



Mamaku Point

CONSERVATION RESERVE

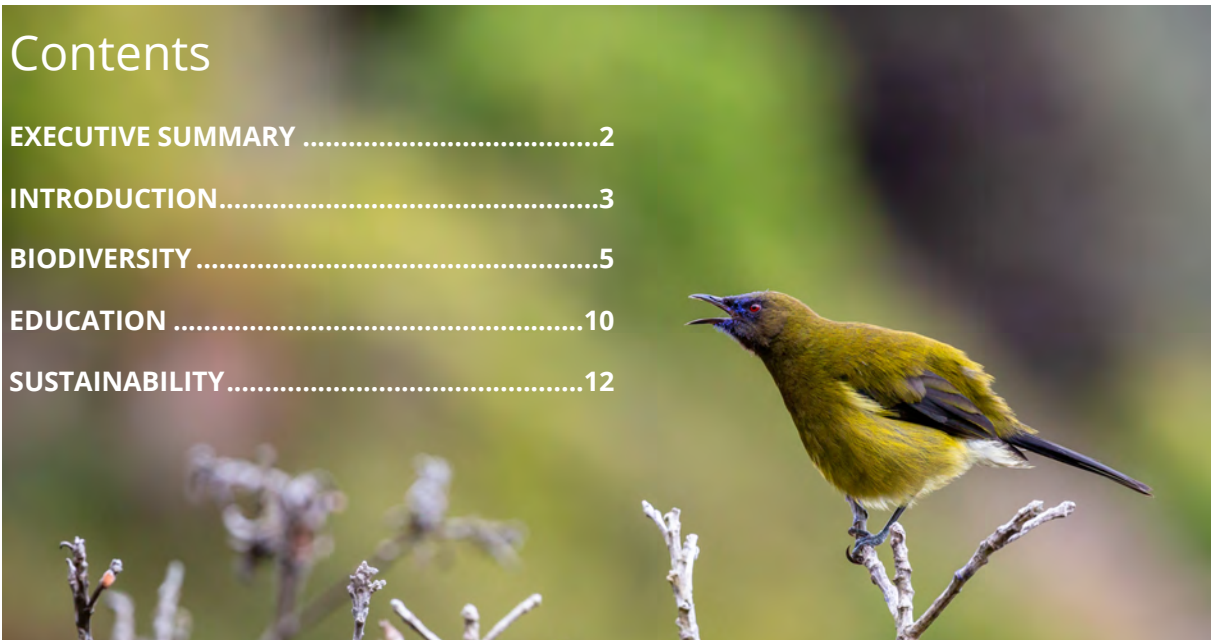
ANNUAL OPERATIONS REPORT

November 2021



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Executive Summary

2021 has been about collecting, nurturing and planting more than 15,000 native trees across the last 18 hectares of rewilding farmland within the reserve, and constructing the new 24-person bunkhouse at the school camp.

These two projects, which are outlined in more detail later in this report, have been huge undertakings for our small organisation and it's important to acknowledge the extent of the challenge that they have presented to our small team of staff and volunteers. A huge thanks to everyone who has contributed to these projects in some way.

These challenges were of course further compounded this year by Covid-19, which has made it increasingly difficult for charitable organisations such as ours to secure grant funding and volunteer assistance.

We're fortunate however to have an extremely dedicated on-the-ground team in Antony Simpson and Ernie Mason, ably supported by Eddie and Miley (Ant's fox terrier team) , together with our valued volunteers and financial supporters, who together have enabled us to maintain the predator controlled status of the reserve, and progress our key projects and objectives.



Introduction

Mamaku Point Conservation Reserve is a special place located on the north-eastern coastline of Rakiura Stewart Island, Aotearoa New Zealand.

The rugged 172-hectare headland contains an extraordinary variety of [flora](#), including some of the oldest native podocarp forest in the country, and is a thriving habitat to over 181 [native species](#), including 26 native bird species, 154 native plant species, long tailed bats, invertebrates, marine mammals, and a thriving population of kiwi.

The reserve is protected by a predator-proof fence that extends across the 2.1km neck of the headland, and an extensive biosecurity grid both inside and outside the predator-proof fence. Both the fence and the biosecurity grid are monitored real-time using a combination of VHF, cellular and satellite communications to ensure that any biosecurity breaches are detected immediately.



