GNS SCIENCE TE PŪ AO

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Annual Report

2024/2025

On 1 July 2025 GNS Science and the National Institute of Water and Atmospheric Research (NIWA) were merged to form Earth Sciences New Zealand.

Presented to the House of Representatives pursuant to section 44 of the Public Finance Act 1989.

This report meets our annual reporting responsibilities under the Crown Research Institutes Act 1992 for the year ended 30 June 2025.

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Groundwater testing conducted by Uwe Morgenstern.
Photography by PJ Warren

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Introduction from the Chair and Chief Executive

Welcome to our final annual report.

This marks a significant moment in New Zealand's scientific journey. As we reflect on the successes of the past year, we also celebrate the legacy of GNS Science and the people who have shaped it. Looking ahead, we're excited to embrace a new era as Earth Sciences New Zealand, continuing our commitment to world-leading research, innovation, and impact for the benefit of all New Zealanders.

This year marked a period of profound transformation and achievement. The Science System Reform and the establishment of Earth Sciences New Zealand represents a significant shift for our organisation — one that we continue to embrace with focus and determination.

In this last year as GNS, we helped unlock new economic opportunities through cutting-edge research and innovation that supports industry and drives growth. Our scientists joined an international expedition to Brothers Volcano, one of the most hydrothermally active sites in the Kermadec arc. Drilling into the sub-seafloor, we uncovered rich ore deposits of copper, zinc, and gold—critical materials for modern infrastructure and technology. These findings are guiding future exploration and resource development. We're leading a global effort to transform bio-waste into clean hydrogen and high-value chemicals. Our novel biomass electrolyser—developed with partners in Japan, Thailand, and New Zealand—uses low-value waste to produce hydrogen, methanol, and ethanol. This breakthrough supports New Zealand in reducing emissions, and opens the door to commercial opportunities in a global market.

In a world-first energy investment, GNS Science's long-term research laid the foundation for the government's $60 million commitment to supercritical geothermal energy. This bold step could provide up to 35% of New Zealand's projected electricity needs by 2050. We're now working with Kānoa to identify pilot sites and develop the technologies needed to harness this powerful, renewable energy source. In Taranaki, we're exploring how depleted oil and gas reservoirs could be repurposed for underground compressed air energy storage—a promising solution to New Zealand's dry-year electricity challenge. This approach could transform the region into a cornerstone of the country's clean energy transition, while supporting economic resilience and avoiding stranded assets.

We are also delighted to have delivered tools and insights that are helping decision-makers act faster, smarter, and with greater confidence. Our RiskScape software, which was co-developed with partners NIWA, Natural Hazards Commission and Catalyst IT Limited, is powering smarter emergency planning. By combining AI and advanced modelling with real-world data, RiskScape is helping Fire and Emergency New Zealand understand future risks and position resources where they're needed most. RiskScape provides a comprehensive risk framework to support response decisions. We are also working at a local level to help communities build resilience. In Takapūwāhia, Porirua, our work with Ngāti Toa Rangatira iwi is demonstrating how science and mātauranga Māori can come together to protect people and places. Through hazard mapping, impact assessments, and community-led planning, we're helping tangata whenua make informed decisions about emergency preparedness and land use, ensuring their voices and values shape future resilience.

These are just some of the projects that reflect our commitment to turning scientific discovery into real-world impact—fuelling industry, supporting regional development, and powering New Zealand's future.

Our Organisation

In the first half of the financial year, GNS embarked on a Financial Sustainability Change Programme that aimed to address current and future challenges for the organisation. As a Crown Research Institute, GNS has an obligation to be financially sustainable. More importantly, growing our financial sustainability is critical if we are to make strategic investments. We focused on operating with fiscal prudence, seeking cost savings where possible and looking hard at discretionary spending. Considering the size of our workforce alongside other cost saving measures was a difficult but necessary part of this programme.

Throughout all of these changes, our people have been exceptional. Their resilience, adaptability, and commitment to delivering outstanding science has been inspiring. This year we made a profit after tax of $9.1 million, which is our strongest financial result ever. This is a testament to the agility and dedication of our teams and puts us in a very good position for the merger.

We support the Government's ambition to grow economic productivity through science and innovation.

Contributing to the Science System reform process has been a welcome opportunity for us, and our partners and stakeholders, to shape transformational system change. We look forward to continuing to play our part in delivering a modern, future-focused research system for New Zealand.

We are grateful to everyone at GNS — the Board, the Executive Leadership Team, and all our people — for their tireless work and commitment to excellence and impact. And to all our partners — industry, government agencies, iwi-Māori, and others in the science system — who enrich our work with their insights and help to translate our science to achieve impact. We look forward to continuing to work with you in the year ahead as Earth Sciences New Zealand.

David Smol
Chair to 30 June 2025

Chelydra Percy
Chief Executive to 30 June 2025

Our Science Outcomes

Driving economic growth

Increasing returns from the use of New Zealand's natural resources and environments, enhancing energy security and increasing prosperity in our changing and challenging climate.

Riches lie deep! Secrets from under the seafloor

Research at Brothers Volcano is unlocking new economic opportunities by revealing the mineral wealth hidden beneath the seafloor. Beneath the volcano's surface lies a dynamic magmatic-hydrothermal system where circulating hot hydrothermal fluids create rich deposits of valuable metals. As these hot fluids rise through the volcanic rock and escape onto the seafloor, they leave behind a treasure trove of materials like copper and zinc—essential ingredients for modern technology, infrastructure, and industry.

The international team onboard the RV Sonne sent a drill rig down onto the seafloor to recover samples from the upper 100 metres of that volcanic crust. By studying the processes that create these valuable deposits, our scientists can support the development of more effective strategies for locating and extracting resources from similar environments across the globe.

GNS scientists joined a team from the University of Bremen, Max Planck Institute for Marine Microbiology, and the University Erlangen-Nuremberg.

Converting waste into clean affordable energy

We are leading an international effort to turn waste biomass into clean hydrogen and high-value chemical products. At the centre of the collaboration is a novel biomass electrolyser. Unlike traditional electrolysers, which rely on ultra-pure water and expensive materials, this system uses waste biomass to simultaneously produce hydrogen and byproducts such as methanol and ethanol, lowering costs and broadening the range of usable feedstocks.

By transforming low-value biomass, like forestry and food production waste, into commercially valuable products, this new technology supports New Zealand's circular economy and reduces emissions across hard-to-decarbonise sectors. The project aims to tap into a global market of 320 million people and reduce commercialisation costs by up to 79%.

Developed by GNS Science in partnership with researchers from Japan, Thailand, and New Zealand. The project has just received funding as part of the e-ASIA Joint Research Programme, a major initiative aimed at strengthening international collaboration on alternative energy research across east Asia and beyond. The Ministry of Business, Innovation and Employment's Catalyst Fund will also support the project.

World first energy investment powered by New Zealand science

We have shown that supercritical geothermal is not only a significant energy solution for New Zealand, it is economically viable too. Supercritical geothermal could economically provide up to 2,050 MW, roughly 35% of New Zealand's projected electricity needs by 2050. New Zealand has taken a bold step towards energy security and decarbonisation with a world-first, government-funded exploration into supercritical geothermal energy.

The $60 million government-backed funding marks a significant milestone in New Zealand's transition to a low-emissions future. Our evidence-based science will support the government to unlock regional development, energy security, and global leadership in renewable technology. GNS Science is proud to be a catalyst for this step change. By partnering with iwi, government, and industry, supercritical technology will help transform geothermal into one of New Zealand's most strategic, long-term energy and export assets.

The New Zealand Government announced it ringfenced $60 million to support supercritical exploration in November 2024.

Bold innovation and smart technology

Developing new materials and technologies that improve energy efficiency and advance low carbon energy use.

Cracking concrete's carbon emissions

We are pioneering an ultra-low carbon cement alternative, called RockXtract. Made from abundant, underutilised rock material found in New Zealand, RockXtract removes the need for the carbon-intensive calcination process. It instead uses experimental geochemistry to produce a strong binding performance, with up to 95% lower emissions.

We have also launched a five-year Endeavour funded research programme to create a carbon-negative replacement for Portland cement, based on local sources of iron that are in an oxide form. In this form, the manufacturing process will not generate carbon dioxide.

Not only do the latest concrete innovations address environmental challenges and support critical industry, they also demonstrate how New Zealand's unique resources could unlock significant export opportunities in a competitive global market.

GNS Science is developing RockXtract in partnership with a leading US research group in cement engineering to accelerate R&D. The team are also participating in the GCCA – Global Cement and Concrete Association Innovandi Open Challenge 4, which is connecting us with some of the world's biggest cement and concrete producers.

Taranaki is emerging as a strategic location for New Zealand's energy storage

With the cancellation of the NZ Battery Project's Lake Onslow project, securing large-scale energy storage is in sharp focus for the energy sector. Attention is now shifting north. The North Island accounts for about two-thirds of New Zealand's electricity demand, with peak demand forecast to reach 6.9 GW by 2050. Underground energy storage could answer New Zealand's dry-year problem, prevent blackouts, and ensure reliable delivery of renewable electricity to homes and businesses.

We are investigating whether Taranaki's depleted oil and gas reservoirs could store up to 7 GW of energy underground in the form of compressed air. Taranaki is ideal due to its well-known geology, proximity to major demand centres, and connection to, and growth of, renewable energy generation. The region already has infrastructure in situ, such as drilled wells and pipelines, meaning compressed air storage would build on what is already in place, avoiding stranded assets and expensive decommissioning.

If supported by government and industry, this storage option could enable Taranaki's oil and gas sector to become a cornerstone of New Zealand's clean energy transition.

World-first simulator supports efficient geothermal solutions

Our new "geothermal reservoir process simulator" precisely replicates geothermal conditions in unprecedented detail. Geothermal developers face big, high-stakes decisions. The simulator provides a powerful alternative to in-field testing, removing many of the costs and safety risks associated with early development.

This world-first tool is providing the data and insights the geothermal industry needs to plan with confidence and move faster. By working closely with clients to develop methods and solutions that are bespoke to them, we can help them make safer, more informed decisions.

The simulator was developed at our experimental geochemistry laboratory in Taupō in collaboration with French R&D company, Vinci Technologies.

Empowering communities

Supporting communities to prosper and to be more resilient and better prepared for natural hazard events.

From whenua to whānau – building community resilience through science

Our science is helping protect Porirua's Takapūwāhia community and the property people care about from natural hazard impacts. Takapūwāhia is home to 1500 people, the majority of whom are tangata whenua from Ngāti Toa Rangatira iwi. The land is vulnerable to earthquakes, tsunami, landslides and other natural hazards, so Ngāti Toa know it is only a matter of time before a geohazard event strikes. In partnering with us, the Takapūwāhia community is supported to plan for a safer, more resilient future.

Project outputs are helping the community make important decisions about where to place emergency supplies and how to protect homes and key resources – like marae, kura and medical centres – from natural hazards.

GNS Science provided technical expertise funded through It's Our Fault, a collaborative research programme studying Wellington's earthquake risk. The programme is now looking to provide similar support to two further Wellington region communities.

Fault lines to front lines

Vanuatu is recovering from the M7.3 earthquake that shook the region on 17 December 2024. From the moment the earthquake struck, we have been supporting Vanuatu, identifying landslide hazards induced by the earthquake and subsequent aftershocks and assessing the impacts on communities and infrastructure. The partnership is a demonstration of resilience-building in practice.

Helping to inform the Vanuatu Meteorology and Geohazards Department's immediate response and recovery decisions, our team is also empowering them with new tools, methods, and the confidence to assess complex hazards, like landslides and liquefaction. This kind of partnership is exactly what resilience-building looks like in practice.

New Zealand Ministry of Foreign Affairs and Trade, the High Commission in Port Vila, and the Humanitarian and Disaster Management Team in Wellington facilitated engagement with the Government of Vanuatu to enable GNS Science assistance.

Testing energy solutions with Ngāhina Marae

Marae often rely on a diesel generators for energy back-up, but sometimes it can be hard to access diesel to fuel those generators in a disaster situation. We are designing a microgrid solution to enable marae to generate, store and use renewable energy within their own communities. We are working with Ngāhina Marae in Bay of Plenty to test whether isolated rural marae can utilise green hydrogen to enhance their energy independence and build community resilience.

Together, we are exploring the marae's potential for capturing solar or wind energy for their electricity and then storing it as hydrogen.

GNS Science partnered with Ngāhina Marae to co-design the pilot project.

Better decisions

Providing the expertise and technologies New Zealand needs to find future-focused solutions to our biggest societal and environmental challenges.

A new wave of safety and simplicity with smarter tsunami evacuation

Tsunami evacuation maps are critical when it comes to an emergency response but, when every second counts, our response tools need to be action-ready. Our social science research team has been a critical contributor in the design of a nationally consistent, simplified approach to tsunami evacuation zones across New Zealand.

A major shift in this new, research-led approach is the introduction of single, easy-to-understand "Blue Zones" for evacuation. By aligning technical data with how people behave in emergencies, we can improve public safety outcomes and strengthen community resilience against this ever-present threat.

The Tsunami Evacuation Director's Guideline for Civil Defence Emergency Management Groups was published by the National Emergency Management Agency in May 2025.

Laser eyes on the sea floor

Laser technology installed on cables deep beneath the sea in the Southwest Pacific is being trialled in a bid to improve tsunami warnings. Installed on 4,000 kms of existing Southern Cross NEXT subsea telecommunications cables, the laser sends ultra-stable light along the seafloor. From the returning signals, our scientists can identify possible earthquake or tsunami signatures. Our Rapid Characterisation and Tsunami programme (RCET) is collaborating with the UK's National Physical Laboratory (NPL) and the Measurement Standards Laboratory of New Zealand (MSL) on the UK-NZ trial.

The subsea technology is described as the equivalent of ~70 additional tsunami sensors lined up like an ever-awake infantry unit, poised to intercept changes in the ocean that might indicate a tsunami threat. The innovative technique could be a game changer for tsunami resilience, fast-forwarding the speed at which warnings are delivered.

The international collaboration was enabled by the UK's International Science Partnership Fund and is supported by the New Zealand's Quantum Technologies Aotearoa programme. RCET is funded by the Ministry of Business, Innovation and Employment's Endeavour Fund.

Smart risk software powers national emergency response

Understanding our future risk and knowing where to position critical equipment is key for Fire and Emergency New Zealand (FENZ). RiskScape is delivering cutting-edge data visualisations that are much improving FENZ's ability to plan for tomorrow's disaster responses. The online tool hosts bespoke risk models, specially designed to meet the responders' needs. It incorporates FENZ response data, building information, road information, demographic and deprivation data, and uses AI machine learning to derive risk scores for individual buildings, road segments and land packages.

