

# Sustainability

## *Annual Report 2022*



THE UNIVERSITY OF  
SYDNEY









# Sustainability

## *Annual Report 2022*

We recognise and pay respect to the Elders and communities – past, present, and emerging – of the lands that the University of Sydney's campuses stand on. For thousands of years they have shared and exchanged knowledges across innumerable generations for the benefit of all.

Foreword 2022	3
Highlight 2022	5
Caring for Country	6
–	
01 Research	11
02 Education	17
03 Carbon footprint	23
04 Waste	29
05 Biodiversity	35
06 Water and food systems	41
07 Transport	45
08 Sustainable community	49
09 Governance	53



# Foreword 2022

## *Chancellor and Vice-Chancellor*

We are pleased to present the University's second Sustainability Annual Report recording our progress towards becoming a greener and more environmentally conscious institution throughout 2022.

Just as our campuses returned to life, with students flocking back following the disruptions of COVID-19 in 2020–21, so much of the early preparatory work to implement the Sustainability Strategy over the same period started to demonstrate tangible impact. We were delighted that, towards the end of 2022, the University placed equal fifth globally and equal first in Australia in the new QS Sustainability Rankings, which rank 700 institutions.

One of our most significant accomplishments was the signing of a Power Purchase Agreement in mid-2022. All our electricity now comes from renewable sources, three years before our target date of 2025, marking a major milestone in our efforts to reduce our carbon footprint. Reducing waste is another critical aspect of our sustainability agenda, and in early 2022 we welcomed the NSW Environment and Heritage Minister to officially open the cutting-edge biodigester that has started to play a vital role in cutting waste generation by transforming organic waste into compost that is reused on campus grounds.

We stepped up our work to protect and preserve biodiversity, demonstrating our commitment to maintaining the delicate balance between nature and human activities wherever we gather. The native plant Curriculum Garden on Camperdown

Campus was recognised for its outstanding contributions to sustainability with the 2022 Australasian Green Gown Award for 'Creating Impact.' A partnership between our academic experts, grounds staff, sustainability team and Aboriginal-owned social enterprise IndigiGrow, the curriculum garden exemplifies the ambition of our Sustainability Strategy to bring our academic and campus operations together, although the impact of our academic work stretches far beyond our own campuses.

This report records highlights of our research activity in 2022, including the establishment of a new Net Zero Initiative and the launch of a new Heat and Health Research Incubator to investigate the impacts of extreme heat and climate change on human health. In mid-2022, Professor Emma Johnston commenced as our new Deputy Vice-Chancellor

(Research) in the same week as the publication of the Australian State of Environment Report she co-authored – a sobering read that confirms the impact of climate change on every Australian ecosystem.

We are committed to play our part in confronting this reality and one of the hallmark initiatives of our new institutional strategy, Sydney in 2032, commits us to empowering up to 40 of the world's best and brightest emerging academics to undertake innovative research that will build our understanding of, and resilience to, climate change, improve health outcomes, and create a more sustainable world..

Our Master in Sustainability continued to be very popular, while work continued throughout the year to prepare for the successful launch in Semester 1 2023 of our undergraduate major in sustainability, attracting future professionals who will enrich the practice of sustainability while prioritising people and planet.

In sum, 2022 was a remarkable year for sustainability at the University of Sydney, and the tireless efforts of our staff, and students have laid a solid foundation for our sustainable future. The challenge we confronted when we launched the strategy after the fierce bushfire season of 2019–20 has intensified. Now that carbon emissions have reached historical record highs and the climate crisis is destroying ecosystems and impacting vulnerable communities, we recommit the University to driving positive change in a world that needs leaders and urgent action.

**Belinda Hutchinson AC**  
**(BEc Sydney)**

Chancellor

**Professor Mark Scott AO**  
**(BA '84 DipEd '84 MA '93 HonDLitt '15)**

Vice-Chancellor and President



# Leadership introduction

## *Highlights of 2022*



Curriculum Garden awarded  
**the 2022 Australasian  
Green Gown Award**  
for 'Creating Impact'



**Equal 1st in Australia  
and equal 5th globally**  
for Sustainability QS rankings



Signed PPA with Red Energy in  
July 2022 to source  
**100% of electricity from  
renewable sources**



Hydrawise smart irrigation system  
**saved 21 million litres  
of potable water**



Biodigester produced  
**18,693 kg of nutrient-rich compost  
for use on campus**



Operationalised  
**hard-to-recycle enabler wall**  
in the Wentworth Building



Gillian Graham-Crow commenced as  
**Director of Sustainability**  
and Armando Aragon commenced as  
**Senior Program Manager**



**Published Biodiversity  
Management Plan**  
and committed to the  
Nature Positive Pledge





Replaced prohibited  
**single-use plastic items with  
sustainable alternatives**  
on UniBuy



Committed to  
**divesting from fossil fuel companies**  
through new Investment Policy (2022)



**550+ enrolments**  
in Units of Study offered in  
Master of Sustainability



Green Caffeine program  
**diverted 3,372 single-use  
cups from landfill**



**Recycled 15,000 square meters**  
of non-compliant cladding from  
the New Law building



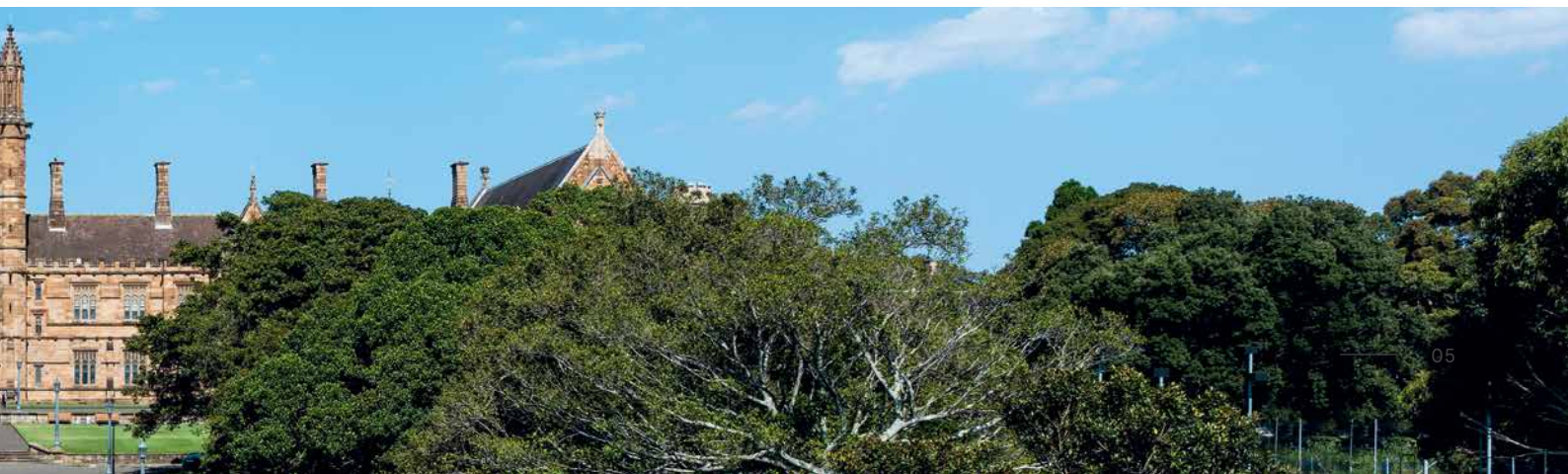
**Generated 1,295 MWh of solar  
electricity on campus**  
(2021-22) from 1.198 MW rooftop solar  
capacity across 33 buildings



**80 colleagues completed  
540 sustainability actions**  
as part of our award-winning Green  
Impact engagement program



**Launched the Sustainability Action  
Grants Student Life Stream**  
attracting 12 student led and  
designed grant submissions





## Caring for Country *Foundation*



Caring for Country is the foundation of the University of Sydney's Sustainability Strategy. The environmental knowledges and practices of Aboriginal and Torres Strait Islander peoples, shared and exchanged for thousands of years across innumerable generations, heals Country and spiritually connects people to place.

