



UNSW
SYDNEY

Australia's
Global
University

Sustainability Report

2017 update



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Please note that this publication is an update and not a complete report for 2017. We are currently reviewing our Environmental Sustainability report for 2018 and look forward to releasing this in the coming months.

This update was originally published as a website in order to reduce printing and subsequent waste.

Visit the online version of this report at <http://sustainabilityreport.unsw.edu.au>

UNSW acknowledges the Bedegal (Kensington campus) and Gadigal (City campus) peoples, and all other traditional custodians of the lands where UNSW campuses are located. We acknowledge all Aboriginal and Torres Strait Islander Elders, past and present, and their communities who have shared and practiced their teachings over thousands of years. We recognise Aboriginal and Torres Strait Islander peoples' ongoing leadership and contributions, including to business, education, research and industry.

Introduction

Sustainability means a lot of different things to different people, but the oft-quoted definition of sustainability – living successfully in the present without compromising our ability to do so in the future – still holds true.

As one of Australia's leading research and teaching universities, UNSW recognises the vital role the university sector has in driving the change to sustainability as well as the urgency with which this change must take place.

The University's approach to sustainability is defined by UNSW's 2025 Strategy and we are excited to provide this update on numerous initiatives that are establishing UNSW as a sustainability leader through excellence in research, outstanding education and our commitment to advancing a just society.

In 2016, we ratified UNSW's Environmental Management Plan (EMP). By documenting our environmental objectives and targets, the EMP enables us to monitor, report on and be accountable for our sustainability progress and is a platform for us to deliver on the aims of UNSW's Environmental Policy.



Highlights during 2017



UNSW's Grand Challenge on Climate Change launched ambitious climate change blueprints on energy, health and justice.



A recycling program that diverts a tonne of batteries away from landfill per year has won a Green Gown Award for excellence in sustainability.



UNSW captured the lion's share of a \$29.2 million boost from the Australian Renewable Energy Agency for Australian solar cell research.



UNSW is participating in the Science in Australia Gender Equity pilot which is addressing the underrepresentation of women in STEMM disciplines.



In 2017, UNSW joined the top 10% of applicants in the UI GreenMetric Ranking of world universities (51st out of 619).



UNSW Business School works towards global sustainable development goals through a United Nations supported platform to raise the profile of sustainability in schools around the world.

Approach

Sustainability defined

Sustainability means a lot of different things to different people, but the oft-quoted definition of sustainability – living successfully in the present without compromising our ability to do so in the future – still holds true. To that end, sustainability encompasses not just environmental, but social, cultural and economic dimensions.

As one of Australia's leading research and teaching universities, UNSW recognises the vital role the university sector has in driving the sustainability agenda as well as the urgency with which this change must take place.

Reporting period

UNSW's 2017 Sustainability Report provides a quick update of the sustainability performance of the University since 2013, but with a focus on the 1 January to 31 December 2017 reporting period. This update includes our environmental and social performance, as well as an overview of how the University is tracking in sustainability research and education. Information about our economic impact can be viewed in [UNSW's 2017 Annual Report](#).

The aim of this report

This report aims to:

- To identify the sustainability issues that impact on the environment and society as a result of UNSW business activities.
- To describe UNSW's journey towards sustainability, including past achievements, current initiatives and future aspirations.
- To provide a snapshot to allow comparison with our past sustainability performance and a benchmark for the future from 2013-2017.

This report is a celebration of our sustainability achievements but it is not about 'greenwashing'. It is a genuine attempt to record where we have been and where we are now so we can transparently and clearly demonstrate our improvements over time.

Identifying our reporting needs

UNSW Sustainability is championing UNSW's charge towards sustainability, but we understand the vital importance of bringing the whole UNSW community along with us. When initiating the annual Sustainability Report in 2013, our first step was to explore what sustainability issues were important, so we:

- interviewed key members of senior management and a sample of students
- conducted interviews and focus groups with internal managers and data owners
- undertook staff engagement activities.

Best practice reporting

In terms of the structure and reporting style, we have been guided by the Global Reporting Initiative (GRI) reporting principles for defining report content.

We'd love your help!

If you have any sustainability initiatives or research you'd like to highlight in 2018, or if you think there are any sustainability indicators missing in this report we want to hear from you. Email us at sustainability@unsw.edu.au

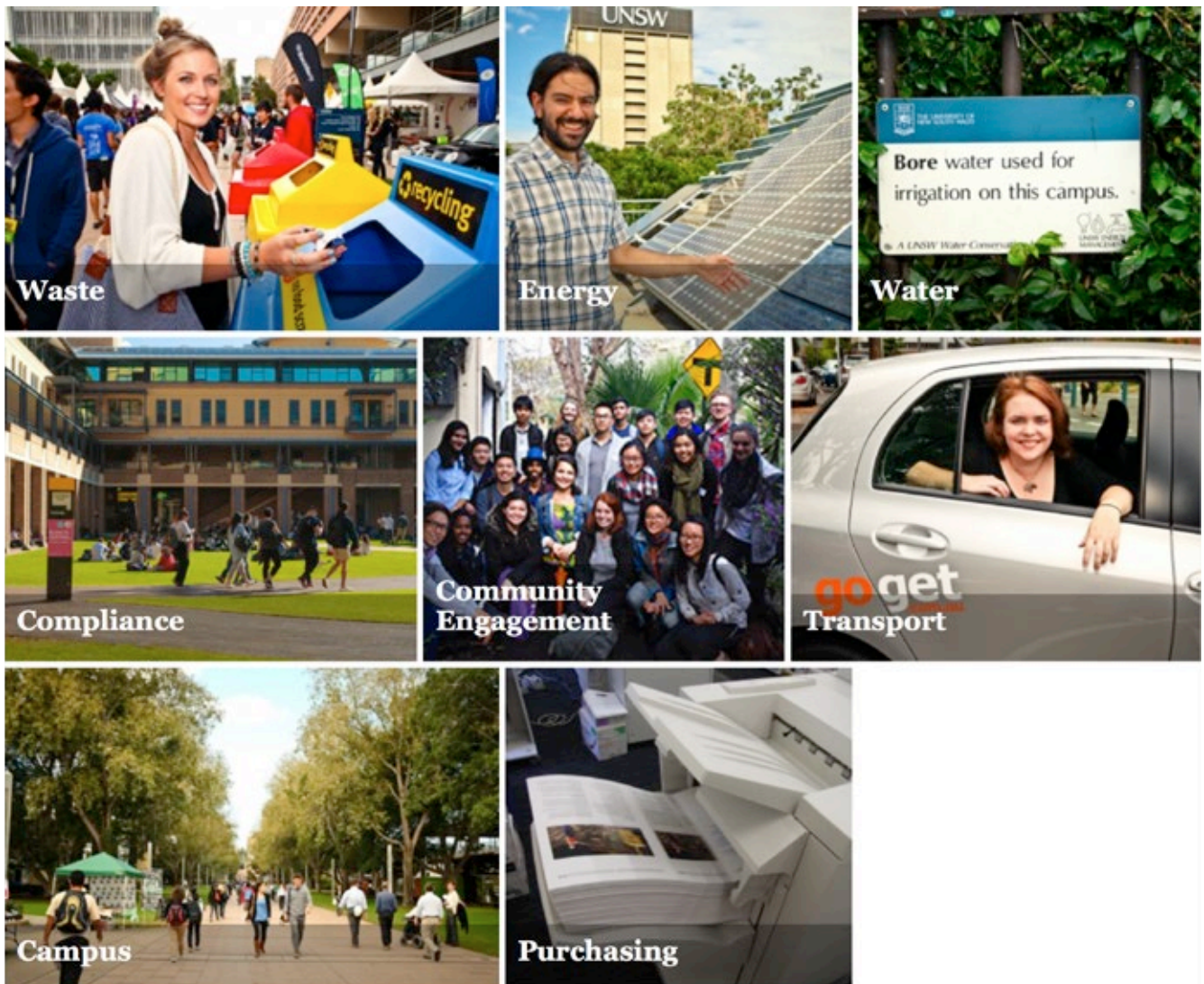
Environment

With approximately 59,000 students and more than 6,000 staff, the UNSW campuses are equivalent in population to a small town. These campuses consequently have the potential for significant and wide-ranging environmental and ecological impacts.

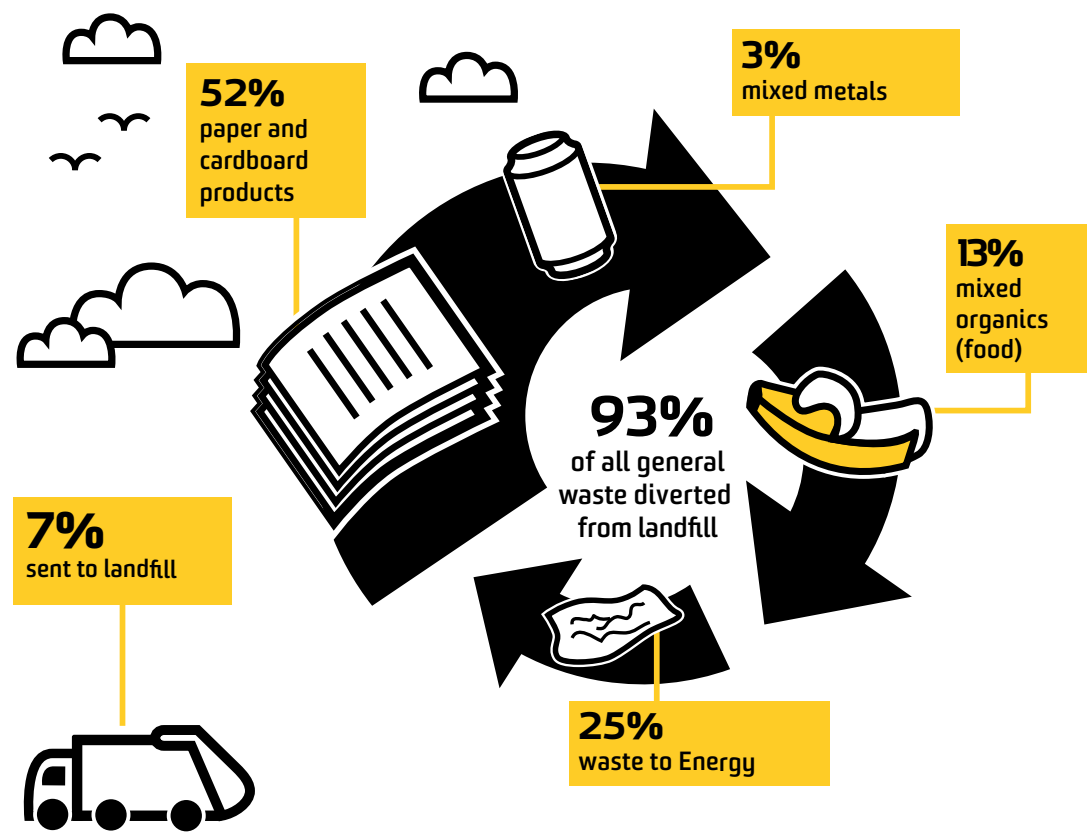
Environmental sustainability is very important to UNSW's Strategy 2025. This report update follows annual reporting since 2013. It is our commitment to continuously improve our environmental performance across all areas of the University – from the way we construct our buildings, dispose of our waste, make purchasing decisions and use our resources, to how we measure our performance.

Ratified in 2016, UNSW's Environmental Management Plan (EMP) outlines the University's sustainability objectives, targets, indicators, strategies and actions that will guide our environmental planning and management to 2018 and beyond. The EMP also guides reporting in this section of the Sustainability Report.

In this section



Waste



Information source: UNSW Estate Management

UNSW's waste management initiatives involve reducing, reusing, recycling and composting

In common with many organisations, waste management is a considerable challenge for UNSW. With several different streams of waste generated by a wide variety of activities, the University proactively looks for sustainable ways to deal with waste. However, waste is not just an institutional responsibility, UNSW Sustainability, Estate Management and the Arc student body have joined forces to introduce a number of University-wide waste reduction and recycling initiatives.

Some of these programs include:

- our battery and mobile phone recycling program
- an e-Reuse Centre established in collaboration with Arc
- a reusable coffee KeepCup program
- a stationery reuse centre to reuse unwanted office supplies
- installing and promoting charity clothing bins in residential areas on campus

- recycling waste cooking oil and fluorocarbon gases from disposed refrigerators
- thoughtful disposal of mercury from light fittings, oils, organic solvents and paints (via chemical waste).

Overview of waste

General waste

'General waste' consists of all waste collected from public spaces, offices, labs and teaching spaces. UNSW's current waste management contract ensures that all general waste is collected and carefully sorted.

Other waste

'Other waste' consists of all the other waste streams generated by the University, including chemical waste, electronic waste, skip bin hard waste and many other streams.

The following table outlines the total waste generated by UNSW between 2014 and 2017:

	2014	2015	2016	2017
General waste				
Waste component	Total (tonnes)	Total (tonnes)	Total (tonnes)	Total (tonnes)
Paper/cardboard	1300	1045	1306	1413
Mixed metals (containers)	193	232	158	82
Food and organics	502	571	382	238
Food waste	111	108	102	118
Processed Engineered Fuel (PEF)	x	266	667	672
Component sent to landfill	549	472	129	186
General waste recycled	1735.4	2264	1948	1851
General waste subtotal	2714	2694	2744	2709
General waste recycling rate	64%	60%	71%	68%
Landfill diversion rate	64%	94%	95%	93%
Other waste				
Waste component – recycled	Total (tonnes)	Total (tonnes)	Total (tonnes)	Total (tonnes)
Chemical waste	No data	No data	No data	12.3
E-waste	24	16	17	15
Fluorescent tubes	2.08	1.34	1.5	1.5
Batteries	0.58	1.45	1.42	0.77
Mobile phones	0.04	0.05	0.05	0.13
Toner cartridges	2	3.5	2.2	3.1
Waste oil	20.4	15	15	17
Green waste	99	108	128	124
Concrete*	24	30	30	30
Wooden pallets**	1.5	1.5	1.5	1
Skip bins	328.5	319.9	303.6	313
Waste component – not recycled	Total (tonnes)	Total (tonnes)	Total (tonnes)	Total (tonnes)
Chemical waste	110	114	122.5	158.7
Biological waste	106	106	66	102
Skip bins	541.5	538.1	569.4	580
Other waste total	1140.2	1131.84	1115.17	1518.5
Component sent to landfill	757.5	758.1	757.9	738.7
Other waste recycled	382.7	496.74	500.27	517.8
Percentage of other waste recycled	34%	33%	32%	34%
Furniture reuse program				
Waste component	1200 cubic metres	800 cubic metres	800 cubic metres	1000 cubic metres
Furniture***	192	128	128	160

Data provided by UNSW EM Waste team | *Calculated by 3 tonne skip bins of concrete go directly to recycle from R9 civil engineering per annum | ** Pallets used for E-waste recycle and exam desk storage. 72 x pallets 20kilos/pallet = 1.5 tonne | *** Estimate from Furniture re-use contract and items re-used from UNSW Randwick Tram Shed storage. Based on 160kgs per cubic metre

Waste stream	Destination
Paper & cardboard	Separated then transported to Veolia paper mill
Mixed organics (food)	Separated then transported to Earth Power technologies to be processed using anaerobic digestion technology to convert solid and liquid food waste into a combustible gas and compost
Mixed metals	Separated then transported to metal recycling facilities
PEF	Waste to energy, processed on site and transported for sale
Landfill	Residual waste transported to licensed landfill site



Innovative battery recycling project won Green Gown Award

The UNSW Sustainability battery recycling program won the Creating Impact award at the annual Green Gown Awards in Melbourne.

