



Mamaku Point  
CONSERVATION RESERVE

# ANNUAL OPERATIONS REPORT

## November 2020



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## Executive Summary

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It will not surprise any reader that 2020 has presented the Trust with plenty of challenges, not least maintaining robust biosecurity during times of Covid-related restrictions, and a drying up of some sources of operational funding.

However, with the tremendous support of our small but perfectly formed team, Antony Simpson, Ernie Mason and Eddie (Ant's fox terrier), together with our wonderful volunteers and financial supporters, we've been able to not only maintain the predator free status of the Reserve, but to also progress several key objectives as outlined in this report.

Our biodiversity highlights this year included the return of at least two breeding pairs of Fiordland crested penguins and initial steps toward the potential establishment of a recovery area for yellow-eyed penguins (hoiho). Disappointingly however, we have not made progress with DOC, iwi or other conservation groups in respect to potential translocations of threatened and endangered species into what remains the only predator-free habitat on Stewart Island proper. We remain focused on seeing the Reserve used as extended habitat and Stewart Island beachhead for species such as tuatara, hoiho, pateke, takahe, kakapo and snipe.

Our ecological restoration plans really kicked off this year, with planting of natives in the Lee Bay creek, co-funded by Environment Southland, and restoration planting of an historic slip on Mamaku Point, funded by Billion Trees Fund. We have also been able to continue our efforts to control gorse and other noxious weeds.

In respect to our education objectives, we were thrilled to welcome back the Queenstown Primary school camp for a 3rd year and have them book in again for 2021. John McGlashan College returned for a 2nd consecutive year and we hosted Maniototo Area School, Tahuna Normal Intermediate, St Gerard's School from Alexandra and Invercargill youth group Number 10 each for the first time. A local Te Reo wananga were also regular visitors to the education centre throughout the year. We were able to complete much needed upgrades to the Horseshoe Bay pedestrian and vehicle tracks, and are excited to have started construction of a new 24 person bunkhouse, which should be ready for the first school camps in 2021.

Ecotourism visitor numbers continue to grow steadily, especially in respect to kiwi spotting at the Lee Bay end of the Reserve.

The Trust received invaluable financial support this year from the DOC Community Fund, Perpetual Guardian Drysdale Trust, Lotteries Environmental & Heritage Fund, Community Organisations Grants Scheme (COGS) and the Earnslaw Family Trust, without which the activities outlined above would not have been possible.



# Background

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## Land

Mamaku Point Conservation Reserve is located 4km north-west of Oban township on the north-eastern coastline of Stewart Island | Rakiura, which is situated 27km off the southern coastline of the South Island, New Zealand | Aotearoa.

The Reserve makes up most of a 172 hectare property encompassing an entire headland comprised of rugged hilly terrain, rewilding grasslands, pristine sandy beaches, streams and some of the oldest native podocarp forest in NZ.

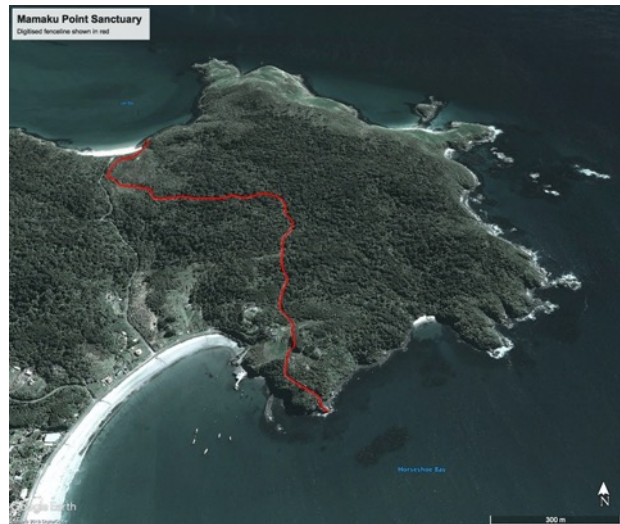
Prior to November 2000 the property was privately owned and managed as a farm by the Turnbull family, with the seaward faces used for sheep and cattle grazing, while the higher inland areas remained as native bush.



