

Attachment B. Mustelid control pilot review summary (in support of option one)

Background:

In the 2016/2017 financial year, a mustelid control pilot was led by the Hauraki Gulf Conservation Trust (HGCT). The project was jointly funded by Auckland Council and Department of Conservation.

The project set up a 400m by 400m grid of traps (total 154 traps) covering the central region of Waiheke between Whakanewha regional park and Onetangi beach (see map for detailed project layout). 68 landowners participated in the project, including council and commercial properties as well as large and small private landowners. Only three landowners could not be persuaded to accommodate traps on their property. The project ran for six months between Oct 2016 and April 2017, over this time, five stoats, 70 rats and 53 hedgehogs were trapped. At the end of this period the trap network was closed and a completion report was provided to the key stakeholder group in June 2017.

As the project was only funded as a short-term pilot the HGCT sought additional funding from the Waiheke Local Board, in their March 2017 community grants round, to extend the pilot to a second year of operation and look at extending the project areas to the western end of Waiheke. The board declined this funding application.

In September 2017 the Waiheke Collective was formed – a community-based stakeholder group which aims to bring unity, shared goals and commonality to the community on Waiheke in regard to the protection and enhancement of its natural environment and specifically as it relates to the removal of pest animals. The Hauraki Gulf Conservation Trust is a founding member of the Collective and has agreed that the management of the mustelid control project be transitioned over to the Collective and integrated into the community led Predator Free Waiheke initiative.

The Waiheke Collective has secured \$40,000 from council's 2017/2018 Regional Environment Natural Heritage fund towards operational costs of the mustelid control project, including the purchase of traps and support for a trapping team. As part of project planning for Predator Free Waiheke Collective members agreed to review the mustelid pilot study findings and incorporate learnings of the pilot into a revised project plan to guide implementation going forward. A review meeting took place on the 13th February 2018.

Summarised review:

A review panel consisting of Collective members and Auckland Council staff from Biodiversity and Biosecurity have evaluated the mustelid control pilot and provided a summary of their recommendations for the project delivery in 2018.

Miranda Bennett	Ecologist, Biodiversity, Auckland Council
Deryn Dromgoole	Biosecurity Officer, Auckland Council
Jo Ritchie	Ecological Consultant
Hue Ross	Forest and Bird representative, Private contractor

Sally Horwood	Private contractor, Rat Busters Coordinator
Jonah Kitto-Verhoef	Forest and Bird representative Regional Park Ranger, Auckland Council
Mary Frankham (absent from meeting, provided email correspondence)	Hauraki Gulf Conservation Trust representative

The evaluation report written by HGCT provided a good summary of the project delivery, results and lessons learnt, these are outlined in the tables below. The Mustelid pilot study was set up with the following four purposes. The review panel agreed that the pilot achieved the first two purposes, but that the pilot study did not adequately achieve purpose 3 and 4.

1. TO TEST THE LEVEL OF COMMUNITY SUPPORT FOR LANDSCAPE SCALE ANIMAL PEST CONTROL AND POTENTIALLY THE ERADICATION OF MUSTELIDS:

Learnings reported in the pilot evaluation	Review panel comments
<i>The study was only funded for a few months and therefore was not able to test eradication feasibility as this requires a trial over a number of seasons. Instead a trial to test the social acceptance of a trap network to landowners was undertaken The pilot had good buy in from landowners; Only three landowners could not be persuaded to accommodate traps on their property.</i>	Agree the pilot did not test eradication feasibility
<i>We can confidently expect wide participation and willingness to accommodate traps from most landowners. Landowners were supportive of traps on their properties but many preferred that the checking was undertaken by a contractor. Reasons included not always being present, being busy, not keen to removing dead animals</i>	Agree that a willingness from landowners to accommodate traps on their land was demonstrated. The pilot study was not able to demonstrate willingness by all landowners to maintain and operate traps on their land, the pilot showed that majority of traps were maintained by paid contractors. This is a cost consideration for future implementation and island wide control.
<i>The trapping team consisted of local people, which provided local knowledge and assisted with building relationships between the project and landowners.</i>	Agree. Local knowledge is important. Hiring local trappers builds capacity within community to deliver local projects.

