ZERO CARBON BY 2030

VICTORIA UNIVERSITY OF WELLINGTON
TE HERENGA WAKA

2023 SUSTAINABILITY REPORT

CONTENTS

Cover photo by Des Kelly for the University's 2023 Sustainability Photo Competition.

FROM THE DIRECTOR

He maurea kai whiria—ignore small matters and direct effort towards important projects.

This whakatauki speaks to the challenge that sustainability practitioners face all the time. Climate action, nature regeneration, and building a circular economy are all big, complex, long-term commitments that can easily be bumped down the priority list in favour of devoting more resources to immediate crises or short-term initiatives. In that regard, 2023 was particularly challenging for us at Te Herenga Waka—Victoria University of Wellington. Like all other universities in Aotearoa, we have considerable fiscal challenges, which led to some difficult decisions to reduce expenditure and staff numbers across the University. This necessary focus on achieving financial sustainability was prioritised and, correspondingly, there was less capacity across the University to engage with and accelerate our environmental sustainability work throughout 2023.

There is no doubt it was a tough year, but we are now in a stronger position in 2024 and those hard decisions that were made in 2023 did incorporate our strategic commitment to sustainability. Earlier in 2023, we witnessed the devastation caused by Cyclone Gabrielle—a stark reminder that climate change is not only an environmental issue but also a financial and social one. So, it's pleasing that our university kept an eye on the long term while responding to the short-term crisis.

Sustainability remains a huge area of opportunity for us at Te Herenga Waka. Student and employer demand for it continues to grow, while the urgency to find innovative solutions to our global challenges is increasing exponentially. Not only is our commitment to sustainability of value to our community and our planet, but it is also beneficial to our own financial resilience.

While it was a turbulent year, there was still a lot of progress towards our sustainability goals that I am very proud of. This report provides a small snapshot of the contribution the University is making towards a sustainable future. The breadth of activity is impressive and the impact that we are making is what keeps me coming back for more.

Noho ora mai

Andrew Wilks
Manutaki, Toitūroa—Director, Sustainability

2023 BY THE NUMBERS

WOMEN ON SENIOR LEADERSHIP TEAM

56%
(up from 42%
in 2022)

MĀORI STUDENTS

12.4%
(up from 12.2%
in 2022)

PASIFIKA STUDENTS

6.7%
(same as in 2022)

STUDENT VOLUNTEER HOURS

10,476 hours
(up from
9,124 in 2022)

SUSTAINABILITY-FOCUSED MEDIA RELEASES

43
(resulting in
64 media stories, up
from 48 in 2022)

STUDENT SCHOLARSHIPS OFFERED IN SUSTAINABILITY TOPICS

40
(worth $315,000)

RESEARCH PUBLICATIONS IN ENVIRONMENTAL SUSTAINABILITY

573
(up from
506 in 2022)

COURSES OFFERED IN ENVIRONMENTAL SUSTAINABILITY

149
(up from 125
in 2022)

ENROLMENTS IN ENVIRONMENTAL SUSTAINABILITY COURSES

7,041
(up from
5,290 in 2022)

GROSS CARBON EMISSIONS

14,090 tonnes
(down 27%
from 2017 baseline)

WASTE TO LANDFILL

389 tonnes
(down from 467
tonnes in 2022)

TREES PLANTED

3,150
(down from
4,150 in 2022)

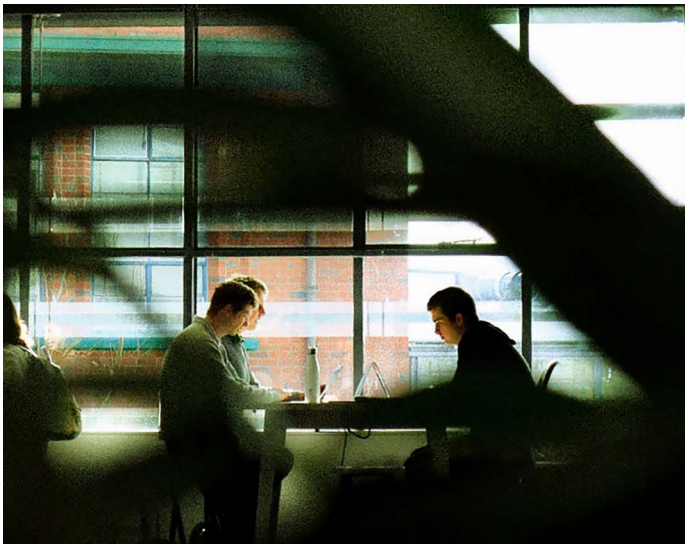
INTRODUCTION

This report outlines the ways Te Herenga Waka—Victoria University of Wellington is striving to advance its sustainability goals. The goals we set ourselves are not just for the sake of patting ourselves on the back and producing a glossy report each year—they are an integral part of our broader purpose as a future-focused, values-based university. Our commitment to sustainability is embedded in the University's core ethical values, particularly kaitiakitanga and whanaungatanga—responsibility and fairness.

