



Cultivating success.

About this report /



Front cover, cultivating the right soils

Dr Ants Roberts discusses the value of soil sampling to assess nutrient levels. See page 15

We hope you enjoy Ravensdown's latest integrated report covering the financial year ended 31 May 2024.

This report has been prepared for our key stakeholders and presents a snapshot of the ongoing Ravensdown story - our governance, strategy, performance and future prospects.

We share our focus for the future, discuss risks and opportunities, and touch on the views of our stakeholders our external environment, and the communities in which we work. The report explains how, in a dynamic external environment, we add value for our stakeholders and measure up against the goals we have set for ourselves as a business.

As proud as we are of our company and our work to help our shareholders farm smarter, there is much to do to ensure we remain aligned with and drive towards our strategic 2030 goals.

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Setting the scene /

Smarter farming, brighter future

There's a whakatauki which sits well with farmers. "Whatungarongaro te tangata, toitū te whenua". "While people come and go, the land remains".

Farmers understand and take the long-term view. Generating an asset for future generations is just as important as generating an income today. We partner with farmers and growers to enable them to reach their annual production goals, without compromising their land's sustainability.

We call it *Smarter farming for a better New Zealand*. It's a philosophy which naturally starts with the soil. Managed consistently and well, healthy soils support farm system productivity from one generation to the next.

We have tested and trusted smart farming solutions which combine world-class nutrients, leading soil science and proven products. We back them with a high level of service and support from people who care as much about the land's success as the people who are working it. It is all about the right product in the right place at the right time.

It is *smarter farming*, cultivating success one generation at a time.



Targeted economic levels

Ongoing management

Right nutrients

1 Performance scorecard / Smart progress

▲ Positive trend compared with 2022/23

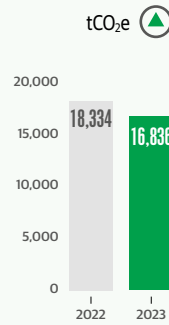
▼ Negative trend compared with 2022/23

See page 60 for key of UN Sustainability Development Goals.

Carbon footprint CY scope 1+2

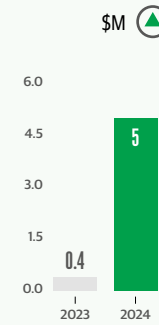
Target: 50% reduction by 2030

Achieved a year-on-year absolute reduction in scope 1+2 emissions since the base year of 2018 and successfully phasing out coal use.



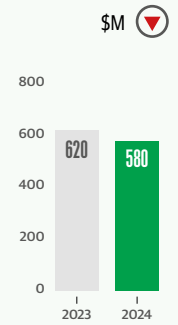
Profit before rebate and tax from continuing operations

Profit was impacted by lower sales volumes, higher commodity prices and impairments to assets.



Total equity

Equity reduced as a result of decreased fair values and share capital redemptions.

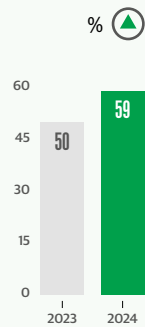


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Employee engagement

Target: ≥67% by 2030

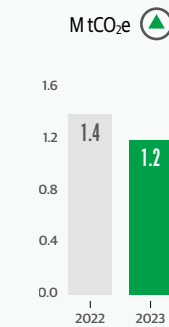
Employee engagement improved from 50% in September 2023 to 59% in February 2024.



Carbon footprint CY scope 3

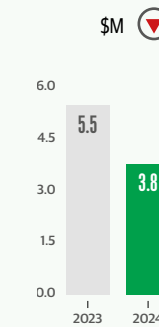
Target: 50% reduction by 2035

Year of low sales and low stocks. Significant reduction on previous year's emissions.



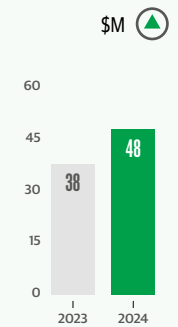
Investment in research and development

R&D spend on limiting the loss of nutrients to water or atmosphere, strategy of interconnecting productivity and sustainability.



Net capital expenditure

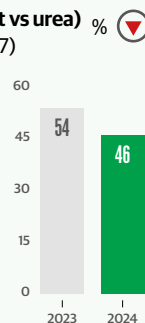
Continued targeted investment to sustain efficient manufacturing and distribution operations.



Urea sold with inhibitor (N-Protect vs urea)

Target: 50% (base year 2018, 21347)

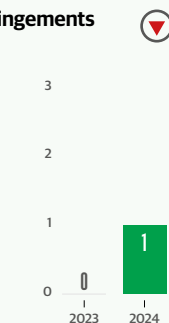
Throughout 2023/24 urea was available at a lower price compared to N-Protect. In a tight economic environment, more customers opted for the less expensive product.



Number of environmental infringements

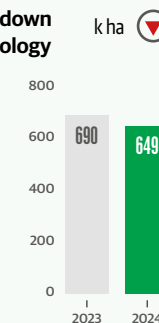
Target: 0

An active plan is in place to implement required stormwater improvements at Stratford Store following issue of an Abatement Notice in August 2023.



Land area captured by Ravensdown proof of placement GPS technology

The land area reflects sales volumes and includes hectares captured by GPS technology in Aerowork aircraft.



Value of shareholder distributions including tax credits

For the last two years there were insufficient profits to declare rebates.



Chair and CEO report /

Grounds for optimism

Bruce Wills Chair / Garry Diack CEO

There has been much said and published depicting the past two years as some of the toughest experienced by the agriculture sector. The collision of on-farm inflationary costs with variable to weak farmgate returns has seen farmer and grower expenditure severely constrained.

Falling fertiliser application is a consequence of these economic challenges, and also a lead indicator of longer-term productivity from the land. Fertiliser volumes were 26% down at 891,000 mt from periods of peak productivity with 2024 a repeat of 2023. This compares with a more typical year's application of 1.2 million mt in 2022.

Over two years that is close to 620,000 fewer tonnes applied by Ravensdown. Given we are a little less than half the

industry, this means the productivity of New Zealand soils has been deprived by close to 1.3 million mt over two years.

In 2021 Ravensdown struck a vision for the company and our shareholders, *Smarter farming for a better New Zealand* and in doing so focused all our efforts on *interconnecting productivity and sustainability*.

We pursue this vision with focus. We are driving efficient lowest cost product procurement and bringing science to the fore in on-farm data driven advice and



< Our Chair and CEO share their views on the challenges ahead.

Chair and CEO report continued /

precision placement. In addition, we are providing specialist environmental expertise on-farm and in the wider industry, and investing in digital technologies focused on both reporting and efficiency. Our goal is enhanced productivity accompanied by a reduction in fertiliser use.

However, the current and economically driven reduction in fertiliser application has shifted the pendulum too far. If this trend continues, we would be rightfully concerned about longer-term productive capacity of the industry.

We are very conscious that cost is a real concern for farmers in the current environment and we are very focused on addressing that. While we have delivered a solid level of profitability, with an underlying operating and pre-impairment result of \$27.4 million (\$4.8 million NPBTR after impairment), we have also continued our efficiency drive to reduce the cost of delivery. We have plans to reallocate capital from non-essential assets, and we are reducing the capital committed to manufacture superphosphate by reducing production capacity from three to two manufacturing plants, sufficient to meet forward market demand.

We have further positioned the business for improved performance, carrying lower inventories, reducing working capital and



delivering year-on-year flat operating costs in this inflationary period.

We are also proud of our ongoing success at reducing our carbon footprint for scope 1+2 emissions by 8% in 2024 compared to the previous year, but do recognise that the contraction of market volumes contributed to scope 3 reductions.

In these challenging times Ravensdown has adapted well. In this past year we have spent \$48 million on continued rejuvenation of both our assets and longer-term environmental commitments.

Significant in this figure is the recovery of the Awatoto site from fire in 2022 and the impact of Cyclone Gabrielle in 2023. We have also devoted investment to critical industry initiatives seen to underpin our sustainability and environmental commitments.

Early in this report we speak proudly of our ongoing commitment to AgriZero^{NZ}. In true co-operative spirit, where a greater good can be achieved more effectively and at scale through working with others, we highlight the collective pan-industry co-investment towards methane gas emission reduction. In this globally unique industry/government investment vehicle, progressive technologies for methane gas emissions reduction will be made available to New Zealand farmers and growers.

Fundamental in *Smarter farming for a better New Zealand*, is the principle that we stand shoulder to shoulder with our

shareholders, as 'their' co-operative. Given all the current challenges in the industry and all the aligned initiatives presented in this report, we also proudly report shareholders' equity of 79%.

While balance sheet equity has lifted, our level of profitability in an ongoing low volume environment means your co-operative could not pay a shareholder rebate this year.

In these volatile times, it is reassuring to shareholders that we have increased the strength of our balance sheet, but it is prudent to continue to conserve funds.

The resilience shown by our shareholders, by our staff, and by our Board demonstrate an ongoing stoicism in the face of adversity. Like our farmers, we have adapted and continue to deliver the right fert, at the right time, in the right place, at the right price.

It is for these reasons that even in these difficult times we continue to use our strong base to look to the future. We invite you to read in detail our 2024 report *cultivating success*.

Bruce Willis
Chair

Garry Diack
CEO

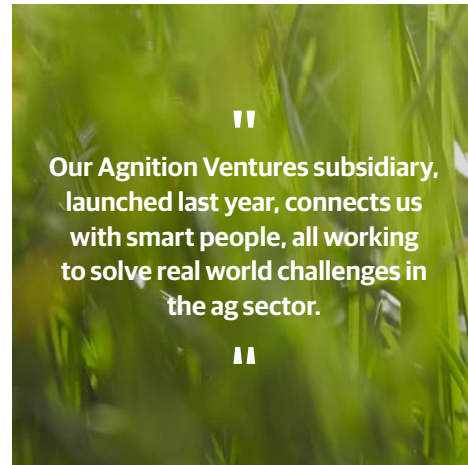
Reporting on our commitments /

Keeping our promises, meeting the challenges

In our 2022 integrated report, we talked about our plans in three areas where we saw opportunities to do more, or we saw a need to address potential risks such as climate change or geopolitical tensions affecting supply.

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We made commitments and it is time to report back on how we are doing.



Science and technology

In 2022 we wanted to ensure that nutrient management and technology integrated better with wider farming systems and performance management capability. We also wanted nutrient management to be part of our customers' wider integrated productivity and sustainability performance management.

Work to date has been in two main areas; expanding the capability of our HawkEye software toolkit and casting a wider net to capture emerging technologies being developed by others.

With HawkEye we have invested in upgrades and enhancements to keep it useful for farmers. We have enabled it to keep pace with the changing regulatory requirements for reporting metrics such as nutrient placement and nitrogen efficiency, while keeping it straightforward to use. We now have 40% of nutrient orders placed via the software.

Upgrades have continued. HawkEye Response is a good example. It was released to support farmers in mapping and managing damage such as slips in farm effective areas after severe weather, such as Cyclone Gabrielle. The tool combines pre and post Cyclone Gabrielle satellite data with fixed wing aerial imagery and can cross-reference images

of slips and washouts against existing fence line data. This gives farmers an up-to-date spatial view of the damage and has proved invaluable where farmers have been unable to access parts of their property to assess damage and plan remediation.

Our Agnition Ventures subsidiary, launched last year, connects us with smart people, all working to solve real world challenges in the ag sector. We're especially interested in those focused on soil health and nutrient management. We are investing in their development and connecting them to our significant farmer base. In our first year Agnition Ventures engaged with five companies and has more in the pipeline.

Through our 100-strong Pilot Farm Network, potentially game-changing products are put to the test by farmers. The entrepreneurs benefit from contact with potential end users, while our farmers have the chance to see what smart technology is out there.

One of the technologies on trial, CarbonCrop, is a good and timely example given the squeeze on farm incomes from higher costs and lower returns. It opens up income opportunities for farm owners, especially those retiring blocks back to native bush by identifying the trees eligible for carbon credits - including natives.

Reporting on our commitments continued /

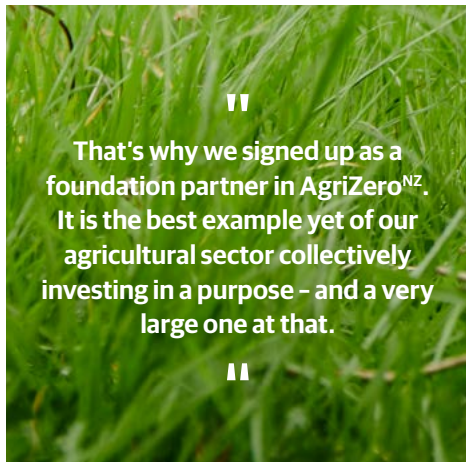
Investment and the environment

When we scoped the areas for attention two years ago, the environment was an obvious choice, especially the need to contribute to technology investments to reduce greenhouse gas emissions.

While government policies might change in the electoral cycle, we can't afford to ease up on the commitment to doing better. Politicians come and go, but our global customers – and their customers – remain and there is no easing up on their expectations of us as producers.

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That's why we signed up as a foundation partner in AgriZero^{NZ}. It is the best example yet of our agricultural sector collectively investing in a purpose – and a very large one at that.



Unless we can demonstrate a significant effort and commitment to reduce our agricultural emissions, we will face an increasingly steep uphill battle to convince our global customers, and trade negotiators, that we are a responsible and responsive part of the global food supply chain.

In the past we have been able to look at our emissions profile and say, "well, the science is just not there yet." But the excuse no longer holds and the AgriZero^{NZ} investment in crucial areas such as a proven and practical methane vaccine is the evidence needed to show our tangible commitment to mitigation.

For our own part, we have progressed mitigation efforts, notably through securing supplies of New Zealand's lowest carbon urea through collaboration with Saudi Arabia's SABIC Agri-Nutrients Company's (SABIC AN). This will support our effort to reduce carbon emissions by 50% by 2030.

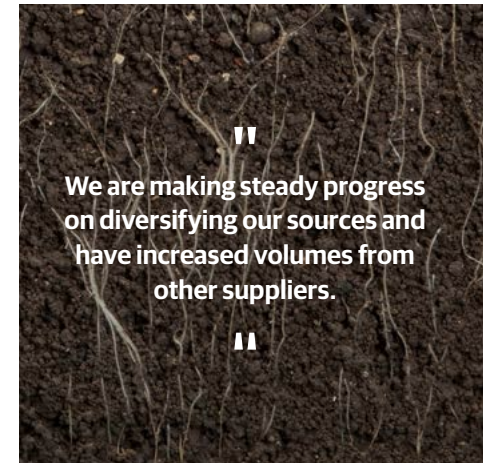
Independent testing and certification by TÜV Rheinland have confirmed that the urea manufacturing process produces 64% less carbon dioxide per tonne of urea than standard processing. Other mitigation work is covered in this report.

Supply

We have enjoyed an excellent track record for ensuring an ethical supply of quality products at the lowest possible cost and continue to look for an enduring alternative to importing phosphate rock from Western Sahara.

We are making steady progress in diversifying our sources and have increased volumes from other suppliers. As our report discusses, this has not been plain sailing. New and diverse sources of rock require a very disciplined approach to quality and testing, including chemical analysis and trial runs ahead of a move into full production.

While using alternative sources of phosphate rock has significant implications for our business from a cost, manufacturing and quality perspective, diversification ultimately gives us the resilience required to meet customer demand for superphosphate well into the future.



AgriZero^{NZ} /

Supporting climate friendly agriculture



A year or two back, Sustainable Business Council Executive Director, Mike Burrell, shared a thought with our CEO Garry Diack.

"We need to do something big in agriculture."

AgriZero^{NZ} is that "something big", with Ravensdown a founding shareholder. It's a year-old public/private collaboration between the agriculture industry and government.

It is targeting reductions in methane and nitrous oxide emissions generated by agriculture by developing practical tools and technologies for farmers.

The ambition is to provide farmers with tools to support a 30% reduction by 2030 and ultimately drive towards near zero emissions by 2040.

Garry Diack calls it a unique and truly excellent example of an industry collective 'investing in purpose' – and that purpose is certainly something big, given the economic stakes for Aotearoa.

> AgriZero^{NZ} is working to reduce agricultural emissions.



AgriZero^{NZ} continued /

As AgriZero^{NZ} Chief Executive Wayne McNee points out, the food and fibre sector accounts for 80% of our merchandise export returns and provides more than 360,000 jobs, contributing \$55.5bn to GDP last year.

“Our pasture-based farms are integral to our landscapes and our economy. We’re efficient, high-quality producers and exporters. But increasingly, our global customers are setting emissions reduction targets. We are a significant part of their scope 3 (supply chain) emissions, so it is increasingly important that we can come to the table with roadmaps that show our own reduction targets and how these can help them.

“Increasingly, we will see emissions considered in trade negotiations. AgriZero^{NZ} is our sector and our government side-by-side, accounting for our effort, our ambition and our progress.”

AgriZero^{NZ}’s potential for galvanizing crucial emissions research was shown in April when it announced its plan to setup a new methane vaccine venture to accelerate the New Zealand research programme. This will consolidate 15 years’ of research into one entity, supporting a stronger focus on vaccine development

and creating a stronger magnet for international funding.

