The HALO PROJECT

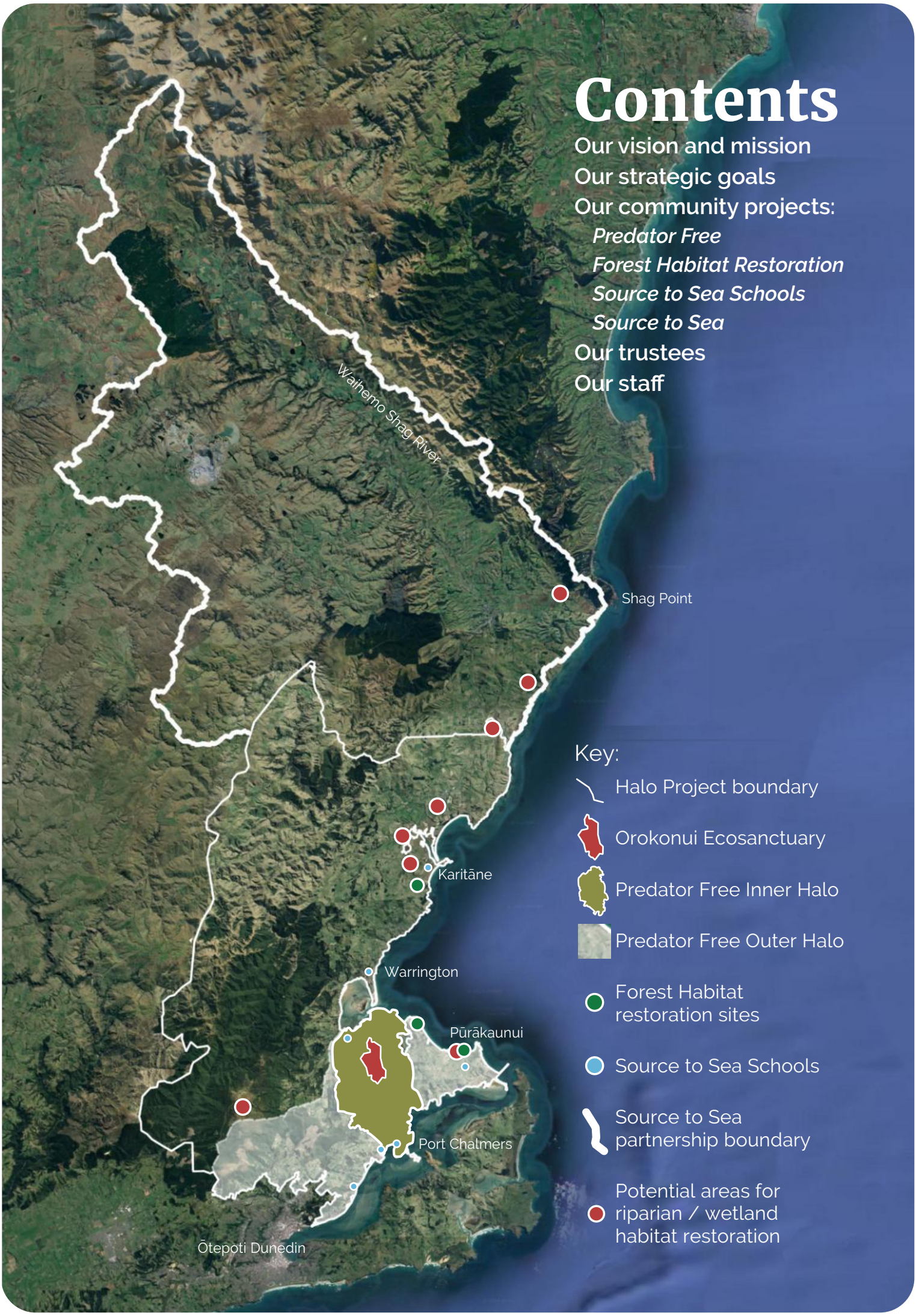
Beyond Orokonui

2019-2021 Review

April 2021

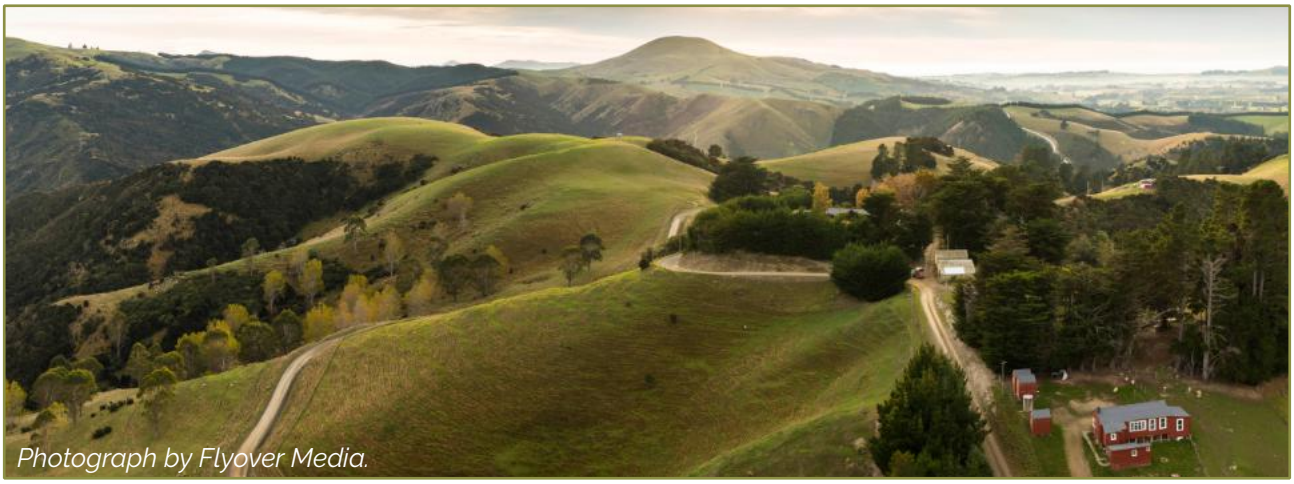
Landscape Connections Trust

Contents



Our Vision

From Silver Peaks to sea, communities and nature thriving in balance.



Photograph by Flyover Media.

Our Mission

We aim to inspire and work with our communities to enhance, protect and connect with this landscape, by:

- Protecting and improving the ecological, recreational, aesthetic and amenity values of the whenua;
- Restoring peoples' connection with the land and with nature through education and practical involvement with ecological restoration initiatives;
- Restoring ecological processes and optimising ecosystem services by improving natural connectivity in the landscape;
- Working with partners such as schools, community groups, landowners, land managers, local and national agencies and non-governmental organisations to achieve the aims of the trust, and to facilitate an improved working relationship between these partners; and
- Promoting the application of best land management practices to maximise economic production, community benefit and environmental values.

Photograph by Flyover Media.

Our Strategic Goals

We are a grass-roots community organisation that was initially established in 2009 to create healthy landscapes that support resilient communities.

