



AUT

AUT SUSTAINABILITY
REPORT 2022

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FOREWORD FROM THE VICE-CHANCELLOR

Tēnā koutou katoa

Auckland University of Technology – Te Wānanga Aronui o Tāmaki Makau Rau has been a pacesetter in New Zealand education and continues to make significant progress in its commitment to sustainability.

AUT has maintained its place as one of the top 100 universities in the Times Higher Education (THE) impact rankings. The ranking assesses universities based on their contribution to the United Nation’s Sustainable Development Goals (SDG’s), which collectively address the most serious and critical global challenges of our time, including poverty, inequality, and climate change. AUT placed 64th equal amongst 1,591 universities. AUT remained in the top 30 universities in the world for decent work and economic growth and gender equality.

The United Nations’ Sustainable Development Goals contextualise AUT’s commitment to sustainability by creating great graduates, great research, and impact for a sustainable world. AUT recognises that contributing to the SDGs in a meaningful way requires more than a ‘business as usual’ contribution; there is a need for a step change in human behaviour before society can meet these goals. AUT is committed through research, teaching and the management of its own operations to be part of this step change.



Upon my arrival at AUT in April 2022, I outlined five key priorities, including advancing our environmental and financial sustainability. In 2022 the University continued to build on its previous successes and made steady progress towards this. We saw new sustainability-focused teaching, impactful research, and several investments in energy-saving technologies, including installing low-emissions heating, cooling and ventilation systems in WB, our only listed heritage building.

Progress on AUT’s Te Tiriti framework, alongside work on our new strategy, will set us up to take significant steps towards creating an equitable and sustainable university that supports students and staff and delivers excellence in teaching, learning and research.

Ehara taku toa i te toa takitahi, engari, he toa takitini
It is through the efforts of all of us that we succeed.

Professor Damon Salesa

Vice-Chancellor,
Auckland University of Technology

CHAIR OF THE SUSTAINABILITY COMMITTEE INTRODUCTION



Auckland University of Technology (AUT) - Te Wānanga Aronui o Tāmaki Mākau Rau is showing steady progress in teaching sustainable practices, generating impactful sustainability research and leading by example through sustainable campus operations.

LEARNING AND TEACHING

The new academic year brought progress around sustainability focused teaching with the number of sustainability-focused courses offered to students increasing to 88, from 67 in 2020 – the baseline year. This increase is also reflected in the proportion of students choosing to study sustainability, with 14% of AUT students enrolled in a sustainability-focused course in 2022, up from 10% in 2020.

A new Environmental Sustainability minor was introduced for students to enhance their learning of sustainability across a range of sustainability focused courses, including the environmental sciences, environmental communications and climate change. Changes to the curriculum now mean students from a range of programmes including architecture, business, design and communications can complete this minor.

RESEARCH

The percentage of AUT's SDG-related publications has increased from 17% in 2020 to 30% in 2022. AUT produced 220 SDG-related research publications in 2020, and 390 in 2022. The main areas of SDG-related research continue to be focused on SDG3 – good health and wellbeing – SDG4 – quality education – and SDG7 – affordable and clean energy.

Impactful sustainability research by Senior Lecturer Dr Jack Chen, and PhD student Andres Tiban, resulted in the development of a sustainable surfactant named spherelose. It works similarly to detergent but is sourced from wood pulp and smaller amounts of plant oils as opposed to most surfactants which are typically made from petroleum products with many being non-biodegradable pollutants. Spherelose has received \$350,000 of funding from Kiwinet with testing and product formulation underway.



OPERATIONS ON CAMPUS

The flow-on effects of the pandemic continued to be felt across our campus operations in 2022. A slower return of staff and students to campuses in early 2022 impacted AUT's CO₂e emissions, water, and waste consumption.

AUT's CO₂e emissions were 45% below our 2018 baseline year, and all emission sources decreased in 2022, except for refrigerants and data centres. Despite international borders reopening in July, AUT's air travel emissions remained low (10% of 2018), supported by changes to AUT's Travel Policy.

Work began in 2022 to lock in the CO₂e energy-related savings achieved during 2020 and 2021 through the development of an Energy Reduction Plan. The Plan will provide a clear pathway for AUT to reduce CO₂e emissions associated with energy consumption through energy efficiency measures and switching from carbon-intensive fuels – natural gas – to electricity. An organic waste collection was introduced throughout the City Campus from early 2022 to divert more waste from landfill and create a valuable resource – compost.

The development of AUT's Commuter Travel Plan began and included input from stakeholders across AUT. One of the objectives of the plan is to achieve a sustainability target where 85% of staff and students use sustainable transport to access AUT campuses.

Planting native species has continued throughout the campuses in 2022, including the first stage of planting natives along the sides of a creek on the South Campus. School of Science Lecturer Dr Craig Bishop, worked with the sustainability team and undergraduate ecology students to establish a biodiversity baseline at the City and North Campuses. The baseline will be used to assess our progress with biodiversity on three campuses.