Mamaku Point is managed by the Mamaku Point Conservation Trust, an incorporated charitable trust and registered charity, which is focused on:

- **maintaining and enhancing biodiversity within the reserve;**
- **making the reserve accessible by the public for conservation education and eco-tourism activities; and**
- **working toward the financial and environmental sustainability of the reserve's operations.**



Responsibility for the day-to-day operation of the reserve rests with General Manager Antony Simpson, and Biosecurity Ranger Ernie Mason, supported by a large number of supporters who give their time generously toward achievement of the Trust's objectives. We would like to acknowledge and thank the following folk in particular for their contributions over the last year:

- **Phillip Smith** and **Prof. Phil Seddon** for their sage advice, and time, as Trustees;
- **Rachel Thompson**, for her time and perseverance as Funding Manager;
- The many people who volunteered their time and efforts on our big native planting project this year, including **Ange and Tai Simpson, Suz Turner and family**, the [SIRCET](#) team, **Donald Mason, Jim and Trudy Overton, Trek Events, Rachel Thompson**, local volunteers **Thomas and Ian**, and **Jo Ritchie** for her valued advice;
- **Myell Smith** from Myelectrician in Queenstown who enthusiastically volunteered his time and materials for the electrical work on the new bunkhouse;
- The team at **DOC Rakiura** for their continued support and enthusiasm;
- **Brian & Chris Rance** for their help in further developing our flora survey;
- **Bridget Carter** for her help developing our translocation programmes;
- **Jo Tilson** and volunteers for their help with kiwi call counts;

The Trust also received absolutely invaluable support this year from a number of financial supporters, who have been critical to progressing the objectives of the Trust and the individual projects ongoing within the reserve, and to whom we cannot give enough thanks;

- [DOC Community Fund](#) for co-funding our biosecurity and operating costs;
- [MPI One Billion Trees Programme](#) for co-funding our native planting project;
- [Pacific Development & Conservation Trust](#) for co-funding our track maintenance and exotic tree control;
- [WWF - New Zealand, in partnership with the Tindall Foundation](#) for co-funding our ecological restoration plan;
- [Lottery Environment and Heritage Committee](#) for co-funding our biosecurity expenses;
- **Pierre and Ziba de Weck** for funding the purchase of ground temperature data loggers being used to assess the viability of the reserve as a future habitat for tuatara.

Finally the Trust would also like to acknowledge and thank the many businesses who contributed to our projects this year, including:

- **Gus MacAlistair**, and the team from **Fork and Spade** for making the trek to the island to help spot spray for the native planting project;
- **Morgan and Kate Townsend** and team from **Native Solutions** for the hard slog planting out most of the 15,000+ native plants;
- **United Scaffolding** and **Barry Stewart Builders** for lending their scaffolding, which was a huge cost saving for the new bunkhouse build and greatly appreciated;
- **Jarad Voorkamp** and team from **JV Roofing**, for a great job cladding and roofing the new bunkhouse, and who's flexibility was greatly appreciated.



Biodiversity

Objectives

The Trust's primary objective is to conserve and enhance the health and diversity of the native flora and fauna within the reserve.

Strategies

The Trust's 2021 **flora** strategies were to protect existing native flora, continue the control and removal of invasive non-native flora including gorse, macrocarpa and eucalypts, and to assist the rewilding of those areas that were previously cleared for farm grazing.

The Trust's 2021 **fauna** strategies were to protect existing native fauna, continue the control and removal of invasive non-native fauna including cats, rats, possums and deer, and to seek opportunities to re-establish other absent native species.

Highlights

Our biodiversity highlights this year included:

- initial steps toward assessing the feasibility of the reserve as a breeding habitat for **tuatara** (see below for more detail);
- planting of more than 15,000 **native seedlings** across 18 hectares of rewilding grassland (see below for more detail);
- progressing the establishment of a recovery centre for **yellow-eyed penguin | hoiho** within the reserve (see below for more detail);
- the return of at least three breeding pairs of **Fiordland crested penguins**;
- confirmation of a population of **long-tailed bats**, which Davidson-Watts Ecology are in the early stages of investigating further;
- confirmation that Otago University researchers will be undertaking research on **stag beetles** within the reserve in January 2022;
- research on **lizard habitat** within the reserve by an SIT student.

Tuatara

As mentioned previously, the Trust is interested in the potential to establish tuatara within the reserve, as there is a pressing need to find new habitats for tuatara in the face of climate change.

With funding from Pierre and Ziba de Weck the Trust was fortunate to be able to purchase 9 ground temperature data loggers, which Bridget Carter is kindly installing and monitoring in three potential tuatara habitat locations around the reserve so that we can assess the viability of these areas as breeding habitats.



