



SOUTHERN
LAKES
SANCTUARY

**PROJECT
UPDATE III**
07.2023



ORANGE-SPOTTED GECKO © Samuel Purdie

Southern Lakes Sanctuary is one of the largest and most exciting conservation projects in the country. Our team are highly knowledgeable, dedicated and motivated to make a positive difference for our native biodiversity.

“By uniting and strengthening the efforts of our six founding partners and their many hundreds of volunteers, we can make genuine landscape scale progress for conservation.”

Paul Kavanagh, Project Director

We have a shiny new intro video - so if you'd like to know more about our project in HD, follow the link below:



southernlakessanctuary.org.nz/SLS005



Kia ora! Our project continues to grow at pace as does our team and our ambitious plans.

Two of our key pillars are an openness to collaborate; to work with anyone who wants to work with us, and an openness to innovate. These pillars guide our strategy as we expand our conservation efforts.

There are no silver bullets in conservation, but exciting developments in the tech space could mean that we can do much more conservation work across larger areas. In this project update, we will discuss some of our new developments and some exciting trials that we have facilitated such as:

- eDNA for lizard monitoring,
- acoustic monitoring to identify individual mohua based on their song,
- AT220 traps with Integrated Management Systems.

None of this tech will ever replace the need for boots on the ground and

hard work. We are now up to 22 staff; all bringing an incredible mix of knowledge, positivity, experience and curiosity. Our team complements the hundreds of volunteers, Department of Conservation and Council staff, and the collective impact of our mahi/work means that we can dream big and plan for potential releases of some of our iconic species that are absent from some of our project areas.

We are working hard to find the funding to ensure our project continues so we can make these dreams a reality.

Thank you to DOC, AJ Hackett Bungy, our staff, trustees and founding groups, our supporters and to all of the dedicated volunteers working to improve the biodiversity of the Southern Lakes.

Kā mihi,

Paul Kavanagh, Project Director
Southern Lakes Sanctuary





GAME CHANGING TECHNOLOGY

After a significant amount of planning and testing, the new Integrated Management System for our AT220 trap network in the Whakatipu is now live. This incredible technology will allow us to check on trap status, operations, bait and battery levels from the office – significantly reducing our field time and increasing our efficiency. This project, in conjunction with FTP Solutions, has seen a leap forward in our ability to maintain our trap network as well as hopefully opening the door to using these traps in kea habitat. Using an A.I. camera, these traps can be set to only activate on possums and rodents.



TEAM BUILDING IN MAKARORA

In early June, we gathered most of our team for some Health and Safety training and planning for our ever-expanding project. With our project area being so large, we don't get to catch up face-to-face often, so it was a great opportunity to swap stories and learnings, to brave the heavy rain and get out in the bush together.



WHAT IS OPTIMAL BIODIVERSITY?

We have engaged Wildlands Consultants to help with our long-term biodiversity planning. They are building GIS maps to showcase what species would have been present across our district pre-humans, which will help to 'set the bar' in terms of restoring biodiversity. They are also working to identify possible elimination sites; areas where we could focus efforts to bring predator numbers down to zero. Thanks to Queenstown Lakes District Council for supporting this work.



We went into 2022/23 knowing it was absolutely critical to build a deep and wide set of relationships in order to raise the profile of our work. Earlier in May we took the Director General of Department of Conservation - Penny Nelson - to see some of the areas we plan to release takahē in the Rees Valley. We introduced Penny, the Deputy Director General Mike Tully and the Southern South Island Operations Director, Aaron Fleming, to the landowners who are supporting our conservation efforts - Iris and Kate Scott and Amanda and Mark Hassleman. We showed some of the new technologies we are using and introduced some of our partners and partner groups. We have also showcased our mahi/ work to MPs Joseph Mooney, Rachel Brooking, and Chloë Swarbrick, QLDC councillors, ORC leadership, and Tuawhenua kāhui. In the international sphere, we hosted visits from E.U. Ambassador Nina Obermaier, U.S. Ambassador Tom Udall, and French Ambassador Laurence Beau, as well as presenting to a delegation from South Korea, all of whom were taken with the scale of our project and our strategic approach to conservation.



WĒTĀ WORK

Southern Lakes Sanctuary staff and a DOC invertebrate specialist teamed up for a trip to help study and protect the Nationally Endangered Southern Alps giant wētā (*Deinacrida pluvialis*), an alpine species that has rapidly vanished from much of its former distribution. The team spent three nights surveying in a remote area of Mt Aspiring National. We now understand more about the species distribution, behaviour and abundance here.