Continuing with a partnership approach, the Energy Efficiency Conservation Authority (EECA) supported AUT in successfully accessing \$2.3million from the State Sector Decarbonisation Fund to replace four gas boilers and chillers with efficient heat pumps, as well as moving to refrigerants that have a much lower global warming potential.

Our staff and students have experienced three very disruptive years, yet AUT has continued to progress our sustainability goals. This is a testament to our staff and students' ongoing work to advance sustainability.

Professor Mark Orams

Deputy Vice-Chancellor Research
Chair of the Sustainability Steering Group

OVERVIEW OF KEY TARGETS

The overview of key targets below highlights a pathway towards zero carbon energy, circular economy and ecological regeneration aspirations. It shows where we are progressing well and where more focus is needed.

LEARNING AND TEACHING - MOHIO-ORA

ALL UNDERGRADUATE PROGRAMMES DEVELOP SUSTAINABILITY LITERACY, VALUES, AND PRACTICES



+10

compulsory sustainability courses since 2020

MORE STUDENTS HAVE ACCESS TO SUSTAINABILITY MAJORS, MINORS, OR COURSES



+21

sustainability-focused courses and +1,004 students enrolled since 2020

+1

degree with a sustainability major or minor compared with 2020

RESEARCH - MOHIO-ORA

INTERNAL FUNDING THAT SUPPORTS SUSTAINABILITY RESEARCH PROJECTS



2 faculties have sustainability criteria in their internal research grants process

INCREASING PEER REVIEWED SDG RESEARCH OUTPUTS



30% of research outputs contributed to a UNSDG

+13%

and +170 outputs since 2020 (Source: Dimensions)

EXTERNALLY FUNDED SUSTAINABILITY RESEARCH PROJECTS



84 externally funded SDG-related research projects generated \$18.8M

+8 from 2020

PARTNERSHIP AND COMMUNITY - HAPORI-ORA

AUT BECOMING A FAIRTRADE REGISTERED ORGANISATION



Only Fairtrade coffee is sold at cafés on AUT campuses. In 2022 3.2 tonnes of Fairtrade coffee consumed

+0.7 tonnes from 2020

LOW CARBON - HIHIRI-ORA

CO₂e REDUCED BY 50% BY 2025

-45%

decrease since 2018*



CO₂e FROM ENERGY REDUCED BY 50% BY 2025

-15%

decrease since 2018*



CARBON FOOTPRINT OF OUR ICT USAGE REDUCED

+15

tonnes increase since 2018



WATER - WAI-ORA

MAINS WATER REDUCED BY 20% BY 2025

-23%

decrease since 2018*



* Reductions in CO₂e and water against the baseline relate, to sustainability initiatives and in part to the effects of COVID, including, a ban on international air travel until July 2022, and fewer people on campuses. Also, AUT's campuses were open from January 2022, however the majority of staff and students returned to campus in May 2022.



AUT AND SUSTAINABILITY

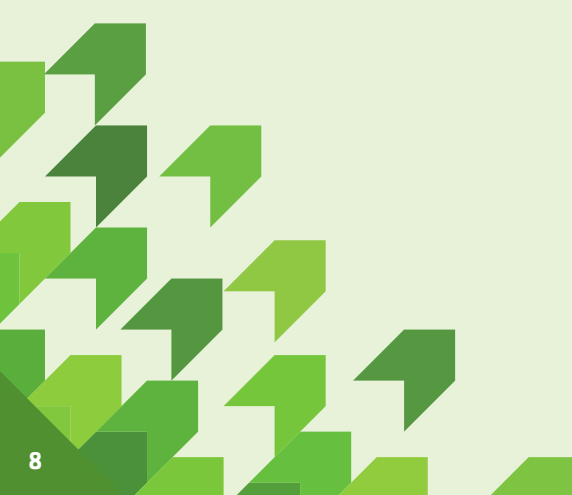
As a university we have a significant contribution to make around sustainability, through research, teaching, innovative thinking and leading by example. We also have a role to play through contributing towards the SDGs, which is highlighted in our Sustainability Plan. AUT Directions and the Sustainability Plan are both centred on five themes. These themes also form the structure of the Sustainability Report. These themes and their relevant focus areas, are:

- Creating exceptional learning experiences – Learning and teaching
- Discovery and application of knowledge for wellbeing and prosperity – Research
- Responding to our place in the world – Partnerships and community
- Building our position as New Zealand’s University of Technology – Leadership
- Being a place where people love to work and learn – Sustainability on campus

AUT has commenced work on our next strategic plan and is set to launch a new Tiriti o Waitangi framework. Over the next year, we will review the Sustainability Plan and reporting framework to ensure alignment with these guiding documents.