Upon the lands and water in which students and staff learn, generate, and inspire new knowledges, comes responsibility to engage, care and respect the environment and to those we serve. Strengthening our knowledge, appreciation and practice of Caring for Country is vital to embedding an ethos of custodianship into everything we do, for the benefit of generations to come.



Key achievements across teaching, research and operations as part of extensive University-wide collaborative work include:

- Developed an introductory Unit of Study (SUST1001) for the upcoming Undergraduate Sustainability Major, embedding Indigenous knowledges and practices of Caring for Country.
- Increased opportunities with and for Indigenous enterprises, through the development and launch of the University's first Indigenous Procurement Strategy, in partnership with Supply Nation and NSW Indigenous Chamber of Commerce.
- The Operations team and the Faculty of Science engaged in consultation with the Land Council and local Aboriginal communities to map Aboriginal cultural heritage, Scar Trees and points of significance at the University's Narrabri campus. This project aims to enable staff to identify and plan tree plantings in ways that respect and protect sites of significance.
- The School of Architecture, Design and Planning Developed two units – *Indigenous Built Environment Systems* and *Post-Colonial Built Environment Systems* as new continuing professional development courses that explore connection to Country, pre-contact spatial order, and architecture to provide foundation for learning and challenge colonial notions of planning and design.
- Created a dedicated category on our University-wide procurement platform, [UniBuy](#) for Ethical, Sustainable and Indigenous items.



Image bottom right: The Plant Breeding Institute in Narrabri.  
Image top right: Narrabri crops.  
Image opposite page: Gadi Tree on Camperdown campus.



Launched our first Indigenous  
Procurement Strategy



New introductory unit (SUST1001)  
for the Undergraduate  
Sustainability Major



Mapped Aboriginal cultural heritage,  
Scar Trees and points of significance  
at our Narrabri campus



Curriculum Garden won  
'Creating Impact' in the 2022  
Green Gown Awards



Launched an Ethical, Sustainable and  
Indigenous category on UniBuy

### Caring for Country impact case study: the 'Creating Impact' Green Gown Award

The University of Sydney won the 'Creating Impact' category in the 2022 Green Gown Awards for Nguragaingun, Ngara, Pemulian – our Curriculum Garden and Biodiversity Management Plan. The Green Gown Awards are considered the most prestigious recognition of sustainability excellence in the tertiary education sector in Australasia. In their 13th year, the awards are administered by Australasian Campuses Towards Sustainability (ACTS). The Curriculum Garden was designed using over 1,000 Australian native plants in partnership with IndigiGrow, to act as a space for cultural and environmental learning.



Image opposite page(top left): [Curriculum Garden](#).  
Image opposite page(top right): [Planting of Curriculum Garden](#).  
Image opposite page(bottom): ['Spine 3 \(radiance\)'](#), by artist Dale Harding Date: 2018.











# 01 Research

Researcher, Dr Angela Pattison in the field.

## Research

The University of Sydney is committed to meaningful and innovative research impact towards achieving sustainability outcomes. A key aspiration for the University's 2032 Strategy is that "our research is excellent, tackles the greatest challenges and contributes to the common good." From the University's multidisciplinary initiatives to aligning impact to the United Nations' Sustainable Development Goals (SDGs), progress in sustainability research excellence, impact and partnerships deepened in 2022.





### Living Labs

We are supporting our researchers and students to utilise our campuses as 'Living Labs' to create, pilot, evaluate and implement innovative sustainability research. In 2022, we progressed work on expanding the [Living Labs program](#) for staff and student projects, with some exciting developments in the pipeline for 2023.



### Sustainability research

Our researchers are [leaders in their field](#) and are continually breaking new ground across disciplines concerning sustainability challenges including the just energy transition, supply chain analysis, biodiversity, sustainable food systems and climate science. Our world-leading research across Faculties, Schools and Institutes had enormous impact on pressing issues resulting from the climate crisis, including protecting biodiversity through urban rewilding, and reducing the impacts of extreme heat on human health.

Key sustainability research led by the University includes:

- The Office of Global Engagement launched a \$2 million awards scheme to fund research projects tackling sustainability and the UN's Sustainable Development Goals.
- The [Heat and Health Research Incubator](#), based in the Faculty of Health, was launched as a multidisciplinary initiative that aims to tackle the unprecedented impacts of extreme heat and hot weather on human health and society.
- As a bold vision to advance the University's net zero ambition and research in the decarbonisation space, the [Net Zero Initiative](#) (NZI) was launched within the Faculty of Engineering.
- The Sydney Business School [published a report](#) detailing its progress towards advancing the UN's Sustainable Development Goals. This comprehensive report covers all of the United Nation's supported Principles for Responsible Management Education (PRME) including research, teaching and organisational practices.
- Sydney Environment Institute researchers were awarded major funding, including a \$800K Bushfire Recovery Grant to undertake ground-breaking research on [community protection of animals during catastrophic fires](#), and \$900K as part of the NSW Disaster Risk Reduction Fund to support two key projects to [better prepare communities for ongoing climate disasters](#).
- The Sydney Environment Institute's [Collaborative Research Fellowships](#) spanned across 8 Faculties, including research on facilitating a just and sustainable energy transition in the Pacific, and supporting young people in response to climate distress.
- Professor Emma Johnston, Deputy Vice-Chancellor (Research), was a [lead author on the landmark 2021 State of the Environment Report](#), released in 2022.
- A team of researchers spanning economics, engineering and nutrition was awarded the [Eureka Prize for Excellence in Interdisciplinary Scientific Research](#) for developing advanced data modelling techniques to highlight the drivers of dietary choice and inform United Nations policy.

Image opposite page: Heat and Health Incubator Lab.

- The Integrated Sustainability Analysis (ISA) research group was commissioned to build the database underpinning a new United Nations tool to assess carbon and other sustainability hotspots [SCP-HAT](#), as detailed in [Nature Sustainability](#) and [Sydney Business Insights](#).
- The School of Architecture, Design and Planning released its [declaration of climate emergency](#).
- The Matilda Centre and Net Zero Initiative hosted an online panel discussion to discuss the mental health impacts of climate change.
- Sydney Institute of Agriculture researchers received a \$5.6 million grant for three projects to [improve soil condition and plant productivity as part of the national Soil Science Challenge](#).
- Two University of Sydney research teams were awarded more than \$1 million to work with industry on [urban rewilding and hydrogen embrittlement projects](#).
- Sydney Future Students supported an exchange program as part of its Sustainable Program Development Funding to the University of Toronto for BUDL3902: Disruption for Sustainable Futures students and launched a Sustainability Program enabling over 80 inbound study abroad students to enhance their knowledge on Australia's climate crises.

