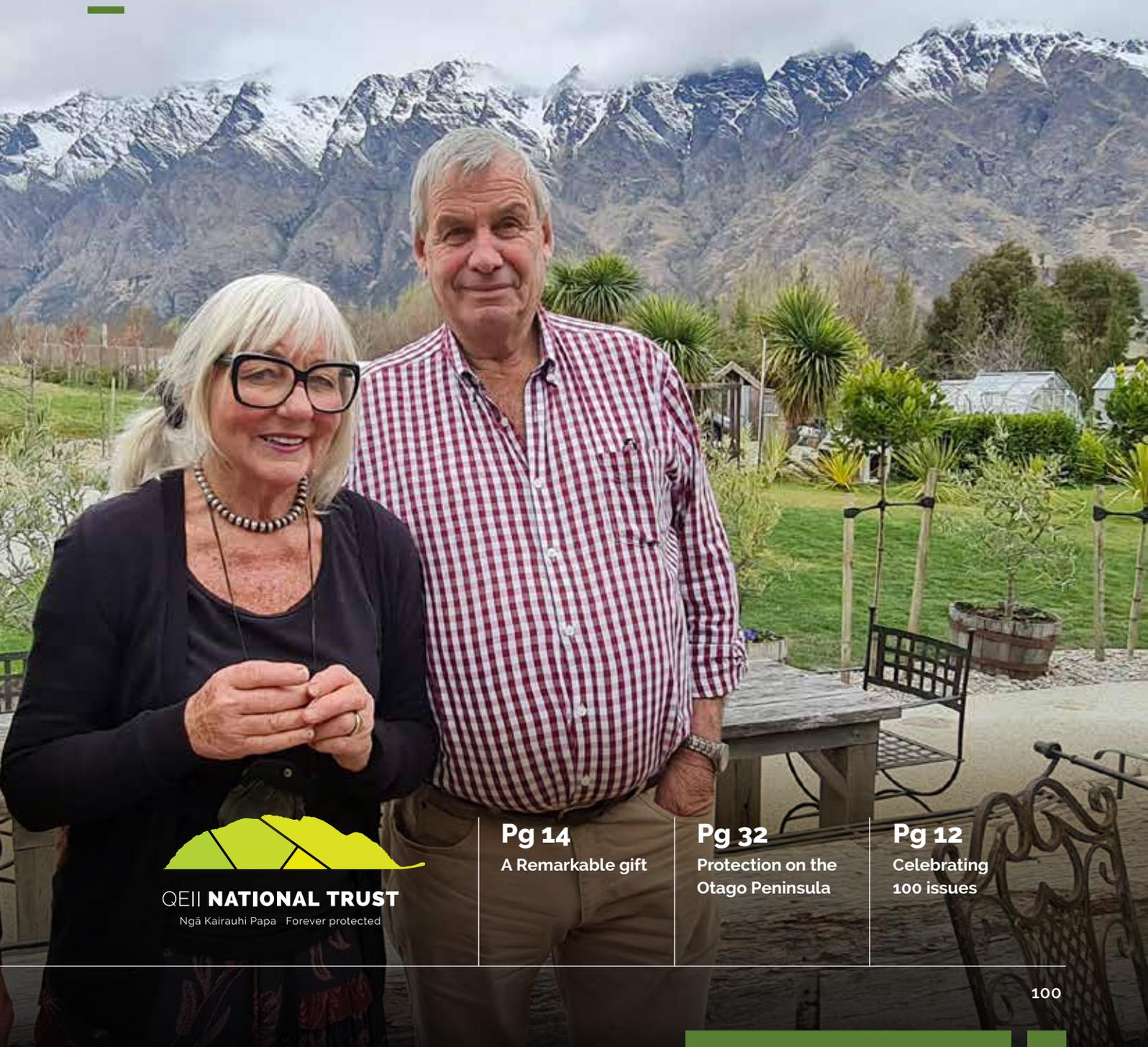


Open Space

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BOARD OF DIRECTORS Chair Bruce Wills, Karen Schumacher, Alan Livingston, Neil Cullen, Donna Field, Graham Mourie
CHIEF EXECUTIVE Dan Coup **T** 04 472 6626 **E** dcoup@qeii.org.nz **Patron** Her Excellency The Rt Hon Dame Patsy Reddy
GNZM QSO DSTJ

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T 04 472 6626 **E** info@qeii.org.nz

Design Pogo Design www.pogodesign.co.nz
Editor Laura Dalby **E** ldalby@qeii.org.nz **W** www.qeiiinternationaltrust.org.nz

CHAIR

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Regional Representatives

Greg Blunden **FAR NORTH AND KAIPARA**
09 407 9701 gblunden@qeii.org.nz

Nan Pullman **WHANGĀREI**
09 434 3457 npullman@qeii.org.nz

Chris Floyd **NORTH AUCKLAND**
021 066 2165 cfloyd@qeii.org.nz

Paul Goldsmith **SOUTH & WEST AUCKLAND**
021 622 368 pgoldsmith@qeii.org.nz

Lynette Benson **WAIKATO AND HUNUA**
09 232 2898 lbenson@qeii.org.nz

Robbie Bennett **WAIKATO NW AND EAST**
07 824 5051 rbennett@qeii.org.nz

Jason Roxburgh **COROMANDEL**
07 868 2401 jroxburgh@qeii.org.nz

Rob Fraser **WESTERN BAY OF PLENTY**
027 562 0333 rfraser@qeii.org.nz

Wayne O'Keefe **EASTERN BAY OF PLENTY**
021 023 85608 woakeefe@qeii.org.nz

Melissa Sinton **ŌTOROHANGA-TAUMARANUI**
027 867 6407 msinton@qeii.org.nz

Neil Phillips **NORTH TARANAKI**
027 268 0664 nphillips@qeii.org.nz

Jake Goonan **SOUTH TARANAKI**
022 327 0445 jgoonan@qeii.org.nz

Malcolm Rutherford **GISBORNE**
022 3106818 mrutherford@qeii.org.nz

Troy Duncan **HAWKE'S BAY**
021 629 426 tduncan@qeii.org.nz

Bill Wallace **TARARUA**
06 376 7796 bwallace@qeii.org.nz

John Williamson **CENTRAL - MANAWATŪ**
06 328 6851 jwilliamson@qeii.org.nz

Trevor Thompson **WELLINGTON & WAIRARAPA**
027 333 3243 tthompson@qeii.org.nz

Tom Stein **NELSON - TASMAN & MARLBOROUGH**
03 574 2978 tstein@qeii.org.nz

Martin Abel **WEST COAST**
03 753 3012 mabel@qeii.org.nz

Miles Giller **NORTH CANTERBURY**
03 313 5315 mgiller@qeii.org.nz

Alice Shanks **CENTRAL CANTERBURY**
03 337 1256 ashanks@qeii.org.nz

Rob Smith **SOUTH CANTERBURY**
03 689 7735 rsmith@qeii.org.nz

Cathy Rufaut **COASTAL OTAGO**
021 100 8347 crufaut@qeii.org.nz

Rob Wardle **CENTRAL OTAGO**
020 4012 6483 rwardle@qeii.org.nz

Mark Sutton **WAIKATO CATCHMENT**
021 540 814 msutton@qeii.org.nz

Jesse Bythell **SOUTHLAND**
020 400 32109 jbythell@qeii.org.nz

Update your contact details with us

You can update your contact details the following ways:

WEB: qeii.org.nz, use the 'Contact' form on our website

POST: **PO BOX 3341, Wellington 6140**

EMAIL: info@qeii.org.nz,

PHONE: **04 472 6626**



A word from the Chair

When heading into a new year, we often take the opportunity to set goals and reflect on the year gone by. For many, the arrival of 2021 will have been welcome, considering the unprecedented events of 2020. Here at QEII, we still have the same big goals to work towards and with a growing interest in protecting our unique species and landscapes, the team is busier than ever.

The increase in interest to protect privately owned land means that, once again, our team is growing to help us expand the amount of work we can do. Growth, while necessary, comes with challenges, and one of these is funding. Support from the government has not increased for many years, so to help us meet the growing demand for our services, QEII has begun to dip its toes into the fundraising world with a new team member coming on board in early 2021 to help us with this work – watch this space for updates.

In this issue, like a new year, we're looking back to see how far we've come. We are honoured and privileged to continue to work alongside landowners who have

chosen to protect the special values on their land, and we are proud to have been able to share their stories in 100 issues of Open Space. That's 100 opportunities for us to share knowledge, celebrate wins and connect with our community.

Today, we share the stories of landowners in Waitomo, who pioneered the protection of waterways in the region to create what was once the highest concentration of QEII covenants. These covenants protect waterways that flow into underground caves. You can read more about them on page 36.

We also have a story about photopoints on page 28. Photopoints

are an integral part of the regular monitoring visits done by our regional representatives. They show us changes to a covenant over time and are a great tool for reflecting on the work landowners have done and the work we have ahead.

On the topic of reflecting, we also have a piece on page 26 featuring Howard from the Wairarapa. He shares the story of his property Canada Flats, which was previously featured in issue 35 of Open Space, back in 1995.

I hope you enjoy reading the 100th issue of Open Space and I hope that 2021 treats you well.