The Sustainability Plan further identified three over-arching outcomes AUT is working towards through our sustainability actions:

<p>Mauri ora Wellbeing</p> <p>A recognition that human wellbeing is dependent upon the wellbeing of the planet and the web of life that supports and resources our endeavours.</p> 	<p>Ki Tua Futures</p> <p>A viable future is inherent within sustainability and so future-oriented thinking for wellbeing and prosperity is key.</p> 	<p>Whanaungatanga Connectivity</p> <p>The wellbeing of planet and people is enabled by complex global systems, which connect across diverse regions, areas and functions.</p> 
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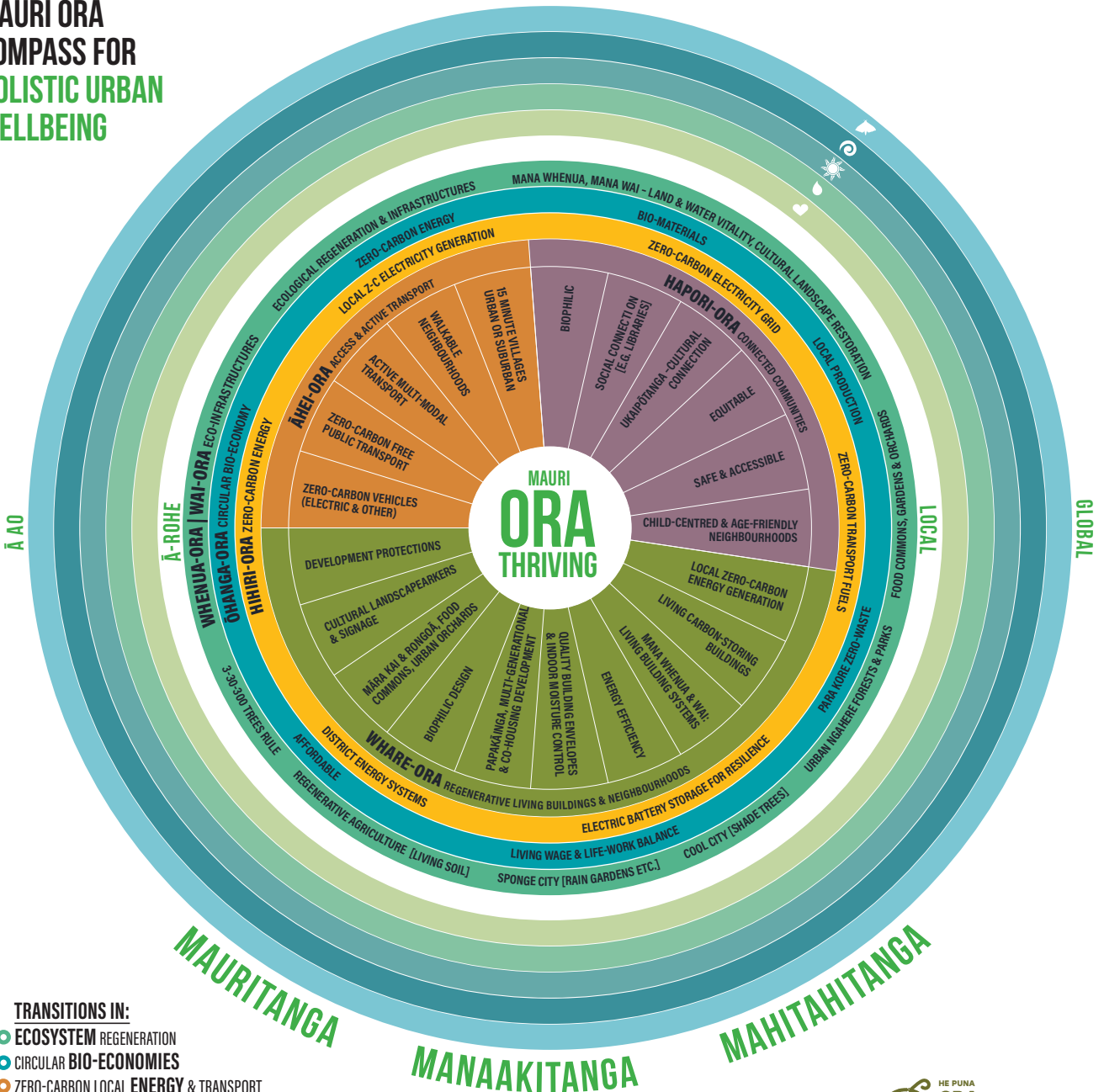


Since the Plan was written, we have also included in our Sustainability Report the Mauri Ora Compass for holistic wellbeing as a lens through which to view our activities. The compass conceptualises regeneration from a Māori perspective and takes a more progressive approach to sustainability. It was developed by Associate Professor Amanda Yates with funding from the National Science Challenge programme. Compasses are co-created by organisations providing a governance and action framework for transformative decision making centered to mauri ora, social, cultural and ecological wellbeing.

Each target in the Sustainability Report references and integrates the following three areas that are relevant to the university:

- Core concepts of AUT's Sustainability Plan
- SDGs
- Te aō Māori and Mauri Ora compass points

NGĀ TOHU
MAURI ORA
COMPASS FOR
HOLISTIC URBAN
WELLBEING













- TRANSITIONS IN:**
- ECOSYSTEM REGENERATION
 - CIRCULAR BIO-ECONOMIES
 - ZERO-CARBON LOCAL ENERGY & TRANSPORT
 - REGENERATIVE BUILDINGS & INFRASTRUCTURES
 - CONNECTED COMMUNITIES

THEME 1:

CREATING EXCEPTIONAL LEARNING EXPERIENCES – LEARNING AND TEACHING

AUT is a university creating great graduates for the changing world that we live in. Sustainability is a response to that changing world, so AUT is offering our students opportunities to learn about sustainability, which can be applied in their future professional life.