The awards, run by Australasian Campuses towards Sustainability, recognise excellence in sustainability within the tertiary education sector in Australasia.

UNSW Sustainability Manager Arifa Sarfraz said Australians produced a concerning amount of e-waste.

“Australians generate 16,000 tonnes of battery waste per year and 97% of this goes to landfill where it can contaminate the soil with toxic chemicals and heavy metals,” she said.

“Electronic waste is increasing at a rate three times that of general household waste in Australia, so this critical issue of battery waste needs an urgent solution, and UNSW has found a community-based solution to this crisis.” The UNSW recycling program, which is managed by 60 staff and student volunteers, diverts about one tonne of batteries away from landfill each year.

Seventy to 80% of the batteries are recycled at an e-waste recycling facility and the remainder are used to conduct research into advanced battery recycling methods at the Sustainable Materials Research and Technology (SMaRT) Centre.

[Watch the story here](#)

Furniture reuse program

Any UNSW staff member or student needing additional furniture for their work space at the University, or wanting to responsibly dispose of old workplace furniture, can use the UNSW Furniture Reuse Centre.

Lab equipment is reused through a similar scheme called Technet. Both Adminet and Technet are sharing portals and run by staff volunteers.

Food waste

Food waste bins are available to campus food outlets and owners are encouraged to separate their food scraps. These bins are collected and the contents composted.

Food and organics

Food and organics are separated from the general waste collected on site at the Doyle Bros materials recovery facility and composted.

Cooking oil waste

The waste cooking oil collected from campus is recycled into the process of creating bio-diesel fuel.

Problematic waste streams

Batteries

A battery recycling collection service is available to all UNSW staff and students. Spent batteries that are D-size and smaller, and all button batteries can be recycled by depositing them in the specific recycling tubes in most schools and buildings. There are also recycling tubes at the following locations:

- FM Assist
- Arc Precinct
- The Chancellery.

During 2017, 760kg of batteries were collected for recycling.

Packaging waste reduction including polystyrene

Polystyrene is identified as a dedicated waste stream in the new Waste Tender which was signed in 2017.



UNSW Environmental Management Plan published

Guiding our environmental planning and management to 2018 and beyond.

Environmental sustainability is important to the UNSW community and UNSW's strategy 2025. The EMP outlines our objectives, targets, indicators, strategies and actions to guide environmental planning and management to 2018 and beyond.

'Environmental management planning is an exceptionally useful tool in establishing the site specific environmental impact of a complex organisation like UNSW as it sets out clear commitments on how those impacts will be avoided, minimised and managed,' says UNSW Sustainability Manager Arifa Sarfraz.

'UNSW's 2016-2018 EMP is a significant step towards achieving an ISO-certified environmental management system. Based on ISO 14001:2016: Plan, Do, Check, Act model this Sustainability Report is key to our performance evaluation and communication assuring continuous improvement.'

Printer and photocopier toner cartridges

Toner recycling bins are found throughout campus. UNSW partners with Close the Loop and Planet Ark, who collect and recycle cartridges and toner bottles from any brand of printer, photocopier or fax. During 2017, 3.1 tonnes of toner cartridges were recycled.

Mobile phones

Mobile phones contain both hazardous and valuable materials that need to be recycled and prevented from going to landfill. Mobile phone recycling stations are located across campus including the Library, FM Assist and the Chancellery. Phones can also be sent via internal mail to the Sustainability team. During 2017, 130kg of mobile phones were collected and recycled.

Bulbs and globes

Fluorescent light globes are processed as chemical waste and recycled. In 2017, 1.5 tonnes of fluorescent tubes were recycled at UNSW.

Paper and cardboard

UNSW has run a paper recycling program for many years. The University is reimbursed per tonne of paper, so this process has both environmental and economic benefits. In 2017, 1413 tonnes of paper was collected and recycled.

Litter and dumping reduction

Cigarette butt litter

In addition to awareness campaigns and enforcement, UNSW Sustainability has installed six permanent Enviropole Cigarette Butt bins at the litter hot spots outside UNSW boundary and near main entrances.

Campus-wide dumping reduction

All skip bins on UNSW sites are gated/locked and/or monitored by security cameras to reduce illegal dumping.

Waste awareness raising

Ongoing activities include:

- posters promoting recycling displayed in communal areas
- a quarterly Facilities Management newsletter with articles promoting ways to responsibly manage different types of waste (i.e. fridges, pallets, batteries etc)
- installing and promoting water refill stations to encourage the re-use of drink bottles
- environmental awareness training is available to all staff
- stickers have been applied to all paper recycling bins across campus to promote the benefits of paper recycling.

Electronic waste recycling

Monitors, laptops, PCs, printers, scanners, projectors, fax machines and servers

UNSW has an agreement in place with the current IT equipment suppliers, HP and Lexmark. Serviceable items such as laptops and desktops that are no longer of any use to UNSW are remanufactured, resold or donated via HP Planet Partners.

Chemical and biological waste management

UNSW researchers are involved in activities which use a wide variety of chemical and biological materials. UNSW has contracts with specialist chemical and biological waste management companies who collect and dispose of these materials safely. Paint products are processed as chemical waste and recycled.

Green Lab Program

The UNSW Green Lab Environmental Compliance Program works directly with faculties and schools to ensure relevant staff are informed of their legal responsibilities in regard to environmental compliance. The program offers training for staff and students who use the laboratories and environmental auditing of campus laboratories as necessary.



eReuse Program gains momentum

UNSW IT lends support to innovative e-waste initiative.

eReuse is a UNSW student start-up and not-for-profit organisation with the goal of supporting a sustainable e-waste management system. The program, funded by Arc, has recently launched as a pilot, and UNSW IT are proud to be able to support the initiative.

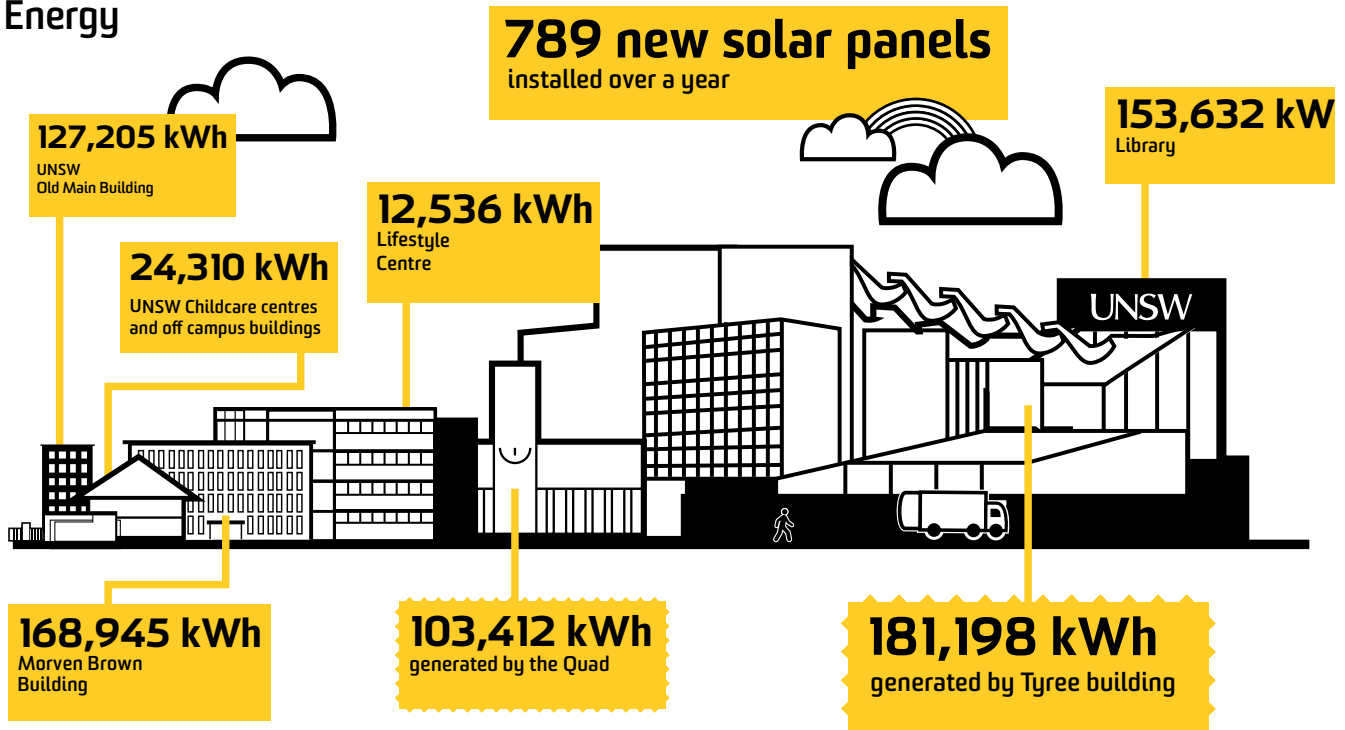
eReuse has two main goals. The first is to reduce the amount of e-waste filling up landfills across Australia by breathing new life into 'old but good' computer equipment. At the same time, eReuse hopes help bridge the digital divide by getting that computing equipment into the hands of disadvantaged families.

Ian Summers from Desktop Services said UNSW IT will support eReuse by supplying older PCs that would normally be disposed. 'It's the students at eReuse that have the knowledge and process for wiping the PCs and preparing them for release to the communities they've engaged with,' Summer's said. 'The community engagements are not easy to establish, it was a significant amount of work to build the relationships and trust that's in place.'

And if you've got working computer equipment you'd like to donate yourself, eReuse would love to hear from you. 'People in the wider UNSW community can also help by dropping off any unwanted computers, peripherals, technology in general at the Michael Crouch Innovation Centre e-waste recycling bin.'

This article was originally written by Peter Wells for the UNSW IT Blog.

Energy



Information source: UNSW Estate Management

At UNSW we are proactively finding new ways to conserve energy and accelerate our transition to cleaner energy sources

UNSW takes an active approach to reducing energy consumption through the implementation of various energy saving initiatives. Despite this, our total energy use continues to rise slowly due to the increasing operation of highly advanced, energy-intensive research equipment, and our continuous growth on building area required to support student and staff numbers.

Like most organisations in New South Wales, the majority of UNSW's energy requirements are currently met either directly or indirectly through the burning of fossil fuels. The University is committed to finding new ways to meet its energy needs that are both environmentally and economically sustainable and has implemented several strategies to minimise the environmental footprint of the energy required by its facilities.

Reducing our reliance on energy sourced from fossil fuels is critical because:

- the burning of fossil fuels releases greenhouse gases that accelerate climate change
- fossil fuels are a finite resource that will run out
- the price of energy generated from fossil fuels in NSW has doubled since 2007 and is expected to double again by 2020.

Good progress has been made to improve the efficiency of energy use and generate low- and zero-carbon energy onsite. UNSW's Energy and Water Strategy has been produced to provide a summary of recent and future activities.

Energy is a key component of UNSW's EMP. See the EMP for a status report for 2016.

Total energy use

Total energy use on the Kensington campus has risen from 93.5 gigawatt hours (GWh) in 2013 to 119.1 GWh in 2017. This is an increase of 27%.

The source of primary energy consumed by UNSW in 2017 can be broken down as follows:

- 71% from grid electricity (mostly from coal-fired power plants)
- 26% from natural gas
- 2% from co-generation
- 1% from renewable sources such as solar energy.

From 2013 to 2017, three main buildings were added: E26 (BioSciences South), J17 (Mech. Eng), and E10 MSEB. These account for 56% of the increase in total energy use from 2013 to 2017 (i.e. 14,500 MWh out of 25,600 MWh total increase). The remaining increase, can be attributed to increase in student numbers in recent years.

Energy initiatives

Energy Generation - natural gas

Although natural gas is a fossil fuel, its conversion into energy results in approximately 78% less greenhouse gas emissions than coal-based alternatives. The use of natural gas for space and water heating at UNSW, therefore, offers significantly better environmental outcomes than grid-based electric alternatives.

In the long run, however, it is still better to shift away from gas as it is much easier and cheaper to generate electricity from renewable sources. In 2017, natural gas consumption at the Kensington campus was about 113.7 terajoules, up by approx. 65% since 2013.

Electricity generation – photovoltaic

Since 2005, UNSW has been installing photovoltaic cells on buildings around its campuses. The continued expansion of installations meant that in 2017, photovoltaic systems met approx. 1% of the University's energy demand. This is an increase of 3.2 folds since 2013.

Solar progress from 2017

- A new 95 kWp PV system was installed on the new Biosciences South (E26) building roof.
- A new 112 kWp PV system was installed on Old Main Building (K15) roof.
- The Quadrangle (E15) 42 kWp PV system was replaced by a newer 100 kWp system.

Electricity generation – co-generation & tri-generation

Co-generation and tri-generation are techniques for energy generation that capture and use the heat energy that results from the production of electricity (that would otherwise have been wasted). Co-generation systems use waste heat from the production of electricity to supply hot water to buildings, whilst tri-generation systems capture both the heating and/or cooling potential of the waste energy.

UNSW currently has one co-generation system and one tri-generation system on campus which, in 2017, accounted for approx. 2% of the University's energy demand.

Energy efficiency - building upgrades

The energy management team at UNSW continually improves the energy efficiency of the University's facilities through initiatives such as:

- replacing ageing electric hot water systems with solar or gas-powered systems
- replacing old lighting systems with new, more energy-efficient, sensor-controlled lights (*around 10-15% of a building's energy consumption comes from lighting and EM has been working to centralise lighting control systems allowing EM to re-program and optimise the settings and make significant energy savings*)
- fitting new bathrooms with only cold-water taps
- installing variable speed drives to pumps and fans
- 'tuning' the building management systems
- enhancing energy efficiency design for new buildings
- re-commissioning major heating, ventilating, and air conditioning (HVAC) plants.



UNSW ranks in world's top 10%

UNSW comes 51st out of 619 in a leading Green University ranking.

The UI GreenMetric Ranking is an initiative of Universitas Indonesia, one of UNSW's key regional partners. The ranking considers each university's setting, energy, waste, water, transportation, education and carbon footprint.

UNSW Sustainability Manager, Arifa Sarfraz, said it was an honour to be recognised. 'The aim of our sustainability programs is to reduce our environmental impact and educate future leaders who can lead change for a sustainable future,' she says.

Energy efficiency - awareness campaigns

The University also runs awareness campaigns about energy efficiency for staff, students and the wider community. These campaigns include:

- making live energy data available for the UNSW community
- encouraging security staff patrolling buildings at night and cleaners to turn off lights
- creating posters.

Carbon and other greenhouse gas emissions

The University is required to report its carbon and greenhouse gas emissions to the Commonwealth Government under the National Greenhouse and Energy Reporting (NGER) Act.

The term 'greenhouse gas' refers to any gas that absorbs infrared radiation when released into the atmosphere. The absorption of this energy creates an insulating layer that balances the amount of energy received from the sun with energy radiated away from the earth's surface, creating a stable surface temperature.

Different gases are able to absorb different levels of radiation and remain in the atmosphere for different periods of time, making comparisons between them difficult. To enable us to estimate how much a given mass of a greenhouse gas is contributing to global warming, the gas is compared to a baseline of one unit of carbon dioxide (CO₂) and is expressed as a carbon dioxide equivalent (CO₂eq). For example, methane has an insulating (global warming) potential 21 times greater than that of carbon dioxide, meaning the emission of one tonne of methane is equivalent to the emission of 21 tonnes of carbon dioxide (21 CO₂eq).