Bruce Wills
Chair



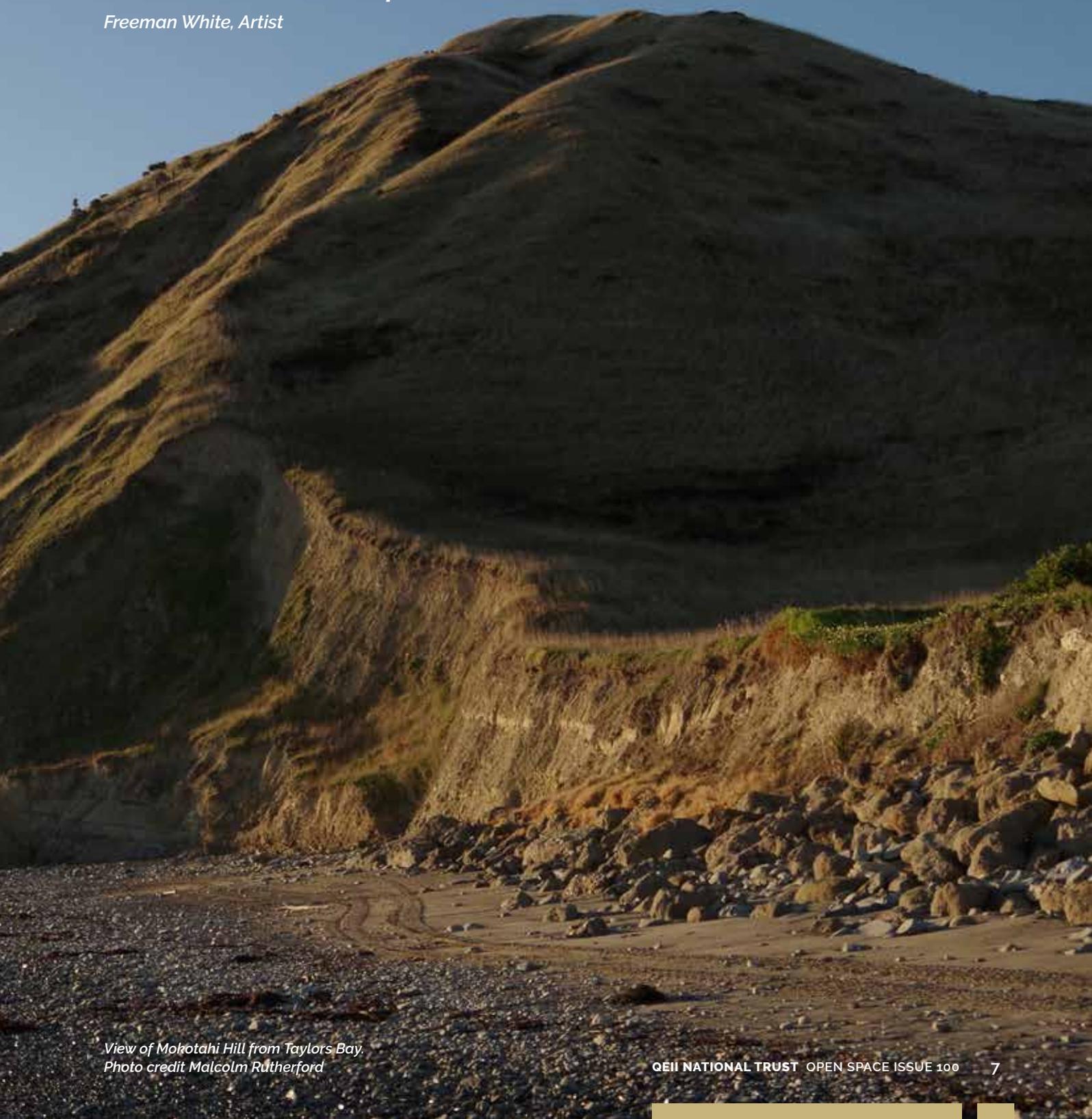
A MĀHIA ICON: MOKOTAHI

—
Written by Malcolm Rutherford, QEII regional representative



“In a time of great social and political change, the permanence and great presence of our iconic landscapes and national parks are more important than ever before. They let us form a sense of identity and give us the knowledge through their timeless permanence that not everything is affected by lockdowns or political change. Their presence both reminds us of the past and gives us hope for the future. Mokotahi Hill is such a place.”

Freeman White, Artist



*View of Mokotahi Hill from Taylors Bay.
Photo credit Malcolm Rutherford*



TOP LEFT: Regional representative Malcolm Rutherford stands on steps being built as part of the track upgrades

TOP RIGHT: Landscape view, with Mokotahi Hill in the centre

ABOVE: Kōkōwai residue on an uncovered pestle tool

BELOW: Tuatua and tuangi shells in the largest midden on site

What makes Mokotahi Hill worth the climb? Is it the challenge? The history? Or perhaps purely for the view? As the QEII regional representative for Te Tairāwhiti (Gisborne and Wairoa), I can say that it's all of these, even if, more often, the reason I'm heading up is to do some line trimming or track maintenance.

On a clear day, looking southwest from the top you can see Napier Hill and Cape Kidnappers; to the northeast beyond Gisborne, to Gable End Foreland; and south to Taupiri, a prominent, sacred mountain on the western side of Māhia. In the foreground is the stunning Māhia beach and Taylors Bay. The view from the top of Mokotahi Hill is iconic, as is the view from the beach with the hill landscape in the background. Countless photos have been shared online and the setting has inspired many artists, including a recent plein air painting of the hill from Taylor's Bay.

As a rep, most of my role involves monitoring existing covenants, assessing new proposals and working

on landscape-wide projects. A smaller part of my job is to manage the properties in my region that are owned by the QEII National Trust. Across Aotearoa New Zealand, QEII has 26 properties, where ownership has been gifted to the trust – Mokotahi Hill is one of these.

The property was gifted to QEII by the Ormond family in 2001. The Ormond family home is located at the base of the hill and the original walking track went through their back yard. The climb up the hill has always been popular for locals and visitors alike, especially over the New Year holidays, and thousands of people have made the trek to the top. The Ormond family gifted it to QEII because they wanted the hill to be protected forever so that locals and visitors could always venture to the top to enjoy the view.

In 2018, work began to give the track a much-needed upgrade to make it wider and even out the gradient. This meant cutting into some midden sites that were on the hill, so we worked closely with the Wairoa District Council,



Heritage New Zealand Pouhere Taonga and Rohan Ormond and Pera Edwards of Māhia iwi Rongomaiwahine to determine the best way of upgrading the track, while minimising damage to archaeological sites.

Rohan and Pera shared with me the history and connection that Rongomaiwahine have with the hill. An interesting fact that they mentioned was that it was part of a special long-standing association with whales in the area. Over 700 years ago, locals would have ventured up Mokotahi Hill for a vantage point to spot the whales, which were a valuable resource for food and material.

The mauri/life force of whales was brought to the area by Ruawharo, a senior tohunga/priest on the Tākitimu waka, who settled at Te Māhia around 1300 AD. Where the Māhia Peninsula is now connected to the mainland by a sandy isthmus, there was once a channel named Te Ara-a-Paikea, which allowed whales to pass from one side of the peninsula to the other. The traditions surrounding

the relationship with whales have been kept over the years and are practised when there are significant whale strandings. The connection to whales continued in early European settlement, with the site being used as a lookout and whaling station by commercial whalers. At the end of 2017, a 16 metre long, 40 tonne Sperm whale washed up on Māhia beach. This whale was named Tū Amo Kotahi, by Iwi kaumātua Arthur Williams.

Further insight into the historical use of Mokotahi Hill was uncovered during archaeological work, led by archaeologist Kevin Jones, in preparation for the track upgrades. Kevin taught us how to read the physical landscape of the hill. The first ridge contains pits, which were probably used to store kūmara. Other platforms can be seen on the ridge, and a possible defensive line. On the tihi/summit of the hill more pits can be seen, which were likely used for storage or housing as part of a fortified pā. On the sheltered eastern slopes there was probably some gardening of kūmara.

Kevin also found some marine mammal bones, which Southern Pacific Archaeological Research unit at the University of Otago helped us identify as whale and dolphin, including "industrial" whale bones that had been used as tools.

Samples of the middens were also supplied for analysis. These historic refuse systems give us incredible insight into the history of everyday life. They were found to contain several different fish species such as snapper, barracouta, red gurnard, tarakihi, spotties and red cod and bird species, like the albatross and pūkeko. Most of the material was shellfish with the most common shells being from tuatua and tuangi/cockles. Radiocarbon dating was also carried out by the University of Waikato on some of the midden samples, indicating they dated back to approximately 1500 AD. Other historical tools were found, including many stone 'teshoa' (sharp chips that would have been used as knives or scrapers), hōanga (sandstone sharpening stones) and small pieces

“Standing at the top of Mokotahi Hill, out of breath and slightly doubled over – that was where I fell in love with Māhia. It’s not just a beautiful place, it is a beautiful community. I can’t imagine a better place for Clarke to propose – even if I was out of breath.”

Jacinda Ardern

of obsidian from Tuhua/Mayor Island.

To me, the most interesting thing we found was a pestle tool, which was used for grinding kōkōwai / red ochre – we even found kōkōwai residue on the stone. Kōkōwai was mixed with oil from fish, whales, tītoki seeds and could be used to add colour to carvings, waka and for decorating skin. It was a privilege to learn about the history of the hill and the surrounding area in such a hands-on way, and to be able to return all the artefacts discovered on the

hill during the archaeological work to Rongomaiwahine. The upgraded track was completed and opened to the public in February 2019 with help from the local community including students from Te Māhia School and Te Kura Kaupapa Māori o Te Parehuia. The upgrade has increased ease of access, allowing more people to get to the top of the hill to enjoy the view.

So, when you visit Māhia, be sure to climb Mokotahi Hill and stand where many have stood before.



*Contractor evening out gradient and widening the track up Mokotahi Hill
Photo credit (for all photos): Malcolm Rutherford.*



Celebrating 100 issues of Open Space

We have been publishing a regular newsletter/magazine to go out to our members for just over 40 years. Over that time, it has been a valuable resource for people in Aotearoa New Zealand who are active in the conservation space, as well as those who are interested in the work that we do.

The first issue of Open Space was simply titled 'Newsletter No 1' and was published in March 1979. Featuring a photo of Manganui o te Ao on the cover, the shorter form had brief updates about the happenings at QEII, including office updates and issues facing covenants.

Nowadays, our aim is to share with our members the stories of amazing people doing great things for biodiversity, provide practical advice on caring for covenants and share the knowledge and experience of others with our members – all sprinkled with

a bit of inspiration and glimpses of some very special places.

To mark our 100th issue and ensure that the back catalogue of Open Space magazine is available to all members, we have digitised our back issues and they are all available on our website to view. If you would like to read any previous issues, you can find them in the Publications and Resources section of our website.

If there's something you'd like to see featured in Open Space email editor@qeii.org.nz



Feedback on our new packaging

In the last issue of Open Space, we asked readers to send us feedback about our new paper envelope packaging. We wanted to know if your magazines arrived in good condition, what you liked about it, what you didn't like and any other feedback.

We would like to thank every single person who took the time to send us feedback about the new packaging and to those who sent us feedback and suggestions for future issues of Open Space magazine.

Overall, the response to our new packaging was positive and we will continue to use it. If you have any feedback about the packaging or Open Space magazine, please email us at editor@qei.org.nz.