“A methane vaccine is highly sought-after as a low cost, high-impact solution to reduce agricultural emissions and Kiwi scientists have done some groundbreaking work in this space over the years. We’re confident this new venture will significantly boost their work and help get the vaccine into farmers’ hands sooner,” says Wayne.

An earlier commitment of \$1.5m has now been boosted by an additional \$1m to set up the venture which will operate independently but continue to receive funding support from the partnership.

AgriZero^{NZ} has also invested \$9.9 million in ArkeaBio, a US company developing a methane vaccine.

“The work to develop a methane vaccine is pioneering, complex and challenging. We’re proud to be working with two world-leading research teams to support and accelerate their work for farmers in New Zealand and around the globe,” says Wayne.

The JV has also committed up to \$5m in BioLumic, an agriculture biotech company founded in Palmerston North which is

using its proprietary ultraviolet (UV) light treatments to develop a low emissions ryegrass, one of the most common grasses used on New Zealand farms.

The UV technology has already been successfully used to improve plant performance in crops including corn, soybeans and rice. The aim with ryegrass is to increase its fat content and subsequently reduce methane emissions from the animals that consume the forage.



^ Jason Wargent, Chief Science Officer at Biolumic with rice seedlings.



LOOK WHO'S TALKING

Wayne McNee, Chief Executive of AgriZero^{NZ}, a 50/50 public private partnership between the Ministry for Primary Industries (MPI) and New Zealand agricultural businesses.

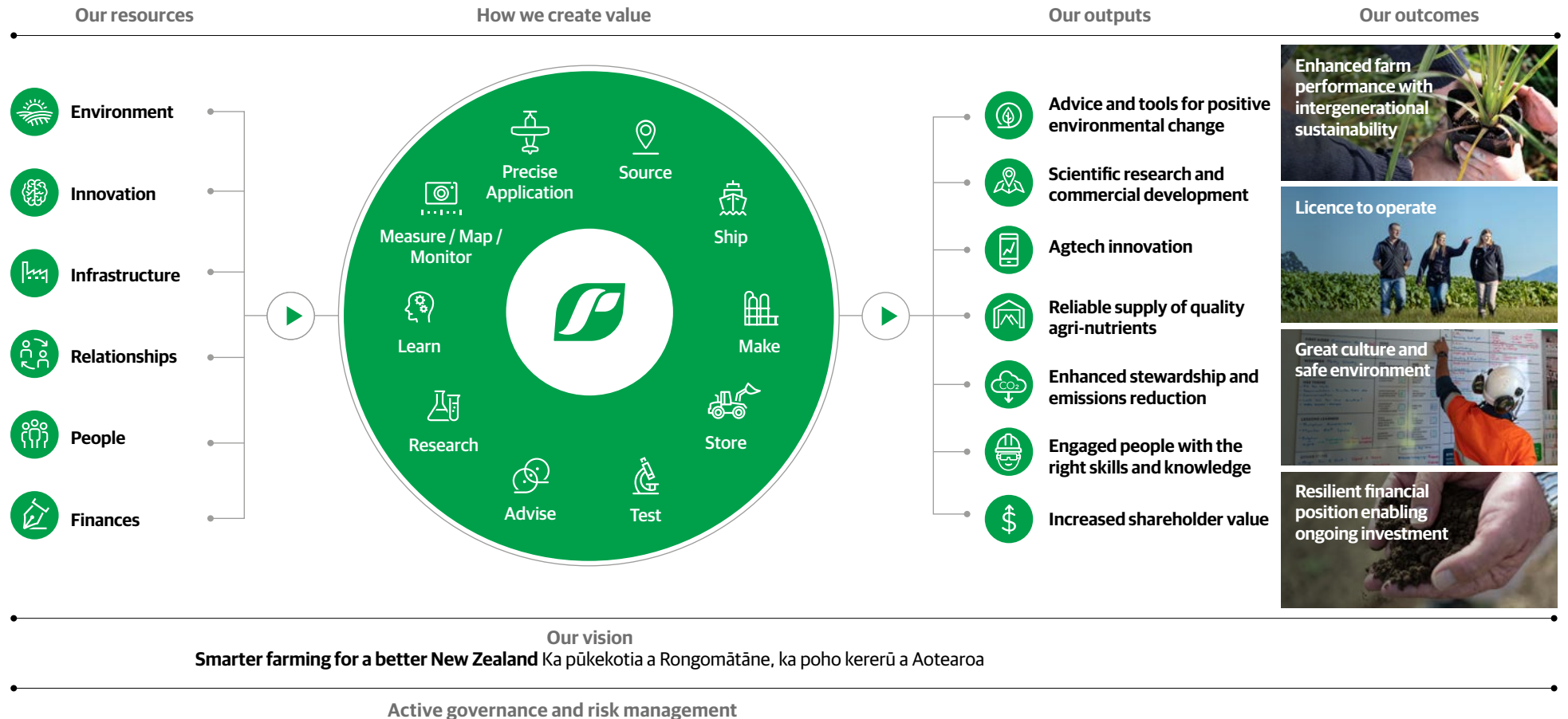
Its shareholders are MPI, The a2 Milk Company, ANZ Bank New Zealand, ANZCO Foods, ASB Bank, BNZ, Fonterra, Rabobank, Ravensdown, Silver Fern Farms and Synlait. The shareholders have made a long-term commitment to pool funds to support the ambition to reduce greenhouse gas emissions through investments which will deliver emissions reduction tools to farmers.

Formed in February 2023, AgriZero^{NZ} has total funding from shareholders of \$183m. As at 31 March 2024, \$29.2m had been committed in 10 investments all focused on aspects of emissions reduction.

The partnership is part of the Centre for Climate Action on Agricultural Emissions, working alongside the New Zealand Agricultural Greenhouse Gas Research Centre. For more information on its work and investments go to www.agrizerozero.nz

Value creation model /

Successfully creating value



Engaging with our stakeholders /

Smarter, together

Customers



“People don’t buy products; they buy smart solutions.”

No two farms are the same. So, getting the right products to meet a farm’s bespoke needs, at the right time is they key to optimising outputs of our customers’ farming systems.

Our whole business is focused on delivering this for our customers. From Agri Managers who listen and provide personalised fertiliser plans, to high tech geospatial monitoring, to a world-class global supply chain. We don’t just supply products, we provide solutions to the challenges in front of our customers. And we do this year after year, growing with their farm.

With a view to the future, we work with customers to develop and provide innovative solutions that address water quality and GHG impacts, as well as quality farm data management that works in their farming system.

How we engage

- In person through tailored advice from our field-based team.
- Accessible, personalised remote advice from customer service teams.
- On-the-ground presence at local and national events (field days and A&P shows), keeping customers informed, and extending our hospitality at the AGM and shareholder functions.
- Regional and national sponsorship presence (New Zealand Dairy Industry Awards, FMG).
- Young Farmer of the Year, Agri-Woman’s Development Trust).
- Digital channels such as apps, website and social media, as well as direct communications.

Our people



Building the Ravensdown team

In a year of significant change, our engagement with our people focused on building trust and keeping priorities clear and simple.

We needed to create clear alignment between organisational and individual goals and performance.

So we focused on two key priorities, hitting the budget and getting the basics right, all while keeping our people safe and lifting engagement.

Our people have a strong understanding that organisational culture is critical to really making the organisation ‘hum’.

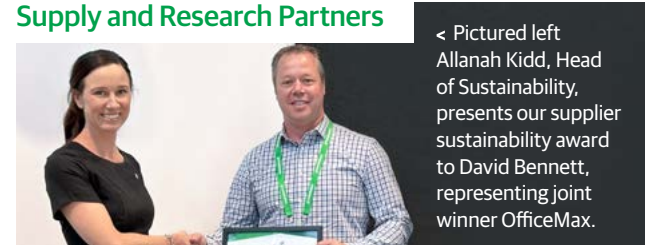
We understand that we must invest and put energy into belonging and our work environment.

So we are starting with a review of the fundamental behaviours that connect the Ravensdown team through the good and the challenging times – our organisational values.

How we engage

- People and Safety Team.
- Yammer (internal social media) and ravNet (intranet).
- Regular direct engagement with and by managers.
- Staff and team events.
- Social events and social club.
- Induction, training and specialist workshops.

Supply and Research Partners



< Pictured left Allannah Kidd, Head of Sustainability, presents our supplier sustainability award to David Bennett, representing joint winner OfficeMax.

“Great support from preferred suppliers through thick and thin.”

Our long-term direct relationships with international nutrient suppliers are a real strength for Ravensdown. We strive to be their customer of choice and in return have received surety of supply of the right quality fertilisers at competitive prices, even during COVID-19, the Napier site fire, Cyclone Gabrielle and lower volumes due to the economic downturn.

Those strong international relationships are mirrored here in New Zealand where we receive fantastic support from our preferred local suppliers. Fleetpartners have supported us to lower emissions from our light vehicle fleet. Allied Petroleum have added real value through monitoring systems for our bulk fuel providing efficiencies across our sites. Russet, NZ Safety Blackwoods and OfficeMax have consistently provided a high level of products and services, giving Ravensdown priority to help keep the “Green Machine” rolling.

How we engage

- Dedicated procurement team.
- Regular visits with and by our suppliers.
- Collaborations with leaders in agri-science institutions.
- Collaboration on sustainability with suppliers.
- Work on and support a range of research projects to enable smarter farming and technology development.

Engaging with our stakeholders continued /

Communities



The communities we operate in expect us to show up and do the right thing. They want an open, transparent relationship where they can raise issues and trust Ravensdown to respond quickly and responsibly, learn and improve, and take accountability within our reporting processes as we go.

We are also a part of those communities, contributing to events and offering practical support to local groups and organisations where we can.

How we engage

- Site-specific engagement with local communities, e.g. contributing to school fundraisers, providing school and community sports sponsorship, taking part in clean-up days and other environmental initiatives, and working with local business.
- Occasional site open days and hosting tours and presentations for schools, universities, and local government agencies.
- Regular environmental meetings with local stakeholder groups.
- 'Lend a hand' day – one day a year for each staff member to volunteer in their communities.
- Social media channels.

"The communities we operate in expect us to show up and do the right thing."

Iwi



Local relationships are the bedrock to helping Ravensdown improve how we care for our people, the land and water, and many have been in place for decades.

Relationships with mana whenua and iwi organisations across the motu strengthen understanding in mātauranga Māori practices. This assists our environmental assessment methodologies and helps us to adopt the appropriate tikanga for how we support our shareholders and our people, and how we manage our operations. Ultimately, these important relationships support our goal to deliver sustainable outcomes across the business.

How we engage

- Fabian Kopu has been appointed as Ravensdown Pou Ārahi to support and guide Te Ao Māori across the business.
- Work on Ravensdown's Te Ao Māori strategy is underway.
- Engagement with iwi and mana whenua stakeholders is ongoing.
- Scheduled internal meetings to identify business needs and to support our people is in progress.

"Relationships with mana whenua and iwi organisations across the motu strengthen understanding in mātauranga Māori practices."

Regulators



It is important that our relationships with regulators, especially councils, are strongly held at multiple levels between our organisations.

We actively participate in stakeholder groups and make submissions on relevant policy changes at central and local government levels, collaborating with other industry players where possible.

The burden of regulatory compliance across our manufacturing sites, bulk stores and quarries continues to grow whether it relates to health and safety, labour, or environmental requirements.

The change in government heralds changes to the environmental regulatory framework and further uncertainty. Our focus is to continue to help farmers make incremental improvements to farm management practices where required to drive improved environmental outcomes.

How we engage

- Engage in policy development.
- Active participation in council-led and primary industry focus groups.
- Site-specific local liaison for major projects.
- Direct engagement with central and local government at multiple levels from Chief Executive to policy and compliance teams.
- Participation in council-led stakeholder groups, sharing knowledge and influencing policy direction relating to farming and our operations.
- Submissions on new policy and guidance.

2 Environmental performance / A year of action

We continued to underpin our commitment to the environment with a focus on compliance and on finding better ways of working across our manufacturing, stores, quarries and sites. During FY24 we invested \$2.35m in environmental improvement to property, an increase on the FY23 investment of \$2.26m.

Continued investment in infrastructure improvements

Stores

At our New Plymouth store, we extended the swale to increase nutrient uptake prior to stormwater discharging into the Mangaone Stream.

Our Amberley store is located in a residential zone. To significantly reduce dust emissions we have installed a dust screen at the intake and dust curtains at the front of the storage bays. A wooden boundary fence was also installed along the western side of the site.

Judder bars have been installed at building exits at several stores to dislodge loose product and minimise tracking on to the road.

Works

At Napier Works, we are continuing to implement actions identified in the Source Control Management Plan. Completed actions include installing dust suppression curtains or physical barriers on doorways, implementing preventative maintenance programmes, improvements to stormwater infrastructure, and looking for opportunities to improve acid plant restarts. As a result of Cyclone Gabrielle, all drainage onsite was thoroughly cleaned, improving reticulation capacity and reducing any build-up of contaminants in the pipework.

The green ponds at Christchurch Works have been desludged, repaired and resealed. As these ponds collect all acid plant process water, acid plant stormwater and wash bay water, this will help reduce any risk of leaks from the ponds into the

> Mature landscaping on Christchurch Works site in Hornby provides a buffer between the site and residential communities.



ground. All underground pipework installed prior to 2018 has been checked for potential leak points and any identified have been fixed to prevent seepage into the ground.

Accumulated sediment was removed from the stormwater settling tank at our Dunedin Works, with temporary bridges craned in place over the tank so that suction contractors could work safely and efficiently. Once the tank was empty and dry, minor repairs were completed to confirm the tank's longevity and a new sediment suction line and aeration 'boat' installed to further enhance the system.

Meeting our consent compliance obligations

Currently, we have 81 resource consents across the business. We have achieved very high levels of compliance in FY24, with targeted work programmes to resolve non-compliances in place where needed.

Discharges to air

The September 2022 fire and Cyclone Gabrielle in February 2023 caused considerable interruption to the Napier Works, impacting operations and environmental management. Major upgrades to the manufacturing scrubber

Environmental performance continued /

and acid plant converter are underway and, once operational later this year, will result in improved air discharge.

The air discharges at Christchurch Works fully complied with consent conditions, except for three days in January 2024 - a combination of rock processing and the pH dosing system not working correctly caused slightly lower than acceptable pH levels in the manufacture stack emission. The problem has been resolved.

At our Dunedin works, fluoride levels exceeded the permitted rate of 1kg per hour for a brief period in October 2023. Following investigation, discharges were retested four days later and found to be fully compliant. The short duration of this event meant that the rolling average remained compliant.

Discharges to Water

During the first weeks after restarting the acid plant at Napier Works when a new temporary stormwater system was also commissioned, total suspended solids and pH were exceeded twice. We have also implemented a new sampling regime for heavy metals and nitrogen and work is ongoing to plan and implement further stormwater infrastructure upgrades.

At Christchurch Works, resource consent was granted to allow the passive discharge



of contaminants into the ground. This new consent requires improvements to infrastructure to reduce the discharge to ground. As part of this, improvements to the fluorosilicic acid ponds are underway (FSA is a by-product of the superphosphate manufacturing process). This project is on track to be completed in January 2025.

There are three key discharges to Otago Harbour from the Dunedin Works: cooling water from the sulphuric acid plant; saltwater scrubber effluent from the scrubbing process in the superphosphate manufacturing plant; and site stormwater. Site stormwater is captured and reused in both the sulphuric acid plant (as dilution water) and the superphosphate manufacturing plant (as top up water for the hygiene scrubber). Before any excess stormwater is discharged to the coastal marine area, it first passes through a series of gravitational mud traps and settling ponds, including pH correction if needed. There is also pH correction in place for the cooling water discharge from the sulphuric acid plant.

▲ Following cleaning and minor repairs the Dunedin stormwater tank is back in action with a new aerator installed.

◀ Temporary bridges enabled contractors to safely and efficiently remove sediment from the Dunedin Works stormwater tank.



< See page 60 for key of UN Sustainability Development Goals.

Enhanced science and technology /

Cultivating the right soils: Chile success



Advice and tools for positive environmental change

+



Engaged people with the right skills and knowledge

It's a 9,131km trip from New Zealand to Chile, but the main measure interesting Chief Scientist Dr Ants Roberts is the 15cm or so of topsoil that's the lifeblood of that country's largest dairy operation.

It's a long-distance case of us standing shoulder to shoulder with our farmers, with Ants providing soil management and nutrient advice to the Chilean operation's mainly New Zealand shareholders.

Their goal in 2005 was to transplant New Zealand dairy farming production systems to cheaper soils in a country with high dairy demand.

As a large portion of the farming group is made up of Ravensdown shareholders, it made sense to call on the same expertise available to them on their New Zealand farms and shareholders have funded Ant's involvement since 2010.

On subsequent visits, including one this year, he has seen the operations grow from two farms to 59 producing 191 million litres of milk.



"The farms sit at a latitude similar to Southland with beautiful volcanic soils, some of which the owners cleared for conversion to dairy. The approach here is the same as we use in New Zealand – soil testing, understanding the numbers and working with the farm team on what fertilisers and farming systems to use to achieve their production and sustainability goals."

