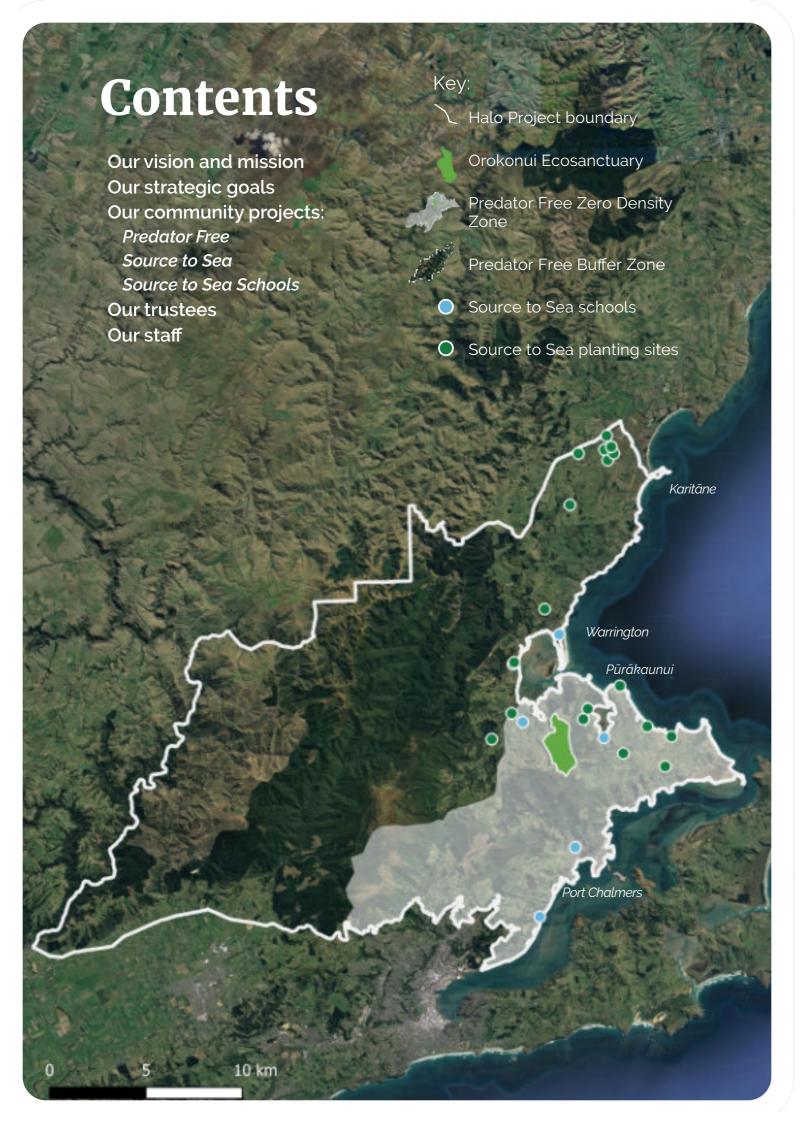


2021-2023 Review

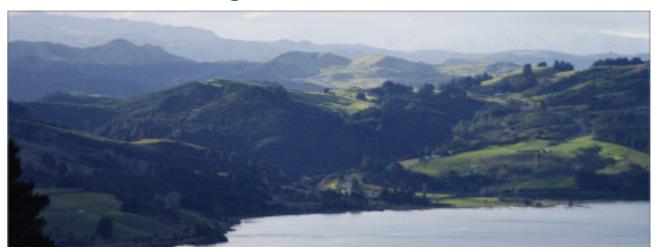
September 2023





# **Our Vision**

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



# **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 mana whenua and partners such as schools, community groups, residents, 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.



# A note from Andrew

The Landscape Connections Trust, established in 2009, seeks to foster, promote and protect the ecological, recreational, aesthetic, cultural and amenity values of this landscape.

The Halo Project is an increasingly prominent conservation connector in the Dunedin rohe. We're broadening our scope, while remaining true to LCT's establishment mission, to create healthy landscapes that support resilient communities.