The NGER Reporting Guidelines break emissions down into three categories:

Scope 1: These are direct emissions, such as those from the burning of natural gas and motor vehicle fuels.

Scope 2: These are indirect emissions, removed by a single step such as those generated as a result of the use of electricity produced by a third-party.

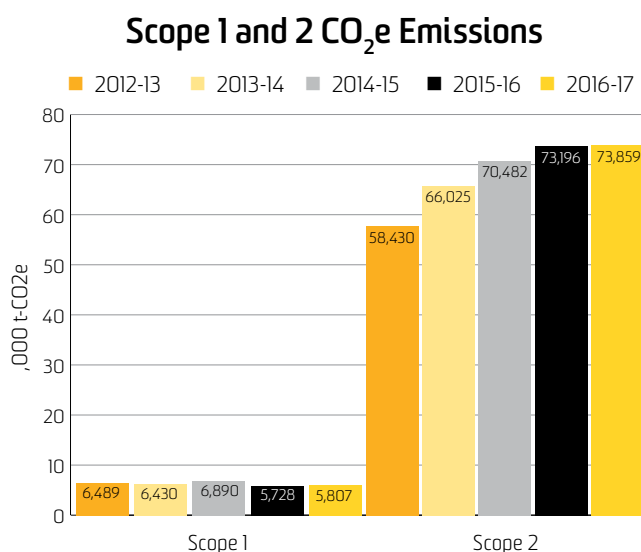
Scope 3: These are emissions that are more than one step removed. This category is most difficult to measure and includes emissions such as those resulting from business travel by staff, the disposal of waste, the extraction and transmission of energy and the purchasing of goods and services. UNSW did not measure Scope 3 emissions during the 2017 reporting period. This is something we intend to investigate for future reporting, as scope 3 emissions are likely to represent the greatest proportion of UNSW's carbon emissions.

In the 2016-17 financial year, the University's campuses and operations were responsible for the production of 79,666 tonnes of Scope 1 and 2 emissions of CO₂eq greenhouse gases, which is an increase of 20% since 2013-14 due to an increased population of staff and students and new, research-intensive buildings.

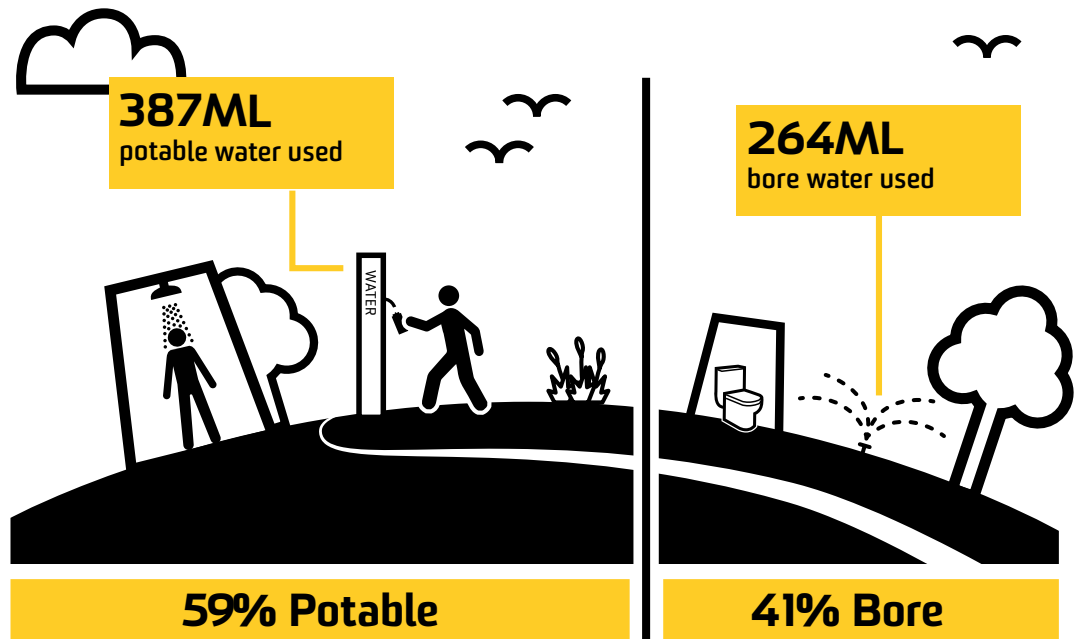
Scope 2 CO₂eq greenhouse gas emissions associated with the consumption of NSW grid electricity are the largest contributor to the University's carbon footprint. In 2016-17 UNSW's Scope 2 emissions totalled 73,859 tonnes.

The Scope 1 CO₂eq greenhouse gas emissions from the burning of natural gas (primarily for space and hot water heating), and the liquid fuels used by the vehicle fleet totalled 5,807 tonnes in 2016-17.

UNSW greenhouse gas emissions



Water



Information source: UNSW Estate Management

Water conservation remains a priority at UNSW for our current operations and future planning

The intermittent and uncertain supply of water in Australia has led individuals and organisations to take an active interest in their water usage and the long-term sustainability of water supply. UNSW accepts its ongoing responsibility as an efficient water user and takes water conservation seriously in its day to day activities and in the planning of future developments on campus.

Good progress has been made to improve the efficiency of water usage at UNSW and the Energy and Water Strategy has been produced to provide a summary of recent and planned activities for the future.

Water is a key component of UNSW's EMP. See the EMP for a status report for 2017.

Water sources and use

Potable water

Since 2003, UNSW has instigated a range of water saving initiatives that have allowed UNSW to become water efficient and maintain water use levels despite a large increase in student numbers and total building area. In 2017, the total amount of potable water used on campus was 387 megalitres, representing 59% of the water used on campus.

Bore water

Where potable water is not required, UNSW is systematically replacing it with bore water. In addition to irrigation and toilet flushing, the applications of bore water have been extended to include reverse osmosis systems, process cooling, and heat dissipation in air-conditioning systems. In 2017, UNSW used 264 megalitres of bore water, representing 41% of total water use.

Stormwater

UNSW uses a managed aquifer recharge process to mitigate the effects of the extraction of bore water from the Botany aquifer. Managed aquifer recharge is a significant area of research at UNSW, through the UNSW's Connected Waters Initiative. As a part of this initiative, the University has installed Sydney's largest percolation pit, capturing close to 70% of the stormwater runoff in the village green on Kensington Campus. Surface runoff that would normally flow out to sea is redirected into the percolation pit from where it can recharge the Botany aquifer.

Although this water is not directly used on the University's campuses, it replenishes the aquifer and therefore feeds UNSW's bore water system. This process enables UNSW to capture and return 160 megalitres of water to the aquifer per year, the equivalent of 64 Olympic-sized swimming pools.

Ongoing water conservation initiatives

We actively investigate opportunities to reduce water use at UNSW. Initiatives include:

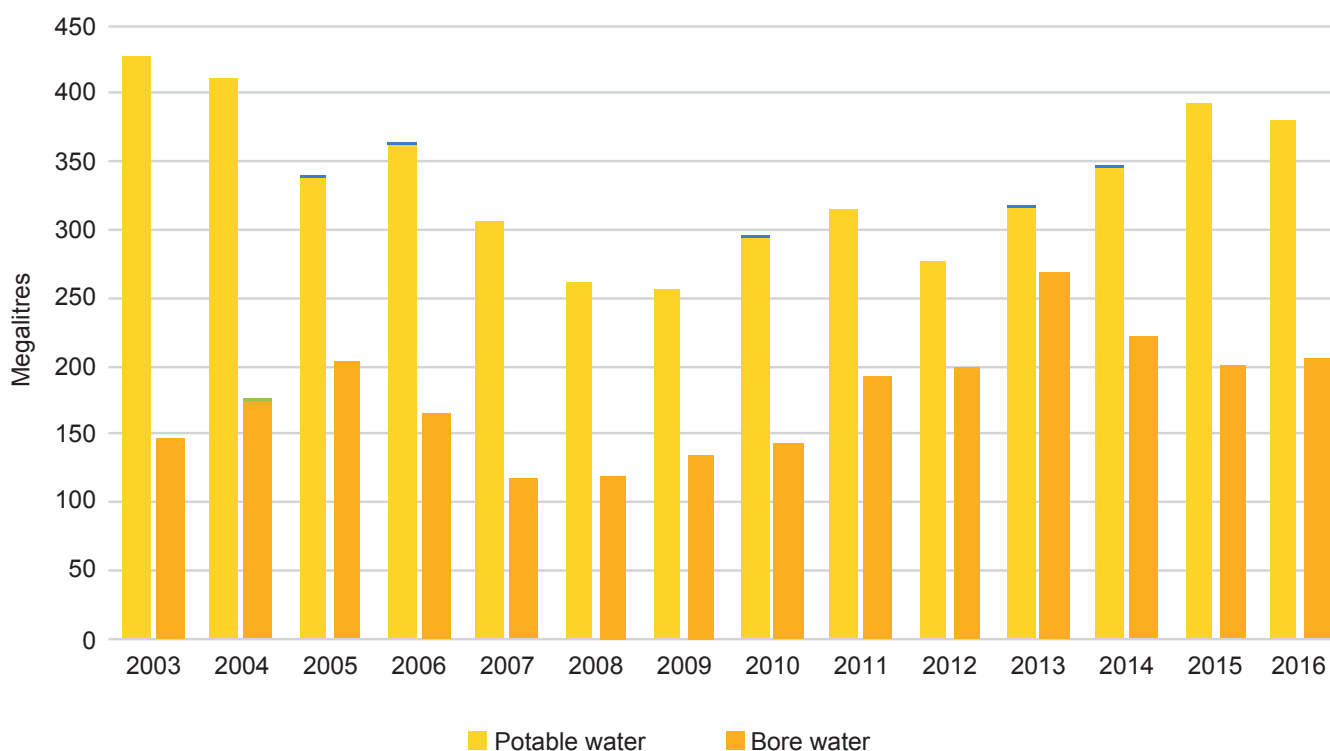
- upgrading toilets and showers to incorporate high efficiency water-saving fixtures and fittings
- planting drought-tolerant grasses and native plants
- undertaking water consumption reviews of campus cooling towers to improve operational efficiency and reduce water wastage
- incorporating bore water systems into all of our major building projects
- and continuous monitoring of water use on our buildings and systems.

Progress in 2017

In the Tyree Energy Technologies Building, a heat recovery system was commissioned, using thermal energy from bore water to preheat and precool fresh air used across the building. The bore water tank maintains 19°C year-round, which means that, no matter what is happening with the weather, the system can reduce energy consumption and help keep indoor areas at a consistent temperature.

Bore water infrastructure continues to be extended throughout the main Kensington campus and from April 2017 included the new Biological Sciences building's cooling towers and toilets. In general, all new buildings will have infrastructure to use bore water. For existing buildings, bore water is used in most major buildings on campus.

UNSW Water Usage Kensington Campus 2003-2016



Compliance

UNSW goes over and above compliance to environmental legislation to reduce our environmental impact.

Environmental compliance means conforming to environmental laws, regulations, standards and other site-specific requirements. UNSW's operations are diverse and impact the environment in different ways. Activities that have potential environmental impacts are reduced, or avoided completely via careful planning through UNSW's Environmental Management Plan (EMP). This outlines a series of targets, strategies and indicators to ensure, not only full compliance, but ongoing best practice.

Compliance and pollution prevention are key components of UNSW's EMP. See the EMP for a status report for 2017.

EMP compliance objectives

- Maintain full compliance with all environmental legislative and regulatory requirements.
- Conduct environmental audit/inspections of identified high risk facilities to ensure compliance and environmental improvement.
- Develop and implement strategies for managing and/or reducing toxic, hazardous and hard waste.

Compliance and pollution prevention activities

- Annual reporting under the National Greenhouse and Energy Reporting Act 2007 (NGER).
 - Annual reporting to the National Pollutant Inventory (NPI) under the National Environment Protection Measure.
 - Communicating staff compliance responsibilities via the Sustainability website
 - Actively managing our environmental responsibilities via UNSW's Environmental Management System.
 - Providing an online reporting tool for staff to report hazards and environmental incidents on any UNSW campus or site.
 - Green Lab Program.
 - Security staff hazardous spill management training.
 - Batteries and toner cartridge recycling programs.
 - Reporting via UNSW's annual Sustainability Report.
-

Community Engagement

UNSW achieves high standards in environmental sustainability by integration, communication and community engagement

Sustainability is possible only if the whole community is committed to achieving this goal. As environmental awareness and the importance of sustainability continues to grow in the mainstream, more and more opportunities have arisen on campus for staff, students and visitors to get involved.

Integration, communication and engagement are key components of UNSW's EMP. See the EMP for a status report for 2017.

Events

From major ongoing university-wide campaigns to annual events focused on environmental sustainability issues, here are just a few of the community engagement activities occurring on campus throughout the year:

- UNSW Grand Challenges is an ongoing series of events that engage experts on campus and around the globe to discuss the sustainability challenges facing our society
- Global Climate Change Week encourages academic communities in all disciplines and countries to engage with each other, their communities, and policy makers on climate change action and solutions (run annually at UNSW since GCCW's inception in 2015)
- O Week Sustainability engagement stall (run annually)
- Earth Hour events (run annually since 2013)
- Ride to Work Day (run annually since 2013)
- International Residential Colleges, Communities and Charities (IRCCC) committee annual Sustainability Pitch Off (run annually since 2013)
- Australasian Campuses Towards Sustainability Green Campus Day under the Green Building Council (run annually since 2014).



Engineers Without Borders

Engineers without Borders (EWB) is a not-for-profit organisation run by a purposeful community of student volunteers.

With topics ranging from renewable energy and floating houses to prosthetic limbs and more, EWB is equipping a new generation of humanitarian engineers with the skills they need to change the world. EWB's vision is that everyone should have access to the engineering knowledge and resources required to lead a life of opportunity, free from poverty. Projects are people-centered and based on knowledge-sharing and mutual respect.

Yasmin Cherk, Co-President EWB and Environmental Engineering undergraduate describes what her participation means to her:

'What you give is nothing in comparison to what you receive. Looking back at the time I've been involved with EWB, it seems I've grown into the person I had hoped to become. My perspective on engineering has done a 180. What I thought would be a technical slog of endless maths and physics is, in fact, a much more intricate discipline. Engineering involves creativity, initiative and a lot of curiosity. But most important is a basic human understanding. This grasp of what is needed will differentiate your engineering work from satisfactory to exceptional.'

Sustainability promotion and communication

The Sustainability office promotes the University's sustainability objectives through:

- sustainability reporting
- submitting applications for sustainability awards and rankings
- newsletters, social media and websites
- through events and stalls.