Whether a farm is in Chile or Canterbury, Ants says understanding soil nutrient status, quality and management is essential and regular testing ensures that the soil nutrient levels are at the target economic levels for each farm system. When budgets are tight, as they are now, testing supports informed decisions around tactical use and application of nutrients.

< Dr Ants Roberts, aka Dr Dirt, discusses the value of soil sampling to assess nutrient levels.

Enhanced science and technology continued /

“Some farmers will have soil P levels that are 20-30 units above optimum, partly because of heavier fertiliser applications in the past.

“They can draw on that bank account for a while for phosphate. Volcanic ash soils have high levels of sulphate and that can be drawn on, but if you’re on sedimentary soils where sulphur levels are low, that is not an option.

“With current high input costs and lower farmgate prices, we are working very closely with farmers to come up with the best nutrient strategy for them across their farm to minimize the inevitable losses in production as soil fertility declines.

“Increasingly we are suggesting testing to assess nutrient status on every paddock, especially in dairy operations, but increasingly higher density testing on sheep and beef farms.

“We can build up a total picture and separate the farm into blocks which are above or below optimum status for pH, potassium, sulphur, or phosphorus and develop a variable rate strategy which meets the budget.

“A comprehensive testing programme enables farmers to use the right product in the right place, at the right rate and

at the right time. They get the most out of their fertiliser investment and they get a clear picture of their overall farm nutrient status.”

Ants also advocates complementing soil testing with relevant plant and animal tissue tests which can provide valuable information on trace elements such as molybdenum, copper, selenium or cobalt which may influence plant and/or animal production levels. Understanding both soil, plant and animal requirements supports good decision making around nutrients or the need for any feed supplements to support production goals.



DR ANTS ROBERTS

LOOK WHO'S TALKING

Dr Ants Roberts, aka Dr Dirt, is Chief Scientist for Ravensdown and a recognised authority on soil fertility management with more than 44 years of experience. He manages our agronomic research and development, works directly with many of our corporate and other farming shareholders, and trains our Agri Managers and other staff in soils, fertilisers and pastoral agriculture.

In 2019 he linked Ravensdown with AgResearch and Ngāi Tahu Farming to develop an holistic testing approach which provides a greater in-depth analysis of soil quality (sometimes called soil health). The study tested samples from five sites, evaluating soil fertility, organic matter, physical soil conditions and biological activity. The wider range of indicators can contribute to better understanding and management of soils across all pasture systems.

Enhanced science and technology continued /

Piloting innovation on-farm

+

-  Scientific research and commercial development
-  Agtech innovation



to solve real world challenges in the ag sector. Its pilot farm network was created to quickly get some of these awesome innovations into the hands of farmers.

“The network was created to meet two needs; innovators needed farmer feedback and farmers were keen to see what’s out there that could benefit their business. So Agnition got a selection of the best innovators and curious farmers together. We’re helping to get innovation from that pre-commercial stage into the market with farmer feedback making it even more suitable for farmers to use,” says AgTech Growth Specialist Christy Mead.

“What I really like about this pilot farm network is that we can bring farmers in, with no strings attached, to hear about the solutions companies are working on. It’s a simple two-way street where agri-innovators can get their products out there in front of interested farmers and farmers can access useful technology, try

it on-farm and give useful feedback without a high-cost risk.

“We offer the chance to scale up rapidly through our large network of pilot farms. For the farmers and growers who get involved, they see first-hand the



^ AI is enabling a digital assistant for pasture management.

Waikato innovator, Bill Gallagher, knew the way to get farmers to adopt his electric fence in the 1940s. He offered a free month’s trial.

Legend has it most signed up and paid up, having seen first-hand how the technology simplified how they could manage and move livestock.

With new generations of innovators working to solve on-farm challenges, we felt Ravensdown was better placed than most to connect them with farmers, given we work with more than half of New Zealand’s producers.

Now, our Agnition Ventures subsidiary, launched last year, is finding, building and investing in high potential opportunities

Enhanced science and technology continued /

technologies being developed. Looking at the wider picture, we're also contributing to the whole ag sector by supporting faster commercialisation of solutions that support sustainable, profitable farming."

In its first year, Agnition engaged with five companies and technologies and is continuing to seek out the best in ag innovation. The initial cohort included:

- Aimer, an AI enabled digital assistant for pasture management
- CarbonCrop, an AI tool to enable farmers to generate revenue from carbon storage
- CropX, an agronomic farm management system including automated soil sensors
- Nanobubble Agritech which boosts oxygen saturation in irrigated water
- CropMark Seeds which is developing a high-performance perennial ryegrass with a novel endophyte that protects the grass against a greater range of insects, with no negative impacts on ruminant health or performance.

"We have many more awesome companies in the pipeline and we're really looking forward to connecting our farmer network to companies like Mobble, IIF and Floating Peaks in our next webinar," says Christy.



^ Christy Mead putting new ag technology through its paces with members of our pilot farm network.



CHRISTY MEAD



LOOK WHO'S TALKING

Christy Mead joined Ravensdown in 2017 through our one-year graduate programme, bringing with her a Bachelor of Agriculture. She then spent nearly seven years as Agri Manager for Gisborne and Hawke's Bay. Now, as AgTech Growth Specialist she continues to build on the relationships established with farmers, connecting them to our network of ag innovators. Outside the office, Waipukurau-based Christy is also hands-on in a sheep and beef operation managed by her husband Hamish.

Relentless service /

Fostering trust



Advice and tools for positive environmental change

+



Engaged people with the right skills and knowledge

After four decades of farm management, Steve Sanders knows a good nutrient advisor when he sees one and he rates Nicole Adam as one of the best.

Steve and his wife Vicki have recently purchased Mt Campbell Station off the family. Vicki is a primary school teacher who teaches locally, while Steve manages and works the station, with the help of a shepherd and casual staff.

Steve has been a loyal Ravensdown client throughout his farming career, most of which has been spent managing farms in South Otago and South Canterbury. Steve has worked with several of our Agri Managers, trusting them as partners on his team. On his return to his family's farm at Mt Campbell in 2020, Steve was reassured to find himself in especially good hands.

"Farming is not a solo job. I make a point of surrounding myself with good people and I've had some great support from Ravensdown over the years. Nicole is

exceptional. Nicole and her husband farm in Central Otago and she understands the region and its challenges. Nicole is always aware of the situation you are in and looks for options to use fertiliser for maximum effect."

Nicole, who is Senior Agri Manager for the lower South Island, remembers her first day on the 8,000 ha property behind the clock at Alexandra.



> Senior Agri Manager, Nicole Adams, with Mt Campbell Station's Steve Sanders and Agri Manager, Bridget Airey.



Relentless service continued /

“The major challenge with Mt Campbell is that only around 2.5% of it is flat paddocks and the rest is hill country. When I first met Steve, we went way out the back of the station and it was very apparent that there were vast areas which would not be easy or cheap to fertilise. Cashflow was a real handbrake after some difficult seasons, so my priority with Steve was to really look after the flats and get them cranking, while planning for the rest when finances allow.”

Steve has invested in expanding a farm irrigation system, initiated in 2018, including installing a significant \$1 million dam.

“Nicole’s expertise and the use of good analysis has seen a cropping regime breaking in new ground,” said Steve.

Nicole says lifting soil fertility rates on the irrigated flats helped the Station improve returns. The Station runs 7,000 stock units, mainly merino sheep, balanced by Angus and Angus-cross beef. Mt Campbell also grazes dairy heifers on an 18-month contract.

Wintering the dairy grazers on brassica crops has resulted in a better cash flow for the season.

Mt Campbell Station has hosted Ravensdown visitors, including a



^ With deep knowledge of our customers’ land and productivity needs, agri managers advise on options to use fertiliser for maximum effect.

< Agri managers are on-farm partners, advocating for the needs of farmers, growers and their individual farming systems.

delegation from Saudi-based SABIC which supplies urea to the co-operative. Steve and his team turned on the best hospitality, staging shearing and mustering demonstrations.

With Mt Campbell’s merino wool sold to an Italian weaving mill, the Saudi visitors were impressed to see how their urea contributes to a quality 16-17 micron fibre fit for the Italian tailoring market.

Mt Campbell’s hospitality doesn’t stop at international visitors. The Station is home to the ‘Mount Campbell Hunting Club’. Oldest daughter Alice, a lawyer in Wanaka, is introducing hunting skills to people of all ages. Her sister Olivia is looking into the feasibility of developing a wedding venue on the station. Steve and Vicki are keen to see their sharemilker son Ben and third daughter Virginia also involved in the property.

“Family is everything. It’s all part of the succession plan,” says Steve.

It is a plan that is highly likely to have some Ravensdown input and Nicole says Steve is a good client who likes to be challenged.

“In the early days I used to apologise when I threw an idea at him, and he told me off for saying sorry. He wants all ideas brought to the table. Out of 10 ideas only one might fly, but he wants to consider all 10!”

Our products /

Sourcing quality



Reliable supply of quality agri-nutrients

+



Increased shareholder value

Camille Wilson freely concedes that she's an occasional micromanager. But in her role as South Island Logistics Manager, she will do it to keep faith with farmers.

"The customer is always at the forefront, and we must deliver – right product, right place, right time. I want every customer to be able go into the store they purchase from and be able to collect their fertiliser requirements with ease, when they need it. Otherwise, it's inconvenient and we let them down.

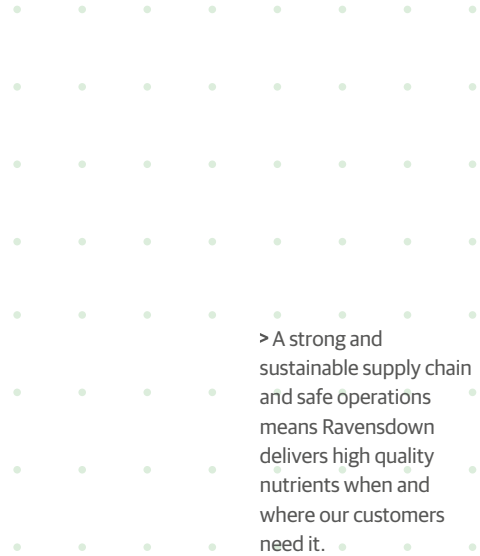
"When demand peaks because of seasonality and ideal weather, if stock levels are running low, we will definitely micromanage product lines so every order can be covered."

Camille's role includes managing bulk vessel discharges at the five South Island ports used by the co-operative – Lyttleton, Timaru, Dunedin, Bluff and Nelson. Ravensdown is Lyttleton's largest bulk importer customer. Vessels, including Ravensdown Shipping Services own fleet,

> Camille Wilson is at the front line of ensuring products get to our customers in full and on time. Here she chats with Andrew Todd, Head of Customer Relationships, Lyttleton Port Company.



Our products continued /



CAMILLE WILSON

LOOK WHO'S TALKING

Camille Wilson has lived and breathed logistics in Ravensdown for almost 10 years.

She has a wealth of experience in the discipline, gained in New Zealand and Australia and across sectors including energy and livestock improvement.

Camille says the demands of logistics are simultaneously exhilarating and stressful and the challenging days are often the best ones. The outcome of Logistics' work touches the whole co-operative and it also relies on skills across the business in areas like sales forecasting and production planning which influence supply and demand.

So, like many farmers who depend on our products, Camille only schedules annual holidays in winter.

"It's the one time of year I can happily not think about vessel discharges, weather, inventories and demand."

carry raw materials for processing in New Zealand, as well as imported products including urea, DAP (diammonium phosphate) and potash and GAS (granular ammonium sulphate).

Once a vessel discharges, she ensures the smooth flow of product through port stores to market stores. Meeting the 'right product, right place, right time' challenge requires close attention to demand curves, daily sales and available inventory.

The attention to detail required by logistics isn't confined to what's happening on land. Every day, Camille

knows which vessels are en route and to which ports.

"If a vessel is en route and we can see large volumes of demand coming into the system, we can adjust the destination port or allocations to ensure supply. It is not ideal, because usually a vessel will have a return cargo to load at its original destination port, but we do have this ability to be agile if we see large demand."

Weather is also a constant consideration for Camille and the logistics team, and they scan both short-term and long-range forecasts frequently.

"This industry is weather driven, and you come to expect the unexpected. It's either not enough rain or too much. In the south, as soon as it gets cold demand stops. But if the weather is favourable, demand can continue longer or start earlier.

"You can run stocks quite low prior to shipments arriving which is great for our focus on product quality, but it's a juggling act at times. Weather can also affect unloading at the port and a delay of a day or two can make a real impact on supply, depending on the time of year."

Our products continued /



Reliable supply of quality agri-nutrients

+



Increased shareholder value

The power of resilience

Napier Works Manager Tony Gray leads a 50-plus strong production team which he reckons deserve medals for their “good old-fashioned cunning, thinking and pragmatism” through a couple of difficult years.

After the manufacturing plant was damaged by a significant fire in late 2022, the site, which is the largest of its kind in New Zealand, was just returning to full production when Cyclone Gabrielle hit causing more disruption and damage.

“The fire had set us back a bit, however we’d made a good recovery. We had just become fully operational in February 2023, two weeks before the cyclone hit. We then had to regroup to get the plant back into production as quickly and as safely as possible. We saw resilience from our people in spades after the fire and the cyclone.”

The site’s strong spirit carried through to the 2024 financial year, as the co-operative used inventory reductions

> Resilience and team work has seen our Napier plant back in operation following damage from a fire and Cyclone Gabrielle.



Our products continued /

and leaner production to reduce costs without compromising supply or quality.

With raw material supplies hit by geopolitical unrest, new sources of rocks were sourced by the supply team, but these called for tight production disciplines to move them from trial status into full production runs. Tony says this demanded "a fair degree of agility and expediency", including the establishment of a new purpose-built laboratory for both process, quality and environmental testing.

"We moved from chemical analysis of new raw materials to trial runs and on to full production in record time while keeping our chemical and physical quality parameters at the forefront. As well as quality and safety we had to keep an eye on areas like maintenance implications from plant wear and tear, changes in energy requirements and costs for milling, and any potential environmental impacts."

Tony says the team was able to reduce inventories to produce significant savings in terms of holding costs. They went into the winter shutdown with raw material levels at historical lows. Inventories will be rebuilt ahead of seasonal demand.

The 14-week winter shut this year will not only include annual maintenance but also completion of three big projects - the



< Tonnes of scaffolding safely supported the construction of a new roof for the manufacturing plant at Napier Works.

completion of fire recovery work and two capital works projects. It will also see more permanent fixes put in place for the various patches implemented post-cyclone.

More than three years in the planning, the capital works programme includes replacement of the acid plant converter tower which converts sulphur dioxide to sulphur trioxide through a series of beds of catalyst. The sulphur trioxide is used to create the sulphuric acid used to

produce superphosphate and other manufactured products.

The programme also includes replacing a manufacture scrubber system which cleans the gases from the production of superphosphate before they are discharged to the air. Tony says the investments will give the plant long-term reliability and surety of production while managing emissions. They will also support the site in meeting consent conditions, now and into the future.

TONY GRAY



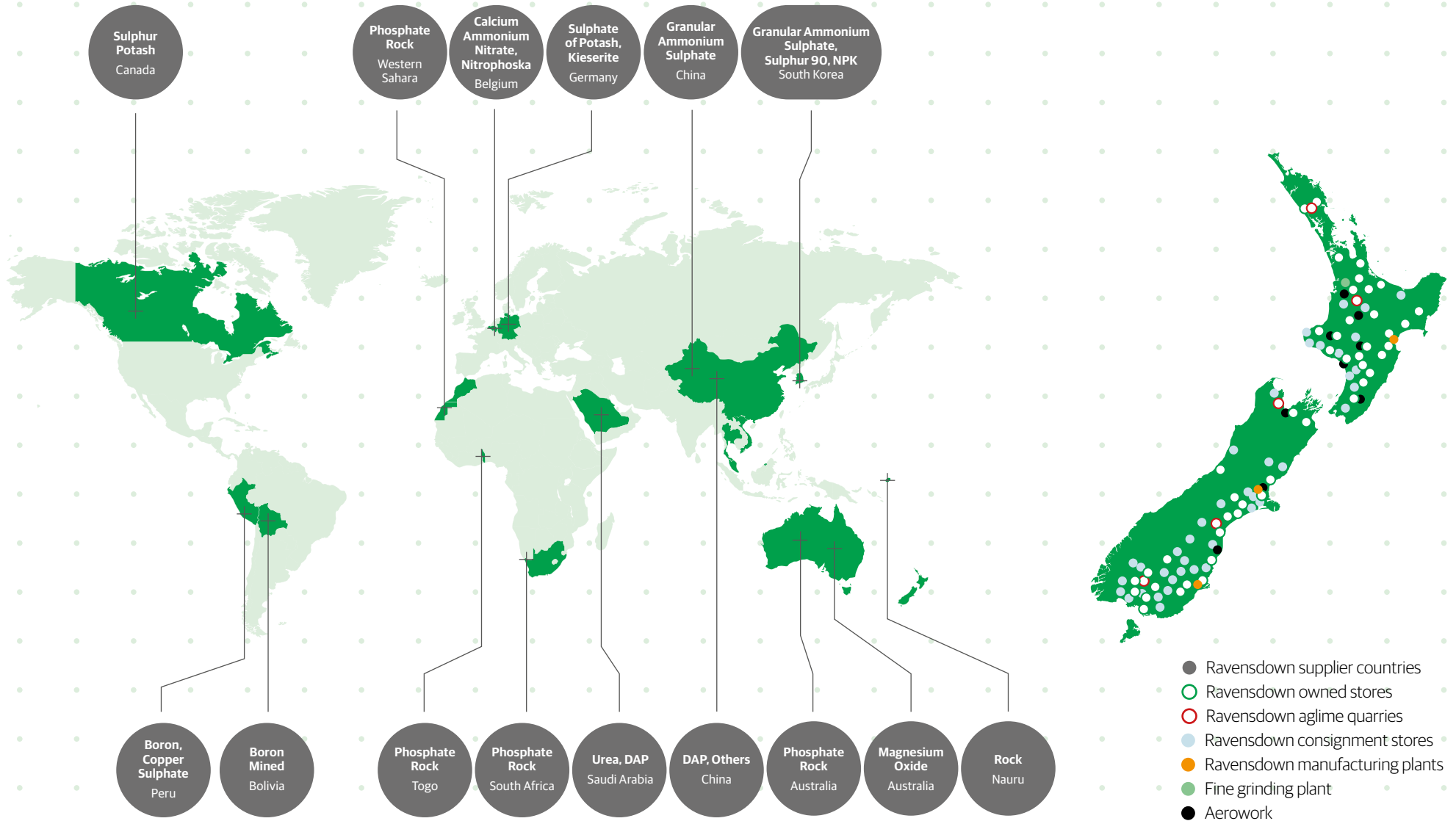
LOOK WHO'S TALKING

Tony Gray's 20-year career with Ravensdown has seen him in a variety of roles, from inside the farm gate to production sites.