### Research impact case study: Sydney Environment Institute – Grounded Imaginaries

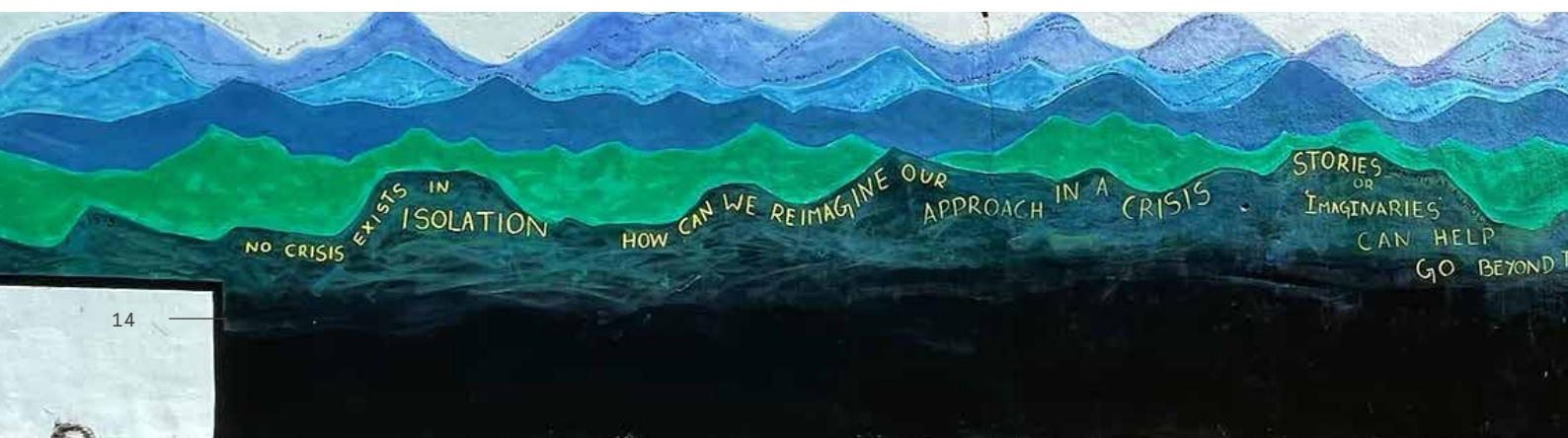
The climate emergency poses a crisis of *imagination*, and hence of action. Imaginaries (dominant narratives of what the future will look like) help empower communities to develop forms of life capable of ethically and justly sustaining themselves and their worlds. Working in Australia and India, *Grounded Imaginaries* explored and amplified grounded and transformative imaginaries, and equipped communities and youth leaders to develop systemic understandings of their situations and their responses, as well as to effectively narrate how they are building transformative futures.

In collaboration with two partner organisations in India, eight community sites and 14 youth fellows, this novel Sydney Environment Institute research project promoted these transformative imaginaries through multimedia outputs including a [podcast series](#), videos, street art, events, magazines, radio programs, policy briefs, and academic research. Project outputs effectively convey imaginaries in action to inspire replication. In addition, their production enhanced those communities' capacity to lead in a climate changed world. Find out more in this [interactive digital map](#).



### Local and global partnerships

The University engages in collaboration with multiple partners across higher education, industry, government, NGOs, and community, on both a local and global level. One example is the work of the Office of Global Engagement in engaging with strategic partners for research collaboration. In 2022, University partners included Sorbonne University, The Chinese University of Hong Kong, Cornell University, and the University of Edinburgh.





### Research impact case study: the Net Zero Initiative

In 2022, the Sustainability Strategy supported the launch of the [Net Zero Initiative](#) (NZI), based within the Faculty of Engineering, as a bold vision to advance research in renewable energy, climate change modelling, decarbonisation, low emissions technologies, and carbon capture and conversion. It brings together over 100 of the world's top researchers across engineering, science, urban planning, renewables, policy, carbon accounting, and behavioural science.



### Net Zero Initiative case study



**\$400,000 in  
industry seed funding**



**Seed Fund launched to establish  
Net Zero Initiative Masterclass and  
Microcredentials in 2023**



**2 industry PhDs with Worley, aligned  
with Climate Change Risk**



**Co-funded Power Fuels stream  
in the NSW Decarbonisation  
Innovation Hub**

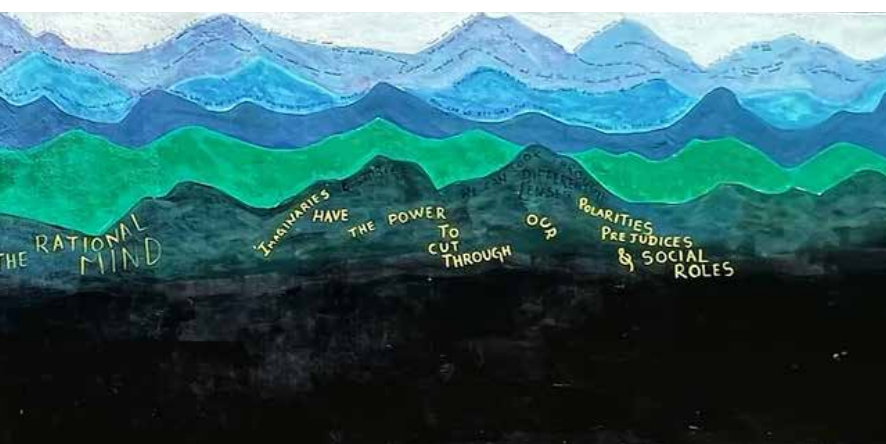


Image opposite page: 'Mural by Janet Orlene (Grounded Imaginaries youth fellow), near Upstream Ecology at Ooty, India. Janet led a street art project co-created with the Nilgiris (India) community. ['Mountain Murals - Narratives from the Nilgiris'](#) champions the voices and perspectives of community - both human and nature - in the scenic hill stations of Ooty, Kotagiri and Coonoor. In this mural, the questions and statements flow along the contours of the mountains, echoing over the Nilgiris. The public art piece is self-facilitating over time, encouraging the community to reflect and add to the statements and questions that address the possibilities of imagination.'



THE UNIVERSITY OF  
SYDNEY

# Sustainability

[sydney.edu.au/  
sustainability](https://sydney.edu.au/sustainability)





## 02 Education

Students connect with the Sustainability Strategy at Welcome Week.

# Education

Education is an essential part of working towards a more sustainable world. We are committed to ensuring sustainability is embedded in curriculum and the student experience across our campuses. The University of Sydney was named one of the top universities in the world for accelerating the pace of environmental and social change, placing equal fifth globally and equal first in Australia in the new [QS World University Rankings: Sustainability 2023](#).







Image above: Graduates from the Bachelor of Science and Bachelor of Advanced Studies (Taronga Wildlife Conservation).

### Sustainability Education

In 2021 our Academic Board approved a new interdisciplinary undergraduate major in sustainability to be offered in 2023. In 2022, extensive work from our researchers and staff across the University went into developing and implementing this new interdisciplinary offering with over 60 units of study offered in the major selection. The major fosters the critical, multidisciplinary thinking and skills needed to address the complex social, economic, and environmental challenges faced by humanity.

Other sustainability-focused degrees include the Bachelor of Science and Bachelor of Advanced Studies (Taronga Wildlife Conservation), Master of Sustainability, Master of Environmental Science, and Master of Sustainable Design. These education offerings, among many others at the University, open diverse career opportunities in a range of fields, including government, law, consulting, policy and planning, journalism, architecture, and business.