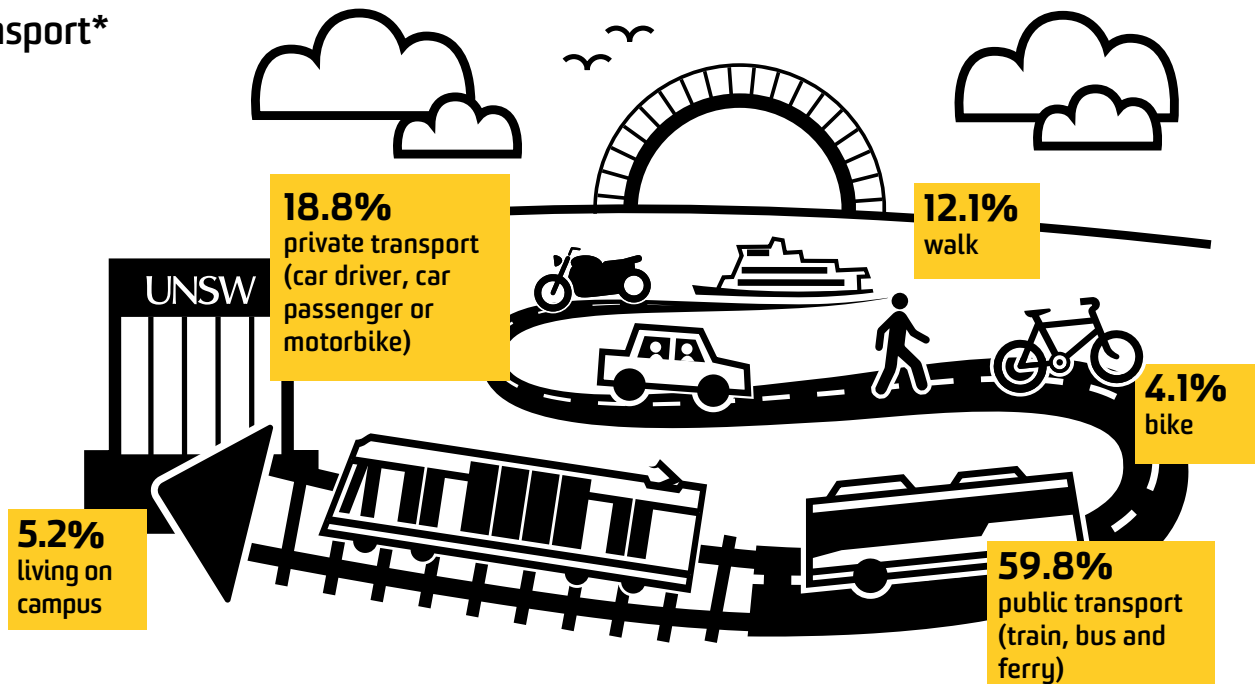
Student groups

Everyday sustainable living practices require people to actively get involved to create a culture that accepts sustainability as the norm. At UNSW, we have a vibrant campus that seeks to promote best practices and behaviours.

Our students (often in collaboration with staff) conduct an enormous range of activities that benefit the community throughout the year, these are just a few of the groups and initiatives:

- Amnesty International UNSW
 - ARC Environmental Collective (student representative council)
 - UNSW Oxfam Club
 - UNSW Bike Club
 - Thoughtful Foods (UNSW's Organic Food Coop)
 - Stationary Re-use Centre
 - Arc Student Development and Volunteer Programs
 - Engineering World Health
 - Engineers Without Borders
 - International Student Volunteers
 - United Nations Society
 - Vegetarian Society
 - eReuse Centre.
-

Transport*



*Note: This is 2016 data due to the fact that the survey was not conducted in 2017 due to light rail construction.

UNSW actively helps students and staff make sustainable transport choices

More students and staff are travelling to UNSW by public transport and by bicycle than ever before. Every weekday during semester, around 40,000 trips are made to and from UNSW's Kensington campus making it the largest single destination in Sydney's eastern suburbs.

Unlike other Sydney-based universities, UNSW is not located close to a railway station meaning there is a higher reliance on the use of buses, although this will change in 2020 with the opening of the new South East Light Rail line.

Transport is a key component of UNSW's EMP. See the EMP for a status report for 2017.

Travel survey

UNSW's Travel Survey provides critical input to the University's transport strategy. Although run annually between 2007 and 2016, the survey was not undertaken in 2017 so the data below is from 2016.

The University analyses survey results to design programs that promote sustainable transportation options including walking, cycling and public transport.

The results are also used to develop measures that reduce car dependence and parking demand on campus. Some 18%, or almost 10,000, UNSW staff and students took part in the 2016 travel survey. Some key statistics from the survey results are as follows:

Public transport: In 2016, a majority of the respondents (59.8%) travelled by public transport, an 10.9% increase since 2007 when this method of travel was used by only 48.9% of staff and students. When the percentages were extrapolated to the average daily campus population, the results equated to an average increase of 1,419 public transport users each year.

Private vehicles: In 2016 18.8% of respondents travelled in private vehicles, a 13.3% decrease since 2007. When the percentages were extrapolated to the average daily campus population, the results equated to an average decrease of 360 private vehicle users each year despite a growth in the total campus population of approximately 18,327 since 2007.

Walking: Walking to and from the campus has been fairly consistent over the years with 12.1% of all respondents walking to campus in 2016. When extrapolated to the average daily campus population, the results demonstrate that approximately 5,322 staff and students walked to/from the campus in 2016 on a typical semester day.



The new South East Light Rail

A vital transport link for UNSW.

As UNSW has grown, we have outgrown the existing public transport system and a high capacity mass transport solution was desperately needed to alleviate current transport issues, improve accessibility and make sure UNSW continues to attract students and staff of the highest potential.

In 2015, construction started on the South East Light Rail to provide sustainable and reliable modern transport from the CBD to UNSW's Kensington Campus. In a few years the Light Rail will provide efficient, turn-up-and-go public transport, with services every eight minutes to/from Randwick and Kingsford between 7am and 7pm. Each vehicle will carry up to 450 people – the equivalent of nine standard buses, with a planned capacity of 13,500 passengers per hour (6750 in each direction).

The Light Rail will also deliver a significant improvement in reliability compared to the current variability of bus travel times to and from UNSW due to traffic congestion.

Transport for NSW's current planning would see a combined light rail and bus network deliver double the morning peak capacity from the CBD to UNSW and the Randwick hospital precinct.

Cycling: Bicycle usage continues to gain popularity and demonstrates an increasing trend which has more than doubled as a typical mode of transportation since 2007. The percentage of respondents cycling to and from the campus increased from 2.7% in 2007 to 4.1% in 2016. When extrapolated to the average daily campus population, this is a significant increase from 922 daily riders in 2007 to 1,613 daily riders in 2016.

South East Light Rail

UNSW is a key destination on the new South East Light Rail route which will extend from Circular Quay, through Sydney's CBD and on to UNSW via Central Station. Construction started in 2016 and is expected to be completed in 2021. The light rail is set to transform public transport to UNSW and is anticipated to greatly reduce staff and student reliance on private vehicle usage. For the latest news visit UNSW's Light Rail website

Car sharing

In 2011, UNSW became the first university in Australia to have car sharing facilities on campus. Four vehicles (including a van) from the car share company GoGet are available for hire.

In 2017, there were 1,723 student and staff members registered to use the vehicles. There were over 2,950 bookings across the year (an increase of almost 550 from 2016) with an average booking length of 4.4 hours. On average cars were booked eight times per day.

GoGet data has shown carshare members drive, on average, 2,000km less per year than the average car owner. This results in 320,000 less kilometres travelled per year by UNSW students and staff.

Car parking

Whilst car parking at UNSW is limited, driving to and from the University remains attractive to many staff and students. There are approximately 2,800 parking spaces on its Kensington campus (including loading bays).

Cycling

The Kensington campus is easily accessible by bicycle and provides over 50 indoor and over 700 outdoor designated bicycle parking spaces. This is an increase of about 17% since 2013. There are also two permanent bike pumps and 19 shower locations. UNSW also took part in national Ride to Work day in 2017 for the sixth consecutive year.

Fleet vehicles

UNSW reduced its fleet from 83 to 68 in 2017, 17 of which are in regional locations. This includes three electric cars.



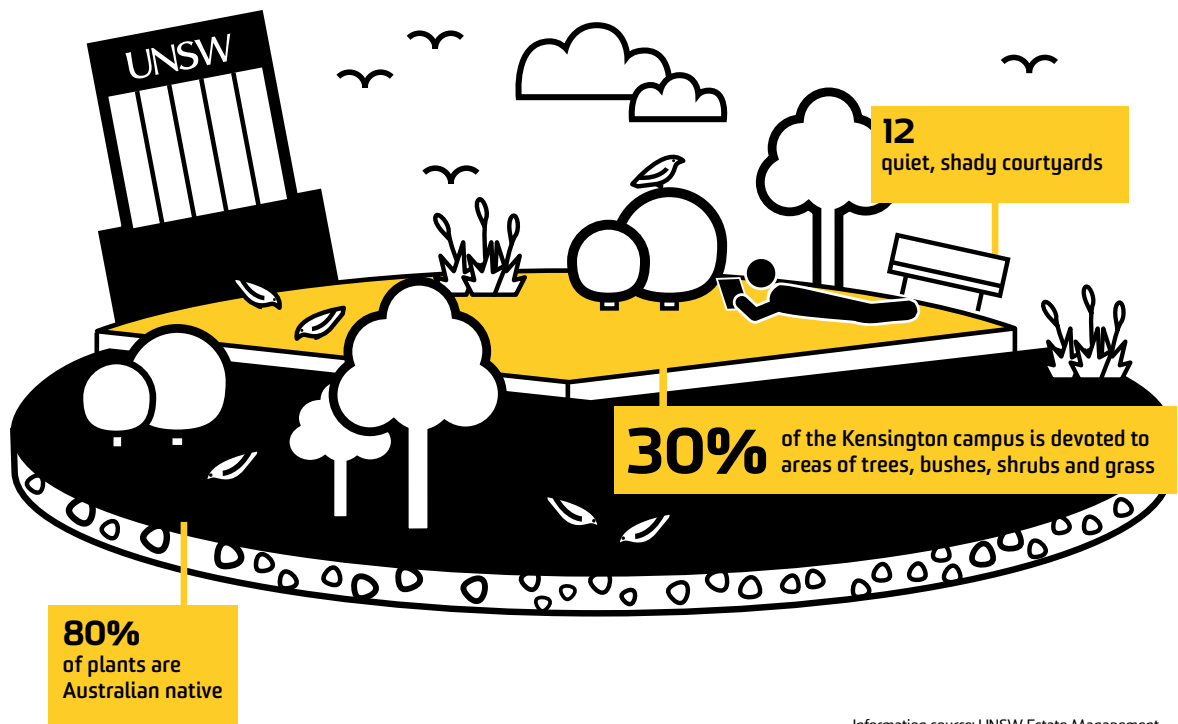
Bike riders push cycling cause at Ride2Uni Day

Big turnout of UNSW students and staff for national Ride2Work day.

A large number of cyclists from all over the city relied on pedal power to travel to UNSW in celebration of National Ride to Work Day.

More and more Sydneysiders are riding bikes for transport, with a 100% increase over the past three years. Twice as many are riding bikes for transport than the national average, and some 31,600 City of Sydney residents get on a bike in a typical week (2013 Australian Bicycle Council survey). Safe cycle access is currently impaired due to the building of the South East Light Rail, but when complete there will be excellent bike access to campus.

Campus



Information source: UNSW Estate Management

UNSW's campuses inspire a green outlook

UNSW has appealing campus grounds that are planned, planted, and maintained with the local environment and ecology in mind. We protect and create wildlife habitat and conserve water and other natural resources.

Campus environment, biodiversity and open space are key components of UNSW's EMP. See the EMP for a status report for 2017.

Grounds management

UNSW maintains approximately 120,000m² of landscaped areas and another 80,000m² of playing fields. The University recognises that the way these grounds are managed can have significant environmental impacts and employs several strategies to ensure they are managed in a sustainable way.

These strategies include:

- choosing appropriate plants (i.e. planting native species that complement the soil and climactic conditions)
- maintaining soil quality
- minimising the use of chemical and fertiliser treatments
- ensuring the responsible disposal of green waste.

Trees

UNSW is the proud caretaker of over 1,200 trees on the Kensington campus including several visually stunning 120-year-old Morton Bay and Port Jackson Fig trees. Our trees are managed through a tree database system and an interactive tree plan of the campus.

As well as providing a habitat for wildlife and contributing to a pleasing aesthetic, trees create a microclimate that can significantly reduce the 'urban heat island effect'. This provides staff and students with a more comfortable campus environment and the temperature decreases can significantly reduce the amount of energy required to cool (and in some instances to heat) buildings.

Campus grounds sustainability initiatives

Native planting policy

UNSW's planting policy is to promote local biodiversity. While the Kensington campus has some mature non-native trees, new plantings favour native plants and grasses, particularly species that are indigenous to the Randwick/Kensington area. These plants are suited to the local climactic conditions (reducing their watering requirements), and allow students to learn about bioregionalism. In 2017, 80% of trees on campus were noted as Australian native species.

Irrigation

UNSW continues to audit its landscape irrigation systems and has a contractual requirement in place for the grounds maintenance contractor to ensure optimum outcomes. Where irrigation is required, the preference is for drip irrigation rather than sprinkler systems, and all campus irrigation systems use bore water, rather than potable water.

Healthy soil

UNSW has reduced its use of synthetic garden fertilisers and replaced these with slow-release organics wherever possible. This reduces potential run-off issues, improves the soil structure and reduces watering requirements.

UNSW has limited the use of pesticides on campus through modifications in grounds maintenance contracts. Low toxicity chemical solutions are still used for pest and weed control, but only as a last resort.

Mulching

UNSW processes all tree prunings on site into mulch and woodchips to use in gardens across its campuses to reduce evaporation and conserve water. Approximately 600 cubic metres of mulch was applied to the landscaped environment in 2017.

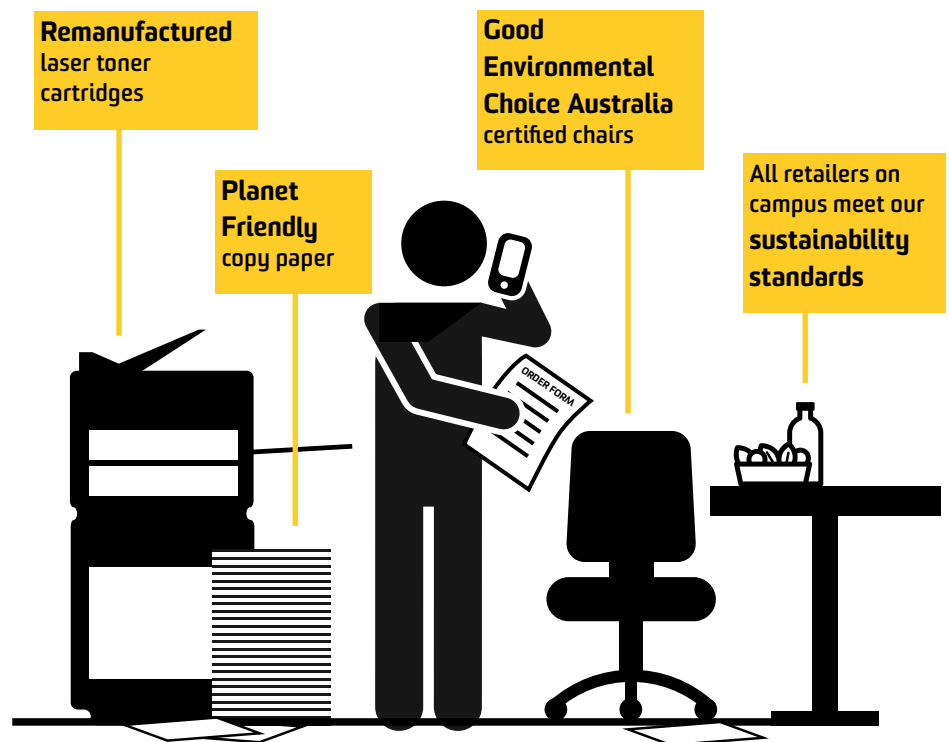
Technology in the garden

Automatic watering systems, rain sensors and night-time watering regimes are in operation at UNSW. These industry-standard solutions are applied to 100% of the Kensington campus and have significantly reduced overwatering.

