



**ravensdown**  
Stakeholder Review 2017

**HOME. GROWN.**

# GENERATION





We're driven to build something lasting, something of a legacy,  
something collectively we can be proud of.

As a co-operative, we're here to enable smarter farming for a better  
New Zealand. Because this is the place our staff, customer-owners and  
so many stakeholders call home. And growing is what they do.

Taking pride in 40 years of adapting to change breeds confidence,  
not complacency. As farming faces disruptive trends that could destroy  
or deliver more value, Ravensdown is evolving so that the children of  
today and tomorrow are better off for our being here.


# TO GENERATION









A close-up photograph of a person's hand holding a bright yellow corn cob. The person has long, light brown hair and is wearing a blue denim jacket. The background is dark and out of focus, showing horizontal lines that suggest a fence or a building. The overall mood is natural and focused on the product.

We have the products, expertise and technology  
to help farmers reduce their environmental impact and  
optimise value from the land. It's about kaitiaki – stewardship  
and relationships for the long term.

When it comes to growing the prosperity of New Zealand,  
stronger rural communities and a progressive agri-sector;  
smarter farming is the answer.

# THE FUTURE



An aerial photograph of a vineyard, showing neat rows of green grapevines separated by brown soil. The perspective is from directly above, looking down at the vines. The word "HERE" is printed in large, white, sans-serif capital letters, centered horizontally and slightly above the vertical center of the image. The text is superimposed over the vineyard pattern.

HERE



We provide the nutrients that nourish New Zealand's soil which, in turn, feed the plants and animals that deliver the products that can command a premium on the world stage.

Ravensdown tests for, advises about, buys, ships, makes, stores, spreads, measures and maps the impact of food-creating nutrients in an integrated way. The highly trained team also provides products and services in the areas of environmental mitigation, agronomy and animal health.

"Smarter" means there's always a better way; always a way to improve. It's how we all grow. We look at how we perform, who we are here for and how we deliver value. So we can keep growing ourselves.

# AND BEYOND.





# THERE'S A LOT

We all want to grow in the land we call home.  
We do this by reflecting on the **past**, measuring where we are in the **present**  
and setting our sights on the **future**.



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# AT STAKE



**A bright future**

Interview with  
Ravensdown Chair

# John Henderson

YOUR CHAIR



**Engagement with stakeholders is vital for any business and it's especially important for a farmer-owned co-operative. But engagement is a two-way street and I've noticed the conversation has changed.**

**Businesses are part of society and society is always changing. Our challenge is to keep adapting so that we are seen as relevant, progressive and, ultimately, a force for good.**

**This is an ambition and a challenge, but this is what our stakeholders expect. They'd prefer us to aim high; to tell them where we're making progress and where we're not, to listen to them and to tell them what we're doing about their concerns.**





Forty years ago when Ravensdown was created in the 'Gumboot Takeover', farmers had to step up and become directors. Compared to 1977, the role of director has changed too, but what hasn't changed, and is a strength of our model, is that someone who cares as much about co-operatives' contribution to New Zealand as I do, can throw their hat in the ring and become an elected director. Looking to the future, a key issue will be for our board and leadership team to more accurately reflect the diversity of our stakeholders.

Competition and a focus on shareholder value are good for the agri-sector and

spur innovation. This was a fundamental belief when Ravensdown started as a provider of fertiliser inputs. These days, our stakeholders are telling us they want much more than that. The "smarts" they are seeking from Ravensdown vary, but the common factor is the value placed on trusted science, strong relationships, advanced technology and a concern for the environment.

Of course, co-operatives still need to be run as sound businesses – efficient, dynamic, profitable and well-led. But as a co-operative, we can try things that a private company would never attempt. We offer continuity

and greater long-term focus, which are not always easy for a listed company.

I am proud of the achievements of my board colleagues and the whole Ravensdown team in 2016-17. I am even more proud of the confidence with which the team is addressing the changes coming our way.

Our achievements do not arrive in isolation so, as well as thanking all those directly involved with Ravensdown, I'd like to acknowledge all the other stakeholders who, through their engagement, are contributing to the improvement of our business year in and year out.



**An integrated view**

Q+A with  
Greg Campbell CEO

# Greg Campbell

YOUR CEO



**The world needs smarter farming to create more food for people and animals with less land. New Zealand needs smarter farming for the sake of its prosperity, its communities and its environment.**

**While many of our team have farming backgrounds, Ravensdown doesn't actually do the smarter farming. We champion the best examples; encouraging, educating and even challenging our shareholders to always be better.**





### How is this report different to others you've done?

This stakeholder review is best read alongside our annual report as a picture of how our year has gone.

Our report is slightly different this year because, instead of reporting by functional area or only focusing on the financials, we wanted to take a more integrated view. Our performance is better understood in the context of our stakeholders: the ones who impact us and the ones we have an impact upon.

As a co-operative, stakeholder engagement is extremely important to Ravensdown and occurs in more ways than we could list here. We talked to a variety of people from different walks of life and with very different reasons to interact with Ravensdown. These voices are captured

on our special Integrated Reporting website in the form of videos, so I hope you get a chance to watch these on the website: [integratedreporting.ravensdown.co.nz](http://integratedreporting.ravensdown.co.nz).

If you want to see how we're going day by day, follow us on facebook.

### Does it matter Ravensdown's been going for 40 years?

Four decades ago, a band of far-sighted farmers challenged the status quo and stood up to the corporate giants of the day. Forming Ravensdown changed the rural landscape and, although it was touch and go at birth, the new co-operative went from strength to strength.

So much has been achieved in those 40 years. While we learn from the past, we need to think ahead; not just to the next four years but to the next 40.

Today there is a new team stepping up to the plate for Ravensdown, going into bat for farming and building the kind of company that future team members will take pride in.

It's a privilege to work for a 40-year old company that keeps that pioneering spirit of the co-operative's founders alive by constantly striving to be better, look forward and innovate.

We will challenge ourselves – knowing there's always a better way – and take pride in our contribution. When it comes to a better New Zealand, we are part of the solution.

### How important was the financial performance this year?

I'm proud the team was able to help so many people and carry out work that really matters. Thanks to past decisions, a clear strategy, customer support and a lot of hard



work, the co-operative is resilient enough to deliver returns to its stakeholders.

This is the third year on the trot that we've ended in a strong financial position and this has shown the fundamentals are strong.

Instead of pushing for a big year-end profit with one rebate paid at the end of the year, we deliberately returned value to shareholders in other ways. For example, by taking the initiative on price reductions throughout the financial year, shareholders faced lower input costs as they replenished nutrients in their soils. Paying a \$45 per tonne cash rebate with \$20 of that paid in June was also about acknowledging that, right now, farmers need that money more than their co-operatives.

For the year ending 31 May 2017, our balance sheet strength enabled us to invest in improvements in infrastructure, science and technology. Across our network of stores, manufacturing sites, lime quarries and support operations, \$42m was invested in infrastructure improvements such as recladding buildings, replacement cabling and new vehicles such as loaders. This ultimately improves quality, efficiency and safety.

#### **Overall, how has Ravensdown benefited its stakeholders?**

In our annual customer survey, 89% either strongly agree or agree that they value the relationship they have with Ravensdown. Our customers tell us that they trust our advice and value our support. More people agreed with the statement 'Ravensdown supports rural communities like mine' than ever before.

We partnered with suppliers to maintain quality, assure availability and take the initiative on pricing.

We opened our doors to the popular graduate scheme so that we could keep training a new generation. Through developing and keeping some very experienced people, we combine their practical insights with fresh perspectives.

The team has shown a great deal of dedication last year. The culture is just so positive and the people are motivated to make a difference.

I was proud of how the team responded to the rural community's needs in North Canterbury after the devastating Kaikoura earthquake. This included Aerowork pilots flying in emergency supplies, volunteers helping with fencing and flexible stores arrangements. The Aerowork team was busy again in February, this time working with Rural Fire on controlling the bushfires in Christchurch.

As part of acknowledging Ravensdown's 40th year, the company gave a volunteer day to every staff member to devote to a cause of their choice. This is in addition to all the community support and sponsorships the co-operative is involved in.

Our collaboration across industry associations, universities and research bodies delivers value in terms of intellectual property for Ravensdown but also progresses scientific understanding on topics that are crucial to New Zealand's future.

There is no doubt that communication will be vital in farming's ability to extend its social licence to operate. So we were pleased to commit to an exclusive named sponsorship

of the Ravensdown Agri Communicator of the Year, which in 2017, was won by Lain Jaeger of Zespri.

#### **What were the specific highlights and opportunities?**

Seeing our environmental consultancy team grow so strongly was promising. It shows the farmers who told us we need to lead in this space were right when we launched three years ago.

Our agronomy business also performed very well and is an important contributor to New Zealand's pasture-based story in terms of providing nutrients, lime, agrichemicals and seeds. The Animal Health side of the business responded well in the face of severe price competition.

Great progress was made on the new replacement store in New Plymouth which will supply the North Island and contain the same type of Precision Blending Plant that has been delivering coating and blending innovations in Canterbury.

Technology is an important enabler for us. For example, our new enterprise resource planning system allows more accurate and flexible forecasting, procurement, scheduling and logistics.

We also introduced new technology to improve nutrient decisions called HawkEye and became a data partner for Agrigate; the online farm dashboard from Fonterra and LIC. Our subsidiary C-Dax is working on exciting developments such as improvements to ground spreading and a robot version of the Pasture Meter. Continuing to support OVERSEER as it incorporates the latest scientific discoveries is a vital commitment.