There's not much he doesn't know about farming, after personally working closely with horticulture and pastoral clients for many years as an advisor and field officer before managing sales teams, taking the same guidance out on the farms.

He moved from sales management into laboratory management with ARL and optimising its laboratory services in soil, plant tissue, feed quality and fertiliser analysis. He transitioned into manufacturing management in Dunedin in 2010 before a brief sabbatical that saw him return into a projects role, before moving to Hawke's Bay, leading the Napier team in mid 2023.

Our supply chain /



3 Nurturing and leading our people / Smarter ways of working

You can't keep good people down

This year has been a testament to the resilience of our people. After the challenges of Cyclone Gabrielle and an organisational restructure in 2023, our people met 2024 with true grit and determination.

recovery, but also demonstrates that we have work to do. Feedback from the full survey has since informed the development of a refreshed people and culture strategy.

Values and a sense of connection and belonging matter

A hui of our key leaders and influencers across the business this year identified the importance of a strong organisational culture where people feel a real sense of belonging. It recognised that for the organisation to really 'hum' we need to bring together the diversity of talent across the business. Underpinning this is a project to refresh our core organisational values to ensure they are fit for the future, genuinely 'lived', and form a basis to connect all our people and teams.

A key element will be ensuring we integrate Te Ao Māori into those cornerstone beliefs and behaviours. The establishment of a new Pou Ārahi role in our Environment and Sustainability team

Building the Ravensdown team

Our 2024 People and Safety programme had three objectives; to *stabilise and reset* after significant change; to *get back in the game* with clear short-term priorities; and the creation of a *high performing culture*. This included a plan for developing the right capabilities, processes and leadership competencies to support a longer-term strategy.

We undertook a baseline pulse-check survey of staff engagement in September 2023 post-restructure and achieved a 51% engagement score. The concerted effort on our three priorities saw us lift our level of engagement by 8% to 59% when we completed a full survey five months later. This signalled that we are on the road to



^ The team at Ravensdown is passionate, concerned, and active about the future and play a leadership role to confront industry challenges.

Nurturing and leading our people continued /

underlines our commitment. Our Pou Ārahi leads the high-level positioning of Te Ao Māori in the business, and develops and fervently upholds the kanohi Māori from planning to execution. Our Pou Arahi will ensure the growth of Māori knowledge and capability across Ravensdown and will also focus on enriching our relationships with iwi landowners and developing mana whenua relationships. This will be achieved by ensuring Ravensdown's business practices are aligned to Te Ao Māori in a way that resonates with Māori communities and businesses.

Performance focus

Lifting leadership capability and maximising performance will be a key focus for our People and Safety team in FY25. A priority is development of an integrated performance, development and rewards system that fosters exceptional performance. This will be supported by a programme to develop leadership that better supports and

empowers talent to evolve within the business. We have already initiated a project to review our framework for remuneration, benefits and incentives across the organisation, and another project to map our key talent and build a talent strategy to support growth and development of exceptional individuals, thus establishing a strong succession pipeline.

Keeping our people safe and well

Last year we rolled out the Health, Safety and Wellbeing (HSW) strategy for the co-operative and centralised the HSW team to lift capability and ensure the effective delivery of the new strategy. This year has seen an increased focus on the Visible Leadership and Critical Risk Management elements of the strategy.

The development and roll-out of our Visible Leadership Policy enabled the achievement of our Safe Work Conversation target for the first time. We also developed a Critical Risk Policy and began an annual programme of deep dives



▲ We're making strong progress in advancing excellence, innovation and always staying safe.

Nurturing and leading our people continued /

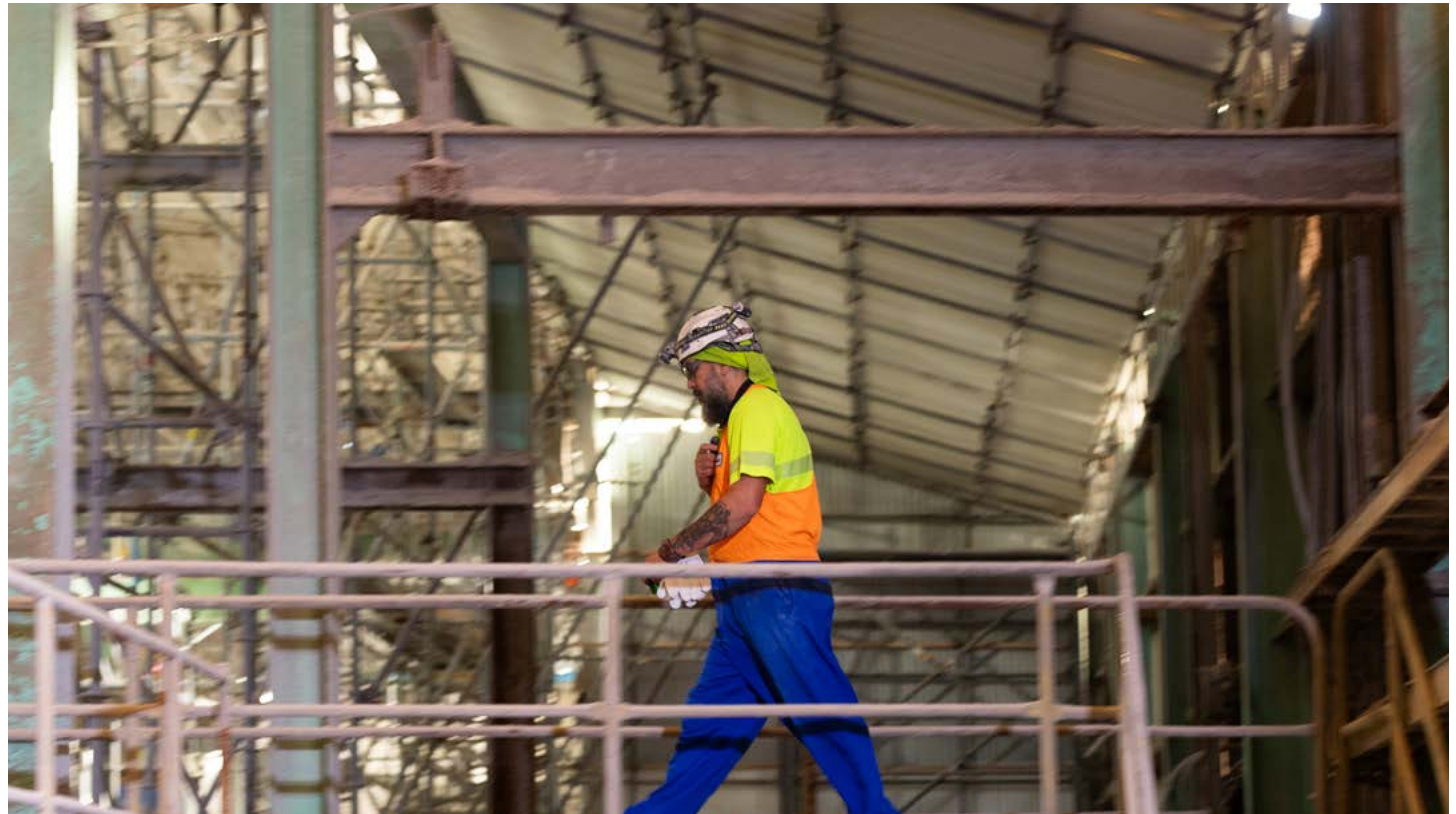
into each of our nine identified critical risks. We have completed deep dives on fall from height, stockpile collapse, uncontrolled hazardous energy, and moving vehicles and equipment. Each of these risk assessments is conducted across the organisation and led by Leadership Team members as a strong display of visible leadership. This proactive approach to critical risk management has identified multiple improvements in the areas assessed and will continue into the coming year.

Two other areas of increased focus have been safe driver behaviour and employee wellbeing. We are in the early stages of revitalising our Wellbeing Representatives programme and increased attention on safe driver behaviour has led to a reduction in speeding alerts by over 88% since June 2023.

Though still well below the industry average, our Lost Time Injuries (LTIs) have crept up this year due to more reported sprains and strains. We are developing a programme with support from an external physiotherapist to better educate our people around injury prevention and management.

We maintained tertiary-level accreditation as part of the ACC Accredited Employers Programme for the fourth consecutive year following an audit of our Napier works.

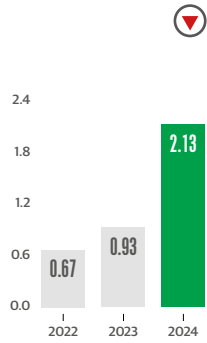
- Safety is no accident, it takes all of us working together to thread it into our day-to-day work life.



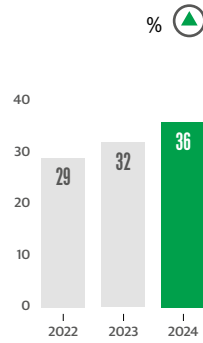
Nurturing and leading our people continued /

Our people at a glance

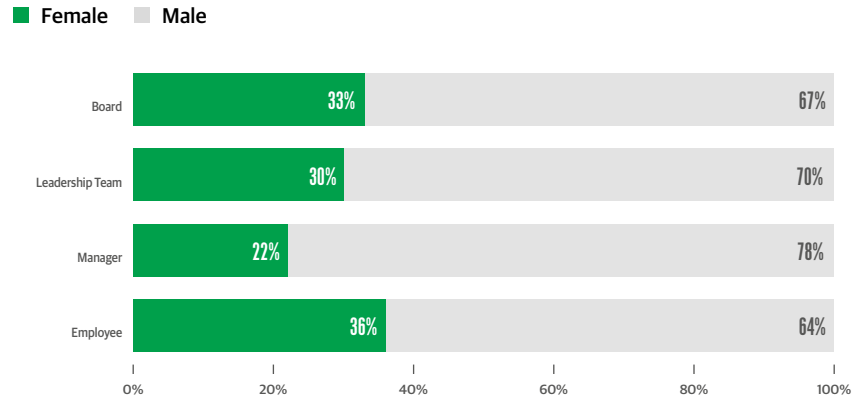
Lost-Time Injury Frequency Rate



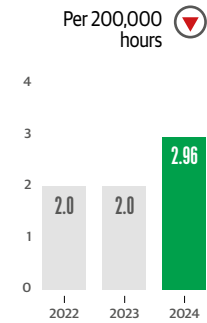
Internal appointments



Diversity by gender

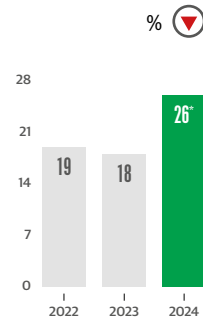


Total recordable Employee Injury Frequency Rate

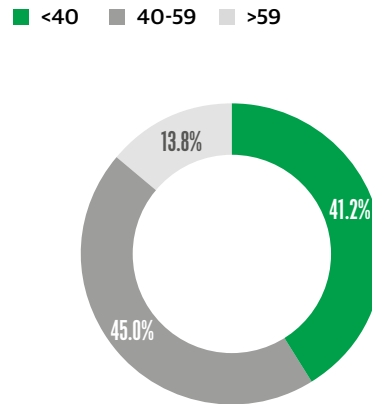


Employee turnover

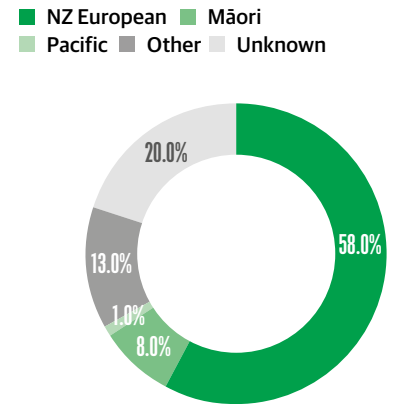
* ongoing impact of redundancies during 2022/23 restructure



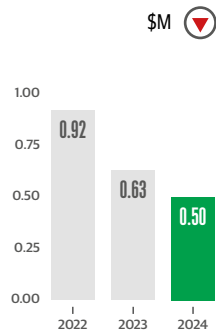
Age Range



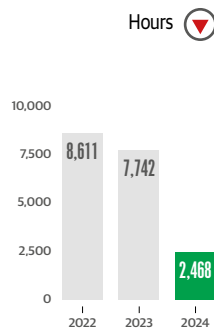
Ethnicity



Spend on learning and development



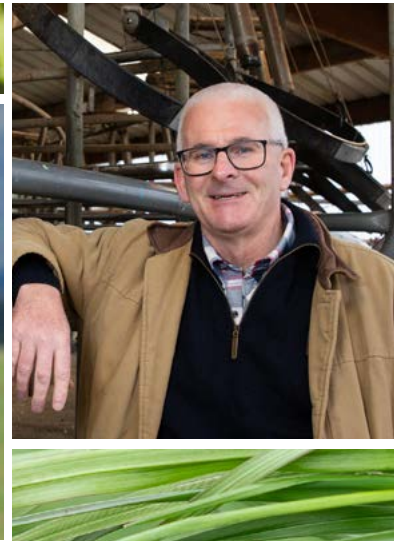
Learning hours



< See page 60 for key of UN Sustainability Development Goals.

Nurturing and leading our people continued /

Meet the Board



Bruce Wills

Elected Director North Island
B.Com (Ag) , CMIntD

Bruce farms sheep and cattle and grows grapes in Hawke’s Bay, having previously spent 20 years in banking and investment. A past national president of Federated Farmers, he also holds a range of other governance positions.

Mike Davey

Elected Director North Island

Mike is a cropping farmer, an elected representative of the Taranaki Regional Council, Chair of Taranaki Electricity Trust, Director of Taranaki Health Trust, and retired director Taranaki Hospital Board. He was a Ravensdown employee for more than 40 years.

Nicky Hyslop

Elected Director South Island
B.Ag.Sci (Hons)

Nicky farms an intensive sheep, beef and arable property in South Canterbury. She was a farm management consultant for 15 years. She is an experienced governor, including directorships with Opuha Water, Irrigation New Zealand and Beef+Lamb New Zealand.

Jane Montgomery

Elected Director South Island
LLB (Hons)

Jane owns a North Canterbury farm. She was an intellectual property lawyer, but stopped practising during FY24. Previously an associate director with AgResearch and a former chair of the audit and risk committee for the JR McKenzie Trust.

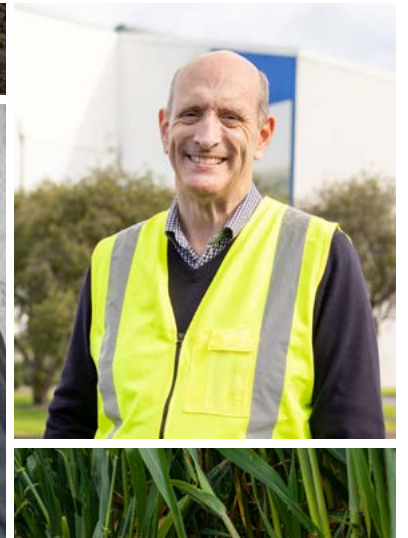
Pete Moynihan

Elected Director South Island
B.Ag.Sci.

Pete is an Invercargill-based dairy farmer and company director. He has directorships with The Power Company, PowerNet, OtagoNet JV and Southern Generation. His prior experience includes a role as a senior banker and manager of the South Island agri-business division of a large bank.