Knowing the calculated risk empowers first responders to make better decisions about where and how to prepare for future emergency events. This smart technology puts us a giant leap ahead by enabling faster, more efficient responses to the emergencies that unfold in our neighbourhoods.

RiskScape is New Zealand's next generation, open source, loss modelling software developed by GNS Science and NIWA in collaboration with the Natural Hazards Commission and Catalyst IT Limited.

Trusted stewards

Understanding and mitigating human impacts on our environment and climate, and finding solutions that will benefit our communities now and for generations to come.

Muddy waters, clearer strategies – cyclones a segue to better lake management

When extreme events such as Cyclone Gabrielle lash the landscape, the resulting landslides and erosion in the hills carry a huge volume of silt and mud into surrounding streams. This sediment eventually washes into lakes, causing large disturbances to the aquatic plants, animals and organisms living there. Our co-led Our Lakes, Our Future research programme is studying sediment cores from Lakes Tūtira and Waikōpiro to understand the response of lake ecosystems to the cyclones.

The layers of mud on the bottom of these Hawke's Bay lakes are a hidden archive of Cyclones' Gabrielle and Bola on the lakes' ecosystems. Retrieving and assessing critical information directly from the lake beds will support the development of management tools to help boost lake resilience in our changing climate.

Our Lakes, Our Future is funded by the Ministry of Business, Innovation and Employment's Endeavour Fund, and is co-led by GNS Science, Lincoln University, and the Cawthron Institute.

Innovative science boosts groundwater resilience

Groundwater is a vital freshwater resource for New Zealand. It makes up more than 80% of the water flowing through our rivers, streams and wetlands and provides 40% of our drinking water. Groundwater irrigation is estimated to contribute more than $2 billion to New Zealand's economy annually. The Te Whakaheke o Te Wai research programme has combined innovative techniques in environmental tracers and modelling to provide a step-change in our understanding of the age, source and flow of water through New Zealand's aquifers.

We have developed a powerful suite of tools to support the sustainable management of groundwater. A national map of groundwater age, levels, and interaction with surface water can be used to identify areas where groundwater may be susceptible to contamination, and to evaluate the sustainability of groundwater extraction. An interactive National Groundwater Model supports decision makers to find future-focused answers to complex environmental management questions.

Funded by the Ministry of Business, Innovation and Employment's Endeavour Fund. For further information about the Te Whakaheke o Te Wai research programme, including who we worked with, see https://www.gns.cri.nz/research-projects/te-whakaheke-o-te-wai/

Critical data

Providing the essential, high quality and timely data and information New Zealand needs to inform good decisions, reduce risk and increase national resilience.

Mapping our cities for a better future

As our cities grow, having up-to-date geoscience information is particularly important. Knowing the types of rocks and sediments that form the foundations of our built-up areas, and the nature of the geological hazards affecting our communities – like earthquake faults and landslides – is critical for planning. Our detailed geological and landform maps of urban and developing areas offer unique insight into the region's geological risks and opportunities.

We are helping to shape smarter, safer cities through the Urban Geological Mapping Project - unlocking vital insights beneath our feet and providing councils and planners the critical tools they need. Our scientists are generating information packages for the Auckland region, Dunedin and Hawke's Bay, providing resources of benefit to a variety of users including local government, geotechnical consultancies and the general public.

The Urban Geological Mapping Project is funded by the Ministry of Business, Innovation and Employment's Strategic Science Investment Fund.

More resolution, more faults, more information

Knowing where New Zealand's active faults are located can help inform actions to manage risk and build resilience. We are now providing more detail than ever to help manage the risk of ground surface rupture during large earthquakes, following a major upgrade to the public New Zealand Active Faults Database (NZAFD) webmap. The data is 25 times greater resolution than was previously accessible, meaning thousands more active fault traces can now be viewed right down to individual backyards.

This new wealth of detail can help people determine levels of insurance, take measures to earthquake strengthen a property, or help make decisions about land-use options for developers and owners.

The NZAFD is produced by GNS Science and represents the most current mapping of active faults for New Zealand in a single database.

Our Science

Our Vision **A Cleaner, Safer, More Prosperous Aotearoa New Zealand.**

Our Purpose

To undertake research that:

- increases New Zealand's resilience to natural hazards;
- enhances our understanding of geological and Earth-system processes;
- drives innovation and sustainable economic growth in New Zealand's energy sector; and
- develops new materials, products and approaches to assist other agencies with sustainable management of risk, environment, and natural Earth and groundwater resources.

Our impact by 2032

GNS Science will contribute to the following:

Energy	Bring more than $5 billion back into the Aotearoa New Zealand economy by 2032 and reduce our annual energy emissions by up to 30 million tonnes through a science-led transition to locally produced low-carbon energy.
Hazard and risk	Greater resilience to a significant geohazard event through a range of planning, regulatory, and education measures, improved response, and improved forecasting of scale and breadth of impact. Combined, these efforts could save hundreds to tens of thousands of lives and reduce economic shock by billions of dollars.
Environment and climate	The connectivity of environmental systems is understood and a plan in place to protect our groundwater. We will be able to forecast and minimise the impact of our activities on the environment and adapt effectively to unavoidable change. We will contribute scientific knowledge and implement actions to reduce anthropogenic atmospheric CO_2 which could have an Emissions Trading Scheme value of $2 billion by 2032.
Kaitiakitanga	Not only will the potential resources, energy, environments, hazards and origin of Te Riu-a-Māui Zealandia be valued, understood, respected, protected and restored, we will have a comprehensive plan to monitor our changing environment so current and future generations can live sustainably and resiliently in New Zealand.

Our Direction

Our direction is defined by the research required to enable a cleaner, safer, more prosperous New Zealand. That is, a country more resilient to natural processes, a more sustainable environment, and a secure and better quality of life for all who live here.

Our Science Roadmap identifies where our research can best deliver benefit for New Zealanders and future stakeholders.

We are contributing to a 30-year vision for New Zealand informed by Treasury's Living Standards Framework and United Nations Sustainable Development Goals. Our contribution will help New Zealand:

- enable industry, innovation, infrastructure and economic growth
- achieve its long-term energy needs
- meet climate action goals (carbon net zero 2050)
- have sustainable and resilient environments, ecosystems and societies
- secure its freshwater.

GNS Science is committed to increasing our understanding of Māori science needs and expectations. To support this outcome, we have continued to implement Te Punawai o Rangiātea, our Māori Strategy. Meaning 'the flourishing pool of knowledge', Te Punawai o Rangiātea provides critical guidance and direction to enable GNS Science to create enduring and sustainable relationships with tangata whenua – iwi, hapū, whānau and Māori. By weaving the future interests of iwi / Māori into our Science Roadmap and actively using mātauranga Māori in our work, we demonstrate our commitment to the principles of participation, protection, and partnership. Our goal is to build more opportunities for iwi / Māori to lead significant research programmes and grow capability and capacity to contribute to long-term intergenerational wellbeing and change.

Focused on four research themes, our data, discoveries and innovations over the past year are enabling more informed decisions to meet New Zealand's current and future needs. Our four research themes are:

- **Natural Hazards and Risks**
- **Environment and Climate**
- **Energy Futures**
- **Land and Marine Geosciences**

Our themes are underpinned and connected by Social Sciences, Data Science and Vision Mātauranga. This helps us to make certain our outputs are useful, usable and used, enabling us to deliver impact.

Our Science Performance ▶

This section sets out what we achieved this year in delivering the outputs planned in our Statement of Corporate Intent 2024/25 (https://www.gns.cri.nz/about-us/corporate-documents/).

Our Science Performance

Natural Hazards and Risks

GNS Science has a national leadership role in monitoring and researching the causes, risks, and consequences of geological hazards in New Zealand. We work to increase resilience to natural hazards and reduce the risk from earthquakes, volcanoes, landslides, and tsunamis.

The purpose of our research is to generate important scientific knowledge, expertise and tools that can be used to improve resilience to natural hazards at national, regional, business, community and individual levels. The more we understand about the size, frequency and location of our geophysical hazards and what triggers geohazard events, the better we will be prepared for the future, have more effective responses when they do occur and will recover more quickly from them.

What we planned 2024 / 25	What we achieved and the impact it had
A natural hazards short course is scoped and delivered (landslide, risk or earthquake), including investigating the range of funding models.	A two-day Earthquake Short Course was developed and delivered. This interactive course covered earthquake hazard and risk concepts, models, tools and techniques. Participants considered the risks posed by earthquakes and learned how to prepare for and reduce the physical, economic and social impacts of an earthquake event. GNS researchers collaborated with Massey University, the Natural Hazard Commission, and Victoria University of Wellington to scope and present the course. GNS offers a range of short courses that provide participants with a better understanding of hazards and risks across New Zealand. These courses contribute to the following Natural Hazards and Risks theme goals: → **Trusted Science Advice** | Provide trusted science advice for effective risk reduction, readiness, response to and recovery from emergencies. → **Community Resilience** | Apply a social science and people-centred systems approach to enable, empower, and support communities to build resilience.
Work with partner agencies to agree and implement the 2024/25 GeoNet and National Seismic Hazard Model (NSHM) programmes of work, aligned with the Government Budget 2024.	GeoNet provides New Zealanders with high quality open data for research and monitoring on earthquakes, tsunamis, volcanic activity and landslides. We use remote and on-site methods to gather and transport data with a network of over 1000 monitoring instruments in more than 700 locations. It also facilitates expert advice in major events. The National Seismic Hazard Model (NSHM) calculates the long-term likelihood and strength of earthquake shaking that may occur in different parts of New Zealand. A new multi-year programme of work has been agreed with our NSHM partner agencies - the Ministry of Business, Innovation and Employment and the Natural Hazards Commission. The programme reflects a strong partnership approach, scientific ambition, and strategic alignment with government priorities, and provides a strong foundation for an evolving NSHM. Key achievements this year across the two programmes include: → Our 24/7 operations continued to provide real-time monitoring and scientific expertise to support decision-makers and communities through geohazard events. → Advancements in modelling joint fault ruptures. → Refinement of the earthquake geology database. → Updates to ground motion database and simulations. → Significant gains in NSHM computational efficiency, reducing future programme costs and enabling more scalable modelling. → International collaborations with NSHM communities (US, Japan, Europe, Taiwan, Australia, Switzerland) through workshops, advisory panels, and joint science initiatives. This body of work contributes to the following Natural Hazards and Risks theme goals: → **Understanding of Geohazard Processes** | Increased understanding of the complex physical processes that generate natural hazards. → **Stewardship of National Capability** | Provide stewardship of critical geohazards data, hazards models and risk tools, monitoring infrastructure and nationally important capability. → **Trusted Science Advice** • Provide trusted science advice for effective risk reduction, readiness, response to and recovery from emergencies. • Understand and respond to the requirements of stakeholders in the planning and delivery of our research. → **Natural Hazard Risk Management System Improvement** | Provide impact forecasting by extending monitoring to include the ability to provide timely impact information and forecast what will happen next (over timeframes of hours to weeks to decades).

Complete a new decadal work plan for geological hazards and risk model development and regular revision cycles, including the use of RiskScape™, MERIT and other socioeconomic tools for assessment of both qualitative and quantitative risk metrics.

The GNS Science Natural Hazards and Risks Theme Plan was reviewed and updated this year. This plan will guide our programmes, funding bids, capability development, and capital investment relating to natural hazards and risks over the next five years. It incorporates our strategy for the development of geological hazard and risk models, including RiskScape™ and MERIT, with aligned work programmes also completed for in-flight projects. These documents have replaced the need for a decadal work plan.

The Plan was developed collaboratively and validated through stakeholder engagement during the Natural Hazard Resilience Platform planning process in late 2024. It ensures alignment with national priorities and supports collaborative development of risk tools across key science agencies.

This contributes to the following Natural Hazards and Risks theme goals:

- → **Understanding of Geohazard Processes** | Increased understanding of the complex physical processes that generate natural hazards
- → **Stewardship of National Capability** | Provide stewardship of critical geohazards data, hazards models and risk tools, monitoring infrastructure and nationally important capability
- → **Trusted Science Advice**
  - Provide trusted science advice for effective risk reduction, readiness, response to and recovery from emergencies.
  - Understand and respond to the requirements of stakeholders in the planning and delivery of our research.
- → **Knowledge Exchange**
  - Act as knowledge brokers for the hazards and risk management system
  - Cross-disciplinary and cross-organisational coordination to deliver maximum benefits for science investments.

Deliver a discussion paper on the requirements for impact-based forecasting for engagement with decision-makers.

Moving towards multi-hazard impact-based warnings fulfils New Zealand's key National Disaster Resilience Strategy reporting obligations against the United Nations Disaster Risk Reduction Sendai Framework. Impact-based forecasts and warnings are used to tell people what kind of impacts they can expect from the hazard, and where and when they are likely to occur, rather than just describing the physical characteristics of the hazard. This can be more meaningful to people and can help them to make more informed decisions on how best to protect themselves.

A paper on the requirements for design and implementation for an impact-based forecasting and warning system at GNS Science has been completed. It provides a useful evidence base and catalyst for discussion as we bring together the monitoring and forecasting of all major natural hazards within Earth Sciences NZ. We have also been working with National Emergency Management Agency (NEMA) to test prototype impact forecasts for landslides during storms over the year.

As the first step in the development of impact-based forecasting and warning system, the discussion paper contributes to the following Natural Hazards and Risks theme goals:

- → **Trusted Science Advice**
  - Provide trusted science advice for effective risk reduction, readiness, response to and recovery from emergencies.
  - Understand and respond to the requirements of stakeholders in the planning and delivery of our research.
- → **Community Resilience** | Apply a social science and people-centred systems approach to enable, empower, and support communities to build resilience.
- → **Natural Hazard Risk Management System Improvement**
  - Improved natural hazard risk management policy and practice
  - Provide impact forecasting by extending monitoring to include the ability to provide timely impact information and forecast what will happen next (over timeframes of hours to weeks to decades).

Our Science Performance

Environment and Climate

Our research under this theme focuses on the sustainable management of the environment and effective adaptation to climate change.

Globally, science's ability to predict how the climate will change, as well as identifying thresholds and tipping points, must improve. It will be important to adapt to unavoidable change as the oceans warm, pressure on freshwater resources increases, sea-level rise affects coastal communities and infrastructure, and extreme weather events become more frequent and intense.

Science is needed to provide context and to evaluate natural variability and baselines so that we can attribute and address human-driven change. The research we are doing to understand and mitigate the impact we are having on the world's environment and climate will benefit our communities for generations to come.