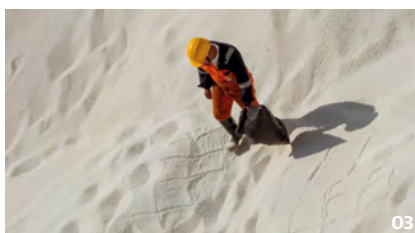




01



02



03



04



05

We launched a new system for managing health and safety that helps embed positive culture change. In addition, a network of 53 'safety and wellbeing champions' met for the first time this year and got behind a new campaign called 'Good to Go'. We also played a key role in supporting the Agricultural Leaders' Health and Safety Action Group that launched at Parliament in November.

#### What about the lowlights and risks?

There was a small fire that caused a bit of disruption in Napier. But everything pales against the fatality of a long-term contractor in Christchurch in July 2016. While the Worksafe investigation resulted in no action against Ravensdown, the whole team is determined to learn the lessons that need to be learned.

The operational, stores and spreading team did a great job in terms of product quality and availability. Our shipping joint venture gives us greater control in a volatile world. The importance of this was demonstrated by the recent actions of a group called the Polisario Front.

One of our phosphate rock suppliers, OCP, operates a facility in Western Sahara. The area has been administered by Morocco for over 40 years, but this is disputed by the Polisario Front which claims to be a 'government in exile'. In South Africa, the Front filed a court action that stopped a cargo of phosphate rock for a different New Zealand co-operative. While our teams have worked hard to avoid disruption of phosphate rock supplies, the risk profile for rock from this part of the world has risen.

We continue to monitor OCP's actions closely and take guidance from New Zealand government officials. The Fertiliser Association's legal team continues to assess emerging potential changes, but their advice stands that the trade is legal.

We believe the key to the decades-old territorial dispute lies with the United Nations. We strongly support their efforts to encourage a political settlement which is the best way to help all the local people in the region.

#### What makes you optimistic about Ravensdown?

Ravensdown is evolving. We're not just a maker and supplier of fertiliser. When it comes to smarter farming for a better New Zealand; we are part of the solution.

We've never done so much:

- Whole-farm soil testing through ARL
- Variable rate application by ground and air
- Environmental mitigation consultancy
- Accurate mapping and measuring
- Evidence-based science and collaboration

We've never enabled so much:

- Feed forecasting and benchmarking
- Sensor-enabled decision support
- Auditability to demonstrate compliance with environmental regulations

We've never had such:

- Well-trained staff (largest number of certified nutrient management advisors in NZ)
- Placement traceability and quality of food-creating nutrients
- Intelligent tools and technology
- Ambitious plans for improvement

There is plenty to work on, but the team is determined to rise to the challenge together.

01.

Good progress made at the New Plymouth store which has a target opening in February 2018.

02.

HawkEye will help farmers make smarter nutrient decisions by showing planned versus actual nutrient investments over time.

03.

This shipment of Granular Ammonium Sulphate from South Korea is tested for physical and chemical quality before being covered in plastic sheeting.

04.

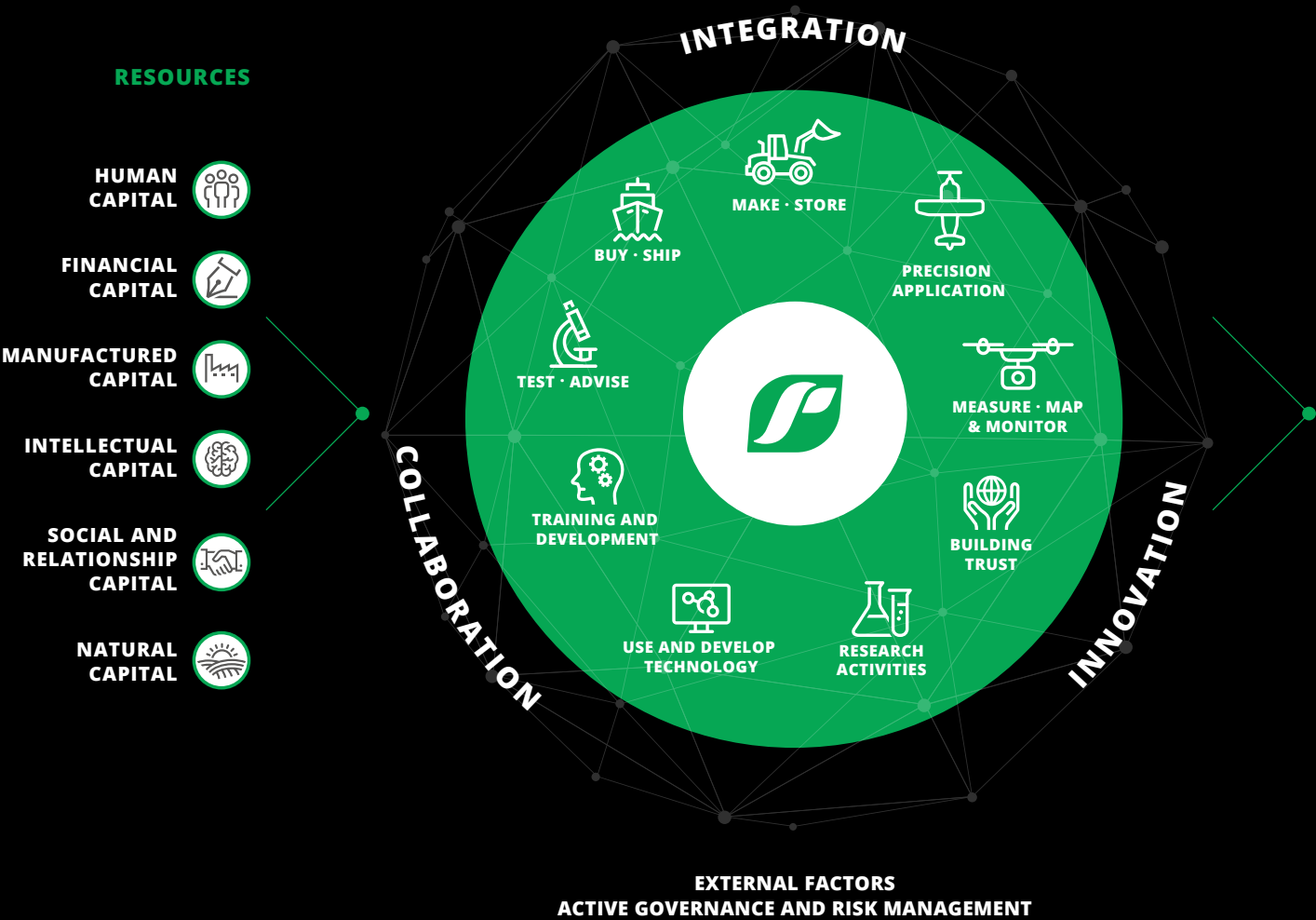
Subsidiary C-Dax is developing a prototype robotic version of its award-winning PastureMeter.

05.

Capping prices for superphosphate through spring was one example of price leadership.



# How we define and create value





## VALUE CREATED



**ENVIRONMENTAL  
LEADERSHIP**



**ENGAGED STAFF IN A  
SAFER ENVIRONMENT**



**ECONOMIC RETURNS**



**OPTIMISED VALUE  
FROM THE LAND**



**RELIABLE SUPPLY OF  
QUALITY AGRI-PRODUCTS**



**LEADING TECHNOLOGY,  
SCIENCE AND INFORMATION  
ENABLING SMARTER DECISIONS**

## THE DIFFERENCE WE'RE MAKING



**REDUCED  
ENVIRONMENTAL  
IMPACTS**



**SMARTER  
FARMING**



**GROWING  
PROSPERITY**



**STRONGER  
COMMUNITIES**

**A BETTER  
NEW ZEALAND**

**Business model:** How we transform inputs through business activities into outputs and outcomes that aim to fulfil Ravensdown's strategic purpose and create value over the short, medium and long term.

**Financial Capital** – Pool of funds available to an organisation to produce goods and services obtained through financing

**Manufactured Capital** – Physical man-made, production-oriented fixed assets, equipment and tools

**Intellectual Capital** – Organisational knowledge based intangibles

**Human Capital** – People's competencies, capabilities, experience and motivation to innovate

**Social and Relationship Capital** – Relationships and interaction between stakeholders and other networks

**Natural Capital** – All renewable and non-renewable environmental resources and processes that provide goods or services that support the past, current and future prosperity of an organisation.

*Source – IIRC – "The International IR Framework" 2013*

Financial Commentary

# Hard work paying off

OUR RETURNS OVER THE PAST YEAR.



**As a co-operative, we have to balance being highly competitive with providing a strong financial position to fund ongoing trading, developments and innovations to ensure short, medium and long term value is created.**

When aiming for a profit target, we consider what profit needs to be retained in the business to create longer term value and what profit is returned to shareholders in the form of rebates to reward trading with their co-operative.

Our 2016/17 financial year was another successful year for Ravensdown as we continued to lead prices down, ensuring competitive pricing was available to shareholders throughout the year. We do this to ensure our shareholders are better off as early as possible on key input costs for their business, whilst achieving an increased rebate and maintaining a sustainable financial position for the short, medium and long term.

For the year ended 31 May 2017, profit from continuing operations before rebate and tax was \$51m (2016: \$62m). After rebates totalling \$49m, discontinued operations, and taxes, \$0.7m will be retained.

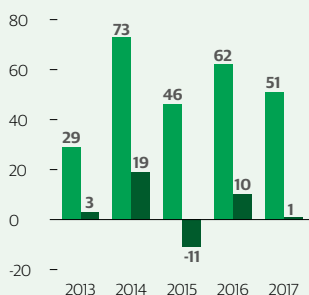
Total rebate on all qualifying fertiliser increased by 10% to \$45 per tonne, including an early interim rebate of \$20 per tonne in cash paid a week after our year-end. This is the second year we have paid an interim rebate. For the past two years, our strong financial position allowed us to give cash back earlier than we had previously done, as we understood that our shareholders could use the cash in their own businesses.