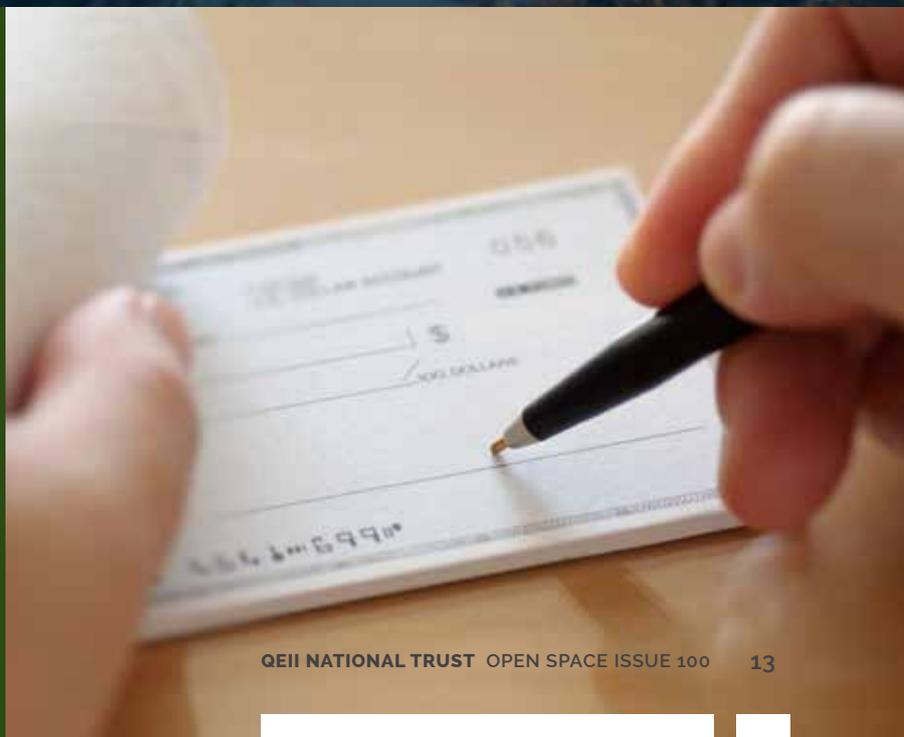
Our new packaging also gives us the opportunity to feature one of your special protected places. The photo used on the current envelope was taken in October

2018 at a Southland covenant, Mānuka Mire, protected by Ron and Gay Munro. You can see a series of waterways meandering through mānuka shrubland. These were previously drains intended to dry out the area, however Ron blocked them up and reflooded them, creating large areas of open water. This area supports masses of native waterfowl and has a healthy population of giant kōkopu (*Galaxias argenteus*; threat status At Risk-Declining).

If you have a photo of your covenant that you would like to feature on a future envelope for Open Space, please send a copy of the photo with a short description to editor@qei.org.nz.

Cheque payments

Banks around New Zealand are phasing out cheques as a form of payment. To our generous supporters who have previously paid by cheque, please note that we are no longer able to receive cheques in payment for memberships or donations.



A REMARKABLE GIFT

Remarkables Station sits at the foot of the Remarkables Range and takes in the lower slopes of its recognisable rugged peaks. The well-kept mixed deer, beef and sheep farm occupies the gently sloping land as it levels off towards Lake Wakatipu, with areas of regenerating native bush on steeper slopes at the southern end of the property providing a habitat for various native birds.

TOP: The sloping land at the foot of the Remarkables range

RIGHT: QEII CE Dan Coup, Central Otago regional rep Rob Wardle, former QEII Chair James Guild and current Chair Bruce Wills, with the Jardines and their advisers, Phil Stevenson and Sam Nelson.





QEII Chair Bruce Wills with Jillian and Dick Jardine and their dog Geordie at the official announcement of the gift.

This stunning piece of New Zealand landscape will soon be protected forever thanks to the foresight and generosity of Dick and Jillian Jardine, who intend to agree a covenant and then gift the ownership of 900 ha of the property to QEII, to be held in perpetuity, ensuring the significant landscape and biodiversity is protected forever on behalf of all New Zealanders.

The Jardine family has farmed and cared for this important slice of iconic South Island landscape for nearly 100 years, and the family has a strong connection to the land.

"This land has been in the Jardine family for nearly a century – since 1922. During that time, we have endeavoured to do all we can to improve and enhance it," said Dick Jardine. "We've poured our hearts into looking after such an important and beautiful slice of New Zealand, and we are truly honoured to have been its custodians."

The landscape values of the property are spectacular. It is a significant area of open landscape at the base of the 34,000 ha Remarkables Conservation

Area. The area is highly visible from the key Queenstown-Milford tourist route and other locations around Queenstown. Open landscapes in the Wakatipu basin have come under increasing pressure from subdivision and commercial development driven by the pressures of population growth and tourism, and there is an increasing need to protect these iconic and recognisable landscapes.

QEII Central Otago regional representative Rob Wardle says that regenerating shrublands and forest on the southern part of the property between Lumberbox Creek and Wye Creek support important biodiversity. "It is highly representative of lakeside lowland to montane vegetation. Common tree and shrub species include cabbage tree/tī kōuka, wineberry/makomako, tree tutu, kōwhai, broadleaf/kapuka and mountain akeake. They form part of an uninterrupted sequence of native vegetation from the lake shore at 308 metres above sea level to the summit of the Remarkables at 2,319 metres. In time, native beech will spread into these shrublands from Wye Creek."

"We hope that future generations are able to appreciate this special piece of land, as our family has been so lucky to."

Discrete areas elsewhere on the property support regenerating bracken fern interspersed with a diverse range of native grasses, herbs and small leaved shrubs. The Queenstown Climbing Club undertakes a pest trapping programme at Wye Creek, where there are thriving populations of bellbird/korimako, fantail/pīwakawaka, grey warbler/riroriro, silvereye/tauhou and smaller populations of kārearea, kea and tomtit/miromiro. There has also been one unconfirmed sighting of a South Island Robin/toutouwai.

The property will officially change hands in 2022, coinciding with the 100-year anniversary of Jardine family ownership of the farm.



TOP: QEII Board with the Jardines

A QEII covenant will be placed on the title to further strengthen its protection. The property will continue to be run as a working farm for the foreseeable future. The farm will be managed for its open space values, with protection of the landscape and biodiversity of the utmost importance. First and foremost, QEII will uphold the vision of the Jardines as set out in the covenant deed.

QEII Chair Bruce Wills said QEII is honoured to be entrusted with such a responsibility. "This is an extraordinarily generous gift to New Zealand and one that will endure long after we are all gone," said Bruce.

"It's exciting for QEII to be taking ownership of this beautiful place, but we also recognise the huge responsibility on our shoulders to ensure the property is looked after for future generations and in line with the wishes of Dick and Jillian."

It's very rare for QEII to own properties. Normally QEII prefers to work in partnership with landowners to protect their properties with a QEII covenant. "QEII considered the Jardines' wishes very carefully, and agreed to take it on, based on the incredible importance of this piece of land and the expectation that it will be economically self-sustaining as a farming operation for the foreseeable future," said Bruce.

QEII intends to explore opportunities for integrating farming and conservation to ensure the property is a regional and national asset. QEII also hopes to create opportunities for public access so that more people can enjoy time in this beautiful landscape.

"It is an exciting opportunity for us to demonstrate the integration of pastoral farming, conservation, public access and landscape protection on such a prominent and accessible site."

Dick and Jillian are proud to be working with QEII to make such a significant gift to New Zealand.

"We firmly believe that this property should be protected forever, and we know that QEII will take the responsibility of stewardship of this property very seriously," says Dick.

"Our decision to pass the ownership to QEII has given us the comfort and assurances that we need, to relax in the knowledge that this land will be protected forever, for the benefit of all New Zealand.

"We hope that future generations are able to appreciate this special piece of land, as our family has been so lucky to."



LEFT: Aerial shots of Remarkables station





*Kauri at Long Bay Reserve
Photo credit: Waitako Regional Council*

Keep kauri standing

Kauri trees are one of our unique taonga/treasures. Found in the upper North Island, they are one of the world's longest-living tree species and can grow to great heights, usually over 50 metres.

Unfortunately, kauri dieback disease is a huge threat to these majestic trees. Caused by a microscopic fungus-like organism, *Phytophthora agathidicida*, it lives in the soil and can be easily spread by human activity such as walking, running, or biking and by animal activity.

It only takes a pinhead of soil to move enough resting spores to spread kauri dieback. Infected kauri are affected at the roots, starving the tree by damaging the tissues that carry nutrients and water around it. Usually, kauri will show physical symptoms of the disease, however a tree can be infected and not show any symptoms at all.

There is no known cure for kauri dieback, so the best way to protect them is by stopping the spread. Whether you are a landowner with kauri on your property or a visitor to the regions where kauri grow, everyone can play their part in protecting them.

Kelly Withers is a landowner from the upper North Island who has kauri in his QEII covenant. One of Kelly's favourite things about the covenant is the taonga found there, including these ancient trees. He recognises how important kauri are to the area and their decline. "The ancient ones are immeasurably valuable, there are some that have seen the rise and fall of entire civilisations, older than history, older even than the first creations of writing itself and now they are nearly gone."

Pest control is also key to the protection of kauri as animals can transport the spores of the disease through their movements. Kelly explains that there is a balance to consider when undertaking pest control near kauri. "We're currently making paths and tracks that enable us to maintain traps and enjoy our property without putting them at risk but mainly, we leave them alone and stay away."

Kauri have large and elaborate root systems which can stretch out at least as far as the canopy is wide. Recently, we were able to support landowners who have kauri in their covenants with custom signs, designed to raise awareness that kauri is present in the area. This was funded as part of the Kauri Protection Fund, administered by the Ministry for Primary Industries and landowners were given signs through their regional representatives to display on their properties.

To further support rural landowners, The Kauri Dieback Programme, Kia Toitū He Kauri – Keep Kauri Standing, have put together a guide for those who have kauri on or near their property. They worked with rural industry groups and farmers to create the guide, which is full of helpful information and a quick and simple checklist to prevent the spread of kauri dieback on rural properties, including:

- Stopping movement of dirt around kauri
- Fencing out stock
- Keeping outside the kauri root zones
- Guidance on farming and kauri

Do your part when visiting kauri regions

When asked why others should do what they can to protect kauri, Kelly's answer was to the point: "because we can".

"A living thing that is literally older than history is owed respect. The oldest kauri was estimated to be over 4,500 years old, and we chopped them down to turn into architraves, that were replaced mere decades later. Now we kill them because we can't be bothered to clean our shoes. The least we can do is not kill them out of negligence."

If you're in native bush in the upper North Island, it's likely you'll be near kauri so it's important to always follow the appropriate steps to help prevent the spread of dieback disease. You should always:

- If available, use a wash station as instructed
- Clean your gear before and after forest visits. This includes shoes, tyres, and equipment
- Stay on the marked tracks. This will ensure that you stay off kauri roots
- Follow all other signage instructions

The rural landowner guide, more information about kauri dieback and lots of other resources can be found on the Keep Kauri Standing website, kauriprotection.co.nz

BELOW: Custom signs for landowners with kauri in their covenants



PEST CONTROL: MUSTELIDS

Written by QEII regional representatives
Trevor Thompson, Jake Goonan and
Wayne O'Keefe



In this third instalment focusing on pest control, three of our regional representatives Trevor Thompson for Wellington and Wairarapa, Jake Goonan from Taranaki and Wayne O'Keefe from the Eastern Bay of Plenty share their experience and expertise controlling mustelids in their areas.