In 2023, we launched Te Parahia, an outcome framework that is Te Herenga Waka's collective guide to applying these core ethical values to achieve our sustainability goals. Its objective is to provide clear and collective direction for all our staff and students to enable the University's community to support and work together towards meeting these commitments. Te Parahia brings together all the functions of the University (learning and teaching, research, engagement, operations, and governance) to maximise our contribution to a sustainable future. These areas also form the structure of this report.

Our efforts are guided by the United Nations' Sustainable Development Goals (SDGs), and we were thrilled to be ranked fifty-eighth (out of 1,591 institutions around the world) in the international Times Higher Education University Impact Rankings 2023. We gained a top 10 global ranking for SDG 16: Peace, Justice and Strong Institutions, which is about promoting peaceful and inclusive societies, providing access to justice for all, and building effective, accountable, and inclusive institutions at all levels. The University also ranks in the top 20 globally for SDG 15: Life on Land and SDG 11: Sustainable Cities.

This is a huge achievement, one that reflects the enormous amount of energy and time being invested into our commitment to sustainability here at Te Herenga Waka. Please enjoy reading about our progress and successes.



Right: Photos from the University's 2023 Sustainability Photo Competition by, from top, Angelica Anthony Thane, Risheet Peri, and Xydene Ladores.

LEARNING AND TEACHING

Te Herenga Waka's students are our trump card in the quest to create a healthy planet for all. Our graduates head out into the world armed with the knowledge and tools needed to ask questions, build their sustainability literacy, and take impactful action.

Alongside the many sustainability-centred clubs and activities in which our students can participate, the number of environmentally focused courses on offer—and enrolments in those courses—have increased on the year prior.

There is a wealth of stories about our students and alumni inspiring change and making an impact in the field of sustainability through research and community action. They are a crucial part of our ultimate goal of equipping all our graduates, no matter their chosen discipline, with the skills to help the world transition to a sustainable future.

Performance indicators	2020	2021	2022	2023
Environmental sustainability-focused course offerings	96	109	125	149
Enrolments in environmental sustainability-focused courses	5,509	5,965	5,290	7,041
Environmental sustainability-focused scholarships (and cumulative value)	12 ($96,000)	10 ($59,500)	13 ($164,654)	40 ($315,000)

STUDENT EXCELLENCE

Designs for therapeutic landscapes earned a Master of Landscape Architecture student a prestigious scholarship. Caitlin Hartnett-Poelman was awarded the 2023 New Zealand Institute of Landscape Architects Tuia Pito Ora Vectorworks Landmark Student Scholarship for her work, which applied design principles that promoted a sense of belonging and improved mental health. Her research, which focused on Auckland's central business district, aimed to foster improved wellbeing among the city's multicultural community. Caitlin said therapeutic landscape architecture was a relatively new field of research that had enormous potential. The scholarship judging panel was very impressed with her design, saying it showed how landscapes could offer more than amenity, with cities benefiting from a thoughtfully designed environment to support and promote physical, emotional, and mental wellbeing.

Master of Architecture graduate Maria Walker was named a Future Thinker of the Year for 2023 for her research on biomaterials. The annual award, run by the Green Building Council, acknowledges a student or young professional who demonstrates environmental knowledge and leadership, and recognises their success and passion for greener, better buildings. Maria's Master's thesis explored key market entry points and barriers for mycelium biocomposites, a mushroom-based biomaterial. On receiving the award, Maria—who is now working at Warren and Mahoney—said it was a huge honour. "I look forward to connecting with other agents of change in a bid to transform industry mindsets regarding biomaterials and digital design, and to make experience-rich learning more accessible to young people."

Te Herenga Waka strives to incorporate sustainability-focused thinking into a wide cross-section of disciplines. This was exemplified by Religious Studies student Michaela Richards, whose PhD looked at New Zealanders' spiritual connection with the land and how this could be capitalised on to improve conservation outcomes. Her research sprang from an interest in the sacred and spiritual language that came up in 2017 when legal personhood status was given to Taranaki Maunga. Michaela's thesis aimed to understand how different groups related to the mountain and the land, how spiritual connections with the land impacted different people's desire to take part in conservation activities and preserve the land, and whether improving or encouraging spiritual connections would motivate different groups to take more conservation action.