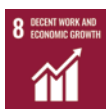
Image above: Sustainability stall at Welcome Fest 2022.

### Education impact case study: Sydney Business School

The Sydney Business School has been leading the way in integrating the Principles of Responsible Management Education (PRME) with a focus on embedding the SDGs into research and partnerships, curriculum and teaching, and practices. Led by Dr Anna Young-Ferris, Professor Betina Szkudlarek and Rachel Tuitama, the UN PRME/SDG Impact Core Team is acting as a pilot Faculty for driving SDG integration across the broader University.

#### Key achievements include:

- Global recognition in the 2023 PRME Faculty Recognition Award for Excellence in SDG Integration, United Nations Global Compact.
- Recognition in the 2022 Vice-Chancellor's Awards for Excellence for Outstanding Contribution to Sustainability.
- Driving change in the University's Graduate Qualities to embed an explicit focus on sustainability.
- Embedding SDGs in teaching across specific programs, units of study, learning outcomes and assessment.
- Measuring SDG-related data and impacts in research and education portfolios. For example, incorporation of SDG criteria in research publication outputs and funding applications and establishing an SDG Impact award.
- Engaging School leadership and securing funding to undertake a Current Practice Review to holistically map SDG integration in curriculum, research, partnerships, and practices.
- Establishing a multidisciplinary PRME Steering Group.
- Launching a new core unit for the Sydney Business School's Master of Commerce program, BUSS5220 Responsible Business Mindset, engaging around 2,000 students per semester.



### Education impact case study: Capstones and Master of Sustainability

The [Master of Sustainability program](#) is based in the Faculty of Science and engages with teaching academics and research across diverse disciplines including environmental science, business, economics, law and physics. Core units include focus areas on energy, food security, environmental law, sustainability analysis and footprints, and health.

The capstone requirement of the Master of Sustainability program takes the form of a research project, underpinned by key concepts such as transdisciplinarity and transformative practice. The capstone program had 31 private, public, and not-for-profit organisations providing placements in 2022, including seven placements with the University of Sydney. Placements with the University spanned The Charles Perkins Centre, The Integrated Sustainability Analysis team, the Faculty of Arts and Social Sciences, the School of Life and Environmental Sciences, the Business School and FoodLab Sydney/Sydney Environment Institute.







## Capstones and Master of Sustainability



**550+ enrolments in Units of Study offered in Master of Sustainability**



**Core units from 5+ faculties and schools**



**47 Sustainability capstone projects**



**31 capstone research partners**

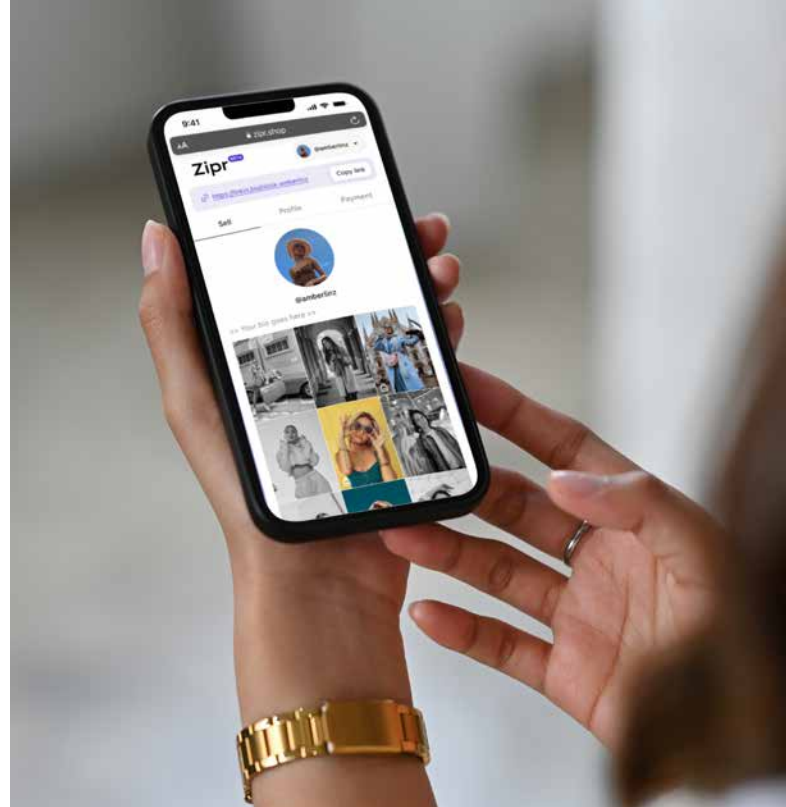


Image above: Winner of the Planetary Impact Award Winner, Zipr app.  
Image above(left): Rachel Tuitama, Betina Szkudlarek and Anna Young-Ferris receiving the 2022 Vice-Chancellor's Awards for Excellence for Outstanding Contribution to Sustainability from our Chancellor Belinda Hutchinson AC.

## Enhancing the student experience

The Sustainability Strategy aims to develop a culture of sustainability that empowers students to undertake sustainable actions beyond the campus. In 2022, we saw successful engagement with the Green Impact program (see Sustainable Community Section). We also supported USU with a range of engagement activities during Enviro Week, including enviro trivia, panels on subjects including law and activism, food trucks, and an outdoor cinema.

The Sustainability team supported several new Industry and Community Project Units (ICPU), including focus areas in museum studies, ethical procurement, and project management in engineering. We also welcomed our first undergraduate Sustainability Engagement student intern as part of the Bachelor of Arts and Bachelor of Advanced Studies (Media and Communications) program.

For the first time, we sponsored a [student award for Planetary Impact](#), in partnership with the Sydney Environment Institute. The recipient of the award was a student working on enhancing the circular economy in the fashion industry.







## 03

# Carbon footprint

Rooftop solar systems installed at the University of Sydney -  
with 79 KW capacity at the Abercrombie Business School, Darlington campus.

# Carbon footprint

Carbon emissions tracking and reduction has been the main objective of the University of Sydney's Sustainability Strategy team. As global GHG (greenhouse gas) emissions continue to rise, reaching 36.8 Gt CO<sup>2</sup> –e in 2022, and the window of opportunity to act closing, there is an urgent need to intensify efforts to eliminate GHG emissions. The future of our civilization depends on how quickly we act.





### Reducing our carbon footprint

The University met significant milestone in July 2022, switching over to a new electricity contract that delivers [100% renewable electricity](#) to all our campuses, the USU, our sports and fitness (SUSF) facilities and several of our colleges and residences.

Through our Power Partnership Agreement (PPA) with Red Energy (which also involves research and learning opportunities), the University is now powered by solar with back up renewable options including Australia's largest battery, Snowy Hydro. This means that the University's electricity load will now be drawn from the grid and the equivalent is replaced by renewable sources from a solar farm in NSW.

The switch to 100% renewable electricity reduces the University's Scope 2 emissions for all buildings under our electricity contract to zero and contributes significant progress towards our Net Zero by 2030 in Scope 1 and 2 emissions targets, which will be seen in our next financial year results. We also generated 1,295 MWh of solar electricity on our campuses in 2021–22 financial year, with a total of 1.198 MW rooftop solar capacity across 33 University and student accommodation buildings.