Leadership

Inspiring transformational change for increased landscape resilience

Community Action

Working with our community to be kaitiaki of this landscape

Science & Research

Collaborating with science providers to fill our knowledge gaps

Community Education

Building and sharing resources to expand our collective knowledge

Partnerships

Working in partnership with our community, our iwi and our funders

Governance

Operating at the highest standards of governance and delivery

In 2013, we held a forum to listen to the residents and communities in the West Harbour and Blueskin area. Their concerns, voiced during a thorough community consultation process, included the decline of water quality and quality of kaimoana, the vulnerability of low-lying settlements to flooding and sea level rise, and a need to better improve the habitat and biodiversity of this area.

We addressed these and other landscape-scale issues in our management strategy[1] for the restoration and enhancement of the 55,000 ha landscape north of Dunedin. The development of the strategy was guided by a 10-member advisory group including representatives of the Department of Conservation, Otago Natural History Trust, Kati Huirapa Rūnaka ki Puketeraki, local landowners and other interested individuals.

Our strategic goals determine how we work with our communities to enhance, protect and connect with this landscape.

The Predator Free Dunedin initiative was launched in October 2018, backed by 20 organisations, with the Landscape Connections Trust taking responsibility for delivery of the predator control work across 12,500 ha north of Dunedin, surrounding Orokonui Ecosanctuary. This has provided the funding to employ a small team to manage predator control supporting the ambitions of our communities.

In 2020, our application for 'Covid-19 Government Response' funding for freshwater and forest habitat restoration was successful. Allowing us to employ a manager and small team to work with landowners to restore and connect habitat, and improve freshwater values.

The Trust, with its seven volunteer trustees, now oversees three primary work programmes: Predator Free, Forest Habitat Restoration, and Source to Sea Freshwater Enhancement - each inspiring action through education, operational delivery, research and community partnerships.

A heartfelt note of gratitude is extended to my fellow Trustees, past and present, for their long hours, focus and passion for conservation and community resilience.

Dave Sharp, Landscape Connections Trust Chairperson

[1] *A community strategy for the enhancement of Dunedin's North Coast and the East Otago environment*. Beyond Orokonui – Landscape Connections Trust, 2015.

Photograph by Andy Thompson.

Our Community Projects

Since 2018 and our partnership with Predator Free Dunedin, the Halo Project is going from strength to strength as the team expands, volunteer numbers grow and we engage our communities with our work programmes.

Volunteers are at the heart of our challenging, work to help make Ōtepoti Dunedin predator free by 2050. Over 300 locals are checking traps, repairing and building trap boxes, clearing trap lines, monitoring wildlife, planting trees, doing mailouts, entering data, and providing governance.

Our Forest Habitat Restoration programme has helped landowners plan and fund restoration work on their farms, and we have two new publications which walk people through the process of planning and implementing habitat restoration on their properties[2].

We receive a lot of positive feedback for our Source to Sea Schools education programme. This is a unique cross-curriculum learning experience for students in our local schools, where they explore the characteristics and workings of their freshwater catchment and local waterway. Source to Sea kids love the outdoors and nature, getting their feet wet, and are naturally curious and caring.

Source to Sea is our newest programme, initiated in 2020, following a successful bid for Covid-19 Government Response funding. Alongside landowners we are working hard to ensure that we will have the biggest impact on improving freshwater and forest habitat, as well as providing education, training and employment opportunities for local people.

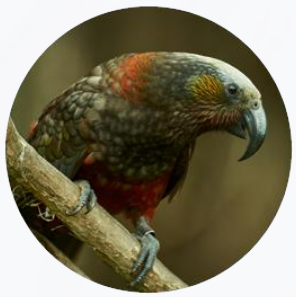
We now have a solid body of work before us, helping residents and landowners enhance, protect and connect with this landscape.

It is essential we maintain our programmes and team as we continue to work with more volunteers and landowners to restore forest, freshwater and coastal habitats and enhance the habitats we already have by making them predator free.

I'd like to extend a sincere note of thanks to our project partners and funders for your ongoing support of the Halo Project. With your support, we know we are providing much-needed services.

I'd also like to thank all of our community supporters and volunteers, who provide so much of the energy and drive to deliver these projects. Your passion and commitment to enhancing the resilience of our landscape is inspiring and motivating for me, and for our team.

Rhys Millar, The Halo Project Director



PREDATOR FREE

FOREST HABITAT RESTORATION

SOURCE TO SEA SCHOOLS

SOURCE TO SEA

[2] *A planning guide to native forest restoration for landowners with native forest remnants*, The Halo Project, 2020; and *Forest restoration planning and planting guide for landowners in the Halo Project area*, The Halo Project, 2020.

Predator Free

Predator control is fundamental to both protecting wildlife and habitat, making habitat safer for wildlife to thrive. It is helping connect and engage communities with nature and is contributing to the economic wellbeing of our farmers.

The Halo Project's Predator Free team deliver possum and stoat operations as a Delivery Partner of Predator Free Dunedin. Funding from Predator Free 2050 Ltd, ORC and DCC ensures we can meet predator control targets and operational milestones until 2023 for these two target species.

Possums not only pose a threat to wildlife, vegetation and gardens, they pose a health risk to people and to stock. Possums are a major vector of bovine tuberculosis (TB), so when the disease was discovered in Dunedin's cattle and deer herds in 2015, OSPRI Ltd started a possum control programme to eradicate the disease.

OSPRI's TBfree work across nearly 12,500 ha of the Halo Project area provided the initial possum population 'knockdown' on a landscape scale. We partnered with them to maximise the benefit by working in the residential areas, engaging landowners and recruiting volunteers to trap in backyards and local reserves. Working alongside rural possum control, backyard trapping reduces the area that possums and rats can take refuge in, improving the effectiveness of control across the landscape.

"The scale we are working at and the level of control we are achieving would not be possible without the commitment of our volunteers,"
Jonah Kitto-Verhoef, Predator Free Project Manager.

Community Action

Community & backyard trapping

Halo's community and backyard trapping programme began in February 2018, starting in the coastal communities closest to the ecosanctuary - Sawyers Bay, Port Chalmers, Waitati, Doctors Point, Pūrākaunui, Osborne, including conservation land and reserves. We currently have 142 'backyard trappers' participating in predator control at home - a clear acknowledgment that this is a grass-roots programme with a shared vision.

Recent expansion of the programme into West Harbour, from Roseneath to Ravensbourne, means we are supporting more communities to protect their patch from predators. These residents can protect their pets and chickens, fruit trees and gardens, keep rainwater supplies clean, and allow native birds and lizards to thrive.

"We're recognised as the go-to people for help with predator control. We get a lot of positive feedback. Residents want to get their neighbours trapping too."
Sophie Bond, Predator Free Project Coordinator.

Photograph by Craig McKenzie.

Partnerships

Possum population knockdown achieved across the landscape

OSPRI's contractors have removed more than 20,000 possums from 12,500 ha, and succession planning is well underway to maintain a low possum density.

We recently trialled self-resetting AT220 possum and rat traps over a 10-week period in summer. The trial, in partnership with Orokonui Ecosanctuary and the University of Otago, was designed to address several practical questions including the safety of this low-maintenance trap in the presence of inquisitive kākā. The study determined the traps are likely to pose a low risk to kākā, at least during summer (the season the trial was conducted).