Reusing and recycling

UNSW's campuses continue to evolve as we adapt facilities and landscapes to meet our changing needs. Surplus materials and equipment, such as old sandstone, paving bricks, outdoor furniture, plants, bike racks and bollards, are saved and stored on site by the UNSW grounds manager. This policy of reuse before recycling or disposal helps to minimise the waste from these adaptations and gives rise to the possibility of zero-purchase projects.

Purchasing*



**Note: This data was provided by UNSW Green Print, UNSW's central preferred printing service, and represents their printing and procurement activities.*

Sustainable purchasing powers our procurement

Sustainable procurement considers the broader economic, environmental and social cost of purchases made by UNSW

Sustainable procurement at UNSW

The University encourages significant and strategic purchases to be made through the centralised strategic procurement team. This allows UNSW to more accurately measure and manage efficient material and services use and avoid unnecessary expenditure.

Strategic Procurement continues to improve UNSW spend visibility to enable staff to gain insights into the procurement profile of the University. This should assist in identifying opportunities to understand and track procurement behaviors, areas of spending and product categories.

Work in progress in 2017

Strategic Procurement worked with the UNSW community to refresh and update the UNSW Procurement Policy and Procedure.

The Policy and Procedure now includes a new core value around Responsible Procurement to adopt procurement practices that consider social, sustainable and ethical sourcing.

Sustainability features of current supply agreements

Stationery and office supplies

UNSW's preferred stationery supplier provides a range of environmentally preferred goods as a 'Planet Friendly' sub-brand. Items include copy paper and other paper products with recycled content, remanufactured laser toner cartridges, janitorial equipment, Fair Trade teas, coffees and hot chocolate.

The supplier also encourages the return of their shipping packaging for reuse. A small order handling fee has also been agreed to encourage staff to consolidate stationery orders and reduce unnecessary delivery trips to campus.

Office furniture

UNSW's preferred supplier for office chairs offers a range of chairs certified by Good Environmental Choice Australia. The supplier is currently undergoing certification of an Environmental Management System compliant with ISO 14001.

Woollen fabric standards have been chosen. Woollen fabric is known for its long life and ease of cleaning as well as being a natural fibre capable of being recycled. Sustainable practices are conducted in the processing and manufacturing of these fabrics.

Residential catering

UNSW has negotiated achievable environmental and sustainability standards become part of our Residential Catering Agreement. This includes initiatives on:

- water conservation
- waste disposal and recycling
- cooking oil, including reprocessing for bio-diesel
- food waste, including compost and food rescue
- packaging
- economical use of equipment (e.g. fridges in high functioning order), use of sustainable consumables (e.g. light globes), economical use of utilities and use of locally sourced and seasonal produce.

Green Print Centre

UNSW's Green Print Centre is our onsite printing centre providing staff and students with a variety of print solutions. The print centre has implemented a number of initiatives to reduce its environmental impact, including reduction in paper use, as well as recycling of consumables and paper. A range of papers certified by the sustainable forestry networks are also stocked.



Smarter ordering for UNSW Merchandising

Thoughtful purchasing for incremental positive change

With a focus on smarter purchasing, UNSW Merchandising has changed their ordering patterns to reduce the amount of deliveries received from suppliers. This has resulted in an increase in manufacturer production efficiency and reduction in environmental impact.

By way of an example, they have almost halved the amount of deliveries from their T-shirt supplier. "During the printing process there is a setup and screen washout process," says Kenan Kuscu from UNSW Press Ltd. "By ordering more product less frequently, we have reduced this process which has obvious efficiency and environmental benefits."

Kuscu says they also purchase products from suppliers who have known links to factories with fair trade agreements and that are audited regularly by external companies.



Making knowledge readily available

UNSW Bookshop and Interdisciplinary Environmental Studies team up to make sure top environmental titles are available

The Interdisciplinary Environmental Studies (IES) sits at the vanguard of interdisciplinary environmental studies in Australia, offering specialised postgraduate environmental management coursework and research programs.

Environmental concerns, and more broadly sustainability, are providing both greater constraints and greater opportunities for businesses, governments and NGOs. Finding solutions to environmental problems, including climate change, water management and deforestation are now international imperatives. It has been recognised that the challenges are complex and interconnected, and that solutions cannot come from one single area of research, profession or sector of society.

This is why the UNSW Bookshop and the IES have teamed up to present a specialised selection of books and publications that address these urgent concerns.

Campus cleaning contracts

UNSW insists that all cleaning contractors implement and maintain a green cleaning regime. Some of the requirements include:

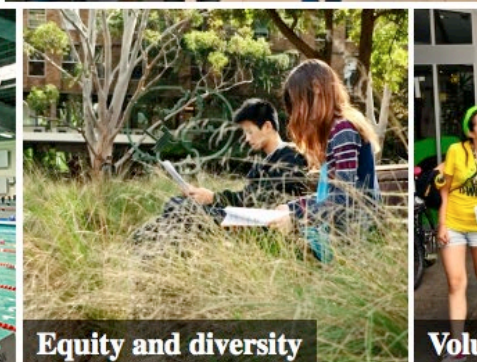
- using methods that reduce environmental impact in relation to chemicals and equipment used; cleaning techniques; and waste and energy management practices
- not using any ozone-depleting substances, and ensuring that hazardous chemicals are only used where no viable alternatives exist (these must be approved by UNSW prior to use)
- using the minimum amount of power and utilities, and minimising resource consumption and waste generation including the use of chemical dispensing systems and colour-coding systems.

Our contractors are required to keep abreast of emerging developments in industry best practice with regard to sustainability and expected to propose innovations which will further improve sustainability performance.

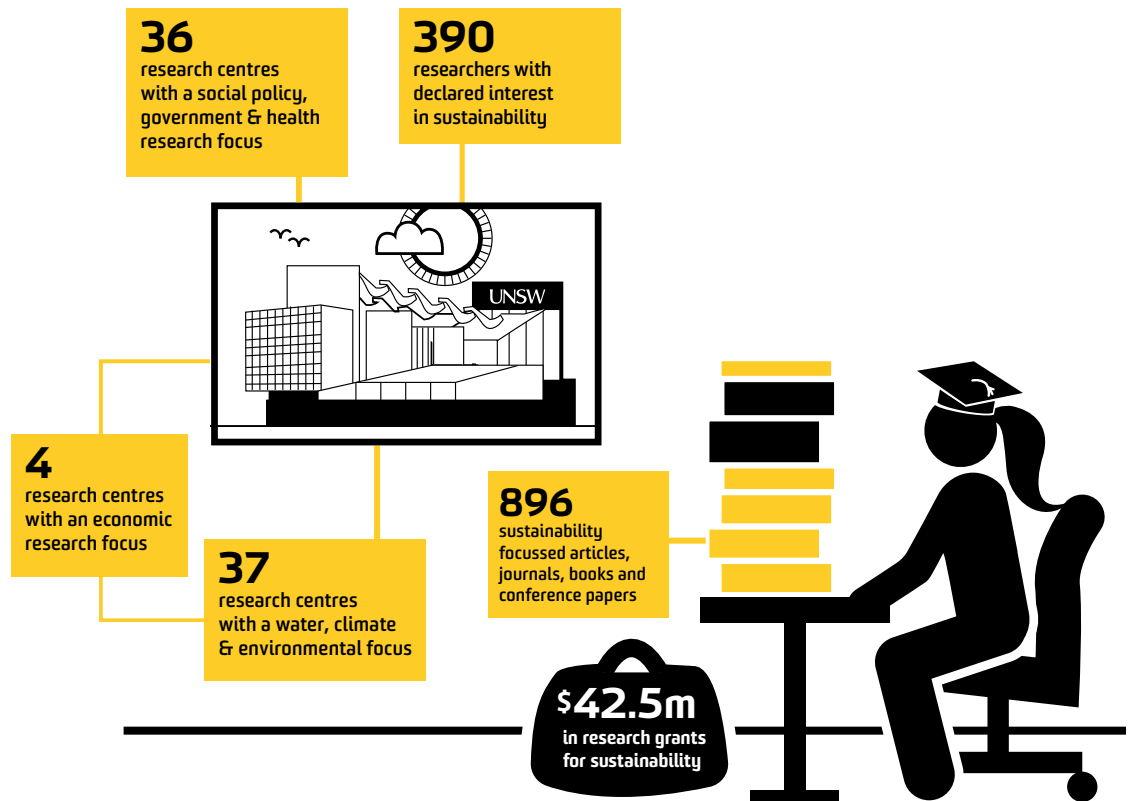
Community

UNSW is not simply a place to learn. It is a unique and diverse community of socially aware global citizens focused on creating positive change. UNSW's academics, researchers and students share a sense of compassion and appreciate that community service and public engagement is fundamental to the creation of sustainable communities.

In this section



Research



Information source: Research income number from UNSW's HERDC (Higher Education Research Data Collection) return

UNSW is leading the charge in sustainability research

UNSW's 2025 vision is to be among the 50 leading research-intensive universities worldwide, known for innovative, pioneering research with a global impact. This means giving equal weight to both discovery research and its application. The implementation of UNSW 2025 Strategy has only just begun but promises a new era where the University not only becomes a magnet for the most talented researchers and research students worldwide, but sees new partnerships established with industry, international organisations, governments and other leading universities.

With a commitment to helping create equitable and just societies around the world, researchers interested in sustainability are increasingly attracted to UNSW as a place where they can see their high-quality research having a real-world impact. A place where they can actively improve the social, health and economic wellbeing of people, particularly from disadvantaged and marginalised communities.

One of many initiatives in the Strategy 2025 is a recruitment drive to appoint world-leading researchers and rising stars. By 2025, UNSW will have invested more than \$500M to recruit 290 Fellows and 700 PhD scholars.

In 2017, there were 390 academics at UNSW with a declared interest in environmental and/or sustainability research. This is a significant increase of 160% from 2013.

Research alliances

UNSW is also forming strategic partnerships such as the PLuS (Phoenix-London-Sydney) Alliance. Formed in early 2016 between UNSW, King's College London and Arizona State University, PLuS brings together three globally-focused universities to contribute to a sustainable future by collaborating in the areas of sustainability, global health, social justice, technology and innovation.

Research indicators

UNSW measures a number of research indicators that demonstrate the most active areas of interest for researchers at the University over the course of a year.

One of the top research topic areas in 2017 was Water, Environment and Sustainability which has showed an almost universally positive increase in sustainability related activities since 2013. Activities carried out under the umbrella of this research indicator:

- netted over \$42.5 million in research grants
- led to the publication of 896, books, journal articles and conference papers

	2013	2014	2015	2016	2017
Publications*	629	687	1,275	780	896
PhDs awarded (Completions)	77	165	82	152	
Enrolments** (HDR Load)	364	398	451	436.6	
Total amount received for research grants (in millions)	\$33.20	\$35	\$30	\$30	\$42.4

Data is based on the HERDC (Higher Education Research Data Collection)

* Includes articles, books and book chapters, journal articles and conference papers

** Number of enrolled masters and PhD candidates

*** Rank out of 10 categories for the percentage of income received in total by the University in research grants

Research centres and institutes

Our academic staff and research students are at the forefront of sustainability research. UNSW has established or partners with more than 60 research centres and institutes in Australia and around the world that have a full or part focus on environmental, social or economic sustainability.

Water, climate and environment research focus

Expertise throughout these institutes includes: alternative energies and fuels; climate change; conservation and biodiversity; environmental modelling; marine biology and oceanography; microbial biofilms; rainfall, rivers and water; river wetland ecology; sustainable cities; sustainable materials and recycling; water use and re-use; and water purification.

- Advanced Environmental Biotechnology Centre
- ARC Centre of Excellence for Advanced Silicon Photovoltaics and Photonics
- ARC Centre of Excellence for Climate System Science
- ARC Research Hub for Green Manufacturing
- Australian Centre of Excellence in Future Low-Energy Electronics Technologies

- Australian Centre for Advanced Photovoltaics
- Australian Centre for Sustainable Mining Practices
- Australian Climate Change Adaptation Research Network for Settlements and Infrastructure
- Australian Poultry CRC
- Australian PV Institute
- Australia-US Institute for Advanced Photovoltaics
- Australian Water Recycling Centre of Excellence
- Blue Mountains World Heritage Institute
- Centre for Ecosystem Science Blue Mountains World Heritage Institute
- Centre for Infrastructure and Engineering Safety
- Centre for Marine Bio-Innovation
- Centre for Sustainable Materials Research & Technology Centre (SMaRT)
- Climate Change Research Centre
- Connected Waters Initiative
- CRC for Greenhouse Gas Technology
- CRC for Low Carbon Living
- Evolution & Ecology Research Centre
- Global Water Institute
- Interdisciplinary Environmental Studies
- National Centre for Excellence in Desalination Australia
- National Centre for Groundwater Research & Training
- Research Centre for Integrated Transport Innovation
- Sino-Australian Research Centre for Coastal Management
- Sydney Institute for Marine Sciences (SIMS)
- The Environmental Research Initiative for Art
- Torch
- UNESCO Centre for Membrane Science & Technology
- Universities Climate Consortium
- UNSW Energy Research Institute
- Water Research Australia
- Water Research Centre
- Water Research Laboratory

Social policy, government and health research focus

Expertise throughout these institutes includes: ageing and retirement; city planning; community medicine; criminology; defence and national security; disability policy and planning; drug and alcohol policy; human rights; indigenous policy; mental health; risk management and safety; and the social impact of disease.

- ARC Centre of Excellence in Population Ageing Research
- Australasian Legal Information Institute
- Australian Centre of Research Excellence in Offender Health
- Andrew & Renata Kaldor Centre for International Refugee Law
- Australian Housing and Urban Research Institute
- Australian Human Rights Centre
- Australian Institute for Population Ageing Research
- Centre for Big Data Research in Health
- Centre for Eye Health
- Centre for Primary Health Care & Equity
- Centre of Research Excellence in Mental Health and Substance Use
- Centre of Research Excellence in Population Health Research
- Centre of Research Excellence in Suicide Prevention
- Centre for Social Impact
- Centre for Social Research in Health
- City Futures Research Centre
- CRC for Living with Autism Spectrum Disorders
- Forced Migration Research Network
- Gilbert and Tobin Centre of Public Law
- Indigenous Law Centre
- Industrial Relations Research Centre
- Ingham Institute
- Initiative for Health and Human Rights
- Lowitja Institute Aboriginal and Torres Strait Islander Health CRC
- National Cannabis Prevention & Information Centre
- National Drug and Alcohol Research Centre
- Neuroscience Research Australia
- Nura Gili Indigenous Research Centre
- Skin and Cancer Foundation
- Social Policy Research Centre
- Research Centre for Integrated Transport Innovation
- Simpson Centre for Health Services Research
- The Garvan Institute of Medical Research
- The George Institute for Global Health
- Transport and road safety
- Victor Chang Cardiac Research Insitute



Spoonful of sugar helps explain climate change

Everyday ingredients like sugar, clay and coffee create 3D printed art works from climate change data.

UNSW Art & Design lecturer Kate Dunn, a research leader and PhD candidate in Digital Fabrication and Material Innovation in the Creative Robotics Lab, is using sustainable materials to 3D print complex information, including the dense scientific data relating to climate change.

