Est: 1977 Ngā Kairauhī Papa | Forever protected

MAGAZINE OF THE QEII NATIONAL TRUST

ISSUE 101 | NOV 2021

Open Space

LEAVING A LEGACY FOR THE FUTURE

QEII NATIONAL TRUST
Ngā Kairauhī Papa Forever protected

IN THIS ISSUE **THE QEII TRUST MAGAZINE:**

QUEEN ELIZABETH II NATIONAL TRUST is a statutory organisation independent from government and managed by a Board of Directors. We are a registered charitable entity under the Charities Act 2005. Registration number CC28488.

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

OPEN SPACE™ is published by the Queen Elizabeth II National Trust, PO Box 3341, Wellington 6140, New Zealand.
Level 4, 138 The Terrace, Wellington ISSN 1179-3880 (Print) ISSN 1179-3899 (Online)
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.qeiinationaltrust.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**

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

Jessica Reaburn
NORTH-WEST AND EAST AUCKLAND
021 026 23436 jreaburn@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

Hōri Barsdell **EASTERN BAY OF PLENTY**
027 634 8958 hbarsdell@qeii.org.nz

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

Joanna Buswell **NORTH TARANAKI**
027 668 7905 jbuswell@qeii.org.nz

Carol Burgess **NEW PLYMOUTH**
021932555 cburgess@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

Lou Hagger **TARARUA**
0224773833 lhagger@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 **WAIAU CATCHMENT**
021 540 814 msutton@qeii.org.nz

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

A word from the Chair

The start of the year began with enthusiasm and excitement for a new year. A fresh start, or more appropriately, a new leaf, can be very appealing, especially after the interesting year that was 2020. As we head towards the end of 2021 and into 2022, it is natural to reflect on how the year went – or even, how it didn't go.

While the year may have been full of disruptions and continued uncertainty, as an organisation, we have managed to achieve a lot. I am grateful for our knowledgeable team of regional representatives, the focused leadership from our senior leadership team and our growing and passionate team in head office for their contribution in taking QEII from strength to strength and our 2021 Annual Report is a testament to this.

As well as covering all things financial, the annual report also highlights some of the Trust's major achievements for the year including new covenants approved, monitoring visits undertaken, partnering with others, and supporting members with The Stephenson Fund. An excerpt can be found on pages 38-41 and the full version of the annual report will be published on our website.

This issue of Open Space introduces some new pieces of work for us, including an outline of what the Trust is working on as part of the Government's Jobs for Nature programme on page 14. QEII has been approved for additional funding over the next four years and the team has been preparing for this for much of the year. This means we can significantly increase protected areas throughout Aotearoa New Zealand and provide some extra support for covenantors in certain areas.

We also have several articles focusing on ungulates, a growing issue on both private and public conservation land; on page 6 we have a story about the Jacksons from the Waikato, who have four covenants on their farm, which has been in their family since 1880; and you can find out more about our recently launched fundraising programme, Partners in Protection – Ōhākī, on page 20. As we head into the holidays, I wish you all a safe and happy summer and we'll see you in 2022.

Bruce Wills
Chair

New packaging photo

Each year we select a new photo to feature on the envelopes that we use to send out our issues of Open Space. Photos are submitted by our QEII whānau and choosing just one is a challenge.

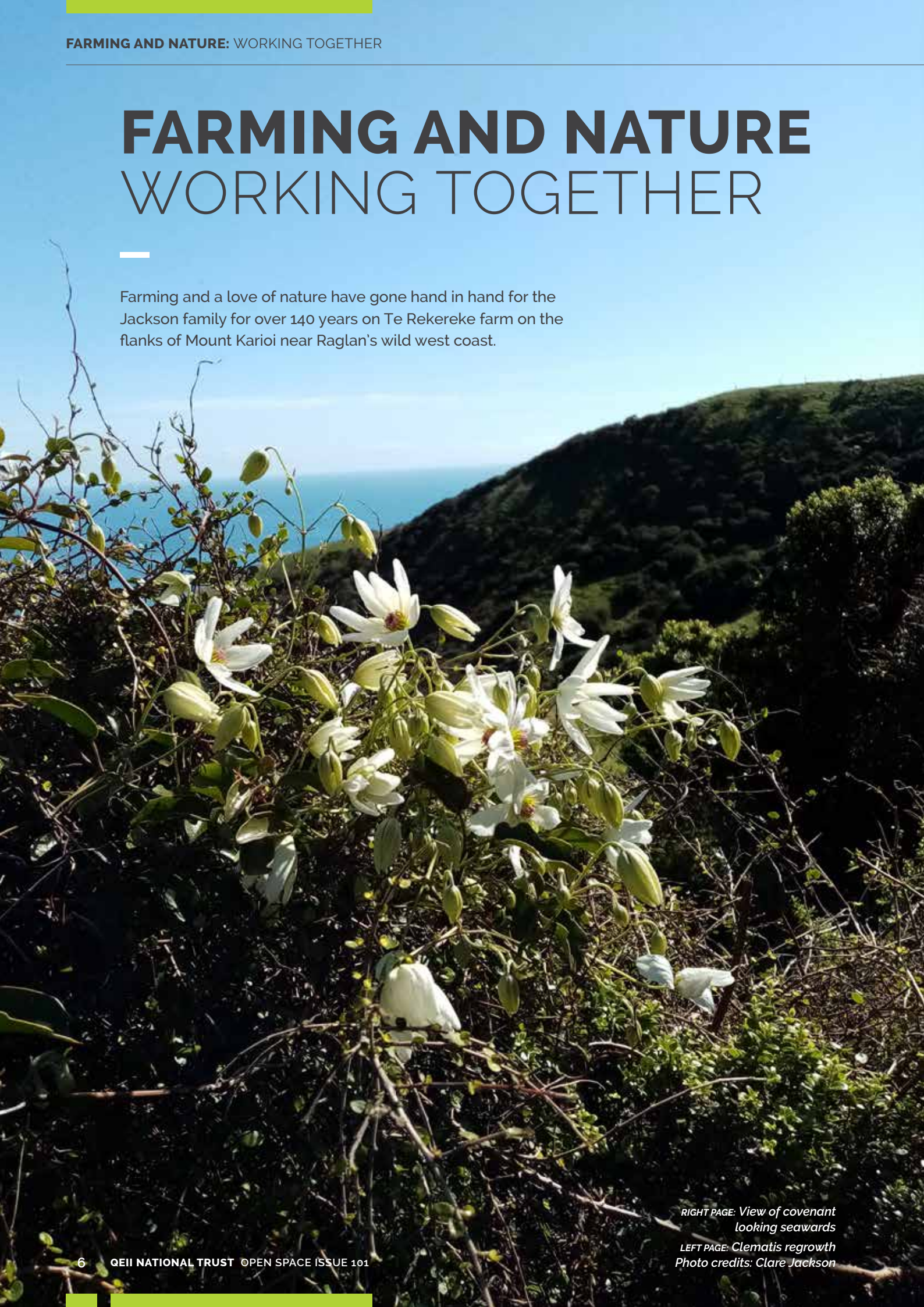
The photo we have selected for our current envelopes was taken by Jesse Bythell, our regional representative for Southland at a covenant near Mossburn in northern Southland. It shows off the copper tussock-grassland in the golden afternoon light.

The 20.5-hectare grassland and wetland covenant was originally protected in 1985 by the Pinney Family and is now owned and managed by Ernslaw One Ltd. The covenant supports many threatened plants, including a tiny native lily, *Wurmbea novae-zelandiae* (Threatened - Nationally Vulnerable).

Thanks to everyone who took the time to send us photos and for the continued feedback on our paper packaging. If you have a photo of your covenant that you would like to feature on a future envelope for Open Space or if you have any other feedback about Open Space magazine, please email us: editor@qeii.org.nz.

FARMING AND NATURE
WORKING TOGETHER

Farming and a love of nature have gone hand in hand for the Jackson family for over 140 years on Te Rekereke farm on the flanks of Mount Karioi near Raglan's wild west coast.



RIGHT PAGE: View of covenant looking seawards

LEFT PAGE: Clematis regrowth

Photo credits: Clare Jackson

" Sustainability is a key focus of our farm succession plan and I'll continue to make farming work with nature."

"It's a special ecological area because the property extends from the mountain to the sea."

Caring for the land and appreciating its natural values has been embedded in the farming operation over 140 years and is set to continue into the future as new generations of the family take the reins.

The creation of four new QEII covenants over two bush blocks during the last couple of years along with weed and pest animal control are among the latest initiatives on the sheep and beef property of just under 290 ha. Clare Jackson recounts a family story of her Scottish great-grandmother walking around when the land was originally being cleared, pointing to trees that were to be preserved.

"There are some really beautiful old trees, some beautiful old stands of pūriri and karaka, trees that are hundreds of years old. It's due to her and others in the family who said no, we're not cutting that down," Clare says.

Clare's brother Malcolm Jackson farms the property, the fourth generation of his family to do so since John F. Jackson arrived from Cambridgeshire in 1880.

Malcolm's parents Tom and Jean covenanted two areas in a northern block with QEII not long after the Trust's establishment four decades ago. These areas were part of a 193 ha block that was later sold to the Department of Conservation in 1999 to allow the Te Toto Gorge Scenic Reserve to be extended down to sea level.

Like the reserve, the farm stretches from the coast up the southwestern flanks of the extinct volcano Mt Karioi. "It's a special ecological area because the property extends from the mountain to the sea. You get that transition of vegetation from the coast to the mountain, which is very rare," says Robbie Bennett, the QEII rep for Waikato North West and East.

"It was great to be able to bring the Trust's mahi to the projects and support the Jacksons' commitment to this important work," Robbie says.

Clare Jackson and her husband Tim Newton, who own an arborist, gully restoration and landscape design business in Hamilton, have enjoyed helping with the latest conservation work on the farm.

Also involved are the Newton-Jackson children, including son Jack, a vet currently living in Scotland, who will eventually take over the farm, daughter Elizabeth, and Paul, a musician and composer studying for a PhD at Cambridge University. Paul developed a keen interest in botany on the farm and has catalogued the native plant species found there.

Some of the discoveries include the black potato orchid, *Gastrodia cunninghamii*, which has not previously been recorded on Karioi and seeds of the nationally threatened swamp maire have been gathered from a neighbouring farm for reintroduction on swampy areas of the Jackson property, Paul says.

ABOVE FROM LEFT: *Te Rekereke Stream. Amazing regrowth on ancient pūriri. Paul on Mt Karioi.*

"It's been a real family affair," says Clare, with a number of whānau chipping in with some of the seed collection, fencing and weed clearing work. Her father Tom, 97, was shown the new fence line from the road and was "amazed and happy" to see what had been achieved.

QEII and the Waikato regional and district councils have made a big difference in helping fund the fencing, as well as weed and pest control. Nearly 3,250 metres of fencing has been built, some of it on steep and sometimes treacherous terrain, protecting the bush as well as wetlands and streams.

Waikato Regional Council provided around half of the fencing cost, according to the council's catchment management lead Callum Bourke. The regional council, DOC and the family have also teamed up to control the invasive dally pine.