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/SDGS
<p>Ensure all undergraduate programmes develop sustainability literacy, values, and practices, consistent with the AUT Graduate Profile</p> <p>STATUS: ON TRACK</p>	<p>There were 44 compulsory sustainability-focused courses offered in AUT programmes, majors or minors. This is an increase of ten, when compared with 2020, the baseline year.</p>	 <p>Mohio-ora, Ki Tua</p> 
<p>Increasing number of students will have access to majors, minors, or courses with a sustainability orientation</p> <p>STATUS: ACHIEVED</p>	<p>In 2022 (and 2021), seven sustainability majors or minors were offered within undergraduate programmes. This is one more than in 2020.</p> <p>The number of sustainability-focused courses increased from 67 to 88 over the same time. One of the new courses offered is SOS585 Climate Action, which is focused on SDG13.</p> <p>Almost 4,000 students (3,907, or 14%) enrolled in sustainability-focused courses. This is an increase of 1,004 student enrolments and four percentage points since 2020.</p>	 <p>Mohio-ora, Ki Tua</p> 
<p>All students will have the opportunity to work on an interdisciplinary project that encompasses the concepts of wellbeing, futures-thinking, and connectivity</p> <p>STATUS: ON TRACK</p>	<p>The Sustainable Enterprise minor includes an interdisciplinary project. Sustainable Enterprise can be selected as a minor for most of AUT’s large undergraduate degrees, including the Bachelor of Arts, Bachelor of Business, Bachelor of Communication Studies, Bachelor of Computer and Information Science, Bachelor of Health Science, and the Bachelor of Science. Students enrolled in Sustainability Consultant Project work alongside stakeholders in an interdisciplinary team to design and deliver a sustainability project.</p>	 <p>Mohio-ora, Whanaungatanga</p>  
<p>Develop climate emergency and zero-carbon system change curriculum materials for academics</p> <p>STATUS: ON TRACK</p>	<p>Our new Environmental Sustainability minor offers students a holistic understanding of environmental sustainability and includes the new SOS585 Climate Action course, along with courses in environmental sciences and communications. As with Sustainable Enterprise, this minor is available to students across a wide range of programmes.</p>	 <p>Mohio-ora, Ki Tua</p>  

1. Sustainability-focused courses – these include courses where the primary, explicit focus is on sustainability, the application of sustainability within a field and/or understanding or solving one or more major sustainability challenge(s) (Source – AASHE – Sustainability Tracking, Assessment and Rating System)* The remaining two learning and teaching targets will be reported on in the 2022 Sustainability Report.

2. Some natural flux in numbers is expected as not all courses are offered every year.

NEW CLIMATE ACTION COURSE

The School of Social Sciences and Public Policy introduced SOSC585 Climate Action, which is specifically aligned with SDG13 – Climate Action. The course threads together various social sciences to understand system change. Students learn how climate action is driven by governance, economics, ethics, policy, politics, Indigenous self-determination, communications, just transitions, climate litigation, climate finance, social movements, and more.



AUT MASTER'S STUDENT WINS PRESTIGIOUS ARCHITECTURE AWARD

Matangireia Yates Francis (Te Arawa, Te Aitanga-a-Mahaki, Rongowhakaata and Ngāti Maniapoto) won the prestigious Te Kāhui Whaihanga Resene Student Design Award for 2022. He was enrolled in the Master of Architecture (Professional) and supervised by Associate Professor Amanda Yates (Ngāti Rangiwewehi, Ngāti Whakaue, Te Aitanga a Māhaki, Rongowhakaata) from the School of Future Environments.

The award acknowledges the top final-year projects from each of the four accredited master's programmes in Aotearoa. Matangireia described his project as being about co-occupying with earth and sky as a step towards a sustainable future. "If te ao Māori presents solutions to a sustainable future, this vertical pā could be the design blueprint that guides us in building homes that support successful co-occupancy with taiao (the natural world)."



THE AWARD WINNING DESIGN BY MATANGIREIA YATES FRANCIS



THEME 2:

DISCOVERY AND APPLICATION OF KNOWLEDGE FOR WELLBEING AND PROSPERITY – RESEARCH

AUT’s research is extremely varied given the range of schools and faculties within AUT. In 2022, our research publications that relate to the SDGs had an emphasis on health and wellbeing, as well as clean and affordable energy, which is consistent with previous years.