### Scope 3 emissions

Across several industries, average [Scope 3 emissions](#) account for between 65 to 95% of the total GHG emissions. As such, tackling Scope 3 is imperative to success in our Race to Zero. The Integrated Sustainability Analysis (ISA) research group, led by Professor Manfred Lenzen, has developed an Input-Output Analysis methodology that can be used to measure the carbon footprint of a supply chain – one the biggest undertakings to accurately measure Scope 3. The ISA group received a [Eureka Prize for Excellence in Interdisciplinary Scientific Research](#) in 2022. A paper led by ISA's Dr Mengyu Li, [Food-miles emissions](#), found the carbon footprint of food miles is up to 7.5 times larger than previously estimated when the entire supply chain is considered. Dr Mengyu Li's findings were widely reported, including in the United Nations' Food and Agriculture Organization [FAO](#), [Nature](#), [News](#), [Bloomberg](#), [New Scientist](#), and [The Guardian](#).

[The last IPCC report](#) presents an urgent call to accelerate climate action and a just transition. Our target is to reach Net Zero by 2030 for both Scope 1 and 2 emissions, in line with the Paris Agreement. However, considering the urgency to act, the University started quantifying our Scope 3 emissions in 2022.



Image left: 2022 Australian Museum Eureka Prize winners, Wild Planet Australian Museum. © Image Belinda Rolland Australian Museum.  
Image opposite page: Charles Perkins Centre rooftop solar.

## Energy targets spotlight

Energy target	2018-19 baseline <sup>1</sup>	2020-21 totals	2021-22 totals	% progress towards target from baseline	Notes
Achieve Net Zero Emissions from Scope 1 and 2 sources by 2030	102,993 tonnes CO2-e	94,813 tonnes CO2-e	88,225 tonnes CO2-e	14.34% reduction	Emissions reduction predominantly due to COVID-19 restrictions in place from 2020-2021, and ongoing hybrid working and learning mode.
Source 100% of electricity from renewable sources by 2025	0% of additional renewable energy sourced	0%	Target achieved in July 2022	100%	The University's PPA came into effect from July 2022, reaching our target to source 100% of electricity from renewable sources.
Have 3 MW on-site renewable electricity by 2025	0.87MW	1.13MW	1.2MW	37% increase	Additional solar projects completed for student accommodation and teaching spaces at Dubbo and Lismore.

<sup>1</sup> Baseline and 2021-22 data by financial year, derived from The National Greenhouse and Energy Reporting (NGER) and Tertiary Education Facilities Management.

<sup>2</sup> Association (TEFMA) reporting. 2018-19 baseline data used to better reflect 'business as usual' figures prior to impacts of COVID-19 restrictions.







14.34% reduction in Scope 1 and 2 emissions (from 2018-19 baseline)



100% renewable electricity target achieved through PPA in July 2022



37% increase in on-site renewable energy generation capacity (from 2018-19 baseline)



Generated 1,295 MWh of solar electricity on-site



Initiated work to quantify our Scope 3 emissions



Image above: The University is now powered by solar and wind power.  
Image opposite page: Gelion solar benches during the day, Darlington Campus.







## 04 Waste

Nutrient rich compost produced by the onsite Biodigester on Camperdown campus.

# Waste

Waste continues to be an area our students and staff identify as a top priority for the University to act. Across 2022, the Sustainability Strategy made progress towards our ambitious targets of recovering 80% of organic waste on campus by 2025 and sending zero-waste to landfill by 2030.



## Demonstrating leadership in waste reduction and management

The University partnered with Green Caffeen to launch the reusable cup program across Camperdown/ Darlington Campus, Camden campus and the Conservationism of Music in 2022. By year end, our community saved 3,372 single-use cups from landfill, the equivalent of 34 otto bins worth of cups.

In partnership with the University's Procurement team, we identified and replaced prohibited single-use plastic items with sustainable alternatives on UniBuy, the University's goods and services system, to meet requirements of NSW Government's single-use plastic ban.

Building on the launch of Chester the Biodigester in late 2021, we were able to capture 12,454 kg of organic waste and produce 18,693 kg of nutrient-rich compost. Chester is an ever-popular stop with both staff and students on our Sustainability Trail Tours of the campus.

2022 saw the call for student art submissions to design the graphics for the Enabler Recycling Wall in the Wentworth Building. The winning submission was from current Medical Science Student Lutfun Nahar Farwa. Farwa artwork spoke to the impact of waste on biodiversity, featuring bees and honey comb motifs throughout. The wall allows our community to recycle items that are difficult to do so in normal waste streams such as; face masks, toners, disposable razors, batteries, dental products, pen and e-waste. With the operationalisation and soft launch of the wall occurring in late 2022, the official launch will occur during USU's Enviro Fair week 2023 after the waste streams have been tested.

Image above: Enabler Recycling Wall celebration with Student Artist, Lutfun Nahar Farwa, designer of the wall, Engagement Specialist Madeleine Culp and students from the Waste Fighters Student Society.



**Waste impact case study:  
the New Law building**

The opportunity to reimagine the façade of the New Law building with an Indigenous art installation created by Michael Jalaru Torres arose from the need to replace existing cladding in line with new fire safety regulations. This remediation work offered a unique opportunity for the University to transform the Eastern Avenue thoroughfare by capturing story of surrounding Gadigal lands.

In line with the Sustainability Strategy, [15,000 square meters](#) of non-compliant cladding was recycled, with panels broken down and separated into aluminium and polyethylene to be repurposed into new products in Australia.

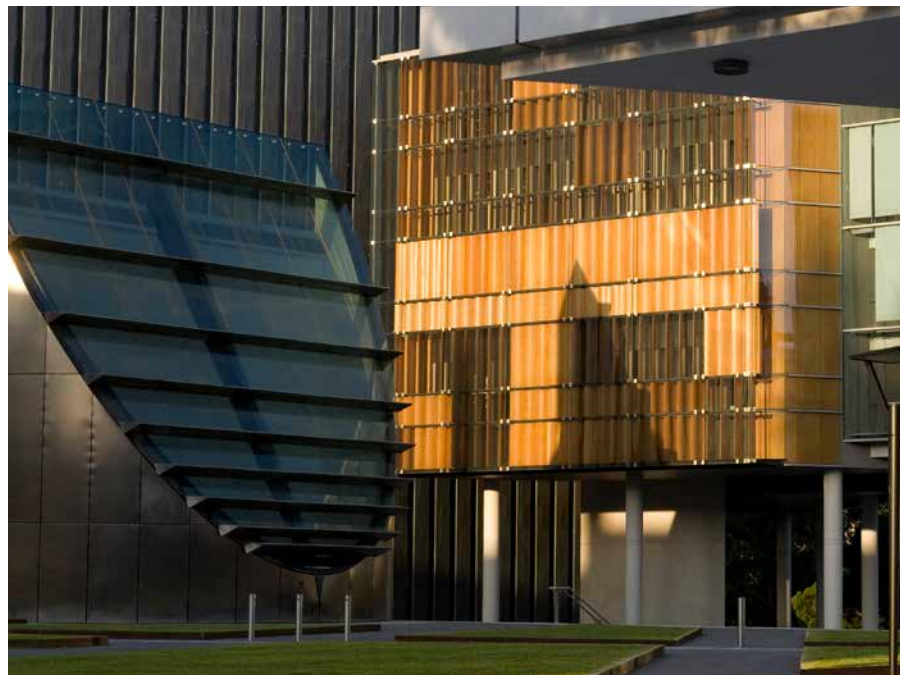


Image top right: The New Law Building.  
Image above: Artist, Michael Jalaru Torres.  
Image below: Indigenous art installation created by Michael Jalaru Torres on the New Law building. "The Echoing of Knowledge from Confrontation", 2022.