These wētā are large, flightless, and will often forage on bitterly cold nights. Consequently, they are extremely vulnerable to introduced mammalian predators and several populations appear to have been vanquished by mice, rats and stoats. Southern Alps giant wētā experience almost perpetual darkness here and they live in habitats that are bombarded by rockfalls, avalanches and giant pieces of glacier. These conditions are not very appealing to most predatory mammals, which may be why our giant insect friends have survived here!



MOHUA MONITORING

We received funding from the Otago Science Participatory Fund Platform and Curious Minds to expand our mohua monitoring study in Makarora. We will work with Dr Laura Molles of Verum Group on improving the monitoring of mohua using acoustic recorders. This monitoring and research builds on prior monitoring done with seed funding received from the Otago Science Participatory Fund in spring 2022. This work will assist in the development of non-invasive monitoring techniques. We will be able to identify individual birds and get a much more detailed picture of the population, to better guide our conservation efforts.

SPOTLIGHT ON FERAL CATS

We need to talk about cats; in particular, feral cats. These cats are very different to strays that can be tamed and fostered. Feral cats in the remote parts of our operational areas are many generations wild and have likely never seen a human. They are incredible hunters and are very adaptable. The breeding potential for a female feral cat is 300 kittens in her

lifetime, with males being many more. There are approximately 2.5 million feral cats across Aotearoa and they are causing many of our native species to hurtle towards extinction. We have to control these wild cats in our high biodiversity areas to protect our native taonga species. We recently featured on TV3 show “Paddy Gower Has Issues” –

helping to start the conversation about cat control in our environment.

Watch online at:
southernlakesanctuary.org.nz/SLS007



CHAIR'S REPORT

Year ending 30th June 2023

Kia ora koutou e te whānau,

He taonga mai i a nehe ki naiane (a treasure passed down for current and future generations).

This year, (2022-23) is the second year since the formation of the Southern Lakes Sanctuary and the Jobs for Nature (J4N) funding (\$2,986,000 over three years). The strong foundation established in the first 12 months, operationally, strategically and at a governance level, enabled Southern Lakes Sanctuary to show continued growth and deepened our relationships across the region.

Through the incredible leadership of Project Director, Paul Kavanagh and Matt Hollyer as Operations Manager, the entire team of 22 established an outstanding record of achievements in the field, operational planning, technical skill application and working well across all of the communities where our projects take place. Paul, Matt and team are wonderful ambassadors for the Trust.

The Co – Chairs also wish to thank the Founding Trustees for their ongoing and unstinting efforts supporting both Southern Lakes Sanctuary as well as their role with their own trusts. They carry a major workload on behalf of community conservation and it is their work that has made all of this, and what is to come, possible.



To the 1,000 or so volunteers out there on the whenua doing great conservation mahi: kia kaha!

Working in partnership with our Founding Trusts as well as landowners and other conservation groups, the outcomes generated by our team tangibly demonstrate the power of working at landscape scale, applying innovative thinking and technologies, leading-edge conservation practices and skills, coupled with passion, energy and enthusiasm.

During this year the Co-Chairs, the Founding Trustees and Special Advisors invested a significant amount of time in strategic planning, relationship building and seeking new sources of sponsorship and funding. Our strategic focus areas were: project growth (fundraising), relationships and storytelling. We note that our operations team focused heavily in our other strategic areas of innovation, knowledge advancement, and measuring impact, thus creating a strong balance between the Board activities (at a strategic level) and the project operations to move forward on all of our goals.

Even though we have grown our network of project ambassadors, the reality of the current political situation sees central government funding priorities focused on cost of living and

climate induced infrastructure damage. The fact that conservation is a “forever and ever” priority, and very much essential in the challenges of a warming planet, is a message that is getting lost in the national discourse. This makes the task of continuously engaging with, and building, the Trust’s network of national relationships all the more critical.

The chairs have engaged in considerable mahi with QLDC planning team to ensure that locally and within the Destination Management Plan, Spatial Plan, Economic Diversification Plan, Climate Change and Biodiversity Strategy, and Culture and Heritage Strategy, biodiversity/conservation is front and centre with our local council. Much work has also gone into building and cementing a strong relationship with ORC, especially at a leadership level.