THEME 2- TARGETS TO 2025

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/ SDGS
<p>Increase the number of mission-led and large-scale projects on the critical issues of our time, including projects which are tackling aspects of the climate emergency</p> <p>STATUS: ON TRACK</p>	<p>Professor Erica Hinckson, School of Sport and Recreation, co-authored a paper on urban planning published in The Lancet Global Health. The research benchmarked urban planning policies that promote health and sustainability in cities around the globe, and aims to inform policy directions and planning for more healthy, sustainable cities worldwide. According to Professor Hinckson, Auckland fares below average in the availability and quality of urban planning and transport policies that support health and sustainability.</p> <p>AUT secured an \$8 million grant for research into earthquake proof buildings. The five year research programme, Sustainable Earthquake Resilient Buildings for a Better Future, is led by Senior Lecturer Dr Shahab Ramhormozian, School of Future Environments. The research will generate optimised, versatile building systems that can withstand severe earthquakes and post-earthquake fire. Dr Ramhormozian says, “using the systems, buildings will suffer no structural damage under severe earthquakes, therefore significantly reducing the cost of earthquakes on the built environment.” The grant comes from the New Zealand Government’s Ministry of Business, Innovation and Employment’s Endeavour Fund.</p>	 <p>Wai-ora, Whenua-ora, Ki Tua</p> 
<p>Providing internal funding mechanisms which support research projects that advance knowledge and its application to sustainability</p> <p>STATUS: ON TRACK</p>	<p>Two faculties have included sustainability criteria in their internal funding rounds. In the Faculty of Design and Creative Technologies, three of the four themes relate to the SDGs. One project funded in 2022 investigated using an alkali-activated volcanic ash binder as a more sustainable option for stabilising unsealed roads. The Faculty of Business, Economics and Law provided internal research funding for 20 research projects, relating to 10 SDGs.</p>	 <p>Hapori-ora, Mauri-ora</p> 
<p>Host annual research events addressing climate emergency responses and system change (mitigation, adaptation, transformation)</p> <p>STATUS: ON TRACK</p>	<p>We established a climate change researchers’ group for postgraduate students. This is a transdisciplinary group for sharing research.</p> <p>The annual Pacific Language video series was focussed on sustainability, and AUT’s research into combatting climate change. There were nine videos, each narrated in a different Pacific language.</p>	 <p>Whenua-ora, Wai-ora, Whanaungatanga</p> 

* The remaining research target will be reported on in the 2023 Sustainability Report.

THEME 2- TARGETS TO 2025

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/ SDGS
<p>Increasing numbers of peer reviewed research outputs that contribute to the United Nations' Sustainable Development Goals</p> <p>STATUS: ACHIEVED</p>	<p>AUT had 390 publications that contributed to one or more SDG in 2022. This was 30% of all outputs and a significant jump from the 17% reported in 2020.</p>	 <p>Mohio-ora, Ki Tua All SDGs</p>

LIVING CITIES COMBAT CLIMATE CHANGE

According to research by Associate Professor Maibritt Pedersen Zari, School of Future Environments, planted 'green' walls and rooftops, wetlands, tree-lined roadsides and urban ngahere don't just beautify our cities – they are critical elements in our efforts to mitigate and adapt to the effects of climate change.

Dr Pedersen Zari is calling on built environment professionals, scientists and policymakers to urgently implement urban ecological regeneration strategies in cities across the globe.

Such strategies reduce the urban heat island effect, where cities tend to be hotter than the surrounding areas. Implementing regenerative living city strategies based on increasing urban vegetation can support biodiversity, help cool and purify air, prevent or lessen flooding, and sequester carbon from the atmosphere.









THEME 3:

RESPONDING TO OUR PLACE IN THE WORLD – PARTNERSHIPS AND COMMUNITY

AUT has developed many enduring sustainability-focused partnerships in recent years. These include Green Impact, a worldwide sustainability behaviour change programme; the Living Labs project with Ngāti Whātua Ōrākei; and ongoing work with the Energy Efficiency Conservation Authority for on-campus CO₂e reduction projects.

THEME 3 - TARGETS TO 2025

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/ SDGS
<p>Establishing partnerships with external organisations based on working together towards the UN Sustainable Development Goals and/or becoming low carbon</p> <p>STATUS: ON TRACK</p>	<p>AUT Ventures received \$0.35 million from KiwiNet to support the ongoing development of a sustainable surfactant invented by Senior Lecturer Dr Jack Chen, School of Science, and PhD student Andres Tiban. Whereas many other commercially available surfactants are sourced from petroleum products and are non-biodegradable pollutants, Spherolose is made of wood pulp and smaller amounts of sunflower, olive, and other plant oils. The KiwiNet funding is now being used in the next stage of development and testing.</p>	 <p>Mohio-ora, Hapori-ora, Mauri ora, Whanaungatanga</p>   
<p>Working towards AUT becoming a Fairtrade- registered organisation</p> <p>STATUS: NOT ACHIEVED</p>	<p>Only Fairtrade-certified coffee is sold in the cafés on AUT's three campuses and 3.2 tonnes was consumed in 2022.</p> <p>This is an increase from 2020 when 2.5 tonnes was consumed, however this number was lower than normal due to campus lockdowns. For AUT to become a Fairtrade university, further work around procurement of Fairtrade products is required, as well as engagement with the student union and the wider university.</p>	 <p>Whenua-ora, Wai-ora, Hapori-ora, Whanaungatanga</p> 

AUT STAFF MEMBER WINS INTERNATIONAL GREEN IMPACT AWARD

Kim Daly, Programme Administrator for the Law School, was named the Global Sustainability Hero at the Green Impact Special Awards, beating out nominations from 76 countries and finalists from Belgium's Vrije Universiteit and the UK's National Star.