While our ability to lower fertiliser prices has reduced our revenue, we have seen a 2% increase in our volumes.

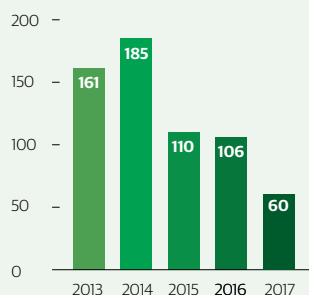
We continue to invest and develop in technology and associated services. During 2016/17, this spend has been allocated between our Income Statement (administration expenses) and our Statement of Financial Position. We also spent \$3.9m in research and development and supporting areas.

The group's financial strength continued to grow, with equity increasing to \$406m. The year-end equity ratio remains strong at 80% before rebates and 73% after allowing for rebates.

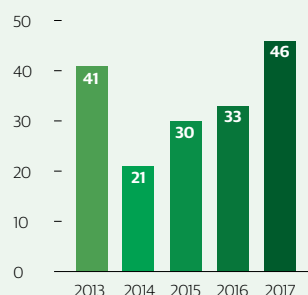


**Net profit (\$m)**

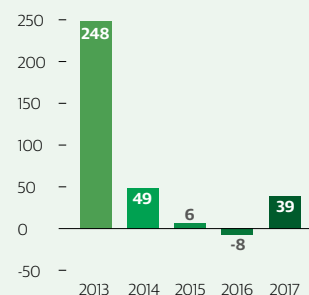
- Net profit before rebate and tax from continuing operations
- Net profit after rebate, tax and discontinued operations (\$m)
- Our financial strength enabled us to reduce our profit by providing price reductions during the year.
- Strong equity position allowed us to return most of the surplus to shareholders as rebates whilst still remaining profitable.

**Operating cashflow (\$m)**

- During 2013 and 2014 our focus was on operating cashflow as we restructured our business. Since then our operating cashflow remains at sustainable levels.

**Net capital expenditure cashflow (\$m)**

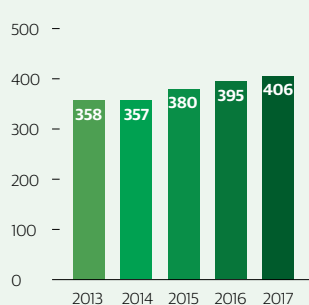
- This year's investment is higher than previous years. It required significant cashflow for the construction of a new major store.

**Net bank debt (\$m)**

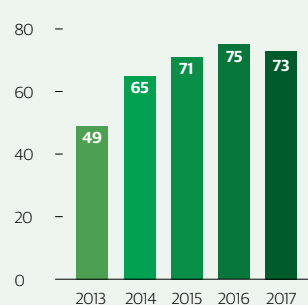
- Year-end debt remains low. The increase in 2016/17 is partly caused by a change in the sales pattern near our year end and an increase in our capital investment.

**Shareholder return (\$/t)  
(including tax credits)**

- Rebate increase by 10% on the back of another strong trading year.

**Total equity (\$m)  
(includes hedging reserve)**

- We have continued to add shareholder value with increasing total equity.

**Equity ratio (%)  
(after rebate)**

- This year we have maintained the financial strength we have rebuilt over recent years.

Our investment back into the business continues with \$46m of net cashflow invested into the capital programme. The investment covers a range of projects, with the most significant project from a cashflow perspective being the new replacement store we are constructing in New Plymouth. The investment also includes a number of software projects, developing systems for internal and customer use.

Cashflow is important for us, with large working capital requirements and a capital expenditure programme that we want to pay for with internally-generated funds, where possible. Our operating cashflow was strongly positive at \$60m.

Our year-end debt increased as a result of several items including an increase in our receivables balance by \$14 million. Adverse weather meant that some of our April sales moved into May. This resulted in a delay of cash collection by a month, increasing our receivable balance at the end of May 2017 and bank debt. We also increased our capital expenditure to fund the new replacement store being constructed.

Our ongoing focus on working capital requirements allowed us to reduce our total debt facility with our debt syndicate during the year by a further \$40m. Lower debt, and interest rates, during the year allowed us to reduce our interest cost by over \$1m.

Looking forward, we are in a strong position to continue investing in the business, ensuring its sustainability. We will invest wisely and, subject to market pressure, continue to return benefits in the way of rebates, rewarding those shareholders who transact with us.

Our immediate investments will include the continuing upgrade in our store network and manufacturing sites. We will also continue to fund customer-facing technologies and our PGP innovation.

For full financial disclosure, please refer to Annual Report at <http://integratedreporting.ravensdown.co.nz>

A New Zealand story:  
Built on trust

# 01.

≡

# Strong relationships

Farming is becoming smarter and we're proud of our contribution. Our products, expertise and technology are helping the agri-sector reduce its environmental impact and optimise value from the land.

Our advisors are invited into shareholders' homes. The relationships are built on common ground and mutual respect.

Customers value advice from a team they trust who keep their interests at heart and the latest science in mind. A gentle nudge here, a new scenario there - it's all about growing together.

The team will guide, support, challenge and speak out on behalf of their customers. Our fast-growing environmental consultancy engages with regional councils on customers' behalf - such is the level of trust.



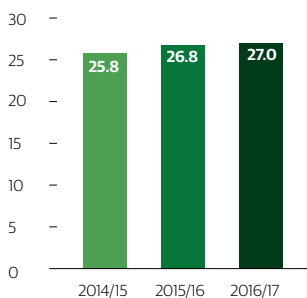




## 20 Customers

Ravensdown  
Stakeholder Review  
2017

**Number of farm visits by agri managers to determine and advise on optimal farm inputs**  
Thousands



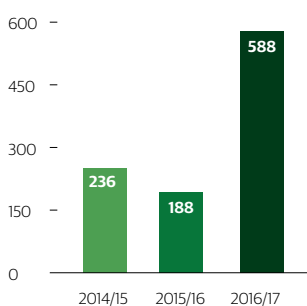
**Proof of placement maps**  
# maps



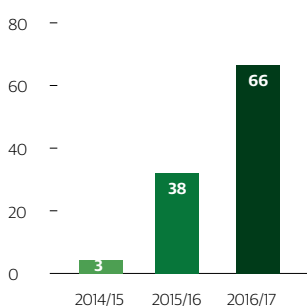
2016/17

Fertiliser application is accurately tracked

**Environmental consultants**  
Projects completed



**Environmental consultants**  
Number of consents achieved



## CASE STUDY

01.

**John Rodwell** is a Wanaka-based shareholder of Ravensdown. He was involved in establishing the Lincoln Hub and recently appointed to the Board of Landcare Research.

Smarter farming is the answer: now what's the question?

When it comes to farming, the changes that we will see in the next ten years will be as great as those we have seen in pastoral farming in the last 100 years in New Zealand. That's the view of John Rodwell who believes – whether it's environmental impacts of the agrisector or building stronger rural communities where families are thriving and prosperity is growing – smarter farming is the way forward.

### The value-adding story of New Zealand food and fibre

"Traditionally within New Zealand farming there's been a focus on farm practice and systems within the farm gates, to suit farmers and their specific location. Now there is a changing focus towards our society's needs and our customers' needs in international markets and a fresh mindfulness as to what they consider is important," says John.

The key factors are integrity in production, involving environmental, welfare and management standards of the highest degree. "Farmers are now looking outwardly, a complete mind shift from the past, which has partly been brought about by some innovative spirits, partly by regulations and partly as a response and recognition of the genuine concerns of local communities and international markets."

Consumers now care where their food comes from and how it is produced, he says. "These two drivers are becoming very powerful and New Zealand, with its pastoral farming system, has a strong story to tell and people are responding. There's an enormous opportunity to change the perception and value of New Zealand pastoral products."

### Targeting environmental impacts

He says one of the key means of meeting the environmental challenges is for farmers to use tools and fertiliser products in more precise ways to provide a far more accurate application to specific plant and soil requirements. "As opposed to broadcast applications, with potential wastage, which in turn leads to nutrients potentially leaching



**"The kind of initiatives which are emerging are game changers."**

John Rodwell  
Ravensdown shareholder

Watch John's story online:  
<https://integratedreporting.ravensdown.co.nz>



into groundwater, or running off into waterways and rivers." After all, nutrient efficiency is at the heart of smarter farming and fertilisers are simply tools that can be used smartly or poorly.

Collaboration is paramount and "incredibly exciting", he says. "There is great opportunity for farmers to work together with companies like Ravensdown to look at the development of smart and targeted fertilisers and application methods, which have the potential to dramatically reduce groundwater leaching and surface water runoff of nutrients.

"The bottom line is that Ravensdown and other companies are responding to farmer requirements and working in partnership with them."

### Targeted for the future

"The kind of initiatives that are emerging are game changers in the way they recognise issues and use tools to dramatically remedy and restore in terms of their impacts. The industry has proven its desire to be responsive and to reach out to develop systems with the likes of Ravensdown, which will make a dramatic difference. The responsiveness and pace of change in areas like nutrient management, fertiliser application and irrigation management is so fast. Within the next few years, people will genuinely understand that if you're talking about smarter farming, good environmental stewardship and intensive agriculture production go hand in hand."

## Nutrient planning

### Past

Fertiliser recommendations separate from ordering and spreading process.  
Predictive nutrient budgets that embody soil tests are not always part of an integrated agronomy plan.