Caitlin Hartnett-Poelman

Maria Walker

ALUMNI

A campaign to return kiwi to Wellington's hills has been led by a Te Herenga Waka alumnus. Bird fanatic Paul Ward, who graduated in 1998 with a Bachelor of Arts with Honours in History and English, Theatre, and Film, leads the team at the Capital Kiwi Project. He said he was inspired by the successful return of kākā to the city and wanted to do the same for the iconic and endangered kiwi. "The kiwi is a bit of a Trojan manu, because we know if we create the necessary relationships to bring kiwi back, other animals will also be able to return and share the hills. We want to see every Wellingtonian experience kiwi in their backyard, to get chills from its distinctive call, and to understand what's enabled it."

SCHOLARSHIPS

A new scholarship for sustainability-minded first-year students was introduced in 2023, with the inaugural cohort of 28 recipients starting their studies in 2024. The Pakohe Sustainability Scholarship is awarded competitively based on academic merit, demonstration of involvement in sustainability practices, and commitment to community. The scholarships are valued at $5,000 or $10,000 for the first year of study, and can be used for accommodation costs at a university hall of residence or as a stipend towards living costs. As well as financial assistance, recipients will also have access to opportunities such as conferences and sustainability events, and will receive mentoring from the University's director of sustainability. The Pakohe scholarships reflect Te Herenga Waka's commitment to supporting students who have demonstrated sustainability qualities that align with our aim to be a global thought leader, by integrating sustainability into all we do.

CURRICULUM DEVELOPMENTS

At Te Herenga Waka, we take a multi-pronged approach to sustainability—it's a thread that is woven through virtually all subject areas across the University. Not only is the amount of environmental sustainability curriculum content on offer growing, but the number of enrolments are too, with 22 percent of students taking at least one sustainability-focused course in 2023.

Within the Wellington School of Business and Government, a number of Accounting papers are increasingly focusing on sustainability. ACCY 130 covers the use and economic and social impact of internal and external accounting information; ACCY 223 looks at how to use an organisation's internal information to plan for a sustainable future; ACCY 231 teaches how to analyse big financial data to explore environmental and social reporting; ACCY 302 examines how to use an organisation's strategic environmental and internal information to add customer, supplier, and organisational value for a sustainable future; and ACCY 314 includes a topic on the environmental context of accounting.

There are also a range of other disciplines with less obvious connections to sustainability, including an Art History course looking at the ways art has responded to revolutions—including environmental ones—over the past 250 years; a Criminology course exploring harms experienced by people, animals, and ecosystems as a result of humans' impact on the environment; an English literature course surveying how contemporary fiction responds to climate change; a Health course that evaluates what makes a sustainable diet and aims to increase students' consciousness as global citizens in a challenging food future; a Sociology course investigating a range of social and political perspectives on the climate crisis; and a Tourism course that examines the positive and negative impacts of tourism on destinations in terms of sustainability and climate change.

It's really encouraging to see the continued student demand for sustainability curriculum offerings (especially in a year when enrolments across the University have declined) and the corresponding increase in course offerings in response. However, many students still don't access any sustainability content in their degrees, there is only limited coordination of sustainability content across teaching programmes, and we are yet to develop a way of assessing students' sustainability literacy. So, while we are improving each year with more of our students gaining the sustainability skills they want and need, there is a lot more mahi to do.

EXTRACURRICULAR DEVELOPMENTS

The increased interest in sustainability-focused issues isn't confined to the lecture theatres. One of Te Herenga Waka's strongest clubs is the Climate Clinic, which brings together students unified by a determination to address the challenges posed by climate change and to fight against its causes. The organisation enables its members to take action on sustainability issues by providing practical information about topics such as submitting on bills before Parliament, organising petitions, participating in marches and demonstrations, and fundraising for environmental causes. Alongside general awareness-raising, the Climate Clinic holds regular events, which in 2023 included an election climate debate, a clothing swap, and hosting discussion panels and informational workshops.

Extracurricular opportunities such as student clubs or our leadership programmes provide great additional learning for students keen to get involved with sustainability. However, with the cost-of-living crisis forcing students to work more hours to afford to live, finding the time to participate in those extracurricular activities—let alone study—is becoming more challenging. We need to ensure these great learning opportunities remain accessible to all students.