Plant species in the covenants include pūriri, kohekohe, hīnau and rimu on the higher slopes. Closer to the sea, species such as kānuka, mānuka, whau and coastal kōwhai become more prevalent, along with five species of rātā and ramarama.

Clare says stock had stripped much of the undergrowth over the years and seedlings were sparse. Only a few examples remain of some tree species, including tītoki and ngaio. The family have been gathering seeds from some of these trees and are having them propagated by local expert Wayne Bennett of Forest Flora to help restore diversity.

Already, regrowth is being seen in the fenced off areas. New shoots are growing from the base of old cabbage trees, nikau palms and pūriri, and kohekohe seedlings are emerging.

Last winter, Clare and her cousin Anthea were walking among the old pūriri trees when they noticed two kākā eating the pūriri flowers. "I had never seen kākā there before. We watched them for about two hours until the sun set. That felt like a real vote of thanks from the birds."

Funding from QEII and the Waikato District Council has helped the Jacksons set up predator control for possums and rats in the covenants, which they hope will help the bird life to flourish and allow more natural regeneration of the bush.

"We want to see the biodiversity really thrive and if a pair of kākā decided to come over and nest in one of the hollow trees, if they felt safe and there was all sorts of food around, that would feel pretty special," Clare says.

The motivation to carry on the conservation work as part of a successful farming operation is firmly rooted in the family and son Jack is determined to carry on the good work when he eventually takes over.

"Sustainability is a key focus of our farm succession plan and I'll continue to make farming work with nature. We hope to preserve and nurture biodiversity in the QEII covenants and across the farm for the benefit of future generations," Jack says.

BELOW FROM LEFT: *Jack and Paul with the covenant in the background*

Alex and Judy pitch in with fencing, summer 2020

PROPERTIES FOR SALE

WHANGANUI

The Matatara Cob House: Off Grid Eco Retreat

Upokongaro, Whanganui

Built from the earth, a rare and unique sustainable lifestyle dream awaits its next custodian. A labour of love, the two story 385sqm home was completed in 2012 to the New Zealand Earth Building Standards. Using one of the oldest building methods on earth it was thoughtfully designed to ensure seamless off grid solar power operating much like an on the grid house.

Cosy in the winter and cool in the summer, this spacious and open plan home is perfect for hosting large groups. Featuring four bedrooms (master with ensuite), a large study, two bathrooms, large kitchen, cinema, and internal access double garage. Outbuildings include a hut that could be converted into extra accommodation and a chook house.

Set upon 13.33 hectares, most of the wetland is protected by a QEII covenant and the environment is wonderfully peaceful. Vibrant birdlife and clear night skies to stargaze provide visual treats both day and night. Opportunities exist to further develop this eco haven and promote environmental awareness, including hosting WWOOFers (Willing Workers on Organic Farms), homestay guests, community groups, school groups, and others who are interested in restoring and enhancing this protected wetland area.

The Matatara Cob House is located an easy 20-minute drive from central Whanganui and only five minutes to the historic riverside rural township of Upokongaro.

Call Knud or Karen from Baileys Whanganui for the comprehensive property information

Knud Bukholt
027 222 6161
knud.bukholt@bayleys.co.nz

Karen Bukholt
027 288 3952
karen.bukholt@bayleys.co.nz

Listing ID: 3001620

Eco-living with panoramic views

6/820 Motueka River West Bank Road
Offers/enquiries over $1,190,000

Just like living in a National Park this picturesque eco-house is the perfect opportunity to live amongst New Zealand native trees and bird life. Unwind and relax in the serenity of this property situated 10km from Motueka and with views over the Valley and Tasman.

Enter this fresh and crisp wonderland with incredible peace, privacy and birdlife. The home features extensive use of timber throughout and has an open plan kitchen, spacious dining and living area.

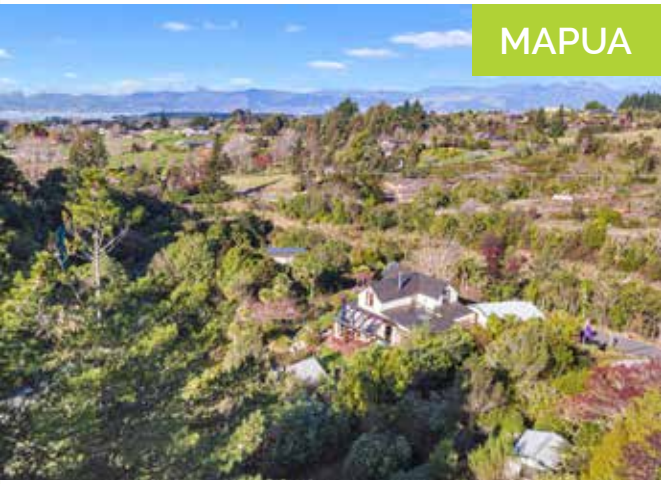
Three bedrooms on the lower level plus study – and the upper level offers a unique space. Families, professional couples and entrepreneurs will love the solitude this property offers. Be captivated by nature. With walking and mountain-biking trails – the adventures start from your doorstep. Let your dreams come true!

Contact Martin Milner at Bayleys now for viewing

Martin Milner
0210393316
martin.milner@bayleysnelsontasman.co.nz

Listing number 4051645

MOTUEKA



Iconic Mapua Lifestyle Opportunity

226 Seaton Valley Road, Mapua
Offers over $1,650,000

Flaxmore House is a rare jewel in Mapua's crown; delightfully private, elegantly presented and brimming with character. Originally built in the 1860s in Nelson and relocated to Seaton Valley in 2000, this lovingly refurbished home is imposing, yet retains the relaxed ambience of a cosy family home.

Featuring two bedrooms on the ground floor, shower and formal lounge. The main living zone comprises a dining room, kitchen, a utility room and a snug. French doors open onto the sheltered entertaining deck, which features shelter blinds, a hipline roof, and the versatility of a South African braii oven/fire for cooking or enjoying as an outdoor fire.

Upstairs houses another bedroom, plus the master with walk-through robe and ensuite with a claw-foot bath complete with beautiful rural views down to Tasman Bay.

The current owners engaged an architect to ensure a thoughtful renovation, with native timbers, antique door and locally made custom joinery to replace previous work as well as installing a log burner, storage heaters, upgraded wiring and insulation.

Improvements have also been made to the grounds, with an alfresco entertainment area, a guest caravan, garage and an outdoor bath. The garden is exquisite and is brimming with birdsong, filled with trees and flowers, an orchard, vegetable beds, bush-walk and the 'pièce de résistance' – a 4,000m² wetland area which is protected by a QEII covenant.

The vendors have relished their time here and loved restoring the home to create something incredibly special. Now is their time to 'pass the baton' to those who are keen to continue the custodianship of this precious gem.

Viewing by appointment, contact Amanda James from Harcourts Mapua to arrange a viewing

Amanda James
027 472 1960
Amanda.james@harcourts.co.nz

Listing number: MPU4242

JOBS FOR NATURE AT QEII

QEII was pleased to secure funding from DOC's Jobs for Nature programme to support a number of projects on private land.

We know that QEII covenants are an effective way to support landowners to protect indigenous biodiversity on private land. The process is simple, trusted, efficient and the protection offered by covenants stands the test of time.

An extra $8 million of funding over the next four years was secured for a project called 'Protecting the Gains'. This funding will allow us to work with landowners to secure enduring outcomes where some of the $1.3 billion government investment in the Jobs for Nature programme is being made on private land.

The extra funding will enable us to increase the number of sites protected each year by approximately 50 per cent, which equals approximately 250 additional sites on private land over the four-year project. We'll work with recipients of Jobs for Nature funding on private land to offer two forms of legal protection, our standard Open Space Covenant or a Restoration Agreement – a new legal protection tool that will be developed as part of this project. Restoration Agreements will enable QEII to protect Jobs for Nature investment on private land where biodiversity values at the site do not yet meet the criteria for protection in perpetuity by Open Space Covenant.

We're keen to work with local councils, community groups and anyone else receiving Jobs for Nature funding to protect biodiversity on private land. If you or a project you're working with has received Jobs for Nature funding and you think your project could be eligible for protection, get in touch with your local regional representative.

DOC Private Land Biodiversity Fund

We will also be undertaking two Jobs for Nature projects funded through DOC's Private Land Biodiversity Fund. These will support landowners with existing QEII covenants. We're really excited about these projects because they give us an opportunity to support landowners with work that isn't possible with our usual funding.

QEII covenant deer eradication project (NZ wide)

Funding of $2 million over 3 years will support this project to exclude pest deer from a limited number of existing QEII covenants where deer eradication work has been identified as the highest conservation priority. The project will engage fencing and ungulate-culling contractors to exclude pest deer and upgrade conventional fencing to deer-proof status in participating covenants.

This project will be run internally. Our regional representatives are in the process of identifying priority areas and we'll then start reaching out to landowners who may want to be part of this project. We're aiming to start work on the ground in early-mid 2022.

Accelerating stewardship of rare and threatened species (Eastern South Island)

This project will work over 3 years with selected covenants in Eastern South Island that support and protect some of Aotearoa's most rare and threatened indigenous biodiversity. The project will involve a combination of ecological survey and planning, as well as a range of site-specific on-the-ground conservation actions.

This is also an internally run project. QEII regional representatives in the project area are working to identify and finalise sites to be included in the project. Because of the nature of these species, much of this work will be seasonal (undertaken in spring and summer), and we're aiming to commence work on the ground in Spring 2022.

Keep an eye out in future issues for some exciting stories about how this additional funding is contributing to improved conservation outcomes on private land.

COLLABORATIVE **RESTORATION CHAMPIONS**

ABOVE: Around 80 volunteers turned up on the day to help
LEFT: Māori Wardens get stuck in on the planting day
Photo credits: Robbie Bennett

Some collaborations just make sense, so when QEII covenantors Richard and Carol Metcalfe were approached by Jude Tisdall from Piako Catchment Forums (PCF) with the idea of extending an existing kahikatea forest protected by a QEII covenant to connect with a nearby council reserve, complete with an extensive understorey planting project, "it took them about three seconds to realise what a good plan it was," Jude said. "They really got it, right from the beginning."

Digging the holes in advance made the planting day easier. Photo credit: Robbie Bennett

The idea was part of the 'Connecting the Waitoa' project, a project initiated by PCF, the New Zealand Landcare Trust and Waikato Regional Council in 2018. It aims to restore lowland forest fragments along the Waitoa river and reconnect them where possible.

In the early decades of the 20th century, most kahikatea forests were cleared for dairy farming and used to make butter boxes and cheese crates for exports. "There's less than 2% of the original lowland forests left and a lot of that is very degraded," says Jude. The biggest problem they face is the 'edge effect', where wind and sunlight are a threat to forest health.

The Metcalfes have three blocks of QEII-covenanted kahikatea forest on their property and one of them sits adjacent to a council reserve, Te Ngahere o Waharoa Hawes Bush. Bringing these two pieces of land together and protecting an additional 1.2 hectares of remnant forest combats the 'edge effect' and gives the understorey a head start. "It provides more of the dark, moist middle to the forest which is the really choice bit, where we'll get the ferns and sensitive plants growing," Jude explains. "These blocks are some of the best fragments you will find in the area".