Model biogenic carbon fluxes across New Zealand's urban areas and assess the potential of carbon offsets from the urban biosphere being included into future National Inventory Reports (in partnership with the Ministry for the Environment).

Carbon dioxide from urban fossil fuel burning is responsible for 40% of New Zealand's gross carbon emissions. Understanding how much carbon dioxide is released by our cities and how much is absorbed by urban green spaces is key for effective mitigation policies.

GNS Science is leading the CarbonWatch-Urban programme. This includes mapping urban carbon dioxide sources and sinks for every town and city in New Zealand, providing vital information to support the transition to a low-carbon economy and help New Zealand meet its net-zero 2050 target.

This year GNS researchers have modelled biogenic carbon fluxes for towns and cities across New Zealand. This provides a first dataset that will be compared with atmospheric observations and revised to better reflect the true urban biogenic carbon fluxes.

This work contributes to the following Environment and Climate theme goal:

→ **Carbon Cycle and Atmospheric Emissions**

- Improving New Zealand's national and regional carbon budgets in order to meet its national and international commitments.
- Examining carbon fluxes in the Southern Ocean and short- and long-term sequestration potential into our coastal- and land-based ecosystems.

Develop a national map of groundwater age.

Groundwater age provides a useful way to distinguish between 'young' and 'old' groundwater. When combined with other data, groundwater age helps identify recharge sources, outflow boundaries of an aquifer system, potential contamination sources, and the lag time between contamination entering the aquifer and discharging (via wells or connected surface waters). When incorporated into models, groundwater age information can assist decision-makers to better manage groundwater resources.

A national map showing the estimated age of groundwater has been completed. It was presented at the Annual Conference of the New Zealand Hydrological Society.

This work contributes to the following Environment and Climate theme goal:

→ **Freshwater Security and Quality**

- Measuring, mapping, and modelling groundwater systems
- Recognising the social, environmental and cultural value of New Zealand's groundwater.

Obtain a new geological record of West Antarctic Ice Sheet response to past increases in global surface temperature from beneath the Ross Ice Shelf.

The Sensitivity of the West Antarctic Ice Sheet to 2°C warming (SWAIS2C) project aims to determine how much the West Antarctic Ice Sheet melted during the last interglacial and other past times when climate was warmer than present. This will enable us to better project how much sea-level rise to expect in the future.

The international team of scientists, drillers and crew have been drilling beneath the sea floor to recover sediment cores from beneath the Ross Ice Shelf.

Technical challenges were encountered during the first two deep field drilling seasons, and the primary drilling targets were not reached. However, short sediment cores and grab samples were recovered during both drilling seasons, which will contribute to our understanding of West Antarctic Ice Sheet variability. A third drilling season is scheduled for 2025/2026 at another location on the ice shelf.

This work contributes to the following Environment and Climate theme goals:

→ **Antarctic Climate and Ice Dynamics** | Develop and improve understanding of how ice shelves, ice sheets and sea ice will change as temperatures increase, and how this will impact the Southern Ocean and New Zealand.

→ **Our Climate System Through Time**

- Generate records of past climate from sediment layers and ice cores to identify and examine patterns not currently captured in short-term datasets (e.g. thermometers and satellites).
- Identify thresholds and tipping points in the climate system to improve our ability to model and project future climate.

Estimates of sea level rise commitments from Antarctic Ice Sheet melt are integrated into at least one long-term environmental management plan.

The Ministry for the Environment's Coastal Hazards and Climate Change Guidance was released in 2024 and incorporated Antarctic Ice Sheet projections. This guidance is designed to help decision makers, land use and infrastructure planners and others consider the potential effects of climate change, based on the latest scientific information. Antarctic Ice Sheet projections have been incorporated in the Guidance.

This work contributes to the Environment and Climate theme goal of:

→ **Sea Level Rise and Coastal Change**

- Understanding the causes, rate, and magnitude of past, present, and future sea level change and its impact on New Zealand and the South Pacific.
- Connecting our ice sheet research with global sea level datasets and coastal vertical land movement to improve regional projections of sea level.
- Incorporating sea level research results into groundwater, coastal hazard and risk models to guide climate change adaptation policy and planning.

Our Science Performance

Energy Futures

Under this theme we deliver research and technology solutions that support a sustainable, low-carbon future for New Zealand.

Our research aims to increase opportunities to use renewable resources and efficiency gains to reduce carbon emissions from energy use and to grow energy resource security.

This will be achieved through increased use of geothermal energy for electricity generation, direct use of geothermal energy, improvements in hydrogen production, the development of enabling technology to increase the use of renewable energy, and the identification of new energy sources that contribute to a low-emissions energy future.

Review carbon sequestration potential and the future of carbon management regulation.

Carbon sequestration: GNS researchers completed a study that evaluated the potential for carbon sequestration in the Taranaki area. This work included modelling of carbon dioxide injection into depleted gas fields and the evaluation of leakage risk through active faults from a potential offshore carbon dioxide storage site. Initial results indicate technical feasibility, but further analysis and model refinement needs to take place to see if the technique is suitable given the geological conditions of Taranaki and to test the reservoir seal.

Carbon management regulation: A European Societal Embeddedness Level (SEL) methodology was evaluated for carbon management purposes and further adapted to the New Zealand regulatory setting. This work aimed to help project leaders in New Zealand identify potential societal challenges that may hinder their projects widespread adoption.

This work contributes to the Energy Futures theme goal of:

→ **Using the Earth for New Energy Storage**
- Using the subsurface as a machine for storing or producing energy
- Use the subsurface to capture emissions

National scale heat flow models will be developed from thermal gradients, rock properties and transient processes to identify areas of elevated temperatures.

GNS researchers have examined New Zealand's heat flow and crustal temperature distribution, using borehole temperature measurements and conductive heat flow modelling. This used our knowledge of geological processes occurring in New Zealand to predict underground temperatures between measurement locations.

This work produced an updated New Zealand heat flow map and subsurface temperature maps across New Zealand. These maps will assist our understanding of new areas that may have potential for direct and indirect use of geothermal resources in the future. This work also provides an improved framework by which to understand thermal processes in tectonically active regions across the world.

Our findings were incorporated into the new Government draft strategy to unlock New Zealand geothermal potential.

This work contributes to the Energy Futures theme goals of:

→ **Growing the Use of Geothermal Energy, with a Particular Focus on New Resources** | Build capability and provide understanding that supports increased sustainable and innovative use of geothermal energy to reduce New Zealand's carbon emissions and enhance wellbeing. This includes both hotter supercritical fluids and shallow geothermal energy that can be used directly for industrial process heat.

→ **Modelling and Analysing New Zealand's Energy System** | Provide information and data that propels New Zealand to a just transition to a net-zero carbon energy future.

An electrochemical green ammonia production system employing catalyst materials developed by GNS Science will be tested and demonstrated.

This research aims to fabricate an active catalyst for electrochemical green ammonia production and develop a reactor capable of testing these catalysts and measuring their performance. GNS researchers have successfully identified a promising catalyst (fabricated using GNS' unique material fabrication techniques) and developed a reactor setup capable of accurate and precise testing of electrochemical ammonia production performance. Ammonia has a double use as energy carrier and food fertiliser and represents a large national economy potential.

This work has successfully established the foundational capability and provided strong preliminary evidence for a breakthrough. Our focus for the next year will be to leverage this powerful validation platform to systematically optimise the catalyst, tackling the critical performance and stability barriers to commercial viability.

This work contributes to the Energy Futures theme goals of:

- → **Growing New Zealand's Hydrogen Economy** | Design and develop materials, tools and technologies to overcome the scientific, engineering, social and economic barriers in implementing hydrogen as a zero-carbon energy carrier and industrial feedstock.
- → **Developing New Clean Technology Industries Based on Advanced Materials Research** | Create, characterise and integrate new materials systems to underpin the clean technologies that will deliver a sustainable and resilient net-zero carbon energy future for New Zealand.

Progress discussions with the Government and industry round a joint supercritical geothermal initiative.

The New Zealand Government announced that up to $60 million from the Regional Infrastructure Fund has been ringfenced to explore the potential of supercritical geothermal technology.

GNS Science is very proud that our science has demonstrated the potential of supercritical geothermal resources to meet a significant amount of energy demand growth in the future, and to make a contribution to New Zealand's target for net-zero emissions by 2050.

GNS researchers are working with the government through Kānoa – Regional Economic Development and Investment Unit to support this project by providing science advice.

This work contributes to the Energy Futures theme goal of:

- → **Growing the Use of Geothermal Energy, with a Particular Focus on New Resources** | Build capability and provide understanding that supports increased sustainable and innovative use of geothermal energy to reduce New Zealand's carbon emissions and enhance wellbeing. This includes both hotter supercritical fluids and shallow geothermal energy that can be used directly for industrial process heat.

Our Science Performance

Land and Marine Geoscience

This theme generates knowledge about the continent Te Riu-a-Māui / Zealandia and oceans that enables GNS Science to improve predictive capability for hazards and disasters, understand global scale environmental change, variability and impacts, and identify new sustainable natural resources. Under this theme, GNS Science is kaitiaki (steward and custodian) of Earth science knowledge, mātauranga, our databases and collections taonga.

Our research under this theme is framed in health, cultural, economic and environmental outcomes and is underpinned by the precious taonga in our Nationally Significant Collections and Databases.

In developing GNS Science's approach to critical minerals research, we will assess long-, mid-, and short-term indicators of economic and social interest in critical minerals through engagement with stakeholders.

GNS Science has developed a strategic framework to guide its research into critical minerals, with a focus on aligning with national priorities and industry needs.

We have organised and hosted two workshops to foster collaboration and re-establish key relationships - one with a private sector representative and another one with MBIE Resources Markets team.

Through these initiatives, GNS is laying the foundation for a robust and responsive critical minerals research programme that supports sustainable resource management and national economic resilience.

This work contributes to the Land and Marine Geosciences theme goal of:

→ **Managing Natural Resources Sustainably**

- Understand the relationships between tectonism, volcanism and geothermal systems in New Zealand to enhance geothermal resource potential and management.
- Quantify how and where critical elements and materials are distributed in the subsurface to support a sustainable transition to a low-emissions future.
- Facilitate the use of the subsurface to capture emissions and as a machine for storing or producing energy.

Build capability in landscape evolution and surface process modelling to better understand long-term landscape responses to natural hazards and climatic changes including earthquakes, severe weather events and sea level rise.

GNS Science researches the processes that shape the surface and subsurface of the Earth. Our continent is positioned astride an active plate boundary, where dynamic seismic, volcanic, physical, hydrological, chemical and thermal processes constantly shape the surface of our continent.

By further understanding these underlying processes, how they interact and how human impact and intervention may further affect our landscape, we can better support the planning and building of resilient communities.

GNS progressed several initiatives this year to build capability in this area:

→ Upskilling in sediment dynamics and fluvial modelling at the catchment and reach scale using the Caesar Lisflood modelling package.

→ Better utilisation of geological datasets in landscape modelling projects.

→ Completion of a project looking at how landscape evolution model outputs can better meet stakeholder needs. This project brought together social scientists and landscape modelers to understand how numerical model outputs can be delivered in such a way as to be useful, useable and used by local government, stakeholders, and iwi / hapū.

→ Building knowledge of how to model the transport of bedload sediment down rivers and use these models to validate existing theories about river aggradation following storm/cyclone and earthquake events.

This work contributes to the Land and Marine Geosciences theme goals of:

→ **Understanding our Changing Landscape**

- Develop capability in landscape evolution modelling and exploring the land-to-sea boundary to understand the source-to-sink system of sediment transfer. The focus is on low-lying coastal zones which are particularly vulnerable to the dynamics of natural and human-induced changes.
- Advance our ability to measure and model surface processes across land, coastal, and marine settings to provide essential insight into changing environments. This supports New Zealand's response to hazards and climate change.
- Understand the diverse submarine landslide tsunami sources around New Zealand to refine existing hazard assessment and mitigation strategies.

→ **Understanding Our Past to Improve Our Future** - Provide stewardship of New Zealand's geological history and timescale enabling improved understanding of the rates and scale of change and climate impacts.

Nationally significant and nationally important geoscience datasets have publicly available information on their data management quality and accessibility to promote their data science application and re-use.

GNS Science is the custodian of eight Nationally Significant Collections and Databases. We ensure that these are kept up to date with newly acquired samples and data. We also maintain and improve system functionality and infrastructure to ensure ready access both internally and externally for research, commercial applications, and public information.

GNS has been focusing on improving 'FAIR' (Findable, Accessible, Interoperable and Reusable) scores that track data management quality. To improve the availability of our Nationally Significant Collections and Databases information, we have also worked with MBIE to publish information on each collection on their website.

This work contributes to the Land and Marine Geosciences theme goal of:

- **Understanding Our Past to Improve Our Future** | Provide stewardship of New Zealand's geological history and timescale enabling improved understanding of the rates and scale of change and climate impacts.
- **Kaitiaki of Our Continent Te Riu-a-Māui / Zealandia** | Be kaitiaki of Te Riu-a-Māui / Zealandia geoscience by ensuring our data, knowledge and understanding of the fundamental processes is in a format fit for purpose and used by many.

Create new gravity and magnetic grids of the offshore Bay of Plenty that will improve our understanding of the volcanic and tectonic transition between onshore Taupō Volcanic Zone and offshore Havre Trough.

New gravity and magnetic grids of the offshore Bay of Plenty have been created using data collected during the Beneath the Waves research voyages. These datasets have been compiled into updated gravity and magnetic anomaly maps, which represent a step forward in understanding the geological transition between the Taupō Volcanic Zone and the Havre Trough.

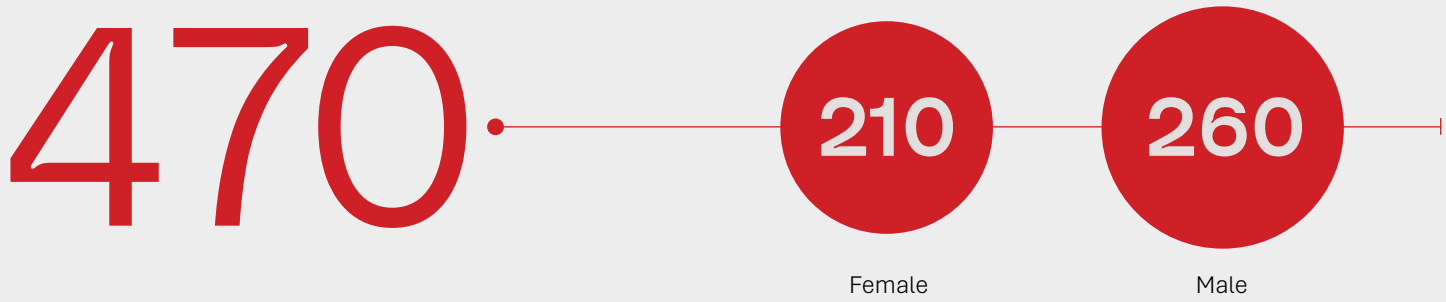
The magnetic anomaly map reveals the spatial extent of the volcanic chain that includes Whakaari (White Island) and identifies additional volcanic features across the offshore Bay of Plenty. The gravity anomaly data has been interpreted to show a northward thinning of the crust, indicating the transition from continental to oceanic crust. This analysis is key to understanding the tectonic framework of the area and supports broader models.