The spread of sustainability and environmentally focused thinking across all facets of university life is growing and we are making good progress towards our crucial goal of readying every one of our graduates to go out into the world and enable the necessary shift to a sustainable future.

RESEARCH

In the face of mounting environmental predicaments here and across the globe, Te Herenga Waka remains resolutely focused on delivering world-leading research on sustainability. The neccessity for urgent action is clear, and we are striving to maximise how we contribute to thinking and action to address these ever-present challenges.

Our measurable activity in sustainability-focused research—the volume of publications to share knowledge and the amount of external research grants to help generate knowledge—has remained consistent in 2023. As always, it is the impact of that research, which is less measurable, that matters most. So we continue to encourage our subject-matter experts to share their knowledge beyond academia to inform thinking locally and globally.

Performance indicators	2020	2021	2022	2023
Research publications contributing to the UN Sustainable Development Goals (as per SciVal at the calendar year end)	505	586	506	573
External grants for environmental sustainability research (and cumulative value)	47 ($31.5 million)	59 ($62.6 million)	55 ($32.6 million)	54 ($7.6 million)

RESEARCH HIGHLIGHTS

There is some very exciting sustainability-focused research taking place at the University. Among the highlights for 2023 was the development of an action plan calling for shared authority of Aotearoa's special places to ensure a flourishing environment for future generations. Me Tū ā-Uru was developed by leading Māori researchers and practitioners, and was launched in April at Te Herenga Waka's Rutherford House. Professor Maria Bargh, who co-led the research group that produced the action plan, said Aotearoa's environmental and social relationships were out of balance. "We are facing multiple, interrelated crises, including climate change, biodiversity decline, poverty, and homelessness. To solve these crises, and for the benefit of present and future generations in Aotearoa and the environment that sustains us, we must work together to reconnect our relationships to the environment and to reconnect relationships between tangata whenua, tangata Tiriti, and the Crown."

Alongside Te Herenga Waka's positive leadership in the field of sustainability, our research also draws attention to what's sadly going wrong with the environment.

Work by researchers from Te Kura Mātauranga Koiora—School of Biological Sciences has found evidence of microplastics in New Zealand sea sponges. Master of Marine Conservation graduate Rachel Parry and Professor James Bell took samples from sponges at three sites in Wellington harbour, and said their findings regrettably showed how widespread microplastics have become in the environment. Rachel said the ingestion of microplastics posed a significant threat to sponge health. "Once ingested, they can't be digested or absorbed. These plastics can also carry toxic chemical additives, which can leech into organisms."

New data has shown that summer heatwaves are becoming more common in Aotearoa as the global climate warms and are already causing wide-ranging effects on the environment, including marine heatwaves and major loss of glacier ice volume in the Southern Alps. Dr Jim Salinger, an adjunct research fellow at Te Herenga Waka who led the research project, said heatwaves across the 2017/18, 2018/19, and 2021/22 summers all produced dramatic climate impacts across New Zealand. "Combined, the three recent heatwaves peeled 17 percent of the total ice off the Southern Alps glaciers, which have lost half their volume since 1949—down from 65 to 32 cubic kilometres by 2021." The study also suggested the 2021/22 marine heatwave may have been linked to the starvation and death of kororā (little penguins) in the Bay of Plenty, with rising sea-surface temperatures potentially affecting the animal's ability to find food.

Even though these findings might sound gloomy, this research is helping us grasp the enormity of what we're all dealing with: knowing our 'enemy' will ultimately help in the push to turn things around for the environment and the lives it supports.

COMMENTARY FROM OUR RESEARCHERS

Research cannot stand alone—to ensure real change, we need everybody on the journey with us. A crucial aspect of research that goes on at Te Herenga Waka is keeping the public abreast of our latest findings and progress—universities are, after all, the critic and conscience of society. Our academics are adept communicators, and they wrote some thought-provoking and engaging sustainability-focused commentary pieces for a range of media outlets in 2023.

The case for restoring long-distance passenger rail in Aotearoa was made by Paul Callister, senior associate at Te Herenga Waka's Institute for Governance and Policy Studies, along with Massey University applied mathematics professor Robert McLachlan. In their article on *The Conversation* website, the pair argued that re-imagining car ownership as an option rather than a necessity would help cut emissions in our larger cities, and reviving passenger rail would be key to achieving that. Because the rail network had been neglected by successive governments in favour of roading, large capital and carbon investments would be required to reinstate an efficient service. "It might be a lot to lay on the humble train, but civilisation is in a tight spot," they wrote. "We need to collectively halve emissions by 2030, while also laying the groundwork for a truly sustainable future. This means wise use of resources—long-lasting, economical infrastructure based on proven technology, combined with renewable electricity. Trains do that."