*Mamaku Point, early 1980's*

In November 2000 the Dancing Star Foundation purchased the property and set about turning most of it into a biosecurity preserve for native flora and fauna.

Since 2005 the Reserve has been enclosed by a 2.1km long biosecurity fence extending from Horseshoe Bay to Lee Bay (shown in red in the image to the right), preventing the movement of non-native mammals into the Reserve. An extensive biosecurity grid is maintained both inside and outside the fence, and both the fence and the biosecurity grid are remotely monitored using VHF communications to ensure that any biosecurity breaches are detected immediately.



In 2017, the Reserve was purchased by a family trust associated with Roy and Rachel Thompson, who subsequently established the Mamaku Point Conservation Trust in order to engage the wider community in their biodiversity, education and sustainability objectives for the Reserve. The name Mamaku Point is taken from a prominent landmark within the Reserve close to Nathan's Island. Mamaku is the Maori name of the [black tree fern](#) (*Cyathea medullaris*), which are found on the point.

As a result of the comprehensive biosecurity programme, the Reserve has become a thriving habitat to over 127 native species, including at least 26 native bird species, scores of native invertebrate species, and one of the highest concentrations of kiwi for its size.

Located within the Reserve is an environmental education centre, which was originally established by the Forestry Service in the 1970's but closed in 2000, before being reopened in 2018.

## People

The Reserve is leased and managed by the Mamaku Point Conservation Trust, an incorporated [charitable trust](#) and [registered charity](#), the Trustees of which are:

- Professor Philip Seddon (chair)
- Phillip Smith
- Roy Thompson

The primary objectives of the Trust are to:

1. maintain and enhance **biodiversity** within the Reserve;
2. make the Reserve accessible by the public for **conservation education** and eco-tourism activities; and
3. working toward the financial and environmental **sustainability** of the Reserve's operations.

Responsibility for the day to day management of the Reserve rests with our General Manager Antony Simpson, and Biosecurity Ranger Ernie Mason, supported by a large number of wonderful and valued supporters who give their time generously toward achievement of the Trust's objectives, and in particular the following folks:

- **Antony Simpson**, Mamaku Point General Manager, for his tireless commitment to the Reserve and its inhabitants (mammal predators excluded of course);
- **Ernie Mason**, Mamaku Point Biosecurity Ranger, for going above and beyond at every turn;
- **Phillip Smith**, Mamaku Point Trustee, for his sage advice and support;
- **Phil Seddon**, Mamaku Point Trustee, for his technical knowledge and valuable time;
- **Ren, Kev and Jen** from DOC Rakiura for their support and enthusiasm;
- **Jo Ritchie, Bruce Ford and Lania Davis** for their advice and ongoing support;
- **Mark Oster**, Environment Southland Biodiversity Leader for his invaluable advice;
- **Chris Stowe** and **Claire Newell** from Urtica Ecology for their technical expertise;
- **Braydon Moloney**, [www.braydonmoloney.com](http://www.braydonmoloney.com), for his stunning video on Mamaku Point.

Special thanks are also extended to;

- **Department of Conservation Community Fund 2020** for co-funding biosecurity costs;
- **Perpetual Guardian Drysdale Trust** for co-funding toward the new bunkhouse;
- **Lottery Environment & Heritage Fund** for co-funding biosecurity costs;
- **Earnslaw Family Trust** for co-funding operational costs;
- **Community Organisations Grants Scheme (COGS)** for enabling at least two youth groups to visit the Reserve who would not otherwise have the opportunity to do so.

The following report details the objectives, strategies and highlights of our third full year of operation, through to 31 October 2020.