At the beginning of 2023, Halo Project trustees revisited our strategic goals. Whenever we do this, two things are remarkable: our goals and objectives 1) remain relevant and motivating, despite an ever changing backdrop of critical events, and 2) they are reaffirmed in their duality of people and place – in protecting this landscape, it's as much about who is involved and how, as what the biodiversity and environmental outcomes are.

The Halo Project's team and outputs have grown significantly since our last review. Thanks to our kaimahi, our funders, and the communities we work with, large scale benefits are being returned to this landscape and community – from West Harbour to the Waikouaiti river in the north and the Silver Peaks in the west. As our operations expand, we remain conscious of supporting the aspirations of mana whenua and respecting boundaries.

With 15 staff across our two main projects, Predator Free and Source to Sea, massive milestones have been achieved in the last two years, such as the 17,946 predators removed and 135,008 native trees planted. While these numbers are commendable, it's the outcomes that count most – healthier forests, less predation on taoka species, cleaner waterways, personal meaning for our resident volunteers, connection and shared purpose for our communities.

As well as the achievements to date, we recognise significant challenges ahead. 2023 has shown more than ever how vulnerable we are to climate change and other global disruptions, so the resilience aspect of our goals is a central pou/pillar.

With the commitment and knowledge of how to enhance, protect and connect with this landscape, gained so far, the Halo Project and partners have an important role in wayfinding for our local place in the coming years. In all of this, I'd like to share my warm appreciation for all our staff and volunteers, including my fellow trustees. Engaged, and hardworking, describes everyone involved in the Halo Project.

Kā mihi maioha

**Andrew Lonie** 

Landscape Connections Trust Chairperson







Community Education
Building and sharing resources to
expand our collective knowledge







Partnerships Working in partnership with, mana whenua, community partners and funders



# Reflecting on the years

In a world that constantly evolves, spinning from one crisis to the next, the Halo Project is dedicated to inspiring and working with our communities to enhance our shared home. Our efforts, guided by the principles of collaboration, resilience, and transformative thinking, have culminated in a period of exceptional achievement.

Volunteers and residents are the heart of the Halo Project. Our projects and team provide the framework and mechanisms to support community efforts and passion towards common objectives. Hundreds of volunteers contribute their time and energy for various reasons, whether to enhance biodiversity, enjoy recreation, or connect with like-minded individuals.

The Halo Project transcends land tenure and jurisdictions, engaging land managers and stewards across working environments, conservation estate and urban areas alike. This allows our operations to cover physically contiguous areas, which is key to the success of goals such as predator elimination. The outcomes include improved habitat connectivity and the health of fragmented habitats. Areas of land with significant biodiversity values that have received minimal effort in the past now have a platform for optimal biodiversity recovery.

Our commitment to our communities and the challenges they face remains steadfast. Economic uncertainties, resource scarcity, a volatile climate, and shifting global leadership sees an even greater need for strong community leadership to navigate these challenges.

We are led by community needs and aspirations. From our recent community survey we know that informed and strategic community responses to climate change is a top priority for residents. We are committed to working with mana whenua, with our partners in central and local government, and our funders, to help our communities meet these challenges.

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 are providing much needed services and helping to achieve amazing outcomes.

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, protecting and connecting with our landscape is inspiring and motivating for me, and for our team.

Lastly, a big note of thanks to the team for their commitment and hard work - the legacy you are contributing to is truly amazing. To Trustees, whose lived experience, wisdom and guidance ensures the Trust is in good stead, a heartfelt thanks.

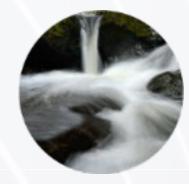
Kā mihi.

Rhys Millar

Halo Project Director



PREDATOR FREE



**SOURCE TO SEA** 



**SOURCE TO SEA SCHOOLS** 

# **Predator Free**

Predator control is fundamental to protecting both wildlife and its habitat. Creating safer & richer ecosystems for wildlife to thrive





Working together to achieve region-wide predator control



The Halo Project's Predator Free team is proud to be a Delivery Partner of Predator Free Dunedin, working alongside City Sanctuary and Otago Peninsula Biodiversity Group (OPBG) towards our shared goal of creating a predator free Dunedin by 2050.