For a pest species, mustelids demand nothing but the utmost respect. They are the ultimate killing machine and have a high metabolism, which means they need to eat often. This appetite also means that they can do a lot of damage to our native fauna in a short space of time. One saving grace is that they tend to have only one litter of kits per year. However, the male will usually impregnate the females of the litter prior to them leaving the nest. The number of young born is

dependent on food supplies, meaning that they can rapidly grow in numbers when food is abundant. All these factors, along with their numbers in the wild, class them as one of the top problem predators in the country.

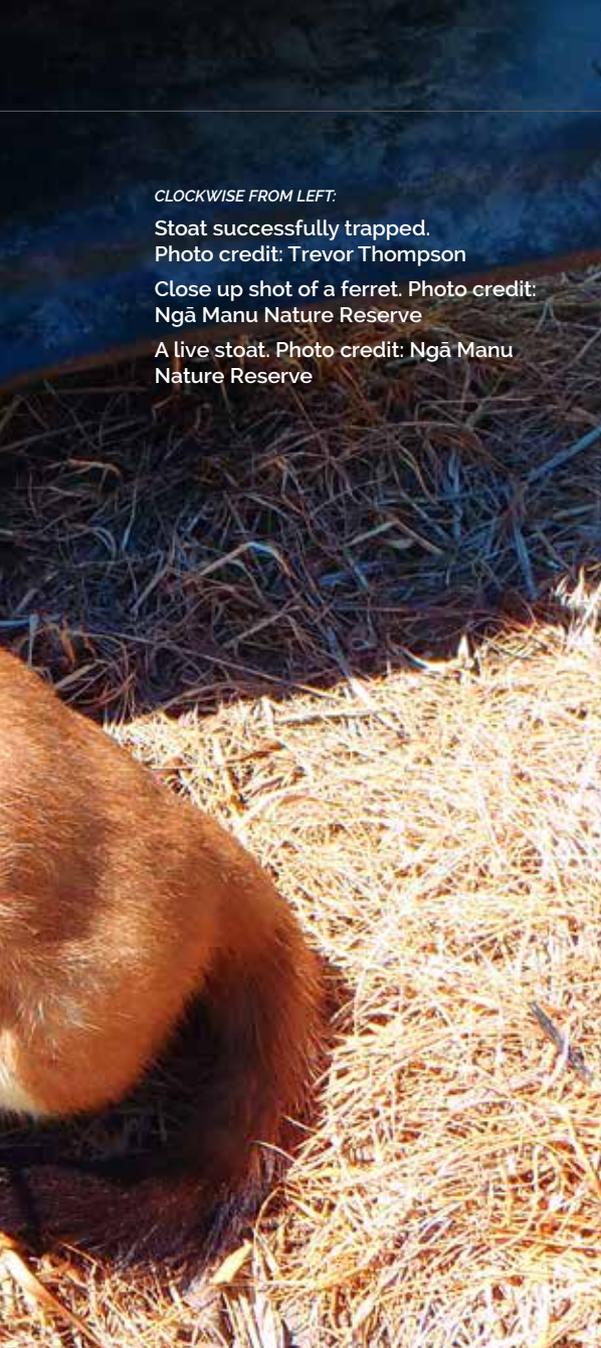
Here in Aotearoa New Zealand, we have three main species that have been introduced in recent times that require pest control – weasels, stoats, and ferrets.

CLOCKWISE FROM LEFT:

Stoat successfully trapped.
Photo credit: Trevor Thompson

Close up shot of a ferret. Photo credit:
Ngā Manu Nature Reserve

A live stoat. Photo credit: Ngā Manu
Nature Reserve



Due to their small size of about 25 cm in length, weasels (*Mustela nivalis*) are often considered a less serious predator but their effects on native species should not be underestimated. While their preferred food source is mice, they are also known to take lizards, insects, and other smaller prey.

Stoats (*Mustela erminea*) are about twice the size of weasels and can be identified by the distinctive black paint brush tip on their tails. They can thrive in most ecosystems from the coast to above the treeline, however forests are their strong point, since they can climb exceedingly well. They are generally on the go 24 hours a day,

with acute hearing and sense of smell. Stoats are highly intelligent animals and are quick learners, meaning that they can quickly become wary of new things in their environment such as traps and bait. Their main meal of choice is rats, but rabbits, mice, birds, invertebrates, and lizards are also on the menu.

The largest of the three and known for their soft pelts, ferrets (*Mustela furo*) have a much more powerful build. They are avid rabbit hunters and are also able to take on and kill adult kiwi. They are not great climbers so are more likely to be found in pasture areas and at the edges of forest remnants, rather than deep within a forest.

These three species were brought to New Zealand in the 1870s and 1880s primarily because of the rabbit explosion that occurred not long after their original introduction. This was an early attempt at biocontrol, opposed by many who saw the possible negative effects on our biodiversity but, unfortunately, were overruled. Now mustelids are widespread throughout Aotearoa New Zealand except for some offshore islands and predator-excluded sanctuaries.

Mustelid control programme in Taranaki

Jake Goonan, regional representative for South Taranaki

In the last 12 months, the Taranaki Regional Council has added mustelids to its Regional Pest Management Plan, as part of the Towards Predator-Free Taranaki programme. Concentrated around the Taranaki ring plain surrounding Maunga Taranaki and Te Papakura o Taranaki (previously known as Egmont National Park) landowners across 240,000 hectares of private land work with trained biosecurity officers to learn best-practice trapping methods and technologies for mustelid eradication.

The programme kicks off with contractors carrying out intensive control on each block of private land until recorded mustelid numbers decrease by over 90%. Once the mustelid numbers are low, landowners then purchase traps at a subsidised cost to place on their property, maintaining those small numbers.

New trapping technology, which makes trapping more efficient and less time-consuming, has allowed the area under control to expand. An example of the recent technology being used in the field is wireless 'econodes' (remote trap sensors) that send catch notifications to mobile devices, and automatically upload trap catch data to the mobile trapping app Trap.NZ. Self-setting traps and other types of traps are being trialled across large areas, to monitor their effectiveness compared to the more traditional DOC 200 and DOC 250 traps.

The aim of this programme is to reduce predator numbers on a landscape-scale, to have a significant impact on improving native biodiversity values in the region. Hopefully, the new technology will help shape the direction of large-scale predator control projects across the country and enable trapping on larger scales.

Towards Predator-Free Taranaki is also carrying out research into the stomach contents of mustelids they catch, to get a better understanding of their diet. While this research is in the early stages and it's too early to draw concrete conclusions, a recent sample of 21 mustelid stomachs found 33% contained birds, 81% rodents, 28% insects, including wētā, and 19% contained vegetation. So far, no mustelids have been found with rabbits or hares in their stomach contents, despite mustelids being introduced to New Zealand to control rabbits.

Another research project involves stoats being live-trapped and released with GPS collars to monitor their behaviour patterns in and around Te Papakura o Taranaki, and to give a better understanding of how efficient these predators are at killing native birds and other wildlife. This research is a joint effort between the Taranaki Regional Council, Department of Conservation, Manaaki Whenua Landcare Research, Taranaki Mounga Project and rural landowners.

More information on the Towards Predator-Free Taranaki programme can be found on their website.

Mustelids and kiwi

Wayne O'Keefe, regional representative for Eastern Bay of Plenty

An important thing to think about when undertaking a predator control operation is what are you trying to protect? This will inform factors of your control regime such as the time of year you need to focus your efforts on control e.g. before nesting starts. Monitoring of the species you are trying to protect and the target species are critical components of a successful pest control plan.

Kiwi are particularly vulnerable to predation by mustelids and effective control is vital to their success. Baby and sub-adult kiwi are especially vulnerable to stoats and the general view is that once they reach 1000 grams, they can fend off a stoat. However, ferrets can attack and kill adult kiwi and once they get a 'taste' for kiwi, they will actively seek them out. A single ferret can decimate a population of kiwi in no time at all.

Mustelid control is challenging and mostly done with kill traps; the smaller DOC 200 for stoats and weasels and the bigger DOC 250 for ferrets. The usual mantra applies here; try and think like the animal you are hunting. As is the case with bait stations, traps should be laid out across the site considering the natural features that the animal is likely to use to cover ground such as fence lines, stream sides and tracks.



Weasel predating a blackbird. Photo credit: Ngā Manu Nature Reserve



Stoat removing chick from kiwi nest. Photo credit: Whakatāne Kiwi Trust

I can't stress enough the importance of maintaining the traps to ensure they are doing their job. Effective placement, regular cleaning, lubrication of the mechanism and six-monthly calibration of the treadle plate is paramount if trap-shyness is to be avoided. I also recommend using a variety of baits where possible and rotate them regularly. DOC have an excellent resource available for those undertaking predator control, available on their website.

Trap shyness is now a reality for a lot of the more established conservation projects. This effectively means that due to circumstances such as a non-fatal encounter with the trap, the mustelid learns that they are 'no-go' areas, and this information is then passed down to their young. Another phenomenon to consider is that by trapping you are effectively selecting the smarter animal to survive as it is only the naïve animal that will enter the trap; therefore, unintentionally creating a 'super-race' of predators. Many of the longer established projects recognise this and will periodically use a second-generation anti-coagulant such as Sodium Fluoroacetate (1080), which can be an effective tool to target trap-shy stoats as they ingest the toxin by eating prey that itself has ingested toxin e.g. rats and mice. This 'reset' is usually needed every three to ten years depending on the circumstances.

Prey-predator relationship

Trevor Thompson, regional representative for Wellington and Wairarapa

When you are planning pest control, it is important to recognise the prey-predator relationship. Research tells us that a stoat's diet is mostly rodents, and a population driver is an abundance of rats. For ferrets the population driver is their preferred food source of rabbits; big rabbit numbers mean big ferret numbers.

I have seen projects in my region spend big bucks on pest control, only to find after 15 years there are more ferrets and stoats than before trapping started. The reason for this, simply put, is that the basic food supply was not given the same effort in control as the predators. In the case of mustelids, reducing their numbers may have an undesired effect on rabbit numbers and the resultant boom in rabbits will see ferrets and stoats drawn into the area as well as up the reproduction rate.

New covenantors often ask me how to catch stoats to assist with restoration on their new covenant, I usually explain that a stoat eats mostly rats, a 100 ha covenant is likely to be home to 700 ship rats and a couple of stoats, so think about who is doing the most damage. If you concentrate on reducing rat numbers, stoats will eventually move on to where the picking is much better.