In light of these results, the AT220 remains one of our currently preferred tools to use in a low-input programme to continue to suppress possums across the landscape. Our aim is to have these traps deployed across the Heyward Point Sector, as a larger-scale trial, in a low-density grid of one per 18 ha. The medium-term goal is to achieve full coverage of the 12,500 ha Predator Free area.

Self resetting AT220 possum/ rat trap by NZ Auto trap.

Leadership

Stoats controlled across the Halo

Goodnature self resetting A24 traps for rats and stoats.

A dense grid of around 200 self-resetting Goodnature A24 traps was established in March 2020, centred on Mihiwaka–one of the most important habitats for wildlife immediately outside the ecosanctuary. With one trap per hectare, rats and stoats are controlled to low densities protecting the reintroduced South Island robin, kākā and other wildlife.

Networks of trap lines of DOC200 and DOC150 traps, set up and maintained by staff and volunteers, also provide localised rat control and stoat control across much of the Halo area.

With 1,200 stoat traps in place across the landscape, and a further 200 remaining to deploy across Mt Cargill and Flagstaff, we will have complete coverage of our Predator Free Halo with, on average, one trap per 10.5 ha.

Science and Research

Outcome monitoring shows the results we are working for

We monitor sites for the presence of South Island robins spilling over from Orokonui and vulnerable to rats and stoats. Monitoring robins also gives us a better idea of where to target predator control to benefit them.

Southern grass skink in an artificial retreat. Each summer, with the help of volunteers, we monitor nine lines of 20 retreats.

The most recent survey of five robin sites (in 2020) showed that robin are now present at some sites over multiple years and are likely increasing in number, suggesting predator control efforts are benefiting robin populations. Despite robin not being detected in seven new baseline data collection sites, we have numerous reports of people seeing them in many locations outside Orokonui Ecosanctuary, including Graham's Bush, Mihiwaka and Doctors Point. Public reports are important and contribute to our knowledge of robin dispersal and distribution.

A robust lizard monitoring programme was established in 2017 with the help of the Department of Conservation (DOC). A report on the first three years of data was published recently[3], showing more lizards were observed, per visit, along the monitoring lines in the Inner Halo, than Outer Halo lines. Stoat trapping, the presence of good habitat and dispersal of juvenile lizards from the ecosanctuary are likely to be benefitting lizard populations in the Inner Halo.

Community Education

What are we doing about cats?

Cats prey on native birds, lizards and insects and are widespread and abundant across our landscape, as recorded in our camera trap trial. For owners of domestic cats, it is important to be responsible and ensure companion cats are neutered, microchipped, well fed and kept indoors (especially overnight, including dawn and dusk).

In follow up to our 'How Safe Is My Cat?' in-school study[4], we've been promoting a cat microchipping programme. We have microchips and registration forms for the NZ Companion Animal Register to give away for companion cats within the Halo Project area. We continue to work with Otago Polytechnic and now Vetlife Waikouaiti to increase the ratio of microchipped and registered cats in homes.

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[3] *Halo Project Lizard Monitoring*, 2020, by Sophie Penniket.

[4] View the video with the findings of the 'How Safe Is My Cat?' study (funded by Curious Minds) online at www.haloproject.org.nz/resources.

Community Education

Sharing what we learn

In addition to community engagement and training our volunteers, we produced the 'Community-Based Urban Predator Control Toolbox'. It's an instruction manual with templates, best practice guidelines and resources for people wanting to establish predator control in urban areas and is available online on our resources page. It draws from the Halo Project's experience in establishing urban predator control in Port Chalmers and Sawyers Bay.

The 'Community-Based Urban Predator Control Toolbox' available online at www.haloproject.org.nz/resources.

Science and Research

Little blue penguin monitoring

Twice each year, with the help of volunteers, we monitor little blue penguin sites at Doctors Point and Long Beach. Stoat and rat traps guard these sites and are helping maintain a stable number of birds.

Science and Research

Monitoring shows the effectiveness of control

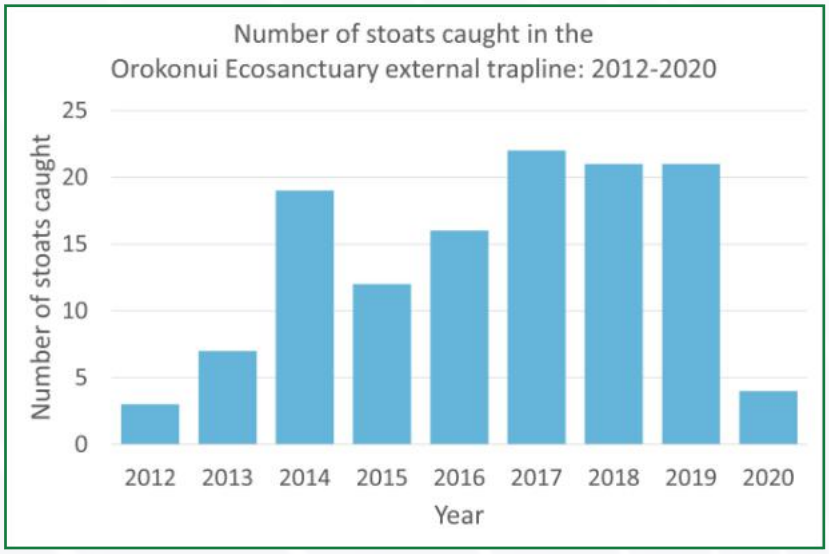
We monitor the effectiveness of predator control by sampling predator population density ('result monitoring') and by sampling the population of the native species we're working to protect ('outcome monitoring').

Forest canopy health was shown to have improved in a resurvey of 11 photopoint sites and 54 māhoe and kotukutuku/tree fuchsias around Mihiwaka and Pigeon Flat. The initial survey was conducted four years prior, at the start of OSPRI's possum control operation. Wax tag result monitoring in those areas showed possums to be at "low to very low levels".

Every year, we run eleven permanent lines of tracking tunnels in different habitats to monitor the abundance of rats. Signs are good: We have seen lower rat tracking rates at sites with active rat control.

Stoats are much harder to monitor. They shy away from entering new objects, including tracking tunnels and traps, and are hard to detect - even with cameras. Instead, we use trap kill data as a relative measure of the project's effectiveness. At this early stage of control, we cannot determine any patterns to stoat captures, other than that stoats are widespread across the landscape, and that more stoats are caught in December when juveniles disperse from their dens.