This work contributes to the Land and Marine Geosciences theme goal of:

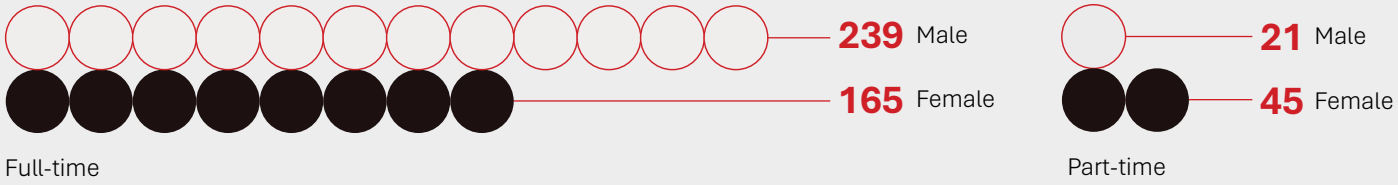
- **Managing Natural Resources Sustainably**
  - Understand the relationships between tectonism, volcanism and geothermal systems in New Zealand to enhance geothermal resource potential and management.
  - Quantify how and where critical elements and materials are distributed in the subsurface to support a sustainable transition to a low-emissions future.
  - Facilitate the use of the subsurface to capture emissions and as a machine for storing or producing energy.

Our People at a Glance

TOTAL HEADCOUNT



EMPLOYMENT TYPE

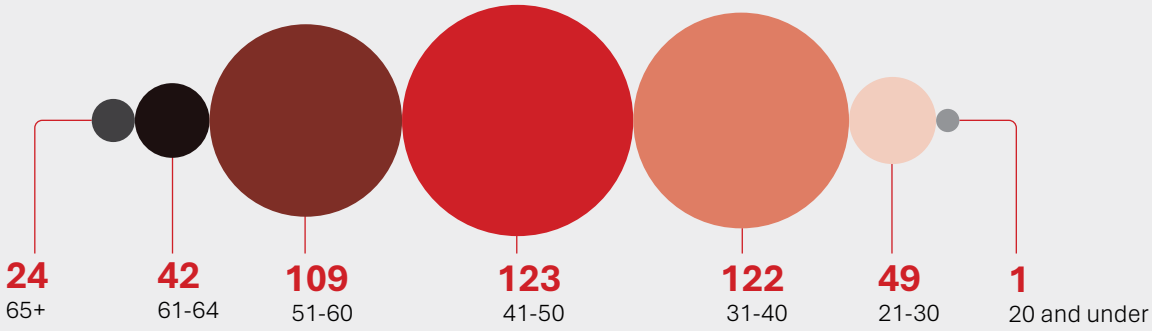


ETHNICITY

Some employees select multiple ethnicities. *MELAA stands for Middle Eastern / Latin American / African.

Our People at a Glance

AGE RANGE

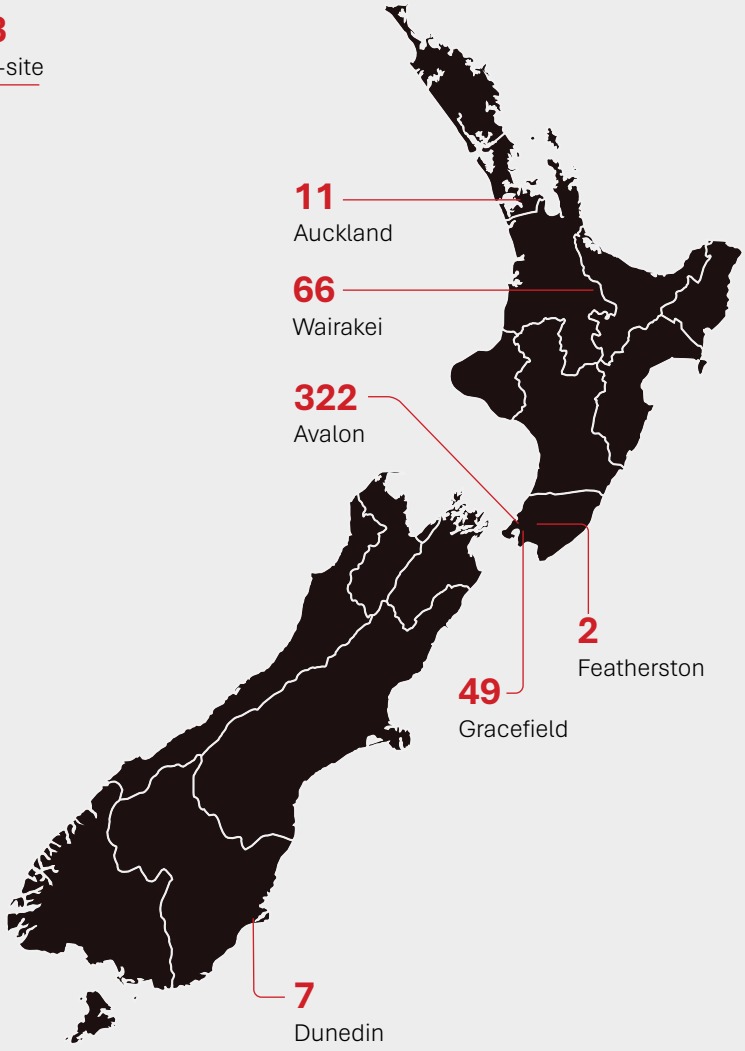


PAY GAP

2.6%
between male and female

WHERE WE WORK

13
Off-site



Investing in Our People

Our people are at the heart of GNS Science. We are committed to our values and the principles of being a good employer. Our people and culture policies and practices promote fair and proper treatment of our people in all aspects of their employment.

We focus on our workforce as a key contributor to meeting strategic goals and delivering value to New Zealand. Our investment in people is evidenced through our emphasis on leadership development, employee engagement, and enhancing equity, diversity and inclusion. Through these initiatives we nurture talent and ensure our people feel valued for their work.

Supporting our people through change

During the first half of the financial year we undertook a financial sustainability change programme. This was designed to address our long-term financial performance and enable us to be more strategic and confident in our future investments. The programme looked at the profitability of our research, including commercial work, and the costs of supporting our operations. It also included a review of the size and structure of the organisation.

Our approach to the review was to run a fair, open, and transparent process that was done in good faith with our staff and their representatives, as well as meeting all our contractual and legal obligations. A wellness support programme was in place, led by a Wellness Group.

To support our staff through the change process we implemented a comprehensive engagement programme with a mixture of in-person and on-line approaches, including Q&A sessions held across all of our sites. A tool called 'ConsiderThis' was used for feedback and responses and ensured accessibility, transparency and interactive ability for the whole organisation to discuss and question the proposed changes.

Developing our leaders

This year GNS developed and launched the Leadership Approach framework to ensure we have effective leaders now and into the future. Having clear expectations about what leadership means at GNS is critical for the success of our leaders and will support us to deliver our goals and foster a strong culture. Five key areas sit under the Leadership Approach:

Leadership expectations

The accountability, capability and behaviours we expect from leaders. Links into performance, promotion and goal setting.

Leader selection

Expectations and behaviours articulated in position descriptions and recruitment for leadership levels. Supports aspiring leaders with a clear direction.

Leader development

Targeted and purposeful development programmes based on GNS' strategic and business needs.

Building networks

Building strong and supportive networks across the GNS Leadership community. This could include mentorship, coaching and enhancing collaboration.

Communicating and supporting

Leaders are supported with clear and consistent communication of key messages and alignment of business processes.

GNS also established an induction programme for new leaders, revised position descriptions for people leader roles to include leadership expectations and revamped our Manager Essentials e-learning. These initiatives aim to boost skills and ensure consistent leadership across the organisation.

Our quarterly leadership forums this year were designed to support people leaders navigating ongoing organisational change and complexity - focusing on emotional intelligence and leading through change and uncertainty. The forums are designed to share common leadership learning and language and provide leaders with practical tools and takeaways.

Equity, diversity, and inclusion

Our Equity, Diversity, and Inclusion (EDI) policy strengthens every aspect of our work, from advancing science to engaging clients and communities.

Highlights from the 2024/25 year include:

Training and resources: The provision of online resources and training for our people, such as unconscious bias (mandated for those involved in recruitment), intercultural capability, workplace neurodiversity awareness, and working towards a rainbow inclusive workplace.

Gender pay gap: Our average gender pay gap has moved from 21.6% in 2016 to 4.1% (2.6% excluding the Chief Executive) by 30 June 2025. Key pieces of work have included review and revision of the way we assess our people for promotions, monitoring of starting salaries for bias, and applying an EDI lens in our annual remuneration round.

Kia Toipoto: Our Kia Toipoto working group and our employee-led Equity, Diversity and Inclusion Committee recognised the opportunity to bring their work together. The Kia Toipoto goal and action plan has a wide scope to make progress on the ethnic pay gap, accelerate progress for wāhine Māori, Pacific women, women from ethnic communities, and creating fairer workplaces for all, including disabled people and members of rainbow communities. The group have agreed the action plan for the 2025-26 year. The plan and progress report can be found on our website at Pay Equity - Earth Sciences New Zealand | GNS Science | Te Pū Ao.

Te Ao Māori capability

GNS' Te Ao Māori capability programmes provide our people with opportunities to explore, learn and enhance their knowledge and cultural awareness to engage with iwi and Māori in meaningful and successful ways. Training opportunities include te reo, tikanga, and marae-based Te Tiriti o Waitangi training. These courses are very well attended from across the organisation.

Our support for Māori participation in science progressed well with the continuation of the Ahunuku Māori Summer Scholarships programme. This scholarship provides Victoria University of Wellington Te Herenga Waka university students of Māori descent with an opportunity to enhance their skills and gain valuable experience within the earth sciences field. They are guided and supported by our expert GNS Science researchers.

The organisation gets behind the celebration of Matariki and te wiki o te Reo, with interactive events and opportunities for our people to participate and learn. Events organised for te wiki o te reo, increased exposure and interaction to te reo and tikanga.

We maintain our Māori Engagement Database and intranet toolkit to support our people's engagement with Māori and iwi. This includes information about relationships, plus current and accessible advice and maps for our people.

Employee-led networks

GNS continues to support the development and sustainability of employee-led networks. These networks engage in activities to promote social connection, raise awareness and influence policy.

Our employee-led groups include:

- Site Health, Safety and Wellbeing committees
- Equity, Diversity and Inclusion Committee
- Site based Social Clubs
- Early Career Staff Network (ECSN).

The ECSN advocates for and empowers our early career people. The network is led by a Council who drive the workstreams of Engagement, Advocacy and ECHO (a buddy programme for new ESCN members). Their activities this year included issuing a monthly newsletter highlighting achievements of members, running events for Mental Health Awareness week, organising training courses on understanding your strengths, time management and financial knowledge.

Keeping our people safe

We aim for seamless integration of health and safety risk management into all GNS activities to ensure the best possible safety outcomes for our people and the business. Our people are supported by our Health Safety and Wellbeing Policy, procedures, and active and visible leadership practices.

GNS Science workers are exposed to some very hazardous environments and working conditions. We invest in Health, Safety and Wellbeing (HSW) training for all workers, and provide protective equipment, safety monitoring systems, and health monitoring, as appropriate to specific work types.

Our workers participate in the HSW Management System through input into policies and procedures and active participation in site HSW committees. This has resulted in improved understanding and increased levels of HSW leadership, ownership, and collaboration across the organisation. For example, there has been a significant decrease in over speeds recorded in our vehicles through awareness, reporting, and manager conversations.

This year we have continued development of our Critical Risk management and verification activities, including the introduction of the Guardian Angel system to monitor the safety of field teams. This allows monitoring in real time via the Iridium satellite system. This was trialled by our Remote Infrastructure Monitoring team, before being rolled out to all field workers and their leaders.

Reducing our Carbon Footprint

GNS Science is committed to acting in an ethical and responsible manner, to prioritise the sustainable use of New Zealand's natural resources, and to minimise the impact of our operations on the environment.

We have an Environmental Policy that promotes the wise use of resources, particularly through use of waste minimisation and energy efficient programmes, and an Environmental Sustainability committee. This is a staff-led initiative aimed at helping GNS Science to fulfil its Environmental Policy and reduce its environmental footprint.

We are also part of a pan-CRI community of practise, through which we share information about sustainability initiatives, collaborate on sustainability matters, and encourage the measuring and reporting of carbon emissions.

We are proud to have received Toitū carbonreduce certification for six years running . GNS has collated and reported our carbon emissions since the 2018/19 reporting year, joining the Toitū Envirocare carbonreduce programme in March 2020.

The carbonreduce programme provides a platform to both accurately collate and report on our greenhouse gas emissions, and to identify targets and projects to reduce emissions. This independent verification confirms that our carbon footprint is complete, accurate, and up to an international standard.

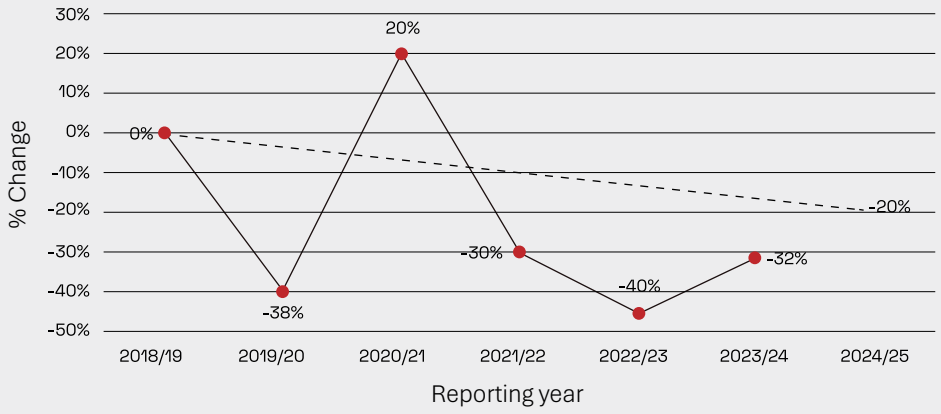
Total annual emissions and their source

GNS Science's greenhouse gas emissions for 2023/24 were 3018.80 tCO2-e (tonnes of carbon dioxide equivalent), which represents a 32% reduction from the baseline measurements in 2018/19. With this reduction, we are on track to meet our target of reducing our emissions by 20% by 2025[1].