'I'd listen to climate scientist's talk and think, 'There must be a way to make this information more accessible,' says Dunn. 'Climate change is our great global, environmental challenge, but I'm also hyper-aware that 3D-printed products will eventually contribute to landfill. I wanted to find out how to do what I love, but do it ethically.'

And so began her collaboration with UNSW climate scientist Dr Sarah Perkins-Kirkpatrick from the Climate Change Research Centre's extreme weather team.

Perkins-Kirkpatrick said scientists are familiar with charts and graphs but not everyone is comfortable with them. 'Kate's work is a really cool way of visualising actual climate data. You can see how heatwaves have changed with very little explanation necessary.'

This is an adaptation of a story written by Fran Strachan which originally appeared on the UNSW Newsroom.

Economic research focus

Expertise throughout these institutes includes accounting; business and management; capital markets and finance; economics; law, governance and regulation; and taxation.

- Centre for Applied Economic Research
- Centre for Energy and Environmental Markets
- Centre for Law, Markets and Regulation
- Institute of Global Finance

Research centre highlights**Indigenous Law Centre**

The Indigenous Law Centre contributes to the recognition, protection and development of the legal rights and freedoms of Indigenous peoples both in Australia and internationally. The Centre achieves this by conducting and disseminating innovative and high-quality research on Indigenous legal issues and through community legal education on issues of significance.

Australian Centre for Sustainable Mining Practices

The Australian Centre for Sustainable Mining Practices is recognised by both government and industry in Australia and internationally as a leading authority on sustainable mining practices. Key areas of expertise include mine site water, groundwater and seepage barriers; remote sensing to detect environmental impacts, subsidence and illegal mining; climate change adaptation and mining; and carbon management.

Global Water Institute

The Global Water Institute (GWI) is a world leader in water research, innovation and problem solving. Drawing on water expertise from seven faculties and 13 specialist centres across the University the Institute is Australia's most advanced water knowledge hub. Research activities span an incredible variety of water-related fields but GWI's researchers have one thing in common: they are driven by the urgent need to protect this essential resource in perpetuity.

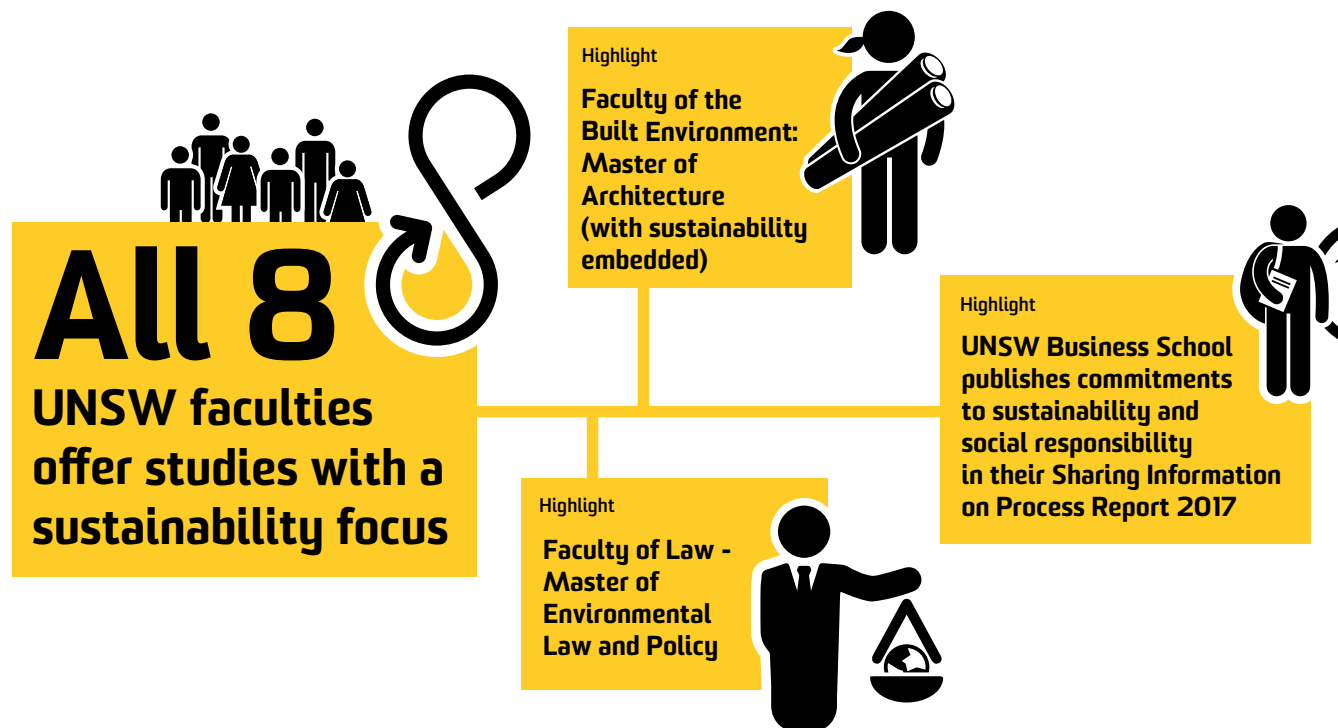
Australian Human Rights Centre

The Australian Human Rights Centre aims to promote public awareness and academic scholarship about domestic and international human rights standards, laws and procedures through research projects, education programs and publications. The Centre brings together practitioners, research fellows and student interns from Australia and internationally to research, teach and debate contemporary human rights issues.

Centre for Marine Bio-Innovation

The Centre for Marine Bio-Innovation is a leader in fundamental and applied research in microbiology and ecology, particularly the interactions between microorganisms and their eukaryotic hosts. It is now recognised that eukaryotes (ranging from humans to plants to invertebrates) are not individual organisms, but complex communities comprising the host and their associated microbial communities. This realisation is a paradigm shift across much of biology, and is influencing studies of everything from the functioning of marine ecosystems to diabetes in humans.

Education



Leading the way in sustainability education

UNSW's 2025 vision is to be among the 50-leading teaching-intensive universities worldwide, known for the most innovative developments in digital and face-to-face learning to improve educational quality and the student experience. As traditional industries, professions and career pathways are transformed and replaced by new, previously unimaginable ways of working, making and doing, UNSW is actively preparing students for jobs that do not yet exist.

UNSW has a diverse range of formal education programs that critically address issues of sustainability. By educating its students about sustainability, UNSW is arming our future leaders, scholars, workers, and professionals with the skills to tackle the sustainability challenges we will face in the future, as well as those that we face today.

In 2017:

There were approximately 20 student organisations related to environment and sustainability

Sustainability curriculum

All eight faculties at UNSW offer opportunities to undertake studies with a sustainability focus. Sustainability can be taught as a subject in its own right, but increasingly UNSW's educators are embedding sustainability considerations into the fabric of courses they develop.

Faculty of Art and Design

The Faculty of Art and Design is UNSW's hub of experimentation and exploration in art and design, fostering collaboration across science, engineering, the humanities and social sciences.

Sustainability is embedded as a component of many courses with notable cases including:

- Sustainable Design Theories and Practice
- Art and the Environment – Studies in the Field
- SPI Experimental Fieldwork
- Imperatives for a Sustainable Future.

Faculty of Arts and Social Sciences

The Faculty of Arts and Social Sciences offers students a licence to explore and address the social issues of sustainability. Key programs and courses include:

- Environment and Social Process
- Environmental Humanities
- Women's and Gender Studies
- Indigenous Studies.

Business School

UNSW Business School has long recognised the importance of its role in sustainability and social responsibility and in 2015, and again in 2017, published its commitment in the Principles of Responsible Management Education (PRME) Sharing Information on Progress (SIP) Report.

Key programs, initiatives and courses from the Business School include:

- Master of Business Administration (MBA) in Social Impact
- Creating Social Change: From Innovation to Impact
- Entrepreneurship Practicum
- the creation of new placement opportunities for students to work with Indigenous communities
- the introduction of the new PRME Teaching Award.

Faculty of the Built Environment

Creating sustainable built environments that satisfy environmental, social and economic objectives requires critical thinking that considers the value systems and cultures that influence communities.

There is a growing body of principles and techniques to do this and most of the programs offered by the Built Environment have sustainability embedded into their courses. Key courses and programs include:

- Graduate Certificate of Sustainable Built Environment
- Graduate Diploma of Sustainable Built Environment
- Master of Architecture
- Master of Sustainable Built Environment.

Faculty of Engineering

As the best engineering faculty in the country, the Faculty of Engineering lives up to its promise of solving tomorrow's problems today. Engineers conceive, design and build the world around us and, as such, have a critical role in our sustainable future. It is no surprise that sustainability considerations are embedded into the majority of programs.

In addition to the School of Photovoltaics and Renewable Energy Engineering, which offers two full degree and masters programs in photovoltaics and renewable energy engineering, the Faculty offers a degree in Environmental Engineering from the School of Environment and Civil Engineering. Numerous other sustainability courses are offered across all nine schools.

Faculty of Law

Most courses have a distinct human rights and social justice focus. Throughout their law degree, students are invited to participate in a range of activities that provide opportunities to engage with communities on issues of critical social and economic significance.

Key courses and programs include:

- Environmental Law
- Human Rights and Social Justice
- International Law
- Master of Environmental Law and Policy.

Faculty of Medicine

UNSW Medicine is committed to improving healthcare delivery and outcomes for every patient.

Key courses and programs include:

- The Master of Public Health - UNSW Sydney is widely recognised as essential for a career in population health, including health promotion, primary health care, policy formulation, research, and management of health programs
- Society and Health – explores the inter-relationships between the health of people and the environment in which they live. The major themes include the societal determinants of health, the diversity of society focusing both on culture, systems that provide health care and the relationship between health and human rights.

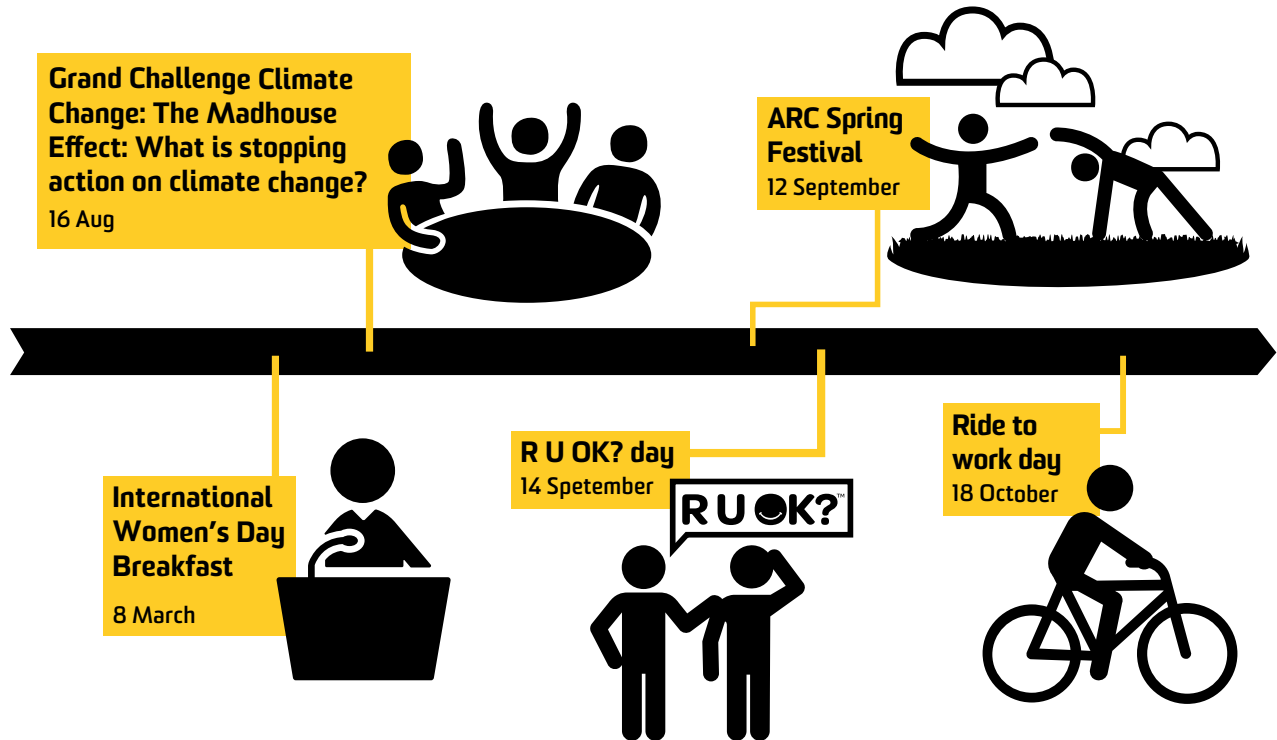
Faculty of Science

With a central part to play in understanding our impacts on the world around us, the Faculty of Science is at the forefront of sustainability education.

The School of Biological, Earth and Environmental Studies offers degree programs in Biology, Marine Science, Geology, Ecology, Earth Science, Paleontology, Geography, Climate Science and Environmental Management.

The Faculty also offers a Master of Environmental Management which provide students with the basis for the critical appreciation of environmental management frameworks and 'environmental literacy' in key disciplinary areas.

Events



Advocating for the environment, social justice and equity

One of the three priorities in UNSW's 2025 Strategy is social engagement and improving lives through equality, diversity, open debate and economic progress. Harnessing UNSW's intellectual capacity to deliver expert contributions through a variety of timely events has established the University as a leading centre for discussion, debate and policy on the grand challenges facing humanity.

Grand Challenges Program

UNSW aims to lead the debate and shape the public discourse on the greatest issues facing humanity. The Grand Challenges Program has been established to facilitate these critical discussions, and in the process, raise awareness of the ground-breaking research and excellent initiatives undertaken by UNSW academics, staff and students.

Climate change was chosen as the first grand challenge to be addressed. This was followed by Refugees and Migrants, Inequality, and Living with 21st Century Technology.

In 2017:

- 65 events, projects and activities were held under the Grand Challenge banner
- 7,500 people registered for events and activities
- More than half of invited speakers at Grand Challenge events were female.

The UNSW Climate Change Grand Challenge has generated rigorous debate and innovative thinking, including formation of the Leadership Forum on Energy Transition.



International Women's Day breakfast

International Women's Day 8 March 2017 is both an opportunity to celebrate and a reminder to continue campaigning for gender equality. Each year UNSW hosts a breakfast keynote speaker.

As was noted recently by speaker, the Shadow Minister for Women, Tanya Plibersek - 'The first thing to think about on International Women's Day is to feel a little bit of gratitude for the people who've fought these battles in the past, who've made our lives very different to the lives of our mothers and grandmothers'.

Those changes included equal pay test cases, affirmative action policies, the opening of the first women's refuges and the funding of rape crisis centres.

But being proud of those achievements and grateful to the people who won them 'should not for a moment make us content that we have achieved enough', Ms Plibersek said.

'My two pleas to you today are to celebrate what we've achieved and never ever be content because we have generations of young women who deserve to grow up in a country where they are respected for who they are.'