The presence of kiwi also has big effect on how pest control is carried out. Significant effort is needed to give kiwi a chance to reach adulthood and have a chance against a stoat. Wellington lost its last naturally occurring kiwi in the 1970s and the 1940s in the Wairarapa, and while they are being reintroduced in some areas, overall, the approach to mustelid pest control is quite different to areas with kiwi and is notably simpler and cheaper.

I would add that when trapping mustelids, it pays to work smarter not harder. Rather than saturate an area in traps, utilize obvious rabbit runs under fences, tracks beside creeks, and easy travelling and obvious invasion routes from bridges. Sometimes a particular trap will catch more than one predator as the scent of a trapped stoat can often lure another animal to that same trap.

There are many types of traps available, however to me, the cover over the trap is critical. It should present a stoat or ferret or weasel with a dark tunnel like entrance, something they will instinctively want to explore. In my time running a successful predator control operation across a 1000 ha area, I found that mustelid traps placed under a cover with a dark hole at each end would often work without bait.

While the approach to mustelid control may differ from region to region and while you may have your work cut out catching these quickly adapting mammals, it is worth the effort. The positive effects that removing mustelids has on native biodiversity outweigh the pest control challenges. For more information or advice on controlling mustelids and other pests in your region, check out the Predator Free New Zealand website or contact your local QEII regional representative.



Weasel successfully trapped Photo credit: Trevor Thompson

Note: While our reps have shared their experience with various pest control methods, we support landowners to make pest control decisions based on what is right for them individually.

North Taranaki rep plans new adventures

Neil Phillips has always jumped in with both feet when it comes to life, and he has no plans to change his approach when he finishes up his role as QEII's North Taranaki regional representative. On the other hand, he may be more careful about literally taking the plunge, given boats will be part of the next chapter of his life.

Neil has been a regional rep for the trust for 22 years and he looks back on the last two decades at QEII with a strong sense of achievement. When he started in 1999, Taranaki had 80 covenants. Three years ago, the region was split into two to cope with the workload of 420 covenants and currently Neil is responsible for around 300 covenants in North Taranaki.

A background in dairy farming as well as his time working as a ranger with the Department of Conservation has served him well and the farming experience in particular has made a big difference in building relationships with landowners.

"My farming background has made the job really easy. I can relate to farmers; I know exactly what they're experiencing when they go through hard times and stressful seasonal periods. Sometimes I'll go to a farm and three-quarters of my time is talking about farming."

The growth in covenants reflects a recognition by farmers that protecting natural areas and fencing them off is good for farm management as well as conservation. From a conservation perspective, the gains can be made quickly after areas are fenced off.

"I've seen some amazing results after just five years," Neil says. "It's quite quick because we have really good growth and rainfall in our area. We don't dry out, so there's pretty much growth all year round."

Good cooperation with local councils and other organisations has also been a key factor in achieving good results. The Taranaki Regional Council has a biodiversity team that supports landowners with pest and weed control for five years on covenanted land, and the regional council and one of the district councils also helps with fencing costs in some cases.

"It's been a real buzz working together with the regional council, district councils, and even other conservation groups. What we are doing together in Taranaki is something that a lot of the other regions in New Zealand don't have," he says.

Outside of work, adventure sports have been a major part of Neil's life, especially since his wife Denise died of cancer in 2014. "I've realised life can be short, especially after what I've gone through."

His achievements include competing in the Long-Distance Triathlon World Championships in Sweden in 2015,

which was immediately followed by six days running in the Swiss Alps. In 2018, he completed the 3000 km Tour Aotearoa cycle tour from Cape Reinga to Bluff and earlier this year he rode the 1060 km Kōpiko Aotearoa cycle tour from East Cape to Cape Egmont and entered the Taupō Half Ironman in March.

"The mountain bike endurance events I really enjoy, they're adventurous, you set yourself your own targets."

Neil will finish up with QEII later this year and shortly after he hangs up his regional rep hat, he plans to take off on a three-week sailing trip around the South Island and he is currently studying for his skipper's ticket. During the voyage he plans to visit the remote Cape Puysegur lighthouse at the bottom of Fiordland as part of his goal to visit all of New Zealand's lighthouses by the end of next year.

Neil is always looking ahead, and he will also look back with satisfaction and gratitude for his two decades at QEII. He is particularly thankful for the support from all the head office and other staff over the years, particularly during his wife's illness and following her passing. "They treat you like a family member. That's something I've never struck anywhere else."

“They treat you like a family member. That’s something I’ve never struck anywhere else.”



“My farming background has made the job really easy. I can relate to farmers; I know exactly what they’re going through when they go through the hard times.”

CANADA FLATS: A WAIRARAPA WETLAND

In 1991, Howard Egan retired from a financial career and left a lifetime based in the big cities. "My interests had always been rural, so it was no surprise when I decided to move to the Wairarapa. I took on the last house on a no-exit road. A cottage on 45 acres of flat land, located one kilometre back from the road gate," says Howard. It was here, tucked back under the Tararua foothills, that Howard created Canada Flats, named after the Canada geese that used to be found here in high numbers. The terraced house site provides an outlook over the 9 acres of wetland that Howard has created, following the lifetime interests that he shared with his father Roy Egan, wetlands and hunting Fallow deer.

When Howard first took over the land, it was clear it required a keen, fit and dedicated owner to turn it around. "It was known as uneconomic dairy land with a mix of gorse, rush bushes and the West Taratahi boulders. I knew it was a challenge, but one I was keen to take on." The property was served by two different water races and a spring-fed stream, which was key to the site's suitability and within four years the wetland was established. "The introduction of a wetland required thought, machinery, and a modest amount of money. I created six ponds – three large and three small – and set about putting in flaxes and native trees." Howard planted a mix of flaxes and native trees around each of the

ponds, including tī kōuka/cabbage trees, karamū, kānuka, kahikatea and tōtara. To allow for beef cattle farming, considerable fencing was done. Stock water was provided by water races, so the cattle were able to be kept away from the ponds.

His efforts were recognised in 1993, when he was named Wairarapa Small farmer of the year. "I was surprised and happy to win, especially since the prize was a quantity of native trees." Howard has gone on to be known for his experience in the wildlife field and has worked alongside both Fish and Game and the Department of Conservation.

The wetlands have attracted bird life to the area, although the namesake, Canada geese, which have been declared a pest, are no longer found here. The wetlands are home to pūkeko, pied stilts and spur winged plover along with several duck species including grey teal, mallard and New Zealand's only diving duck, the scaup, which also breeds here.

Howard's aspiration has always been to contribute to the bigger picture and leave a legacy. This was put into place in May 1995 when a QEII covenant protecting the wetlands was approved. "When I purchased the land, I was determined to make sure that what I created would be forever. Anyone who owns Canada Flats in the future will be bound by the covenant in place."

His connection to QEII has since grown over the years with a visit to the covenant in November 2002 by attendees of the National Trust Silver Jubilee conference. "I was thrilled by the visit and even more so that some staff members, including my regional representative Trevor Thompson, keep in touch".

When reflecting on all the work done at Canada Flats, Howard is happy with how far it has come since 1991 and is proud that the wetlands are becoming a key feature of the property. "One of the main ponds is just below the cottage, partly surrounded by kānuka and native bush, but still clearly visible. It is very relaxing to be able to watch the wild ducks flying in at dusk. Canada Flats is a very pleasant place to be."





Egan Covenant

Howard Egan has protected a wetland on his property at Parkers Road, 11 km from Masterton. The wetland is made up of five ponds and springs covering three hectares.

In only four years, he has turned the rough and gorse infested pasture into a model wetland. The ponds are all fenced off and their margins are planted in a variety of shrubs and trees, including cabbage trees, karo, karamu and kahikatea. Mr Egan's covenant covers the whole 10.44 hectare property.

The Department of Conservation has recognised his wildlife management skills in entrusting him with the care of the whio, or blue duck. He also has a captive pond with Australian shelduck. Other birds using the ponds include free-ranging Canada geese, black and mute swan, shoveler and mallard duck. Waders include pied stilt, which breed on the site, white-faced heron, pukeko and spur-winged plover.

Mr Egan was Wairarapa Small Farmer of the Year in 1993, and his wetlands are used by the Wellington Fish and Game Council as a model of how wetlands can be created. He has many years of wildlife management skills.



Simon Collins

Simon Collins passed away very unexpectedly on Saturday 20 March 2021. Simon was the passionate Sanctuary Manager at Lake Rotokare Scenic Reserve, a predator-proof sanctuary and QEII site for threatened native species in South Taranaki. Simon worked extensively with our QEII staff and conservation enthusiasts across Taranaki and NZ for many years. He will be sorely missed and leaves a huge gap in our conservation whānau.



Excerpt from issue 35 of Open Space, featuring Canada Flats. Published in December 1995

TRACKING CHANGES WITH PHOTOPOINTS

As many people who have covenants will know, one of the handy tools QEII regional representatives have for tracking changes in covenants is the humble photopoint.

A photopoint is a quick and simple monitoring technique that can yield some interesting insights into basic trends and help to assess the health of ecosystems within covenants.

Often the photos year-on-year are very similar and sometimes 'no news is good news'; the system is already in a steady state and everything is humming along nicely. Other times the photos tell an inspirational tale of regeneration, document dramatic disruption such as earthquakes or fire damage, or show negative changes like invasion by weeds or browsing feral animals like goats.

In this issue, our regional representatives Jesse Bythell from Southland, Rob Wardle from Central Otago and Malcolm Rutherford from Gisborne share photopoint sets from their areas.

Trevor and Rebecca Brown at Wakapatu, Southland

This coastal rimu-rātā-kāmahi forest fragment was protected by the Browns in 2013. Prior to covenanting, domestic livestock including deer had free access to the forest and the understorey was in a poor state. It had few saplings present, and seedlings and ferns on the forest floor were trampled. In addition, deer rubbing on mature trees was impacting the long-term forest health by causing canopy dieback in places.

Now, with a sturdy deer fence around this forest remnant, we can see clear improvements with a healthy abundance of

diverse species thriving in the understorey, including a wide range of very palatable species which are often absent from Southland forests due to feral deer browsing.

In time, there may be some podocarp recruitment, which will indicate that the conditions have improved sufficiently to support these slow growing forest giants. The Brown family undertake pest control in their covenant and have also planted some native species on the windward side of the forest remnant to provide shelter and help speed up the natural forest recovery.



NOVEMBER 2016: Note the open understorey and rubbed rimu tree in the front left of the frame.



MAY 2019: Thousands of saplings and seedlings have been planted by nature and the forest is regenerating strongly. The damaged rimu has died.