<i>Project coordinator and trappers noted that making initial contact with landowners and getting permission to place traps was difficult. Improved information gathering systems are required to get property owner contact details</i>	Agree. Further support is required with landowner liaison, especially for absentee landowners and as the project area increases.
<i>Where landowners cannot be persuaded to participate, the effect of gaps in trap coverage need to be mitigated for, solutions outlined in report.</i>	Strong technical support and guidance to the trapping team is required to ensure robust decision-making is part of the project design and delivery. Evaluation of the 400/400m grid design is required for eradication.
<i>The Pilot showed support for one managing entity to co-ordinate pest control, that is an apolitical group and solely focussed on Predator Free Waiheke.</i>	Formation of Waiheke Collective is addressing this need

2. TO BUILD CAPACITY AND KNOWLEDGE IN THE LOCAL COMMUNITY:

Learnings reported in the pilot evaluation	Review panel comments
The project demonstrated that a good degree of pest control knowledge and experience already exists on the island. Majority of the field team were Waiheke residents and three of the field team had some experience in pest control. All of the team involved agreed they have increased their knowledge and skills set.	Pilot was a good example of empowering community model. Supported local people and utilised local knowledge and skills. Future project planning needs to include experts with pest eradication knowledge and experience. Pest control knowledge is different to pest eradication knowledge. Some concern that technical advice from external pest animal specialists needed to be better utilised in the project design and delivery.
<i>While not outlined in the pilot evaluation report, members of the trapping team have expressed concern that pay rates for this type of work are too low and that this may compromise the ability to retain locally skilled trappers.</i>	Agree skilled trappers are needed for mustelid eradication. Pay rates need to be addressed in future project budgets. Training, support and fair pay rates is required to develop and expand local skills. Funders need to be made aware of the living costs for Waiheke, which in turn impacts contractor rates.
<i>Pilot coordinators found data management difficult for a number of reasons.</i> <ul style="list-style-type: none"> - <i>Obtaining trapping records from team members.</i> - <i>Lack of data on existing traps, which were included in the pilot grid i.e. Eco village.</i> - <i>Data sharing difficulties.</i> <i>In future, trap check records and Health and</i>	Agree that robust data management needs to be in place at the beginning of the project. Trappers contracts must include clauses requiring reporting of trapping results tied to contract payments. Agree community groups need support with health and safety requirements, currently a gap in knowledge and resources for small contractors to meet these health and safety requirements.

<p><i>Safety information will be a mandatory requirement to be submitted with timesheets and invoices before payment. Protocols around data management and sharing need to be established.</i></p> <p><i>Health and safety requirements are extensive and onerous.</i></p> <p><i>The effort and time needed to set up and manage this type of operation should not be underestimated.</i></p>	<p>health and safety capacity building is needed within the Waiheke community and local contractors.</p> <p>This is a risk for project implementation and personal safety, going forward the mustelid control project health and safety plan will need review and updating, responsibilities needs to be clarified between the Collectives member groups.</p> <p>Agree sound project planning and setting up of project administration is essential going forward.</p>
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3. TO LEARN ABOUT LANDSCAPE SCALE CONTROL ON WAIHEKE:

Learnings reported in the pilot evaluation	Review panel comments
<p><i>Although the 'adjusted grid' approach seemed to work well, it may be worth reviewing other approaches to trap placing, such as along lines or by roads.</i></p>	<p>The grid approach is a very theoretical design for mustelid control. A grid is able to test control of an area but wasn't a design to test eradication feasibility for Waiheke.</p> <p>The HGCT pilot was not about testing eradication feasibility, but rather focused on social feasibility of mustelid control and investigating the social barriers that may be encountered by large control projects over a varied landscape.</p> <p>Agree that the grid design was good for testing of social feasibility as outlined in purpose 1 and 2 of the project.</p> <p>To the project needs to move towards development of a targeted eradication methodology, which is integrated with the island wider predator free Waiheke goals.</p> <p>All agree that a linear system favouring mustelid habitat and movement corridors (e.g. roads, waterways, coast, bush edges) is the preferred approach. The linear system is in accordance with best practice control guidelines from Department of Conservation and Auckland Council.</p> <p>The linear system would need to be intensified for eradication. Stoats pose a significant risk to biodiversity, e.g. penguins, grey-faced petrel, kaka. A small scale test of the linear system is proposed to build community support and understanding and test effectiveness in the</p>