Green Impact is a United Nations award-winning programme designed to support environmentally and socially sustainable practice. More than 1,500 organisations around the world participate in the programme, including AUT. Kim is a founding member of the Faculty of Business, Economics and Law's BELOved Planet team. The judges described her as a trailblazer and sustainability champion, and recognised her achievements in educating the campus community along with implementing green initiatives.



KIM DALY



THEME 4:

BUILDING OUR POSITION AS NEW ZEALAND'S UNIVERSITY OF TECHNOLOGY – LEADERSHIP

According to THE World University Rankings, AUT is placed in the top 1% of universities worldwide and is first in New Zealand (and 53rd in the world) for global research impact. QS recently placed AUT equal 407th in the world and gave us five stars across a range of areas, including research, teaching, facilities and environmental impact, all of which combine to make AUT one of the best young universities in the world.

THEME 4 - TARGETS TO 2025

SUSTAINABILITY ROADMAP TARGETS	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/SDGS
<p>Generating sustainability research projects across AUT that attract external financial support</p> <p>STATUS: ACHIEVED</p>	<p>There were 84 externally funded SDG-related research projects in 2022, up from 76 in 2020. The financial value of these projects increased \$0.9 million to \$18.8 million over the same period.</p> <p>External funding for research projects came from a range of sources, including Te Whatu Ora – Health New Zealand, the Health Research Council, Callaghan Innovation, and the Ministry of Business, Innovation and Employment.</p>	 <p>Mohio-ora, Whanaungatanga All SDGs</p>
<p>Demonstrating innovation in sustainability professional practice within the curriculum and our research</p> <p>STATUS: ON TRACK</p>	<p>High-resolution mapping produced the first ever global estimates of coastal habitat damage caused by anchoring. A research team including Dr Marta Ribó, School of Science, discovered that every time a high-tonnage ship anchors, it can excavate the seafloor up to 80cm and move, displacing enough sediment to fill an Olympic-sized swimming pool. As the damage remains for at least four years, new approaches that will reduce the impact are badly needed.</p>	 <p>Mohio-ora, Whanaungatanga</p>  

AUT STUDENTS WIN THE TCS TRANS-TASMAN SUSTAINATHON

Gemma Moore and Xanthe Moore, both students in the Bachelor of Arts/ Bachelor of Business, won the top prize at the 2022 TCS Sustainathon event. This international problem-solving competition sees university students work in small teams to tackle real-world sustainability challenges faced by Australian and New Zealand businesses. Gemma and Xanthe were asked to identify a way to reduce cabin waste for Virgin Australia. Their solution was to offer a reward, such as frequent flyer points, to customers who opted out of an in-flight meal.



GEMMA AND XANTHE MOORE




THEME 5:

BEING A PLACE WHERE PEOPLE LOVE TO WORK AND LEARN – SUSTAINABILITY ON CAMPUS

Sustainability on campus continues to be a key focus and we are making progress. AUT offered staff and students the opportunity to participate in Green Impact – a sustainability behaviour change programme – for the fourth consecutive year. Seven teams completed Green Impact actions and projects in 2022.

THEME 5 – BIODIVERSITY TARGET TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/SDGS
<p>Preferring indigenous planting, where appropriate</p> <p>STATUS: ACHIEVED</p>	<p>We planted 229 native trees, 16 native vines, and more than 400 native ground covers across AUT’s three campuses in 2022. The trees included rimu, kauri, matai, taraire and tanekaha. The only non-native species were 16 fruit trees, which in time will supply fresh fruit to students at the North and South Campuses.</p>	 <p>Whenua-ora, Mauri-ora</p>

SOUTH CAMPUS CREEK RESTORATION AND THE NORTH CAMPUS PLANT NURSERY

Grounds staff began restoring the South Campus creek in 2022, which involved clearing weeds and planting native trees along the banks. The trees included six kahikatea, three taraire, and three kowhai, along with 150 manuka that were raised at the North Campus nursery. We also planted three rimu, three wharangi, and three miro plants near the creek on the motorway boundary. The next phase will include clearing rubbish left by the previous owners and planting more trees.

Work on the North Campus plant nursery restarted in 2022, after being delayed due to COVID. Grounds staff, along with Dr Caryn Zinn and students in the NUTR701 Lifestyle and Nutrition course eco-sourced seeds from local native bush areas. The nursery will and has begun to raise native plants, to be planted at the North and South Campuses.