Nic and Catriona Broad, Nuhaka

This remnant of podocarp broadleaf forest on the flats near Nuhaka, East Coast, North Island was bare ground on the understorey when it was first protected in 1999 and the first photopoints were taken thirteen years later.

While it can take a few years for revegetation to occur naturally in a forest where the understorey is stripped out and the soils have been eroded, the growth can be impressive once it gets going. In this case, progress over

the last nine years has been astounding with a huge number of nīkau palms, pukatea and various other plants making the most of the deer-free covenant.

In 2015 a tree fell on the deer fence which unfortunately let some Fallow deer in, so the photopoints can show us damage they've done. Luckily, twenty years of protection has allowed the understorey to get well established and the fencing has been fixed.



2012



2015



2017



2021

Soho Property Limited, Mahu Whenua Covenants

Mahu Whenua was purchased by Soho Property in 2003 and retired from its previous land use. The QEII covenants were established in September 2015 and are located on four high country stations: Coronet Peak, Glencoe, Mount Soho and Motatapu, protecting over

53,000 hectares. The Mahu Whenua covenants make an outstanding contribution towards protecting one of New Zealand's most iconic natural and cultural landscapes and the photopoints show change over time.

Mount Soho Station, Central Otago

The photo from 1991 was sourced from the Manaaki Whenua Landcare Research National Indigenous Vegetation Databank and was originally taken by Landcorp Property Ltd (now known as Pāmu) following a burn in

the spring of 1990. This same viewpoint was converted into a QEII photopoint in 2016 and the photopoints reveal slow recovery of snow tussock on sunny aspects and a more rapid recovery on darker aspects.



JANUARY 1991



May 2020

Possibly the oldest photopoint in the country, the first photo is thought to be from around 1890. It was copied from an old interpretation board at historic Macetown and retaken. It is apparent that before or during the mining era, native forest and shrublands had been

lost from the lower slopes of Mount Soho Station. Under the protection of a covenant, native plants are now returning, with *Coprosma propinqua*/mingimingi and *Dracophyllum pronum*/trailing neinei making a slow comeback along with exotic sweet briar.



Circa 1890.



December 2020

Motatapu Station, Central Otago

The Motatapu Valley is going through a transformation with retired terrace scarps beginning to yield to bracken, providing a nursery for the establishment of native

shrubs including coprosmas, lemonwood and matagouri. Mountain beech have also been planted and successfully established above the cultivated terrace on the far right.



March 2008



March 2021

Chris and Brian Rance, Otatara, Southland

Chris and Brian Rance had a choice when they were registering a QEII covenant on their coastal kahikatea forest in 1998 – they could fence the forest edge or for the same cost they could hire a digger and build two wetlands on the adjacent soggy paddock, utilise existing fences and restore the forest edge.

While over a very long time, the forest could have slowly spread out into the soggy pasture, it would have been tough work for forest species that like shady and sheltered conditions to colonise sunny, grass dominated areas. This is why the Rances have spent the last twenty-three years speeding up the natural process, using plants grown from

local genetic material to transform the soggy pasture to young forest. This pair of photos shows how much has changed in only seven years as the young forest grows in to protect the older established forest edge.

The couple also run a community nursery and environmental education centre on their property where they teach members of the public, farming groups, schools and others how to undertake restoration work in Southland, how to grow and identify native plants and much more. You can check out some of their free advice and activities on their website southlandcommunitynursery.org.nz.



APRIL 2011: Chris and Brian standing in the revegetated portion of the covenant with the mature kahikatea forest in the background.



SEPTEMBER 2018: Chris dwarfed by the native trees she has planted with the mature kahikatea forest only just visible on the skyline.

PARKERS' PENINSULA PARADISE



“The knowledge that our covenants will stick is very pleasing because it’s a fair old effort that’s gone in.”

Looking out from their house on a hill on the Otago Peninsula, John and Moira Parker can survey not only the benefits of their work over nearly three decades on their QEII covenants but also those of seven other covenantors nearby.

The Parkers are proud to be part of a network of landowners protecting and improving the natural values of the peninsula, which is an important habitat for native plants and wildlife.

The work continues on their own covenants, not least combatting growing numbers of rabbits. But they have seen huge changes on their 40 ha property on a neck of land between Hoopers Inlet and Papanui Inlet, of which 37 ha is covenanted. The property is dominated by the 134 m Varleys Hill, with commanding views of both inlets and the surrounding landscape.

The fact the covenants exist in perpetuity and cannot be removed by future owners is a “fabulous” feature, John says. “The knowledge that our covenants will stick is very pleasing because it’s a fair old effort that’s gone in.”

The couple have been staunch defenders of nature on the peninsula and the region for four decades. John campaigned against the proposal four decades ago to build a smelter on the other side of Otago Harbour at Aramoana and Moira helped found organisations including Save the Otago Peninsula (STOP), and the Yellow-Eyed Penguin Trust, and belongs to a group of volunteers battling to control weeds on the peninsula.

There was a remnant of podocarp forest in one part of the property when they bought it and a large area of kānuka but the understorey was bare due to grazing. “Now when we look through the tall kānuka or broadleaf forest, it’s thick and green,” Moira says.

“It’s been amazing watching the ferns come away, we have 30 species now. Sometimes I can be in the bush and I almost get a bit lost because it looks so different.”

The Parkers have done some planting, including podocarp species, but much of the growth has come from natural regeneration. Moira likes to show visitors how the gorse dies back after it becomes shaded by natives growing through it.

Coastal Otago QEII regional representative Cathy Rufaut describes the Parkers as pioneers among those restoring nature on the peninsula and as keen collaborators with others in the community. “Their willingness to be so open and transparent about their property with QEII provides a wonderful learning experience for sharing the knowledge coming from their site,” Cathy says.

One example is the impact of rabbits on the property. In a previous role as an ecologist at University of Otago, Cathy organised students to create four monitoring plots, one with rabbit proof fencing to compare with the damage rabbits were doing elsewhere on the property.

Outside the plot the ground is fairly bare but inside clusters of lemonwood, lancewood, māhoe and ferns show how the rabbits are impacting new growth. Moira has noticed that rabbits can completely ringbark quite large kowhai.

Three species the rabbits don’t seem to find palatable are young kānuka, tōtara and ponga/silver fern. “Over time if rabbit numbers stayed

RIGHT: Kowhai recently ring barked

BOTTOM LEFT: Rabbit exclusion fence

BOTTOM RIGHT: Broadleaf seedlings, 2m above ground level on tree stump

“Sometimes I can be in the bush and I almost get a bit lost because it looks so different.”



at this level, I feel they really would alter the composition of the forest in years to come – some trees such as broadleaf and three-finger would never get established,” Moira says.

Rabbit numbers have been growing for about 10 years. Their property is especially vulnerable because it is bordered by pasture paddocks. John, who does pest control work in the covenants, finds it difficult to control the rabbits by shooting because of the cover provided by the bush.

“The rabbits have got everything they want, they’ve got shelter on our side of the fence and they’ve got pasture grasses on the other side,” Moira says.

A meeting of landowners recently agreed they would work together to tackle the problem and Moira is hopeful this will lead to an improvement.

The network of covenants in the area around the Parkers’ property is providing a wildlife corridor for native birds such as tītīpounamu/rifleman, korimako/bellbird and kererū. Tūi have returned to the area and the dawn chorus has grown louder over time. “Some of the covenanted areas are quite small but they’re all part of the jigsaw,” Moira says.

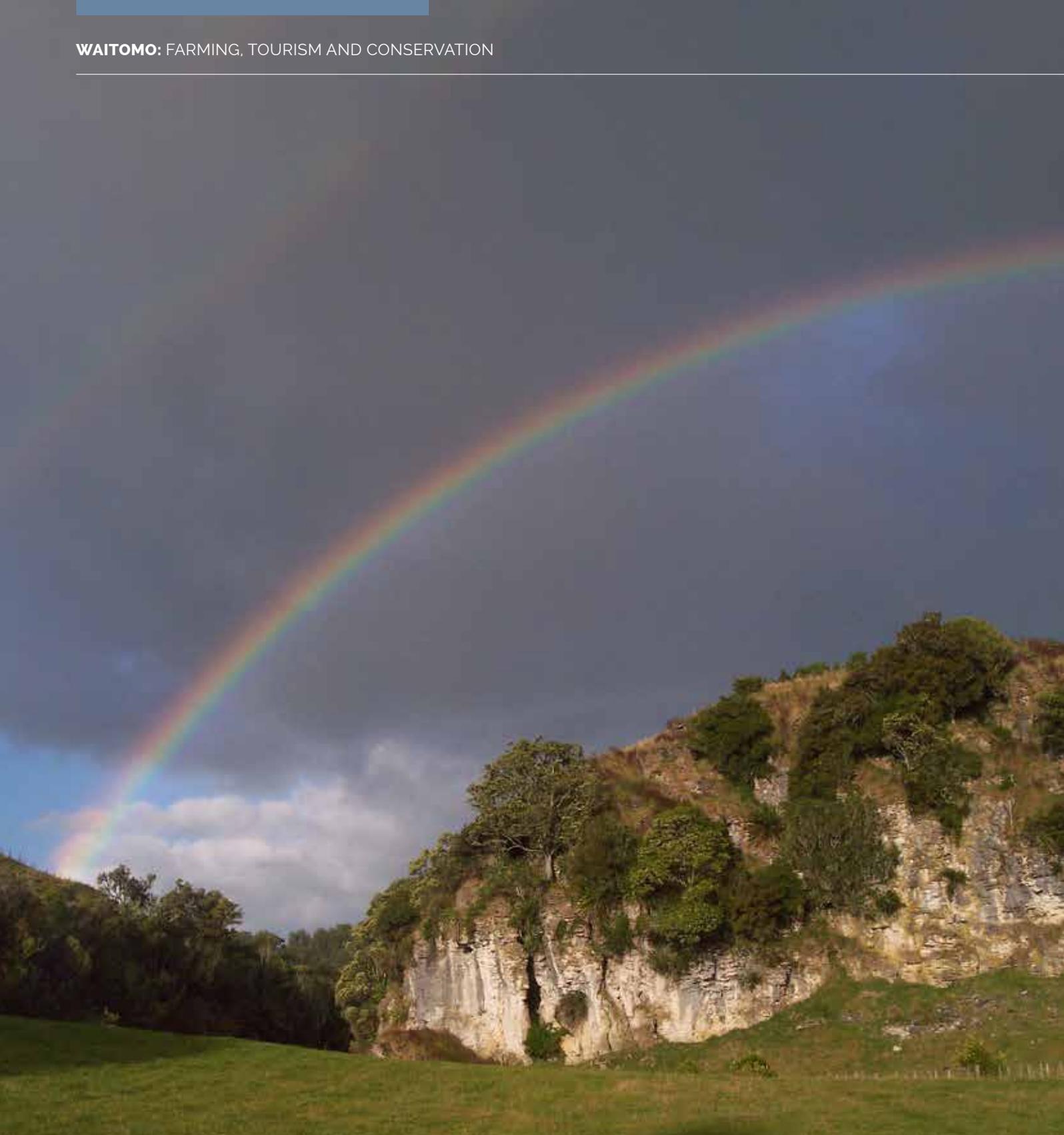
Moira has helped form a band of volunteers called SWAT (Search Weeds and Terminate) who go out to

properties on a Friday to banish pest plants including banana passionfruit vine – “my pet hate” – Darwin’s barberry, and Chilean flame creeper.