### Present

Improving ability to make nutrient decisions such as order and spread tasks that are integrated with test results.  
Integrated agronomy plans evaluate impacts of seeds, agchem and fertiliser inputs.

### Future

Visualising implications for more effective nutrient decisions in terms of potential for nitrate and phosphate loss and productivity.  
Auditable map that shows test-recommend-order-spread-measure stages so customers can combine digital insight with farming actions.

## Decision support

Mapping technology that is only for PCs and is a closed system so access and data cannot be shared easily with other staff or outside parties. No third party vendors supplying data inputs, so tool only gives partial picture.

Partnerships with industry to provide data across different platforms developed, providing a more comprehensive picture of farming.  
Configurable access permissions for sharing information and insights for all members of the farming team. Predictive and strategic pasture tools for production insights.

Integration of our technology to allow for greater precision and traceability throughout NZ.  
Improvement of pasture prediction tools, improved nutrient precision tools and use of automation, so data overload can be simplified into actionable insight.

## Environmental consultancy

New Environmental consultancy established a team of highly trained farm environmental consultants and nutrient management specialists in New Zealand.  
Attracting talented consultants gives more farmers access to services they are asking for.

Growing reputation of Environment consultancy team and regional expansion in response to accommodate farmer demand.  
Broaden service offer from nutrient budgeting to include Farm Environmental Plans and Consenting, compliance and water quality testing.

Becoming leaders in their field; shaping the debate and advocating on behalf of customers.  
Adopting proven methodology and new tools so farmers stay ahead of regulatory changes.  
Measure success in number of projects completed, productivity per consultant and consents obtained.



Building insights:  
Informing the conversation

# 02.



## Deep understanding

A growing environmentally sustainable agri-sector will be built on partnerships. As a co-operative, we focus on co-operation. We partner with leading minds at our agri-science institutions to help make farming even smarter.

We fund a range of projects including doctoral students and support thought-provoking industry conferences, because we know the best way to solve New Zealand's environmental and productivity challenges isn't going to be grandstanding or mudslinging.

The answers lie in sound science and smarter farming. That's what's going to unlock the value for all of us. The prize is increased production efficiency, reduced environmental impacts, stronger rural communities and national prosperity. Relationships and collaboration across academics, researchers, farmers and their advisors will be how we all win.









**Dr Bethanna (Beth) Jackson** is Senior Lecturer at Victoria University's School of Geography, Environment and Earth Sciences and is passionate about the way technology can help reduce the impact of phosphorus-based fertiliser.

## Cutting the risk of run-off

Phosphorus is vital for all plant and animal life including humans. Putting the nutrient into the food that is put on people's tables means putting it on soils first. Too little will impact on growth and nutritional value of pasture. But too much in the wrong place can create a risk of phosphorus molecules being washed into fresh water. Too much phosphate in the water can stimulate "algal blooms" that damage aquatic life.

### The P problem

Victoria University of Wellington's Dr Bethanna Jackson and her team of researchers are working hard on a software tool that tackles this serious problem. "The purpose of the Land Use Capability Indicator (LUCI) is to support the decisions farmers are making about how to meet nutrient loss targets," says Beth.

Her team and Ravensdown have worked to adjust the LUCI software to account for New Zealand farm conditions. When it comes to mapping the risk of phosphate run off, Beef and Lamb New Zealand state LUCI "is recognised as the only model in the world which is able to determine and analyse critical sources and pathways at the farm and wider catchment (watershed) level."

### Spotting the opportunity

LUCI was originally developed for use in Wales in 2006 where Dr Jackson was working on land use interventions to help mitigate flooding. "Ravensdown had been conducting nutrient monitoring with Lincoln University in a Southland stream. There is lots of peer-reviewed research about nutrient modelling in the root zone that has informed the OVERSEER tool, but not so much about nutrients in the water," says Beth.

"To complement the soil science, LUCI adds hydrology and topography into the mix and

accounts for detail in farm management such as changing fertiliser usage, types of irrigation and stock movement."

### Guiding the advice

Ravensdown environmental advisors will use LUCI to help farmers identify their at-risk areas so those places can be targeted for mitigations. LUCI can then be used to assess the effect of these mitigations on N and P loss.

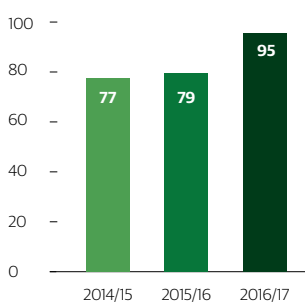
In some regions where P loss is especially problematic, many farmers are looking to take action as part of a collective group, because waterways typically flow through or border multiple farms and sources of phosphate. These community groups seek to influence the water quality at a catchment level.

"As a tool in the hands of a trained professional, LUCI empowers these groups by showing them potential consequences of possible actions across the catchment," said Beth.

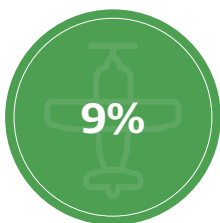
### Continuing collaboration

"There's still a lot of scientific evidence to be collected, including farmers' and advisors' input. LUCI still needs work for it to reach its full potential, but it can be really helpful right now as a way to improve freshwater outcomes."

**ARL total number of diagnostic tests conducted**  
Thousands



**PGP**



Research showed an average of 9% of land was environmentally sensitive or ineffective meaning fertiliser could be redeployed.



"I've always believed science is a collaborative process. By working together, farmers, academics and Ravensdown put theory into practice for a better outcome"

Dr Beth Jackson  
Senior Lecturer  
Victoria University



"Central government, regional councils and the entire agri-sector are all facing nutrient challenges. Ravensdown is working very hard in this space and actively to overcome these problems," said Beth. Ravensdown is the perfect partner in this developing technology with the ability to materially contribute advanced science, funding and an environmental consulting team that's able to take the technology benefits out into the real world through engaging with farmers.

Beth dismisses divisive thinking on the topic of managing phosphate run-off. "It's not about polar opposites: rural versus urban or conservationists versus farmers. It's about conversations and collaborations that need to continue if we're going to get better outcomes."

## Nutrient diagnostics

### Past

Analytical Research Laboratories (ARL) uses state-of-the-art diagnostic techniques to analyse soil fertility, so farmers and their advisors see what's needed (see page 24).

The start of all-paddock tests which identify in-paddock variability presenting an opportunity to improve efficiency of fertiliser use.

### Present

Independently-certified ARL provides nutrient status and feed quality data in order to help farmers and to calibrate remote sensing technology.

Over a 1000 farms have had an all-paddock test since 2012 yielding valuable trend analysis showing where fertiliser is best applied and where it can be optimised.

### Future

Evidence-based insight and integration with spreading companies enables the right amount of the right nutrient in the right place at the right time.

ARL provides the diagnostic services that calibrate and refine the accuracy of remote sensor technology.

## Nutrient efficiency

15 years of significant investment in OVERSEER nutrient modelling software to enable our farmers to continue to innovate within an environmental footprint.

Advanced technical training for staff in conjunction with Massey and Lincoln universities improves individual employability and sector-wide capability.

Relied on by farmers in the areas of nutrients, farm systems and related farm inputs.

Detailed modelling of farms by Ravensdown Environmental using OVERSEER to identify areas/practices on farm to reduce farm system losses.

Encouraging adoption of latest sector-wide R&D such as the Forages to Reduce Nitrate Leaching programme.

Continue the investment into OVERSEER to incorporate latest scientific discoveries and the changing needs of farming.

Adoption of technology that complements OVERSEER and models nutrient movements on farm in order to minimise potential losses.

Core focus on reducing nutrient losses from farms resulting in lower environmental impact and increased production.

## Nutrient application

In 2002 Ravensdown began to introduce technologies to track fertiliser applications to enable improvements to be made.

As part of a Primary Growth Partnership receiving funding from Ministry for Primary Industries, Ravensdown starts its Pioneering to Precision programme to transform hill country nutrient application.

Ravensdown successfully introduced IntelliSpread technology: aerial application of nutrients that is computer-controlled for better accuracy, pilot safety, economic returns and environmental benefits.

Collaborating with Massey University and AgResearch on Ravensdown's Airscan service to "soil test from the sky" to determine where nutrients should be targeted according to precise fertility needs.

Upgrade Aerowork fleet to IntelliSpread capabilities and enhance ground spreading fleet technology.

Nutrient losses will be reduced by excluding fertiliser application from environmentally sensitive areas.

The PGP programme "Pioneering to Precision", is estimated to deliver a \$120 million per year difference by 2030.

People at our heart:  
Looking out for each other

# 03.

≡

## Families valued

Others may pay lip service to listening, but we care about our people's concerns and contribution. Employees value this real commitment and respond to the confidence shown in them.

Empowering people and keeping them safe is hardwired into our values as a co-operative.

Compassion and respect are not the only reasons employees thrive here. The pace of change brings opportunities. New recruits want to join, experienced people can build careers and teams collaborate well together. All stakeholders notice and benefit when they interact with an employee who is engaged and passionate about their work and Ravensdown has more than its fair share of those.







## 28 Employees

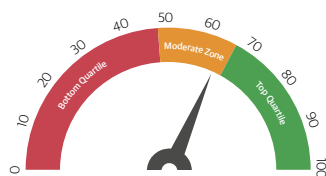
Ravensdown  
Stakeholder Review  
2017

**Positively thriving**  
Training spend



2016/17

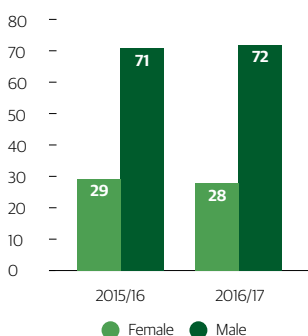
**AON Hewitt Engagement score**



Ravensdown carries out a culture survey every two years with all staff to check that we deliver on our staff promise – to ensure a positive experience for staff; empowering and engaging them and delivery on our promises.