Nurturing and leading our people continued /

Meet the Board



Jacqueline Rowarth

Elected Director North Island
B.Ag.Sci (Hons), PhD Soil Science, CNZM, HFNZIAHS

Jacqueline is involved in dairy, deer and maize in the Waikato. She is a director of DairyNZ, Deer Industry New Zealand and a member of World Farmers' Organisation Science Council. She holds the honorary position of Adjunct Professor with Lincoln University.

David Biland

Appointed Director
B.Ag.Sci, Dip.Hort.Sci.

David is based in Auckland and holds governance roles in the farming and animal health/pet food sectors. He has held international management and governance roles in the UK, EU, US, Australia and New Zealand, including with New Zealand multinational Argenta and animal health multinational Merial.

Tony Carter

Appointed Director
BE (Hons), ME, MPhil (Loughborough)

Tony has extensive governance and management experience across a broad range of sectors. He is Chairman of New Zealand-owned technology business Datacom Group, My Food Bag, TR Group, The Interiors Group and the Skin Institute. Additionally, Tony previously chaired Air New Zealand and Fisher & Paykel Healthcare. He was also a Director of Fletcher Building and ANZ Bank New Zealand.

Joined 1 September 2023

Graham Stuart

Appointed Director
B.Com (First Class Hons), MSc (MIT)

Graham is Chair of Northwest Healthcare Property Management Limited and Comhla Vet Limited. He is Director and Chair of the Audit Committees for Tower Limited and Nexeus Global Limited, and is a Director on the Board of VinPro Limited.

He has been Chief Executive Officer of Sealord Group and was on the Executive Management Team at Fonterra Co-operative Group.

Joined 27 May 2024

Jason Dale

Appointed Director
B.Com, FCA

Jason is Chief Financial Officer of KiwiRail and Chair of Southbase Construction and Crest Commercial Cleaning Limited and an Independent member of the Risk and Audit committee of Te Rūnanga o Ngāi Tahu. He has previously served as CFO for several large companies and chaired both LIC and Taranaki Investment Management Limited's audit committees.

Left 24 May 2024

Nurturing and leading our people continued /

Meet the leadership team



Garry Diack
Chief Executive Officer

"The beauty of a co-operative is that shareholders not only invest, they belong to a collective commitment to lowest cost, to an enduring environment, and to a shared love of the land. That shared sense of belonging is our reason for being."

Katrina Benedetti Forastieri
Chief People and Safety Officer

"Our people bring the passion and capability that drive trusted relationships and performance across Ravensdown. Our People and Safety team work to empower our people to thrive and deliver so that Ravensdown has a lasting impact on NZ farming."

Gary Bowick
Chief Customer Officer

"As a genuine partner, side by side with our farmers and growers inside the farm gate, we're demonstrating how Ravensdown is driving greater productivity, profitability and sustainability, and why we're essential to the farming team."

Kevin Cooney
Chief Financial Officer

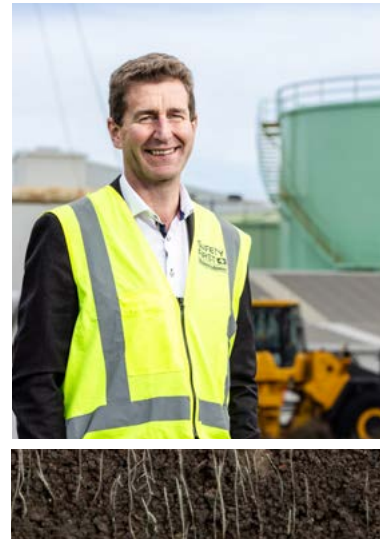
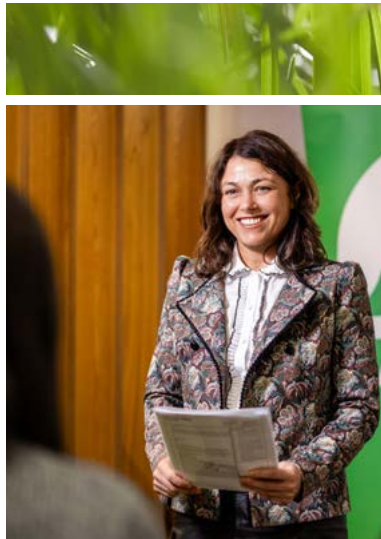
"Strong planning underpins any successful strategy. We're working across the business to ensure our actions are prioritised, tracked, measured and reported with intent, so our business delivers for our shareholders."

Jasper van Halder
CEO Agnition

"Agnition is scouting all over the world to bring the latest technologies and innovations to New Zealand that will make a real difference on-farm and give our shareholders the edge in running their operations sustainably."

Nurturing and leading our people continued /

Meet the leadership team



Jennifer Goldsmith
General Counsel

“As guardians of our Code of Business Conduct, Corporate Affairs ensures Ravensdown acts with integrity in every facet of our operations. We guide the board and leadership team to safeguard legal compliance, protect our reputation, and ensure transparent communications.”

Mark McAtamney
Chief Digital Officer

“Our investment in practical digital tools aims to save customers’ time, ease compliance overheads, and boost farm productivity and sustainability goals. By sharing data and know-how with industry partners, we’re spearheading smarter, more efficient farming.”

Mike Manning
Chief Science Officer

“Our science team continue their sharp focus on developing robust technologies that maintain or boost productivity, whilst simultaneously reduce the environmental footprint and improve sustainability – critically, delivered in ways that are simple, affordable and scalable for farming.”

Mike Whitty
Chief Operating Officer

“The right products for customers’ needs are critical – access to Nitrophoska and post-cyclone recovery at Napier ensures surety of supply of competitively priced products. We’re keenly focused on reducing working capital, funding requirements and costs to reflect lower demand.”

Anna Wilkes
Chief Environment & Sustainability Officer

“A strong commitment to the environment and sustainability underpins our license to operate. We’re following through by taking action to reduce our own operational environmental and carbon footprint and supporting our farmers and growers to do the same.”



Climate disclosures

This section reflects the recommendations of, and has been structured to align with, the Taskforce on Climate-related Financial Disclosures (TCFD). The greenhouse gas (GHG) footprint has been measured following the GHG Protocol with limited assurance from EY.

35

The taskforce's recommendations are structured around four thematic areas that represent core elements of how organisations operate.

Governance / page 37

• Oversight, assessment and management of climate-related risk and opportunities.

Strategy / page 37

• The actual and potential impact of climate-related risks and opportunities on the business.

Risk management / page 40

• How the organisation identifies, assesses and manages climate-related risks.

Metrics and targets / page 42

• Metrics used to assess and manage relevant risks and report on performance against targets.





From the CEO

This year we are pleased to report a continuation of the emissions reduction seen over the past five years towards our 1.5°C-aligned 2030 target. However, climate mitigation is becoming more challenging as we work to address harder-to-abate emissions sources, while also operating under challenging conditions.

The effects of climate change are beginning to come to the fore and the challenge of adaptation diverts resources as we, and the sector, must respond to difficult climatic events while also working to address the cause. Operating at a lower intensity contributes to reducing emissions but can also limit the capacity for capital investment and transition.

We see climate change response as not only a risk but also an opportunity for the sector. We have therefore have invested in collaborative industry ventures to accelerate the creation and application of tools to reduce emissions from farming

(AgriZero^{NZ} see story page 8). We have also directly in agtech innovations, such as CarbonCrop (page 46), which can be developed and implemented through our Pilot Farm Network to help farmers to manage and optimise sequestration and natural capital on farm, with the overall goal of reducing emissions while maintaining profitability and productivity.

Garry Diack

Governance

Our Board, Audit and Risk Committee (ARC) and Leadership Team are actively engaged in risk management.

The Board of Directors has ultimate responsibility for oversight of climate-related risks and opportunities. They gain oversight of the climate risk position and activity through the ARC which meets on a regular basis. The ARC has responsibility to assess risk mitigations implemented by management on behalf of the board. The ARC undertakes an annual formal review of our climate risk position including greenhouse gas emissions and targets.

Assessment and management of climate-related risks and opportunities is championed by the CEO with the support of the Leadership Team. They review decarbonisation progress regularly and have a formal annual processes to review climate risk through the Risk Management Committee.

The Leadership Team takes ownership of enterprise-level risks and drives focused risk management within their individual business areas.

The Risk Management Committee meets regularly to assess risks and review the suitability and implementation of management activity.

Ravensdown has an Enterprise Risk Management System within which risks (including climate risks) are assessed and controls applied and managed.

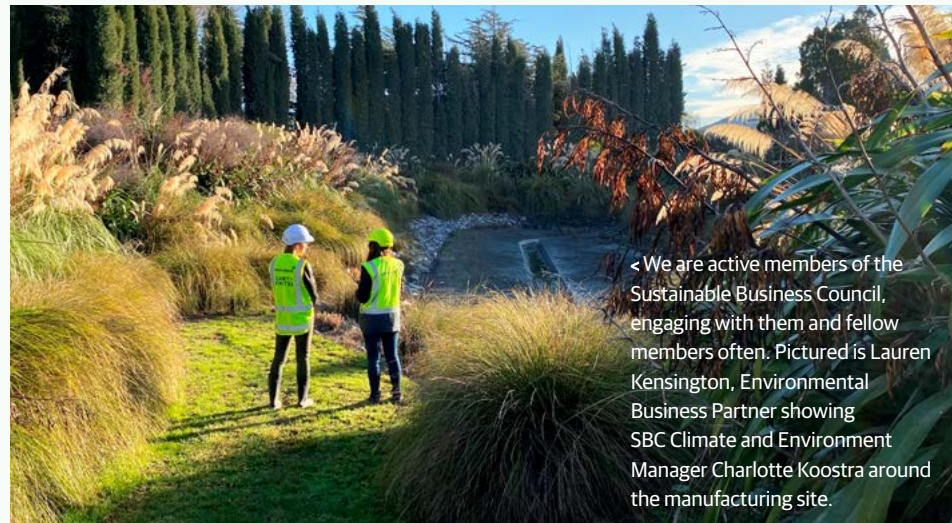
Full Board and Leadership Team support is required for making and reaching carbon reduction targets. The target is science-aligned to 1.5°C of warming, which is 50% reduction of 2018 emissions by 2030 for scope 1 and 2 emissions, and 50% reduction by 2035 for scope 3. This year, reduction progress is on track but there is still a lot of work to do.

Decision making frameworks such as the capex management system are designed to support and facilitate decisions under

the conditions of climate change and a low carbon economy. A strong commitment to carbon reduction projects in the near term will be required in order to meet or surpass carbon reduction targets, and to mitigate the worst impacts of climate change.

This year we met our commitments to the Climate Leaders Coalition in full and took part in their mentorship programme.

We performed well in our Sustainable Business Council Member Review and were actively involved in two of their climate change programmes: the Adaptation Working Group and the Nature Readiness Programme.



< We are active members of the Sustainable Business Council, engaging with them and fellow members often. Pictured is Lauren Kensington, Environmental Business Partner showing SBC Climate and Environment Manager Charlotte Koostra around the manufacturing site.

Strategy

Tackling climate change will require agriculture to adapt farming practices and crops and to significantly reduce GHG emissions. The impact of regulation is being felt across the sector and increasingly local and international markets are demanding low emissions products.

In this section we describe and prioritise the risks and opportunities associated with climate change relevant to Ravensdown across three possible scenarios and the controls enacted to improve the resilience of Ravensdown's strategy (page 38). The scenarios are detailed on page 40.

We would like to recognise Aotearoa Circle whom we worked with on the Agri Adaptation Roadmap which helped us in the development of Ravensdown's climate scenarios.



Ravensdown's climate risks and opportunities.

Climate Risk	Assessment Summary	Current Impacts	Future Impacts	Management
Carbon pricing	Carbon pricing through the NZ Emissions Trading Scheme (ETS) is an important market mechanism for driving climate change mitigation.	Moderate impact of ETS on fossil fuel-related operating costs.	A steep rise in the ETS carbon price and/or expanded scope of applied carbon pricing will increase operating costs of the business. A carbon price for product import or use will have an impact on price of product to farmers.	<ul style="list-style-type: none"> Wider product and service offering. ARL investment. Develop, source and transition to transition to low carbon products.
Farm viability, land use change & diversification	Change to forestry or non-productive land use driven by policy (planning limitations, compliance requirements, ETS mechanisms); increased frequency of flood, drought and fire; changes land use and ownership.	Change to product type and reduced volumes ordered.	Leads to loss of market in the long term.	<ul style="list-style-type: none"> Customer engagement, support and advice. Talent acquisition and retention. Advocate for consistent and enabling national policy settings.
Low carbon solutions	Domestic policy support driving a low carbon transition creates new opportunities.	Government funding support for development of new products; joint venture with government to invest together in mitigation solutions.	More marked opportunity under orderly scenario where mitigation solutions are enabled and pathways to market are identified. Also increased opportunity to take up mitigation technology for decarbonisation.	<ul style="list-style-type: none"> AgriZero^{NZ} partnership. Agnition investments. N-Vision investment.
Brand & reputation	Corporate responsibility to respond to climate change and environmental pressure commensurate to increased stakeholder interest and urgency has positive impact on brand.	Some customers and stakeholders already driving and requiring a focus on climate change mitigation and biodiversity.	More marked opportunity under orderly scenario where mitigation solutions are enabled.	<ul style="list-style-type: none"> Strategy focused on leading the ever-evolving challenge of enhancing land potential while exceeding the sustainability and emissions obligations of New Zealand's primary sector.
Supply link disruption	Increased risk of interruption to supply links and stores from physical (weather) or transitional (geopolitical) causes.	Increased volatility, some higher costs incurred when extreme weather disrupts transport links.	Potential inability to supply high quality product where it is needed in a timely fashion.	<ul style="list-style-type: none"> Increased stock on hand. Increased focus on coastal shipping. Network review. Strong working relationship with Ravensdown Shipping Services.
Spreading window	Reduced application window because drier summers and wetter winters leads to high seasonal pressure.	Lower sales.	High redundancy of assets.	
Damage to assets	Extreme weather events combined with sea level rise leads to flooding, high winds, wildfires threatening high value assets.	Cyclone Gabrielle was the most extreme weather impact seen to date. Cost to Ravensdown > \$46m in clean up, lost time, lost stock and asset replacement. Increased insurance premium by \$4m.	Increased repairs and maintenance (R&M) cost, asset outages, higher price and/or lower coverage of insurance.	<ul style="list-style-type: none"> Build back better. Design considerations. Network optimisation. Capex management system enhancements.

Nature Related Risk and Opportunity

During 2023/24 we continued to work on the next frontier of climate action - nature-based risks and net positive targets - in the following ways.

- Completed the Sustainable Business Council's Nature Readiness programme which has provided clarity over our goals and targets, as well as opportunities for collaboration. This work clearly linked our nature and biodiversity goals to freshwater ecosystem outcomes by way of material and commercial business activities and highlighted the value created through investment in this area.
- Restructured our Environment & Sustainability resourcing resulting in a better resourced team for environmental management and stakeholder engagement.
- Undertook a nature/biodiversity assessment across operational sites to identify risks and opportunities and assess sensitivity of locations, to understand where to prioritise our efforts.
- Extended existing support with an additional three-year commitment to the Tākaka Hill Biodiversity Group Trust to achieve longer term biodiversity outcomes that enhance ecological value on our sites while also benefiting the wider environment and local community. See page 47 for full story
- Invested in pest management to better protect environmental assets at selected sites.
- Commitment to ecological assessments of additional priority sites.

Risk Management

Three temperature scenarios were used to model and assess Ravensdown's climate related risks and opportunities over the short, medium and long term (Figure 1). The scenarios were loosely based on the sector level adaptation roadmap developed by Aotearoa Circle, of which we had a role on the Technical Expert Group and combined the use the Intergovernmental Panel on Climate Change SSP-RCP scenarios (Shared Socioeconomic Pathways + Representative Concentration Pathways scenarios).

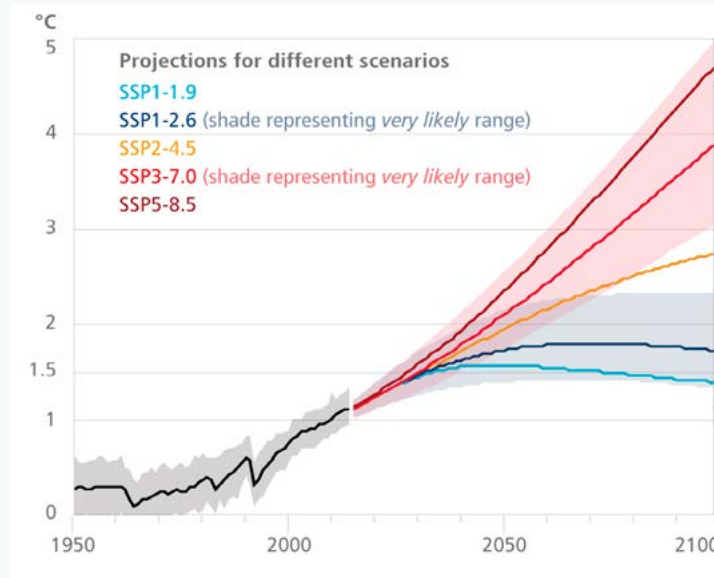


Figure 1: Global surface temperature changes relative to 1850-1900

40

This year we added the exercise of consulting with key stakeholder experts on their perceptions of risk and opportunity in the industry and in relation to our business, which fed into our scenario analysis, strategic planning and risk management.