*An unusual snow fall event, Mamaku Point October 2020*



# Biodiversity

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## Objectives

The Trust's primary objective is to conserve and enhance the health and diversity of the native flora and fauna within the Reserve, and specifically to:

- Ensure that the biosecurity of the Reserve is maintained to the best of the Trust's ability;
- Seek opportunities to re-establish native species not currently found within the Reserve.



*Healthy coastal rock pool, Mamaku Point 2020*

## Strategy

The Trust's 2020 flora strategies were to conserve the existing native flora and to help facilitate the rewilding of those areas that were previously cleared for farm grazing.

The previous owners maintained a policy of minimising the removal or destruction of non-native plants such as gorse, macrocarpa and eucalypts. While the Trust understands the reasons for this policy, our strategy is to remove or destroy all non-native plants within the Reserve, to the extent practical, and in particular to eliminate all gorse, macrocarpa and eucalypt trees, Darwin's barberry, gunnera and ragwort.

The Trust's 2020 strategies in respect to fauna were to conserve the existing native fauna, to help grow the populations of the resident species and to seek opportunities to re-establish other absent natives. such as Yellowhead (Mōhua, *Mohoua ochrocephala*) and South Island Saddleback (Tieke, *Philesturnus carunculatus*).

The Trust remains particularly interested in the potential to establish tuatara (*Sphenodon punctatus*) within the Reserve. There is a pressing need to find new locations for the expanding population of captive bred tuatara and it is the Trust's understanding that the Reserve represents a very suitable habitat due to its north facing aspect, abundance of invertebrate populations on which tuatara predominantly prey; including beetles, crickets and spiders, and an absence of the weka.

The ongoing control of non-native mammals is critical to the health of both flora and fauna within the Reserve, and is enforced through a strategy involving three lines of defence:

- The first line of defence is provided by the biosecurity fence. However, as the fence terminates at the high tide mark at each end, it is possible for these mammals to swim or walk around the fence ends at low tide.
- The second line of defence is provided by fenced cells on the Reserve side of each end of the fence. These cells act to contain any rats, cats and possums making it around the fence ends with a high density and diversity of traps within a small space.
- The third line of defence is provided by trapping and baiting throughout the property and immediately outside the biosecurity fence.

In addition to the three lines of defence, we are also actively trapping and baiting for cats, rats and possums on our property outside the biosecurity fence to minimise the pressure on the fence in the first instance. Overlaying the three-lines of defence biosecurity strategy, the Trust maintains the following priorities:

- A zero-tolerance policy in respect to cats within the Reserve. Should cats be sighted, or any sign of cats be detected, the animal(s) will be found and destroyed as a priority.
- Ongoing rat and possum baiting within the Reserve is focused around the fence ends, particularly around the more susceptible Lee Bay end.

The bait stations within the central part of the property will be retained in situ but only activated when required in response to any infestations.

## Highlights

The exotic trees felled around the outdoor education centre in 2018 continue to be processed into firewood, some of which has been donated toward Island fundraising activities.

Considerable effort has been applied over the course of 2019 and 2020 to the eradication of gorse at the Horseshoe Bay end of the Reserve, and almost all of the established gorse in this



location has now been removed. Regrowth is being actively controlled and this work will continue into 2021 and beyond, with the focus also moving toward the Lee Bay end of the Reserve where considerable amounts of gorse were controlled in 2020.

A Billion Trees Fund grant was received in 2019 toward the ecological restoration of 17.84ha of former pasture on the seaward faces of the Reserve. This is a four year project involving the collection of native seedlings within the Reserve and re-planting of these seedlings in the target area.



*Mamaku Point Billion Trees Fund project nursery*

A combination of paid staff and volunteers have been collecting and potting seedlings since late 2019, and in 2020 we started our first planting of the target area, focused initially on a slip on Mamaku Point.

During its third year of operation the Trust has confirmed small breeding populations of Fiordland crested penguins on both the Lee Bay and Horseshoe Bay sides of the Reserve.