CREATING OUR BIODIVERSITY BASELINE

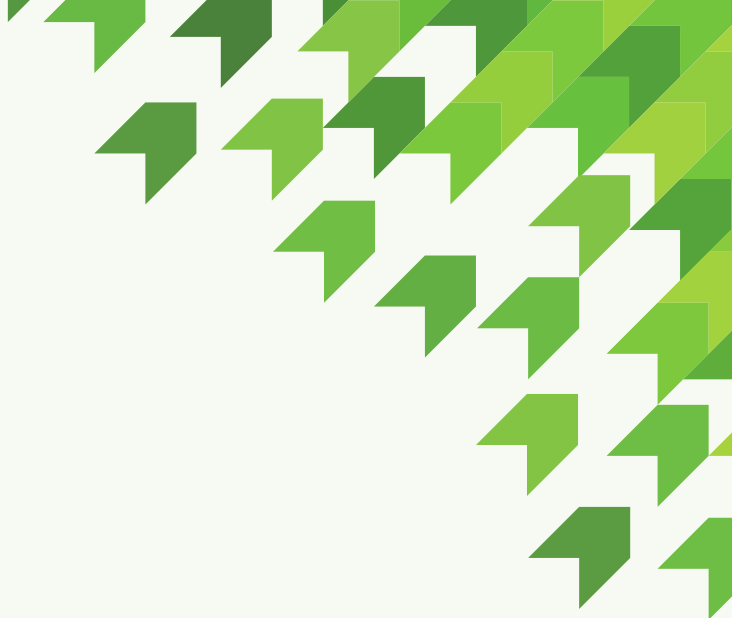
Dr Craig Bishop, School of Science, and a group of students in the Bachelor of Science in Applied Conservation worked with the sustainability team to establish a biodiversity baseline at the North and City Campuses. They collected data on the range, maturity, and prevalence of native and exotic species. While both campuses have a similar range of plants and the North Campus has more big native trees, overall the City Campus has a higher proportion of natives. This information will be used to track AUT’s progress in increasing biodiversity on its campuses; data for the South Campus will be collected shortly.








NATIVE SPECIES PLANTED ALONG THE SOUTH CAMPUS CREEK



NEW PLANTINGS OF INDIGENOUS SPECIES AT THE NORTH CAMPUS



THEME 5 – TRANSPORT TARGETS TO 2025











TARGET	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/SDGS
<p>85% of staff and students take sustainable transport to/from the University</p> <p>STATUS: NOT ACHIEVED</p>	<p>AUT conducts biennial staff and student travel surveys in conjunction with Auckland Transport and the last survey was completed in 2021. Across AUT’s three main campuses 67% of AUT’s students were taking sustainable transport to and from AUT, with 85% of students at the City Campus using sustainable transport in 2021. For staff, 63% choose sustainable modes of travel to/from work.</p>	 <p>Waka-ora, Whanaungatanga</p>  
<p>50% reduction in emissions from air travel</p> <p>STATUS: ACHIEVED</p>	<p>CO₂e emissions associated with air travel have decreased 90% since 2018, from 4,546 tonnes down to 462. While initial savings were due to pandemic-related restrictions, the new AUT Travel Policy allows travel only where it is of demonstrable benefit to the University.</p>	 <p>Waka-ora, Whanaungatanga</p> 

AUT COMMUTER TRAVEL PLAN

Work to develop a commuter travel plan began in conjunction with a Stakeholder Steering Group, which included staff and students from across AUT. One of the main aims is to meet the target of 85% of staff and students using sustainable transport to campus. The scope of the plan is around transport to and from the campuses for staff and students and involved analysing a significant amount of data to inform potential travel measures. There are a range of barriers and complexities for staff and students’ travel choices, and AUT has only limited influence over the transport network. The plan is in development and will be completed in 2023.








THEME 5 - WASTE, WATER AND ENERGY TARGETS TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/SDGS
<p>Carbon emissions halved by 2025</p> <p>STATUS: ON TRACK</p>	<p>AUT's CO₂e emissions in 2022 were 7,534 CO₂e tonnes, a 45% decrease since 2018.</p> <p>A large part of our progress to date arises from the decrease in emissions associated with air travel (approximately 4,000 tonnes). Overall, emissions have decreased from most other sources since 2018, with the exception of those associated with data centres and refrigerants.</p>	 <p>Hihiri-ora, Ki-tua</p> 
<p>Emissions from energy reduced by 50% by 2025</p> <p>STATUS: ON TRACK</p>	<p>AUT's energy consumption, including natural gas and electricity, produced 2,538 CO₂e tonnes of emissions, down 15% since 2018. This is partly due to the pandemic; while buildings were available for use from January, staff and students mostly waited until May to return to campus. Fewer people on campus, along with careful management of heating, cooling, and ventilation, led to a reduction in energy-related emissions.</p>	 <p>Hihiri-ora, Ki-tua</p>  
<p>Mains water reduced by 20% by 2025</p> <p>STATUS: ACHIEVED</p>	<p>We consumed 87,896kL of mains water, down 23% since 2018. Again, water consumption was lower than anticipated due to the delayed return of staff and students.</p>	 <p>Wai-ora, Ki-tua</p> 
<p>Waste reduced by 50% by 2025</p> <p>STATUS: ON TRACK</p>	<p>We generated 458 tonnes of waste, down 34% from 2018. Although partly due to the delayed return to campus, we also installed organic waste bins across the City Campus to divert compostables from landfill.</p>	 <p>Ōhanga-ora, Whanaungatanga</p>  