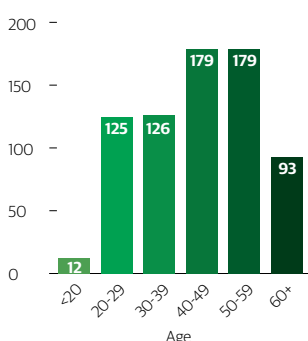
**Diversity analysis**

Percentage



**Diversity analysis**

By age group



## CASE STUDY

03.



**Belinda Partridge** is a member of the Sample Preparation Team at Ravensdown's Analytical Research Laboratories in Napier. She is one of the employees who benefit from the company practice of paying a living wage to our permanent staff.

Living wage is a progressive step

Enabling and empowering people is a big part of how Ravensdown achieves its purpose. Paying a living wage is one more important way Ravensdown takes care of its staff.

A living wage is the hourly wage a worker needs to pay for the necessities of life and participate as an active citizen in the community; reflecting basic expenses of workers and their families such as food, transportation, housing and childcare.

### Genuine appreciation

Belinda was awake all night the evening Ravensdown first paid her the living wage. Instead of her monthly pay packet just meeting her basics, there was money to spare. "I double checked and triple checked to make sure I was correct, and I was," says Belinda.

"It was a great feeling. I had paid all the bills and I had this big chunk of money left over.

"We know people matter at Ravensdown and I feel quite emotional talking about the living wage because it means so much." According to Belinda, since the news, staff attitudes have subtly changed, with people demonstrating additional loyalty as well as genuine appreciation.

### Valuing people and their jobs

"We're pretty open with each other, and we were all so blown away about it. It is a company-wide policy and it is a progressive step which shows Ravensdown has its employees at its heart and values them and the work they do."

Everyone saves for a different reason. Belinda is saving for a trip to Perth to visit her old high school friend from Wairarapa College. "By the time I get there it will be four-and-a-half years since we saw each other – and she has two grandchildren whom I've never met. Being paid a living wage gets me to see her faster."



"Because our ideas are listened to and encouraged, we tend to think a bit more about how things are done and why. It builds enthusiasm and pride which others get to see."

Belinda Partridge  
Employee



### Hands-on work

Belinda takes pride in what the team of four full-time employees, one fixed-term and five casuals accomplish – especially in the busy season. "Over the late autumn, we can have up to 1000 samples coming in a day. It's very hands-on, can be very physical and it's relentless. The samples need to be pushed through sub samplers, put into an oven overnight and then the soil is dried, sieved into pottles, weighed and ready for the lab for analysis.

"At the end of the day, the living wage is one more example of Ravensdown trying to do the right thing by its people. Other initiatives might matter more to other people. For me, receiving it is making a real difference in my life."

|                                       |  |
|---------------------------------------|--|
| <b>1. Medical insurance</b>           | All permanent staff over 35 hours fully subsidised for self and family (over 20 hours subsidised for individual) |
| <b>2. Life insurance</b>              | All permanent staff from start date up to 70 years of age  |
| <b>3. Salary protection insurance</b> | All permanent staff (except pilots) from start date up to 65 years of age  |

### Training

#### Past

Moved training budget to centralised control to ensure all staff have access to development. Commitment to development and internal promotions so knowledge is retained and staff can progress.

#### Present

Appointment of training specialist to develop training and development competency framework for a more co-ordinated and systematic approach.

#### Future

Roll out of training framework based on four levels of training and competency for all staff monitored through a virtual log book delivering more targeted relevant training spend.

### Diversity

Collection of data on gender, age, level within organisation. "Unconscious Bias" training completed for Leadership team helping to positively develop the culture.

Profile data collection started to track progress so that we are able to monitor our development of a diverse workforce. Treaty training planned for Leadership team to continue to honour our partnership.

Diversity targets and plans to implement will be drawn up to reflect our customer base and develop a more diverse workforce. Increase in Māori scholarships and liaison with iwi groups developed.

### Engagement

Implemented new Aon Hewitt climate survey in 2017 and achieved 66% engagement score across the company.

Staff develop action plans to align around a common purpose and lift engagement in all departments.

Target to develop the culture and increase the engagement score to over 67% (the highly engaged area) in the 2019 survey.



From planet to paddock:  
Making and supplying quality products

# 04.



## Value delivered

With so much beyond their control, farmers need certainty. They depend on products such as fertiliser, seeds, agrichemicals and animal health to get more from their land and livestock. Without them, New Zealand can't grow the way it needs to.

Our procurement, logistics, manufacturing, stores and spreading teams work with suppliers across the world to ensure these quality products are available when needed. Our suppliers, laboratories and MPI-endorsed biosecurity protocols ensure 'no surprises' when the products enter our country.

We work with international suppliers over time so they become partners; delivering quality, dependability and innovation for the benefit of New Zealand farmers. So if anything threatens the global supply chain for farming necessities, these relationships go a long way to protect the flow.



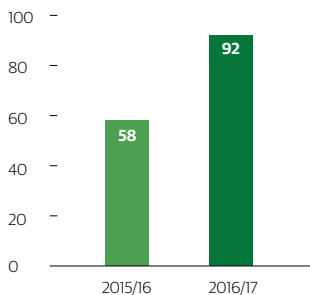




## 32 Supply Partners

Ravensdown  
Stakeholder Review  
2017

**Delivery in full, on time, in specification - International suppliers** (percentage)



**International suppliers evaluated**



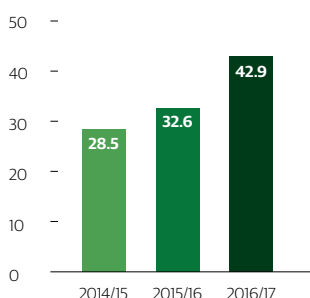
Ensuring our suppliers meet Ravensdown standards

**Percentage of product purchased through preferred Suppliers**



Surety of supply from reputable and long-term suppliers

**Investment in infrastructure**  
Property, Plant and Equipment (\$M)



## CASE STUDY

# 04.

**Andrew Harvey** is General Manager New Zealand at DXC Red Rock Consulting a global IT consultancy and believes communication is the key to a strong supplier relationship.

### Collaboration with suppliers expected and delivered

Suppliers are an important stakeholder group for any company and, for a co-operative like Ravensdown, this is especially true. A track record of promises made and promises kept helps form a positive relationship over time. Combine this with open and honest communication and, according to Andrew Harvey, you have a recipe for success.

#### A matter of trust

"We do our best work when we can challenge and be challenged by the companies we supply services to," says Andrew whose company works with Ravensdown on its IT systems. "A free-flow of ideas and accurate feedback all come down to trust and mutual respect. That's what most suppliers would be aiming for wherever in the world they are based.

"We provide a service that helps Ravensdown add value, but it's not only a transactional thing. We are aligned in other ways. The things that really matter to both of us - our goals and values - are lined up which delivers long-term success."

#### Managing risk

"We are helping Ravensdown bring together its systems for demand forecasting, inventory planning and production scheduling. It's complex work and the stakes are high," says Andrew. "Ravensdown is an important company in an important sector and you can't take chances with the system that ensures its customers have access to quality product when they need it."

One way Ravensdown manages the risk of something going wrong is to work with specialists who understand the business and spend time,

effort and attention ensuring the supplier is clear on scope, processes and expectations. According to Andrew, Ravensdown is particularly good at articulating its desired outcomes. "I think both our teams are aligned to driving towards these outcomes."

#### Weaving the threads together

"Now Ravensdown's system has been upgraded we're looking at improvement initiatives, for example, we're helping them streamline their Supply Chain Management processes. This will allow Ravensdown to more effectively source, mix, and deliver fertiliser blends to their customers," Andrew continues.

"I have the greatest respect for the Ravensdown team, who know what they need to do to be leaders. Our ambition is to support Ravensdown, first through applying our expertise, but we seek to add value in other respects as well, by leveraging our experience gained with our other customers, globally."

Red Rock's business model is to work with customers as a partner, over the long term. "Our aspiration for Ravensdown is that we be an important partner in its business across a broad range of activities. As a partner, an indication of our success is Ravensdown's success."



**"They've shown me that they have the discipline and disposition to get the best from supplier relationships."**

Andrew Harvey  
General Manager NZ  
DXC Red Rock Consulting



For Andrew, collaboration isn't just a buzzword. "Some companies pay lip service to collaboration, but don't really follow through. I think the true test is asking 'do the teams from the two companies bring out the best in each other in order to achieve a better outcome?' With Ravensdown, the answer is a resounding 'yes!'"

## Investment

### Past

Investing in people and in the technology that helps the business forecast its demand, schedule its production and link to suppliers.

Investing in infrastructure such as new stores, production facilities, blending equipment and mobile plant.

Maintenance across network of buildings including asbestos removal programme utilised large contractor base.

### Present

Rollout changes to enterprise management system, focusing on distribution and procurement planning.

Investing in specialist maintenance management systems to drive efficient quality outcomes.

Continue training Graduate Process Engineers with right skillsets for our operations and assets.

Ongoing upgrading of infrastructure and mobile plant.

Evaluating new technology such as weighbridge systems to reduce truck waiting times and loader-based sieve screening.

### Future

Flexibility and efficiency. Increasing in-house knowledge of our operations mitigating risk and identifying opportunities.

Lower cost of maintenance, improved safety and quality of product / service.

Explore new technologies that improve quality, efficiency and service experience.

Ground and air spreading technology delivers environmental and production benefits on farm.

Transparency of service performance meeting expectations every time.