Climate Scenarios



Orderly
SSP1-1.9

Pathway that limits global warming to 1.5°C, the Paris goal
Imminent, smooth transit on to net zero
Immediate policy and financial impact
Low-medium physical impacts



Delayed Transition
SSP2-4.5

An intermediate pathway
Late but rapid and disruptive transition to net zero
Delayed and divergent policy and financial impact
Medium physical impacts



Hot House
SSP3-7.0

A baseline outcome rather than a mitigation target (+3°C in 2100)
No policy change
Delayed financial impact
Extreme physical impacts



Time Horizons

Short 2030



Medium 2040



Long 2050+

Identified climate risk and opportunities assessed over a range of scenarios and horizons.



Orderly



Disorderly



Hot House

Category	Risk/Opportunity	Orderly		Disorderly		Hot House	
		2030	2050	2030	2050	2030	2050
Transitional	Carbon pricing	H	H	L	H	L	L
	Farm viability	M	H	L	H	L	L
	Low carbon solutions	H	E	M	H	M	L
Physical	Brand and reputation	H	H	M	H	M	L
	Supply link disruption	L	M	M	M	M	H
	Spreading window narrows	L	M	M	H	M	H
Physical	Land use change	L	M	H	H	H	E
	Damage to assets	L	M	M	H	H	E

In the past year we made more investment in climate change mitigation than ever before with over \$4 million directed to decarbonising business operations and, more importantly, mitigation solutions for farmers.

2023/24 investment in climate change mitigation

Scope 1

Fleet replacement	Opex only
Mobile plant	\$124,477
Biomass combustor	\$1,200,000
Geraldine storage shed	\$650,000

Scope 2

Solar generation	\$0
Renewable electricity credits	\$54,029
Charging infrastructure	\$5,659

Scope 3

Sustainable Food and Fibre Futures (Ravensdown contribution)	\$737,340
AgriZero ^{NZ} (mitigation solutions only)	\$1,500,000
Agnition (sequestration solutions)	\$250,000
Total	\$4,397,028

	Risk	Impact	Opportunity
<\$250k	L	Low	L
\$250k-2M	M	Medium	M
\$2-10M	H	High	H
>\$10M	E	Extreme	E

Metrics and Targets

Greenhouse gas carbon footprint

The greenhouse gas (GHG) carbon footprint is calculated on a calendar year and undertaken in accordance with the GHG Protocol. Ravensdown has reported its GHG inventory within its Integrated Report since 2017 and obtained limited assurance annually. The base year for measuring progress is 2018 as this was the first year for which a robust and complete footprint was available.

Methodology

A thorough screening process is undertaken annually to identify all material emissions sources across scope 1-3, to define organisational and operational boundaries and to identify any need for recalculation. Organisational boundary takes an operational control approach to include Ravensdown and all subsidiaries and to exclude associate and joint venture partnerships as defined in the annual report. Operational boundary is as defined on page 44. We strive to improve the accuracy and scope year on year. As each year's scope is broader than the last, the inventory is not necessarily comparable to those published in previous reports.

Reports, invoices and data are received from the relevant data source/supplier and the relevant emission factors are applied to calculate the emissions. A calculation methodology has been used for quantifying the emissions inventory based on the following calculation approach: emissions = activity data x emissions factor.

The primary source of emissions factors for calculation is the Ministry for the Environment (MfE, 2023). The cases where MfE emissions factors are not available are:

- marine gas oil (Defra (UK) 2020 factor has been used)
- CO₂ from CO₃ in phosphate rock (Calculated based on analysis of carbonate content of phosphate rock by an independent lab)
- sequestration rates (Climate Change (Forestry Sector) Regs 2008 Sch. 6 Table 2 has been used)
- purchased urea (assured product footprint provided by supplier).

New inclusions in the current year: The embodied emissions of purchased urea have been added to the inventory this year under the category of purchased goods and services (C1) as our most material purchase by volume, value and intensity.

Exclusions in the current year: No material emissions sources, facilities and operations have been excluded from the inventory. Scope 3 emissions that are present and are monitored but did not meet materiality criteria (1%) for this disclosure were:

- purchased goods and services (except for urea)
- capital goods such as IT and office equipment
- construction projects
- plant and equipment purchases
- refrigerant leakage from HVAC
- waste if recycled
- staff activities such as commuting, working from home, hotel stays, rental cars, mileage, taxis and couriers.

Some of these emissions also sit outside the current operational boundary:

- upstream manufacture, mining and transport to port of raw materials
- purchased goods and leased assets (i.e. vehicles)
- downstream spreading and grazing.

Urea sold for industrial uses, rather than land application has no emissions associated and is therefore excluded.

Base year recalculation policy

Situations prompting recalculation of the base year are acquisitions/divestment and changes in reporting boundaries or calculation methodologies, including improvements in the accuracy of emission factors as per the GHG Protocol where they are material (i.e. >1%) of the base year emissions profile.

Base year recalculations:

No recalculation of the base year was undertaken this year, but all 2023 emissions sources have been included in the base year for comparability. Recalculation occurred in 2022 following the divestment of White Rock Lime in December 2021. Emissions factors have been adjusted over time as accuracy improves. The reporting boundary expanded with the addition of process reaction emissions from superphosphate manufacture (2022) and manufacturing emissions from imported urea (2023) which have been back-calculated for comparability between years.

Offsets in the current year: No offsets were purchased but the low carbon options, certified renewable electricity and container shipping with biodiesel were purchased in place of the more carbon intensive alternatives previously purchased.

Science Based Targets

The Science Based Targets Initiative (2023) absolute contraction methodology was used for setting an emissions reduction target aligned with 1.5°C of warming against a 2018 base year. This requires scope 1 and 2 emissions to reduce by 50% by 2030. The scope 3 target is to reduce emissions by 50% by 2035 through reduction of absolute emissions and provision of new technology.

Target aligned with

1.5°C

of warming against a 2018 base year

24% 

Reduction in operational emissions since 2018 base year

Performance against targets

Ravensdown has three areas of focus for climate change mitigation:

- the reduction of greenhouse gas emissions from our own operations
- engagement with our suppliers to support and encourage their own decarbonisation
- identifying, developing and bringing to market new, sustainable solutions for farmers to reduce the emissions from the use of fertiliser and from agriculture in general.

Performance in the current year

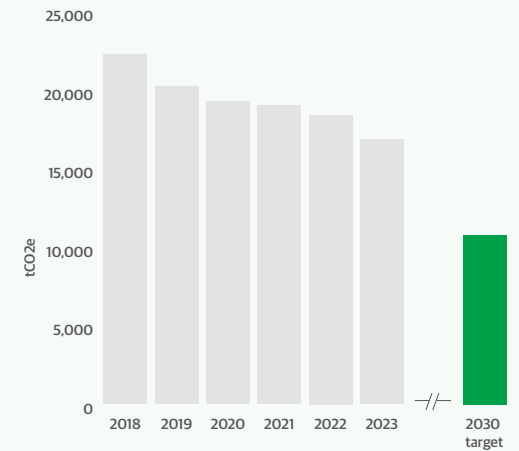
Due to the co-generation of its superphosphate plants which feed electricity back to the grid, Ravensdown exhibits relatively low industrial scope 1 and 2 emissions. Scope 3 emissions are comparably high, attributable to upstream international sourcing and shipping of raw materials, downstream haulage of products to market and use of nitrogen and lime products on farm.

In 2023, emissions are reduced across most areas (page 44). The significant drivers of this result are Cyclone Gabrielle which disrupted agriculture and

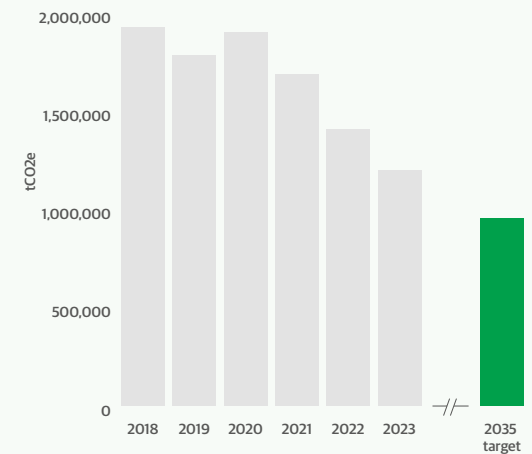
horticulture activities in the region; lower than usual sales volumes across fertiliser and lime throughout the year (in part due to the cyclone, as well as low returns and high costs for the sector), and one less quarry supplying lime to Ravensdown. Less stock on hand, a reduction in staff numbers and restrictions on expenditure were other contributors.

With Napier Works heavily impacted by the cyclone from February 2023 onwards, stationary diesel use was very high in 2023. A number of diesel generators ran in the aftermath and start-up of the plant was fraught with difficulties from flood damage and therefore prolonged. Electricity exports did not occur due to the local substation being down for several months. As this is the largest manufacturing plant, the impacts of this event have a noticeable impact on the GHG footprint.

Scope 1+2 (operational) GHG emissions profile over time



Scope 3 actual and target GHG emissions profile over time



Scope	Emissions source (/activity)	2018 (base year)	2022 (last year)	2023 (current year)	% change this year	T change this year	% change since BY	T change since BY
1	Stationary diesel/manufacturing startup	904	539	2,305	328	1,766	155	1,401
	Transport diesel & petrol	4,919	4,534	4,263	-6	-271	-13	-656
	Sub-bituminous coal/lime drying	3,354	2,305	1,822	-21	-482	-46	-1,532
	Aircraft fuel/aerial spreading	4,822	3,621	2,494	-31	-1,127	-48	-2,327
	CO ₂ release/superphosphate reaction	7,080	6,033	5,744	-5	-289	-19	-1,336
	Biomass fuel	-	-	8	100	8	100	8
	Scope 1 subtotal	21,078	17,032	16,637				
Sequestration	-	-4	-9	100	-4	100	-9	
Scope 1 total (net/with removals)	21,078	17,027	16,628	-2	-399	-21	-4,450	
2	Electricity exported to grid	-273	-359	-75	-79	284	-72	198
	Purchased electricity	1,440	1,729	1,339	-23	-390	-7	-101
	Scope 2 subtotal	1,167	1,370	1,264				
Renewable Energy Certificates	-	-	-1,056	-100	-1,056	-100	-1,056	
Scope 2 total (net/with removals)	1,167	1,370	208	-85	-1,162	-82	-959	
3	Haulage port to manufacture	2,450	1,971	829	-58	-1,142	-66	-1,621
	Freight/Distribution by road	20,586	17,469	14,073	-19	-3,396	-32	-6,513
	Coastal shipping/Distribution by sea	183	421	319	-24	-102	75	136
	International shipping	109,675	73,224	50,164	-32	-23,220	-54	-59,672
	Waste to landfill	196	124	105	-15	-18	-46	-91
	Transmission losses	153	140	162	16	23	6	9
	On farm product use	1,225,494	890,511	788,619	-11	-101,892	-36	-436,875
	Air travel	1,273	541	363	-33	-178	-71	-909
	Purchased urea (*new)	572,401	425,966	344,975	-19	-80,990	-40	-227,426
	Scope 3 subtotal	1,932,412	1,410,877	1,199,610				
	Container shipping with biomass	-	-511	-160	-68.7	351		
Scope 3 total (net/with removals)	1,932,412	1,410,366	1,199,450	-15	-210,916	-38	-732,962	
TOTAL	1,954,657	1,428,764	1,216,286	-15	-212,477	-38	-738,370	

16,836 tCO₂e ▲

Net scope 1+2 greenhouse gas emissions in CY23

1,199,450 tCO₂e ▲

Net scope 3 greenhouse gas emissions in CY23

Emissions by gas	TOTAL tCO ₂ e	CO ₂ tCO ₂	CH ₄ t	N ₂ O tCO ₂ e	HFCs t	PFCs t	SF ₆ t
GWP (AR5)				28			265
Scope 1 (excl. biological CO ₂)	16,628	16,516	1	19	0	94	N/A
Sequestration	-9	-9	-	-	-	0	0
Biofuel scope 1	8	8	-	-	-	0	0
Scope 2 (excl. removals)	1,264	1,228	1	33	0	3	N/A
Scope 3 (excl. biological CO ₂)	854,635	362,102	6	155	1,858	492,378	N/A
Biofuel scope 3	-160	-160	-	-	-	0	0
Urea manufacture (no gas split available at this time)	344,975						
Total	1,217,341	379,684	7	206	1,858	492,475	

*NB in accordance with MfE detailed guidance on GHG inventory development, numbers may not add due to rounding

EY has provided limited assurance over scope 1, scope 2 (location-based) and scope 3 GHG emissions for the calendar year 1 Jan to 31 Dec 2023. Note that scope is expanded year on year for continual improvement of reporting, therefore footprints published in previous years are not necessarily comparable and have not received limited assurance.

Mitigation activities

Scope 1

Biomass combustor

Completed and optimised the biomass combustor at Dipton Lime and secured a long-term biomass supply. Coal is no longer used at this site. Completion of the combustor also made a noticeable impact on air emissions from the plant. Testing shows: Fine particulate PM₁₀ down to 2.63kg/hr (8.8 kg/hr allowable); PM_{2.5} 0.7kg/hr (1.7 kg/hr allowable); sulphur dioxide 0.2kg/hr (10.6 kg/hr allowable).

Coal emissions down

21% 
in 2023

Drying shed at Geraldine Lime

This project was successfully completed within budget. Coal has not been used at this site since construction due to the ability to mine rock only in dry periods and to store it for high demand in cooler/wetter periods of the year. We are looking forward to seeing how long we can run without starting up the burner.

As a result of these two projects, coal emissions are down a further 21% in 2023, with the full results of these projects to be seen in the coming year.



Low emissions vehicles

With the continued transition to a fleet of low emissions vehicles, HEV/PHEVs and EVs now represent 21% of the total fleet. We are seeing good fuel savings from this programme, fleet reporting shows a 20-30% reduction in monthly fleet emissions, and have used our rebate from the purchase of RECs to increase onsite EV charging capacity.

HEV/PHEVs and EVs represent

21% 

Ravensdown's fleet

Electrification of mobile plant

Electrification of mobile plant has been slow due to availability of suitable equipment as well as capex limitations.

Dedicated decarbonisation plans are being developed for each of the Works prior to the end of the year.

Reduced industry demand

Reduced industry demand has resulted in a reduced GHG footprint across almost all emissions sources. There were 50% fewer bulk shipment stops at the ports as well as 14% fewer container deliveries. Aircraft fuel emissions were reduced due to poor weather reducing available flying hours as well as reduced demand for aerial spreading (down 31%).

Scope 2

Renewable Energy Certificates

Renewable Energy Certificates (RECs) that add renewable capacity to the grid were purchased for imported electricity consumption for the first time. These were granted to us by Meridian Energy for West Wind completed in 2009. Recognising the need for increased renewable generation in New Zealand, we consider this a short-term measure while we investigate our own renewable investments.



Scope 3

- In July Ravensdown received a delivery of New Zealand's lowest carbon urea. The shipment of around 2,700 tonnes was SABIC Agri-Nutrients Company's first ever global shipment of low carbon urea. The carbon savings are captured as scope 3 emissions.
- For more on the achievements of our investment in AgriZero^{NZ} joint venture partnership see page 8.
- For more on the achievements of our Agnition investments see page 17.

The coming year

- **Mobile plant transition:** Work to ensure that all new mobile plant is electric where possible.
- **Fleet transition:** Continuing the transition to low emissions vehicles.
- **Renewable electricity:** Continuing to use certified renewable energy, using the allocated funds towards other electricity-related mitigation projects, and working towards direct renewable electricity purchases.
- **Startup diesel:** site-specific decarbonisation plans for each manufacturing site focused on process heat. Progress feasibility work and complete long-term plans for startup diesel substitution.
- Continued investment in scope 3 mitigation opportunities through R&D ventures and partnerships.

CARBON CROP

CarbonCrop uses AI to help farmers recognise and accelerate the sequestration of thousands of tonnes of CO₂ from the atmosphere. CarbonCrop technology monitors and verifies carbon sequestration across mixed-species biodiverse forests with precision and a streamlined process. Our partnership with CarbonCrop offers both financial and environmental value to farmers and growers across Aotearoa New Zealand. With this technology, they can speed up the issuing of compliance or voluntary carbon removal units accurately and at scale via forest assessment, sequestration calculations and reversal monitoring; and farmers and growers have support in navigating the Emissions Trading Scheme, adding value and credibility to existing natural capital.

5,000+

NZ farms assessed (4 million ha)

\$35,000,000+

Carbon revenue distributed to landholders



>80%

ETS registered area in native forest



Environmental action /

Adapting with Nature

- +  Advice and tools for positive environmental change
- +  Enhanced stewardship and emissions reduction

It's not every day you find a member of one of the most threatened species in the country in your back yard, but Charmaine Petereit did in January and her husband Norman spotted two more.

