regional Council and the Department of Conservation and
- (ii) to deliver the Te Matau a Māui project under the contract with the Aotearoa Foundation.

2. *Functions of the Parties*

Department of Conservation Te Papa Atawhai (DOC)

The Department of Conservation Te Papa Atawhai (DOC) is the central Government organisation charged with conserving the natural and historic heritage of New Zealand on behalf of and for the benefit of present and future New Zealanders.

Hawke's Bay Regional Council

The Hawke's Bay Regional Council (HBRC) is a Regional Council charged with meeting the current and future needs of the Hawke's Bay community for good quality infrastructure, local public services and performance of regulatory functions in a way that is most cost effective for households and businesses.

3. *Background*

Te Matau a Māui is a five-year overarching project in Hawke's Bay that commenced in 2015, which includes two parts – Poutiri Ao ō Tāne and Cape to City. These are collaborative landscape-scale projects covering 8,800 ha in the Maungaharuru/Tutira area and 26,000 ha between Cape Kidnappers, Havelock North and Waimarama. The land covers a variety of land uses and buildings on the success and knowledge gained from Poutiri Ao ō Tāne, that commenced in 2011.

Te Matau a Māui is a partnership between DOC, HBRC, Cape Sanctuary, Landcare Research (LCR), the Aotearoa Foundation, and various landowners and businesses. Iwi are key partners with representation at the governance level, and the project team are in dialogue with respective hapu and marae to enhance the partnership.

4. *Areas of co-operation*

This partnership is based on a contract between the Aotearoa Foundation and DOC to deliver the Te Matau a Māui project (Appendix 1). As part of the project delivery HBRC has two contracts – one with Landcare Research and another with John McLennan.

This MOU provides principles on which the relationship between HBRC and DOC for the purposes of Te Matau A Māui is based and therefore if the relationship changes over the duration of Te Matau a Māui this agreement can be used as a guide to work through the changes. Each Party is also bound by the Terms of Reference for the Te Matau a Māui Governance and Project Teams (Appendices 2 and 3).

DOC is responsible for leading their workstream (as outlined below), reporting twice yearly to the Aotearoa Foundation on the workstream, providing updates to the project team and governance group as and when required, delivering the agreed milestones and working collaboratively with the other partners.

DOC has been nominated the grant holder under the agreement with the Aotearoa Foundation and is also responsible for releasing the funding to HBRC for activities related to the delivery of workstream milestones on receipt of an invoice. DOC will also report on the combined investment of \$6.2 million in the interim and yearly report to the Aotearoa Foundation.

HBRC is responsible for leading their workstream, reporting twice yearly to the Aotearoa Foundation on the workstream, providing updates to the project team and governance group as and when required, delivering the agreed milestones and working collaboratively with the other partners.

The workstreams are as follows –

Workstream	Lead
Research and Monitoring	HBRC
Community Engagement and Education	DOC
Biodiversity and Species	DOC
Habitat Restoration	HBRC
Pest Control	HBRC
Financial Management	DOC
Funding Sustainability	DOC

5. *Agreed Standards*

Both parties will adhere to the following standards in their dealings with each other:

- **Integrity**
Each party will treat each other with the utmost respect, honesty and fairness.
- **Dominion**
Each party has dominion over their respective organisation.

- **Consultation**
Each party agrees to consult on matters relating to Te Matau a Māui and agrees to contribute to strategic and annual planning processes in an integrated manner.
- **Availability**
Each party agrees to make every effort to attend each meeting.
- **Commitment**
Each party is committed to delivering their respective workstreams (ref clause 4) on time and to budget, and will ensure that appropriate resource is allocated to the project to achieve successful project outcomes.

6. ***Risk Management***

Risks will be monitored through risk register which will be reviewed by the project Governance Group at each of their meetings. The Project Chair will report to the Governance Chair on any variations to the agreed workstream programme and any risks that are unable to be easily mitigated. The Governance chair is responsible for ensuring that a workable solution is determined.

7. ***Dispute Resolution***

Any dispute concerning the subject matter of this document will be settled by a full and frank discussion and negotiation between the Parties. Disputes that are unable to be resolved at project staff level shall be referred to the Governance Group members representing the Parties, who shall consider the issue fairly and impartially and seek resolution of the dispute. The Parties agree that the resolution of any disputes referred to the Governance Group members shall be dealt with as a matter of priority.

Should the dispute not be resolved satisfactorily by these means, the Parties agree that they will engage in mediation conducted in accordance with the terms of the LEADR New Zealand Inc Standard Mediation Agreement.

8. ***Communication***

Management from both parties agree to meet once a year and staff once a month to discuss issues of mutual interest.

If matters arise that may be of interest to either Party (ie Ministerials), the Project Chair is to be informed in the first instance.

If a contact person changes in either organisation, there should be a handover process so that the new person can quickly settle into the role.

In the interests of clear communication around Te Matau a Māui, any public statements must only be made once the other Party has been informed.

9. ***Intellectual Property and data sharing***

All intellectual property brought to the relationship by each Party will remain vested in that Party.

When Intellectual Property is developed by either party as part of this project this will be openly and perpetually shared with the parties.

Intellectual Property between either Parties with a third party in relation to commercial activities will not be shared.

Should either Party contribute resources that are not related to a specific project the other must acknowledge their ownership and their contribution.

Use of logos or other corporate identification must be agreed by each Party on a case by case basis.

10. ***Confidentiality***

Confidential information means proprietary scientific, technical and business information disclosed in the course of the relationship.

Both Parties must identify in the first instance any information that is deemed to be confidential. Neither of the Parties shall disclose directly or indirectly the confidential information received from the other Party to any third Party without written consent, unless required by the processes under the Official Information Act 1982 and the Local Government Official Information and Meetings Act 1987 in which case DOC or HBRC will inform the other party prior to disclosure.

11. ***Monitoring***

This agreement will be monitored on a six monthly meeting of the parties. Matters considered will include a review of the identified areas for co-operation and an assessment of the degree to which agreed standards have been adhered to. A yearly report will be provided to both signatories of this agreement by the project team by 31 August each year and covering the financial year ended on 30 June of that year.

12. ***Duration of MOU***

The duration of the MOU shall be for five years from the date of the signing of the document.

13. ***Termination***

Either party may withdraw from this memorandum of understanding by written notice to the other party at any time.

Signed:
for the Department of Conservation

Signed:
for the Hawke's Bay Regional Council

Lou Sanson
Director-General

Liz Lambert
Interim CEO

Date:

Date:

Witnessed by
for the Department of Conservation

for the Hawke's Bay Regional Council

Date:

Date:

This Memorandum of Understanding is entered into and is effective at
The _____ day of _____ 2015

Appendices

- Appendix 1 – Aotearoa Foundation contract and deliverables
- Appendix 2 – Governance team Terms of Reference
- Appendix 3 – Project Team TOR