The need to create 'sponge cities' was explored in a commentary piece on *The Conversation* by Dr Alex Lo, a senior lecturer in Climate Change at Te Kura Tātai Aro Whenua—School of Geography, Environment and Earth Sciences. Dr Lo said the 2023 Auckland floods and Cyclone Gabrielle demonstrated how poorly our cities were prepared for a changing climate. "Perhaps not surprisingly, there is now a lot more talk about the need for 'sponge cities', with Auckland being a prime candidate. The basic principle is to manage urban flood risks by utilising more natural drainage and flood-resilient systems and material," he wrote. "The concept is well understood and undoubtedly an appropriate response to current and future conditions—but it is not cheap. Overseas experience, especially in China, suggests building and adapting a city like Auckland to be more 'spongey' would require serious financial commitment."

The possibilities for transforming underused landscapes into massive carbon-capture terrains was explored by Professor Rod Barnett in an opinion article for *Newsroom*. Professor Barnett, who is the head of Te Kura Waihanga—School of Architecture, wrote that Aotearoa needed to adopt fundamental new design objectives, techniques, collective social goals and formulations of what our gardens could do. "Gardens provide us with opportunities to increase our health, grow nutritious food for our families, and make places to play and socialise in. When carefully planned and designed, they also offer a biological realm in which to connect to natural systems through organisms such as plants, birds, and insects, and link with natural forces—sunshine, rain, wind, water, and unstoppable evolutionary growth," he wrote. Te Herenga Waka's Landscape Architecture programme was researching how to upscale community gardens and examining ways to redefine public gardens as 'carbon gardens': sites where social objectives of public health could be met and where climate change research could be conducted.

How could our electric cars help power our neighbourhoods? Te Herenga Waka's Chair in Sustainable Energy Systems Professor Alan Brent introduced the public to a concept called the 'grid of grids', which is revolutionising the way we think about energy. In an article for *The Conversation*, Professor Brent said a grid of grids was a collection of smaller electricity networks capable of operating independently or together as required, thereby forming a flexible and resilient energy infrastructure that could help contribute to a sustainable future. He discussed some recent research from Te Kura Mātai Pūkaha, Pūrorohiko—School of Engineering and Computer Science that explored the integration of smaller-scale renewable, self-sufficient energy systems (microgrids) with a fleet of electric vehicles. "EVs would be part of this network, not merely extracting power but actively participating in a reciprocal energy exchange. This approach turns every EV into a decentralised power unit, capable of contributing to, and benefiting from, the broader energy system." He said that once established, the grids would form a buffer against the uncertainties of the wider energy market.

ENGAGEMENT

There are a plethora of priorities competing for the attention of our staff and students: the cost-of-living crisis forcing students to pick up more paid work and increasingly study part-time and often remotely, and organisational restructuring and financial constraints for staff, alongside all the wider societal pressures that demand attention. So, the challenge for Te Herenga Waka as an organisation is to engage individuals and the broader university community in sustainability issues in a way that develops understanding and inspires action.

There have been a range of ways we've achieved this in 2023, and we are especially delighted to see a jump in the amount of time students committed to volunteering in our community. Through our continued efforts to mobilise our community, and bring the wider public on board through partnerships at local, national, and international levels, students are also reporting that they feel more engaged with sustainability issues.

Performance indicators	2020	2021	2022	2023
Student volunteer hours (Wellington Plus)	9,290	9,563	9,124	10,476
Sustainability-focused media releases (and the number of resulting stories)	45 (148)	30 (38)	48 (42)	43 (64)
Staff and student teams who completed the Green Impact programme	49	28	45	14
Students who think they have become more engaged with sustainability issues while enrolled	46%	44%	42%	45%
Philanthropic donations to sustainability work	$1.7 million	$250,000	$250,000	$2.6 million

We've engaged our own university community and the wider public in a variety of ways in 2023.

A podcast series produced by Te Herenga Waka has encouraged listeners to consider a range of sustainability questions. Hosted by Science Communication lecturer and ecologist Dr Sarah-Jane O'Connor, the series delved into topics such as climate action, biodiversity, clean water, the circular economy, equity, and the role of partnerships in achieving sustainability goals. The podcast featured experts from all over the University and highlighted our cross-disciplinary capability in tackling climate and sustainability issues.