We're now working with the Department of Conservation and the Yellow-eyed Penguin Trust to identify potential sites to establish safe breeding habitats for yellow-eyed penguins | hoiho around the Reserve. Initial indications are that there are at least three suitable sites, and we look forward to continuing this work toward a successful establishment of these nationally endangered birds in these areas.

In respect to biosecurity activities, highlights included:

- Eddie, Ant's fox terrier, has become an invaluable member of the team on the Reserve with his rat and possum finding skills;
- The rat incursion experienced in 2019 resulting from the rimu mast event was effectively dealt with, and we are now not finding any material bait take across the bait station network;
- There are currently no indication of possums within the Reserve;
- Nor are there indications of any cats within the Reserve, though feral cats are notoriously wily so we remain on high alert to any signs of incursion;
- We have been searching for a lone Whitetail doe that was in the Reserve earlier in the year, but have not seen any sign of this animal for some time so believe it has most likely left the Reserve around the fence at low tide.
- Overall, we finish this year confident that the Reserve is predator free to all intents and purposes, and we can certainly see this reflected in the health of our forest and bird populations.



# Education

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## Objectives

The Trust's secondary objective is to facilitate education, research and public awareness of the importance of restoring and conserving our native flora and fauna. Specifically, the Trust will:

- Allow access to the Reserve, and accommodation in the education centre, for school parties and youth groups;
- Allow access to the Reserve, and accommodation in the education centre, for scientific and academic researchers;
- Allow access to the Reserve to members of the public, via appointed guides, for general conservation education and experiences.

## Strategy

The Trust's strategy in respect to youth education is to proactively encourage the return of school and youth groups to the Reserve, so that young people can gain first-hand experience and knowledge in respect to the biodiversity of our natural environment free of non-native mammals, and hopefully acquire a lifelong passion for the conservation of the natural environment. The Trust will support such groups by making the Reserve and accommodation facilities accessible to them at a minimal cost.

The Trust's strategy in respect to scientific and academic research is to proactively seek out those tertiary institutions, Government agencies and NGO's who are involved in researching methods of restoring and protecting the biodiversity of New Zealand's natural environment. The Trust will support and assist selected researchers by making the Reserve accessible to them at no cost and by making the accommodation facilities available to them at a relatively low cost.

The Trust seeks to open the Reserve to the local community, domestic visitors and foreign tourists in order to promote a greater awareness and understanding of the biodiversity of our natural environment when freed of non-native mammals. The Trust aims to have a significant percentage of visitors to Stewart Island include a visit to the Reserve by the end of 2022.

## Highlights

In respect to our education objectives, we were thrilled to welcome back the Queenstown Primary school camp for a 3rd year and have them book in again for 2021. John McGlashan College returned for a 2nd consecutive year and we hosted Maniototo Area School, Tahuna Normal Intermediate, St Gerard's School from Alexandra and Invercargill youth group Number 10 each for the first time. A local Te Reo wananga were also regular visitors to the education centre throughout the year. We were able to complete much needed upgrades to the



Horseshoe Bay pedestrian and vehicle tracks, and are excited to have started construction of a new 24 person bunkhouse, which should be ready for the first school camps in 2021.



*Upgraded pedestrian access track*



*Upgraded vehicle access track*



*Foundation preparations for the new bunkhouse*



2020 saw continued scientific and academic work on the Reserve, with Chris Stowe & Clair Newell, from Urtica Ecology, having prepared an Environment Restoration Plan, which is in final draft at the time of this report. This plan will provide essential guidance our restoration activities going forward. Once finalised, the report will be available on our website at [www.mamakupoint.nz/visit-research](http://www.mamakupoint.nz/visit-research).

In respect to public access, the Trust has been pleased to see steady growth in eco-tourism activity on the Reserve over 2020, with Ulva's Guided Walks hosting increasing numbers of visitors for their kiwi spotting walks.