## Procurement

MPI-approved supplier screening and biosecurity programme.

Maintain supplier relationships and assess against performance criteria.

Continue testing products to specification, integrating storage and handling protocols to deliver quality product every time.

Supplier code of conduct to align values and expectations for both parties.

Collaborate with suppliers on new product development.

Ravensdown seen as a customer of choice among its community of suppliers.

Transition to partnership status with key suppliers contributing to New Zealand's intellectual property.

## Manufacturing innovation

Launched Precision Blending Plant (PBP) for more precise coatings and blends of fertiliser.

Routine maintenance of three plants that manufacture sulphuric acid (three of only four in New Zealand).

Investing in precision blending and Surfex coating technologies to more accurately deliver what each customer needs.

Store in New Plymouth opening in 2018 will have North Island's first precision blending plant.

Investment at all three acid plants which, through improved process management, will improve environmental performance and reliability.

New products to be delivered that will increase pasture response and nutritional value.

Five-year capital investment programme to improve our stores network and other infrastructure.

Investment at all three manufacturing sites with new technologies that will improve safety, reduce emissions and provide surety of supply.



Achieving compliance:  
Pushing for more

# 05.



## Driving change

We actively engage with regulators to understand requirements and, where possible, take the lead.

Our ultimate goal is that anyone who has anything to do with Ravensdown goes home safe and sound. Because it's the right thing to do and a better New Zealand can't be built on anything less.

We also monitor and mitigate our own environmental impacts as we are helping farmers reduce theirs. Responsible stewardship is about fronting up to the challenge and tackling issues if they arise.



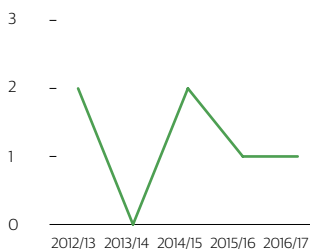




## 36 Regulators

Ravensdown  
Stakeholder Review  
2017

### Number of breaches

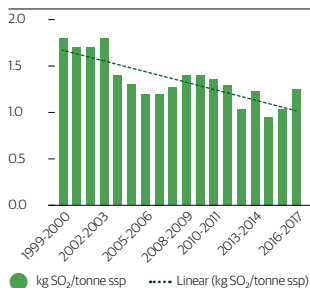


### EMISSIONS

Aggregated over 3 work sites – for details see environmental report

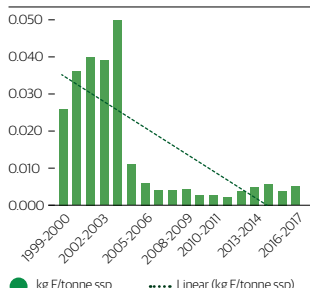
#### Sulphur Dioxide Discharged to Air

(kg SO<sub>2</sub> per tonne of fertiliser manufactured)



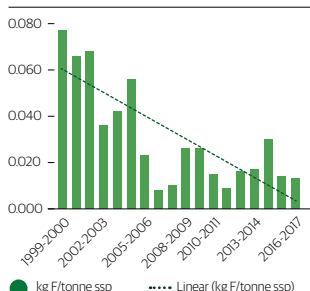
#### Fluoride Discharged to Air

(kg F per tonne of fertiliser manufactured)



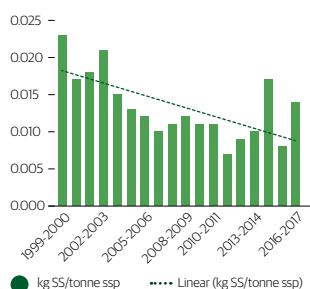
#### Fluoride Liquid Discharges

(kg F/tonne super)



#### Suspended Solids Liquid Discharges

(kg SS/tonne super)



## Working with others for a safer New Zealand

Brian Roche lays down a challenge for all Ravensdown employees when it comes to safety in the workplace. "It's about leadership and walking the talk, showing people how to be safe through your actions rather than your words. It's about not being afraid to speak out and challenge the status quo. Just because things have been done the same way for a long time, doesn't mean to say they can't be done better."

### Safety's place at Ravensdown

According to Brian, a safe working day and a certain return home at night is the bedrock on which all Ravensdown's values are built. Brian himself is an example of someone who has grown within the co-operative. He is now chairman of the Aggregates and Quarry Association (AQA) and gets to know the major stakeholder groups that can impact quarry operations and talk with other quarrying people who are affected by policy changes.

Compliance can be seen as a base level – a minimum standard – and in his opinion only gets you so far. "If you set minimum standard goals, then you're not aiming for any improvement – let alone perfection. If you have lofty goals, if you're 90 per cent there, you're still well above minimum compliance. We see ourselves as a co-operative with a duty to be safe. We need to show our shareholders that we can be safe on our sites in much more than a minimum way."

### Dealing with change

"Pike River changed the face of health and safety. Everybody is affected by what happened there, through the implementation of the Health and Safety at Work Act, and the subsequent mining and quarry regulations.

"For us, this has resulted in a standardising of safety and wellbeing approaches across all our quarries and all our operations. Because we're so spread out, we've suffered from this separation. We've all had different systems.

"Take incident reporting as an example. We now have a company-wide system for putting in incident reports – definitely a good initiative – helping the quarries report their incidents and learn from each other."

## CASE STUDY

### 05.

As Chairman of New Zealand's Aggregates and Quarry Association, Ravensdown's Quarries Development Manager **Brian Roche** is engaging across the sector to build a culture that puts safety first.

Mining and quarrying operations have been coming up with fit-for-purpose regulations, he says. "With more regulations and good guidance, we're now on the way to being a better and safer industry."

### Work still to do

Ravensdown lime quarries produce a fifth of all New Zealand's aglime which is used by farmers to condition their soil. "Everybody in the quarry division is well aware of where we need to go and what we need to do. Quarries have certain responsibilities peculiar to quarrying. Our highest risks are mobile plant, exposed conveyors and electricity related issues and we're tackling those."

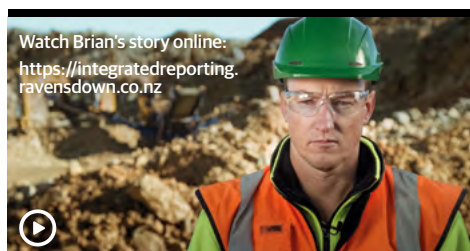
There's still work to be done, he says but Ravensdown has moved a long way in the last five years, picking up on the changing expectations. "We've had WorkSafe come into being, the new Health and Safety at Work Act, and the regulations that they carry. This has been a big change and Ravensdown is reacting positively towards it. It's a workplace responsibility, and while we've not got it completely nailed yet, we're on the start of the journey and, for me, we're headed in the right direction."





“There has never been more change than there has been lately. So to be able to pool our collective ideas and canvas a wider breadth of experts places the industry body and Ravensdown in a good position to deal with current and future change.”

Brian Roche  
Quarries Development Manager



## Reporting

### Past

Annual Environmental Report since 2001 consistently tracking emissions and compliance at our three superphosphate manufacturing plants.

## Greenhouse gases (GHGs)

Engaged with government to improve policy outcomes.

## Safety and wellbeing

Developed integrated approach to safety and wellbeing and appointed 53 champions to bring staff ideas and concerns forward.  
Annual plan and compliance focused.

### Present

Continue reporting measures relevant to stakeholders on works emissions and compliance.

Maintain or enhance our community engagement around our key sites.

Establish standard process for annual measurement of greenhouse gases (GHGs).

Continue research into on-farm mitigations of greenhouse gases.

Implemented new data gathering system for capturing incidents and sharing progress (Noggin). Champions network nurtured and trained to achieve goals.

Five-year strategic plan developed through broad consultation.

### Future

Reduce emissions per unit output.  
Further increases in transparency of reporting data.

Full measurement and reporting of our GHG footprint from our activities. Success of measures to reduce footprint. Contribute to reduction in on-farm GHG /unit of farm output.

Risk analysis tool used to identify and consistently manage high safety risks.

Continuing to develop wellbeing initiatives (going beyond health and safety).  
Acknowledged as leader in the sector.



Our communities:  
A powerful sense of belonging

# 06.



## Staying close

Families and homes come in all shapes and sizes. But one thing they all have in common: they are part of a wider community. These communities don't exist separately from our staff, customers, suppliers or neighbours.

Being determined to make a positive difference in our communities, the co-operative backs many causes and encourages connection. Moving beyond acceptance and approval through to building admiration will come from individuals taking action, engaging and listening.









**Trevor Johnson** is a member of the Ravensbourne Community Liaison Group that fosters good communication between the superphosphate manufacturing plant in Dunedin and its immediate neighbours.

**"Relationships and dialogue with the community help any company stay in touch and relevant. Ravensdown works hard to actively listen and engage with our concerns."**

Trevor Johnson  
Ravensdown neighbour

### Close relationships the key for community

When business and city dwellers share the same locality, a close relationship is a vital component for getting along well.

This has certainly been the case in Ravensbourne, the west harbour community near Port Chalmers, Dunedin where a manufacturing plant has been operating since 1931. A family community, Ravensbourne has been Trevor Johnson's home all his life, and he was one of the first to join the Community Liaison Group when it was formed about 20 years ago.

### Honest feedback is the key

It's a far cry from 50 years ago when Trevor recalls his mother's anger at finding her nylons melted on the washing line. That was a decade before Ravensdown took over ownership. Over that time, the expectations and willingness of neighbours and business to engage with each other have been transformed.

"We were not as environmentally aware in those early days, and there were lots of concerns particularly about emissions from the chimney

stacks at the plant. It would be fair to say that in the beginning there was quite a bit of suspicion from both sides," says Trevor.