Te Herenga Waka was proud to be named one of three official nominators in Aotearoa for an esteemed international environmental award. The Earthshot Prize, which aims to find and grow the solutions that will repair our planet this decade, is awarded to teams or individuals by the Royal Foundation of the Prince and Princess of Wales. Valued at £1 million each, the prize has five categories: protect and restore nature; clean our air; revive our oceans; build a waste-free world; and fix our climate. With many innovative solutions being developed at Te Herenga Waka, and by its wider community, the University narrowed down the field to announce seaweed stock-feed supplement company Sea Forest Ltd, novel biomaterials developer Humble Bee, and reusable wooden building system XFrame as its 2023 nominees. We were delighted that Sea Forest was announced as one of the three finalists in the 'Fix our Climate' category.

The University's Ōrauariki—Wellington School of Business and Government celebrated the sustainability and ethics-related initiatives, achievements, and impact of its staff and students across teaching, research, engagement, and leadership with the release of its latest *Principles for Responsible Management Education (PRME)* progress report. The PRME is an initiative of the United Nations Global Compact that engages business and management schools around the world. It comprises seven principles—guided by the UN's Sustainable Development Goals—that focus on serving society and safeguarding the planet. Chair of WSBG's PRME steering committee Dr Christian Schott said the aim of the voluntary scheme was to equip business school students with the skills needed to be future leaders who deliver change by balancing environmental, social, cultural, and economic wellbeing goals.

Ten teenagers have had the chance to explore some of the country's unique glaciers thanks to support from Te Herenga Waka. Te Hauhunga—Girls* on Ice Aotearoa offers secondary-school-aged girls (including all female-identifying, non-binary, and intersex students) the opportunity to join scientists, outdoor specialists, and artists on mountain expeditions within New Zealand. Part of an international network, the Aotearoa branch of Girls* on Ice is hosted by the University's Te Puna Pātiotio—Antarctic Research Centre, and support from generous donors allows

students to join the expeditions at no cost. The organisation recently held its first trip to the glaciers of Mt Ruapehu, the highest active volcanic peak in the North Island. Te Puna Pātiotio research fellow Dr Lauren Vargo co-founded the programme in Aotearoa and said she was very excited for its first iteration. “It can be transformational, particularly for young people with fewer opportunities to explore the outdoors or an interest in science. Girls* on Ice enables this for them, fostering a sense of self-confidence in their abilities and intelligence, and hopefully creating lifelong advocates for Earth science and environmental stewardship.”

A Te Herenga Waka law professor has helped create a new international treaty that deals with the conservation and sustainable use of the ocean. Professor Joanna Mossop, whose specialist area is the law of the sea, participated in the creation of the Agreement on the Conservation and Sustainable Use of Marine Biodiversity in Areas Beyond National Jurisdiction, sometimes known as the BBNJ (Biodiversity Beyond National Jurisdictions) agreement. The treaty provides a legal framework for dealing with the parts of the ocean outside national boundaries—around two-thirds of the world’s oceans. Professor Mossop travelled to the United Nations headquarters in New York to work on the agreement, and said it was a very busy but rewarding piece of work. “It’s not often for an international lawyer that you get a major new treaty in your area. There’s a lot of intellectual energy going on, studying this treaty around the world. There’s been a lot of excitement, but also recognition that we’ve still got a lot of hard work to do.” The treaty has been agreed in principle by UN member countries, but will likely take a few more years to be adopted, ratified, and implemented.

These are great examples of how we are working with our community to influence and inspire action for a sustainable future. Our audience of people who are engaged with sustainability issues continues to grow but, as always, the challenge is converting interest into action. We must also try to find new ways to reach people who don’t consider sustainability issues a priority or have challenges preventing them from contributing.

OPERATIONS

Coming up with solutions to help solve the climate crisis is just one of Te Herenga Waka's jobs as a research-focused university—we have an obligation to lead by example with how we operate as an organisation on a daily basis too. We are one of Wellington's largest employers, and between our staff and students, we have the population of a small town. With that kind of ecological footprint, it's vitally important we 'walk the talk' when it comes to sustainability practices.