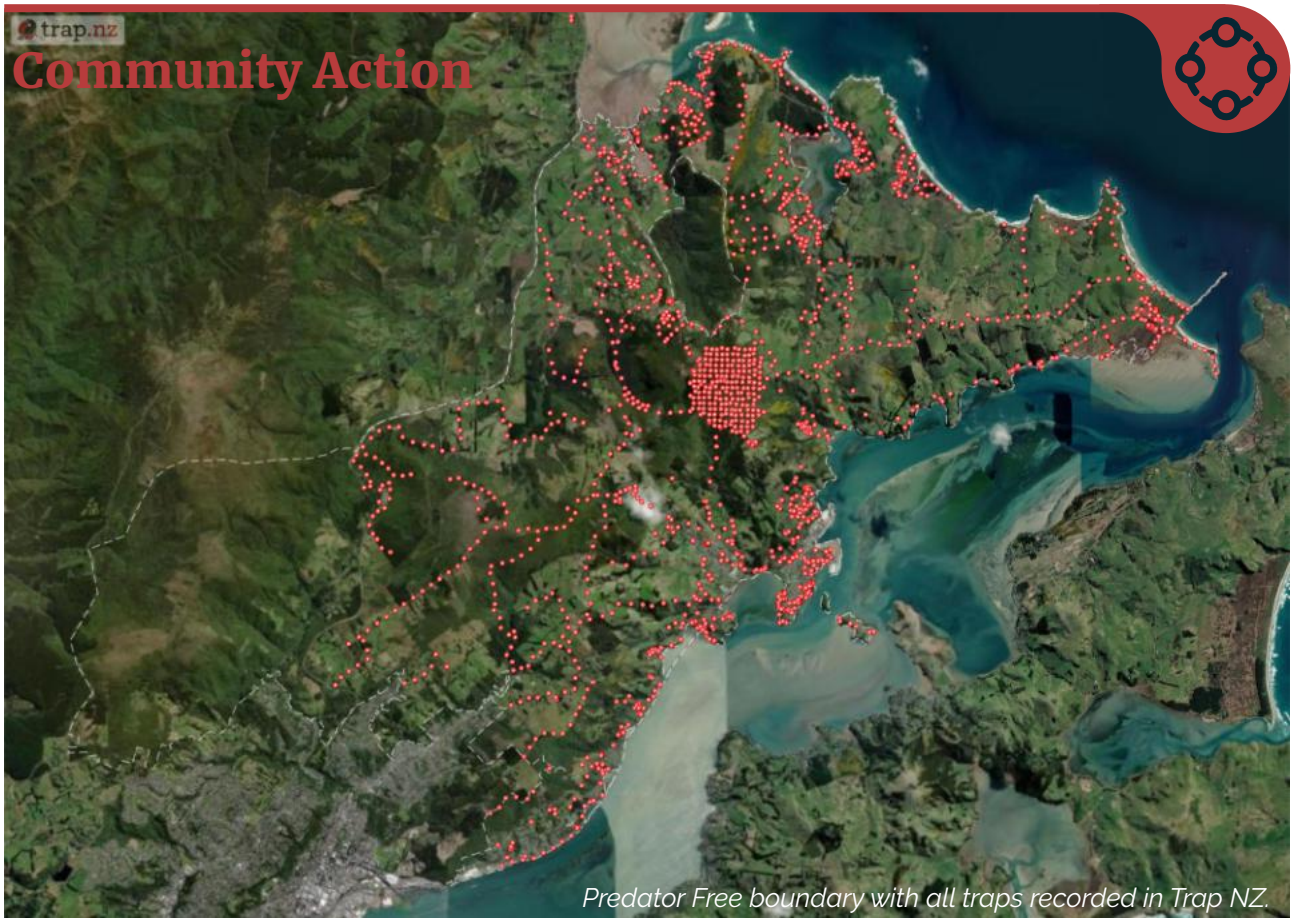
Encouragingly, last year Orokonui Ecosanctuary recorded a significant decline in stoat captures outside the fence and attribute this, in part, to our trapping programme. Orokonui's stoat trap line is the longest running in the area, using the same bait and trap sites. While aware that "one year doesn't make a trend" – the result supports Manaaki Whenua's research showing that, using our current trap layout and density, we would be removing over 90% of the stoats. Ongoing control is needed to maintain low numbers and counter dispersal and immigration.



Graph showing the number of stoats caught in the external trapline
Courtesy of Orokonui Ecosanctuary.

"For the first time since Orokonui Ecosanctuary started trapping outside of the fence, the stoat capture has steeply declined with only four stoats being caught in 2020. The main contributing factor to this would most likely be the Halo Project's best practice stoat control that now surrounds Orokonui. This is great news, not only for the potential benefits to biodiversity but also that the threat of stoats at our fence has been much reduced."
Elton Smith, Conservation Manager, Orokonui Ecosanctuary.

Community Action



Predator Free boundary with all traps recorded in Trap NZ.

Partnerships

We thank our funders for their support

The Halo team enjoys connecting with all the groups and individuals across our rohe who play a part in protecting wildlife and habitat. We value our partnerships and our volunteers for all their contributions of time and expertise.

BAY RD

ZEAGOLD QUALITY EGGS

BLUESKIN NURSERIES & CAFE

City Forests

Department of Conservation Te Papa Atawhai

OSPRI

Predator Free Dunedin

PORT OTAGO

Lottery Grants Board Te Puna Tahua LOTTO FUNDS FOR YOUR COMMUNITY

Birds New Zealand

PREDATOR FREE 2050 kia uru ora, return to life

DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

Otago Regional Council

Halo Dashboard

2019-2021 we have removed:

RATS	1899
POSSUMS	1078
HEDGEHOGS	887
MICE	315
STOATS	320
WEASELS	110
FERRETS	76

Total #: **4715**

Total # traps: **2028**

Forest Habitat Restoration

We work with landowners and volunteers to integrate biodiversity across this landscape.

Since 2019, we have been working with the owners of rural coastal properties to develop forest habitat restoration plans, secure funding and get plants in the ground. With successful funding applications, we've been able to help landowners get the work underway. Halo volunteers enjoy the work, the views from these stunning locations and the feed that follows.

Community Action

A landowner's field day

We combined one of our three planting days with a landowner's field day on Potato Point, hosted by the property owner.

There was a fantastic turnout for the planting day: almost reaching the Covid crowd limit of 100 volunteers. Close to forty locals stayed afterwards to hear about how the Halo Project works with landowners to create and implement forest restoration plans for properties around the coast. Equally important, landowners heard from representatives of two local funding providers – Dunedin City Council's Biodiversity Fund and the One Billion Trees fund.

Volunteers at Potato Point planting day.

Photograph by Flyover Media.