Jude engaged local native plant specialist, Wayne Bennett, and a plan was put together. From here, the project embraced its collaborative nature. Successful applications were made to Waikato Regional Council and Matamata Piako District Council for assistance with planting and weed control, and a grant was received from the Waikato section of Forest and Bird.

The Metcalfes protected the area with a QEII Open Space Covenant, which assisted with the fencing, and the team from Waikato Weedbusters were already familiar with the site having had several sessions in the existing covenant blocks dealing with weeds.

Because of historic grazing there was no understorey growth in the block. With the kahikatea root system being so shallow, the remaining 100- to 200-year old kahikatea were at risk of dying without a plan remedy this, so Jude and the PCF team created a planting plan. 1,900 plants were purchased, mostly understorey plants along with a few canopy species such as kahikatea, rimu, pukatea and mātai. Preparation was key so pre-planting weed control was organised and mulch distributed to help protect the new plants from weed invasion.

Jude and the team at PCF teamed up with Landcare Trust, the Metcalfes and QEII regional representative, Robbie Bennett to spread the word and get volunteers to help with the planting day, held in mid-June. On the day, the weather was in their favour and the event had a great turnout with over 80 locals, representatives from the regional and district councils, including councillors and the Mayor, Landcare Trust, Forest and Bird, and of course the PCF team, and the Metcalfes and their farm team, all turning up to pitch in. The local Māori Wardens, who came to assist with car parking, ended up rolling up their sleeves to help with the planting too.

Planting was made easier when the volunteers arrived with spades in hand to find that local volunteers Jason Kete and Te Aroha Drummond had come through the weekend before and pre-drilled holes with a mechanical auger. After getting the 1,900 plants down in record time, Carol put on a delicious morning tea and lunch for all the volunteers to enjoy and celebrate their hard work.

Manaaki Whenua Landcare Research ecologist Norman Mason applauded the efforts of the project, as reversing the almost total loss of kahikatea forests from the flood plains of the Piako could seem like a daunting task to take on. The community is closer to protecting these precious forests for future generations to come. "This is a great example of what can be achieved when landowners, the community, government agencies and conservation charities work together," said Norman.

In particular, he commended the volunteers for putting in the work. "None of this would have been possible without the many hours of volunteer time. It looks like a recipe for success in reversing biodiversity decline is emerging in the Piako. The hope is that positive events like this will give other landowners more confidence to seek assistance in protecting and enhancing native ecosystems on their own farms."

The planting day was a success and an exciting moment for QEII regional representative Robbie. "It's amazing what collaboration can achieve if you have people with the vision, expertise and energy driving it."

Richard and Carol are incredibly grateful for all the effort that the volunteers, in particular the PCF team, put into making the planting day happen and they are looking forward to seeing the area and the new plantings flourish in the future.

LEFT: *Jude Tisdall (Piako Catchment Forum), Carol and Richard Metcalfe (Landowners). Photo credit: Lynette Begovich, Morrinsville News*

BOTTOM AND RIGHT: *Volunteers, big and small, get stuck in to help. Photo credit: Robbie Bennett*

PARTNERS IN PROTECTION – ŌHĀKĪ

We see every day how landowners are leaving a legacy by protecting their land with QEII.

It is time for us to focus on strengthening this commitment through our Partners in Protection programme, which will allow our generous supporters to support QEII by leaving a gift in their will.

We're good at covenanting – it's what we do. We reverse the decline of indigenous species and preserve our cultural heritage and landmarks of our natural history, forever.

But protection costs.

We've added three or four covenants every week since QEII started its work in 1978. With greater numbers comes a larger workload, and ever-increasing maintenance and monitoring requirements.

We need financial investment to allow our exceptional specialist staff and regional reps to do their work with confidence and focus their energy where it is most urgently needed.

Your support is critical to our success as a country in ensuring our unique biodiversity and cultural history is not lost.

Our donors play a vital role in making QEII the respected charity it is today, allowing us to protect our shared natural heritage in partnership with landowners.

"I'd love to see more people in the farming community as well as city folk walking the path of conservation. There are all sorts of things people can do without too much effort, whether that's volunteering time and energy or through donating. I get a great deal of joy from it."

Catherine Smith ONZM, Hamilton.

Governor-General launches Partners in Protection

Partners in Protection – Ōhākī was officially launched on Tuesday 21 September at an event at Government House. The scaled-down launch was hosted by our Vice-Regal Patron Her Excellency the Rt Hon Dame Patsy Reddy Governor-General of New Zealand and attended by the Minister of Conservation Hon Kiri Allan and some of our network of supporters and stakeholders.

We thank our generous Partners in Protection, who have already left a gift in their will to support our conservation efforts beyond their lifetime.

If you're not ready to amend your will but would like to make a donation now to support our day-to-day activities, you can make an annual contribution to QEII through our donor programme, Inspiring Protection. Whether your contribution is $250, $500 or $1,000 or more; every dollar you give will help grow the network of private land in New Zealand in perpetuity.

For more information about Partners in Protection, Inspiring Protection or donating to QEII, see the QEII website or get in touch with our Fundraising Manager Bryna O'Brien by email at bobrien@qeii.org.nz or call her on 027 295 5369.

www.qeiinationaltrust.org.nz/get-involved

TOP LEFT: *Hon Kiri Allan MP, Minister of Conservation, and Her Excellency Dame Patsy Reddy, GNZM, QSO, Governor-General of New Zealand.*

TOP RIGHT: *A candid moment; Chair Bruce Wills takes a photo of fellow-Directors Karen Schumacher and Donna Field.*

ABOVE: *Mr Bruce Wills ONZM, Chair of the QEII Board of Directors.*

"The time to leave a lasting legacy is now."

– Bruce Wills ONMZ, Chair of QEII

New rep a familiar face to New Plymouth covenantors

Carol Burgess took up her new role as rep for the New Plymouth region in the middle of this year but she would already have been well known by many of the area's covenantors.

Thanks to the rapid growth of covenants in North Taranaki over recent years, New Plymouth is a new QEII region, after being split off from North Taranaki when the previous rep Neil Phillips retired from the role. Carol pays tribute to Neil's energy and passion for growing the number of covenants in Taranaki during his more than two decades with QEII.

She worked with Neil for four years as his field assistant, conducting monitoring visits, supporting landowners with management of their covenants and helping with funding applications for new protected areas. "I definitely had a good idea about what the job involved in terms of the QEII processes and working with landowners," Carol says.

She's looking forward to deepening existing relationships with landowners and creating new ones.

"They're pretty neat people that have a strong connection with the land. Sometimes the property has been in the family for three generations, they can tell you lots of stories about the farm and the piece of bush and particular trees within the bush."

"I enjoy hearing about their long-term vision for the land, and what they've done so far, what's worked, and lessons learned. I'm always learning from landowners."

"I feel it's an absolute privilege to go onto private land and experience these beautiful patches of bush and stunning landscapes. There are many pieces of bush with interesting projects attached to them. They're special, not only for the land, but also the passion of the people for what they're doing."

New Plymouth is one of the smaller QEII regions and Carol doesn't have to drive more than an hour to any of the covenants, something that would be the envy of reps in some of the larger regions. Nevertheless, she has around 240 to 250 covenants in her area, many of them smaller blocks of bush and natural areas on lifestyle blocks and dairy farms.

Her region has other distinctive features. The volcano, Taranaki Maunga, dominates the landscape and over the years the development pressure has been intense on the fertile ring plain around the mountain.

"We have a few wetlands in covenants. They were mostly quickly drained in the past but many of these areas still get boggy in the winter and some landowners are seeing the value of fencing and protecting them," Carol says.

"There's a number of covenants that are next to the national park - Te Papakura o Taranaki. The remnants are pretty stunning and rich in biodiversity."

Carol's enthusiasm for the job stems both from a lifelong love of plants and also of dealing with people. She qualified with a horticulture degree and worked in the industry for some years before qualifying in and teaching English as a second language.

Unsurprisingly, she is a lover of the outdoors and mountain biking and hopes to find more time to do some tramping on the mountain.

Taranaki is the perfect setting for her most recent sporting passion, surfing, which Carol took up about four years ago. "It's something I thought I'd never be able to do but I've got to the stage where it's fun, I'm always learning."

"I enjoy hearing about their long-term vision for the land, and what they've done so far, what's worked, and lessons learned. I'm always learning from landowners."

Joanna Buswell tramping on Mt Taranaki

North Taranaki rep knows QEII from both sides

North Taranaki's rep Joanna Buswell has seen QEII from both sides of the covenant fence.

Joanna Buswell in the mist on Mt Taranaki

Joanna joined the National Trust in July, taking over as rep for North Taranaki from Neil Phillips, with New Plymouth being split off from Neil's old territory into a new region under another recently appointed rep Carol Burgess.

Joanna's association with QEII goes back to her childhood more than two decades ago when her parents covenanted a 200 ha bush block in the Retaruke Valley, in the hill country between the Tongariro and Whanganui national parks. "One of the things I still do in my spare time is checking stoat traps and doing bait stations on that covenant," she says.

Her love of nature was fostered by her Te Kūiti-based parents, and the many hours spent doing pest control with another conservation project the family was involved in – Project Manu in the Mangaokewa Reserve near the King Country town.

The North Taranaki hill country where Joanna works is not unlike the landscape of her parents' covenant and Joanna has long had a love for steep hill country. "I feel at home when I'm walking around the steep papa (mud stone) country."

Since moving to Taranaki from Wellington in 2018, Joanna has been able to travel to visit her parents more often but since joining QEII, she looks at the country surrounding the road to the King Country with fresh eyes. "I look out on that landscape and think of all the covenants out there," she says.

"That was very striking when Neil and I were driving around and he was telling me, 'that's a covenant, that's one over there too, and there's three behind that hill'. There's a lot of beautiful country out there and I'm enjoying spending time getting to know it better and meeting the covenantors who are doing great work."

"There's a lot of beautiful country out there and I'm enjoying spending time getting to know it better and meeting the covenantors who are doing great work."

Joanna appreciates that conservation is about much more than what happens on publicly owned land and says private landowners play a huge role in New Zealand's overall conservation effort.

"I like the idea of working with people to help them achieve their goals. I'm enjoying getting out and meeting people with different backgrounds to me and learning things from them while having the privilege of seeing these places you wouldn't normally get to visit."

"I went to one covenant the other day that is just the most stunning piece of bush. The landowners had been protecting it for ages but it had just recently become a covenant and is now receiving that extra level of protection. It's such a gem and you wouldn't know it's there."

Joanna's early interest in nature led to a Masters degree in ecology and biodiversity, and a career working for the Ministry of the Environment and later as a freelance ecologist. Her experience in monitoring forests and other natural environments are valuable skills for checking the diversity of plant and animal life in covenants and measuring the progress of regeneration.