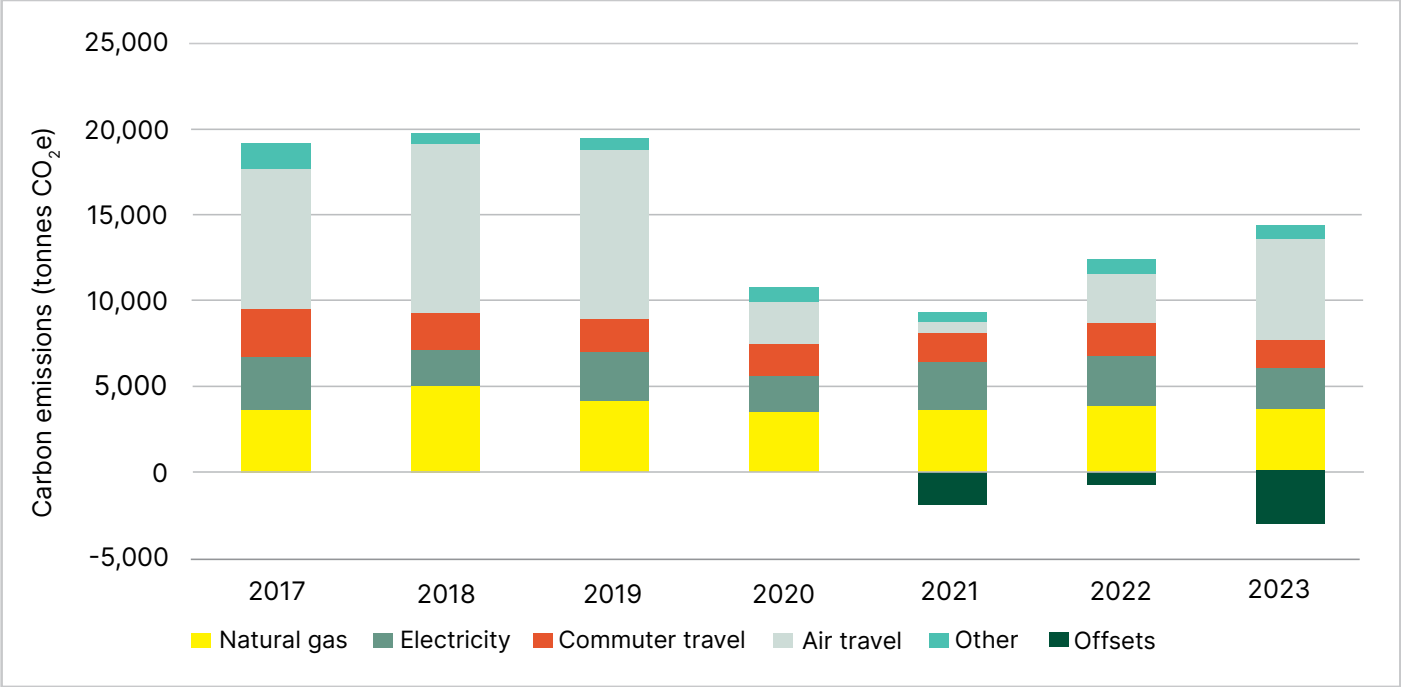
Although it had many obvious challenges, COVID-19 did provide some glimmers of hope in terms of sustainability. With everyone taking heed of the 'stay home' directives, and many of our functions subsequently moving online, the University—like many other large organisations—enjoyed significant drops in its greenhouse gas emissions. But with COVID-19's impact waning, we are increasingly returning to in-person activities, which generates more travel and more resource consumption on campus. The challenge is to strike the right balance between face-to-face engagement and other alternatives.

While university-wide financial constraints have been useful in limiting our negative environmental impacts (particularly dampening air travel volumes), we have nevertheless continued working hard to embed sustainability outcomes in our decision-making. We're pleased to say we have kept our greenhouse gas emissions well below pre-pandemic levels, and that hard work will continue with our commitment to reach net zero greenhouse gas emissions by 2030 via our Zero Carbon Plan. Of course, the university-wide financial constraints also mean there is currently less resourcing available to invest in making our campuses and operational practices more sustainable.

Performance indicators	2020	2021	2022	2023
Energy consumption (electricity and natural gas—GWh)	34.5	36.3	39.8	43.2
Air travel (university funded—million km)	11.1	3.8	17.1	33.8
Commuting by car (staff and student—million km)	4.4	4.9	4.6	5.2
Waste to landfill (tonnes)	395	458	468	389
Paper consumption (reams)	15,500	12,600	21,000	6,209
Trees planted	1,000	2,400	4,150	3,150
Gross greenhouse gas emissions (tonnes CO_2e)	10,715	9,282	12,364	14,090

Photo by Cathy Fouhy for the University's 2023 Sustainability Photo Competition.

CLIMATE ACTION



Te Herenga Waka's Zero Carbon Plan commits us to net zero greenhouse gas emissions by 2030 while achieving a 40 percent reduction in gross emissions compared to 2017. So far, we are ahead of schedule. In 2023, our emissions were 27 percent below our baseline.