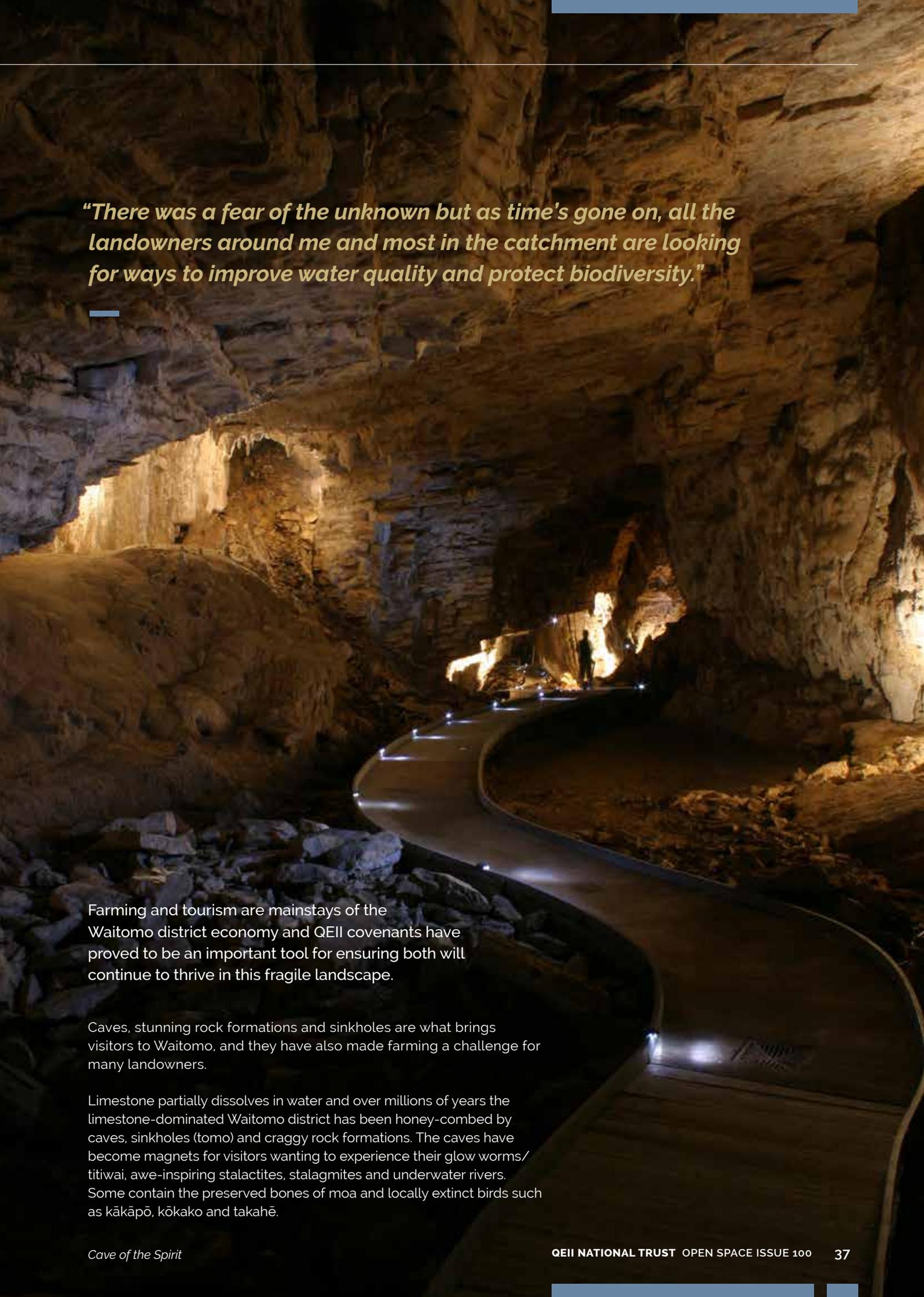
“With six people working on it for a morning, you can make an impact. We’ve been going for a year, the group is expanding, and we have some delightful mornings,” she says.

John and Moira have a strong sense of community and at the heart of it all are their own much-loved covenants. “It’s turned out to be totally wonderful,” John says. “We built a house using macrocarpa from the place and it’s a piece of paradise frankly.”





COVENANTS GOOD FOR WAITOMO ECONOMY AND ENVIRONMENT

A photograph of a cave interior. A winding, dark path leads through the cave, illuminated by small lights. The walls are made of rough, brown rock. In the distance, a person is visible on the path. The lighting is warm and focused on the path and the rock formations.

“There was a fear of the unknown but as time's gone on, all the landowners around me and most in the catchment are looking for ways to improve water quality and protect biodiversity.”

Farming and tourism are mainstays of the Waitomo district economy and QEII covenants have proved to be an important tool for ensuring both will continue to thrive in this fragile landscape.

Caves, stunning rock formations and sinkholes are what brings visitors to Waitomo, and they have also made farming a challenge for many landowners.

Limestone partially dissolves in water and over millions of years the limestone-dominated Waitomo district has been honey-combed by caves, sinkholes (tomo) and craggy rock formations. The caves have become magnets for visitors wanting to experience their glow worms/ titiwai, awe-inspiring stalactites, stalagmites and underwater rivers. Some contain the preserved bones of moa and locally extinct birds such as kākāpō, kōkako and takahē.

Silt from farms and other developments has previously threatened the ecology of, and access to, the best-known caves at Waitomo. At the same time, cave entrances, sinkholes, and limestone cliffs have posed dangers to stock and been difficult for farmers to manage. It has made sense for farmers to look at retiring land for the sake of their own farms and for tourism.

"I remember my dad taking me out and showing some of the sinkholes with breeding cattle down them," says local farmer Ben Stubbs. "Taking out a covenant was an easy decision in a lot of ways".

The Stubbs family farm west of Waitomo village is run by Ben and his wife Bex Stubbs, the fourth generation to manage the property since Ben's great-grandparents took it over in 1914. Ben's parents Anne and Alistair took out the first QEII covenant in the early 1980s, motivated both by farm management issues and a strong conservation ethic. Today there are nine covenants, covering 253 hectares.

As well as the beef, sheep and dairy grazing operations, the farm attracts cavers, scientists, school groups on adventure camps, rock climbers and participants on the popular annual Waitomo trail run. "We're only here

to look after a piece of land, it's not necessarily only ours. It's kaitiakitanga and we really thoroughly enjoy having people come here."

Ben learned a love of the bush as a child exploring the farm, the caves and the secrets they held. "We went on a moa hunt when I was probably seven or eight with another family just as something to do but we actually found moa bones – it turned out to be more than a game."

"We have found bones from moa and many other extinct or endangered species. There's a sense that they have only just left the property and it becomes obvious what we have lost." The covenants also include wetlands, where Ben and his father found fernbirds they had previously not known existed on the farm.

As silt problems increasingly threatened the Waitomo caves, plans were drawn up in the 1980s to retire land in the 5000 ha Waitomo Stream catchment. In 1992, the Waitomo Catchment Trust Board was set up to tackle the problem.

The establishment of the catchment board was a major catalyst for other landowners retiring land and taking up QEII covenants. Board representatives came from the farming community,

tourism, tangata whenua, the regional council, Department of Conservation, QEII National Trust and cavers.

QEII covenants were established on many areas with natural values, and at one stage the Waitomo region had the highest concentration of QEII covenants in New Zealand. Other land was converted to forestry or permanently retired from grazing, leading to a major reduction in sedimentation in the stream catchment over coming years.

Mark Frederickson farms in the upper reaches of the Waitomo catchment. He sold 100 ha to the Native Forest Restoration Trust in 2007, which is now the Tui Glen Reserve, protected by a QEII covenant.

He now acts as honorary ranger for the reserve and has two covenants totalling 8.2 ha on the land he still owns. He has been closely involved in the catchment board, including spells as treasurer and a board member.

"We started with more than 270 ha on this piece here and I think we're now farming 90 ha or less in grass," Mark says. "A lot of it has been returned to a protected status. The catchment trust board has been fantastic as a vehicle to move all of that along for us and other properties in the area."



The tourism industry in Waitomo has been struggling since Covid-19 suddenly cut off international tourism over the last year but domestic tourism and government support have given many operators hope for the future, cave tour operator Peter Chandler says.

"After the main lockdown, tourism was quite buoyant with the rebound in domestic tourism. But since then, it's kind of morphed into being quite good during long weekends and school holidays. The rest of the time it's been about five to ten percent of what it was," he says.

Many of the domestic visitors during school holidays are parents with small children wanting to visit the caves as they did as children. Adventure activities, such as abseiling and blackwater rafting, have been harder hit in the absence of foreign tourists.

Tourism operators have banded together to create the Go Waitomo website to market themselves to potential visitors and many received government grants offered to strategic tourism assets to help with cash flow for two years.

There is light at the end of the tunnel now the rollout of vaccinations has started and the bubble with Australia has been created. "The Australian market will help, but I think it's going to be a slow kind of recovery," Peter says.

If you are interested in visiting the Waitomo area, plan your trip at www.gowaitomo.com

Much of the funding for improving water quality in the Waitomo region has now been taken over by the Waikato Regional Council as part of its effort to improve water quality in the Waipā River catchment. "The Council has a big focus on what's happening upstream and is willing to be involved in conjunction with the Department of Conservation."

"The QEII reps have been working very hard for us, looking at ways we can get good funding for fencing for instance, and the regional council has been really good too," Ben Stubbs says.

Mark plans to covenant other areas of his property in the future and he says landowners' attitudes toward environmental issues have changed over the years. "There was a fear of the unknown but as time's gone on, all the landowners around me and most in the catchment are looking for ways to improve water quality and protect biodiversity."