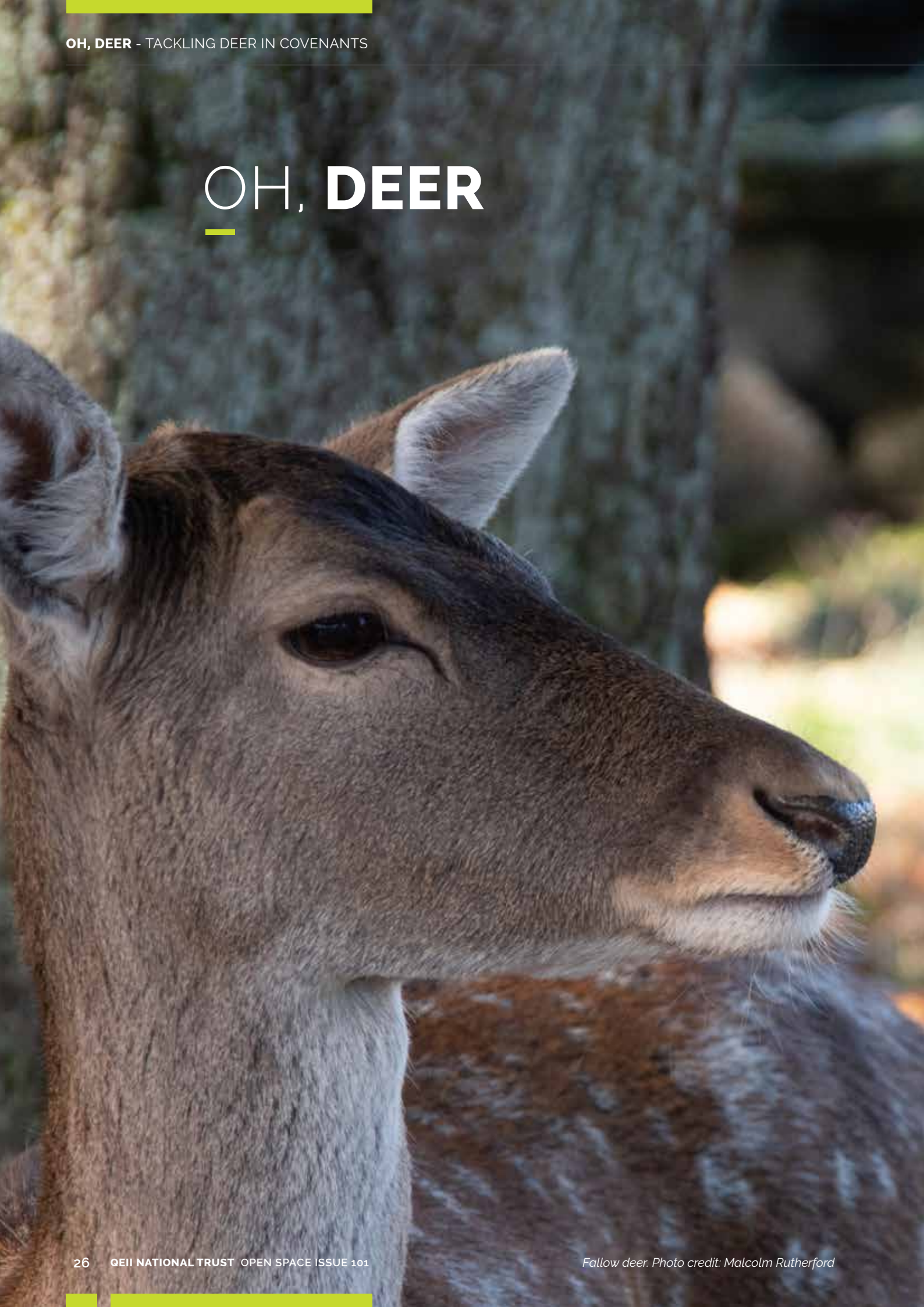
Collaboration has always been a key part of Joanna's work and that is especially so in her new role. "We work not only with landowners but a range of agencies, such as New Plymouth District Council and Taranaki Regional Council. Working together helps to get the best outcomes for landowners and for the covenants. All these people and agencies have a lot of goals in common and it's about working together to achieve them."

Outside of work hours, the outdoors remains the focus of Joanna's free time, including her lifelong love of tramping. In the quieter moments she likes to work in her garden, bake or catch up with family and friends.

And of course, there's always the traps and bait stations to be checked on her parents' covenant in the idyllic surroundings alongside the Retaruke River.

" I feel at home when I'm walking around the steep papa (mud stone) country."

OH, **DEER**



Fallow deer. Photo credit: Malcolm Rutherford

Whether it's the thrill of the stalk, roaring in a 14-point stag, or just the love of perfectly cooked backstrap, for many there is a great love for deer in New Zealand. At the same time, the damage caused by deer to our native ecosystems means some people see them as a bit of a problem, while others hope for total eradication. QEII partners with landowners to uphold the objectives of the covenant for protected areas and deer and goats can undermine this goal. Where the original covenant owner's aim is to protect native ecological values then the smallest number of deer possible will achieve the most enduring results.

Written by Dan Coup, Chief Executive

Deer have a long history in New Zealand and like other pests, they are an introduced species. Red deer came in the 1850s and 60s and releases of imported deer continued with eight more species added to the mix – elk/wapiti, sika, sambar, rusa, axis, fallow, white-tailed deer, and the elusive Fiordland moose. Axis deer were all killed by the 1920s due to the damage they did to crops. When first introduced, red deer were protected, and reserves were set aside to ensure their numbers increased.

Five decades later in 1906, deer numbers were high enough for there to be significant concern about the damage they were causing, and bounties were offered by acclimatisation societies to control the numbers. In addition to hunting and bounties, government culling, commercial meat recovery and live capture for farming have controlled deer numbers to varying degrees over the last century.

Although some areas, particularly up north, have almost no deer, across most of the country, our regional reps are hearing from covenantors that numbers are on the rise. Some covenantors on bigger stations on the East Coast of the North Island are reporting herds of over 140 eating grass intended for sheep and cattle. Covenants that were in great condition in Canterbury have had years of regeneration chewed out in a few years. Pockets of sika, red and fallow deer from illegal releases are being reported and controlled in Northland. At the other end of the country in Southland, deer numbers are on the rise too, with one landowner removing 650 deer in 18 months and at least one instance of canopy collapse happening in a covenant due to deer feeding.

When it comes to controlling feral deer numbers, too often it seems that people are lumped into two camps – either those who are for the environment or those who are hunters. As many of you know, there is more nuance to this as there are many passionate conservationists, landowners, covenantors, who are also hunters. For some, including some of our reps, the ecological damage they see is a big part of the ongoing motivation to hunt. We also have a significant group of our covenantors who, as deer farmers, rely on deer for their livelihoods and do a great job of keeping both farmed and feral deer out of their covenants. This is not a simple 'for' or 'against' discussion.

As a result of increasing deer numbers and increasing control, there are some big discussions happening across Aotearoa New Zealand about the place of deer. Currently DOC is developing Te Ara Ki Mua - a strategic framework for deer management, Forest and Bird is running a campaign focusing on the negative effects of deer, and deer control is being carried out on a landscape scale on public conservation land. There are also deer control and conservation initiatives being led by the hunting community. Hunters for Conservation, Sika Foundation, Eastern Whio Link, Fiordland Wapiti Foundation, and others are working with the hunting community for positive biodiversity outcomes for our forests and native species such as whio.

So, where does QEII fit in? Fundamentally, QEII National Trust covenants have objectives and where those objectives are to protect biodiversity values, we'll try our best to help landowners combat anything that has a negative effect on those values.

Regional reps Malcolm Rutherford and Jesse Bythell, have worked with their fellow reps from across the country to pull together some useful information about ungulates for this issue of Open Space.

The damage done

When deer and goats (ungulates) are browsing in our forests, the impacts range from the canopy above to the ground and streams below and all the other creatures that call the forest home.

Many plants that are important for our native fauna are vulnerable to browsing. Nectar-feeding native birds, such as tūī and bellbird/korimako, supplement their diet with fruit and insects. A range of nectar rich plants throughout the year, especially in late winter/early spring, is crucial to a flourishing bird population. However, many of the forest species that flower in these leaner seasons are palatable to ungulates, creating competition for the same food sources. Deer directly compete with kōkako for food plants, leading scientists to conclude that this effect, more than forest clearance and pressure from introduced predators, has negatively impacted their population health.

ABOVE: Obvious deer browsing line in a forest. Photo credit: Malcolm Rutherford

Deer and goats gain a lot of their nourishment from eating fallen leaves and leaf litter – this feeding behaviour results in a shallower and drier leaf litter which is less hospitable for native reptiles, snails, and insects. Loss of leaf litter can also affect kiwi, as the dry forest soils make it harder for kiwi to probe the ground for insects.

Streams and the animals that live in them are impacted by goats and deer trampling stream banks and releasing sediment into the waterways. Many native species of fish breed in the vegetation on stream margins and freshwater crayfish/kōura forage on vegetation and insects that fall into creeks from the surrounding forest.

From a financial point of view, ungulates can have a big impact your bottom line. While the damage caused can be difficult to quantify and will depend on the land use or farming system, anecdotally we have heard from landowners that the damage caused can be anywhere from $30,000 to upwards of $100,000 per annum. This includes loss of value of grazing, damage done to new planting work, damage to fences and damage to fodder crops set aside to feed livestock through winter. There is also a significant animal health risk, with deer and goats carrying various diseases and parasites that are common to farmed stock.

Landowners Mark and Elspeth from Southland experienced a heavy loss of crops. "Our operation involves wintering sheep and cattle therefore our winter crops are immensely important. It was a constant battle to stop deer from devouring swedes, fodder beet and kale crops – mobs of 40 to 50 were seen regularly." Following deer fencing and control, the numbers were much reduced. "The impact on both the productive areas of the farm and the regeneration in the bush is huge."

Systems change

When a non-native animal is introduced to a new ecosystem, the effects can be massive. Some negative effects can be seen straight away, while others can take longer to unfold. Changes to carbon and water cycles, soil bacterial and fungal communities, and loss of a forest's ability to regenerate can be very long-lasting and difficult to reverse.

Deer can severely pug soils on forest floors causing disturbance and compaction which slows the establishment of seedlings and can lead to increased erosion. Mosses and bryophytes on the forest floor can hold significant amounts of water and slowly release it later – these plants are fragile and are easily trampled by deer and goats.

Research shows forests with high levels of ungulates have less bacterial and fungal diversity in their soils, affecting nutrient cycling and storage. There is a strong relationship between native fungi living in soils and the ability for native trees to establish and thrive.

Recently, there has been more research into the impact that pest animals have on the climate. A Forest and Bird report found that the average deer produces 410kg of CO_2 emissions per year, the average goat produces 250kg. This report suggests that feral browsers in New Zealand could be responsible for an equivalent CO_2 output of up to 60% of that produced by road transport in New Zealand in 2018. Removing four deer saves the equivalent of one average year of CO_2 emissions from the family car.

Deer and goats focus their browsing on the most succulent vegetation, with small variances in preference. Goats will eat plants closer to the ground and plants with tougher/spikier stems. Once a forest has had the most palatable plant stripped out, recovery can be held back by an occasional ungulate moving through, feeding on new growth. If other ecological processes are not properly functioning, such as bird distribution, then seed dispersal can be hindered, which will also affect re-establishing the forest. In severe cases, feeding by ungulates can cause the death of mature trees, leading to canopy collapse

Slow-growing and long-lived forest giants, like rimu, kahikatea, mataī, miro and tōtara are key structural elements to many of our forests. Rimu are easily damaged when they are smaller, as trees with stems 10-30 cm in diameter are used by stags to rub itchy antlers when shedding their seasonal velvet. Rimu in this size class can still be over 50 years old, as they bide their time in the forest understorey waiting for a chance to grow when older trees naturally die and let sunlight in. Deer pressure in many of our forests can become severe enough that most podocarp recruitment is stopped – seedlings are trampled, saplings browsed, and immature trees killed by de-barking. If this pressure goes on long enough, the natural cycle of forest regeneration is put in jeopardy.