Since 2018 we have worked to remove predators from the Halo 'zero density zone' of 10,000 hectares surrounding Orokonui Ecosanctuary. In 2022, thanks to a funding boost from PF2050 Ltd, and with support from OSPRI, Dunedin City Council, Otago Regional Council, Wenita Forest Products and City Forests our operational area expanded to include the 33,000 hectare 'buffer zone' west of State Highway 1.

Our aim in the Halo 'zero density zone' is to get possum numbers down to functional zero, and maintain that 'zero density' over the long-term. Zero density means that the number of animals in the area is so low that they can't reproduce. In the 'buffer zone' we are setting up a comprehensive network of automatic, self-resetting AT220 devices which will act as a buffer from reinvasion of the 'zero density' zone.

Since 2018 with the help of volunteers and community conservation groups the wider Predator Free Dunedin initiative has collectively installed more than 14,000 predator control devices, removing over 54,000 possums, 21,000 rats and 1,700 mustelids from the focus area of 64,000 hectares.

Our fellow delivery partners City Sanctuary and Otago Peninsula Biodiversity Group (OPBG) are doing incredible work. The team at City Sanctuary are focussed on reducing possums to very low numbers and achieving zero density in key parts of the city to protect native wildlife and prevent reinvasion of the neighbouring Halo Project and OPBG areas. City Sanctuary's landscape covers more than 32,000 properties, extending from North East Valley to South Dunedin, across to Brighton and Chain Hills. OPBG have been working hard to remove possums from the Peninsula since 2011 and have removed an impressive 23,923.

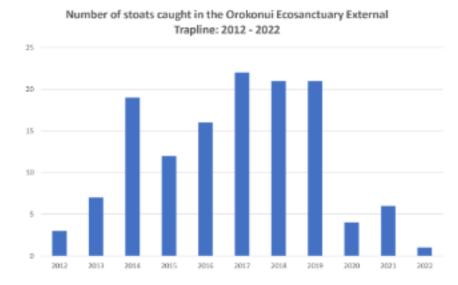
Since 2021 the Halo Project Predator Free team has grown from 3 to 6.6 full time staff who continue to strive to be the best at what we do. We were supported by the Predator Free Apprentice programme to employ one of 42 apprentices nationwide as part of the Jobs for Nature programme. This initiative was set up to "meet the needs of community, commercial and council projects around Aotearoa, by training a new generation of predator control experts".



## **Community Action**



#### Community-led predator control helps to protect Orokonui Ecosanctuary





The Department of Conservation (DOC) refers to stoats as 'public enemy number one for New Zealand birds', which is why stoats are our other target species.

We have installed a network of 1,136 DOC150/DOC200/DOC250 devices at a density of one per ten hectares in the Halo 'zero density' zone. From 2021 to 2023 these devices removed 631 mustelids. Besides mustelids, this network also targets hedgehogs and rats which all help to reduce the threat of predator incursion at Orokonui Ecosanctuary.

Volunteers take care of these devices, checking and re-setting them around 16 times per year, a task completed monthly through the cooler months, and fortnightly December through March.

SouthRoads volunteer to monitor and reset the device lines on public roads. Operations Manager Connell Burdon reflects "SouthRoads are motivated to help protect the environment in an area where we operate in and where many of our staff and their friends and family live, for not just our generation but all that follow."

"The Halo Project's work supports Orokonui Ecosanctuary by lowering predator density around the sanctuary and helping to reduce potential predator incursions. This, in turn, contributes towards a future where the taoka species spilling out of Orokonui are better protected and may return across the landscape."

Amanda Symon, Orokonui Ecosanctuary General Manager

Above: SouthRoads Dunedin Branch Manager Troy Dennison checks a device on the road side.

Below: Volunteer Kim checking mustelid devices at Pūrehurehu/Heyward Point



### Science and Research



Since 2021 we have been working in collaboration with the developer of the AT220, NZ AutoTraps.