All of this points to a potential for ongoing operational funding but with our J4N funding ending in June 2024, as a board, our current mahi continues to be focused on securing the funding for the Southern Lakes Sanctuary to continue. It was always a 30 year project and it continues to be! Greatly assisted by Paul and Matt, this vitally important work is showing positive outcomes, but more is still required.

We come into our third year with a strong sense of having well-articulated our story, and delivered significant “runs on the board”. We are also keenly aware of the ever-present need to

ensure our current and potential future funders understand the depth of our project’s capacity for significant impact.

It is clear that the Founding Trusts are working very hard to maintain and grow the conservation outcomes they have achieved over many years. With the support of the wonderful Southern Lakes Sanctuary staff much has been achieved with much more to follow.

We are deeply appreciative of the support we continue to receive from both the Whakatipu-wai-Māori and Central Otago DOC teams, especially David Butt, Nicole Sutton, Kathryn Longstaff and Rebecca Teele, with whom our project staff work closely.

We look forward to our third year with the knowledge that we can make huge gains when we work together, and that the benefits of our landscape scale approach, have created not only better outcomes for natural biodiversity, but also for our community and the planet. With our gratitude and appreciation for the mahi of everyone involved in the Southern Lakes Sanctuary,

**Leslie Van Gelder, Steve Batstone
and Greg Lind, Co-Chairs
Southern Lakes Sanctuary**



Progress Report: Jobs for Nature



YEAR 1 (END 06.22)

YEAR 2 (END 06.23)

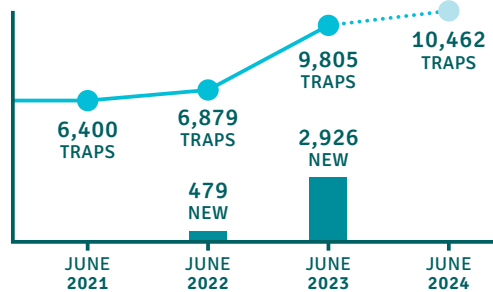
YEAR 3 (END 06.24)

TRAP AUDIT:

- 100% TRAPS AUDITED
- 30.6% REQUIRED CALIBRATION
- 20.9% REQUIRED REPAIR



TRAP TOTALS:



SUPPRESSION AREA (JUNE 2023):

TARGET: 121,100 ha ACHIEVED: 134,809 ha

NEW TRAPS:
1,818

TRAP TOTAL:
10,462

SUPPRESSION AREA:
155,400 ha

- Establish Cardrona Valley Hub
- Assess biodiversity & trapping gains
- Secure funding for long-term plan

- ✓ Establish baseline monitoring
- ✓ Trap audit & calibration
- ✓ Grow knowledge & innovation
- ✓ Plan for new Cardrona Valley Hub

- ✓ Connect two Hubs
- ✓ Initiate plan for new Cardrona Valley Hub
- ✓ Long-term operational plan completed

HUB UPDATE: MAKARORA

The Makarora trap network has seen a lot of expansion and upgrading, largely the result of a lot of hard work by the Southern Lakes Sanctuary team. While the number of volunteers is at an all-time high (54 at last count), the size and complexity of the network mean it is almost beyond the capabilities of a volunteer operation and Southern Lakes Sanctuary support has become indispensable.

50 extra traps have been added to lines in the Young catchment, a mohua hot spot. We have had a major upgrade on other lines with many 25-yr-old traps replaced, and old wire mesh replaced on others to make the network kea proof. Funds won from the ORC ECO Fund will pay for an additional 300 rat traps. Goodnature A24 traps are being monitored to see how effective they are: catch rates have been steadily dropping on these traps for some time and they may no longer be cost effective.

The Roys Peak trapline has been closed for winter after taking out a lot of high altitude hedgehogs over summer. Cat trapping operations at Makarora and Matukituki have been converted to cell phone from satellite link, dramatically reducing operating costs.

Closure of the Makarora and Blue River bridges by DOC has meant more river crossing training for volunteers. One of our volunteers is providing a jet boat ferry operation to cover some lines in the event of high river flows.

Rapidly rising rat catch numbers at Makarora – a rat plague – is being partly countered by doubling trap clearances, but in the absence of any 1080 operations by DOC, we must be prepared for the mohua population to be badly affected.

**Mo Turnbull, Trustee
Forest & Bird, Central Otago Lakes Branch
& Southern Lakes Sanctuary**



Makarora staff have completely replaced or retrofitted kea safe grilles and new mechanisms to more than 200 stoat traps that were over 20 years old. Staff and volunteers have audited and checked every trap in the region, ensuring the efficacy and safety of our trapping network is up to standard.