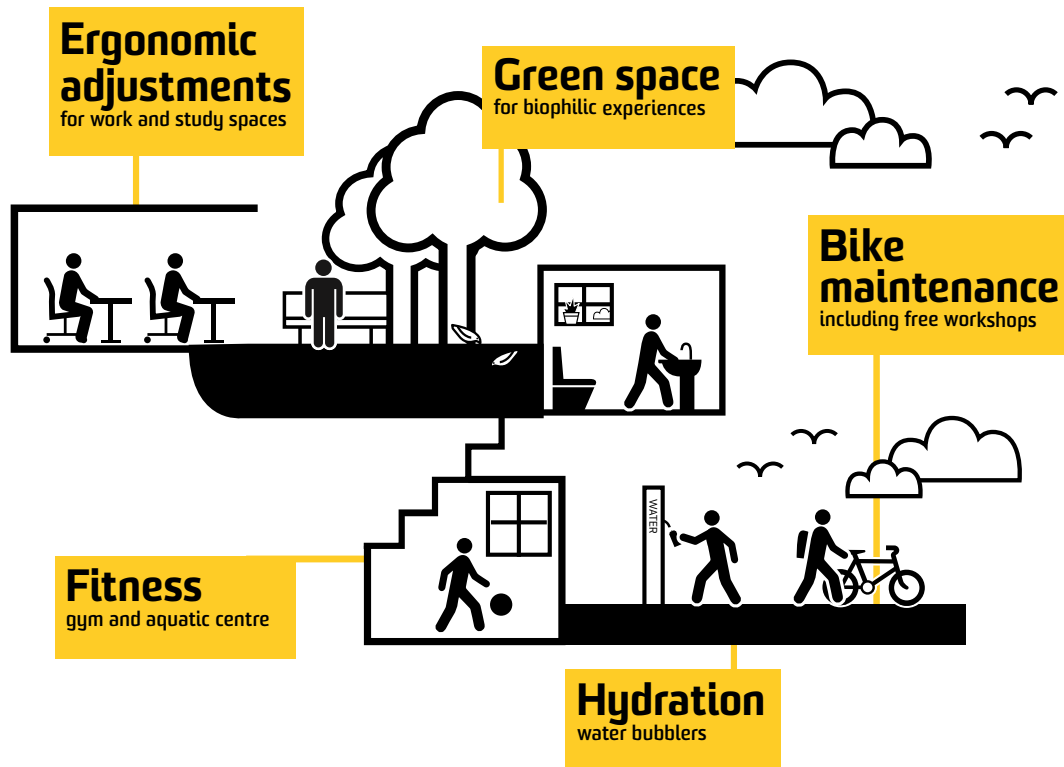
This is an adaptation of a story which originally appeared on the UNSW Newsroom.

Global Climate Change Week

Global Climate Change Week (GCCW) is a global movement that was established in 2015 and aims to encourage academic communities, including academics, students, and non-academic staff at universities; in all disciplines and countries to engage with each other, their communities, and policy makers on climate change action and solutions.

Held annually in October, GCCW provides an open-ended framework for voluntary activities aimed at raising awareness, inspiring behaviour change, and driving political transformation in relation to climate policy. Multiple events were held at UNSW across the GCCW in 2017.

Safety and wellbeing



The safety and wellbeing of UNSW staff and students is paramount

UNSW provides its staff and students with access to a range of resources that promote a safe, active, healthy, happy and productive campus experience.

Safety

As one of the University's guiding principles, safety is central to everything we do. As well as working hard to ensure a safe campus experience, the University proactively manages risks with a series of risk management and continuous improvement strategies.

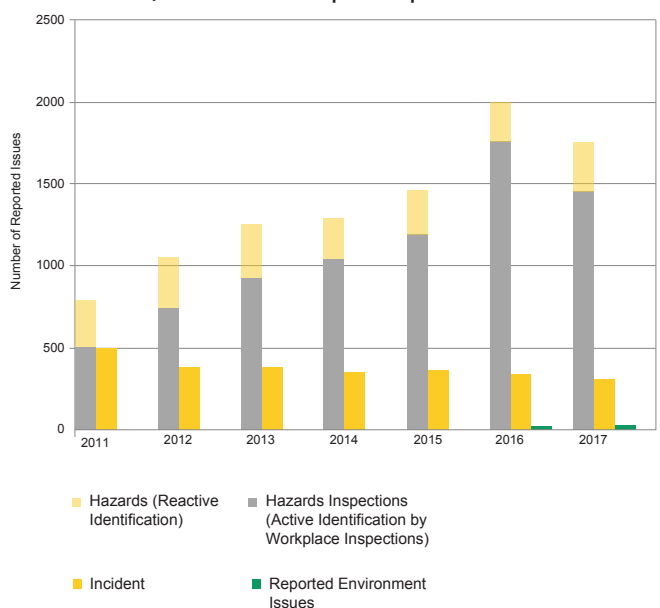
Health and safety management system

UNSW's Health and Safety management system (HSMS) is a set of plans, actions and procedures that are designed to systematically manage health and safety in the workplace.

More information on health and safety governance and training can be found at [UNSW Health and Safety](#).

Our safety performance

Hazards, incidents and workplace inspections



Maintaining a safe campus

UNSW's Campus Security provides the following essential services and facilities to keep staff, students and visitors safe on campus:

- StaySafe@UNSW app
- night shuttle bus
- safety escorts
- help points
- Cops on Campus initiative
- Gate 2 Security Office

Wellbeing

UNSW's Wellbeing website

UNSW Wellbeing is a gateway to the diverse suite of health and wellbeing initiatives across the University.

Global Challenge

In 2017, UNSW won the Global Challenge 'Most Active University in Australia' title for the second year in a row. The Global Challenge is an annual team-based walking challenge to help improve the health and wellbeing of workers through regular physical activity. It is a 100-day virtual journey that kicks off in May and involves hundreds of thousands of people from around the world competing in teams of seven. Sections of the Challenge are devoted to sleep, nutrition and life balance and the journey as a whole improves both physical and psychological health.



Respect.Now.Always.

New sexual assault and sexual harassment initiative launched.

The Respect.Now.Always. initiative was launched by Universities Australia to highlight the determination of universities to ensure that students and staff are safe from sexual assault and sexual harassment.

The campaign coincided with the Australian release of the critically acclaimed film *The Hunting Ground* a documentary film about the incidence of sexual assault on college campuses in the United States and what its creators say is a failure of college administrations to deal with it adequately.

It also coincided with the announcement and launch of Australia's first comprehensive national prevalence survey on university student experiences of sexual assault and sexual harassment, which has the support of all 39 Australian universities.

UNSW held a special student screening of the *Hunting Ground* and Q&A led by Professor Eileen Baldry, the Academic Chair of UNSW's Equity, Diversity and Inclusion Board. A dedicated website, UNSW Respect was also launched to provide easy access to advice about reporting sexual harassment, sexual assault and rape. Produced by the University's Sexual Harassment Working Group, which is comprised of student and staff representatives.



Stress less week

Arc-run initiative helps students manage their stress.

Stress Less Week is a three-day festival run towards the end of semester that comes from the understanding that it's not always easy for students to juggle the demands of this busy time.

Events are designed to promote wellbeing through a range of fun activities including puppy cuddling, healthy food workshops, yoga classes, free pancakes, Zumba and even free hugs.

R U OK? Day

UNSW partnered with Arc, SafeWork NSW and Beyond Blue to deliver a fantastic *R U OK?* Day in September 2017.

Several on-campus food outlets also came on board with generous donations of free coffees to participating staff members. Caffe Brioso, Bluestone, Bar Navitas and Coffee on Campus all offered 2-for-1 coffee deals.

Upper campus featured an information stall on the Library Walk with free Tai Chi on the Library Lawn at lunchtime. The CLB courtyard was transformed into 'Conversation Courtyard' with chairs and decorations encouraging passers-by to stop and engage with staff members. A variety of information brochures and useful resources including UNSW-branded 'Need Help?' cards were made available to all.

The CLB Courtyard also featured the Gratitude Tree – one of the CLB Courtyard trees decorated with yellow and gold cloth and hung with ribbons. Staff and students were invited to write something they were grateful for on the back of a special *R U OK?* Day postcard and clip it to one of the gold ribbons dangling from the Gratitude Tree. This was a popular activity with both staff and students and by the end of the day the tree looked spectacular.

Several speakers gave talks throughout the day including a special volunteer from Beyond Blue and an engineer who shared his own story of combating mental illness as a young employee of Sydney Water.

Four faculties ran yoga sessions for their staff and some faculties organised additional faculty-based events including a full-day line-up of impressive activities in Engineering, a speaker for Law, and a special faculty-funded 2-for-1 coffee deal for Arts and Social Sciences.

Safety and Wellbeing Month

At UNSW, October was Safety and Wellbeing Month and we had a full month of wellbeing activities, with a wide variety of events and challenges.

Special events included the annual Wellbeing Celebration, a healthy recipe sharing day, a performance by Mind Blank Theatre to raise awareness of mental health issues in the workplace, and a poetry performance from UNSW recent graduate and spoken word poet Lewis-Alan Trathen. Our three challenges focused on sleep, mental health and kindness. The Sleep Smart Challenge encouraged participants to introduce good sleep hygiene practices (such as all devices off half an hour before bed and not taking them into the bedroom at all) and to aim to get to bed by 11pm each night. The Trivia Challenge tested knowledge and raised awareness of mental health issues. The Random Acts of Kindness Challenge is explained in more detail below.

Mindfulness Meditation

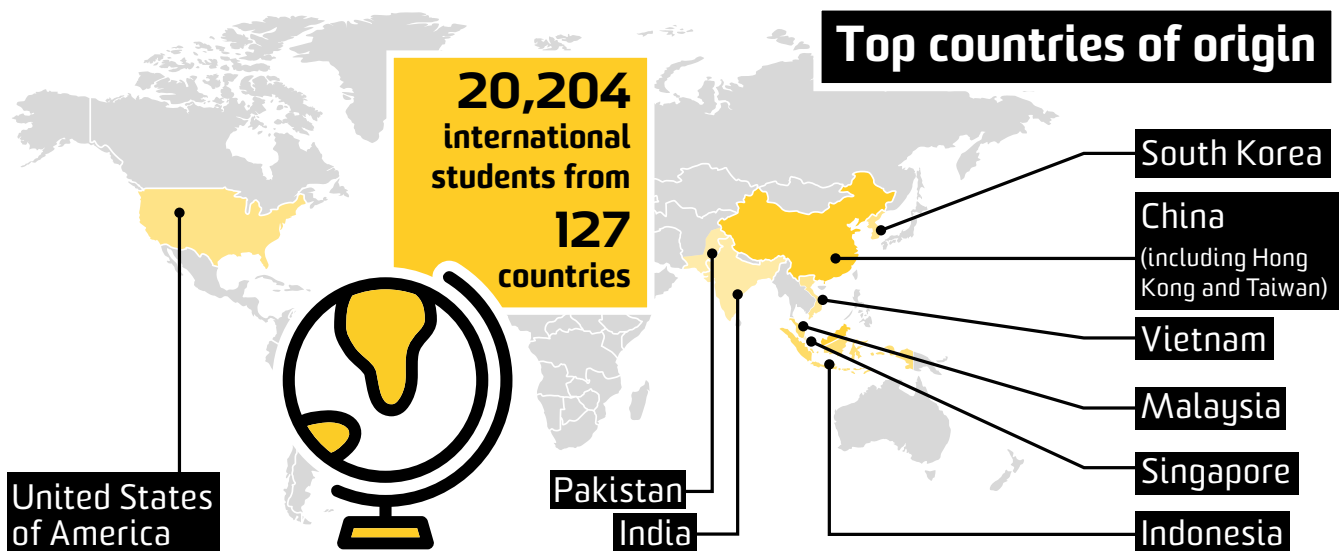
Mindfulness meditation is a simple, secular, scientifically validated exercise providing a valuable stress relief technique and proven benefits for mental health. During Safety and Wellbeing Month, weekly Mindfulness Meditation sessions were made available to staff in collaboration with Counselling and Psychological Services (CAPS).

Green space

In response to the growing amount of literature surrounding the importance of green space in physical health, mental health and overall wellbeing, UNSW has increased investment in the development of its green spaces.

With approximately 30% of the Kensington campus devoted to green space and 12 shady, intimate courtyards, the University provides a variety of opportunities to escape the built environment and enjoy a biophilic experience.

Equity, diversity and inclusion



Providing an equitable and inclusive environment for all

Equity is a fundamental element of the UNSW vision and is a guiding principle in the University's strategic intent. The maintenance of an equitable and inclusive campus and workplace is fundamental to UNSW's mission to become one of the world's top 50 universities and an international exemplar in equity, diversity and inclusion.

As part of UNSW's commitment to Social Engagement, which has 'A Just Society' as a central theme, a wide range of initiatives have been developed to enhance equity, diversity and inclusion both at a campus and faculty level. Thus far the following actions have completed.

- UNSW Council has approved targets for 2025: 50% females at Academic Levels D/E and 50% females at HEW10/10+ (Academic levels D = Associate Professor / E = Professor, HEW= High Education Worker)
- Diversity Champions representing staff and students have been appointed. One each for Culture, Gender, Disability, Flexibility and Leave Options, and LGBTQI.

- An Equity Diversity and Inclusion Board has been established. Membership includes the Diversity Champions and Faculty Deans).

Strategy 2025

The following high level initiatives are now underway as part of Strategy 2025.

Staff Equity Program

The Staff Equity Program is designed to address differences in employment rates based on gender, disability, sexual orientation or gender identity, cultural background and Indigenous origin to ensure that such factors do not influence recruitment, hiring, promotion, pay level or retention. The Staff Equity Program aims to facilitate equity in employment across UNSW, and covers all diversity groups and incorporates national and international benchmarking. Evidence-based plans and actions are being developed for specific diversity groups and will support the ability of both the University and its faculties and divisions to meet specified targets.

Student Equity Program

The Student Equity Program is being designed to deliver a systematic approach to the recruitment and support of students of high potential from diverse backgrounds. Given the limitations of relying solely on high school grades – entry criteria and processes will be a focus of review and reform. In addition, UNSW's Scholarship Program will include more 'equity-based' scholarships to support students from disadvantaged and under-represented groups and the number of scholarships for Indigenous and low socioeconomic status students will be increased. Support for students from disadvantaged backgrounds will be ongoing throughout their studies including a University-wide mentoring program.

Disability Inclusion Action Plan

UNSW's Disability Inclusion Action Plan has been developed with a focus on making the learning and teaching experience welcoming and inclusive, and the University's built and digital environments accessible to all staff and students with a disability. Using the principles of Universal Design, the measures will ensure the needs of students with disability are factored into curriculum development, design and delivery. 'Best practice' in building accessibility across our physical campuses and residential communities will ensure the needs of staff, students and visitors with a disability are met.

Indigenous Program

The Indigenous Program is being designed to acknowledge, respect and celebrate the important place of Indigenous Australians at UNSW. Respecting and learning about Indigenous knowledge will be integral to the UNSW educational experience. All staff joining the University will undertake cultural awareness training as part of their induction to UNSW. We will implement a University-wide scheme focused on continuously improving Indigenous students' access and degree completions and provide the opportunities for our Indigenous staff to build their careers. We will strengthen our commitment to Indigenous communities by expanding existing outreach programs and Winter School, and by new initiatives that partner UNSW with specific Indigenous communities.

Equity, diversity and inclusion champions

Five Diversity Champions were appointed from across the University in 2016. The Champions will help lead UNSW's equity, diversity and inclusion agenda and be advocates internally and externally. These champions are working with representatives from diversity groups to drive the agenda for equity and inclusion across UNSW and will oversee progress against strategies at the University and faculty/divisional levels.

Workplace Diversity

UNSW's diversity commitment aligns to our strong sense of social responsibility and our belief that a diverse employee workforce enhances our ability to deliver world class research, teaching excellence and thought leadership.