# Towards zero waste to landfill

**This trailer is on its way to turn organic waste into compost for our gardens.**



This project was supported by the Environmental Trust as part of the NSW EPA's Waste Less campaign.

[sydney.edu.au/sustainability](https://sydney.edu.au/sustainability)



3,372 single-use coffee cups diverted from landfill



12,454 kg of organic waste diverted from landfill



Biodigester produced 18,693 kg of nutrient-rich compost



Single-use plastic items on UniBuy replaced with sustainable alternatives



Image top of page: Electric trailer used to collect organic waste from across campus to the Biodigester.  
Image above: Green Caffeene reusable cup program launched across 3 campuses in 2022.



## Waste targets spotlight

Waste target	2018-19 baseline <sup>1</sup>	2020-21 totals	2021-22 totals	% progress towards target from baseline	Notes
Send zero waste to landfill <sup>2</sup> by 2030	1,910 tonnes to landfill	858 tonnes to landfill	638 tonnes to landfill	66.60% reduction	Data shows the target as significant progressed, however this outcome is predominantly due to COVID-19 restrictions in place from 2020. As the community returns to campus, this result will fluctuate in future reporting. Estimates used for Student Accommodation waste figures.
Recover 80% of organics waste on campus by 2025	0 tonnes recovered	0 tonnes recovered	12,454 kg of organics were loaded into the Biodigester	Separation of total food & organics waste measurement TBD.	Organics waste recovery commenced in 2022 with the launch of our on-campus biodigester.
Achieve 60% recycling by 2025	518 tonnes of recycling = 21% of total waste recycled	287.72 tonnes of recycling = 25% of total waste recycled	437.39 tonnes of recycling	41% of total waste recycled	Recycling increase from previous financial year from streamlined recycling streams and increased furniture recycling. Estimates used for Student Accommodation waste figures.
Enable 'single use plastics free' campuses by 2025	No roadmap. No ban/restrictions in place for single use plastics	Roadmap completed Projects identified	Waste audits completed in 2022 as part of roadmap	Progress on track	Implementation of roadmap to commence in 2023.
Compost 80% of food waste by 2025	0 tonnes composted	0 tonnes composted	18,693.3kgs of compost produced	Separation of total food & organics waste measurement TBD.	Organics waste recovery commenced in 2022 with the launch of our on-campus biodigester.
Ensure 100% of food/beverage packaging on campus is compostable or recyclable by 2025	0 out of 20 University owned or leased outlets use compostable packaging. Recyclable/landfill only packaging totals baseline: TBC	13 out of 20 outlets use compostable packaging	13 out of 20 outlets use compostable packaging	On hold	Compostable packaging rollout on hold due to new EPA restrictions.

<sup>1</sup> Baseline and 2021-22 data by financial year, derived from The National Greenhouse and Energy Reporting (NGER) and Tertiary Education Facilities Management.

<sup>2</sup> Association (TEFMA) reporting. 2018-19 baseline data used to better reflect 'business as usual' figures prior to impacts of COVID-19 restrictions.





## 05 Biodiversity

## Sustainability developing and managing the built and natural environment

With one third of Australia's threatened species inhabiting urban environments, and [over half of Australia's land held by farming](#), the University of Sydney is in a unique position to investigate, influence, and demonstrate sustainable practices that protect, support, and enhance biodiversity, both on our urban campuses and at our rural farms. Healthy, biodiverse ecosystems sustain life on Earth, and whilst the targets within the Sustainability Strategy are working towards reducing our impact on the environment, we are looking further into best practice to protect and enhance our biodiversity globally and locally.





## Biodiversity

In December 2022, the University of Sydney took the pledge to become a Nature Positive University. Nature Positive means halting and reversing nature loss so that species and ecosystems can show measurable recovery by 2030, and net positive by 2050. This pledge is part of the Global Goal for Nature and works alongside the UN Convention on Biological Diversity's [Kunming-Montreal Global Biodiversity Framework](#). Being a Nature Positive University means restoring species and ecosystems that have been harmed by the impacts of a University and its activities and enhancing the positive impacts on nature. This refers to everything the University does, from teaching and research to operations and supply chains. Our work on reducing emissions and the Race to Zero will not only reduce carbon and contribute to limiting global heating, but it will also reduce biodiversity impacts, highlighting the interconnected nature of our actions and their impacts.

Complimenting the global goals of the Nature Positive Pledge, our [Biodiversity Management Plan](#) was published online in 2022, outlining the 7 principles and 24 targets for protecting and enhancing biodiversity at a local scale. Further to this, the Biodiversity Management Officer role was established and advertised to guide the University to reaching not only the targets within the Biodiversity Management Plan, but globally relevant targets such as the Nature Positive Pledge, and to provide biodiversity expertise across University operations.

In continuing work to support biodiversity and rehabilitate the ecosystems on our campuses and farms, two tree planting events were held on Camperdown campus, as well as events planting over 25,000 trees and shrubs on the Arthursleigh farm, including one with [Mastercard and Conservation International](#) and another with the [Rivers of Carbon](#) initiative. Further supporting the nest boxes already in place on Camperdown campus, a [native species nest box building event](#) was held in June 2022 as part of Green Impact (see Sustainable Community section) to increase habitat complexity and replace damaged boxes. These boxes, for brushtail possums, kookaburras, and sulphur-crested cockatoos, will be installed in 2023 with wildlife motion activated cameras as part of AVBS3004 Wildlife Conservation coursework, to monitor box usage, and provide opportunities for community engagement and outreach.



Image left: Student, Staff and Open Spaces planting native shrubs along Eastern Avenue for National Tree Day 2022  
Image on opposite page: Green Impact participants working with the Open Spaces team to plant shrubs and trees around the New Law Building.

In 2022, canopy cover was investigated by TreeiQ and Mosaic Insights to determine our baseline in relation to the 30% canopy cover target for 2030 on the Camperdown campus. This investigation included Darlington campus, however, the 30% goal was stated for the Camperdown campus only. Currently, the percentage canopy cover (for trees 5m and taller) is 18.21% for the Camperdown campus, and 16.91% for the Darlington campus. The investigations further revealed a historic net loss of canopy cover between 2008 and 2019 of 25%. However, between 2019 and 2020 there was an overall increase in canopy cover across both campuses combined of 1.98%, a small but significant step forward that will be supported by the collaborative work of the Sustainability Strategy team and the broader University community. These investigations also provided several recommendations regarding planting on campus to make progress towards the 2030 goal.



**Biodiversity Management Officer  
commenced in new role**



**2 Tree planting events on  
Camperdown Campus**



**25,000 trees and shrubs planted at  
Arthursleigh farm**



**TreeiQ and Mosaic Insights engaged  
to determine the baseline for our  
30% canopy cover target**



**Committed to the Nature  
Positive Pledge**



Image opposite left: Students watering Strawberry plants in the Community Garden, Darlington Campus. Image opposite right: Gunnedah, NSW, that was the site for a University research project into the drinking habits of koalas.