We have reduced our travel fuel consumption and energy use since our baseline year. Key initiatives that have influenced this include changing our vehicle fleet to electric vehicles (EVs) and hybrids where possible, ongoing commissioning of air handling systems, and tuning of the building management systems to ensure efficient operations. Better reporting has seen our staff commute emissions reduce by 53% from the baseline year. We also note that the Ministry for the Environment's 2024 measuring guidance resulted in a favourable electricity emission factor.

Better reporting and changes in operational activities have led to an increase in some emissions during the 2023/24 year, with the majority of our emissions coming from business travel and energy use. Some operational emissions (e.g. business travel) have returned to near pre-pandemic levels with an increase in travel to reconnect our staff and stakeholders and support our operations.

Change in absolute emissions (all measured emissions) since base year (tCO2e)



1. Note that the 2024/25 data is not yet available. The emissions information in this Annual Report is for the year ending 30 June 2024.

Performance Indicators

For the year ended 30 June 2025

The GNS Science suite of performance indicators includes measures that are consistent across the Crown Research Institutes, as well as indicators that allow GNS Science to show performance against our own strategic direction. This year, GNS Science has performed well against many of our indicators. (Targets for 2025 are in brackets)

Impact case studies

3 (3)

Impact case studies published

Knowledge exchange

77% (>75%)

Surveyed end-users have adopted knowledge from GNS Science in the past three years

Peer-review

3 (3)

Surveyed end-users have confidence that GNS Science considers their sector's priorities when setting research priorities

Science quality

4.7 (3.2)

Impact of scientific publications (weighted citation index)

Research collaboration

93% (>90%)

Papers co-authored

End-user collaboration

116 (95)

Revenue per FTE from commercial sources ($000)

Priority setting

63%[1] (>70%)

Surveyed end-users have confidence that GNS Science considers their sector's priorities when setting research priorities

Technology & knowledge transfer

1.2 (1)

Commercial reports per scientist FTE

Revenue generation

270 (240)

Revenue per FTE ($000)

Team selection

72%[2] (>85%)

Surveyed end-users have confidence that GNS Science has assembled 'best' teams for research delivery

Māori engagement

13 (10)

Projects with Māori stakeholders embedded in the research

Health and safety

0.3 (<2)

Recordable injuries per 200,000 work hours (rolling 12-month average)

Research delivery

91% (>90%)

Research milestones (critical steps) on track or completed

Staff engagement

58%[3] (>73%)

Percentage of staff engaged in working for GNS Science

1. The weighted average response out of 10 is 6.3. 82% of respondents report positive sentiment (providing a score of 5 or above) 50% report very positive sentiment (7 or above).
2. The weighted average response out of 10 is 7.2. 93% of respondents report positive sentiment (providing a score of 5 or above) 70% report very positive sentiment (7 or above).
3. This result is from a pulse survey designed to measure engagement and gather feedback following the structural change phase of the Financial Sustainability Change Programme.

Financial Performance at a Glance

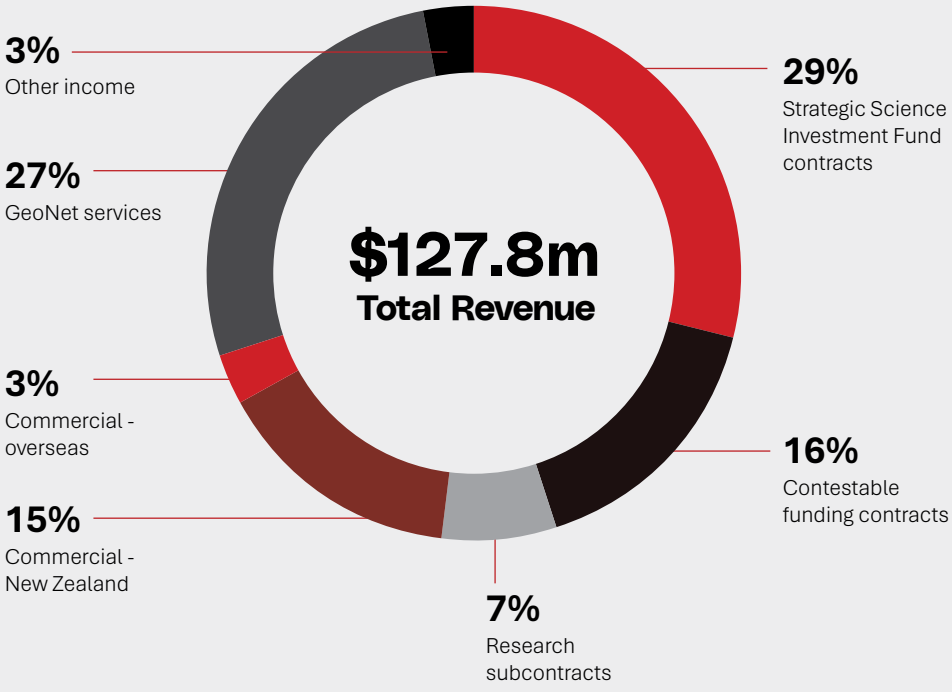
GNS Science recorded a profit after tax of $9.1m compared to a budgeted profit of $1.6m for the year ended 30 June 2025.

Revenue for the year was $127.8m, $4.3m (3.5%) higher than budgeted. This upside is primarily due to the Natural Hazards and Resilience SSIF Platform, of which GNS Science secured a role as host during the financial year.

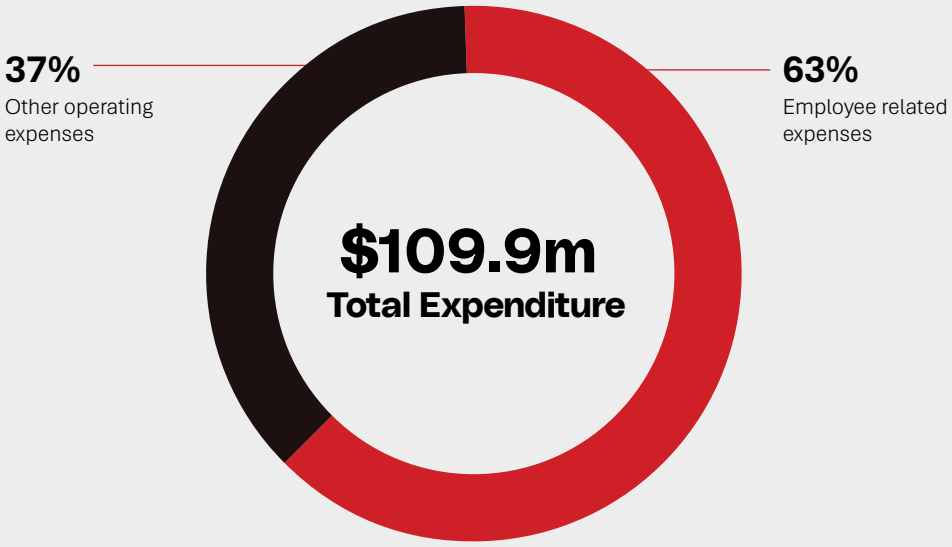
Operating expenditure for the year was $109.9m, $7.4m (6.3%) less than the prior year and $5.0m below budget. Both project expenses and sub-contract expenses have significantly reduced since the prior year. Alongside this, there have been cost reductions through a programme of initiatives focused on improving the financial sustainability of the organisation.

GNS Science continued to invest in the replacement and renewal of our assets, with $10.0m capital expenditure in the past 12 months.

REVENUE



HOW WE SPENT OUR MONEY



Financial Performance Indicators

Group Ratios and Statistics

	Actual 2025	Actual 2024	Budget 2025
Revenue			
Revenue $000	**127,783**	129,564	123,486
Revenue growth	**-1.4%**	9.2%	-4.7%
Operating results ($000)			
Operating expenses (including depreciation and amortisation)	**109,911**	117,250	114,901
EBITDA	**17,872**	12,314	8,585
EBIT	**10,650**	4,780	864
Profit before tax	**12,676**	6,776	2,237
Profit after tax	**9,063**	3,952	1,610
EBITDA per FTE	**38**	22	17
Total assets	**114,974**	98,180	91,518
Total equity	**52,412**	43,349	43,802
Capital expenditure	**10,034**	9,752	11,185
Liquidity			
Quick ratio	**3.0**	2.3	2.0
Profitability			
Return on equity	**17.3%**	9.1%	3.7%
Operating margin	**14.0%**	9.5%	7.0%
Operational risk			
Profit volatility	**49.9%**	51.7%	42.7%
Forecasting risk	**8.1%**	5.6%	4.0%
Growth/Investment			
Capital renewal (before impairment adjustments)	**1.4**	1.2	1.4
Dividend ($000)	**-**	-	-
Financial Strength			
Equity ratio	**45.6%**	44.2%	47.9%

Financial Statements

Consolidated Statement of Comprehensive Income

For the year ended 30 June 2025

In thousands of New Zealand dollars	Note	Actual 2025	Actual 2024	Budget 2025
Revenue				
Research contracts		**66,493**	70,691	68,267
Commercial		**22,207**	25,039	18,246
GeoNet services		**34,812**	30,166	33,343
Other income		**4,271**	3,668	3,630
Total revenue	2	**127,783**	129,564	123,486
Operating expenses				
Employee benefit expenses	10	**69,661**	67,426	70,422
Other operating expenses	3	**40,250**	49,824	44,479
Total operating expenses		**109,911**	117,250	114,901
Profit before interest, tax, depreciation and amortisation		**17,872**	12,314	8,585
Depreciation	6	**7,146**	6,832	7,671
Amortisation	7	**46**	265	50
Impairment of property, plant & equipment	6	**-**	437	-
Impairment of investments	13	**30**	-	-
Profit before interest and tax		**10,650**	4,780	864
Interest income		**2,120**	1,902	1,373
Share of (loss) / profit from equity accounted investment	13	**(94)**	94	-
Profit before tax		**12,676**	6,776	2,237
Income tax expense	4	**(3,613)**	(2,824)	(627)
Profit after tax		**9,063**	3,952	1,610
Other comprehensive income		**-**	-	-
Total comprehensive income attributable to owners		**9,063**	3,952	1,610

The accompanying notes form part of these financial statements

Consolidated Statement of Changes in Equity

For the year ended 30 June 2025

In thousands of New Zealand dollars	Share capital	Equity reserves	Retained earnings	Total equity
Balance at 30 June 2023	6,167		33,230	39,397
Net profit after tax	-		3,952	3,952
Balance at 30 June 2024	**6,167**		**37,182**	**43,349**
Net profit after tax	-		9,063	9,063
Balance at 30 June 2025	**6,167**		**46,245**	**52,412**

The accompanying notes form part of these financial statements

Consolidated Statement of Financial Position

As at 30 June 2025

In thousands of New Zealand dollars	Note	Actual 2025	Actual 2024
Equity			
Share capital	5	**6,167**	6,167
Equity reserves		**46,245**	37,182
Total equity		**52,412**	43,349
Represented by:			
Non-current assets			
Property, plant and equipment	6	**45,955**	43,377
Intangible assets	7	**57**	98
Deferred tax	9	**1,198**	2,160
Investments		**-**	124
Total non-current assets		**47,210**	45,759
Current assets			
Cash and cash equivalents		**46,869**	26,751
Short term investments		**10,000**	11,134
Trade and other receivables	8	**3,989**	7,073
Prepayments		**3,637**	3,393
Contract assets	2	**3,269**	4,070
Total current assets		**67,764**	52,421
Total assets		**114,974**	98,180
Non-current liabilities			
Non-current provision for employee entitlements	10	**1,629**	1,664
Capital grants from Crown (long-term portion)	2	**17,757**	17,361
Total non-current liabilities		**19,386**	19,025
Current liabilities			
Trade and other payables	11	**10,734**	11,159
Current provision for employee entitlements	10	**4,138**	4,430
Contract liabilities	2	**23,100**	16,622
Capital grants from Crown (current portion)	2	**2,640**	1,961
Provision for income tax		**2,564**	1,634
Total current liabilities		**43,176**	35,806
Total liabilities		**62,562**	54,831
Net assets		**52,412**	43,349

The accompanying notes form part of these financial statements

For and on behalf of the Board:

David Smol
Chair

22 September 2025

Mary-Anne Macleod
Deputy Chair

22 September 2025

Consolidated Statement of Cash Flows

For the year ended 30 June 2025

In thousands of New Zealand dollars	Note	Actual 2025	Actual 2024
Cash flows from operating activities			
Cash was provided from:			
Receipts from customers		**135,318**	125,693
Interest received		**2,134**	1,937
		137,452	127,630
Cash was applied to:			
Payments to suppliers and employees		**(110,602)**	(113,871)
Income tax paid		**(1,721)**	-
		(112,323)	(113,871)
Net cash inflows from operating activities	12	**25,129**	13,759
Cash flows from investing activities			
Cash was provided from:			
Sale of property, plant and equipment		**1**	9
Receipts of capital funding in advance		**4,331**	6,700
Maturity of short term investments		**15,292**	19,140
		19,624	25,849
Cash was applied to:			
Purchase of property, plant, equipment and intangible assets		**(10,034)**	(9,752)
Return of capital funding in advance		**(443)**	-
Placement of short term investments		**(14,158)**	(16,652)
		(24,635)	(26,404)
Net cash outflows from investing activities		**(5,011)**	(555)
Net increase in cash and cash equivalents		**20,118**	13,204
Opening cash and cash equivalents		**26,751**	13,547
Closing cash and cash equivalents		**46,869**	26,751

The accompanying notes form part of these financial statements

Notes to the Consolidated Financial Statements

1. Reporting entity and activities

The Institute of Geological and Nuclear Sciences Limited (trading as GNS Science) is established under the Crown Research Institutes Act 1992 and the Companies Act 1993. Its subsidiary companies are established under the Companies Act 1993. These financial statements have been prepared in accordance with the Crown Research Institutes Act 1992, the Public Finance Act 1989, the Companies Act 1993, the Crown Entities Act 2004 and the Financial Reporting Act 2013.