LEFT: Goat damage to sub alpine herb fields. Photo credit: Rob Wardle

FAR LEFT: Goat damage in a covenant. Photo credit: Malcolm Rutherford

FROM TOP:
Kakaha/ bush lily
Photo credit: J Barkla

Karamū
Photo credit: J Sawyer

FROM TOP:
Broadleaf/pāpāuma
Photo credit: J Sawyer

Nīkau
Photo credit: J Rolfe

FROM TOP:
Haumakōroa
Photo credit: J Bythell

Patē/sevenfinger
Photo credit: J Bythell

FROM TOP:
Māhoe
Photo credit: J Rolfe

Tell-tale signs

It's a good idea to learn to identify the palatable or sensitive plants in your area. Tell-tale plants will be different in various parts of the country and across different ecosystems.

Deer and goats can be particularly problematic in lowland forests that are biologically productive and can support higher levels of animals. They can also venture into higher altitude areas where they damage fragile ecosystems such as tussock grasslands, turf communities and wetlands. Damage here can be in the form of pugging and crushing, spreading of introduced weeds such as pasture grasses which outcompete tiny native plants, and browsing palatable herbs such as mountain daisies. Cold temperatures and naturally low nutrients also mean that alpine ecosystems are particularly slow to recover from browsing and may be permanently altered with the introduction of weedy plants.

In a forest area, if there are palatable plants present below 2 meters in height then you know you have a healthy system. If there are only some palatable plants, or you only find them growing as tall adults or perched on cliffs or other trees then you may have deer and goats in the mix.

Below is a list of common sensitive forest plants which will give you an early warning that deer or goats have moved into your forest and are starting to have a negative impact. Some native plants have a different appearance for adult and juvenile leaves. The book 'Field Guide to New Zealand Native Trees' by John Dawson and Rob Lucas (Potton and Burton Press) is a great resource to build familiarity with these species.

- **Tree fuchsia/kōtukutuku** *(Fuchsia excorticata)*
- **Māhoe** *(Melicytus ramiflorus)*
- **Raukawa** *(Raukaua edgerleyi)*
- **Threefinger** *(Pseudopanax colensoi)*
- **Patē/sevenfinger** *(Schefflera digitata)*
- **Karamū** *(Coprosma lucida)*
- **Nīkau** *(Rhopalostylis sapida)*
- **Broadleaf/pāpāuma** *(Griselinia littoralis)*
- **Narrow-leaved māhoe** *(Melicytus lanceolatus)*
- **Haumakōroa** *(Raukaua simplex)*
- **Fivefinger/whauwhaupaku** *(Pseudopanax arboreus)*
- **Hangehange** *(Geniostoma ligustrifolium)*
- **Kanono/large-leaved Coprosma** *(Coprosma grandifolia)*
- **Kakaha/bush lily** *(Astelia fragrans)*

The table also provides some insight into the various stages of damage caused by ungulates and the appropriate action to take.

State	Description	Action
NO SIGN OF DEER, HEALTHY FOREST		
	Providing all the other browsing species (hares, rabbits, rats, possums) are kept under control, forest is in tip top condition	Keep an eye out for pest animal incursions. Check fences.
SOME BROWSING ON PALATABLE SPECIES		
	Forest still maintains most of its function and habitat, most species diversity maintained	Forest will benefit from some control, especially to maintain diversity of understorey species
ALL PALATABLE SPECIES BROWSED OUT		
	Understorey is very thin, comprising some low tangled shrubs like coprosmas, peppertree and tough ferns. Less habitat. Some erosion.	Some constant hunting pressure or an annual shoot up or muster (goats) from a commercial contractor will help
UNDERSTOREY IS GONE		
	No or few seedlings getting to 15cm but are eaten before getting bigger. Habitat for many species is gone. Understorey is gone. Increasing erosion.	Sustained control required in conjunction with neighbours. Big effort, or commercial control required.
SLOW FOREST COLLAPSE		
	Trees being ringbarked and may be dying causing the canopy to start to collapse. Significant erosion exposing roots. Some canopy trees dying.	Urgent action required to save forest

Ungulate Species

In New Zealand, there are eight species that have established populations in the wild - sika, fallow, red, wapiti, rusa, sambar, whitetail deer and goats. Distribution for each species differs across the country and the ecological impact of each species also differs. When it comes to damage in covenants, the worst offenders are red and fallow deer and goats.

Photo credit: Bill Wallace

Red deer *(Cervus elaphus)*

Size: Stags (males) usually have a shoulder height of around 1.2m and weigh between 95 and 215kg while hinds (females) are slightly smaller have a shoulder height of around 1m and weigh between 85-110kg.

Appearance: Reddish brown in summer, and brown or grey-brown in the winter with some creamy white between the back legs.

Where: NZ wide, none or limited numbers in Coromandel and Northland.

Damage: Browsing understorey, rubbing trees with antlers, compacting soil, causing erosion, limiting species diversity, breaking fences, chewing bark, eating fallen leaves.

Fencing: 2m deer fence will keep out all but the keenest stags.

Photo credit: Malcolm Rutherford

Feral goat *(Capra hircus)*

Size: Billies (male) stand around 70cm at the shoulder and can weigh around 40kg. Females are smaller being 62cm at the shoulder.

Colour: Range from white, black, brown, with a range of markings showing the varied gene pool within the population.

Where: Patchy distribution found throughout the North and South Island.

Damage: Browsing a wide range of plants and stripping bark. Causes erosion on steep faces.

Fencing: Goats will go under, over, or through most conventional fences. A well strained post and batten fence with an outrigger 30cm off the ground and an additional wire around the top will work for all but the smallest kids. Where electric fencing is not an option a barb wire can be added as the bottom wire.

Photo credit: Jesse Bythell

Fallow deer *(Dama dama)*

Size: Bucks (males) have a shoulder height of 1m and weigh 60-85 kg, while Does (females) are smaller with a shoulder height of 90cm, and weigh 30-50kg.

Appearance: Coat colour is variable, with four colour phases: Melanistic – brown-black back with a paler grey underside, Common – light red brown sides and back with white spots – grey black in winter, Menil – a paler version of the common phase which stays light through winter, Leucistic – cream when young becoming pure white.

Where: Scattered and spreading range through much of the North and South Islands.

Damage: Lower browse height than red deer but will still browse the understorey out of bush. Rub trees with antlers.

Fencing: Fallow will go on their bellies to get under fences and will fit through surprisingly small gaps. They can jump over 2 metres, but a 2m fence should be adequate where they are not under pressure.

More in-depth information on other pest species, including droppings, footprints and tracks, and examples of vegetation damage can be found on the Pest Detective website **pestdetective.org.nz.**

Ring barked five finger tree. Photo credit: Tom Stein

A successful hunt of a fallow spiker. Photo credit: Jesse Bythell

Control

Active control of deer is generally carried out down the barrel of a gun. Control of deer has developed significantly with the introduction of longer-range calibres, night vision scopes, and thermal imaging scopes. In saying that, controlling deer is not an easy task.

What are we aiming for?

High deer numbers have an enormous impact on covenants that are protected for their biodiversity values. Where possible, fencing is the best way of keeping deer out of a block. Once a deer fence is up, control will be required to remove the deer.

Where a covenant block can't be fenced, and no landscape wide deer control is going on, often sustained control and keeping numbers low is the only option. It's important to be realistic about the level of control you are aiming for. As is the case with pest control, a sustainable effort will be more effective in the long run.

Muster

Mustering is a great option for goats as the value of a goat meat has increased to the point it is worth sending goats off to the meat works. Across the country many commercial operators work full-time mustering goats and transporting them to market, removing tens of thousands of goats. Often the musterer and landowner get half the commercial value each. A good team of dogs and drones are often used for this work, the latter being especially useful for mustering goats off cliffs.

Often the most difficult area on a farm to muster is the covenant area. As a result, in some cases it is given minimal effort, or not successfully mustered. Also, sometimes when mustering the young goats are let go to make sure there are more goats to muster the next year. This kind of mustering is not effective for reducing goat numbers to the point that the biodiversity of a covenant block benefits. To really reduce goat numbers, a muster with a team of dogs and/or a drone to chase them off cliffs, or out of inaccessible areas, followed by a cull, possibly by a contract hunter, will be most effective. Follow up hunts to shoot the last few will ensure numbers are kept low. Reinvasion from neighbouring properties is often the undoing of effective control like this, so if control can be co-ordinated between neighbours, it is more effective.

Although it has been tried, mustering is not an easy option for deer. Some landowners have tried to bring in herds of deer using helicopters without much success.

Hunting

Some hunt as a pastime, for meat or a trophy head, and some are motivated by the ecological benefits, such as Dylan from Southland. "I really like to hunt to reduce the number of deer in the forest to improve the quality of animals around and give the forest a break. I often aim for the breeding hinds, which is more efficient for reducing numbers."

As with any long-term pest control, keeping ungulate numbers low requires ongoing work and monitoring. The more remote your covenant block is, and often the closer it is to plantation forestry or other native forest areas, the higher the deer numbers are. When there are just a few deer, these can be controlled by hunting, but in many areas, numbers are out of control. Some large stations that report their deer and goat control figures to us are shooting hundreds of deer and mustering and shooting over 1,000 goats in a year. One station manager who spoke to us, personally shot over 230 deer, and over 1,000 goats in a single year, that's excluding any shot by their staff. Many covenants are on farmland and deer can often come out of bush blocks to graze on grass intended for stock food, which is also an excellent opportunity for hunting.

If you aren't comfortable hunting yourself and want to improve the biodiversity in your covenant by reducing deer numbers, then there are plenty of people who are happy to hunt. Also, while many landowners, farm workers, friends and family are good hunters, there are benefits to calling in professionals when ungulate numbers get high. Our reps often hear stories of blocks with "just a few goats left", subsequently having dozens mustered out by a skilled operator. The skills of a professional musterer or hunter combined with innovative technology can clear out a block effectively and efficiently. Professional contractors can also be essential for removing shy individuals from areas, especially when trying to eradicate deer from fully fenced areas.

Thermal imaging

Thermal scopes convert variation in heat to a color spectrum, which means even in complete darkness the profile of an animal can be seen. This gives a ground-based hunter a serious advantage and there are an increasing number of hunters, both recreational and professional, with these scopes. Also, thermal scopes can be used during the day to see deer through scrub or a closed canopy. A covenantor we spoke to has a farm boundary with extensive areas of commercial forestry and had seen a dozen or so deer at a time. He purchased a thermal scope and went out at night to find 140 deer eating his grass.

New to the NZ animal control scene is the idea of a thermal camera on a drone. This allows a much more targeted approach when finding animals in a landscape.