The AT220 device resets and relures automatically, it can reset 100 times or last up to six months before its battery needs recharging and lure refilling. This technology allows us to target possums in hard to reach areas, 365 days of the year and we are thrilled to have installed 868 AT220 across our 'zero density' and 'buffer' zones.

NZ AutoTraps help us to troubleshoot issues and we see continual improvement based on our feedback and feedback from AT220 users across Aotearoa.

As we move further in to the Halo 'buffer zone' we hope to install another 1,000 AT220s across the rohe/region, Since these devices removed over half as many predators (9,834) from 2021 to 2023 than all devices in this period combined (17,946) we expect to see substantial biodiversity gains across the entire Halo landscape in no time.



Above: AT220 at Swampy Summit Below: 10 Possums removed by a single AT220.



## Leadership

#### Otepoti community backs predator control at home

We continued working with communities in the Halo 'zero density zone', providing residents with backyard pest detection kits to identify which predators live at their house.

Our 'host a possum trap' scheme was popular and we set up 265 Trapinator devices in backyards. These backyard devices and those set up in reserves subsequently removed 811 possums from the Halo 'zero density zone'.

We also distributed subsidised Victor and T-Rex traps in wooden tunnels which removed hundreds of rodents across the rohe.

It's estimated that scrub and bush can support up to fourteen possums per hectare, so with the removal of thousands of possums from the 10,000 hectare 'zero density zone', we are beginning to see biodiversity gains as a result of reduced browsing.

Data from our 2020 foliar browse index study showed a significant increase in foliage cover at study locations on Mihiwaka compared to 2016. An increase was observed from a mean of 62.4% in 2016 to 74.8% cover in 2020.

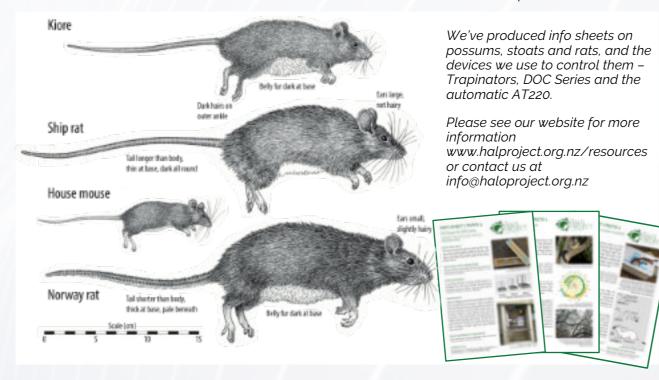
Over time, with such a reduction in number of these omnivorous canopy browsers, and the maintenance of extremely low densities we will see more trees flowering and fruiting and lush canopy growth. A healthier canopy can support more birds and lizards which feed on foliage, nectar, fruit, seeds and insects.

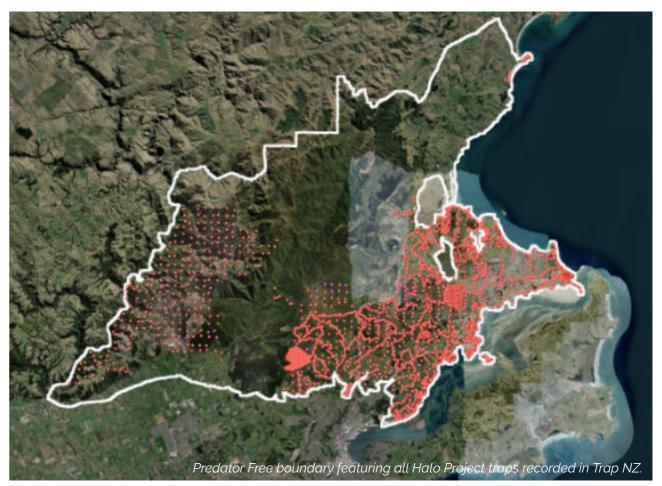
Where volunteers are backyard trapping, there will be fewer possums hiding-out in, raiding and fouling gardens and reserves or potentially spreading bovine tuberculosis.