Consolidated financial statements for the Group comprising the Institute of Geological and Nuclear Sciences Limited (the Parent) and its subsidiaries are presented, and the effects of intra-group transactions are eliminated in the consolidated financial statements. Subsidiaries are those entities controlled by the Parent. Control is achieved where the Parent has the power to govern the financial and operating policies of an entity to obtain benefits from its activities.

The wholly owned subsidiaries of the Parent are:

- Isoscan Limited
- Isoscan Food Limited
- Geological Surveys (New Zealand) Limited
- Geological Risk Limited
- GNS Science International Limited

The principal activities of the Group are to undertake geoscience and isotope science research, development and commercial projects, predominantly in New Zealand. The Institute of Geological and Nuclear Sciences Limited holds a 50% interest in EDDI Project, an unincorporated joint operation formed to undertake a contract for dam hazard management in Vietnam.

Statement of compliance

The financial statements have been prepared in accordance with New Zealand generally accepted accounting practice. They comply with NZ equivalents to IFRS Accounting Standards ("NZ IFRS") as appropriate for profit-oriented entities. The financial statements also comply with IFRS Accounting Standards ("IFRS").

Accounting policies have been applied consistently to all periods presented in the financial statements.

Basis of preparation

The financial statements are prepared on a disestablishment basis due to the Parent's short-form amalgamation with National Institute of Water and Atmospheric Research Limited under the Companies Act 1993, effective on 1 July 2025. As a result, the Parent will no longer operate as a separate legal entity from 1 July 2025. This change does not affect the value of assets and liabilities as at 30 June 2025.

Measurement basis

The financial statements of the Group have been prepared on a historical cost basis, except that derivative financial instruments are measured at their fair value.

Transactions in foreign currencies are converted at the New Zealand rate of exchange ruling on the date of the transaction. Monetary assets and liabilities at year end are converted to New Zealand dollars at the exchange rate ruling at balance date.

The financial statements are presented in New Zealand dollars which is the Group's functional currency. All values are rounded to the nearest thousand dollars.

Material accounting estimates and judgements

In applying the accounting policies, there is the requirement for judgements, estimates and assumptions to be made about the carrying amounts of some assets and liabilities. The estimates and assumptions are based on historical experience and other relevant factors. Actual results may differ from these estimates.

Accounting policies where critical estimates have been made include property, plant and equipment, recognition of deferred revenue and impairment of assets. Judgement has been applied in determining not to value heritage assets for financial reporting purposes.

New Accounting Standards

There are no standards and interpretations pending which would materially affect the Group financial statements.

2. Revenue

Strategic Science Investment Fund

The Parent is party to a Strategic Science Investment Fund agreement with the Crown to perform research activities that support the Parent's Statement of Core Purpose. Revenue under this contract is treated as a Government Grant under NZ IAS 20 *Accounting for Government Grants and Disclosure of Government Assistance.* All core funded contracts were completed in accordance with the agreement during the year.

Revenue from other research and commercial contracts

Revenue from other research and commercial contracts is accounted for in accordance with NZ IFRS 15 *Revenue from Contracts with Customers*. Revenue earned from the supply of goods and services is measured at the fair value of consideration received.

The Group recognises revenue based on the consideration to which the Group expects to be entitled in a contract with a customer. Revenue from services is recognised over time as the service is provided based on the stage of completion of the contract. Any amounts received in relation to work not yet commenced are recorded as revenue in advance.

Where any entitlement condition is not yet met, amounts already received are recorded as a contract liability (revenue in advance). Contract assets (work in progress) are recorded for work performed, where funding is expected but has not yet been received.

Any amounts previously recognised as a contract asset are transferred to trade receivables at the point the customer is invoiced for the product or service delivered.

There is not considered to be a significant finance component to the valuation of revenue, due to revenue generally being recognised during the period of related services/products delivery, or within one year.

Revenue for the year was derived as follows:

In thousands of New Zealand dollars	**2025**	**2024**
Strategic Science Investment Fund contracts	**36,807**	35,221
Contestable funding contracts	**18,574**	23,336
Marsden funding contracts	**1,777**	2,005
Research subcontracts	**9,335**	10,129
Research contracts	**66,493**	70,691
Commercial - New Zealand	**18,731**	20,462
Commercial - overseas	**3,476**	4,577
Commercial revenue	**22,207**	25,039
GeoNet services	**34,812**	30,166
Other income	**4,271**	3,668
Total revenue	**127,783**	129,564

Movement in contract assets and liabilities

Contract assets and liabilities vary from year to year, dependent on the delivery terms of contracted work, and the timing of agreed invoicing or funding received between the Group and contracted parties.

The movement in contract assets and liabilities, relating to all sources of revenue is as follows:

In thousands of New Zealand dollars	2025	2024
Contract assets		
Work in progress at 1 July	**4,070**	4,127
Decrease during the year	**(801)**	(57)
Work in progress at 30 June	**3,269**	4,070
Contract liabilities		
Revenue in advance at 1 July	**16,622**	18,932
Increase/(Decrease) during the year	**6,478**	(2,310)
Revenue in advance at 30 June	**23,100**	16,622

Capital grants from Crown

Government grants received in specie or in cash for the acquisition of network assets, are recognised at their fair value and held on the Statement of Financial Position as a deferred credit and recognised as revenue over the periods necessary to match the related depreciation charges, or other expenses of these assets, as they are incurred.

In thousands of New Zealand dollars	2025	2024
Capital grants in advance at 1 July	**19,322**	15,087
Cash received in advance during the year	**4,331**	6,700
Cash returned during the year	**(443)**	-
	23,210	21,787
Recognised as revenue during the year	**(2,813)**	(2,465)
Balance at 30 June	**20,397**	19,322
Represented by		
Current portion	**2,640**	1,961
Non-current portion	**17,757**	17,361
Capital grants from Crown at 30 June	**20,397**	19,322

3. Other operating expenses

Other operating expenses are made up as follows:

In thousands of New Zealand dollars	2025	2024
Services and contracts	**17,276**	19,568
Research contracts	**11,046**	16,819
Site and communication	**3,626**	2,959
Materials and supplies	**3,100**	4,461
Travel and vehicle	**2,476**	2,874
Conferences and training	**957**	1,258
Rent	**689**	707
Directors' fees	**392**	272
Auditor’s remuneration - audit of the financial statements	**196**	190
Bad debts and credit losses on doubtful debts	**-**	(5)
Foreign exchange loss	**19**	12
Loss on disposal of property, plant and equipment	**290**	549
Other operating expenses	**183**	160
Total other operating expenses	**40,250**	49,824

4. Income tax

The income tax expense is determined as follows:

In thousands of New Zealand dollars	2025	2024
Reconciliation of income tax expense		
Profit before income tax	**12,676**	6,776
Tax at rate of 28%	**3,549**	1,897
Non-deductible items in determining assessable income	**68**	928
Prior period adjustment	**(4)**	(1)
Total tax expense	**3,613**	2,824
Represented by		
Current tax	**2,651**	1,812
Deferred tax	**962**	1,012
Total tax expense	**3,613**	2,824

Under Section OB1(2)(d) of the Income Tax Act (2007), the Parent is not required to maintain an imputation credit account.

5. Share capital

In thousands of New Zealand dollars	2025	2024
Authorised and Issued Capital: 6,167,000 ordinary shares	**6,167**	6,167

All ordinary shares rank equally with respect to dividends and repayment of capital, and each carry the right to one vote at any annual meeting.

No dividend has been declared for the year ended 30 June 2025 (2024: $nil).

6. Property, plant and equipment

Property, plant and equipment are stated at cost less accumulated depreciation and impairment. Cost includes expenditure that is directly attributable to the acquisition and/or construction of the item. Assets have been depreciated on a straight-line basis at rates calculated to allocate the assets' cost over their estimated remaining useful lives. Freehold land is not depreciated.

The estimated useful lives, residual values and depreciation methods are reviewed annually, with the effect of any changes in estimate accounted for on a prospective basis.

The gain or loss arising on the disposal or retirement of an item of property, plant and equipment is recognised in the Statement of Comprehensive Income.

The following useful lives are used in the calculation of depreciation:

Buildings and improvements	
- wooden construction	40 years
- concrete construction	50 years
- improvements	10 - 50 years
Plant, machinery and laboratory equipment	3 - 20 years
GeoNet material	2 - 50 years
Telecommunications equipment	3 - 5 years
Furniture, fittings and office equipment	3 - 20 years
IT equipment	4 - 8 years
Vehicles	5 years

Heritage assets - collections, library and databases

The Parent owns various collections, library resources and databases that are an integral part of the research work undertaken by the Parent. These collections are highly specialised and there is no reliable basis for establishing a valuation.

The two major collections are:
The National Paleontological Collection
The National Petrological Reference Collection

In thousands of New Zealand dollars	Land	Buildings and improvements	Network assets	Plant and machinery	Laboratory equipment	IT equipment	Furniture, fittings and office equipment	Vehicles	Total
Cost									
Balance at 1 July 2023	2,527	23,746	17,978	7,890	38,129	12,043	5,075	1,555	108,943
Additions	-	730	4,981	(2,432)	4,958	1,207	279	1	9,724
Impairment	-	(385)	-	-	(52)	-	-	-	(437)
Disposals	-	(219)	(889)	(83)	-	-	-	-	(1,191)
Balance at 30 June 2024	**2,527**	**23,872**	**22,070**	**5,375**	**43,035**	**13,250**	**5,354**	**1,556**	**117,039**
Additions	-	712	5,220	109	2,682	964	146	194	10,027
Disposals	-	(23)	(783)	(6)	(106)	(418)	(66)	-	(1,402)
Balance at 30 June 2025	**2,527**	**24,561**	**26,507**	**5,478**	**45,611**	**13,796**	**5,434**	**1,750**	**125,664**
Accumulated depreciation									
Balance at 1 July 2023	-	15,681	3,894	4,063	29,660	10,012	3,676	486	67,472
Disposals	-	(172)	(412)	(58)	-	-	-	-	(642)
Depreciation	-	772	1,987	265	2,349	890	276	293	6,832
Balance at 30 June 2024	**-**	**16,281**	**5,469**	**4,270**	**32,009**	**10,902**	**3,952**	**779**	**73,662**
Disposals	-	(22)	(493)	-	(103)	(419)	(62)	-	(1,099)
Depreciation	-	746	2,342	243	2,284	950	288	293	7,146
Balance at 30 June 2025	**-**	**17,005**	**7,318**	**4,513**	**34,190**	**11,433**	**4,178**	**1,072**	**79,709**
Net book value at 30 June 2024	2,527	7,591	16,601	1,105	11,026	2,348	1,402	777	43,377
Net book value at 30 June 2025	**2,527**	**7,556**	**19,189**	**965**	**11,421**	**2,363**	**1,256**	**678**	**45,955**

Included in the total net book value of property, plant and equipment are assets under construction of $4.8m (2024: $5.9m).

7. Intangible assets

Software, patents and capitalised development costs have a finite life and are included at cost less accumulated amortisation and impairment. Amortisation is charged on a straight-line basis at rates calculated to allocate the assets' cost over their estimated remaining useful lives.

The estimated useful life and amortisation method are reviewed annually, with the effect of any changes in estimate being accounted for on a prospective basis.

The following useful lives are used in the calculation of amortisation:

Software	4 - 8 years
Capitalised development costs	4 - 8 years
Patents	4 - 20 years

In thousands of New Zealand dollars	Software	Patents	Capitalised development costs	Total
Cost				
Balance at 1 July 2023	6,005	138	991	7,134
Additions	28	-	-	28
Balance at 30 June 2024	**6,033**	**138**	**991**	**7,162**
Additions	5	-	-	5
Disposals	(1,538)	-	-	(1,538)
Balance at 30 June 2025	**4,500**	**138**	**991**	**5,629**
Accumulated amortisation				
Balance at 1 July 2023	5,973	113	713	6,799
Amortisation	32	7	226	265
Balance at 30 June 2024	**6,005**	**120**	**939**	**7,064**
Amortisation	11	5	30	46
Disposals	(1,538)	-	-	(1,538)
Balance at 30 June 2025	**4,478**	**125**	**969**	**5,572**
Net book value at 30 June 2024	28	18	52	98
Net book value at 30 June 2025	**22**	**13**	**22**	**57**

8. Trade and other receivables

In thousands of New Zealand dollars	2025	2024
Trade receivables	**3,877**	6,945
Accrued interest	**108**	122
Other receivables	**4**	6
Total trade and other receivables	**3,989**	7,073

Ageing profile of past due trade receivables at balance date

In thousands of New Zealand dollars	2025	2024
Past due 1-30 days	**124**	378
Past due 31-60 days	**189**	170
Past due over 61 days	**16**	-
Total past due trade receivables	**329**	548

The Group recognises a loss allowance for expected credit losses on trade receivables. The amount of expected credit losses is updated at each reporting date to reflect changes in the assessed credit risk since initial recognition of the respective receivable.

At 30 June 2025 all overdue receivables have been assessed for impairment and no provisions for estimated credit losses are required. The credit quality of trade receivables that are past due is considered sound.

The carrying value of receivables is considered to approximate their fair value.

Movement in allowance for credit losses

In thousands of New Zealand dollars	2025	2024
Balance at 1 July	**-**	5
Decrease in credit loss allowance recognised	**-**	(5)
Total allowance for credit losses at 30 June	**-**	**-**

9. Deferred tax

Deferred tax is accounted for using the comprehensive balance sheet method in respect of temporary differences arising from differences between the carrying amount of assets and liabilities in the financial statements and the corresponding tax base of those items. In principle, deferred tax assets or liabilities are recognised for taxable temporary differences.

Deferred tax assets are recognised to the extent that it is probable that sufficient taxable amounts will be available against which deductible temporary differences or unused tax losses and tax offsets can be utilised.

The carrying amount of deferred tax assets is reviewed and reduced to the extent that it is no longer probable that sufficient assessable income will be available to allow all or part of the assets to be recovered.

Deferred tax assets and liabilities are measured at the tax rates that are expected to apply in the period in which the liability is settled or the asset realised.

Analysis of temporary differences

In thousands of New Zealand dollars	2025	2024
Deferred tax assets arise from the following:		
Property, plant and equipment	**(651)**	(731)
Intangible assets	**25**	37
Provisions	**1,634**	2,474
Capitalised relocation charges	**-**	1
Capitalised SaaS charges	**190**	379
Deferred tax asset recognised at 30 June	**1,198**	2,160

Movements in deferred tax

In thousands of New Zealand dollars	2025	2024
Balance at 1 July	**2,160**	3,172
Charged to income	**(962)**	(1,012)
Deferred tax asset at 30 June	**1,198**	2,160

10. Employee benefit expenses and entitlements

Employee benefit expenses include an amount of $2,903k (2024: $nil) relating to termination benefits.