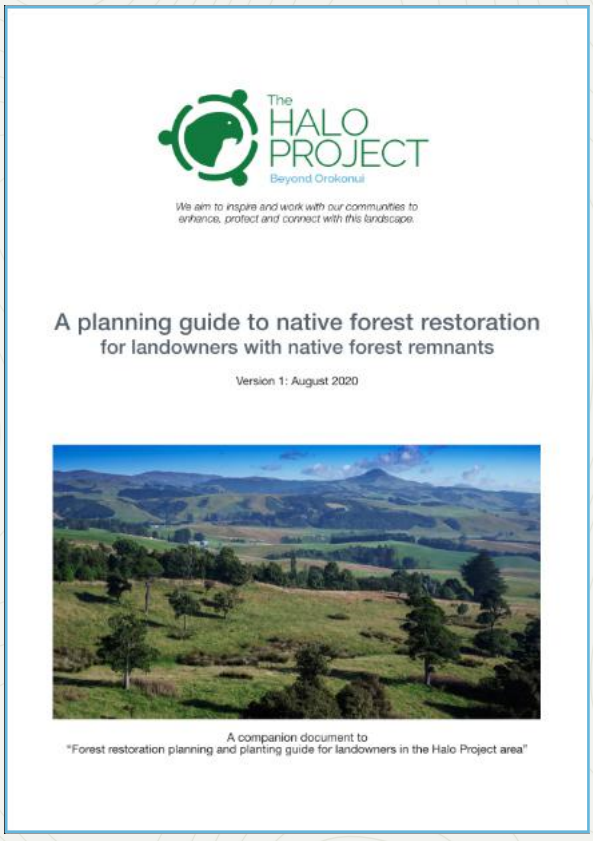
Community Education

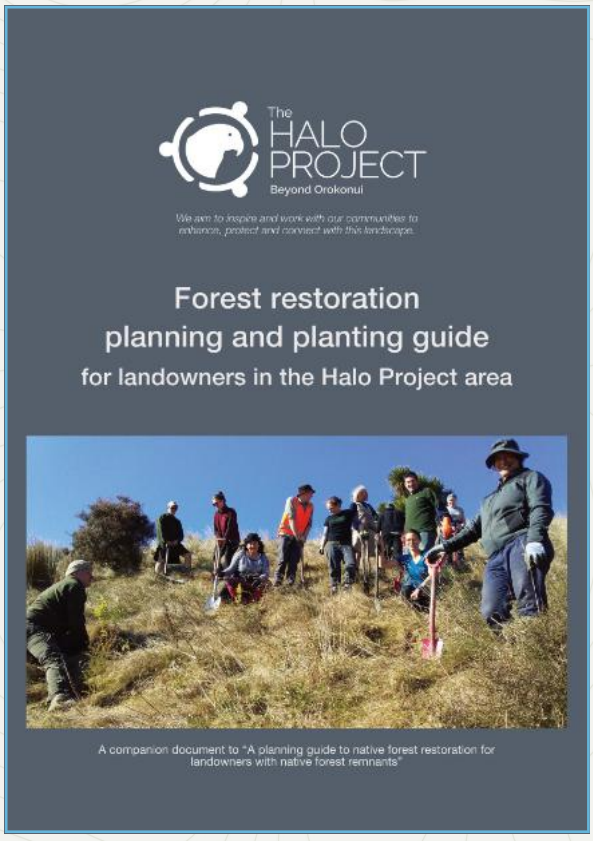
Practical guides for landowners

We have produced two guides for landowners in the Halo Project rohe.

'A planning guide to native forest restoration' helps landowners with patches of bush, remnant tree-lands or regenerating kānuka to develop their own restoration or management plan for their property.

The 'Forest restoration planning and planting guide' compliments the planning guide with its habitat descriptions and plant species lists for our local environs. The planting guide is suitable for smaller landholders who know where they want to plant natives, and want to use ecologically suitable species.

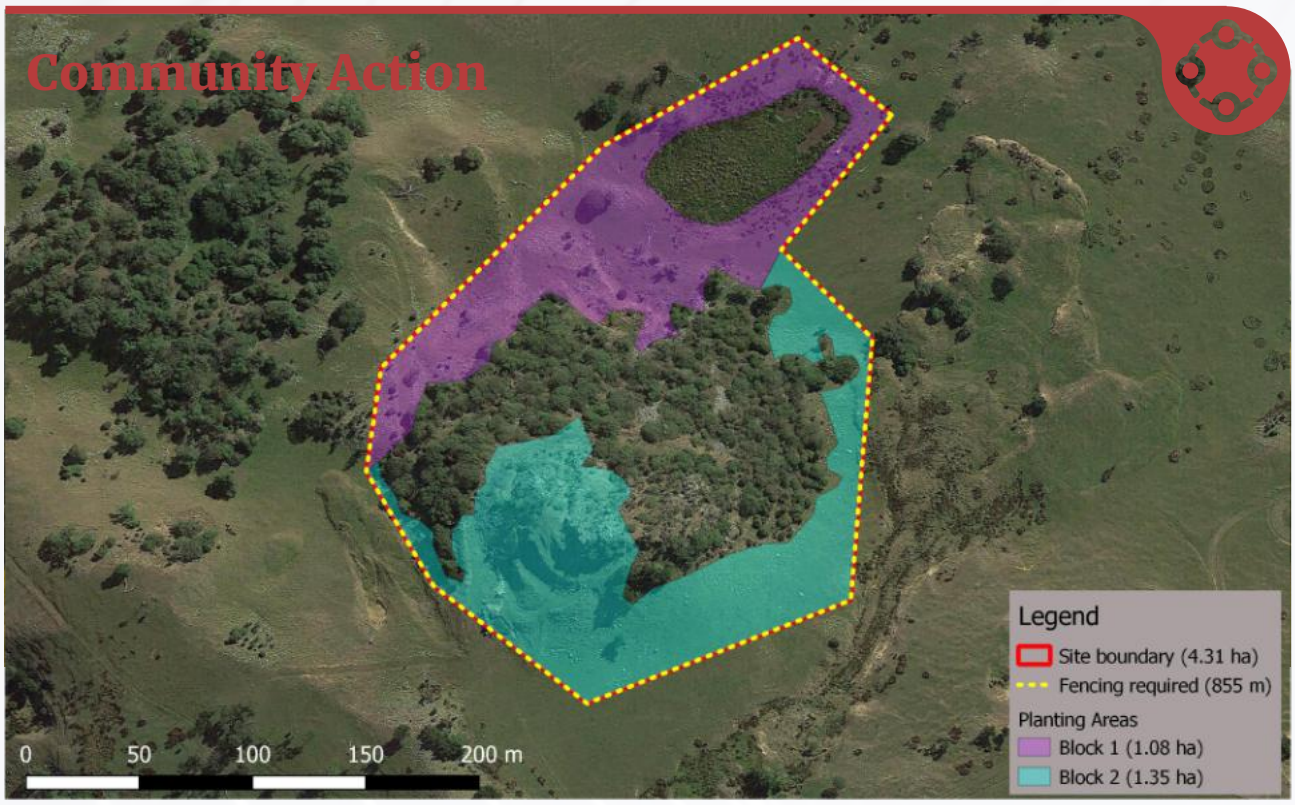




The two new guides for forest restoration planning and planting. Both guides are available in hard copy and online at www.haloproject.org.nz.

These guides are highly relevant to farmers and other rural landowners now, as reforestation and riparian planting become central to achieve regional and national climate change goals. For the Halo Project, the idea that forest restoration must coincide with economic land use is at the heart of our work, as we strive to create healthy landscapes that support resilient communities.

The guides meet the Trust's aims to protect and improve the ecological, recreational, aesthetic and amenity values of land in Aotearoa, to provide advice, and to promote the application of best land management practices.



Map showing restoration site in Karitāne

Restorative action: Karitāne

Nikki Penno putting a guard around newly planted kōwhai.