Above top: Trapinator set up in a tree Middle: Victor trap Bottom: D-rat trap.





## **Predator Free 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.





















# Source to Sea

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

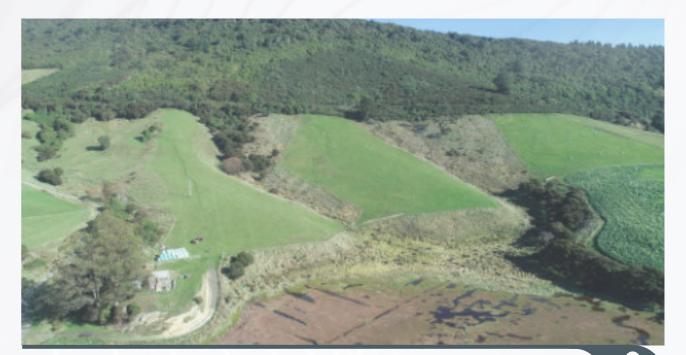
The Halo Project Source to Sea team work with residents to plant, fence and restore waterways, wetlands and forest habitat in Coastal Otago, from West Harbour-Mount Cargill to the Waikouaiti River.

From the planning stages in 2021 to 2023 the team worked with 26 residents and groups on projects to plant 135,008 trees and install 11km of fencing.

The Source to Sea team has grown from one project manager to include six field staff, a volunteer coordinator, and a part time communications lead/administrator. We are excited to see the gains that large scale revegetation will bring and we are proud to support our community to achieve their own biodiversity goals.

We decide which sites to enhance using our 'Guiding Principles'. These are:

- When habitats are connected, biodiversity benefits greatly
- Education and advocacy are enhanced by restoring sites that the community can see, hear about, or be directly involved with
- Restoring sites of importance to Māori aligns with the kaupapa of the Halo Project
- Landowners who have made previous restoration efforts should be acknowledged and rewarded. A landowner's motivation and willingness to contribute factor into our decision making
- Formal protection (covenants) of sites should be promoted, and will be supported
- Biodiversity should be promoted at all stages
- Wetlands are threatened and highly valuable habitats, and should be promoted at all stages
- · We can achieve greater outcomes by selecting sites that are easily accessible



## **Partnerships**

## Mana whenua led: The Gums - Pūrākaunui Block Inc

New fencing and planting connects bush on the slopes of Mopanui to the sea at Osborne



Ngā Whenua Rāhui Operations Manager Courtney Haitana and Source to Sea Project Manager Jennifer Lawn admire the progress.

The Landscape Connections Trust partnered with mana whenua at The Gums, a block of 206 hectares owned by Pūrākaunui Block Inc, a collective which represents the original owners of this taoka site.

Since 2021 the Source to Sea team have planted 31,325 native seedlings and installed 900 metres of fencing here with funding provided by Ngā Whenua Rāhui (NWR). The Predator Free team installed 16 predator control devices that removed 57 predators.

NWR is a funding programme that seeks to protect the natural integrity of Māori land and preserve mātauranga Māori. The Gums is the pioneer NWR funded site in Ōtākou/Otago. With only four locations in Te Waipounamu/South Island and 293 in Te Ika-a-Māui/North Island this is an important site.

"We are thrilled to see the progress with fencing and planting at The Gums, Osborne. We now have parts of our Māori land protected by a Ngā Whenua Rāhui, encompassing the native bush area, The Gums, the wetlands and the area surrounding the rangatira burial site. An amazing collaboration with the team from Halo, DOC staff from Ngā Whenua Rāhui and ourselves."

Niccy Taylor, Chairperson Pūrākaunui Block Inc

Potato Point planting featuring some of the 32,000 seedlings planted here

# **Community Action Wharewerawera/Long Beach**



#### Team work makes the dream work

Since 2022 we have been working in partnership with the Department of Conservation (DOC) at the 9.4 hectare recreation reserve at the southern end of Wharewerawera/Long Beach. Our goal of engaging volunteers to plant 38,400 carefully selected native plants has almost been achieved.