"It has taken time to build a good relationship, but today we are in a situation where we are able to discuss things openly, honestly, fully and frankly, and we've come to know each other very well. It's not perfect, but things are improving all the time, and I can only see good things for the future if we continue on this track."

### Regular reports and action

He says Ravensdown provides regular reports to the group and receives feedback. Ravensdown staff attend the meetings and he believes that "as a result of our group, the co-operative has spent many millions of dollars upgrading its facilities to contain emissions within the plant." These kind of upgrades improved efficiency and safety as well as addressing the neighbours' concerns so there was real value in the engagement.

"New scrubbers have been installed in the stacks where the consented emissions take place. Spillage on the road has also been reduced with several thousands of dollars spent on the truckwash and driver education. Landscaping – native plants and flaxes – has been undertaken at the entrance to Ravensbourne, providing a lift for the residents and creating goodwill. And of course, Ravensdown is an employer, and one we wouldn't want to lose."





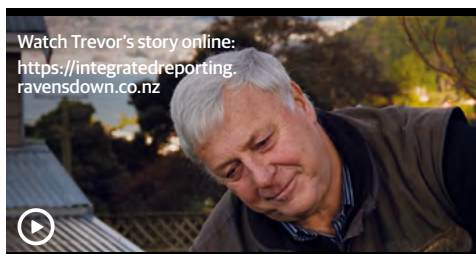
### A bright future

Trevor says the Liaison Group is now looking to the future. "We're hoping things will continue in the same vein and Ravensdown has already indicated it will be re-roofing its bulk storage area, further containing any escaping gases. With ongoing new technology we anticipate there will be more of the same kinds of activities and benefits to the wider community."

"We've gone from the situation where once there was a lot of emission from the plant, to today where it is pretty good. We've even reduced our meetings to three times a year because the issues are just not as significant."

"Ravensbourne was originally a community where people didn't particularly want to live because there was a fertiliser plant nearby, but nowadays if a house comes on the market in Ravensbourne, it goes pretty quickly. Because of the partnership philosophy, it's gone from a community people didn't rate highly, to a place where people want to be. And everyone's washing is safe on the line these days!"

Watch Trevor's story online:  
<https://integratedreporting.ravensdown.co.nz>



01



02



03



04



05



06



07



08



09



10



11



12

- 01. Hugh Williams Scholarship recipient, Sarah Lockhart.
- 02. Releasing kiwis into the wild.
- 03. Fighting the Port Hills fire in Christchurch.
- 04. Volunteering after Kaikoura quake.

- 05. Graduates intake.
- 06. Addressing the Rata Club on sustainability.
- 07. Helping at Orana Wildlife Park
- 08. Meeting retired farmers in Tikorangi

- 09. Displaying our solutions at Lincoln open day.
- 10. Showing a reporter around our operations.
- 11. Supporting the Kakanui water catchment.
- 12. Helping with plantings near Winton store.



Follow us on facebook for more!



# The Board Leading us forward



Kate Scott Tony H Bruce John Tony R Glen Peter Jason Stuart



**John Henderson LLB — Chair**

John runs a 22,000 stock unit sheep and beef breeding and finishing operation, has been on the Board since 2004 and has been Chair since February 2014. As well as running a legal practice in Marton, John spent many years as a director of RACE Incorporated and of a number of farming and agricultural companies in NZ and overseas.

*"Great things can happen when you have a talented team with a common purpose and clear sense of direction. Ravensdown people are making a difference and it's a difference that matters."*

*Committees: Audit and Risk. Board Appointments and Remuneration.*

**Stuart Wright B. Ag. Com — Deputy Chair**

Stuart farms 330ha west of Christchurch growing arable crops, seed potatoes and finishing lambs and has been on the Board since 2006 and Deputy Chair since 2014. Stuart is a Nuffield Scholar and has had a number of governance roles in the industry goods sector as well as not-for-profit organisations.

*"To meet the challengers of tomorrow's farming world we need to embrace technology and promote good science."*

*Committees: Board Appointments and Remuneration.*

**Peter Moynihan B. Ag. Sc**

Peter owns a 190ha dairy farm located at Northhope and has farming interests in Lochiel and Lorneville and has been on the Board since 2013. Peter is an Agribusiness Area Manager for a prominent bank and has been through the Fonterra Governance Development Programme.

*"Smarter farming for a better New Zealand is important to me as it means stronger and more sustainable businesses and communities."*

*Committees: Board Appointments and Remuneration.*

**Bruce Wills B. Ag. Com**

Bruce farms an 8000 stock unit cattle and sheep farm north of Napier and has been on the Board since 2015. Bruce holds a wide range of governance positions, particularly in the science and environmental areas. He previously spent six years on the Federated Farmers Board and was National President from 2011 to 2014.

*"Looking after the environment and optimising the value from your land are flip sides of the same coin. For farming's long-term success, one doesn't happen without the other."*

*Committees: Hugh Williams Scholarship (Chair). Share Surrenders.*

**Scott Gower**

Scott owns and runs a large hill country sheep and beef station at Ohura in the Central North Island and has been on the Board since 2006. Scott is a member of the NZ Institute of Directors and holds a certificate in company direction. He has completed a number of governance courses and continues to prioritise professional development.

*"Diversity has a big part to play if we're going to attract the best people and get fresh perspectives into the rural sector."*

*Committees: Audit and Risk.*

**Kate Alexander**

Kate owns a 245ha dairy farm in Dargaville and has been on the Board since 2014. Kate is also Chair of Delta Produce Cooperative Ltd and is a ministerial-appointed Council member of the Open Polytechnic of New Zealand. She has previously worked in the primary industry training sector. Kate holds an IOD Company Directors' Certificate and a Diploma in Agribusiness Management. She has been through the Fonterra Governance Development Programme.

*"I'd urge all shareholders to think about how they can get more involved – from a quick comment to the Customer Centre right up to securing a nomination to become a director."*

*Committees: Share Surrenders (Chair). Hugh Williams Scholarship.*

**Tony Howey B. Ag Com (VFM & Business Management)**

Through the companies Alpine Fresh Ltd and ViBERi NZ Ltd, Tony grows for the arable, vegetable and berryfruit sectors over 700 hectares. He has been on the Board since 2006.

His past governance experience includes irrigation/dam companies, a zone committee and the Chamber of Commerce. Currently Tony is a director of several local companies, is the Chair of NZGAP and Vice President of Horticulture NZ.

*"There's always a better way – a smarter way – to tackle any task. Farmers are problem solvers and are keen to hear the advice we give and use the tools we provide."*

*Committees: Share Surrenders. Audit and Risk.*

**Tony Reilly B. Ag. Com**

Tony runs the family dairy farming business, has interests in 1,600 cows and has been on the Board since 2004. Tony has been involved in agricultural governance at a local and national level, particularly in the dairy sector for 20-plus years. He was a director of the NZ Dairy Board and Kiwi Dairy Co-op leading up to the formation of Fonterra. Tony is a Nuffield Scholar and a Chartered Fellow of the Institute of Directors.

*"I'm committed to the drive to see all New Zealand farmers recognised as niche food producers and celebrated for their contribution to the country and our environment."*

*Committees: Board Appointments and Remuneration (Chair).*

**Glen Inger**

Glen is an Auckland-based entrepreneur, has agricultural interests in beef, dairy, mushroom, avocados, forestry and aquaculture and has been on the Board since 2007. Glen was a founding director of the Warehouse Group and was a board member there for 11 years. He currently has directorships of 20 private companies across agriculture, property, retail and tourism sectors.

*"There are shrewd operators in the rural sector using technology and innovation to transform how value is created. Ravensdown exists to help farmers lead on the world stage."*

*Committees: Audit and Risk.*

**Jason Dale B. Com FCA**

Jason is CFO of listed tech business EROAD and Fellow of Chartered Accountants Australia and New Zealand. Jason, who was the former CFO of large listed and unlisted companies such as Auckland Airport, PGW Wrightsons, and Fonterra Ingredients, has been on the Board since 2014. He is currently Chairman of TNX Limited and former Chair of the Audit Committees for Taranaki Investments Management Limited and LIC.

*"New Zealand needs agriculture, but too many think negatively about 'intensive' farming. The whole sector needs to demonstrate leadership if we're going to turn perceptions around."*

*Committees: Audit and Risk (Chair).*



# Meet the team



**Our Leadership team motivates others by understanding what drives Ravensdown people. Here they talk about what matters most to them.**



**Greg Campbell**  
Chief Executive

My bike helmet because it keeps me safe.

*"Motorcycling is a great passion of mine and so is the safety of everyone who comes into contact with Ravensdown. What they have in common is freedom and responsibility – to anticipate risk and take action knowing the stakes are high."*



**Sean Connolly**  
Chief Financial Officer

My Fitbit because I'm always on the move.

*"Keeping moving and tracking performance is important to me. Tracking our financial health and seeing how we are adding value to a variety of stakeholders is a key motivation for me."*



**Kevin Gettins**  
General Manager Operations

My cap because I'm the coach of the NZ Women's Softball team.

*"Coaching is important to me because it's a great feeling watching individuals grow as people. Helping them become part of a successful team by using their strengths to get the right results is very rewarding."*



**Bryan Inch**  
General Manager  
Customer Relationships

My pickaxe because I believe in continually chipping away.

*"What's important to me is being grounded and seeing things from the farmer's point of view. The question I ask more than any other is 'how does this benefit the customer?'"*





**Mike Manning**  
General Manager  
Innovation and Strategy

My medals are from marathons in all seven continents because I ran them!