Ohineahi (Māori Peak), near Karitāne, is a partially forested 240 m rocky outcrop and a prominent feature in a pastoral landscape dotted with remnant forest, scrub and wetland. With first-hand knowledge of the bush being much thicker 40 years ago, the Penno's want to maintain birdlife, bush aesthetics and forest integrity longterm, at the same time as benefitting stock health and management. We worked with the Penno's to develop a restoration plan and made successful funding applications to cover the costs of fencing and plants.

There are several sizeable patches of native forest vegetation on the property, as well as large areas of coastal 'tree-land' with kōwhai, fragrant tree daisy and narrow-leaved lacebark, and some wetlands. Forest patches are mostly regenerating kānuka or kōwhai and broadleaf dominated. At least nine native forest bird species visit the property. Restoring and enhancing forest habitat will have significant benefits for a wide range of indigenous birds and invertebrates.

The restoration plan includes planting rare and threatened native plants of the East Otago region, and plenty of kānuka and broadleaf forest species, providing high quality habitats for indigenous forest and wetland fauna and flora. In September 2020, with a fence installed, Karitāne residents, students and our Halo community joined us to plant 700 trees, take in the view and enjoy the kai. Another day like this is planned for 2021.

Map showing restoration sites in Pūrākaunui. Inset, Jon Fergus unloads plants.

Dry, steep and stunning: Pūrākaunui

Jon Fergus has been working hard to establish plantings on 5 ha of his distinctively domed headland farm on Potato Point.

When we started working with him to create a restoration plan he was already restoring kōwhai-dominated tree-land around the house. Within several years of planting, he'd noticed a significant increase in birds using the site, and natural regeneration of native trees and shrubs.

Viewing habitat restoration as an ongoing process, the next site for restoration was 1.5 ha of coastal scrub dispersed with native trees, weeds and rank pasture - valuable for birds, not so much for farming. In August 2020, once fences were in place, volunteers (including many local residents) helped us plant the first 700 kōwhai, ngaio and kohuhu. Next, there's the adjacent 4 ha of retired pasture to be restored to coastal forest with a further 3000 trees.

Partnerships

We thank our funders for their support

Thanks to Trees That Count and Te Uru Rākau One Billion Trees for helping fund forest restoration on private land. Our work is supported with funding from the Department of Conservation and Dunedin City Council.

Department of Conservation
Te Papa Atawhai

DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

TREES THAT COUNT
TE RAHI O TĀNE

Te Uru Rākau
Forestry New Zealand

Source to Sea Schools

Healthy indigenous biodiversity is dependent on healthy surface and groundwater systems. The Halo Project supports communities to look after their water ways

Community Education

Source to Sea Schools education programme

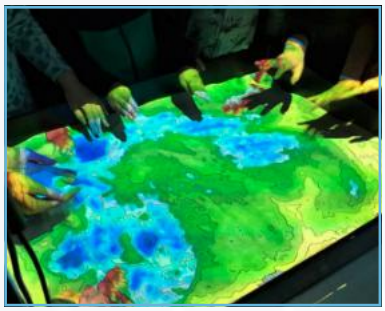
Our local schools are gaining an understanding of their local water catchment, its history and values (recreational, productive and biodiversity), its health, and threats to its health. What's more, students are making action plans to improve their awa, monitor its health and share what they've learned.

This programme, running since 2019, is part of the Trust's strategy to support holistic approaches to healthy water catchments, in response to the concerns of local communities and residents about the decline of water quality, quality of kaimoana, and a need to understand the impacts of land use on the marine environment.

The programme uses a cross-curriculum enquiry model, drawing on science, maths, geography and history. With enthusiasm from our schools' principals and staff, we have worked closely with them to deliver a tailor-made programme for classes of 9-11 year olds in seven schools, reaching 220 students.

Kids love the hands-on activities. They explored the source of their awa and surrounding landuse and history, to get a feel for their catchment and to spark questions.

In a partnership with the University of Otago's School of Surveying, the use of cutting-edge 3D GIS technology brings maths and geography to life for students. Size, slope, vegetation change over time and the interrelatedness of these catchment characteristics has greater meaning when you can manipulate them yourself!



Students made observations and measurements of the physical characteristics of the stream and banks at their study site, to understand the nature and threats to their awa, downstream and close to home. They measured nitrate and phosphate levels, pH, temperature, dissolved oxygen, conductivity/salinity, algae and vegetation cover using professional-quality instruments and methods. But, getting their hands wet exploring streambeds, netting insects, catching fish, eels and kōura (freshwater crayfish) was the best part of the programme for most students. Closely followed by the lab session with microscopes to identify the creatures they had collected.

Students learnt about the macro invertebrate water quality index, based on the different invertebrates that can survive under different water quality conditions. By combining their index rating with their chemical measures of water quality, they not only qualified their stream's health with an overall rating between A+ and F, but got a good grasp on the impacts of different chemicals (including pollutants) on life in the stream.

With a new understanding of how all factors are interrelated, students developed action plans for each catchment area with recommendations that include riparian planting, further water quality monitoring, rubbish removal and creation of a walking track to enjoy the creek. Students at the seven schools have all shared their learning journey, findings and action plans with their school communities.

Partnerships

We thank our funders for their support

The programme has been possible only with funding from Curious Minds Participatory Science Platform, Dunedin City Council's Te Ao Tūroa fund and the Hugo Trust. We also want to acknowledge the significant in-kind support from scientists and educators from Kāti Huirapa Rūnaka ki Puketeraki and the University of Otago. Thanks to Claire Concannon for photographs.

Source to Sea

We help landowners protect and restore waterways, wetlands and forest habitat, to improve freshwater and forest habitat values.

Community Action

Forest, riparian and wetland habitat restoration

We are working with landowners to fence, plant and protect waterways, wetlands and forest habitats in places where protection will have the biggest impact on improving freshwater and forest values.

Source to Sea is a cooperative project where our team works alongside landowners to achieve agreed restoration goals, in strategic locations.

Fencing supplies on their way to Kaikai Beach photograph by Nick Terry.

Source to Sea Project Manager, Jennifer Lawn, with fencing contractor, Nick Terry, marking a new fence to connect habitat at Whareakeake.