Workplace Diversity supports UNSW to embrace the diversity and cultural richness of our communities, by ensuring that all staff can achieve their full potential in a supportive and inclusive work environment. The unit works with the University's internal and external stakeholders to develop initiatives that aim to improve UNSW's cultural, disability, flexibility, gender, and LGBTIQ (lesbian, gay, bisexual, transgender, intersex and queer or questioning) diversity and inclusion.

UNSW also partners with Australia's leading diversity organisations, networks and campaigns including:



AUSTRALIAN NETWORK
ON DISABILITY



NEEOPA
Supporting Diversity
Practitioners



RESPECT.
NOW.
ALWAYS.



Breastfeeding
Friendly
Workplace
An Australian Breastfeeding Association Initiative



ALLY@UNSW



DIVERSITY
COUNCIL
AUSTRALIA



Athena
SWAN
Member



RACISM.
IT STOPS
WITH ME
@UNSW

Students

UNSW is one of Australia's most cosmopolitan universities. We are also Australia's first international university, having enrolled significant numbers of international students since 1951, with more than 127 countries now represented.

In the reporting period, enrolments numbered 59,781:

- 39,577 local students
- 20,204 international students
- 4,183 higher degree research candidates

Excepting local students, the top 10 countries of origin for students were China, Hong Kong, Malaysia, Indonesia, Singapore, Republic of Korea, USA, India, Vietnam and Thailand

UNSW Disability Services

UNSW Disability Services are available to help students with a disability, medical condition, learning disability or who are dealing with personal circumstances that are affecting their study. Disability Advisers can put in place services and educational adjustments to make things more manageable so student can complete their course requirements.

Volunteering



Information source: Arc, UNSW's student union

Volunteering at UNSW: growing friendships, skills and community

UNSW provides considerable support and resources for engaging students in sustainability learning experiences outside the classroom. Sponsored co-curricular offerings deepen students' understanding and application of sustainability principles and embeds this into the campus experience.

Volunteering on campus

Volunteering with Arc

The student organisation, Arc, is a hub of volunteering at UNSW. Under Arc's competent leadership, with guidance and support provided by the University, volunteering has grown steadily over the years. Volunteering activities complement the academic side of university life by providing a vibrant culture of 'giving back' and greatly enhance the experience of everyone at UNSW.

In this reporting period 2,800 volunteers worked many thousands of hours running Arc's 29 volunteer programs, 315 clubs and over 400 volunteer and social events.

Arc student development committee

The Student Development Committee is Arc's student body responsible for overseeing the support provided to Arc-affiliated clubs, volunteer programs, courses, grants and relevant student events. Students are elected to represent the interests of Arc clubs and volunteer programs.

Arc volunteer programs with a sustainability focus

Bike-ology

Bike-ology holds bi-weekly maintenance workshops to diagnose and fix bicycle problems. They also hold second-hand bike sales and will give you all the info you need to know if you're in the market for a new (bicycle) best friend.

eReuse

eReuse is a new Arc program that takes the unwanted computers of UNSW faculties, students and staff, refurbishes them and donates them to charitable organisations to distribute them to those in need.

Passports with Purpose

Between each semester, Passports with Purpose sends teams of students to developing nations to lend a helping hand with a local community project. Students have been to Malaysia, Thailand, Fiji, and Nepal to work on projects including building houses to teaching in local primary and high schools.

Mosaic Mentoring

This program offers both UNSW volunteers and local Sydney high school students the unique opportunity to come together and get talking about the social and cultural issues which shape and define us.

Phil'

Arc Philanthropy (Phil') is one of Arc's newest student-led programs. Their aim is to unite the entire UNSW community behind one common goal of raising awareness and money for a great cause each year.

Shack Tutoring

The aim of the program is to provide a free high school tuition service to local students who have been identified as disadvantaged, or who cannot access a required paid tuition service.

Stationery Reuse Centre

This ingenious, free program provides the UNSW community with good quality recycled stationery that has been previously used or discarded, preventing it from going to landfill.

The Producers

The Producers is interested in sustainable practices and growing fresh produce. Producers get hands on experience in planting, maintaining and harvesting veggies and develop a greater appreciation of how easy it is to live and eat sustainably in this urban jungle.

Volunteer Army

The Volunteer Army helps to connect UNSW students with volunteering opportunities at UNSW Kensington Campus, Sydney CBD and Western Sydney locations. The aim is to foster community engagement while developing leadership, teamwork and communication skills.

Walama Muru

Walama Muru means 'a return of road or path' and offers an opportunity for UNSW students to travel to a regional Aboriginal community in order to learn and share in the local Aboriginal culture

Wellness Warriors

Arc Wellness is working towards raising awareness around mental health, helping students de-stress, and provide resources to foster the well-being of students. Events include Stress Less Week, R U OK? Day and Pat-a-Pooch puppy cuddling.

Volunteering with Student Life: Student Hub

UNSW Advantage accredits over 450 volunteering and professional development opportunities at UNSW and checks the quality of these opportunities to ensure that students are getting are developing important professional skills, gaining experiences, as well as belonging to the UNSW community. UNSW Advantage ensures these experiences are listed on a student's Australian Higher Education Graduate Statement when they graduate.

In 2017, there were 459 UNSW Advantage Accredited opportunities for students across Faculties, Divisions and Arc, including leadership, skills development, cultural and mentoring programs. Major events throughout the year that students had the opportunity to volunteer at, included - O-Week, Open Day, Info Day, Mental Health Month and the UNSW Careers Expo.

In 2017, 8,286 students completed one or more UNSW Advantage Accredited Programs that will feature on their AHEGS when they graduate.

Additional information

This report update has been guided by the principles of the GRI reporting index. The tabulated information below compares what is covered in this update with the GRI.

Global Reporting Index

The following disclosure elements and indicators from the Global Reporting Initiative (GRI) G3 Reporting Guidelines have been used in the preparation of this report. In this section, we provide a table comparing information on this report to the guidelines of the GRI, entitled 'Sustainability Reporting Guidelines 2006.'

No.	Short Description / Title of Disclosure	Notes
1	Strategy and Analysis	
1.1	Statement from the most senior decision-maker of the organisation	See Overview.
2	Organisational Profile	
2.1	Name of the organisation	University of New South Wales
2.2	Primary brands, products, and/or services	Education and Research
2.3	Operational structure	See UNSW organisational chart
2.4	Location of organisation's headquarters.	Randwick, Sydney, NSW, Australia
2.5	Number and name of countries where the organisation operates	1
2.6	Nature of ownership and legal form	Body corporate under statute
2.7	Markets served	Main markets served are Australia, India, China, United States
2.8	Scale of the reporting organisation	See About UNSW
2.9	Significant changes	There were no significant operational changes in the past year
2.10	Awards received	See Appendix 3: Prizes
3	Report Parameters	
3.1	Reporting period	1 January 2017 - 31 December 2017
3.2	Date of most recent previous report	This is UNSW's first sustainability report

Table continued on next page

No.	Short Description / Title of Disclosure	Notes
3.3	Reporting cycle	Calendar year to be consistent with UNSW's Financial Reporting period. It is UNSW's intention to produce an annual sustainability report.
3.4	Contact point	Arifa Sarfraz, UNSW Sustainability Manager, Estate Management
3.5	Process for defining report content	See Overview
3.6	Boundary of the report	See Overview
3.7	State any specific limitations	None
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations	The reporting boundary includes controlled entities, subsidiaries, leased facilities, outsourced operations where these fall within UNSW's operational control. This report applies the definition for "operational control" in section 11 of the National Greenhouse and Energy Reporting Act 2007.
3.9	Data measurement techniques and the bases of calculations	See Overview
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement	Not applicable as this is UNSW's first report
3.11	Significant changes from previous reporting periods	Not applicable as this is UNSW's first report
3.12	Table identifying the location of the Standard Disclosures in the report.	See Appendix 1: GRI Table
4	Governance	
4.1	Governance structure	In accordance with the University of New South Wales Act 1989 (NSW), UNSW is governed by a Council of 15 members representing University and community interests.
4.2	Indicate whether the chair of the highest governance body is also an executive officer.	The Chancellor is the chair of the University Council, a non-executive position. The Vice-Chancellor is the Principal Executive Officer of the University and is responsible for the overall direction of corporate planning, budget activities and external relations. Under the University Council, the Vice-Chancellor manages and supervises the administrative, financial and other activities of the University.

Table continued on next page

No.	Short Description / Title of Disclosure	Notes
4.3	For organisations that have a unitary board structure, state the number of members of the highest governance body	Of the 15 members of University Council, three are official members (the Vice-Chancellor, President of Academic Board and the Chancellor). Others include: <ul style="list-style-type: none"> • 2 ministerial appointments • 2 elected academic staff • 2 council appointees • 2 elected students (1 undergraduate, 1 post-graduate) • 1 elected non-academic staff.
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body	There is a Student Representative Council with elected student leader office bearers that meet the Vice-Chancellor and Executive Team to raise issues on behalf of students on a regular basis. The Vice-Chancellor also holds regular town hall meetings where members of staff are able to ask questions. The University also recognises and meets with the trade unions including the NTEU, CPSU and United Voice, as employee representatives.
4.12	Externally developed economic, environmental, and social charters, principles to which the organisation subscribes/ endorses	See Appendix 2: Declarations and charter
4.14	List of stakeholder groups engaged by the organisation	Stakeholder groups the university engages with include students, staff, alumni, donors, government, local councils, suppliers, other universities, student organisations and staff unions.
4.15	Basis for identification and selection of stakeholders with whom to engage	See Overview
4.16	Approaches to stakeholder engagement	See Overview
EC	Economic	
EC1	Direct economic value generated and distributed (Core)	The economic performance of the University is reported on in the UNSW Annual Report.
EC3	Coverage of the organisation's defined benefit plan obligations (Core)	No defined benefit super
EC4	Significant financial assistance received from government (Core)	See UNSW Annual Report
EN	Environmental	
EN2	Materials used that are recycled (Core)	See Environment, Purchasing
EN3	Direct energy consumption (Core)	See Environment, Energy

Table continued on next page

No.	Short Description / Title of Disclosure	Notes
EN4	Indirect energy consumption (Core)	See Environment, Energy
EN8	Water withdrawal by source (Core)	See Environment, Water
EN16	Direct and indirect greenhouse gas emissions by weight (Core)	See Environment, Energy
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved (Additional)	See Environment, Energy
EN22	Waste by type and disposal method (Core)	See Environment, Waste
EN23	Significant spills (Core)	None
EN24	Waste deemed hazardous under the terms of the Basel Convention (Additional)	None
EN28	Significant fines and total number of non-monetary sanctions (Core)	None
EN29	Significant environmental impacts of transporting products (Additional)	None
LA	Labour Practices	
LA1	Total workforce (Core)	See Community, Equity and Diversity
LA4	Employees covered by collective bargaining agreements (Core)	UNSW Employees are covered by two enterprise agreements. The UNSW (Academic Staff) Enterprise Agreement 2011 and the UNSW (Professional Staff) Enterprise Agreement 2010. See UNSW Human Resources Enterprise Agreements.
LA7	Rates of injury, occupational diseases, lost days and absenteeism, and number of work related fatalities by region (Core)	See Community, Safety and Wellbeing
LA9	Health and safety topics covered informal agreements with trade unions (Additional)	The UNSW (Academic Staff) Enterprise Agreement 2011 and the UNSW (Professional Staff) Enterprise Agreement 2010 contains provisions relating to Occupational Health and Safety. See UNSW Human Resources Enterprise Agreements
LA13	Composition of governance bodies and employees according to gender, and other diversity indicators (Additional)	See Community, Equity and Diversity
HR	Human Rights	
HR3	Employee training on human rights (Additional)	See UNSW Equity and Diversity statement
HR4	Incidents of discrimination (Core)	None
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk (Core)	None

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No.	Short Description / Title of Disclosure	Notes
HR6	Operations identified as having significant risk for incidents of child labour (Core)	None
HR7	Operations identified as having significant risk for incidents of forced or compulsory labour (Core)	None
SO	Society	
SO4	Actions taken in response to incidents of corruption (Core)	No incidents during reporting period
SO5	Public policy positions and participation in public policy development and lobbying (Core)	See UNSW Code of Conduct. See also Community, Research and UNSW Newsroom
SO8	Significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations (Core)	In a decision of the NSW Industrial Court issued in March 2013, UNSW was found to have breached the Work, Health and Safety Act 2000 after a student suffered leg injuries and a broken wrist after falling from a boat while undertaking a research field trip on 31 July 2009. UNSW pleaded guilty and received a fine of \$100,000. See WorkCover NSW report.
PR	Product Responsibility	
PR2	Incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts (Additional)	None
PR5	Practices related to customer satisfaction (Additional)	UNSW undertakes a regular graduate satisfaction survey of all UNSW graduates approximately four months after they complete the requirements for their awards. For more information see UNSW's Business Reporting and Intelligence, and Data Governance.
PR7	Incidents of non-compliance with regulations and voluntary codes concerning marketing communications (Additional)	None
PR8	Substantiated complaints regarding breaches of customer privacy (Additional)	None
PR9	Significant fines for non-compliance with laws and regulations concerning the provision and use of products and services (Core).	None

Declarations and charters

The following are the major declarations and organisations that are endorsed by UNSW and call for universities to make a strong commitment to the implementation of sustainability.

Declarations and Charters	Organisation or Event	Main Goal
Agenda 21 (see Chapter 36 'Education, Public Awareness and Training')	UNESCO	Set in place a range of activities to implement global sustainable development. Advocates a holistic approach to environmental education.
Australian Universities Ecological Development Charter	National Union of Students	Provide a strong framework to guide sustainability within Australian universities. Similar in content to the Talloires Declaration.
AVCC Policy on Education for Sustainable Development	Universities Australia	Commit to education for sustainable development and acknowledge the leading role played by universities in furthering the goals of the UN Decade of Education for Sustainable Development (DESD).
Kyoto Declaration on Sustainable Development	United Nations	Urge universities worldwide to seek, establish and disseminate a clearer understanding of sustainable development. It is recommended that each university have its own action plan that makes an institutional commitment to the principle and practice of sustainable development.
Sapporo Sustainability Declaration	G8 University Summit	Outline the responsibility of universities to contribute towards sustainability and the specific actions they must undertake to fulfil that responsibility. It recognises eight principles concerning the role of universities in global efforts to attain sustainability.
Talloires Declaration	University Leaders for a Sustainable Future	Outlines a 10-point action plan for incorporating sustainability and environmental literacy in teaching, research, operations and outreach at colleges and universities.
The Greenhouse Challenge	Australian Greenhouse Office	Reduce greenhouse gas emissions from buildings, waste products and plant and office equipment
United Nations Decade of Education for Sustainable Development (DESD) 2005-2015.	UNESCO	Implement environmental education globally, for everyone's benefit, while working to build the community's capacity to co-create a sustainable future

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Declarations and Charters	Organisation or Event	Main Goal
Universitas 21 Statement on Sustainability	Universitas 21 (U21)	<p>Member network of 20 research-led universities that benchmark against each other and commit to progressing global sustainable development in five areas:</p> <ol style="list-style-type: none">1. research towards sustainable futures2. education for sustainability3. universities as living laboratories for sustainability4. enhancing citizenship and engagement5. building capacity through cross-network collaboration and action.
Sustainability Collaboration Agreement	Randwick City Council	<p>Enables UNSW students to access internship and placement opportunities with Randwick Council and for the council to access a number of specialist sustainability activities underway across the University. It facilitates practical student learning and the application of particular areas of research and teaching into on-ground sustainability related projects or strategy areas being delivered through Council programs.</p>

Acknowledgements

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