Peter Chandler is a veteran operator of cave tours as co-founder of the Legendary Blackwater Rafting company in the 1980s. That company has since been sold and he and his wife Libby now own a company running tours to the Spellbound glow worm cave and the nearby Spirit Cave south of Waitomo village.

The Spirit Cave contains stalagmites, stalactites and moa bones. The cave entrance is on land owned by Canadian-based lime and limestone company Graymont and there has been a QEII covenant on the 6.1 ha block since Graymont bought the land in 2015.

"We do some pest control work on the covenanted block. Our tours don't walk through the forest area and the undergrowth in there has become so thick since it was fenced off in 2004 that it's a battle to walk through," Peter says.

Ben Murray, health, safety and environment manager for Graymont's New Zealand operations, says the company continues to contribute to the maintenance of the covenant as part of its commitment to operating in a sustainable manner. "This is one of the ways to help generate shared value by supporting the local economy, protecting the environment and giving back to the local community," Ben says.

The efforts of landowners, mana whenua, local councils, tourism operators and organisations like QEII are helping to ensure that farming, tourism, business, and the environment can add value to each other in the Waitomo district.

"We see our farm now as a park-like area. It's quite a small operation as far as farming goes but it has been a great thing to be part of and you can be proud showing people around."

*LEFT TO RIGHT: Pest control is regularly undertaken on the covenants
Moa bones inside the Spirit Cave*



Encouraging stewardship with funding

Covenants are ever evolving. The process that protects a piece of land with a QEII covenant is robust, however landowners also understand that the hard work continues well after a covenant has been registered. The importance of good stewardship cannot be underestimated and in 2017, The Stephenson Fund was established to support this.

The Stephenson Fund

Named after key founders of QEII National Trust, Gordon and Celia Stephenson, the key aim of the fund is to encourage stewardship in QEII covenants and strengthen our partnership with landowners by providing funding for projects that will enhance these protected places.

The most recent round of funding opened at the end of July 2020. This marked the sixth round of funding and landowners were encouraged to get in touch with their regional representatives to discuss any projects that could be suitable. Our regional representatives guide landowners through the criteria so that they can apply.

For the last round of funding, there was \$150,000 available to allocate. Our team received 39 applications from all over the country and these were all put through our well-established assessment process. Partial or full funding was provided for 30 applications and projects included weed and pest control, revegetation work, track work, signage and management plans.

Supporting and encouraging stewardship on QEII covenants remains an important part of our work, and we plan to continue running the Stephenson Fund.

Applications for the next round of funding will open later in 2021. An email will be sent to members when the funding round opens. If you need to update your contact details, please let us know. You can update your contact details with us using the online form on our website or by calling us on 0800 467 367.

The Auckland Council Fund

A new contestable fund to support covenants in the Auckland region was established last year with funding from Auckland Council. We had \$140,000 to allocate which provided two thirds of the funding for projects to enhance the biodiversity values in registered QEII covenants within the Auckland region.

The fund opened for applications over the same dates as The Stephenson Fund and we received 22 applications for the Auckland-specific fund. One of our covenantors in the Auckland region, Max, applied after discussing their project with their regional representative Chris Floyd. "We were happy to successfully get funding, because now we can extend our pest control across a wider area and use humane trapping to reduce our level of toxin use. Without the funding, we wouldn't have been able to do this."

Just like The Stephenson Fund, all applications were put through an assessment process and 15 projects were approved. Other types of projects that were funded included weed control, revegetation, track work and fencing.

We were glad to be able to support our Auckland covenantors with this specific fund and if more funding comes available, we will look to run the fund again as a way of supporting stewardship on QEII covenants in the Auckland region.

District Council	Location	Covenant Name	Area (ha)	Main open space type
Thames-Coromandel	Whenuakite		2.4562	Lowland secondary forest
Thames-Coromandel	Whenuakite		4.113	Lowland secondary forest
Thames-Coromandel	Whenuakite		0.4235	Lowland secondary forest
Tararua	Konini	Beaufort	2.8258	Lowland modified secondary wetland and treeland
Tasman	Moutere		1.7461	Lowland modified primary shrubland and sedgeland, and modified secondary forest
Far North	Totara North	Otawhiri	4.3163	Coastal pohutukawa forest (one-third) with farmed landscape (two thirds)
Far North	Totara North	Otawhiri	0.5209	Revegetated slopes around entrance and house & curtilage
Far North	Totara North	Otawhiri	30.0435	Coastal pohutukawa forest with farmed landscape
Southland	Upper Oreti Valley	Kennedy's Covenant Extension 2 - Centre Hill	15.3005	Sub-montane modified primary tussockland, scrubland and modified secondary grassland
Marlborough	Renwick	Kaituna Wetlands	4.9356	Lowland modified primary reedland, and modified secondary shrubland and sedgeland
Thames-Coromandel	Tairua	Mamaku Gully	8.7793	Lowland modified primary and secondary mixed podocarp-broadleaf forest, modified secondary kanuka shrubland and revegetated (kanuka) scrub
Thames-Coromandel	Tairua	Taku Whenua	8.5713	Lowland modified primary and secondary mixed podocarp-broadleaf forest
Stratford	Stratford	Kiore Ridge	11.1706	Lowland modified primary forest
Grey	Atarau	Little - Matai	0.7353	Lowland modified primary forest
Grey	Atarau	Little - Totara	0.5644	Lowland modified primary forest
Southland	Te Anau	Sue's Garden Extension 2- Eweburn	24.5664	Submontane secondary shrubland and modified secondary fernland and open water and exotic grassland
Masterton	Wainuioru	Karamu South Covenant	23.48	Lowland modified secondary forest and wetland
Marlborough	Avon Valley	Camphill	8.8726	Lowland modified primary water, modified secondary forest and sedgeland and exotic grassland

District Council	Location	Covenant Name	Area (ha)	Main open space type
Kaikoura	Kaikoura	Mount Ross Covenant	10.3379	Lowland secondary and modified secondary forest
Kaikoura	Kaikoura	Frost Family Covenant	0.3633	Lowland secondary and modified secondary forest
Waipa	Maungatautari	Alice's Bush	1.8749	Lowland secondary grassland, modified secondary forest and treeland and exotic grassland
Waipa	Maungatautari	Ryan's Bush	0.9188	Lowland modified secondary forest and exotic grassland
New Plymouth	Omata	Mackay's Bush	0.3485	Lowland modified primary forest
Waimate	Mt Nimrod		21.2886	Lowland modified primary forest and secondary scrub
Dunedin	Hoopers Inlet	Ara Kōtare Bushlands	5.2924	Semicoastal modified primary forest and secondary forest and shrubland and exotic grassland with volcanic rock outcrops
Tararua	Alfredton	J and J McKay Family Covenant	3.16	Lowland modified primary wetland, modified secondary treeland and exotic grassland
New Plymouth	Okato		0.5877	Coastal secondary shrubland
Selwyn	Upper Rakaia Gorge	Pukeko Swamp	13.785	Montane modified primary wetland
New Plymouth	New Plymouth	Cathie Native Bush	2.7686	Submontane modified primary forest
New Plymouth	New Plymouth	Cathie Native Bush	0.1421	Submontane modified primary forest
New Plymouth	Inglewood	Allerby Bush	1.2409	Lowland modified primary forest
Tasman	Takaka	Blyth's Blue Lake Covenant	3.761	Lowland secondary forest and modified primary lake.
New Plymouth	Inglewood	Allerby Bush	3.4761	Lowland modified primary forest
Far North	Kaeo	Lloyd's Covenant - Takakuri	21.335	Lowland modified secondary shrubland and forest
Lower Hutt	Wainuiomata	Innes Bush	38.175	Semicoastal modified primary and secondary forest
Whangarei	Ocean Beach	Kaitiaki ō Dun Mara Wetland Covenant	1.054	Coastal modified secondary reedland and revegetated shrubland
Southland	Horseshoe Bay	Horseshoe Bay Sphagnum - North	0.57	Costal modified primary mossfield and forest
Marlborough	Kenepuru Head	Maggie's Bush	9.1285	Coastal modified primary tawa and kanuka forest.
Southland	Horseshoe Bay	Horseshoe Bay Sphagnum - South	0.4641	Costal modified primary mossfield and forest

Far North	Russell	Collins Kiwi Covenant	0.5585	Coastal secondary kanuka-manuka-totara forest (kiwi, banded rail habitat)
Far North	Russell	Harwood Kiwi Covenant	2.327	Coastal secondary kanuka-manuka-totara forest (kiwi, banded rail habitat)
Waikato	Onewhero	The Sir Robert Fenwick Covenant	9.7206	Lowland secondary hardwood-podocarp forest and modified secondary reedland
New Plymouth	Inglewood	Vujcich Piakau Stream Forest Covenant	5.0029	Lowland modified primary forest
Hurunui	Mount Grey	Birdsong	7.3833	Montane primary and modified primary forest and exotic forest
Selwyn	Rakaia Gorge	Rakaia Gorge Island	0.569	Lowland modified primary treeland and volcanic cliffs
Hurunui	Scargill	H V Murray Covenant	0.8384	Modified-primary and secondary hardwood forest and scrub on limestone outcrops
New Plymouth	Omata	Te Waha o Tāne	1.1331	Semi coastal modified primary forest
New Plymouth	Okato	Fleming Wetland	2.177	Semi-coastal secondary wetland
South Wairarapa	Te Awaiti	He Rākau Rewarewa	45.42	Semicoastal modified primary and modified secondary forest and sedgeland. Public recreation.
Tasman	Ngatimoti	Paratiho North	4.0217	Lowland modified primary forest and reedland, exotic grassland and scrub
Tasman	Ngatimoti	Paratiho South	3.2903	Lowland modified secondary forest
Waitomo	Waitomo	Frederikson protected area	5.5562	Lowland secondary treefernland, shrubland, forest and exotic pasture
Thames-Coromandel	Waiomu		5.4945	coastal secondary forest and revegetated shrubland (retired pasture)
Central Hawke's Bay	Omakere	Rusty's Bush	17.71	Lowland secondary forest and exotic grassland
Thames-Coromandel	Waiomu		6.2322	Coastal secondary forest
Wairoa	Frasertown		37.9045	Lowland secondary forest
Waikato	Glen Massey	Harding Bush	1.953	Lowland modified primary podocarp broadleaf forest
Carterton	Gladstone		3.688	Lowland modified primary forest and sedgeland
Carterton	Gladstone		1.485	Lowland modified primary treeland and lowland secondary sedgeland
New Plymouth	Hurford, New Plymouth	Puriri Bush	1.3318	Semi coastal secondary forest



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Level 4, 138 The Terrace, PO Box 3341, Wellington 6140, New Zealand
Phone 04 472 6626 | info@qeii.org.nz | qeiiationaltrust.org.nz