The ultimate control at present is achieved by putting a high-resolution thermal camera in a chopper and adding an expert shooter to the mix. This is an expensive but extremely effective option.

Game camera

Game cameras or trail cameras retail from $200 and are a good option to find out what is going on in your covenant, especially at night. They are often set up near traps or bait stations but are also great for seeing which browsers are in your block. They are motion sensitive and have infrared lights so can illuminate animals at night. Setting up a camera in a clearing, on a game trail, or along a fence line if you have seen footprints, can show how many deer are around. This is especially important in a deer fenced area to check the area is deer free.

Deer trap

If you are not familiar with a deer trap, it's like a Hinaki, fike net, or cray pot but for deer - easy to get into, and impossible to get out. They range in size from 20m x 40m to a large deer fenced area up to 5 ha, big enough the deer might not know it is trapped. These commonly have deer gates which are sprung with a trip wire. These were once popular for live capture of wild deer when that was a booming industry. The tricky thing with a deer trap can be dealing with the deer after they are in the trap.

Recreational access to your land – and your liability

If you are allowing someone on your land for recreational use, like walking, hunting, or climbing, you have an obligation to make sure those people aren't at risk from the work that is happening on your land. You can usually meet your duties to recreational visitors to let people know about work hazards with signs, emails, or verbally.

You are not responsible for the health and safety associated with the activity being undertaken. For example, if a hunter hurts their back carrying out too much meat, that is their responsibility.

If you employ someone to do work including pest management such as a contract hunter, then this is different. You (and them) are entering the realms of a Person Conducting a Business or Undertaking (PCBU) which falls under the Health and Safety at Work Act. Under these arrangements you both have a duty of care and need to work alongside one other to manage the risk associated with the activity being undertaken.

More information about these obligations is available online:

- **worksafe.govt.nz**
  Keyword search:
  recreational access
- **walkingaccess.govt.nz**
  Keyword search:
  recreational visitors

Deer fencing

Not surprisingly, the best thing for keeping out deer is a fence. Deer fencing has been developed to keep deer on farms but also out of protected areas. We understand not every covenant can be deer fenced but where it is possible, it's the best place to start to help restore native vegetation.

To support this, we updated our fencing policy in 2018 to allow more support for landowners who were keen to deer fence their covenants. Normally, the Trust splits the cost 50:50 with landowners for conventional fences, but to ensure ecological values in new Open Space Covenants are protected from feral deer, QEII can offer a 60:40 split when establishing a new covenant with deer fencing, if the property is not a deer farm.

For existing covenants, there are options to upgrade to a deer fence when the fence needs replacing, or the more immediate solution is to top up an existing fence. Our annual contestable fund, the Stephenson Fund, is also an option and both deer fencing and deer top ups for existing covenants are considered in applications. District and regional councils are increasingly aware of the impact deer and goats have on biodiversity and may also be able to provide funding for deer protection.

If you have a deer fenced covenant there is a chance deer will still get into the block. A passive way to control deer in your block is to have a deer "jump out" via a ramp where they can jump out but can't jump back in. This can be worked into a new fence plan, or if you have an existing covenant and it could benefit from something like this talk to your local regional rep.

FROM TOP: Newly finished top up fencing. Photo credit: Bill Wallace
Replacing the old with the new. Photo credit: Malcolm Rutherford
Covenant deer fence – Kotare Station. Photo credit: Malcolm Rutherford

Considerations before deer fencing

Before fencing deer out of a covenant block, we need to consider whether the fence will be effective. Deer fencing through existing bush or between forestry and bush can fail when branches fall, in this case, either a wide strip needs to be cleared, or the fence needs to be checked on a regular basis.

Steep terrain can make deer fencing difficult as deer can jump downhill over a fence into a covenant block and smaller species of ungulate such as Fallow deer and goats can fit through surprisingly small gaps.

Major waterways cannot be effectively deer fenced, especially where there are extreme flows. Floodgates can work on smaller waterways, but also need to be checked after rain.

DOC has restrictions on the fencing that must be used for keeping deer on farms, as well as restrictions on locations for deer or goat farms in proximity to some national parks, such as Te Papakura o Taranaki National Park. These are especially important in areas where there are currently no deer established in the wild – Coromandel Peninsula, Northland, and most of the Auckland region.

Top up to existing fence

We have supported many covenantors to top up existing conventional fences to make them deer proof. Often, this can be as simple as two wires on battens or a white electric fence tape. However, we have several examples of the tape not working as well as hoped, as determined deer can jump through the fence and over time, the white electric tape visual barrier rots out and needs to be replaced.

The DOC website has a great list which outlines all the requirements for constructing or repairing a deer fence, including making additions to the height of an existing fence. This is a great resource to refer to when you are thinking about deer fencing.

These specifications can be considered a minimum with additions making them more effective. Where pigs are an issue, a barb as the bottom wire can be effective to keep them out. Smaller netting keeps out young goats, but as their heads can easily get stuck, an electric outrigger 30cm above the ground can be an effective deterrent, where it is practical. A deer fence can also be effective at keeping dogs out of kiwi areas.

Once a block is deer fenced there is more work to be done. Getting the last deer or goat out of a block can take a lot of effort, and requires monitoring for footprints, or by using game cameras. Good options include using thermal imaging and/or a deer dog to check for remaining animals.

While fences are very effective, even the most well looked after deer proof blocks can sometimes have incursion. It could be from a branch coming down, a goat digging underneath or even a post losing footing or a loose gate chain. It's important to stay on the lookout for signs of damage, remain watchful for footprints, droppings, or signs of rubbing and to consider other forms of control.

QEII 2021 **ANNUAL REPORT**

We have included an excerpt from our 2021 Annual Report, which highlights some of our work over the last year, provides examples of new protection and includes our financial statements. The full version is available on our website, qeii.org.nz, in the publications and resources section.

If you would like a physical copy of our annual report, please get contact us on **0800 467 367**, send an email to **info@qeii.org.nz** or submit an online enquiry.

Example of new protection

Tākaka: Blue Lake

Written by Anna-Kate Goodall, Land Protection Advisor

Located at the top of the South Island in Tākaka, Golden Bay, is a lake surrounded by 3.8 hectares of native forest. Known as Blue Lake, it is a unique deep tomo, a limestone sink hole, which is both rare and beautiful. The Blyth family are the proud custodians of Blue Lake and recently protected the area with a QEII covenant. The lowland secondary forest of predominantly kānuka, kāmahi and tōtara provides an ideal backdrop and supports the tomo ecosystem. Theo Blyth and her family are committed to protecting this site and stock were excluded from the area for many years prior to covenanting.

Choosing to protect the area with a QEII covenant came about as they realised that not everyone would value the area in the same way. Formal protection of the area would ensure it was there to enjoy for generations to come. Theo recalls someone offering to clear the bush for them, and her immediate reaction was, "you gotta be dreaming!"

Theo has been around the lake since she was in her 30s. Now 95, she still loves the lake, saying that it is like nature's amphitheatre, with the bush behind the lake. Spending time watching the coming and goings of the birds on the water brings her real joy and the family have fond memories of swimming in the lake on particularly hot days after milking and playing in the bush as kids in the wētā filled huts that they built.

The site also has significant ecological values. Tomo are formed by a collapse of the surface layer and are usually associated with karst geology. This tomo covers 0.5 hectares and is between 13 and 18 metres deep. Despite being habitat for wildfowl, the water quality is good due to its depth, and its depth is also what gives the lake its impressive green-blue hues. Tomo are an 'originally rare' terrestrial ecosystem with a threat status of 'Endangered' and meet National Priority 3. There is also a diverse range of wetland flora present around the lake margins, meeting National Priority 2.

The area has great bird life. Species found on the site include wood pigeon/kererū, parsons bird/tūī, bellbird/korimako, fantail/pīwakawaka, kingfisher/kōtare, grey heron/mātukutuku, white heron/kōtuku (Threatened - Nationally Critical), grey warbler/riroriro, woodhen/weka and morepork/ruru. Dabchicks/weweia (At Risk - Recovering) have also been seen on the lake, meeting National Priority 4. Dabchicks were thought to be extinct in the South Island in the 1940s, until a pair began breeding in Tākaka in 2012. Preferring freshwater lakes and dense vegetation for nesting, this limestone tomo could provide an ideal habitat for dabchicks and hopefully more will be seen here in the future.

A covenant well worth protecting. As Theo says, "Blue Lake really is the jewel in the farm's crown!".

ABOVE FROM TOP:
A view of Blue Lake. Photo credit: Che' Blyth

Waterfowl in Blue Lake. Photo credit: Che' Blyth

The amphitheatre behind the lake. Photo credit: Tom Stein, QEII regional represtative for Marlborough and Nelson-Tasman

QEII National Trust covenants and Manaaki Whenua Threatened Environments Classification (2012)

95% of registered covenants are 100 ha or less

QEII National Trust-owned properties:

- **26** properties **(1,433 ha)** (14 formalised & 12 registered as covenants).
- **1** license to occupy **(85 ha)**

Organisations with the most covenants:

Pāmu (Landcorp Farming Ltd)

- **228** registered covenants **(9,948 ha)**

Northland: region with the largest number of registered covenants
761

Gisborne: region with the highest % of covenanted land classed as acutely or chronically threatened
51%

Taranaki: region with the largest number of new covenants registered (and proposals approved) in 2020/21
19 (23)

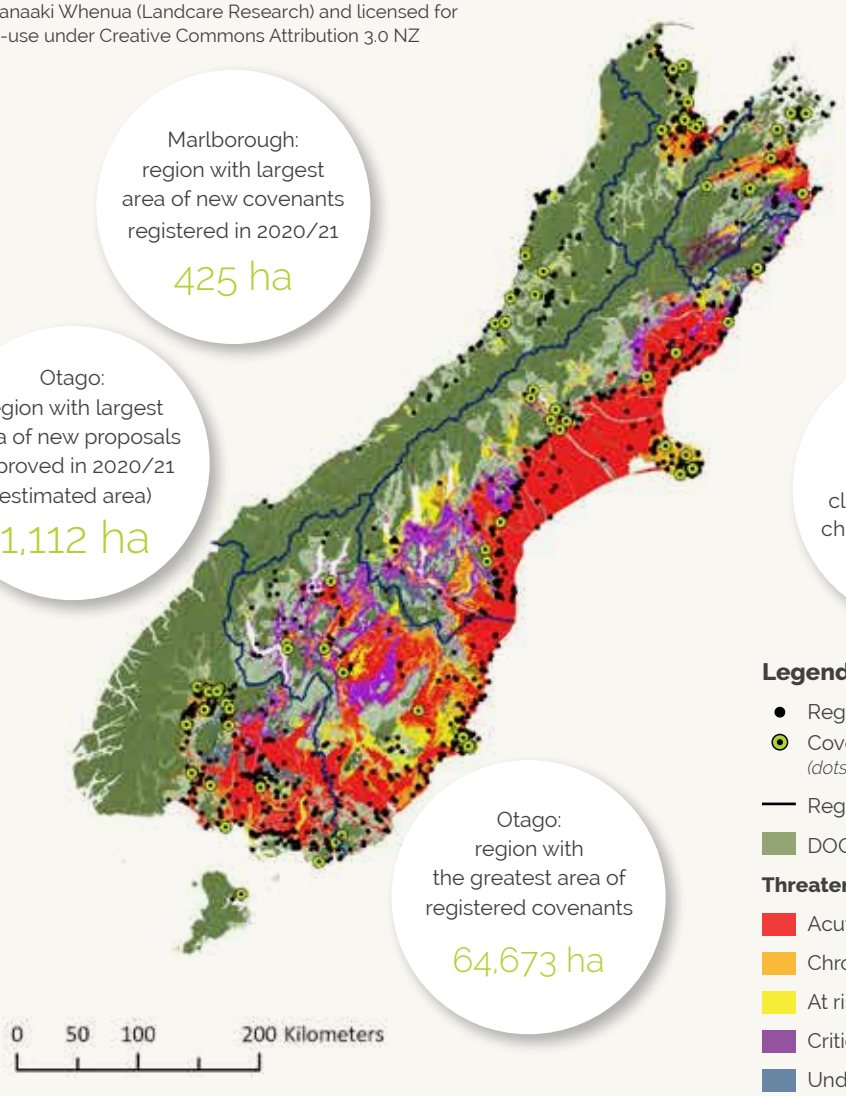
Marlborough: region with largest area of new covenants registered in 2020/21
425 ha