HUB UPDATE: MATUKITUKI



Trials, trapping and translocations have been the focus in the Matukituki hub. We have been running a study on the effectiveness of fake eggs being used instead of fresh eggs and our results indicate the fake eggs were just as effective... this may save some volunteers the job of cleaning broken eggs out of packs! We have been busy planning for the installation of a bait station network ahead of a proposed release of mohua into the area..



The Matukituki Charitable Trust is thrilled with some recent sightings in the Valley. For the first time in 30 years, who have been sighted in the upper valley; and a very good kea breeding season has led

to many juveniles in the valley – and some sleepless nights for campers! The opening of the rebuilt Aspiring Hut in the valley, has allowed more groups to experience the valley and its birdlife.

There have been recent challenging conditions with snow and rain impacting the clearing of traps, but Scott (our Hub Coordinator) has managed this well with a team of volunteers. Additionally, the closure of the Rob Roy bridge makes clearing the three lines on the other side of the river subject to flow conditions with volunteers needing to cross the Matukituki River on foot. However, the team of volunteers is highly motivated to continue, and a recent river crossing course has ensured both staff and volunteers have the skills to safely service those traps.

Paul Hellebrekers
Matukituki Charitable Trust Rep. & Southern Lakes Sanctuary Trustee

HUB UPDATE: DART / REES / GREENSTONE



The Routeburn Dart Wildlife Trust has been continuing its trapping on the Dart and Rees rivers - although we stopped a few weeks ago for winter. In April we rebooted our feral cat traps that are linked to the Celium network and these have been working well. Combined with the feral cat trapping at the head of the lake done under the Southern Lakes Sanctuary banner - we are getting some good numbers.

We are looking forward to the DOC takahē release in the next couple of months in the Greenstone Valley, and are continuing intensive trapping efforts in the Rees Valley and 25 Mile Creek area for a potential takahē release in 2025.

**Geoff Hughes, Trustee
Routeburn Dart Wildlife Trust & Southern
Lakes Sanctuary**



A trap library has been established in the Glenorchy community. This allows local people to borrow a trap, to trap in their backyards. One-on-one training is given to all community backyard trappers which has sparked interest and generated more volunteers to help monitor the traplines surrounding the township. This library project is a wonderful example of collaboration between Southern Lakes Sanctuary and Routeburn Dart Wildlife Trust.

HUB UPDATE: MOTATAPU



In conjunction with the Whakatipu Wildlife Trust we set out a new trapline along the Coronet Water Race - a trail built and maintained by Queenstown Trails Trust, QEII National Trust and Soho Properties Ltd. Last year the Coronet Face reforestation project planted over 10,000 native trees. We have now added nearly 50 traps, including some AT220 self-resetting possum traps. This area will now act as an important link between trapping groups in Arrowtown and Mt Dewar.



We are very excited that all our traps have been audited and all of our old DOC 150's have been replaced by new DOC 250's. We have also increased our trapping efficiency by installing Econodes on all traps – alerting our trapping team when a trap has been triggered. This has led to over 1700 predators removed in the last year. With the help of the Southern Lakes Sanctuary team, we have also installed 20 AT220's,

which cumulatively caught 107 possums in the first month after installation. These traps further increase our efficiency and are really helping protect the taonga species at Mahu Whenua.

**Jo Booker, Trustee
Soho Properties Ltd & Southern Lakes
Sanctuary**

HUB UPDATE: WĀNAKA-HĀWEA



Our partnership with Southern Lakes Sanctuary has initiated and enabled development of a more strategic approach to enhance trapping and biodiversity outcomes in the Wānaka region. Education workshops like the Festival, and the winter community talk series have engaged locals, and enhanced understanding and knowledge within our Backyard trapping and volunteer communities.

The identification of high biodiversity areas has ensured that our trapping efforts are focussed on areas which will maximise

outcomes for our local native species. Over the last year, over 1200 predators have been removed from the Upper Clutha area, and three new traplines have been added. Southern Lakes Sanctuary has supported, funded and helped install new traps, they have also assisted with calibrating traps, and repaired and upgraded traps where required.