It was *Naultinus stellatus*, the Nelson Green Gecko which has more than a passing resemblance to a child's painting of a lizard. It has a vivid, bright green body with star-shaped splodges - that's where the stellatus comes in.

"It's certainly bright and very green, but when it's in the natural environment it is extremely difficult to spot because it blends in so well," says Charmaine.

"They are also very solitary creatures, so they are not usually found together unless it's the mating season".

The geckos made a smart choice of Petereit's back yard since the couple belong to the Tākaka Hill Biodiversity Trust where Charmaine is Project Manager. The area is significant due to its



< *Naultinus stellatus* - the Nelson green gecko is one of the most threatened species in New Zealand.

limestone geology and native flora and the Petereit's land, regenerating after grazing, adjoins the Kahurangi National Park.

Established in 2018 by local landowners, the Trust isn't kidding about its biodiversity mission.

Having committed funding over three years, Ravensdown supports the Trust to restore and protect the Tākaka Hill ecosystems, control predator and pest species, achieve diversity gains over the next 30 years and increase the density

and abundance of Tākaka Hill indigenous flora and fauna. Their holistic approach spans all biodiversity disciplines, eradicating pests and invasive plants, culling wild goats, planting to create fauna-friendly environments, and undertaking species surveys and meticulously mapping its work, the results and the resulting data.

Charmaine says the Trust sees a bigger biodiversity picture and is working to create safe ecosystem corridors across private land and into the Abel Tasman and Kahurangi National Parks. Its work

Environmental action continued /

supports the re-established local populations of kākā, pāteke and whio as well as roroa.

The green gecko also benefits from these corridors, along with the equally impressive carnivorous giant land snail *Powelliphanta hochstetteri* which is closely monitored as a biodiversity indicator.

Charmaine says the Trust's results-based approach has helped it secure funding which is especially vital in the current environment with a diminishing funding pool for key programmes including wilding pine eradication.

"Ravensdown's financial support is a lifeline. It is enabling the trust to keep going to maintain our hard-won social licence. We're having to cut our cloth accordingly, so some work is being reduced. But the value of a collaborative partner like Ravensdown is that we can show other potential supporters that we have secure funding. In many cases you are expected to show you have a third of the costs covered before a funding

organisation will consider your application."

Anna Wilkes, Ravensdown Chief Environmental and Sustainability Officer, says the Trust and the company have enjoyed a good working relationship for some time, but it was time to do more.

"As a co-op we have come to the realisation that it's not enough to be solely working on greenhouse gas mitigations or improving waterways. We need to work towards a positive outcome for the whole environment and we have an opportunity to do this through the Trust. This is what they do well and we want to build on the relationship."

Ravensdown has committed some \$30,000 over three years to support biodiversity work on Tākaka Hill and to be used as a lever to enable the Trust to attract further funding.

As Anna says, "we can go out and plant trees, but we're not always very good at maintaining them. We are better off funding the Trust because it goes directly to the people who are getting their hands dirty. We are beginning in a small way, but we are looking at this as a potential model for other partnerships where the outcome is positive for the environment as a whole.

"We are choosing to make a positive impact and that's something our shareholders are aiming to do every day on their own properties, so it makes sense."



^ Ravensdown's relationship with the Trust could form the basis for other partnerships to create positive environmental outcomes.

Community commitment /

Deepening our involvement



Reliable supply of quality agri-nutrients

+



Engaged people with the right skills and knowledge

Ask Aerowork's longest serving pilot Bruce Harding to define job satisfaction and his answer is "an empty hopper".

"The biggest buzz is having a bin of fertiliser spread evenly over a block of land. There's a lot of calculating that goes into getting an even spread whether it's variable rate, slope scan and exclusion zones and waterways, and the bin's empty - you know you've done a nice job."

Bruce says he has a way of life, not a job. He loves the variety and the early mornings, especially when there's a good sunrise. While Bruce has more than 32,000 hours of flying in his logbooks, every load still commands his full attention every second.

"You must concentrate fully on every job. On a big day, where there's a lot of repetition, you concentrate harder because it is easy to get complacent. Spreading is one of the biggest bills farmers face, so you want to get every job right."

Based in Whanganui and working across the district, Bruce also helps out across the King Country, Taranaki and Taihape. Flying the same beats each season, he's noticed the rural landscape change with the seasons and the fortunes of the agricultural sector.

"You see changes like conversions to dairy, or farm amalgamations. But what I find sad now is seeing nice productive farms going into forestry or into scrub for beekeeping. Trees and scrub are fine on the right land, but when you know it's good land that's been farmed for generations, it's hard to see it wasted like that."

Bruce's family know better than most about the contours of the farms around them and the hazards that come with them. Pilots must be alert to the locations of every potential hazard from single strand powerlines to very tall trees and sun strike must be avoided. His grandfather Wally pioneered aerial spreading in the late 1940s using a



converted Tiger Moth. His father Richmond inherited the pioneering streak and was the first adopter of GPS for ag aircraft, encouraging others to follow suit. He received a Queen's Service Medal for

▲ Pilot Bruce Harding takes pride in a tidy aircraft and a tidy job with an even spread. Happiness is an empty hopper.

Community commitment continued /

his contribution to aviation and search and rescue.

“In Wally’s day, before GPS you had to know the lie of the land. When navigating across a farm you had to note the location of posts, trees and other landmarks to get your load spread accurately. It took a lot more concentration in those days. Now we use IntelliSpread which is a GPS guided application system which is extremely accurate with placement.”

Bruce’s parents, Richmond and Heather, built up Whanganui Aerowork over five decades, selling it to Ravensdown in 2004. The company operates across the North and South Islands.

“We were and still are part of the community, with good people and good gear, working with the same farms. I cannot tell the difference between mates and customers.

Bruce says agricultural aviation is a field where you need to look two to three years ahead to stay in the lead and bring an A game to farmers.

“My grandfather and my parents were always innovating and introducing the best technology available. It’s still important that we continue to do that, even when times are a bit tight.”



^ Pilot Bruce Harding with his father Richmond Harding QSM who pioneered GPS use in ag aviation. He continued the innovative streak of his father Wally who started the business with a converted Tiger Moth in the 1940s.

< Aerowork pilots have a combined average of around 13,000 flying hours.



BRUCE HARDING

LOOK WHO'S TALKING

After being born into an aviation family, Bruce Harding reckons he had the best upbringing of any child and he didn't think twice about becoming a pilot.

Flying is in the family blood and while the cockpit of a Cresco is considerably more sophisticated than Bruce's grandfather's Tiger Moth, the task in hand is the same – spread a load evenly, accurately and well.

While aerial spreaders have been in the skies since the 1950s, Bruce says they still get attention, sometimes for the wrong reason. One onlooker confused the fertiliser with smoke and alerted emergency services that a plane was on fire.

Bruce is determined to fly for as long as he can and got into competing in the Taupo Iron Man in his fifties as a way to keep fit and focused. He's completed five successfully, though he admits it can be hard to make time to train, especially when demand for spreading is high.

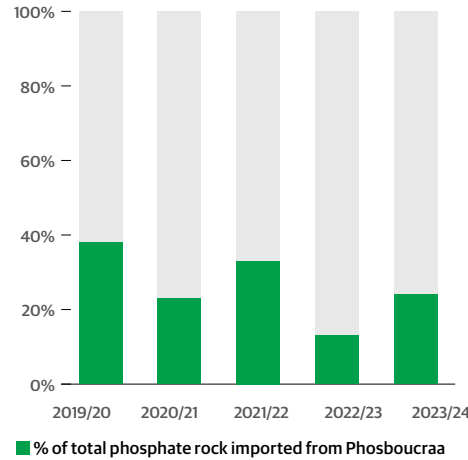
Human rights /

Ravensdown's commitment to human rights is described in our Code of Business Conduct. It is demonstrated by our adoption of the United Nations' Guiding Principles on Business and Human Rights (UNGPs) and the Human Rights chapter of the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises. These values are mirrored in our Supplier Code of Conduct.

This year we undertook a detailed human rights risk assessment across our supply chain, with a focus on phosphate rock. The output was a robust Human Rights Risk Register with control measures recorded and sources of risk identified and prioritised for further due diligence.

This assessment, combined with a workshop, enabled clear identification of our salient human rights (our current priorities in **bold**):

- **forced labour, child labour, bonded labour ('modern slavery')**
- **health & Safety at work**
- right to property, land use and culture
- safe food
- food security
- public and private security services.



The 2023/24 programme of work included the formation of a Human Rights Risk Working Group. It implements actions and processes for the management of human rights risks related to Ravensdown supply chain and operations. The group meets quarterly to improve and record our knowledge of human rights in the supply chain so that our decisions do not impinge on human rights. The group also ensures the early identification of suppliers or products needing dedicated due diligence (HRDD) or other management. We have begun drafting a Human Rights Policy that will strengthen and reflect our commitments to salient human rights, HRDD process, integration and remediation.

Sourcing phosphate rock from new suppliers in South Africa and Australia enabled us to have alternatives. The percentage of Bou Craa rock purchased was up on the previous year, although we bought 53% less rock overall due to softening superphosphate sales through 2023 and 2024. We required Bou Craa rock to ensure the right quality and surety of supply.

Bringing in new sources of phosphate rock ensures we have strong levels of resilience within our supply chain to meet our customer requirements for superphosphate, but it does demand thorough testing and analysis. In March 2024, Craig Hendry, Lime Operations Manager and Chad Gillespie, Head of Procurement, visited our phosphate rock suppliers in Togo and South Africa. The suppliers were very open and proud to show us their entire operations. We were impressed with the engagement of employees, the focus on health and safety and the work with local communities. These visits included due diligence by an independent auditor on their operations to assess the level of commitment and adherence to upholding United Nations Guiding Principles (UNGPs) on Business and Human Rights, a requirement of our Supplier Code of Conduct.



▲ Chad Gillespie, Ravensdown Head of Procurement regularly visits our suppliers' sites where he checks on production and ensures independent due diligence on human rights practices. Here with Kropz Operations Manager, Ian Botha, in South Africa.

Ravensdown's supporting policies



Anti-bullying and Harassment Policy



Diversity, Inclusion and Belonging Policy



Flexible Working Policy



External and Internal Privacy Policies



Safety and Wellbeing Policy



Risk Management Policy

Our FY24 results /

Our results in more detail

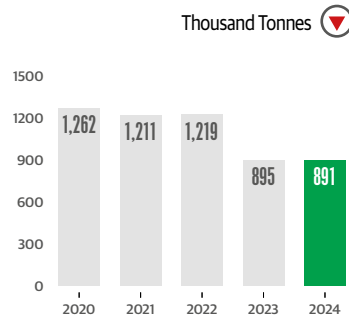
View Ravensdown Limited 2024 Annual Report at ravensdown.co.nz/our-company/our-shareholders/annual-report

▲ Positive trend compared with 2022/23

▼ Negative trend compared with 2022/23

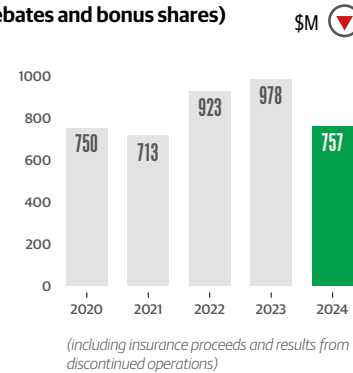
Fertiliser Sales

Lower fertiliser volumes were a result of higher commodity prices reducing demand.



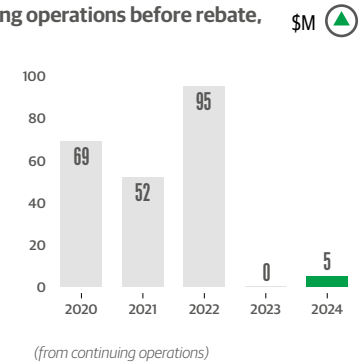
Revenue (before rebates and bonus shares)

Revenue was down on prior years due to lower fertiliser pricing passing through to customers. Revenue also includes insurance proceeds from flooding and a fire in Napier during 2023.



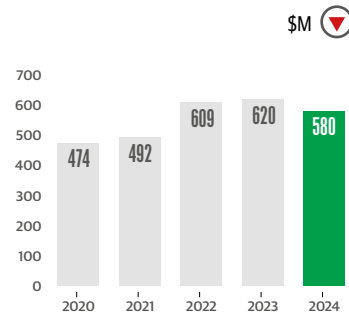
Profit from continuing operations before rebate, bonus shares & tax

Profit was impacted by lower sales volumes, higher commodity prices and impairments to assets.



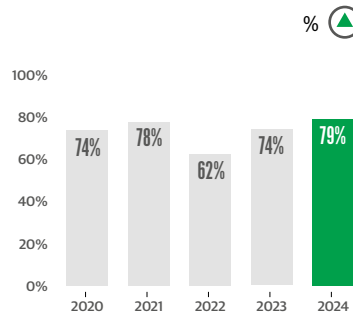
Total equity

Equity reduced as a result of decreased fair values and share capital redemptions.



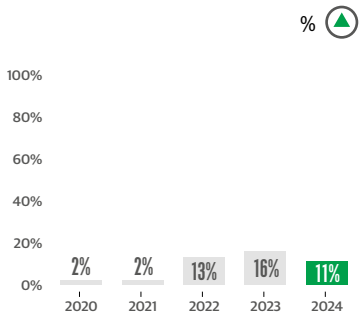
Equity ratio

The equity ratio improved by reducing the working capital requirements funded by banks and creditors.



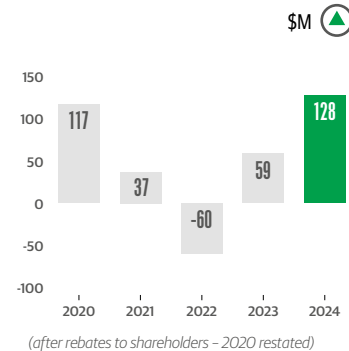
Debt ratio

Surplus operating cash flows enabled bank debt to be repaid.



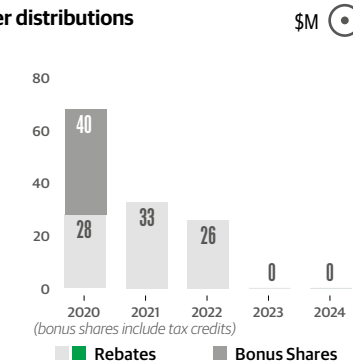
Operating cash flow

Operating cash flows improved as inventory converted to cash to repay creditors and bank debt.



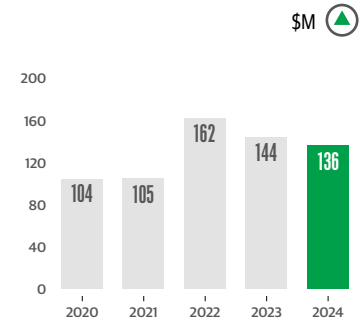
Value of shareholder distributions

During 2024 and 2023 there were insufficient profits to declare rebates or bonus issues.



Working capital

Working capital continued to reduce during 2024 as higher commodity prices of the past two years unwound.



Our FY24 results continued /

Beyond immediate challenges

Ravensdown’s financial performance for 2024 delivered solid profitability while strengthening its working capital and balance sheet in a challenged environment.

The co-operative achieved total revenue of \$756.8m and achieved a net profit before tax and after impairments of \$4.8m. Close attention to working capital and costs saw the co-operative’s equity ratio increase to 79.4%.

Volumes at 891,000 mt were largely flat on 2023.

They were slightly down overall including sales to commercial customers and only marginally up for volumes sold exclusively into primary sector applications.

This reflected ongoing caution for on-farm spending as customers continued to grapple with low margins. Lower commodity prices, albeit improving for dairy, and structurally higher costs for key inputs continued to put farm budgets under pressure, dampening demand.

Customers bought similar volumes to last year but paid 20% less for them as we passed on reductions as global prices improved.

Global fertiliser prices continued to stabilise following the volatility of previous years. Disruptions caused by the Ukraine war eased in global fertiliser supply-chains with supply in certain key products recovering strongly. In addition, softer global demand saw prices ease in the latter part of the financial year. This gradual but steady return to more usual seasonal patterns for global demand and supply means prices are likely to firm as we head into spring, consistent with the seasonal pick-up in global demand.

Margins performed solidly. Reductions in stock holdings across the year enabled us to re-stock quickly with better-priced product as it became available.

This also supported strong cash performance from improved working capital, which in turn enabled ongoing investment in our operational capability and strategic initiatives.

Operating costs were marginally up on last year but generally tightly managed given ongoing inflationary pressures for many of our input costs, including salaries and wages.

Better margins, tight costs management, and a strategy to reduce and tighten debt driving interest costs down, led to a solid operational profit outcome before non-cash impairments.

Higher impairments this year reflected constrained buying by a challenged primary sector. Lower volumes through our manufacturing plants reduced cash generated by them. As a result carrying values were adjusted downwards. This also affected independent valuations for certain land and buildings, with our decision to sell certain quarry assets also requiring adjustments to their carrying value.

Insurance-related work continued, particularly for restoring the Napier works at Awatoto following a fire and Cyclone Gabrielle damage, with insurance monies funding these works.

Solid cash generation from improved profitability and inventory enabled us to further reduce debt. Drawn debt at the end of the year was \$52m better than last year.