	<p>Waiheke environment.</p> <p>A revised project plan will be required, starting with a desk top exercise to place habitat trap lines and calculate infrastructure requirements. These lines will be cross referenced with the existing pilot grid to identify which of the existing traps can be used in the new trap network.</p> <p>Traps in the 400/400 grid will still be useful for the future island wide role out as they will be reconfigured into the linear system once the island wide eradication programme starts. Landowners should be contacted to see if they are willing to maintain the trap themselves or if traps can be left in-situ until required for the island wide eradication.</p>
<p><i>Lone working in remote locations, often without cellphone coverage, is a significant health and safety risk. Sending two works to check is costly. recommended that innovative ways of servicing traps, such as node technology are considered.</i></p>	<p>Agree project delivery costs need to be reviewed and new technology used to reduce costs. Use of satellite nodes to indicate when traps have been set off will be explored for the island wide eradication and testing could start with year two role out of the mustelid eradication project. Initial use around biodiversity hot spots recommended.</p> <p>Keeping abreast of new technology recommended, e.g. Long-life lures.</p>

4. TO BUILD KNOWLEDGE ON WAIHEKE MUSTELIDS:

Learnings reported in the pilot evaluation	Review panel comments
<p><i>5 stoats were caught over the 6-month life of the pilot study - too few to reliably report any geographical or environmental associations with mustelid behaviour or habitat.</i></p> <p><i>Although few mustelids were caught, this is not unexpected, since mustelids are wily, have large territories, and may exist in low numbers on Waiheke. Furthermore, it may well be the case that there are/were very few mustelids in our pilot area.</i></p> <p><i>In addition, 70 rats (31 ship rats, 19 Norway rats and 20 unspecified), 53 hedgehogs and 9 other animals (including mice, a myna bird, a feral cat and a rabbit), hence removing other harmful pests from the ecosystem.</i></p>	<p>Agree catch numbers were low and few geographical or habitat conclusions can be drawn from the data. Agree catch records on the island are low and the pilot area may have had low numbers to start with.</p> <p>The study only ran for a short period, 6 months and as a result was not long enough to reach any scientifically valid conclusions on mustelid density and behaviour. Adjusting the trap layout to lines and running for a further 12 months is recommended.</p> <p>As the project is moving to an eradication goal the design will need input from eradication specialists.</p>
<p><i>Building capacity within the community to</i></p>	<p>Agree knowledge and data gained from the pilot</p>

<p><i>positively identify and report mustelid sightings</i></p>	<p>study is not wasted, this all helps to build the picture and refine our approach.</p> <p>Public continue to report sightings of mustelids and the Waiheke Collective is building this knowledge into an island wide eradication programme.</p> <p>The new Predator free Waiheke website is building on the advocacy started by the mustelid pilot and HGCT.</p>
<p><i>Although not outlined in the evaluation report, there has been debate around the use of different trap types i.e. DOC 200 vs DOC 250 and single and double set traps, side entry and run through designs.</i></p>	<p>Support and encourage review and robust discussion around trap types. The revised project plan will include recommendation for additional infrastructure including traps. The test of the linear trap system will trial the use of double set run through traps to see if these increase trap catch for biodiversity hot spots. Island wide eradication design will include the review of all eradication techniques available for mustelids and recommend a combination that is most suitable for the Waiheke environment.</p>

- **Next steps**

1. Waiheke Collective to develop a modified project proposal for year 2 of the mustelid project, based on learnings of the 2016/17 pilot study.
 - **Design to be integrated with future island wide eradication plan.**
 - Design to change from 400/400m grid to a linear trap placement system, in line with DOC and Council best practice.
 - RENH funded mustelid control to focus on biodiversity hot spots:
 - o Hekerua Bay area (penguins)
 - o Trig Hill Road/Onetangi (kaka)
 - o Wetlands around Rangihoua (banded rail, spotless crane)
 - o Awaawaroa/ Eco village land (banded rail, spotless crane, Caspian terns, dotterel – this site may drop off trial due to resourcing constraints.
 - Proposal would use a combination of new double set DOC 200 Haines boxes modified to enable run through and use of existing grid traps, which are conventional DOC 200 and 250 traps.
2. Desk top analysis of linear system and initial ground truthing of new project areas. Roll out budget to be refined after this initial work completed.
3. A communications update will be provided to landowners within the original pilot area, to provide a progress report and seek landowners willing to maintain their own traps.
4. Waiheke Collective will oversee the hiring of a project team (coordinator and trapping team) and associated project plan and health and safety plan. Project implementation will take place between Feb 2018 and Feb 2019.