Hawke's Bay: region with the greatest area of land covenanted in 2020-21 classed as acutely or chronically threatened
76 ha

Otago: region with largest area of new proposals approved in 2020/21 (estimated area)
1,112 ha

Canterbury: region with the greatest area of covenanted land classed as acutely or chronically threatened
4,308 ha

Otago: region with the greatest area of registered covenants
64,673 ha



Legend

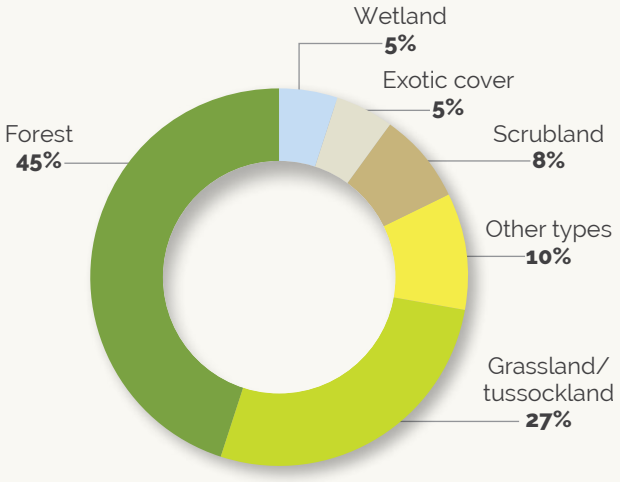
- Registered and approved QEII National Trust covenants
- Covenants registered or approved since 30 June 2020 *(dots represent locations only and not actual area of covenanted land)*
- Regional Council boundary
- DOC Public Conservation Land

Threatened Environments Classification (2012)

- Acutely threatened *(<10% indigenous cover left)*
- Chronically threatened *(10-20% indigenous cover left)*
- At risk *(20-30% indigenous cover left)*
- Critically underprotected *(>30% left and <10% protected)*
- Underprotected *(>30% left and 10-20% protected)*
- Less reduced and better protected *(>30% left and >20% protected)*

Landcover type

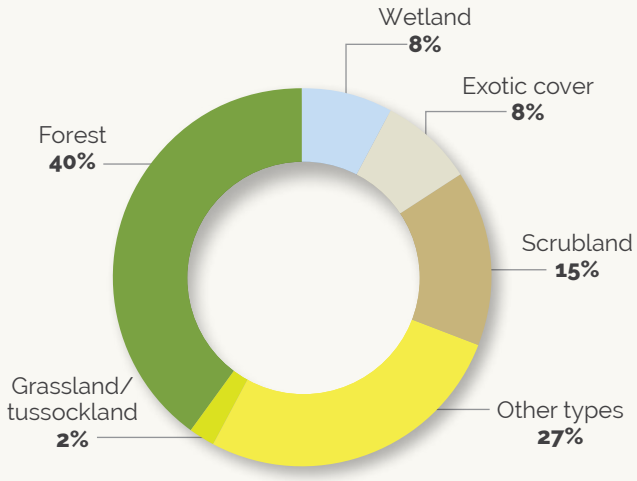
All registered covenants



Grouping the vegetation types recorded for all registered covenants into 6 broad landcover categories, shows that 45% of covenanted land is forest and 27% grassland/tussockland.

93% of covenanted grassland/tussockland (approximately 43,500 ha) is located in the 17 largest covenants, each over 1,000 ha in size.

Covenants Registered in 2020/2021



81% of covenanted forest (approximately 67,000 ha) is located in covenants < 1,000 ha in size.

All of the **128** covenants registered in 2020/21 were < 250 ha, with the greatest vegetation type being **40%** forest by area (approximately 713 ha)

176,000m of fencing, **16,600m** of natural features and **73,300m** of unfenced boundaries protect these newly registered covenants

Covenanting numbers

128

New registrations

1,830.2 ha protected this year

134

New proposals approved

Estimated 2944.8 ha will be protected

4,912

Total registered covenants

192,574.7 ha

Total area (approved and registered covenants and formal agreements)

The Stephenson Fund

The Stephenson Fund was established in 2017 with the key aim to support stewardship for covenants by strengthening our partnership with covenantors.

This year we ran the seventh round of The Stephenson Fund, enabling landowners to apply for funding supporting projects that will enhance their protected places. We know that this funding can make a significant difference to covenants and we frequently receive updates from landowners who have received funding in the past showing us how their projects are progressing – like these two from the Smithline's in Nelson and Bay Conservation Alliance in the Bay of Plenty.

Pupils from Tauranga Boys College, Ethan Lewis (top) and Jett Walsh (bottom) setting a possum trap during a BCA education day

Bay Conservation Alliance predator control

The Bay Conservation Alliance (BCA) predator control project had an objective to facilitate a new education programme, with students establishing and maintaining pest control and monitoring the outcomes in the covenanted Oteora forest in Whakamārama, near Tauranga.

Thanks to an $8,000 grant through the fifth round of The Stephenson Fund, Oteora forest is now set up with three traplines to protect the native forest and improve bird, invertebrate and reptile habitat in the area.

Students from Otūmoetai College's EnviroGroup joined BCA to work on the project, transporting and laying out the traps in the bush. Since then, a group from the school coordinated by student Pipi Kendall, have been visiting Oteora forest monthly to check and reset the traps. BCA's education manager Janie Stevenson has trained the group to set the DOC 200s, Flipping Timmys and Victor traps and will continue to provide support to the students.

BCA also held two corporate education days at Oteora forest with 40 staff from Ballance Agri-Nutrients. The team received an introduction to pest management before heading out to help set up the three new trap lines. The group is planning regular visits to check the traps, and another Ballance corporate day is planned for November.

The new traplines were mapped by BCA and an online trap monitoring programme was developed to provide easy data collection. BCA also purchased safety and monitoring equipment to be used for ongoing pest control. With the support from Otūmoetai school students and Ballance staff, the bush at Oteora will now have an ongoing pest control programme, and BCA's new field-based conservation education programme will provide a working education site for future schools and groups to enjoy.

Supporting and encouraging stewardship on QEII covenants remains an important part of our work, and we plan to continue running the Stephenson Fund in 2022.

An email will be sent to members when the next 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.

Smithline restoration

Scott Smithline and Linda Connor received funding through The Stephenson Fund in the sixth round. Their covenant protects 6 hectares of regenerating forest either side of a prominent ridge on the outskirts of Nelson. The $4,400 grant allowed them to undertake a successful restoration project to extend, enhance and maintain the natural character and biodiversity of the site by clearing pest species. Strategic planting has further helped to increase biodiversity within the covenant, with approximately 600 native trees and shrubs planted.

The covenant is in an area with an 'at risk' LENZ ranking and the northwest facing slopes of the canopy are dominated by kānuka, which is up to eight metres tall. In keeping with the hot and dry nature of the site, the understorey is naturally sparse. The canopy on the southeast side is mostly mahoe and kānuka and while there are still significant areas dominated by bracken, woody tree species are starting to move in. Being southeast facing, the understorey is a lot thicker than on the northwest side of the hill.

Bellbird, tūī, kererū, kāhu, pīwakawaka, tauhou and weka can be seen in the covenant. It has good connectivity to large areas of regenerating forest and there are three other QEII covenants within three kilometres. The presence of bellbird and tūī (pollinators and seed distributors) and kererū (seed distributors) in the area will help improve the diversity and complexity of the covenant over time.

District Council	Location	Covenant Name	Area (ha)	Main open space type
Waikato	Aotea Harbour	Hakea	1.723	Semicoastal secondary forest
Ōpōtiki	Tirohanga	Jerome's Dream	0.6835	Semicoastal modified primary forest
Central Otago	Bannockburn	Doctors Flat Covenant	1.8717	Exotic dryland grassland/herbfield with scattered exotic trees with numerous archaeological features including a house, stable and sheds, sluicing cliffs, stone foundations, rammed earth wall remains and sluicings.
Whangarei	Whareora	ThreeCs	27.1058	Lowland modified secondary forest
New Plymouth	Upper Vogeltown	Haumanu	0.134	Semicoastal modified primary forest
New Plymouth	Lepperton	Barrels Creek	2.7322	Semi-coastal modified primary forest
Whangarei	Kiripaka		14.201	Lowland secondary forest and modified secondary forest and shrubland
Manawatū	Apiti	Ngā Tamariki a Tāne	74.9	Submontane primary and modified primary forest
New Plymouth	Mimi	Wharekauri Bush	2.1447	Semicoastal modified primary forest
Central Otago	Alexandra	Red Conroy's Rose Estate Covenant 1	4.94	Montane dryland shrubland, herbfield and rockland
Central Otago		McGregor Covenant	4.3152	Montane dryland shrubland, herbfield and rockland
Central Otago	Alexandra	Red Conroy's Rose Estate Covenant 2	3.5999	Montane dryland shrubland, herbfield and rockland
Central Otago	Earnscleugh/ Alexandra	McGregor Covenant	4.1702	Montane dryland shrubland, herbfield and rockland
Central Hawke's Bay	Wanstead	Ngaio Bush	10.719	Lowland secondary forest and exotic grassland
Christchurch	Akaroa	Ōtepiki 3	8.0937	Submontane modified primary forest, modified secondary treeland, secondary scrub and exotic grassland
Christchurch	Akaroa	Ōtepiki 1	16.1874	Submontane modified primary forest and reedland and secondary scrub and modified secondary treeland and exotic grassland
Christchurch	Akaroa	Ōtepiki 2	6.8796	Submontane modified primary forest and treeland, secondary scrub and exotic grassland and buildings
Selwyn	Upper Rakaia River	Goat Hill - Freehold	7.25	Montane modified primary rushland and modified secondary tussockland
Westland	Arahura Valley, Hokitika	Kahikatea Memorial Forest and Wetland	2.601	Lowland modified primary forest and wetland
Tasman	Brooklyn	The Bush Line Block	1.6499	Lowland secondary forest and fernland and modified secondary forest