Significant interest savings were achieved from running a tighter working capital structure that sought to balance liquidity with interest cost.

While equity reduced as a number, it improved as a ratio of total assets underpinning overall balance sheet strength.



4 Our Structure

How we manage our risks and relationships /

Board of Directors

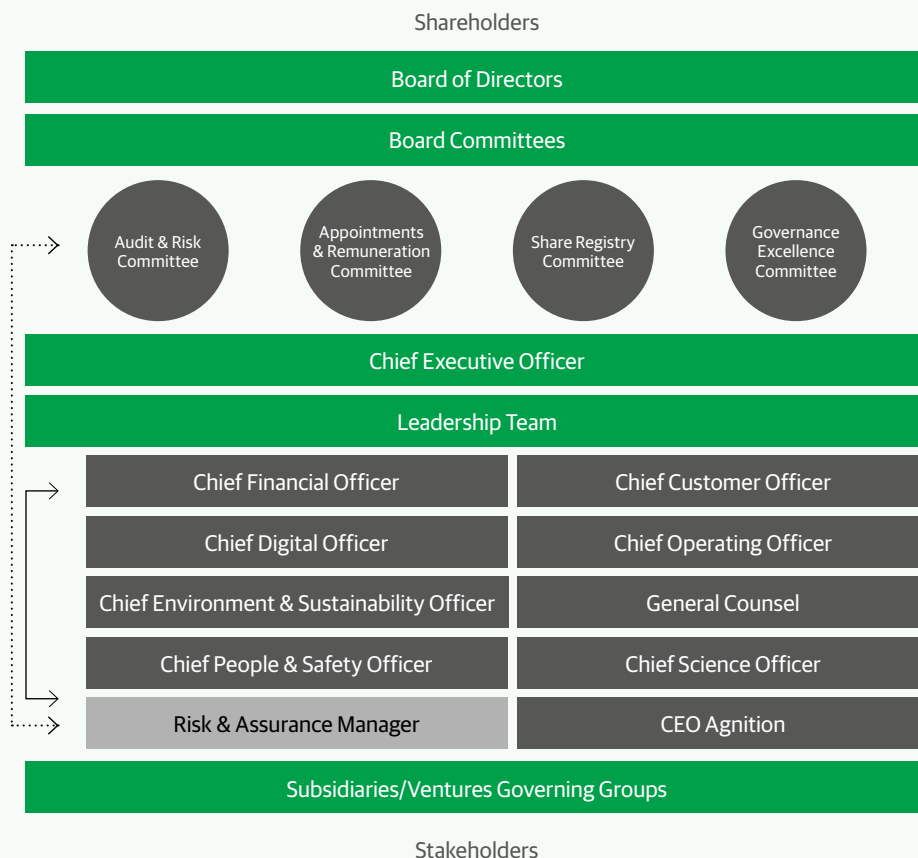
Ravensdown's Board has six shareholder-elected directors and three Board-appointed directors. The Board-appointed directors bring specialist skills and additional experience to the Board. The Constitution allows for up to three Board-appointed directors.

The primary objective of Ravensdown's Board is to act in the best interests of the company by building long-term shareholder value.

The Board's role and responsibilities are set out in its charter.

During the past financial year, Tony Carter was appointed as a director to the Board and Jason Dale retired as a director and Chair of the Audit and Risk Committee (ARC) on 31 May 2024. Graham Stuart, an experienced independent director, joined the Board on 27 May 2024 and will take over as Chair of the ARC.

Governance Structure



Board Committees

The Board has four standing committees.

Audit and Risk Committee

Comprising five to six directors, including the three Board appointed directors (one of whom is the Chair), the Committee meets at least four times a year to assist the Board in relation to:

- audit processes
- financial reporting
- financial systems and controls
- budgets and rebates
- risk management
- integrated thinking and reporting.

The Chief Executive Officer, Chief Financial Officer, Risk and Assurance Manager, General Counsel and external auditor also attend this Committee's meetings.

How we manage our risks and relationships continued /

Board Appointments and Remuneration Committee

Comprising five directors, the Committee meets to:

- review the remuneration and performance of the Chief Executive Officer and the remuneration of senior management
- make recommendations regarding director remuneration
- make recommendations regarding appointed directors.

Governance Excellence Committee

Established in 2021 and comprising five directors, this Committee promotes the importance of good governance and governance development pathways within the Ravensdown shareholder base for the benefit of New Zealand primary industry. This Committee meets on an as-needed basis.

Share Registry Committee

Comprising three directors who meet prior to each Board meeting, this Committee makes recommendations regarding share surrender, allotment, and transfer applications from shareholders.

Code of Business Conduct

Our Code of Business Conduct outlines our commitment to keep our people safe and to safeguard our culture by placing social and environmental governance at the core of our business. It explains our expectations of conduct within the business including our commitments to:

- human rights
- conducting business fairly
- upholding the principles of Te Tiriti o Waitangi
- community development
- environmental protection
- reducing climate change.

Ravensdown's Protected Disclosures Policy encourages employees to report known or suspected incidents of wrongdoing within the company and enables them to do so confidentially. Material breaches to the Code of Business Conduct are required to be reported to the Board and follow-up actions monitored.

We also have a range of other policies to protect our values and people. Examples include:

- Supplier Code of Conduct
- Diversity, Inclusion and Belonging Policy
- Flexible Working Policy
- Anti-Bullying and Harassment Policy
- Legislative Compliance Guidelines
- Fraud Management Policy
- Anti-corruption Policy.

Our people must always act honestly and fairly with due skill, care and diligence in the interests of all of our stakeholders.



How we manage our risks and relationships continued /

Risk Governance

Our Board, Audit and Risk Committee and Leadership Team via the Risk Management Committee are actively engaged in risk management.

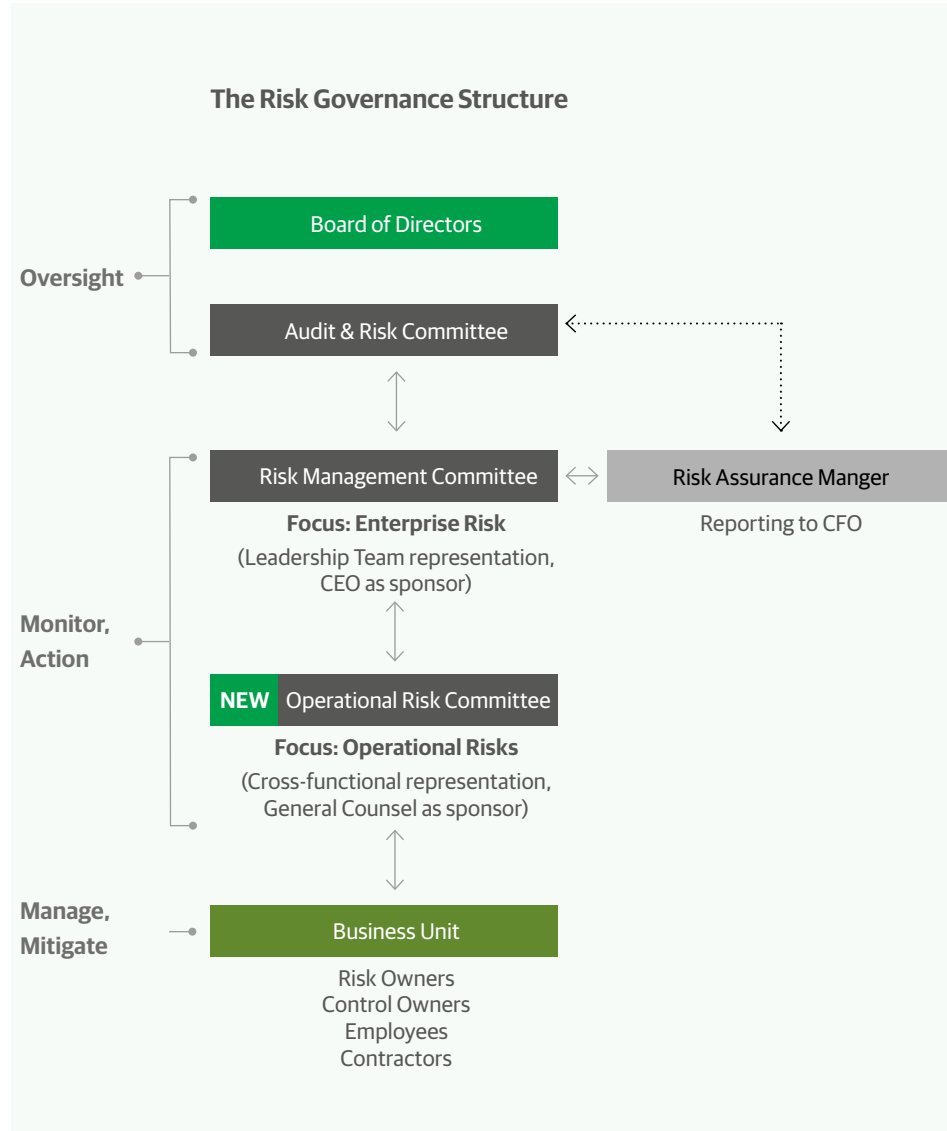
Roles and responsibilities for risk are outlined in both our Board and Audit and Risk Committee (ARC) charters.

The Board promotes a risk management culture, sets risk appetite, and approves the risk policy.

The ARC provides oversight and monitors top enterprise risks by performing regular deep dives and actively challenging management assertions.

The Risk Management Committee (RMC), made up of our Leadership Team, meets regularly to assess and rate risk and review management activity.

This year the risk system was strengthened with the addition of an Operational Risk Committee. It brings together cross-functional leaders to monitor operational risks to ensure they remain within tolerance levels. This group reports to the RMC on significant or escalating risks.



Business units follow one mandated risk management framework. This framework summarises Ravensdown’s commitment and approach to risk management and is reviewed by the ARC and approved by the Board.

A dedicated Risk and Assurance Manager is in direct contact with the Chair of the ARC, facilitates the Leadership Team to discharge risk responsibilities and supports a strong risk culture via system documentation, training and advice.

A business continuity framework and associated plans are in place with scenario testing planned to ensure embedded and continuously improved.



How we manage our risks and relationships continued /

Key risks and opportunities

This section provides an overview of the enterprise risks managed via the risk governance system.

Mitigations for each risk

Business Interruption: Operations

Multiple site locations and resilience is built into asset and system investment. A fire prevention programme is underway in manufacturing and business continuity plans are in place. Diversified suppliers and a shipping joint venture minimise supply chain disruption.

Strategic Execution

Agility to change strategic direction and decision making in an uncertain operating environment. A pricing policy that can be adjusted quickly to meet market expectations. Active engagement with regulators and industry participants. Competitor monitoring and response.

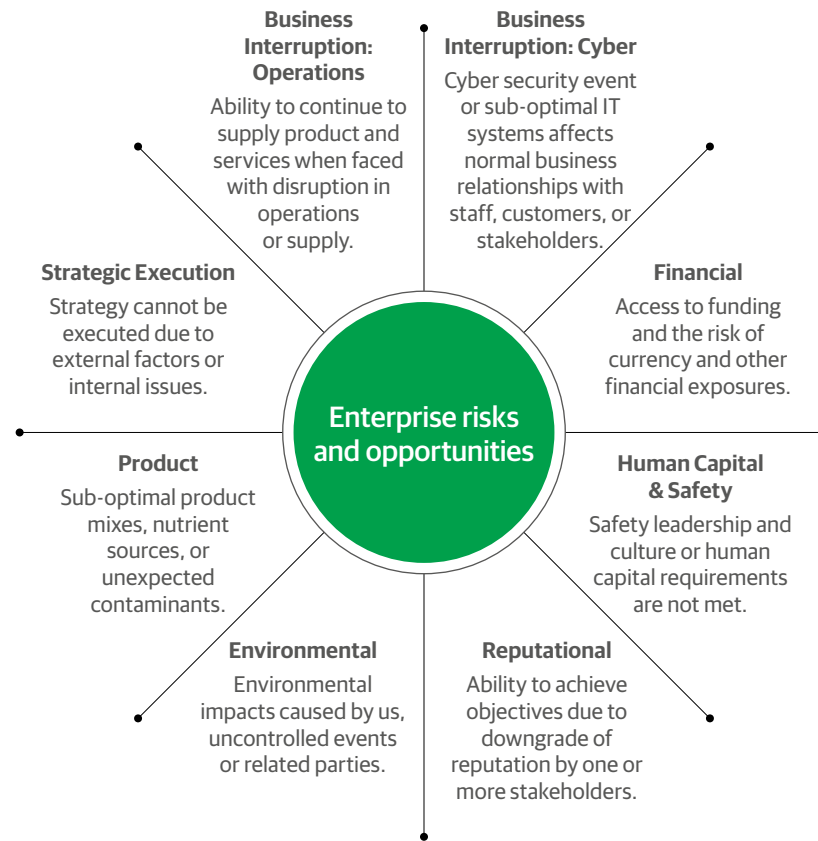
Product

Our strategy for sourcing rock is defined. Quality control warning systems and regular laboratory testing. Third party and shipment inspections are performed. Blends have their own controls and checks for compatibility.

Environmental

Monitoring systems and control mechanisms for emissions, biosecurity protocols, use of technology and research and development processes are employed to reduce environmental impacts.

Enterprise Risk



Mitigations for each risk

Business Interruption: Cyber

Regular cyber security assessment utilising international security standards with a workplan maintained. Key cyber controls and penetration testing performed to assess system resilience.

Financial

Maintain strong banking relationships and open communication. Foreign currency hedging and a strong treasury policy that is audited regularly. Regular forecasting, capital planning controls and strong cost management to maintain financial integrity.

Human Capital and Safety

Restructuring change management processes, employee support services and talent retention protocols. Safety and wellbeing include visible leadership, critical risk management, systems, and assurance.

Reputational

Code of business conduct and human rights impact assessment are in place with supply transition projects underway.

5 Committed to farmers, growers and New Zealand /

Feeding New Zealand's future

Ravensdown is a co-operative founded by and owned by New Zealand farmers. As farm nutrient and environmental experts, we're at the heart of the food and fibre value chain in New Zealand – and a natural partner for our primary producers.

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Using technology, science and talent, we work with our farmers to provide the agronomic solutions they need. This core service is further supported with innovative technology and environmentally focused products and services.

As a business, our multi-layered approach means we test for, advise, buy, ship, manufacture, store, spread, measure and map the food-creating nutrients our farmers need in a truly integrated way.

We meet our customers' needs across a wide spectrum, helping farmers and growers develop smarter ways of farming that are good for their land, good for their bottom line, and better for New Zealand's future generations.



Manaaki whenua, manaaki tangata, haere whakamua.

If we take care of the earth and take care of people, we will take care of the future.

Materiality /

Identifying our priorities

Material matters uncover opportunities, risks, strengths and weaknesses. They are used to help inform strategic decision making within the business, to set objectives and targets, and to identify key performance indicators (KPIs). They also inform our key stakeholder relationships to ensure we are prioritising and communicating on what matters most to them.

Method

Ravensdown completed an independent materiality assessment to gauge the views of its stakeholders on a range of business priorities. A list of 22 material issues was identified using intelligence gained from business units, from stakeholder engagement activities, an operational risk and opportunities assessment, feedback from industry groups, UN Environment Programme's corporate impact analysis tool and historical analysis of company performance. We surveyed and interviewed a range of stakeholders within and outside the business.

Respondents were asked to:

- rate the importance of each issue to the value Ravensdown creates over the short, medium and long term
- rate Ravensdown's performance in managing each issue
- select the top three priorities for Ravensdown to focus on.

Materiality is reviewed annually and third-party assessment is done bi-annually.

Results

Our materiality matrix (above right) illustrates the relative importance of material issues based on the value Ravensdown creates, as defined by internal and external stakeholder views.

Reliable supply remains the top overall issue. This was followed by a tight cluster of four – safety and mental wellbeing, profitability and investment in growth, leadership and direction, and a positive culture. The top 10 material issues were

Materiality matrix



rounded out by innovative solutions, operational environmental impacts, trusted experts, farm environmental impacts and stakeholder relationships. These are the themes that you will notice throughout the report. They also feature in the risks and opportunities section (page 57). The two notable changes compared with last year are the higher priority of profitability and leadership. We asked for an indication of how we are doing in relation to each material issue and

assessed internal vs external views. We were pleased to see close alignment between internal and external stakeholder materiality supporting the direction of our business strategy and indicating a solid understanding of stakeholder views and priorities at this time. There were also some specific differences in priorities for different stakeholder groups. For example, farmers placed more importance on trusted experts and leadership and less on climate action and operational environmental impacts.

UN Sustainable Development Goals /

Pursuing our Goals

UN Sustainable Development Goals (SDGs)

At Ravensdown we recognise the critical role of business in helping to achieve the SDGs. The specific SDGs that are important to us and that we set out to have an impact on are referenced.

We have evaluated our business against the UN's SDG indicators (listed in colour, right) and will continue to be transparent about how we are performing against these indicators.



Directory /

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ravensdown.co.nz

Smarter farming for a better New Zealand / Ka pūkekotia a Rongomātāne, ka poho kererū a Aotearoa.