This future forest will be a source of seeds for nearby dunes, provide food and shelter for native wildlife and will absorb and filter runoff. Our planting plan was established through collaboration with DOC and knowledgeable locals. The area was mapped out and care was taken to select appropriate native species for the specific habitats here.

We have planted 30 common and threatened species here with the goal to create a healthy canopy for effective self-revegation. A new 1.2km looped walking track which will be a great addition to Ōtepoti/Dunedin's track network.

Our public planting days have been well attended by individuals and groups alike. Businesses, local schools, university students, and other community groups such as the Otago Muslim Community, YouthGrow, and Te Hou Ora Whānau Services have all participated. We have been supported too by Kāti Huirapa Rūnaka ki Puketeraki who provided seedlings for us.

Predator control and planting complement each other to create safer and higher quality habitat for the taoka species who reside here. Local volunteers have been trapping possums and stoats for the past two years in this area with these goals in mind.



Above: Planting map shows the differing habitat here, allowing us to choose appropriate plants for each location.

Below: YouthGrow planted 1000 seedlings here and joined us at multiple planting days across many sites. They became resident planting experts.

Right: A drone photo showing approximately 10% of the total 30,000 seedlings planted in 2022.











Above left: Education
Perfect worked hard on
the worst weather day of
the season! They planted
1200 seedlings and even
played piano!

Above right:
ADInstruments planted
475 trees! They likened it to
school camp, sitting on
the grass together and
having a bikkie at
lunchtime.

Left: Audiology South celebrate planting 500 trees!

"Long Beach has been an important forested coastal dune area chosen by local female sea lions to hide away into to give birth to their pups since 2010. Female sea lions need access to extensive areas of forested dunes so that they can hide away and escape the attentions of male sea lions."

Jim Fyfe,

Coastal Otago Ranger, Department of Conservation



## Te Tauraka a Waka/Merton Tidal Arm Update

Community driven wetland habitat restoration

We are proud to support six landowners at Te Tauraka a Waka/Merton Tidal Arm who are working together to restore an important saltmarsh estuary habitat. Te Tauraka a Waka is a regionally significant wetland in the lower reaches of the Waikouaiti River.

This wetland is an important site historically for mana whenua as a mahika kai/food resource. It is known to have been a rich resource in tuna (eels), black flounder, giant kōkopu and waterfowl, and valued as a spawning ground for whitebait (galaxiids).

We have planted 22,800 native trees, shrubs, rushes, sedges and grasses and installed 3.4km of fencing around this saltmarsh.

This work complements the hard work of residents, landowners and local community groups, including Karitāne School and the Waikouaiti River Estuary Care Group, who have been planting around the estuary and Waikouaiti River margins for more than 10 years.

Native plantings have major benefits to downstream water quality and provide habitat for fish spawning, shellfish and bird life. These plantings are doing well, with an average survival rate around the estuary of 83%.



Above: Michelle planting seedlings around the wetland

Below: A Spur-winged plover (Vanellus miles) at home in the saltmarsh.



"The source to sea initiative has been a fantastic way of enabling us to start the process of reintroducing native coastal forest around the tidal arm and salt marsh on the farm. While early days the extent of the plantings will help protect native fauna and strengthen and enhance the biodiversity of this area. Jennifer and the project team has been fantastic to work with and made the process incredibly easy."

Katie Barns, Landowner

## **Community Education**



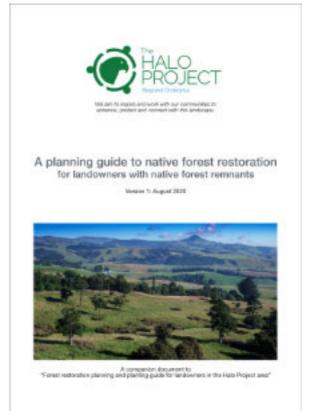
#### Practical guides for landowners

Our 'Planning guide to native forest restoration' helps residents with patches of bush, remnant tree-lands or regenerating kānuka to develop their own restoration or management plan suitable to the area they are working in.