**Kris Vollebregt, Trustee
Wānaka Backyard Trapping & Southern
Lakes Sanctuary**



Trapping in Albert Town has been given a boost with a new trapline established and being run by a network of volunteers. This compliments the efforts by backyard trappers in the town, as well as another trapline which will be established along the lower Cardrona River. By spring, both sides of the lower Cardrona River will be have traplines, protecting our taonga species. These traps have been built by Southern Lakes Sanctuary.

HUB UPDATE: WHAKATIPU



Working with the Whakatipu Reforestation Trust and Shotover Primary School, we have set up a monitoring and trapping project at their restoration project at the Shotover Country wetlands. Future conservationists from Shotover Primary assisted with setting out tracking tunnels, before analysing results and designing a trapping network for the area. These tamariki will now work with their teachers and our Whakatipu Hub Coordinator to manage the trap network and protect their wetland project.



In October 2022 we started running beginner's trapping courses every month and to date we have trained almost 100 new volunteers! We are able to give each new volunteer a tool kit thanks to Bunnings, plus a trapping booklet from DOC and a trap safety clip. We also started running beginners birding courses in March and have trained 46 people already. The Whakatipu Wildlife

Trust has been successful in securing grants from Otago Participatory Science Fund and Predator Free NZ Trust for our projects "Whats living in your backyard?" and the establishment of a new trapline in the Quail Rise residential area. Engaging members of the public in monitoring their backyards to identify and protect birds, lizards and wētā assists in protecting our region's biodiversity. Further community engagement is underway with our annual Wildlife Photography Competition, which will enable us to produce an educational calendar of local native wildlife images.

The Southern Lakes Sanctuary team have been invaluable in helping to protect areas of high biodiversity such as Bush Creek, Bobs Cove and Wye Creek, installing new traplines and cutting edge technology.

**Daniel Sweeney, Trustee
Whakatipu Wildlife Trust & Southern
Lakes Sanctuary**

HUB UPDATE: CARDRONA



For the last year we have been developing an exciting, new monitoring technique for some of our more cryptic reptile species. Our technique involves collecting Environmental DNA (eDNA) from lizards in a non-invasive way. Special pipes are placed in lizard habitat; when the lizards move through these pipes, they leave traces of eDNA that can then be analysed. Our method is less labour intensive and potentially more cost-effective than existing techniques and could be game changing for lizard monitoring.

In autumn 2023, Southern Lakes Sanctuary completed the first trial of



this technique at the Mokomoko Dryland Sanctuary on endangered Otago skinks which are notoriously difficult to monitor. The preliminary results suggest that we have a valid method for detecting lizards in these environments. In spring we will perform further trials thanks to funding from the Leslie Hutchins Conservation Foundation. The Cardrona Hub contains some fantastic lizard habitat, so we will be aiming to use eDNA monitoring here once trials are complete.