# Sustainability

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## Objectives

The Trust's third major objective is to work toward environmental and financial sustainability in all aspects of its operation. Specifically, this means:

- Minimising the use of non-renewable energy in its daily operations;
- Maximising the generation of renewable energy in its daily operations;
- Minimising the generation of non-recyclable waste and other contamination;
- Achieving financial sustainability by building recurring income streams that are sufficient to cover ongoing biosecurity costs.

## Strategy

The Trust's environment sustainability strategy is to apply best-practise energy use in its operations, including minimising the use of non-renewable energy which is particularly challenging on Stewart Island, given that the local electricity supply remains 100% non-renewable and the Island receives relatively low sunshine hours. The Trust aims to minimise the generation of non-recyclable waste and to ensure that the environment within the Reserve is as pristine as possible.

The biosecurity of a privately-owned conservation reserve such as Mamaku Point is always vulnerable to uncertainty of funding, so the Trust unashamedly strives for financial sustainability. The Trust therefore looks for financial contributions from visitors to the Reserve and proactively seek grants and other donations toward the its biodiversity and education objectives. The Trust aims to be financially self-sustaining by March 2023.

## Highlights

During 2020, our environmental sustainability activity has focused on four areas:

1. cementing the **energy and water efficiency** plans put in place in 2018/2019;
2. the continued **removal of defunct plant, equipment and rubbish** left over from the days when the property was an operating farm;
3. the **replacement of old sleeping facilities with new highly insulated structures** which are extremely energy efficient, and;
4. the **replacement of the historically used rat bait with something that has less bioaccumulation and environmental residue impacts.**

We believe we have reduced the Reserve's electricity consumption to close to the minimum possible at this stage, and have now removed almost all legacy defunct plant, equipment and rubbish from within the Reserve (with the exception of a number of old fence lines on the seaward faces which are now overrun with regenerating bush).



As referenced earlier in this report, we recently purchased two prefabricated structural envelopes from NZ Structural Insulated Panels in Cromwell. These highly insulated panelised structures will replace the old uninsulated main bunkhouse and staff hut, and will provide warm, healthy accommodation for future visitors to the environment education centre.

We have long wanted to move away from the use of brodifacoum-based rat bait to something more humane and with lower environmental accumulation risk. The challenge has been finding a more environmentally acceptable alternative that is at least as effective.

We are very pleased therefore to have made the change to Double Tap during 2020. Double Tap is effective on both rats and possums, offers the potency of a 2nd generation anticoagulant like brodifacoum, but in a faster, more humane way and without the environmental residue concerns. It does this by combining the environmentally friendly features of a 1<sup>st</sup> generation anticoagulant (Diphacinone) with a naturally occurring substance – Vitamin D3 (Cholecalciferol).

Double Tap is metabolised relatively quickly, so it is less likely to bioaccumulate and put our non-target species at risk through secondary poisoning. If a non-target species is exposed, it is expected that they'll void these compounds quickly. Cholecalciferol is also readily metabolised too, and doesn't remain in the environment. Double Tap kills rats and possums faster than brodifacoum where sickness is protracted and time to death is variable. The reduced time to death is not only more humane, it also means a reduction in bait consumed compared to brodifacoum.

In respect to financial sustainability, the Trust has been fortunate to have received a number of grants and donations toward specific projects over the last 12 months, totalling \$129,717, and is grateful to the support of the following organisations in this respect:

- **Department of Conservation Community Fund 2020** for co-funding biosecurity costs;
- **Perpetual Guardian Drysdale Trust** for co-funding toward the new bunkhouse;
- **Lottery Environment & Heritage Fund** for co-funding biosecurity costs;
- **Earnslaw Family Trust** for co-funding operational costs;
- **Community Organisations Grants Scheme (COGS)** for enabling at least two youth groups to visit the Reserve who would not otherwise have the opportunity to do so.

Without the support of these organisations, achievement of the objectives outlined in this report would not be possible, so a huge thank you from all Reserve residents and stakeholders.



**Mamaku Point**  
CONSERVATION RESERVE