Our 'Forest restoration planning and planting guide' complements the planning guide with its habitat descriptions and plant species lists suited to our local environs. It has been developed specifically for residents who know where they want to plant, and want to use ecologically suitable species.

We have recently produced our latest guide 'Native Plants and Where to Plant Them'. This guide gives greater detail on plant identification to assist residents in identifying seedlings and choosing the best suited planting location for them. This guide includes 46 native plant species that we are planting, which would have once been abundant in Ōtepoti across diverse landscapes.







All guides are available for free download at www.haloproject.org.nz/resources.

# Source to Sea Schools

We seek to revive the connection communities have with the land, with water, and with nature through education and community-based ecological initiatives











Top left: Saint Leonards school kids and whānau. Above right: Waitati school kids hard at work. Bottom left: Sawyers Bay school kids. Bottom right: Warrington school kids at the surf club.

Sawyers Bay School worked on 'Pete's Patch', an area of the Thomson's Creek/McDermids Creek catchment which runs through the golf course, in collaboration with golf course volunteers. Saint Leonards School developed a native planting to create a forested area in their school playground. This mahi was completed on weekends with support from whanau.

Pūrākaunui School planted 120 native wetland seedlings in and around the Pūrākaunui estuary mudflats (far page left). Ravensbourne school will be planting seedlings at their site later in 2023.

Waitati School focussed on the wetland on their school site which is fed by the nearby Don's Creek. Students created a plan to plant 400 wetland species such as kāhikatea (Dacrycarpus dacrydioides) and tī kouka/cabbage trees (Cordyline australis).

The University of Otago ran a GIS element with the Waitati tamariki mapping and planning the planting, including a loop track and an outdoor 'open air' classroom. The Department of Corrections Otago helped to prepare the site by removing gorse, hawthorn and blackberry.

## Source to Sea Partnerships

We thank our funders for their support



& Investment Unit



















# **Our Volunteers Community Action**



# **Our Trustees**

#### Governance



The Landscape Connections Trust would like to thank David Russell who served as a trustee from 2017 until 2023. David provided valuable treasury and accountancy advice ensuring the financial wellbeing of the trust. We are pleased to welcome Marieke Mahoney and Sasha Roulston (Treasurer) as new trustees.

#### **ANDREW LONIE (Chairperson)**

Andrew has a background in conservation, recreation and community development, and currently works at the Ageing Well National Science Challenge, hosted at the University of Otago. Andrew has lived for over 20 years at Upper Junction to the south-east of Kapukataumahaka/Mt Cargill, in the Halo Project Predator Free 'Zero Density Zone'. With his wife, he is establishing a small coastal lowland forest on their section.

#### **DAVID SHARP**

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

#### **JILLIAN HETHERINGTON**

Jill has academic and practical experience in the broad field of restoration ecology. She currently works for the Department of Conservation in the team charged with coordinating implementation of Te Mana o te Taiao Aotearoa New Zealand Biodiversity Strategy across the country. Her free time is spent renovating a house on the edge of the halo project area, and so far only 1 hedgehog has been caught in her A24 trap.

#### **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 Taupō 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 Karitane, Margaret and her partner Rob 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.



# **Our Staff**

## Leadership





Standing L-R: **Kim** (Dedicated PFD volunteer), **Tom**, (S2S Field Team Ranger), **Sophie** (PF Operations Lead), **Damian** (S2S Field Team Leader), **Jeanne** (S2S Volunteer Coordinator), **Rosa** (S2S Field Team Ranger), **Jonah** (PF Project Manager), **Conor** (PF Operations Lead), **Jennifer** (S2S Project Manager), **Alice** (Halo Project Communications Lead & Administrator)

Seated L-R: **Harvey** (PF Operations Lead), **Kim** (PF Operations Lead), **Mike** (S2S Field Team Ranger). **Hugh** (S2S Field Team Ranger), **Andrew** (S2S Field Team Ranger).

Absent: **Abby** (PF Ranger)

## **Partnerships**



We thank all our partners, funders, supporters and volunteers for their continual contributions – without your help and support the Halo Project would not be the success it is today.