*"Running a marathon in every continent has taken persistence, focus and a fair bit of energy. In my role, it's all about keeping our eyes on the long-term goal and putting in the hard yards."*



**Mark McAtamney**  
Chief Information Officer

One of the first topdressing planes in New Zealand because these flew over my ancestors' farms.

*"My grandparents and parents were farmers and supporting farming is what drives me. The opportunities to support farmers with new and emerging technology are tremendous."*



**Tracey Paterson**  
General Manager  
Organisational Development

An Andrew Bond original because he's a Kiwi painter and I love the colour and quirkiness.

*"I've got the best job in the world because I'm encouraged to care. Fairness and reasonableness are my measures – the chance to help people thrive really matters to me."*



**Mike Whitty**  
General Manager  
Supply Chain

A globe because I talk to suppliers across the world.

*"Success for me is all about forming long-term partnerships. The foundation for this is just like any important relationship – openness, trust and integrity."*



Food for thought

# A LOOK AHEAD

Seven years before Ravensdown was set up in 1977, there were roughly half as many people in the world as there are now. Forty years from now, there will be about two billion more human mouths in the world. Yet the amount of land devoted to farming is *falling*.

The future of food raises some big questions, but one thing we can be certain about. The world needs our farmer shareholders to create food and we are going to have to be smarter about how that happens. The good news is that Ravensdown can help them with smarter farming.





**CEO Greg Campbell**  
looks ahead

### Improving the nutrient system

Whether our customers are creating food for animals or humans, there are two things they all have in common. All that food comes from New Zealand's soil and the nutrients that are removed in the process need to be replaced.

This is the nutrient cycle – the way plant necessities such as nitrogen, sulphur, phosphorus and potassium (to name only four) move through the soil and natural environment and into the food we eat.

Ravensdown invests in science, research, manufacturing and training so it can offer advice, products and services to help improve the efficiency of this nutrient system. The science and technology is often changing as new findings emerge and, as a co-operative with expertise in nutrient systems, we have a vital role to play in sharing the subsequent insights.

In the medium-term, there are exciting developments in terms of soil diagnostics, spreading accuracy, technologies to reduce nutrient losses, fertiliser coatings, grass seed varieties and animal breeding, which will mean better use of nutrients and less potential waste as ways to reduce environmental impact.

Society is still debating the use of genetic technologies but these could also play a role in creating more nutrient-efficient plants and animals which could eventually have an effect on reducing nutrient loss to the environment.

### Value not volume is the key

New Zealand currently has the potential to feed a maximum of about 40 million people a year. So the question for the agrisector becomes 'which 1% of the world's population are we going to serve given our environmental responsibilities?'

Trends such as the ageing population, urbanisation and the growth of the middle classes in developing countries mean there are growing numbers who will pay more for safe, sustainably-grown food with an authentic pasture-based story and that has been produced with the environment in mind.

When faced with commodity protein that can be churned out as insect flour, synthetic meals or factory-farmed fodder, New Zealand's "craft" food – grown by real people who care – will command a premium.

We will help farmers tell their genuine stories. We can help them show how they take their environmental responsibilities seriously and how they use technology to

precisely diagnose what their land needs. The traceable and auditable maps that we supply mean they will be able to assure buyers that those farmers know how much of which fertiliser was applied where: all with the aim of lessening the impacts on our precious natural resources.

Joining the dots and providing the proof becomes easier when internet-connected sensors across the whole farm operation capture and relay data. This 'Internet of (agri) Things' means there are opportunities to give farmers tools to clearly visualise and share the consequences of their decisions. We are preparing for a convergence of digital and physical worlds.

### Social change: the challenge and opportunity

Social licence is a process where society extends or withholds its support for a sector or an individual business. It's fair to say that compared to 40 years ago, farming seems to be framed more often as the villain than the hero.

Younger people who will shape the workforce of tomorrow will avoid a company that is not doing the right thing. They want to join forces with a force for good and for their work to make a difference.

While it doesn't appear on our balance sheet, our reputation is the most valuable



## What smarter farming means to us



asset we possess. Therefore, one of the main risks for a co-operative like ours is that in the future we may be seen as a potential "polluter" – this we refute. Our contribution to New Zealand is positive and we'll be taking that message to new audiences using new channels while listening and acting on any genuine concerns among the community.

The reputation of the shareholders we serve also matters a great deal to us and we will continue to support and speak out for the farmers who are learning, listening and improving their practices.

We are helping farmers reduce their impact so there is rightly an expectation that the co-operative will walk the talk on its own environmental performance. We anticipate greater usage of e-vehicles, improved efficiency of nutrient use, more efficient processes, a focus on recycling and reduced power consumption. These are just some of the short-term initiatives in the pipeline.

We will be extending our environmental report which has been running since 2001 to help the community make up its own mind about how we are tracking.

### Long-term thinking

It's about kaitiaki: long-term thinking and stewardship; building something lasting, something collectively we can be proud of.

As farming faces disruptive trends that could destroy or deliver more value, Ravensdown is evolving so that the children of today and tomorrow are better off for all of us being here.

### Farming with heart

Precision agriculture is about the right amount of the right inputs in the right place, applied at the right time. Smarter farming is also about always having the right reason – the focus on the environment, community, progress, iwi and mana.

### Nourishing Kiwi soils

We provide the nutrients that nourish New Zealand's soil which, in turn, feed the plants and animals that deliver the products that can command a premium on the world stage.

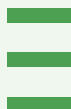
Smarter farming is all about smarter choices for the environment. We pay attention to sales of course, but as a farmer-owned co-operative, it's not our policy to sell farmers more than they need.

### Extending social licence

Anyone who has anything to do with farming and Ravensdown must go home safe and sound. A better New Zealand can't be built on anything less.

Farmers and those involved with the sector earn their social licence and need to move up from acceptance to approval and aim for admiration. Smarter farming is the way to make that happen.

Enabling smarter farming for a better New Zealand  
Ka pūkekotia a Rongomātāne, ka poho kererū a Aotearoa



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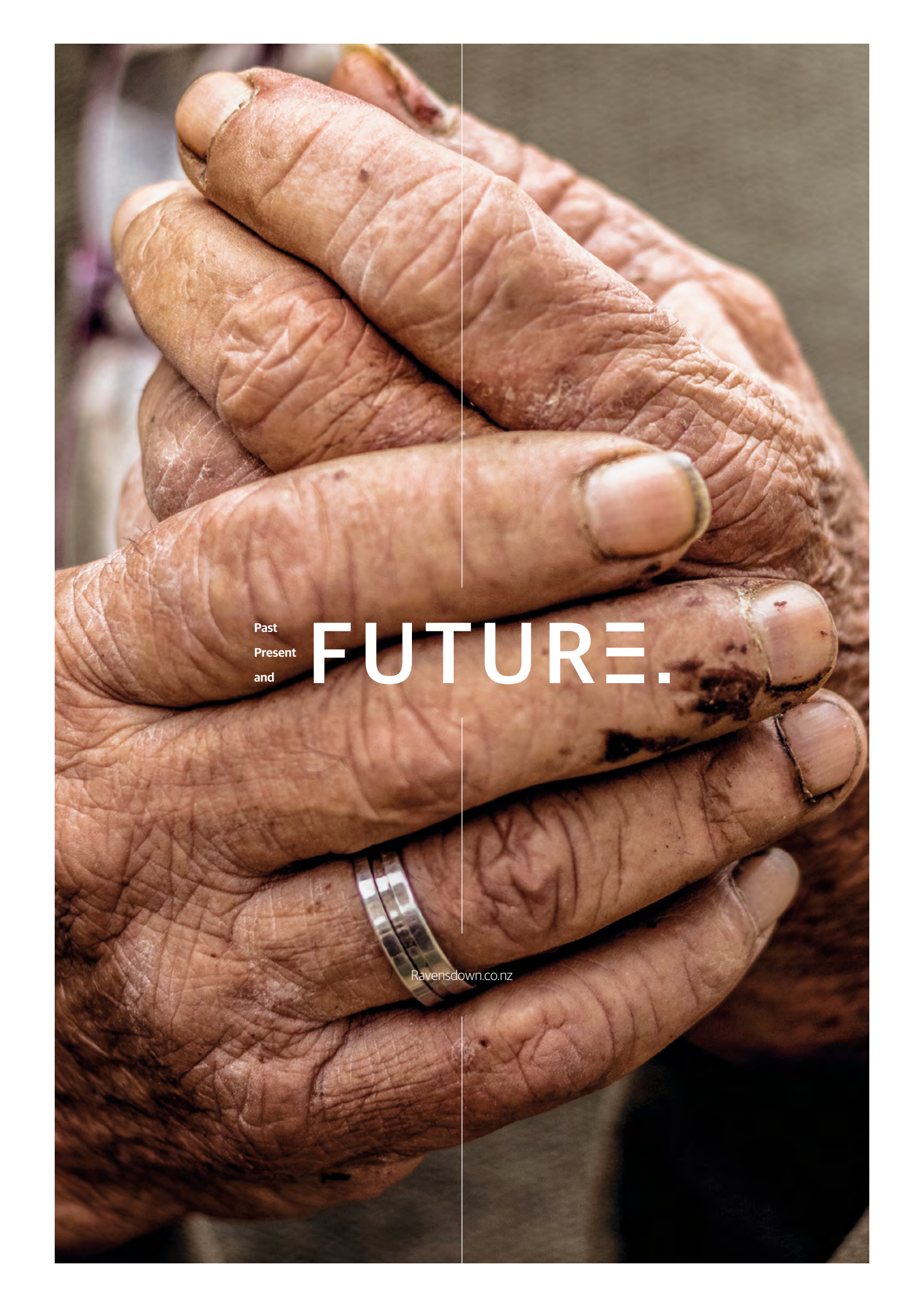


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and

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