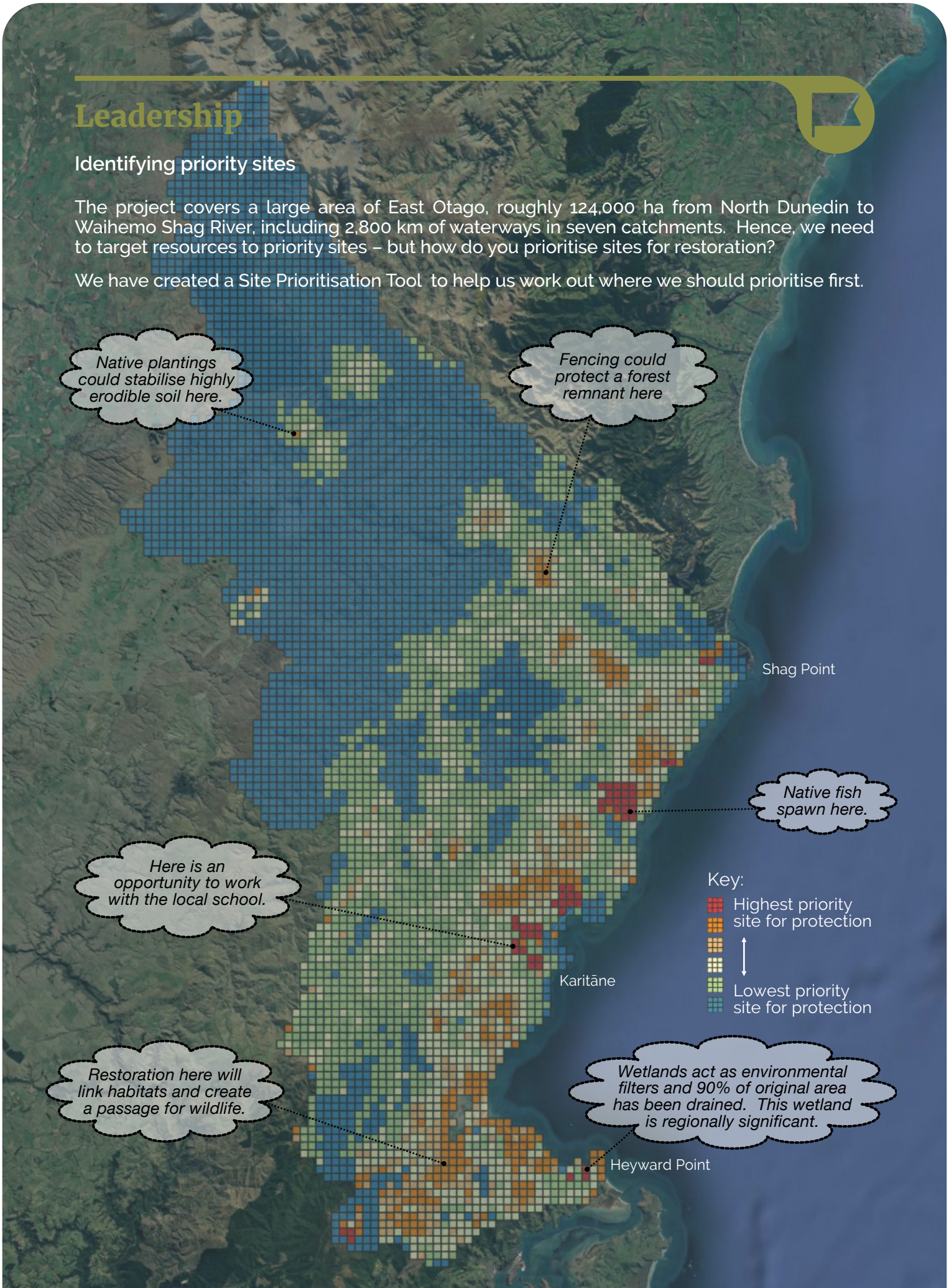
A regionally significant wetland, Kaikai, drone photograph by Flyover Media.

Leadership

Identifying priority sites

The project covers a large area of East Otago, roughly 124,000 ha from North Dunedin to Waihemo Shag River, including 2,800 km of waterways in seven catchments. Hence, we need to target resources to priority sites – but how do you prioritise sites for restoration?

We have created a Site Prioritisation Tool to help us work out where we should prioritise first.



Map produced by The Site Prioritisation Tool, with examples of the different values our Source to Sea project aims to protect or improve.

Leadership

The Site Prioritisation Tool

Decisions about where we work and how we co-fund the project are based on seven guiding principles:

1. Connecting habitat benefits biodiversity
2. Restoring an entire catchment is more valuable than isolated sites
3. Restoring visible sites aids education and advocacy
4. Restoring sites of importance to Māori aligns with our kaupapa
5. Peoples' previous restoration efforts should be rewarded
6. Formal protection of sites should be encouraged
7. Wetlands and biodiversity should be promoted at all times.

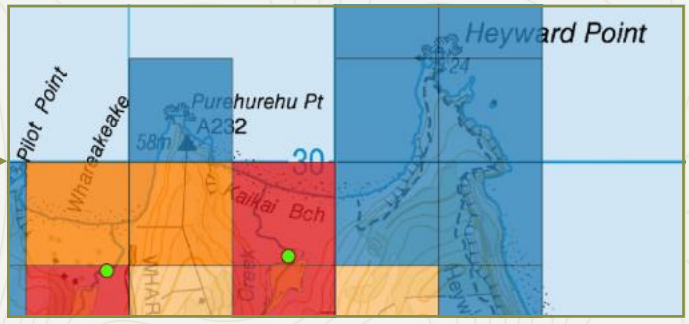
The Site Prioritisation Tool was created specifically for this task. It's a computer-based model that prioritises land according to weighted data sets. The model includes information on erodible soils, endangered wildlife, phosphorus and nitrogen levels, proximity to schools, likelihood of floods and much more.

A team of experts applied a ranking order to each measure, for example, areas with regionally significant wetlands were given the greatest ranking.

Overall, sites are prioritised on how protection could: increase freshwater and forest habitat quality; protect wetlands and waterways; help native wildlife; and empower local communities.

How we make decisions

1. Site Prioritisation Tool (GIS model)



The Site Prioritisation Tool creates a map that helps us focus our effort. We look for landowners to work with, where restoration and protection will have the most environmental benefit.

2. On-site assessment

Subsequent on-site assessments with landowners help us further evaluate sites in terms of, for example, significance to mana whenua and ability to connect local communities.

3. Co-funding decision

Priority level from Stage 1	General description	Financial or In-kind contribution from landowner
1 Highest	All sites	10%
2a Very High	Sites where: • Landowner has a robust environmental plan in place AND • Landowner has made previous restoration efforts	20%
2b Very High	Sites where: • Landowner has a robust environmental plan in place OR • Landowner has made previous restoration efforts	30%
2c Very High	Other SPT2 sites	40%
3a High	Sites where: • Landowner has a robust environmental plan in place AND • Landowner has made previous restoration efforts	30%
3b High	Sites where: • Landowner has a robust environmental plan in place OR • Landowner has made previous restoration efforts	40%
3c High	Other SPT3 sites	50%

The location of the site and the landowner's previous restoration efforts inform how we share costs and labour.

Community Action

Looking for landowners to work with

We are actively looking for willing landowners to work with. We're getting out and about, advertising our project, encouraging landowners to get in touch.

Work is underway, with the aim of using contractors to complete 34 km of fencing this year. We've also ordered 120,000 native plants for the 2021 planting season. This year, we are employing a field team of seven for weed control, planting and maintenance work. The team will be working alongside landowners to implement the restoration projects.

The 'Source to Sea' information pamphlet is available online at www.haloproject.org.nz/resources.

We are helping develop resilient communities together with thriving wildlife and habitats across the landscape. Landowners, communities and groups all have a part to play and will all benefit from their connection to the land.

Partnerships

We thank our partners and our funders for their support

East Otago Catchment Group

This project is funded by the Te Uru Rākau One Billion Trees, Provincial Development Unit, Department of Conservation Community Fund and Otago Regional Council's Eco Fund.