Native planting

Since 2019 a combination of paid staff and volunteers have collected and potted more than 15,000 native seedlings, mostly from within the reserve itself, to be planted across 18 hectares of rewilding former grassland on the seaward faces of the reserve.

In 2020 we started our first planting of the, focused initially on a slip on Mamaku Point. In August 2021 we heli-lifted all the spraying equipment and water supplies out to the target area and undertook the daunting task of spraying 15,000+ planting spots, before heli-lifting all 15,000+ seedlings out to the are in September 2021 for planting that same month, as shown in the photos below:



This was an absolutely huge project for our small organisation, and has relied heavily on funding from the [Ministry for Primary Industries One Billion Trees Programme](#), and just as importantly the commitment and goodwill of a great many people; Antony, Ange and Tai Simpson, Ernie Mason and his brother and mate, Rachel Thompson, Suz Turner and family, the SIRCET team, the Trek Events team, the skilled pilots at Te Anau Helicopters, and so many others in many ways. Thank you all.



Yellow-eyed penguins

In 2020 we started working with the Department of Conservation and Sue Murray from the Yellow-eyed Penguin Trust to explore the feasibility of establishing a recovery centre for yellow-eyed penguins | hoiho within the reserve, and we're excited that the decision was subsequently made to go ahead with this initiative, which the Yellow-eyed Penguin Trust announced in their Nov 21 newsletter:

Mamaku reserve initiative

Following the low numbers of hoiho found during last season's collaborative survey of the Rakiura Stewart Island coastline, the team is determined to do what it can to stem the decline. The hoiho population has declined by a massive 71% over a twelve year period – from 154 breeding pairs in 2008 to just 44 pairs in 2020.

The Yellow-eyed Penguin Trust has secured funding from both the Pacific Development Conservation Trust and a private family trust to establish a rehabilitation facility and purchase equipment to enable us to monitor and assist birds that need help on Rakiura.

The plan is to build capacity on Rakiura to provide support similar to that on the mainland so that underweight birds can be supplementary fed for a short period of time before being released back to the wild. Supplementary feeding of underweight fledglings was trialed at a couple of nest sites in Rakiura over the past two years. This was generously supported by the Department of Conservation and Sanfords who provided smolt from their salmon farm in Big Glory Bay.

The Trust is working closely with the Mamaku Point Conservation Trust to establish a facility at their privately-owned and operated conservation reserve inside a predator-proof fence. The site is relatively close to Oban with good road and sea access, and already has power and water connected. (Mamaku is the black



tree fern and fittingly, a symbol of new life.)

Conservation work on Rakiura is logistically more challenging than on the mainland; some of the hoiho colonies are on small islands or rugged beaches best accessed by boat and then on foot. The rehabilitation centre is within about 20km of several hoiho colonies, so is well placed to provide the much needed support.

Local runaka and whanau groups have been very supportive of this increased programme of monitoring and conservation intervention work with hoiho, particularly through the Kaitiaki Roopu Murihiku Advisory Committee conservation forum and the Whenua Hou committee.

The Trust is hopeful for the future, and look forward to continuing the hard mahi alongside local runaka and whanau, the Department of Conservation and others to ensure the ongoing survival of these precious birds on Rakiura.



Biosecurity

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 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.

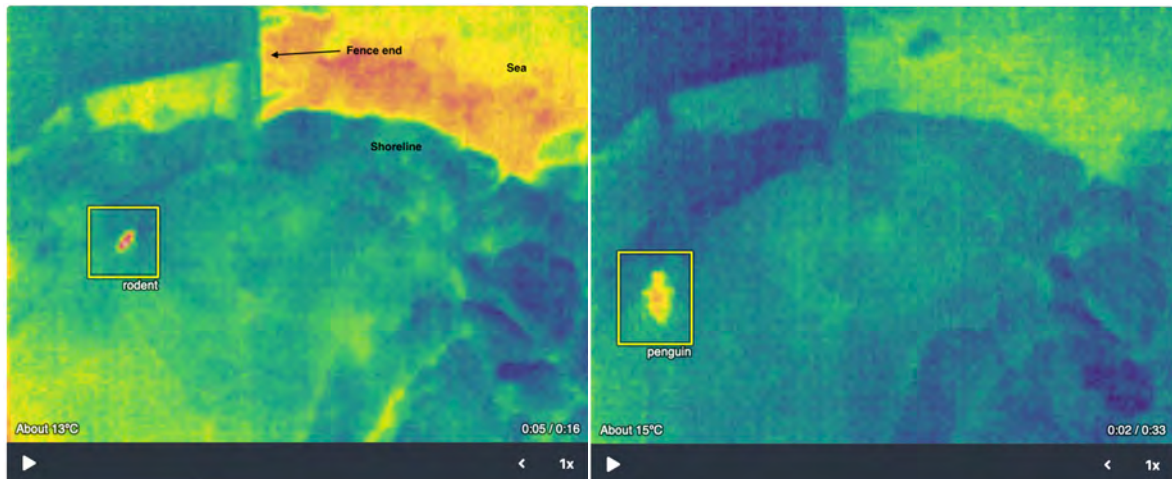
In respect to our biosecurity activities, highlights have included:

- Eddie, Ant's original fox terrier, was joined by Miley, who has already become a key member of our biosecurity team, with their rat, cat and possum finding skills;
- Our network of 280 Celium remote trap monitoring nodes remains a key tool in helping us maintain a cost effective biosecurity network.





- In August we added a thermal camera developed by [The Cacophony Project](#) and equipped with artificial intelligence (AI) to our arsenal of biosecurity weapons, specifically to monitor the Lee Bay end of our predator proof fence. This camera has proven effective at identifying creatures exploring the area between the fence end and low tide mark, some of whom are unwelcome, such as the rat identified on the left below, but others much more so, like the little blue penguin identified on the right below:



- Over the course of this year we've experienced a number of incursions into the reserve by feral cats. Cats are notoriously difficult to remove from bush reserves like Mamaku Point, so it is a credit to Antony and his fox terrier team that there is now no evidence of cats within the reserve at the time of this report.
- A small number of possums have made it around the fence end at Lee Bay, but these have been quickly identified and dealt with, with significant help from the fox terrier team.
- The combination of an intensive network of rat traps outside the fence and around the fence ends, coupled with the network of brodifacoum bait stations within the reserve, remains effective at suppressing rat numbers within the reserve. Low levels of rat activity has been detected within the reserve, particularly focused on the grassland area at Bob's Point, so we're grateful to DOC Rakiura for agreeing to provide 122 traps for this area, which are in the process of being deployed.
- Over the last twelve months three or four deer have made it into the reserve around the Lee Bay fence end. Two were destroyed and the others returned back around the fence end, and there are currently no deer within the reserve.



Education

Objectives

The Trust's second objective is to facilitate education, research and public awareness of the importance of restoring and conserving native flora and fauna.

Strategies

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 supports 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 supports and assists 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.



Highlights

Over the course of the last 12 months approximately 823 people visited the reserve, including school camp groups and kiwi spotting tourists guided by Ulva's Guided Walks.

While this number is much lower than would have been the case without cancellations by some visitors and school camp groups caused by Covid-19, it is nevertheless pleasing that 823 people were able to visit and experience conservation in action on this property, a number that was closer to zero just four years ago.

We were thrilled to be able to welcome back the Queenstown Primary school camp for a 4th year and have them book in again for 2022. John McGlashan College returned for a 3rd consecutive year and we hosted Tahuna Normal Intermediate for a 2nd consecutive year, and they have also booked their 3rd visit.

During the year we undertook the construction of the new 24 person bunkhouse in the school camp, replacing an old structure dating from the '70s (old and new structures shown below).

The new bunkhouse is now awaiting final completion and code compliance certification.

Once the CCC has been issued, the bunks will be installed and the deck completed, which we're hoping to do in the first quarter of 2022.

Installation of the bunks and construction of the deck both require additional funding and voluntary work, so we would love to hear from people or organisations who may be willing to assist with funding or voluntary efforts!





Sustainability

Objectives

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

Strategies

The Trust's **environmental 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 2021, our environmental sustainability activity has focused on four areas:

1. cementing the **energy and water efficiency** plans put in place previously;
2. the continued **removal of defunct plant, equipment and rubbish** left over from the days when the property was an operating farm, which is now almost complete;
3. the **replacement of old sleeping facilities with the new highly insulated bunkhouse** which will be extremely energy efficient.

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 and last year reported that we were excited to be replacing brodifacoum-based rat bait with Double Tap, a 2nd generation anticoagulant. Unfortunately we found that Double Tap was not nearly as effective as brodifacoum-based rat bait, and have had to revert to this type of bait. We will keep searching!

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 \$166,001, and is grateful to the support of the organisations acknowledged in the Introduction section.

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.