**Tom Reeves, Cardrona Hub Coordinator,
Southern Lakes Sanctuary**

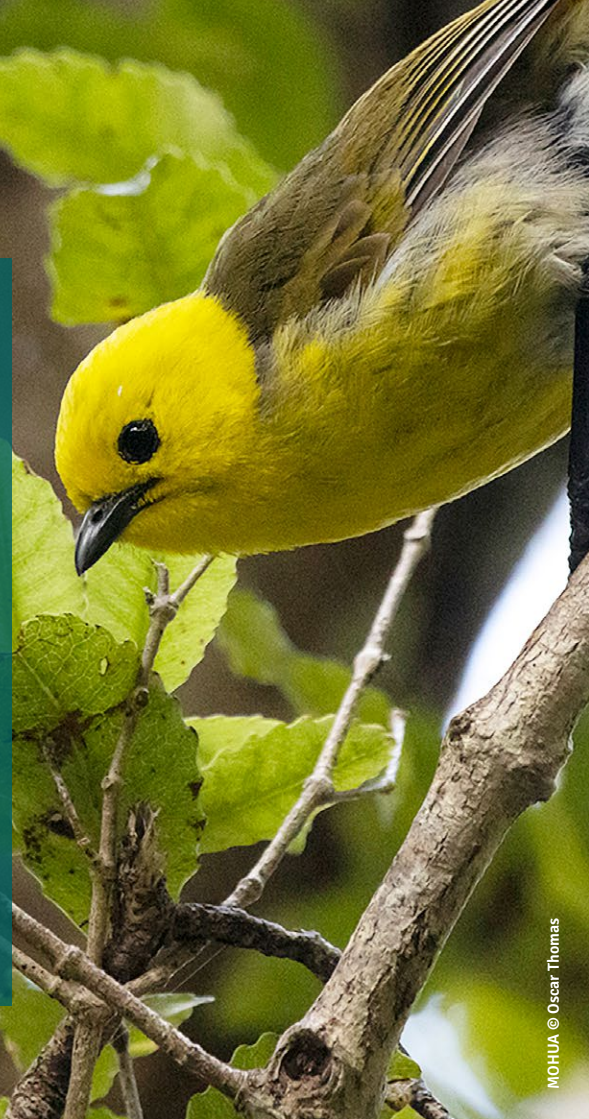


Our Cardrona hub is underway and work has begun supporting RealNZ in establishing biodiversity monitoring and expanding their traplines at the Cardrona and Treble Cone skifields. Further monitoring has begun in the Cardrona township to enable us to install traplines over the coming spring and summer season. Watch this space!

SPOTLIGHT ON MOHUA

In the 1800s, the mohua was one of the most abundant birds in South Island forests but they are now unfortunately absent from 75% of their former range and are continuing to decline. They have been introduced to several predator-free offshore islands but are facing local extinctions on the mainland with the isolated populations very vulnerable to rats. Central Otago Lakes branch of Forest & Bird established over a quarter of a century ago specifically to protect our iconic mohua – the bird on the \$100 bill. That mohua persist here is testament to their incredible efforts. Southern Lakes Sanctuary are pleased to have been able to support this work.

Jo Tilson, our Biodiversity Coordinator and a Forest and Bird trustee, has been monitoring mohua in the Makarora/Haast Pass area for over 10 years. She recently reported on last season's monitoring outcomes which showed that on average, mohua encounters have been slowly increasing, and that there has been more incidental detections of mohua than previously – likely due to extra traplines being installed and additional work by Southern Lakes Sanctuary staff and COLB F&B volunteers. **Check out the report from Jo Tilson:** southernlakessanctuary.org.nz/SLS011



TWO THOUSAND TRAPS

When our team are not hard at work in the field, they are busy in the workshop building new traps. Recently, we hit a milestone of building our 2,000th trap, in addition to those we have bought, to supply to our partner groups. Thanks to Central Lakes Trust and Jobs For Nature / Mahi mō te Taiao for supporting our efforts. We have lots more to go!



TŪPIKI TRUST

In March, Dave and Ross from the Tūpiki Trust visited to check out our progress. Support from the Tūpiki Trust has enabled us to begin work in the Young valley to protect rock wren, whio and mohua and other taonga species in this stunning area.

FUTURE FUNDING

Ensuring that our project continues beyond June 2024 is currently one of our primary goals, and we are investigating ways to secure enduring funding.

Unfortunately, we were unsuccessful with our applications to the ORC ECO Fund and DOC Community Fund this round, and many grants have been highly oversubscribed.

We have a joint application with Whakatipu Wildlife Trust for Impact100. Our project will protect the taonga species of Bob's Cove and we have been invited to submit a full application.

We are pivoting our funding focus to working with philanthropists and businesses directly, and are thrilled to have received funds from Gardell Family Trust to support our work, and from Rod Drury for work on the Coronet Face. Through Rod's generous support of many complimentary projects such as Mana Tāhuna, Treespace and Te Tapu o Tāne, we are starting to see a wider weave that interlinks solutions for the area.

Southern Lakes Sanctuary are pursuing sponsorship agreements to fund our mahi going forward. Check out our Partnership Document for more information or if you can help in any way, don't hesitate to contact us. We feel we are doing important work protecting our native wildlife, so we really need to keep it going!

Download our Partnership Document:
southernlakessanctuary.org.nz/SLS015





SOUTHERN LAKES SANCTUARY

THANKS TO OUR PROJECT PARTNERS & SUPPORTERS:

- DOC MAHI MŌ TE TAI AO
- CENTRAL LAKES TRUST
- QUEENSTOWN LAKES DISTRICT COUNCIL
- OTAGO REGIONAL COUNCIL
- THE NATURE CONSERVANCY
- GARDELL FAMILY TRUST
- AJ HACKETT BUNGY
- TŪPIKI TRUST
- QEII NATIONAL TRUST
- THE US EMBASSY
- ROD DRURY
- COLLIER'S

OUR FOUNDING PARTNERS:



FIND OUT MORE ABOUT OUR PROJECT,
GET INVOLVED OR DONATE AT:

[SOUTHERNLAKESANCTUARY.ORG.NZ](https://southernlakesanctuary.org.nz)