## Natural environment targets spotlight

Environmental Target	2021-22 actions	2023 actions	% progress towards target from baseline	Notes
Establish a Biodiversity Management Plan and baselines to set biodiversity targets and approved indicators for all campuses and farms by 2025	<ul style="list-style-type: none"> <li>- Biodiversity Management Plan published online</li> <li>- Biodiversity Management Officer recruited</li> <li>- Nature Positive Pledge</li> <li>- Purchase and public workshop to construct native species nest boxes for Camperdown campus</li> </ul>	<ul style="list-style-type: none"> <li>- Determine baseline protocols and collect species data for University owned locations.</li> <li>- Engage with Sustainability Working Group to develop approved biodiversity targets and indicators.</li> <li>- Develop ongoing monitoring protocol for ecosystem condition and biodiversity measures.</li> <li>- Install nest boxes on Camperdown campus to support native species and contribute to teaching and engagement.</li> </ul>	Initiated	<p>The BMP was established, and a dedicated biodiversity officer was hired to progress the targets.</p> <p>During fact-finding, important considerations not originally in the business case were identified and are being addressed for future inclusion.</p>
Enable 30% canopy cover* by 2030	Established baseline canopy cover for Camperdown, 18.21%, and Darlington, 16.91%, campuses**	<ul style="list-style-type: none"> <li>- Engage with relevant internal stakeholders to determine considerations and barriers to achieving 30% goal.</li> <li>- Present Sustainability Working Group options for achieving 30% target.</li> <li>- Develop plan for achieving 30% target by 2030.</li> <li>- Establish baseline canopy cover for all University owned sites.</li> </ul>	Initiated	A feasibility study for achieving the 30% goal was approved by the SWG. This will provide options to be workshopped by relevant internal stakeholders to determine a final path forward to achieve 30% canopy cover by 2030.

\* This target is for the Camperdown campus only.

\*\* Based on 2019-2020 City of Sydney canopy cover datasets









## 06

# Water and food systems

# Water and food systems

In recent years, NSW has been dealing with the impacts of climate change, with our University feeling the impact most at our rural and remote facilities. Drawing on our academic expertise, we are investigating ways of using infrastructure, technology and research to make our campuses, farms and operations more drought-resilient and less reliant on potable water use. We are also exploring innovative ways that enable the provision of affordable, healthy and sustainable food and beverages on campus.

## Reducing water usage

To reduce our water usage, we installed 34 Hydrowise stations across Camperdown and Darlington campuses in 2022. The smart irrigation system uses real-time local weather data to adjust sprinkler-based watering, saving 21 million litres of potable water. We also commenced other water efficiency measures including retrofitting tapware and installed additional water refill stations on University campuses.

## SRC and USU Food Hub

To alleviate the considerable pressure some students are facing accessing food, the University of Sydney Union and the Student Representative Council initiated FoodHub, an initiative to help address student food insecurity. Run by volunteers two days a week, FoodHub provides free pantry staples and fresh produce to all students.

## Fresh and Sustainable Food Guide

With the aim of empowering students to find local and sustainable food options, a [Fresh and Sustainable Food Guide](#) of the Camperdown and Darlington campus was rolled out at Welcome Week for Semester 2. The paper free guide highlighted outlets both on and off-campus where students can purchase seasonal, local, and bulk foods, helping to reduce carbon emissions and reduce the cost of food.



Advertising across Darlington and Camperdown campus for the USU and SRC's FoodHub.





34 Hydrowise stations installed  
across Camperdown and Darlington



21 million litres of potable water  
saved through smart irrigation



FoodHub provided students  
with free pantry staples and  
fresh produce



Fresh and Sustainable  
Food Guide published



Sustainability Strategy

## Fresh and Sustainable

On and close to Camperdown/Darlington campus

The University of Sydney's campuses and facilities stand on the ancestral lands of the Gadigal, Gamareygal, Dharug, Wangal, Tharawal, Deerabbin, Darkinyung, Guringgal, Gamilaraay, Barkindji, Bundjalung, Wiradjuri, Wiljaili, Ngunawal, Gureng Gureng and Gagudju Peoples.

We recognise and pay respect to Elders and Communities past and present – who on this place of learning for innumerable generations exchange knowledges and continue our shared responsibility to respect and Care for Country.

---

**Thanks for downloading**

This guide, though not an extensive list, offers some suggestions of places where you can tap into food support or shop in a sustainable way.

---

**On campus**

**USYD Co-op**  
The ethical food store: by students, for students.  
During semester the USYD Co-op provides bulk foods, fridge goods and weekly fruit and veg boxes.  
Operating on stolen Gadigal Land  
[Level 4, Wentworth Building](#)  
Phone: (02) 9563 6059 | [usydfoodcoop.com](http://usydfoodcoop.com)

Memberships for 2022-23 are free for current University of Sydney students. All members get 10% off, volunteer to work at the store and you can get 25% off at the co-op!

---

**Opening soon: USYD Food Hub**  
A partnership between the USU & SRC - supported by FoodBank Australia, Bright Sparkq, Oz Harvest and other charity partners. To support the USYD student community, USU & SRC will re-launch USYD Food Hub, available to all USYD students.  
Foodhub will operate out of Level 4 Wentworth Building, in the office space outside the International Student Lounge, and will open daily Tuesday 10am-5pm and Thursday 10am-5pm.



Image top: The USU opened the first exclusively  
vegan and vegetarian food outlet on Darlington  
Campus, Love Buds in 2022.  
Image above: Fresh and Sustainable food guide.







## 07 Transport

Partners City of Sydney Council and Revolve Recycling contributed to the Sustainability Program at Welcome Festival to promote active travel options.

# Transport

In line with the Sustainability Strategy, we are designing and optimising both internal and external transport and logistics options. From small projects, such as the acquisition of an electrical trailer to transport organic waste to the biodigester, to large transformational projects, such as MaaS (Mobility as a Service), we are committed to providing sustainable transport options that promote social wellbeing and environmental health.

## Promoting Sustainable Travel Choices

The Sustainability Strategy team ran two waves of surveys on the travel behaviour of our staff and students as part of the Promoting Sustainable University Travel Choices (PSUTS) iMOVE project, run by the Institute of Transport and Logistics Studies (ITLS). The iMOVE project aims to investigate the emerging and intended commuting patterns of University staff and students post-pandemic and to assess attitudes towards public transport. Results from the iMOVE project suggest that current staff use of cars is higher than pre-COVID rates and car use amongst staff is picking up quite rapidly, while use of active modes remains static. This highlights a need to facilitate the uptake of active and more sustainable transport options.

## Active Modes of Transport

The Sustainability Strategy team continues to encourage active modes of transport, including walking and cycling. We have opened two additional bike fixing stations on our Camperdown and Darlington campuses, and we hosted a bike fix workshop with a certified mechanic, to support our staff and students to travel sustainably. We also ran a bike education and recycling session in partnership with Revolve ReCYCLING, who divert old bikes from landfill and give them new life, giving people access to high-quality, safe and affordable bikes.

## Public Transport

The University of Sydney's internal bus service from our Camperdown campus to Redfern train station was expanded, offering additional, more frequent services throughout the day and night.

## Mobility as a Service (MaaS)

MaaS is perceived as the next transport 'revolution' because it enables multiple travel needs to be handled with a single intuitive mobile app via monthly subscriptions. In 2022, the University ran a project to build trust and collaboration among MaaS stakeholders. The first step was to run a MaaS trial with the aim of advancing the understanding of the role that MaaS can play in both improving the traveller's experience of using multiple complementary transport services (in terms of cost, travel time, convenience, health benefits and perceived safety) and promoting more sustainable transport options.