Liabilities for annual leave, long service leave, and retirement leave are recognised when it is probable that settlement will be required and they are capable of being reliably measured.

Employee benefits to be settled within twelve months are reported at the amount expected to be paid and are classified as current liabilities. Employee benefits not expected to be settled within twelve months are reported at the present value of the estimated future cash outflows.

Provisions for long service leave and retirement leave depend on a number of assumptions such as the expected employment period of employees and salary levels. We have adopted the standard New Zealand Treasury model and assumptions for valuing long service leave provisions.

	Current		Non-current	
In thousands of New Zealand dollars	2025	2024	2025	2024
Annual leave	**3,838**	4,085	**903**	939
Long service leave	**274**	320	**702**	690
Retirement leave	**26**	25	**24**	35
Total provision for employee entitlements	**4,138**	4,430	**1,629**	1,664

11. Trade and other payables

In thousands of New Zealand dollars	2025	2024
Trade and other payables	**5,550**	6,847
Accrued expenses	**5,184**	4,312
Total trade and other payables	**10,734**	11,159

Trade and other payables are non-interest bearing. The Parent follows government procurement rules regarding prompt payment and seeks to make payment to all domestic suppliers within 10 business days. The carrying value of trade and other payables approximates their fair value.

12. Cash and cash flows

Cash and cash equivalents and short-term investments

Cash and cash equivalents consist of deposits at call and short-term deposits with original maturities of less than three months. Short-term deposits consist of investments with original maturity periods of between three and twelve months and are presented as a separate line item in the financial statements.

Reconciliation of profit after tax to net cash flows from operating activities

In thousands of New Zealand dollars	2025	2024
Profit after tax	**9,063**	3,952
Adjust items classified as investing activities:		
Net loss on disposal of property, plant and equipment	**290**	549
Share of income from investment in associate	**94**	(94)
Adjust non-cash items:		
Depreciation	**7,146**	6,832
Amortisation	**46**	265
Impairment of property, plant & equipment	**-**	437
Impairment of investments	**30**	-
Decrease in credit allowance for doubtful debts	**-**	(5)
Amortisation of capital grant	**(2,813)**	(2,465)
Increase in provision for income tax	**930**	1,809
Decrease in deferred tax asset	**962**	1,012
(Decrease) / increase in non-current provisions	**(35)**	41
	6,266	7,926
Adjust movements in working capital items:		
Decrease in accounts receivable and prepayments	**2,854**	1,491
Increase / (decrease) in payables, current provisions and contract liabilities	**5,761**	(122)
Decrease in contract assets	**801**	57
	9,416	1,426
Net cash inflows from operating activities	**25,129**	13,759

13. Related party transactions

In thousands of New Zealand dollars	2025	2024
Key management personnel remuneration comprised:		
Directors' fees	**392**	272
Salaries and short-term benefits of the Chief Executive and Executive Leadership Team	**2,314**	2,144
Total key management personnel remuneration at 30 June	**2,706**	2,416

Key management personnel, considered to be the Directors, Chief Executive and the Executive Leadership Team, are those people with responsibility and authority for planning, directing and controlling the activities of the entity. Any business the Group has transacted with, in which a Director or an employee has an interest, has been carried out on a commercial basis. Any potential conflict is recorded in the minutes of Board meetings for Directors and a separate interest register for the Executive Leadership Team. The interests register containing all relevant interests is updated on a regular and timely basis.

Balances and transactions between the Parent and its subsidiaries, which are related parties, have been eliminated on consolidation and are not disclosed in this note.

The New Zealand Government is the ultimate shareholder of the Parent. No transactions with New Zealand Government owned entities are considered as related party transactions within the scope of NZ IAS 24 *Related Party Disclosures.*

Damwatch Projects Limited is a 50% joint venture partner with the Parent. The joint venture has purchased research services from the Parent of $246k in 2025 (2024: $351k) and has $118k payable to the Parent at 30 June 2025 (2024: $nil).

The Parent holds a 10% interest in Bspkl - a startup New Zealand-based manufacturer of high-performance catalyst coated membranes. The Parent has recognised a loss of $94k (2024: profit $94k) as the share of profit or loss in Bspkl, resulting in an equity accounted investment of $nil (2024: $94k).

The Parent holds a 6.67% investment in Kiwi Innovation Network Limited (KiwiNet). The Parent has recognised an impairment of $30k (2024: $nil) and has $nil investment value at 30 June 2025 (2024: $30k).

The Parent holds a 6.32% investment in New Zealand Synchrotron Group Limited. The Parent has not recognised an investment value in New Zealand Synchrotron Group Limited at 30 June 2025 (2024: $nil).

14. Financial instruments

Capital management

The Group manages its capital to ensure that entities in the Group will operate in a financially responsible manner.

The Group is not subject to any externally imposed capital requirements.

Currency risk

The Group undertakes certain transactions denominated in foreign currencies. Exchange rate exposures may be managed within approved policy limits using forward foreign exchange contracts.

At 30 June the carrying amounts of the Group's foreign currency New Zealand denominated assets and liabilities were:

	Liabilities		Assets	
In thousands of New Zealand dollars	**2025**	**2024**	**2025**	**2024**
Australian Dollar	**9**	38	**63**	101
Canadian Dollar	**-**	-	**-**	2
Euro	**70**	-	**286**	3
Japanese Yen	**27**	-	**-**	16
Swiss Franc	**6**	-	**-**	-
US Dollar	**13**	-	**77**	77
	125	38	**426**	199

For the year ended 30 June 2025, if the New Zealand dollar had strengthened by 5% against foreign currencies, with all other variables held constant, the profit before tax for the year would have increased by $237k (2024: $400k increase).

Interest rate risk

The Group has deposits on call as well as short-term deposits on which interest is earned. Where possible, the Group manages exposures to interest rate fluctuations through prudent management of its treasury operations. The interest rate for a short-term deposit of $10m held at 30 June 2025 was 4.40% (2024: ranged between 5.35% and 6.30%).

In managing interest rate risks, the Group aims to reduce the impact of short-term fluctuations on earnings. Over the longer-term, permanent changes in interest rates will have an impact on profit.

Credit risk management

The financial instruments which expose the Group to credit risk are principally bank balances, short-term investments and accounts receivable. The Group monitors credit risk on an ongoing basis.

Bank balances and short-term investments are held with New Zealand registered banks in accordance with the Group's treasury policy.

No collateral is held by the Group in respect of bank balances, short-term investments or accounts receivable. The maximum exposure to credit risk is represented by the carrying value of each financial asset in the Balance Sheet.

Liquidity risk

The Group manages liquidity risk by maintaining adequate reserves, cash deposits and short-term investments, by monitoring forecast and actual cash flows and matching the maturity profiles of financial assets and liabilities, all of which are of a short-term nature. The Group continues to generate sufficient cash flows from operations to meet financial liabilities.

15. Capital commitments

In thousands of New Zealand dollars	2025	2024
Contracted, but not provided for	**739**	-

16. Post balance date events

On 1 July 2025, Institute of Geological and Nuclear Sciences Limited amalgamated with National Institute of Water and Atmospheric Research Limited by way of a short-form amalgamation in accordance with the Companies Act 1993. The amalgamation occurred after the reporting date and is therefore identified as a non-adjusting subsequent event.

The amalgamation is part of the reform of New Zealand's science, innovation and technology system, as announced by the Prime Minister on 23 January 2025.

As a result of the amalgamation, Institute of Geological and Nuclear Sciences Limited ceased to exist as a separate legal entity. All operations, assets, liabilities, rights, and obligations of Institute of Geological and Nuclear Sciences Limited were transferred for no consideration to New Zealand Institute for Earth Science Limited, which continues to operate as the amalgamated company.

There were no other events that occurred after the Balance Sheet date that require disclosure.

Corporate Governance

Overview

The Board is committed to ensuring that the Company and its subsidiaries maintain the highest standards of corporate governance, ethics, corporate behaviour and accountability. The basis for these is set out in the Board's Charter and in the policies and procedures established and maintained by the Company.

Role of the Board and management

The Board is responsible to the shareholding Ministers (the Minister of Finance and the Minister of Science, Innovation and Technology who is also the Responsible Minister) for governing, directing and controlling the activities of the Company. This includes:

- setting the Company's strategic direction and agreeing the goals in line with the Statement of Core Purpose and annual Statement of Corporate Intent.
- overseeing the GNS Science operation and monitoring management performance against plans to ensure GNS Science is achieving the agreed goals.
- ensuring there is an appropriate policy framework and approving key policies.
- setting GNS Science's risk appetite and ensuring that effective risk management and regulatory compliance policies and procedures are in place.
- setting the direction for health and safety management and ensuring that it is achieved.

The Board delegates management of the day-to-day affairs and responsibilities of the Company to the Chief Executive. The Chief Executive leads the Executive Leadership Team whose role is to implement the strategies and plans for achieving the Company's objectives. A formal Delegated and Financial Authorities Policy sets the operational and expenditure delegations within which the Chief Executive and the Executive Leadership Team operate.

Appointment of Directors and composition of the Board

Under the Company's Constitution, the Board can comprise up to nine non- executive Directors. The Directors, Chair and Deputy Chair are appointed by Cabinet on the recommendation of the Responsible Minister. The term is generally for three years with reappointment for further terms at the discretion of the shareholders. The GNS Science Board consisted of seven directors from 1 July 2024 to 30 June 2025.

The Board considers that it has an appropriate mix of skills, experience and independence to ensure that the Company is governed in a manner that guarantees the interests of shareholders are represented and protected.

On appointment, Directors receive guidelines on the shareholders' expectations, which are in addition to the requirements of the Companies Act 1993. They have access to on-line resources that contain key information and documents about the Company, its subsidiaries and their operations. New Directors also have the benefit of an induction programme to provide them with an understanding of the Company's business and the markets in which it operates.

Each Director has the right, with the prior approval of the Board, to seek independent legal and other professional advice at the Company's expense concerning any aspect of the Company's operations or undertakings to assist in fulfilling their duties and responsibilities as Directors.

There was a programme of site visits and presentations to the Board by the Executive Leadership Team, management and science staff, and regular interaction with key stakeholders which enabled Directors to keep abreast of key aspects of the Company's activities.

Operation of the Board

The Board operates in accordance with the Board Charter. Three standing committees operated during the year – the Audit and Risk Committee, the People and Culture Committee, and the Science Committee.

All committees are operating in accordance with a Terms of Reference approved by the Board. Each committee establishes annual work plans and undertakes an annual review of its Terms of Reference and performance.

Matters discussed by the committees were reported back to the subsequent Board meeting and key items were discussed and resolved by the full Board.

There were eight formal Board meetings during the year ended 30 June 2025. The table on the next page shows Director attendance at Board meetings and committee member attendance at committee meetings. In addition, any Director may attend any committee meeting.

	Board Meetings		Audit and Risk Committee		People and Culture Committee		Science Committee	
	No.	No. attended	No.	No. attended	No.	No. attended	No.	No. attended
David Smol	8	6	4	3	3	2	3	2
Felicity Evans	8	8	-	-	3	3	3	3
Andrew Cordner	8	8	4	4	-	-	-	-
Livia Esterhazy	8	7	4	3	3	3	-	
Wendy Venter	8	8	4	4	-	-	3	2
Paul White	8	8	-	-	3	2	-	-
Brian Young	8	8	-	-	-	-	3	3

Audit and Risk Committee

The Audit and Risk Committee supports the Board in fulfilling its responsibilities in relation to financial reporting, external audit, risk management, legislative compliance and internal audit.

People and Culture Committee

The People and Culture Committee supports the Board in fulfilling its responsibilities in relation to remuneration policy and organisational culture, and the recruitment, remuneration and performance of the Chief Executive and senior leadership.

Science Committee

The Science Committee supports the Board in fulfilling its responsibilities on the direction and effectiveness of research activities undertaken by the Company.

Health, Safety and Environment

Health, safety and environmental matters are reported to the full Board. The Board recognises that a positive and robust health and safety culture begins at the Board table. The Board ensures that GNS has appropriate systems of work and actively monitors and evaluates how health and safety is managed within GNS. The Board uses a range of mechanisms such as meeting with Health and Safety representatives, risk reviews, site visits, and reporting to learn about and keep up-to-date with GNS' work and related health and safety issues.

Strategic Scientific and User Advisory Panel

The Board receives advice from the Strategic Scientific and User Advisory Panel. The purpose of the Panel is to ensure GNS Science continues to have a focus on excellence and that we are well tuned in to national and international trends and associated opportunities. Panel members have broad experience and insight across all our science themes and provide strong end- user perspectives.

Internal audit and risk management

The GNS Science internal audit plan is developed by the Risk and Assurance Manager and internal audit services provider and approved by the Audit and Risk Committee.

Reporting on progress with the internal audit plan and progress with internal and external audit recommendations are presented to the Audit and Risk Committee. The internal audit services provider has access to management and the right to seek information and explanation. The Audit and Risk Committee meets with the audit provider without management present.

GNS Science has an established framework for managing risk to inform strategic and business planning processes, optimise allocation of resources and allow the Company to effectively recognise, prioritise and respond to risks. Risks are monitored and assessed and reported to the Audit and Risk Committee and the Board.

External auditors

GNS Science is committed to ensuring that the external audit provider is able to carry out its functions independently. Our Auditor Independence Policy sets out the framework under which we ensure the independence of the external auditor is maintained at all times both in fact and appearance, such that the audit opinion is highly reliable and credible. The Office of the Auditor-General appointed Deloitte to perform the statutory audit for the year ended 30 June 2025. Deloitte personnel attended four Audit and Risk Committee meetings during the year.

The external auditor may provide non-audit services where these are approved in advance by the Board as being appropriate. No such services were provided by the external auditor for the year 30 June 2025.

Conflicts of interest

All Directors are required to disclose any conflicts of interest or if they have an interest in any transaction, in which case they may not be entitled to partake in discussions (at the Board's discretion) and will not be entitled to vote in relation to the transaction. To facilitate the disclosure of interests and identification of any actual or perceived conflicts of interest, the Company's Disclosure of Interests Register is reviewed and updated at the start of each Board meeting.

Provision of professional services

Except in exceptional circumstances, Directors will not provide professional services to the Company and will only do so with the prior approval of the Responsible Minister. This is to avoid a conflict of interest – actual or perceived. No such services were provided by Directors during the year.

Directors Report

For the year ended 30 June 2025

The Directors are pleased to present the audited financial statements of GNS Science for the year ended 30 June 2025. The financial statements have been prepared in accordance with generally accepted accounting practice in New Zealand and the Financial Reporting Act 1993.