District Council	Location	Covenant Name	Area (ha)	Main open space type
New Plymouth	Egmont Village		4.7144	Lowland modified primary forest
Far North	Ōhaeawai	Bells Bush	7.7229	Lowland modified primary and secondary pūriri-tōtara-taraire forest
Southland	Riverton	The Asher Restoration Covenant	1.242	Coastal modified primary forest, revegetated shrubland, exotic grassland and open water
Hurunui	Parnassus	Beltana Bush II	15.6347	Lowland modified secondary forest, shrubland and tussockland
Rotorua	Mangamingi	Mangamingi Station - Mangamingi Bush Covenant	36.2621	Lowland modified primary and secondary forest
Southland	The Dale	Dale Farm Covenant	22.0539	Submontane modified primary shrubland, peatland and treeland
Rangitikei	Turakina Valley	Ngamotu - Wetlands and Native Gully	6.79	Lowland modified primary forest and modified secondary mossfield
Southland	The Dale	Te Anau Hill Covenant Extension	17.316	Sub-montane modified primary shrubland and secondary grassland
New Plymouth	Tariki	Raelene's Bush	3.5896	Lowland modified primary forest
Central Hawke's Bay	Flemington	Bush Bush	5.5110	Lowland secondary forest
Southland	Merrivale	McKenzie's Covenant	1.9249	Lowland modified primary treeland and secondary shrubland.
Auckland	Cape Barrier (nr Tryphena)	Kākā Valley	4.0352	Coastal modified primary forest
Central Hawke's Bay	Wanstead		1.2450	Lowland secondary forest and exotic grassland
South Taranaki	Okato	Theresa Jones Forest KNE	2.5526	Semi-coastal modified primary forest
South Taranaki	Okato	Banga's Bush	1.3055	Semi-coastal modified primary forest
Manawatū	Waituna West	Tuatahi 2021	9.6010	Lowland modified primary forest and secondary treeland, and retired grassland
Tasman	Tapawera	Baigent Covenant	3.2716	Lowland modified primary treeland & forest, secondary forest, revegetated shrubland and exotic grassland
Tasman	Ligar Bay		1.7066	Coastal modified secondary forest and scrub
Tasman	Ligar Bay		0.9658	Coastal modified primary sedgeland and modified secondary forest and scrub
New Plymouth	Tarata	Watson's Hill Bush Block	4.2204	Lowland modified primary forest
South Taranaki	Makakaho		1.8602	Lowland secondary reedland and open water

Whangarei	Waipu Caves	Ian and Cindy Fox Nature Preserve 2021	48.7538	Lowland secondary and modified secondary forest, limestone karst formations, sinkholes and caves
Gisborne	Tahunga	Omoeroa Bush 2 Covenant	25.6070	Lowland secondary forest, scrub and exotic grassland
Tasman	Upper Moutere	Schönhof Stand	0.5514	Lowland modified primary treeland
Lower Hutt	Kelson	Mole End Bush	0.1805	Semi-coastal modified primary forest and New Zealand specimen plantings
Grey	Rutherglen	Tui Place	1.3427	Semicoastal secondary forest.
Hurunui	Hundalee Hills	Mount Guardian Covenant	217.9100	Semi-coastal and lowland modified secondary forest, scrub and shrubland
Ruapehu	Matiere	The Mackinder Covenant	5.7780	Lowland modified primary forest and sedgeland, modified secondary rushland, revegetated treeland, open water and exotic grassland
Ruapehu	Matiere	Marshall Covenant	0.2770	Lowland modified primary sedgeland, modified secondary shrubland and exotic grassland
South Wairarapa	Long Bush	Taharoa [3]	4.6000	Lowland modified primary forest and ephemeral wetland
New Plymouth	Omata	McNeil	1.6178	Semi coastal modified primary forest and secondary treefernland
Stratford	Stratford	Karanga	7.4604	Lowland modified primary forest
Ruapehu	Raurimu	Ruby's Lake and Wetland	2.2174	Lowland modified primary sedgeland, reedland, treeland, and open water
Tasman	Parapara	Parkinson Bush	4.0469	Coastal primary forest
Central Otago		Wild Thyme Trust Covenant	4.3436	Montane dryland shrubland, grassland, herbfield and rockland
South Taranaki	Warea	van der Poel Bush	1.3320	Semi-coastal modified primary forest and modified secondary vineland
Upper Hutt	Akatarawa	The Parson Welton's Covenant	28.7028	Lowland primary, modified primary and secondary forest
Hauraki	Karangahake		2.5765	Semi coastal secondary forest
Whangarei	Glenbervie	Arthur and Leonie Batt Memorial Bush	1.0750	Lowland secondary forest
Whangarei	Glenbervie	Arthur and Leonie Batt Memorial Bush	1.4020	Lowland secondary forest
Whangarei	Glenbervie	Arthur and Leonie Batt Memorial Bush	0.1554	Lowland secondary forest
Rotorua	Mamaku	The Boys' Gully	4.7829	Lowland modified primary forest
New Plymouth	Ahititi, Tongaporutu	O'Sullivan Brothers' Bush	290.7220	Lowland modified primary forest, secondary scrub, and lake.

MEMBERS DIRECTOR ELECTION 2022
CALL FOR NOMINATIONS

Members of the QEII National Trust have the opportunity to nominate and vote for two Directors to serve on its Board of Directors for a three-year term, effective from 21 March 2022.

Eligibility to nominate, be nominated, and vote

Only National Trust members (i.e., a current honorary covenantor, Life member covenantor, or a financial member) or an officer of a Corporate Member of the National Trust may nominate, be nominated, and vote in the elections. Eligible National Trust members may put themselves forward for consideration, and do not need to provide a nominator.

Financial members

Financial memberships must be current as of 23 December 2021 and not expire before 31 March 2022 to be eligible to nominate, be nominated, and vote. Renewal notices for most financial memberships will be sent out in January 2022. Please be sure to renew your membership in time if you wish to take part in the elections.

Timeline for nominations and elections

- Nominations opened on Tuesday, 7 September 2021
- Nominations close at 12 noon, Friday 17 December 2021
- Voting papers are sent out to members from Thursday 10 February 2022 inviting them to consider the candidates and elect two members to the Board
- Voting closes at 12 noon, Monday 14 March 2022
- Voting results are confirmed by the end of March 2022.

Nomination form

Nomination forms can be requested by emailing **iro@electionz.com** or by calling the Returning Officer on 0800 666 049. Online and print versions of the nomination form can also be downloaded from the QEII website: **qeiinationaltrust.org.nz/elections**

Board Director duties and fees

Elected Directors represent the membership as a whole and not any organisation or interest group with which they may be connected. The QEII National Trust Board is a governing board. Details about the Trust Board's role and functions are found in the QEII National Trust Act. A copy of the Act is available on our website. Directors receive a daily fee of $215 plus reimbursement of costs relating to Board business.

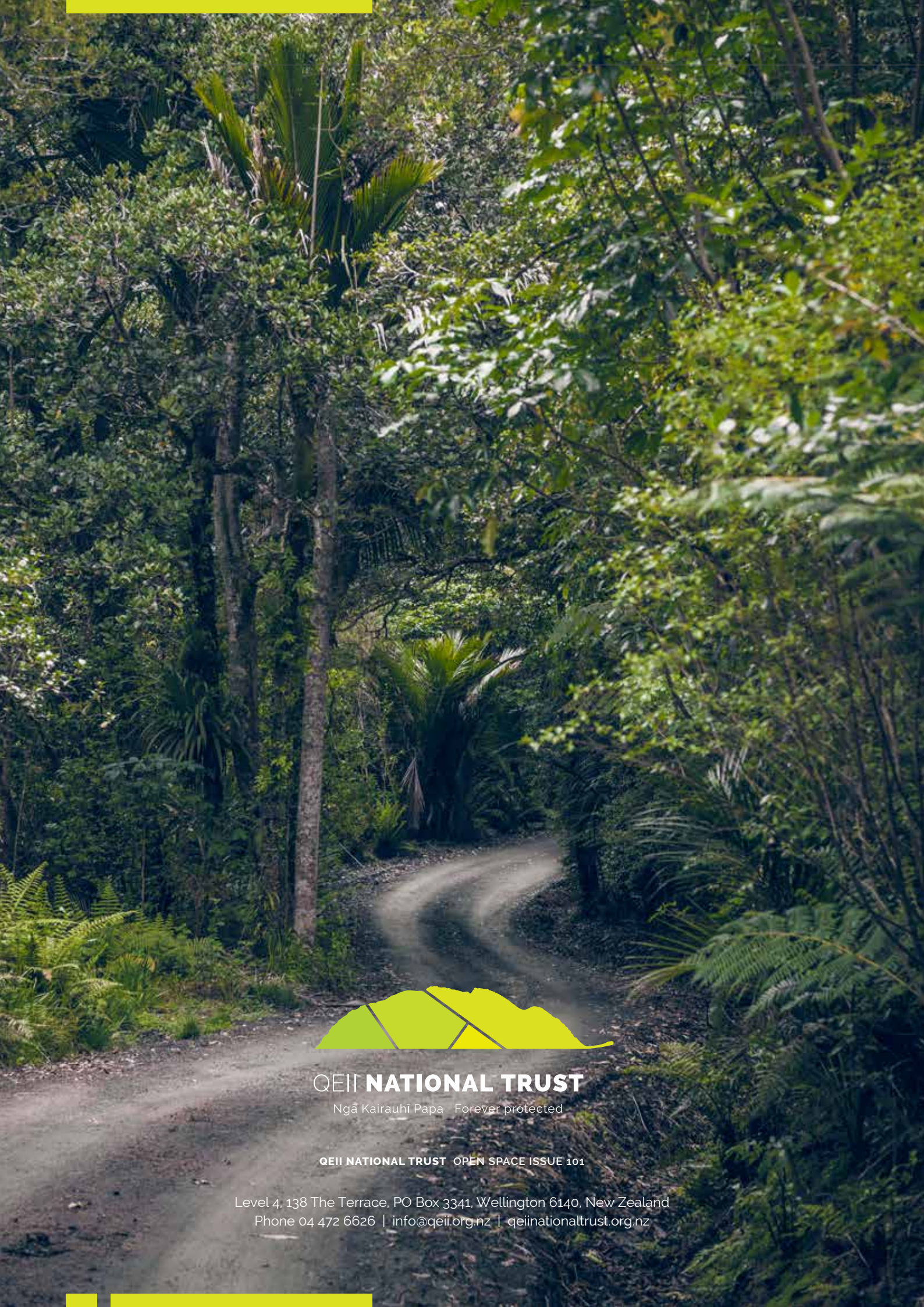
For information about nominations and the elections process

If you have any queries regarding the nomination or election process, please email the Returning Officer at **iro@electionz.com** or phone 0800 666 032.

Keep your contact details current

Please keep us informed of any changes to your address and/or other contact details. Members are encouraged to update their email address with the National Trust if they would like to vote online.

To update your details, send us an email at **info@qeii.org.nz** or call on **0800 467 367**.



QEII **NATIONAL TRUST**

Ngā Kairauhī Papa Forever protected

QEII NATIONAL TRUST OPEN SPACE ISSUE 101

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