Extended bus service from  
Camperdown campus



Organic waste collected with  
zero emissions



Partnership with Revolve ReCYCLING  
diverted unwanted and abandoned  
bikes from landfill



Image above: Bike repair station on  
Eastern Avenue, Camperdown.

Image below: Bike rack on campus.









## 08 Sustainable community

Student at edible gardening workshop, Darlington Campus.

# Sustainable community

The Sustainability Strategy team is committed to building a community of staff and students from across the University who actively engage with sustainability initiatives and collaborate to achieve positive social and environmental objectives. We aim to enable our University community to become leaders in sustainability.



Image above: The Nepean Clinical School Green Impact team, with clinical waste to be diverted from landfill.

In 2022, we hired an Engagement Specialist to establish and develop an active sustainability community at the University of Sydney. Our Engagement Specialist has built such a community through various initiatives, including:

- Partnering with the Student Life Team to open a [Sustainability Action Grants stream](#) of the Student Life Grant offerings. This stream provides seed funding to current students for projects which embed and enable sustainability across our campuses. We received 12 applications and the Sustainability Action Grants panel approved 5 projects. These student-led projects will be implemented in Semester 1 2023.
- Participated for the first time in major engagement events such as Welcome Fest Semester 1 and 2, USU's Enviro Fair as well as hosting Sustainability Trail Tours across Camperdown Campus throughout 2022.
- Establishing two new sustainability communication channels, a [monthly newsletter](#) and an [Instagram account](#), to strengthen engagement with staff, students and community.
- Delivering our grassroots action program [Green Impact](#) for a second year, attracting 80 participants from 5 campuses who together completed 540 individual sustainable actions, which saw an increase in participant completing the program as well as increase in the number of campuses participating.
- Leading 15 Sustainability Trail Tours of the Camperdown Campus to staff, students, and external partners, highlighting the invisible aspects of sustainability, and encouraging participants to get involved in other initiatives across the University.
- Co-funding a new category, [Planetary Impact](#), in the [Sydney Environment Institute's](#) Student Innovation Awards.



### **Sustainable community impact case study: Green Impact – the Nepean Clinical School Team**

[Nepean Clinical School](#) were first time participants in the Green Impact program for 2022 and passionately followed their curiosity to learn, implemented strategies to communicate their new knowledge to peers and colleagues, and inspired others to take up the challenge. The team deep dived into the impacts of the Palm Oil industry and created and shared education resources with other, raising awareness of the International Day of the Orangutan, and being accountable to discuss this issue with at least one friend or family member.

The Nepean Clinical School team set up new recycling streams and after discovering a blue tongue lizard in a rodent trap, liaised with WIRES to have the traps lifted off the ground to protect the lizards. One of their most impactful innovations was setting up MedEarth, to divert medical waste from landfill. This initiative captured 92 kg of medical waste, of which 97% was successfully diverted from landfill. As part of this initiative, the team engaged the wider hospital and the local health district.

The team contributed to the sustainability community at the University by mentoring other areas, maximising their impact and sharing knowledge, demonstrating how wide reaching the Nepean Clinical School team's impact has been.

#### **Key achievements:**

- 92 kg of medical waste captured, with 97% diverted from landfill
- 17 kg of unused medical supplies sent to MedEarth, including blood collection tubes, phlebotomy kits, slides, and pipettes
- 7.3 kg of plastic tubes and specialised containers (worth over \$750) rescued to be used in research projects in the School Laboratories
- 2.9 kg of paper, cardboard, and soft plastics recycled



**Engagement Specialist commenced in new role**



**5 student projects funded through Sustainability Action Grants to be delivered in semester 1 2023**



**12 student and staff newsletters**



**80 Green Impact participants**



**15 Sustainability Trail Tours**







## 09 Governance

# Governance

In launching the inaugural Sustainability Strategy in 2020, the University committed to empowering good governance and coordination, and to ensuring transparency in our approach to delivering on strategy commitments. Throughout 2022, we built upon the strong foundations laid, and partnerships built, in 2020 and 2021.

In April 2022, Gillian Graham-Crowe commenced in the newly formed role as Director of Sustainability. With a mandate to translate the vision and intent of the University's Sustainability Strategy into actions and outcomes, a business case was developed and finalised, to underpin the University's investment in sustainability for the life of the strategy. With funding approved in August 2022, the development of a staffing plan followed, to guide the recruitment of a specialist team of sustainability, project management, engagement, and biodiversity professionals.

The Sustainability Strategy team also transitioned to the Office of the Provost and Deputy Vice-Chancellor in April 2022. As a visible champion for sustainability within the University, the team is the coordinating unit for delivery of a broad range of sustainability projects, activities and advisory, across the research, education, operations, and engagement portfolios of the University.



Sustainability Team participating in a tree planting event on Camperdown Campus. Left to right: Laura Minchella, Gillian Graham-Crowe, Madeleine Culp and Armando Aragon.



To empower  
and enable  
the University  
community to  
place people and  
planet at the heart  
of everything  
we do.

Sustainability Strategy team vision.



Image above: Sustainability table talk.

### Establishing effective governance

The Sustainability Steering Committee (SteerCo) met 6 times throughout 2022, chaired by executive sponsor and Provost and Deputy Vice-Chancellor, Professor Annamarie Jagose. Comprised of senior leadership, SteerCo oversaw strategy rollout and endorsed key initiatives including the \$2 million awards scheme to fund SDG research projects, the strategy's multi-year business case, Sustainability Action Grants in collaboration with Student Life, launching the My Green Labs pilot, and proposals for flight reduction and the Living Labs program.

We progressed work to rescind the existing Environmental Sustainability Policy 2015 and to develop a new policy supporting the strategy. We expect this work to be completed in 2023.

### Being transparent about our progress

Marking the second anniversary of the University's Climate Action Statement, the Sustainability team released its first [SDG13: Climate Action Progress Report](#), detailing the University's progress on contributing towards the UN Sustainable Development Goal 13: Climate Action and reaching Net Zero.

Throughout 2022, reporting and progress updates were delivered to University executive governance committees and community, including release of the Strategy's inaugural annual report, reporting the strategy's implementation and achievements made within the first 18 months since its launch in August 2020. The University also completed its annual National Greenhouse and Energy Reporting (NGER) to the Federal Government's Clean Energy Regulator.

### Investments

We are proud to announce that University of Sydney is undertaking divestment of both direct and indirect holdings in fossil fuel companies, in line with the Sustainability Strategy's target of achieving net-zero emissions by 2030. In 2022, the University reviewed its Investment Policy to exclude *"investments in companies or investment managers that are significantly involved in the extraction of, or generation of power from, fossil fuels unless the companies or investment managers can demonstrate their alignment with a low carbon transition."*

Our new Investment Policy (2022) will see the University's investment portfolio align with the Transition Pathway Initiative (TPI), requiring companies to reduce their greenhouse emissions consistent with limiting warming to 2°C. The policy will see the University of Sydney align investments with the United Nations' SDGs and identify and assess companies' respect for human rights and the rights and interests of Indigenous peoples, including Aboriginal and Torres Strait Islander people.







#### **For more information**

Office of the Provost and  
Deputy Vice-Chancellor  
[university.sustainability@sydney.edu.au](mailto:university.sustainability@sydney.edu.au)  
[sydney.edu.au/sustainability](https://sydney.edu.au/sustainability)

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