OUR ENERGY REDUCTION PLAN

About a third of our CO₂e emissions were related to energy (natural gas and electricity) in 2022, so there is great potential to achieve additional CO₂e reductions through an energy reduction programme. With funding from EECA we were able to complete an assessment in late 2022 and a final plan will be released in 2023. To date, we have a clear pathway for AUT to reduce CO₂e emissions through energy efficiency, including scheduling optimisation, installing window film to reduce heat loss and cooling demand, and switching from natural gas boilers to more efficient heat pumps. Longer term measures involve exiting leased buildings and using existing space more efficiently, and eventually generating our own renewable energy. Implementing on site renewable energy generation after the other measures means we get the greatest proportion of our total energy consumption from on site renewables.

THEME 5 - SUSTAINABLE ICT TARGETS TO 2025

TARGET	PROGRESS TOWARDS THE TARGETS	MAURI ORA COMPASS/SDGS
<p>Carbon footprint of our ICT usage reduced</p> <p>STATUS: NOT ACHIEVED</p>	<p>AUT has two third-party data centre providers. Our CO₂e emissions from ICT usage reflects a proportion of CO₂e from these providers. In 2022, 39 tonnes of CO₂e were associated with AUT's data centre suppliers, an increase of 15 tonnes since 2018.</p>	 <p>Hihiri-ora, Whanaungatanga</p> 
<p>Improve the utilisation of computer hardware</p> <p>STATUS: ON TRACK</p>	<p>ICT Services trialled a centralised computer platform that would require less hardware around campus and in the student labs, as well as reducing the electricity required by computers. This will be tested further in 2023.</p>	 <p>Hihiri-ora, Ki-tua</p>  

3. CO₂e emissions from electricity consumed by ICT equipment is captured through the target relating to AUT's CO₂e emissions from energy consumption on the campuses.

THEME 5 - SUSTAINABLE FOOD AND SUSTAINABLE BUILDING TARGETS TO 2025

The sustainable food and building targets will be revised in 2023.

STATE SECTOR DECARBONISATION FUND SUCCESS

As part of our energy reduction plan, AUT received \$2.3 million from the State Sector Decarbonisation Fund to replace two natural gas boilers and two chillers with efficient heat pumps at the City Campus. The current chillers use the harmful R22 refrigerant, and the boilers are used for space heating and domestic hot water. The new equipment will utilise a refrigerant with low global warming potential. We estimate that this project alone will reduce emissions by up to 4,820 tonnes of CO₂e over the next ten years. The work will commence in late 2023.



MATERIALITY ASSESSMENT

STAKEHOLDER ENGAGEMENT

AUT's Sustainability team last conducted stakeholder engagement with AUT faculty staff in December 2020, and separately with students in April/May 2021. A range of sustainability issues was presented to the stakeholders, and through engagement, the staff and students highlighted the three most important sustainability issues, which are:

- Mental health and wellbeing
- Climate change
- Waste and packaging

These three issues align with the three core concepts of the Sustainability Plan, Ki Tua – futures – (climate change), Whanaungatanga –connections – (waste and packaging) and Mauri ora – wellbeing – (mental health and wellbeing). Throughout this report the connection with these concepts to the targets is highlighted and sustainability is represented through the Mauri Ora Wellbeing compass in section one. The above issues have informed the focus of our Sustainability Report and we have further engagement planned with staff and students to understand if the above sustainability issues are still most important to them.

2023 AND BIG CHALLENGES

Based on this report, AUT is showing steady progress against key learning and teaching and research targets. With borders open for all of 2023, and all staff and students back on the campuses, we will gain a clearer view of our progress towards meeting operational targets in a post-pandemic environment. AUT has big aspirations to meet our operational targets, which includes halving our CO₂e emissions, reducing waste to landfill by 50% and reducing water consumption by 20%, all by 2025. A number of sustainability initiatives were implemented over the past years to make progress against these targets. Now, more bold actions are required to achieve these targets.

The revised travel policy offered a bold response to AUT's financial situation and also supported keeping our air travel CO₂e emissions low. Underway are energy reduction and commuter travel plans that include actions around installing low carbon energy infrastructure, such as replacing natural gas boilers with heat pumps and incorporating sustainable travel facilities on campus, particularly end of trip facilities for cyclists. Implementing these will be challenging, given the amount of expertise and funding required (millions of \$) and we are already operating within a financially constrained context. More broadly, Auckland's public transport network is beleaguered with problems and new infrastructure, including the City Rail Link and rail upgrades are years away from completion. Navigating a plan for achieving these bold initiatives, given the challenges will be a focus for 2023.

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AUT

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Reserved Parking Only



We welcome feedback and comments about this Report.
Contact sustainability@aut.ac.nz with your comments.



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