The Auditor-General is the statutory auditor pursuant to section 21 of the Crown Research Institutes Act 1992. The Office of the Auditor-General, pursuant to section 29 of the Public Finance Act 1977, has appointed Deloitte to undertake the audit on its behalf.

Principal activity

GNS Science's principal activity is to conduct scientific research, consultancy services, and product development in Earth sciences and isotope technologies in accordance with the principles for the operation of Crown Research Institutes set out in sections 4 and 5 of the Crown Research Institutes Act 1992.

Board changes during the year

On 1 July 2025 GNS Science and the National Institute of Water and Atmospheric Research (NIWA) were merged to form Earth Sciences New Zealand. All of the GNS Science Directors' appointments ceased on 30 June 2025 as a result of this merger.

Remuneration of Directors

During the year the following remuneration was paid or payable to Directors in accordance with the schedule approved by the Shareholding Ministers:

Director	Date commenced	Date ended	2025 $	2024 $
David Smol	1 May 2023	30 June 2025	84,962	63,891
Felicity Evans	1 July 2018	30 June 2025	53,101	37,937
Andrew Cordner	1 February 2022	30 June 2025	42,481	31,946
Livia Esterhazy	1 June 2023	30 June 2025	42,481	31,946
John Sharpe	1 September 2016	29 September 2023	-	9,984
Wendy Venter	1 February 2022	30 June 2025	22,911[1]	31,946
Paul White	14 August 2017	30 June 2025	42,481	31,946
Brian Young	1 June 2023	30 June 2025	42,481	31,946

David Smol received an additional fee of $37,171 to reflect the contribution required for the CRI merger process between 1 December 2024 to 30 June 2025.

Felicity Evans received an additional fee of $24,388 to reflect the contribution required for the CRI merger process between 1 December 2024 to 30 June 2025.

No other Director either received, or became entitled to receive, any benefit other than the disclosed Directors' fees during the year.

1. On 15 January 2025, Wendy Venter commenced as Chief Executive of External Reporting Board (XRB) and in line with Public Sector Commission guidance ceased receiving directors' fees from that date.

Chief Executive remuneration

The Chief Executive's remuneration is approved by the Board, on the recommendation of the People and Culture Committee. External advice is incorporated as needed, and recommendations are made to the Board in regard to the Chief Executive's contractual arrangements, including remuneration.

The overarching elements of the approach to remuneration for the Chief Executive (consistent with all GNS Science staff) include simplicity, clarity, fairness and consistency of application, along with:

1. A holistic view of reward;
2. An appropriate link between reward and business performance;
3. A rewards programme that helps to drive a positive and enabling culture;
4. People being rewarded competitively in a context of affordability;
5. Regular review and analysis of the effectiveness and fairness of the remuneration and rewards framework to ensure it continues to meet both GNS Science and employee needs.

Chelydra Percy was appointed Chief Executive on 1 May 2023. Her remuneration comprises salary and KiwiSaver benefits and does not include any separate component conditional on performance.

Chief Executive remuneration

	FY 2021 $	FY 2022 $	FY 2023 $*	FY 2024 $	FY 2025 $**
Salary	468,932	469,834	515,000	515,000	530,000
Discretionary Payment	-	-	-	-	60,000
KiwiSaver	14,068	14,095	15,570	15,500	17,700
Total	483,000	483,929	534,591	530,500	607,700

* In 2023, three individuals filled this role, including the outgoing Chief Executive, an interim Chief Executive, and the newly appointed Chief Executive.

** In 2025, a discretionary payment was made to reflect the contribution required for the CRI merger process.

Employee remuneration

In accordance with section 211(1)(g) of the Companies Act 1993, the numbers of employees who received remuneration and other benefits totalling $100,000 or more, in $10,000 bands, during the year were:

$000	2025
100-110	41
110-120	59
120-130	38
130-140	53
140-150	31
150-160	29
160-170	27
170-180	9
180-190	11
190-200	11
200-210	7
210-220	5
220-230	2
230-240	4
240-250	3
250-260	3
260-270	1
280-290	1
290-300	1
320-330	1
400-410	1
600-610	1
Total	**339**

The remuneration reflected in the above table excludes payments in respect of the cessation of employment of employees. In 2025, the Group made payments of $2,885,753 (2024: $nil) for compensation or other benefits in respect of the cessation of employment of employees.

Subsidiaries

The Company has five subsidiary companies:

- Isoscan Limited
- Geological Surveys (New Zealand) Limited
- Isoscan Food Limited
- Geological Risk Limited
- GNS Science International Limited

David Smol and Peter Benfell were Directors of each of the subsidiary companies at 30 June 2025.

Dividends

No dividend was declared during the year to 30 June 2025 (2024: $nil).

Directors' indemnity and interests

The Company has insurance cover for Directors in respect of any act or omission in their capacity as a Director of the Company. Directors have declared their interests in a Deed of Indemnity dated 29 November 2017, whereby the Company indemnifies Directors against any liability for any act or omissions incurred in their capacity as a Director. The indemnity for liabilities incurred does not extend to criminal liability or liability for breach of a fiduciary duty owed to the Company.

Directors' interests disclosed at 30 June 2025 are set out in the table below. These interests have been appropriately recorded in the Company's Disclosure of Interests Register, which is updated at the start of every Board meeting.

Directors' interests disclosed at 30 June 2025

Director	Position	Organisation
David Smol	Director	Contact Energy Limited
	Director	Co-operative Bank
	Member	NZ Transport Agency Waka Kotahi
	Member	Council for Victoria University of Wellington
	Chair	Department of Internal Affairs External Advisory Committee
	Chair	Ministry of Social Development Risk and Audit Committee
	Member	Ministry of Housing and Urban Development Strategic Advisory Committee
	Director	Tait Communications Limited
Felicity Evans	Member	Defence Employer Support Council (DESC)
	Chair	ANZ National Staff Superannuation Limited
	Chair	Endometriosis New Zealand
	Director	Wairarapa Building Society
Andrew Cordner	Chief Legal Counsel	Health New Zealand Te Whatu Ora
Livia Esterhazy	Director	National Institute of Water and Atmospheric Research Limited
	Director and Founder	The Thrive Collective Limited
	Programme Director for A Lighter Touch	Horticulture New Zealand Limited
Wendy Venter	Director and Shareholder	Venter Consulting Limited
	Chief Executive	External Reporting Board (XRB)
Paul White	Member	Te Rarawa Iwi
	Director and Shareholder	Torea Tai Consultants Limited
	Executive Member	Te Matapihi (Māori housing body)
	Trustee	Top Energy Consumer Fund
Brian Young	Chief Executive	International Accreditation New Zealand (IANZ)

Certifications

The Directors confirm that the Company has operated in accordance with the Crown Research Institutes Act 1992, Crown Entities Act 2004 and the Companies Act 1993 during the year.

The activities undertaken by the Company in the year are in accordance with GNS Science's Statement of Core Purpose.

No written direction was received from either shareholding Minister in the year.

For and on behalf of the Board

David Smol
Chair

22 September 2025

Statement of Responsibility

The Board is responsible for the preparation of the Group's annual financial statements and for the judgements made in them.

The Board, through management, is responsible for establishing and maintaining a system of internal control designed to provide reasonable assurances as to the integrity and reliability of the financial reporting.

In the opinion of the Board, the annual financial statements for the financial year ended 30 June 2025 fairly reflect the financial position and operations of GNS Science.

For and on behalf of the Board:

David Smol
Chair

22 September 2025

Mary-Anne Macleod
Deputy Chair

22 September 2025

Deloitte.

Independent Auditor's Report

To the readers of Institute of Geological and Nuclear Sciences Limited's Group Financial Statements

For the year ended 30 June 2025

The Auditor-General is the auditor of the Institute of Geological and Nuclear Sciences Limited Group (the Group). The Auditor-General has appointed me, Silvio Bruinsma, using the staff and resources of Deloitte Ltd, to carry out the audit of the financial statements of the Group on his behalf.

Opinion

We have audited the financial statements of the Group on pages 30 to 47 that comprise the consolidated statement of financial position as at 30 June 2025, the consolidated statement of comprehensive income, consolidated statement of changes in equity and consolidated statement of cash flows for the year ended on that date and the notes to the consolidated financial statements that include accounting policies and other explanatory information.

In our opinion, the financial statements of the Group, which have been prepared on a disestablishment basis:

- present fairly, in all material respects:
  - its financial position as at 30 June 2025; and
  - its financial performance and cash flows for the year then ended; and
- comply with generally accepted accounting practice in New Zealand in accordance with the New Zealand Equivalents to IFRS Accounting Standards (NZ IFRS) and IFRS Accounting Standards (IFRS).

Our audit was completed on 22 September 2025. This is the date at which our opinion is expressed.

The basis for our opinion is explained below, we draw your attention to other matters. In addition, we outline the responsibilities of the Board of Directors and our responsibilities relating to the financial statements, we comment on other information, and we explain our independence.

Emphasis of matter – The financial statements are prepared on a disestablishment basis

Without modifying our opinion, we draw attention to note 1 on page 34 about the financial statements being prepared on a disestablishment basis due to the Group's short-form amalgamation with National Institute of Water and Atmospheric Research Limited under the Companies Act 1993, effective after 30 June 2025. As a result the Group will no longer operate as a separate legal entity. This change does not affect the carrying value of assets and liabilities as at 30 June 2025.

Basis for our opinion

We carried out our audit in accordance with the Auditor-General's Auditing Standards, which incorporate the Professional and Ethical Standards and the International Standards on Auditing (New Zealand) issued by the New Zealand Auditing and Assurance Standards Board. Our responsibilities under those standards are further described in the Responsibilities of the auditor section of our report.

We have fulfilled our responsibilities in accordance with the Auditor-General's Auditing Standards.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Deloitte.

Responsibilities of the Board of Directors for the financial statements

The Board of Directors is responsible on behalf of the Group for preparing financial statements that are fairly presented and that comply with generally accepted accounting practice in New Zealand.

The Board of Directors is responsible for such internal control as it determines is necessary to enable it to prepare financial statements that are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Board of Directors is responsible on behalf of the Group for assessing the Group's ability to continue as a going concern. If the Board of Directors concludes that a going concern basis of accounting is inappropriate, the Board of Directors is responsible for preparing financial statements on a disestablishment basis and making appropriate disclosures.

The Board of Directors' responsibilities arise from the Crown Research Institutes Act 1992.

Responsibilities of the auditor for the audit of the financial statements

Our objectives are to obtain reasonable assurance about whether the financial statements, as a whole, are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion.

Reasonable assurance is a high level of assurance, but it is not a guarantee that an audit carried out in accordance with the Auditor-General's Auditing Standards will always detect a material misstatement when it exists. Misstatements are differences or omissions of amounts or disclosures and can arise from fraud or error. Misstatements are considered material if, individually or in the aggregate, they could reasonably be expected to influence the decisions of readers taken on the basis of these financial statements.

For the budget information reported in the financial statements, our procedures were limited to checking that the information agreed to the Group's statement of corporate intent and Board approved budget.

We did not evaluate the security and controls over the electronic publication of the financial statements.

As part of an audit in accordance with the Auditor-General's Auditing Standards, we exercise professional judgement and maintain professional scepticism throughout the audit. Also:

- We identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- We obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances but not for the purpose of expressing an opinion on the effectiveness of the Group's internal control.
- We evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Board of Directors.
- We conclude on the appropriateness of the use of the disestablishment basis by the Board of Directors.
- We evaluate the overall presentation, structure and content of the financial statements, including the disclosures and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- We plan and perform the Group audit to obtain sufficient appropriate audit evidence regarding the financial statements of the entities or business units within the Group as a basis for forming an opinion on the consolidated financial statements. We are responsible for the direction, supervision and review of audit work performed for the purposes of the Group audit. We remain solely responsible for our audit opinion.

We communicate with the Board of Directors regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

Our responsibilities arise from the Public Audit Act 2001.

Deloitte.

Other Information

The Board of Directors is responsible for the other information. The other information comprises the information included on pages 1 to 29 and pages 48 to 53, but does not include the financial statements, and our auditor's report thereon.

Our opinion on the financial statements does not cover the other information and we do not express any form of audit opinion or assurance conclusion thereon.

In connection with our audit of the financial statements, our responsibility is to read the other information. In doing so, we consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated. If, based on our work, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

Independence

We are independent of the Group in accordance with the independence requirements of the Auditor-General's Auditing Standards, which incorporate the independence requirements of Professional and Ethical Standard 1: *International Code of Ethics for Assurance Practitioners* issued by the New Zealand Auditing and Assurance Standards Board.

Other than the audit, we have no relationship with, or interests in, the Group.

Silvio Bruinsma

for Deloitte Limited
On behalf of the Auditor-General
Auckland, New Zealand

Directory

During the year ended 30 June 2025

Directors

David Smol
(Chair)
Felicity Evans
(Deputy Chair)
Andrew Cordner
Livia Esterhazy
Wenter Venter
Paul White
Brian Young

Executive Leadership Team

Chelydra Percy
(Chief Executive)
Peter Benfell
(General Manager Science and Commercial Operations)
Trish Casey
(General Manager, People and Culture)
Tania Gerrard
(General Manager, Māori Partnerships and Government Relations)
Richard Levy
(General Manager Science Futures)
Kaetrin Stephenson
(General Manager, Business Services and CFO)

Registered Office

1 Fairway Drive
Lower Hutt 5010
New Zealand

PO Box 30 368
Lower Hutt 5040
New Zealand

From 1 July 2025

Directors

David Smol
(Chair)
Mary-Anne Macleod
(Deputy Chair)
Paul Connell
Professor Chris Bumby
Peter Landon-Lane
Paul White

Executive Leadership Team

John Morgan
(Transition Chief Executive)
Chelydra Percy
(Integration Executive)

Registered Office

82 Wyndham Street
Auckland Central 1010
New Zealand

Private Bag 99 940
Newmarket
Auckland 1149
New Zealand

Strategic Scientific and User Advisory Panel

Dr Chris Pigram
(Panel Chair)
Dr Andrew Heap
Dr James Hutchinson
Dr Lucy Jones
Professor Te Kani Kingi
Professor Claire Lenehan
Namouta Poutasi
Associate Professor Ting Wang

Bankers

ANZ

Auditor

Silvio Bruinsma
Deloitte Limited
On behalf of the Auditor-General

Solicitors

Chapman Tripp

Websites

www.gns.cri.nz
www.geonet.org.nz
www.earthsciences.nz