Air travel is our largest source of carbon emissions and, while we are back flying after the pandemic restrictions, it is still 45 percent below pre-pandemic volumes. We have introduced air travel carbon targets, an internal travel levy, and tightened up approval processes to make sure that we're only travelling when absolutely necessary. Although we're making good progress in addressing air travel emissions, our energy management practices—an area where we have historically been industry leading—have slipped in recent years through a lack of resourcing. Our other big source of emissions is staff and student commuting. Public transport discounts and improved reliability helped create a small shift towards sustainable transport modes, but more students returned to study on campus, so overall commuting emissions rose slightly. You can find out more in our 2023 Greenhouse Gas Inventory.

Beyond reducing emissions, we must plan for how we will adapt to the impacts of climate change. In 2023, we led a project involving all the other universities, Te Pūkenga, and the wānanga to develop climate scenarios that explore how climate change will impact the sector over the next 75 years. This gives us the ability to look at what opportunities and risks are most relevant to us at Te Herenga Waka so we can plan our response accordingly.

Photo by Amish Verma for the University's 2023 Sustainability Photo Competition.

‘WALKING THE TALK’

With our predominantly urban campuses, there is only a limited opportunity to make a significant contribution to nature regeneration on campus. Our Growing our Future project provides a mechanism to make a meaningful contribution to enhancing the biodiversity of Wellington. In 2023, we marked our third year of the partnership with Wellington City Council to re-establish native forest over an 11-hectare block of land in the Outer Green Belt behind Churton Park. Our staff, students, and alumni helped put another 3,150 plants in the ground to fill up the available land at the site. We will now move into planting up the neighbouring parcel of land, while continuing to nurture our trees planted in the past three years.

Te Herenga Waka has been taking steps towards more sustainable energy use and, in 2023, we received significant public funding to help us upgrade some equipment. The University obtained co-funding from the State Sector Decarbonisation Fund (administered by the Energy Efficiency and Conservation Authority) to install efficient LED lighting and replace a fossil-fuel-burning gas boiler system with a low-emissions alternative. The two projects will see the University reduce carbon emissions by more than 2,100 tonnes over the next 10 years.

“This is part of our long-standing process to reduce the carbon emissions produced by our buildings,” said Property Services director David Stevenson. “We have changed to LED lighting throughout all common areas of the University and several buildings thus far, and are working to convert our gas boilers to other, more efficient low-carbon options as they come to the end of their operational life. This is part of the Property Services team’s commitment to the pillars underpinning sustainable development and our institution’s wider commitment to sustainability and wellbeing.”

More than 400 solar panels were installed at Te Wānanga Waihanga-Hoahoa—Faculty of Architecture and Design Innovation, and are providing inspiration for the next generation of designers. The photovoltaic arrays, which convert sunlight into electricity, were part of Te Herenga Waka’s Zero Carbon Plan, which has committed the University to installing more on-site renewable electricity generation. “Sustainability is front and centre of our teaching and research, and we are embracing all opportunities to lead sustainability for the built environment through our actions and mahi,” said the Faculty’s dean, Professor Robyn Phipps. The system was connected in July, and over the following month, the array produced more than 61.6 MWh of electricity—equivalent to the amount of electricity five regular homes would use in a whole year. It was expected that the array would save around 21 metric tonnes of carbon dioxide per year from being released into the environment.

The Living Pā, Te Herenga Waka’s groundbreaking marae redevelopment, is edging ever closer to completion. In retaining the original wharenui—Te Tumu Te Herenga Waka—at the project’s centre, the Living Pā will realise the University’s aim of combining mātauranga Māori and sustainability practices within a stimulating and innovative learning setting. Once finished, it will be one of the most environmentally sustainable buildings not just in Aotearoa but the world, and is being constructed to meet the stringent standards of the globally recognised Living Building Challenge. The regenerative building process has rigorous targets for recycling, reusing, and tracking waste to ensure it doesn’t end up in landfill. Part of that has involved repurposing timber offcuts for other projects, including the upgrade of the Mākara Peak Mountain Bike Park. The Living Pā is on schedule to be opened by the end of 2024.

We are very mindful that our operational practices need to reflect the transition to a sustainable future that our academic staff are championing and our students are expecting. While we aren’t perfect, we are systematically addressing our environmental impacts to become more sustainable and ultimately restore the health of the natural world we all depend on.

ZERO CARBON BY 2030

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TE HERENGA WAKA

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