Te Uru Rākau
Forestry New Zealand

ecofund
Environment. Community. Otago. Te Ao Turoa. Hapori. Ōtākou.

Department of Conservation
Te Papa Atawhai

PROVINCIAL DEVELOPMENT UNIT

Our Trustees

Governance

DAVID SHARP (Chairperson)

Dave brings some twenty years' experience of working within the community/ conservation sphere-both in Australia and here in New Zealand. A resident of Purakaunui, Dave is keen to support the protection and restoration of biodiversity values within his 'home-patch' and across the East Otago landscape.

NIKKI PENNO

Nikki has a background in landscape architecture, policy and planning, pest management and communications. With her family farming in Karitāne, Nikki is looking forward to helping support the aims of her local community from both a landowner and biodiversity point of view.

JILLIAN HETHERINGTON

Jill is an active volunteer in predator eradication and coastal reforestation projects on Quarantine Island. Her background is in invasive plant ecology, having obtained a PhD in this field from the University of Otago. After a short stint lecturing in the Geography Department on environmental issues and biogeography she is now working for the Department of Conservation in the National Volunteering Team, based in Dunedin.

DAVID RUSSELL

MOORE Markhams

David is a chartered accountant with Moore Markhams. He provides the Landscape Connections Trust with clear treasury and accountancy advice, ensuring the Trust is financially robust. David enjoys seeing the implementation of field operations across the field area, and the positive outcomes which result.

GERALD FITZGERALD

Gerald is a corporate lawyer practising throughout New Zealand, based out of Doctors' Point, Waitati. A concern for the local environment (especially the ecological and recreational values of Blueskin Bay), and his experience with preserving the water quality in Lake Taupo through the reduction in leaching of manageable nitrogen led to his involvement with the Halo Project.

MARGARET MCFARLANE

Margaret has a background in science, biology, outdoor and environmental education; biodiversity work for DOC; revegetation and MAF biosecurity. As land owners at Karitāne, Margaret and her partner Rob Raill have started extensive revegetation and predator control. They are involved in several community groups and are passionate about enabling others to care for and enhance their very special environment.

ANDREW LONIE

Andrew has a background in conservation, recreation and community development, and currently works at the Graduate Research School, University of Otago. Andrew has lived for 18 years at Upper Junction to the south-east of Mt Cargill/Kapukataumahaka, near the Inner/Outer Halo boundary. With his partner, he is currently replacing pasture and exotics on their land with native coastal lowland species.

From left: Dave Sharp, Nikki Penno (inset), Jillian Hetherington, David Russell, Gerald FitzGerald, Margaret McFarlane and Andrew Lonie.

Photograph by Craig McKenzie.

Our Staff

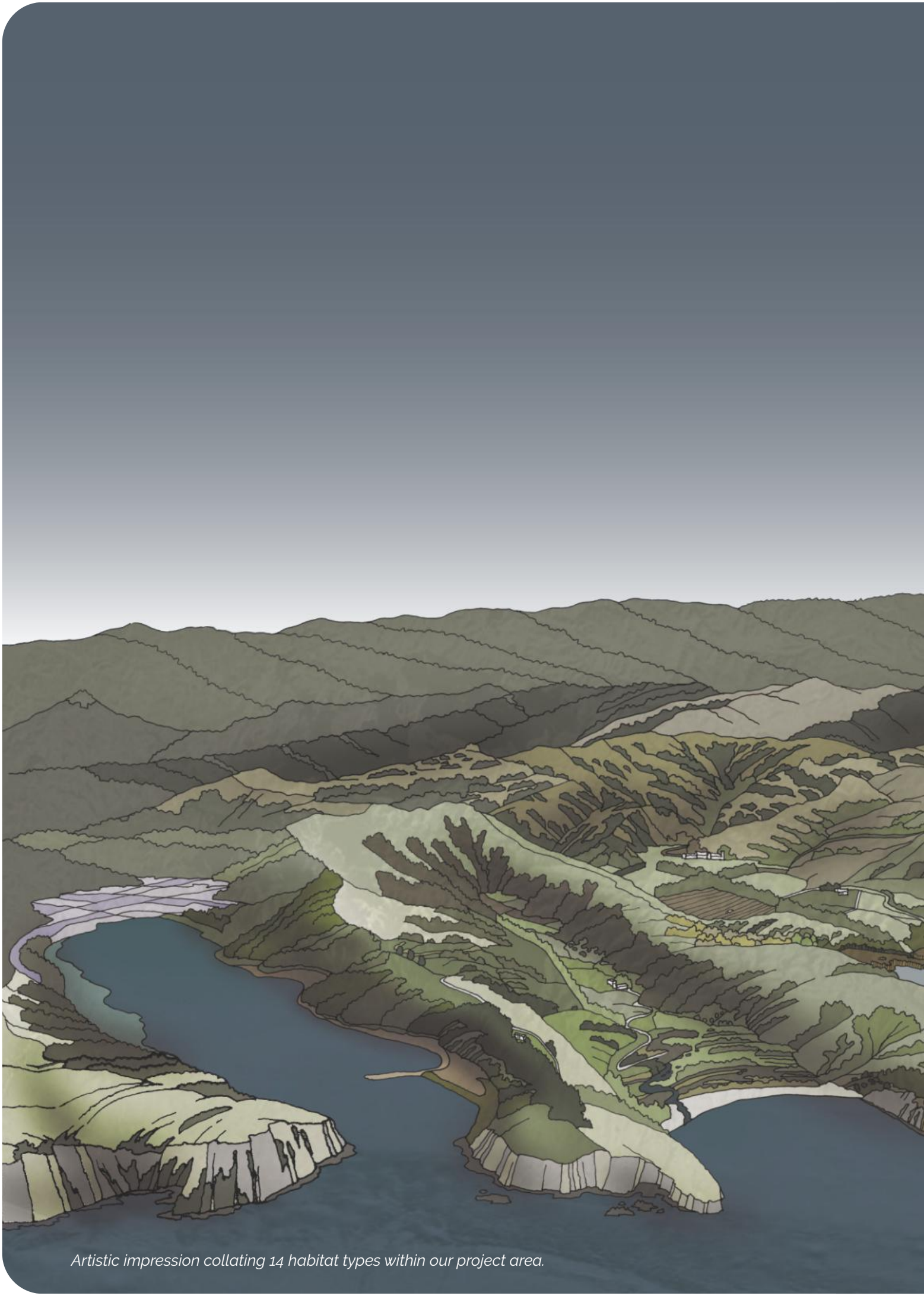
Leadership

From left: ***Liz*** *(Comms),* ***Jeanne*** *(Source to Sea Field Supervisor),* ***Conor*** *(Predator Free Project Coordinator),* ***Jonah*** *(Predator Free Project Manager),* ***Sophie*** *(Predator Free Project Coordinator),* ***Rhys*** *(The Halo Project Director) and* ***Jennifer*** *(Source to Sea Project Manager).*

Partnerships

We thank all our partners, funders, supporters and incredible volunteers for their continual contributions - without all of them the Halo Project would not be the success it is today.

Photograph by Craig McKenzie.



Artistic impression collating 14 habitat types within our project area.