



Environmental Sustainability Report 2020

UNSW Estate Management
June 2021



Acknowledgment of Country

UNSW Sydney acknowledges the Bedegal people (Kensington Campus), Gadigal people (Sydney CBD and Art & Design campuses) and Ngunnawal people (UNSW Canberra – ADFA) as the traditional custodians of the lands on which each UNSW campus is located.

For tens of thousands of years, Aboriginal and Torres Strait Islander people managed the land sustainably using practices adapted to its unique climate, geography and ecology. We honour their unique relationships with the land and their rich contribution to society.



Contents

2020 highlights

04

Environmental sustainability
at UNSW

05

Creating a sustainable future

06

UNSW and the global goals

07

How we measure success

08

**Our influence on
the wider world**

09

Our sustainable campuses

15

Our catalysts of change

20

Target status summary

25

Environmental data

26

**Relevant standards and
frameworks**

27

Message from the President & Vice-Chancellor



The enormous challenges presented by the COVID-19 pandemic over the past year have tested the UNSW community on an organisational and individual level.

It has been humbling to watch our students and staff embrace change with such resolve. This determination to not allow the pandemic to derail study and work has allowed UNSW to not only navigate the most difficult period in its history but emerge stronger.

Despite all the obstacles of 2020, we have continued to implement our ambitious Environmental Sustainability Plan. In fact, we have met some significant milestones.

In November 2020, UNSW realised its long-held vision to achieve net zero emissions from energy use when the Sunraysia Solar Farm started exporting electricity to the grid and supplying UNSW's energy through an innovative solar Power Purchase Agreement (PPA). This landmark will see the University save 1.25 million tonnes of greenhouse gas (GHG) emissions over the 15-year term of the PPA.

Our switch to 100 per cent renewable electricity is a great source of pride and somewhat of an homage to the pioneering work UNSW has done in photovoltaics over the past four decades.

Tackling emissions from energy use is only the start of our journey to net zero emissions. In 2020, the UNSW Council agreed the University would commit to a science-based pathway to net zero total emissions. We believe we are the first Australian university to target net zero emissions across our entire value chain. Our Net Zero Strategy, developed in 2020, sets out how we will achieve our 2030 target of a 50 per cent reduction in total emissions.

During the year we also saw the launch of the International Universities Climate Alliance (IUCA). This is a UNSW-led initiative to bring together the world's best climate change research universities, giving governments, industry and communities access to top researchers devoted to solving this existential challenge. The Alliance issued its first Declaration ahead of the G20 Summit in November 2020, imploring member governments to work together to ensure fossil fuel industries rapidly move at scale to become net zero carbon energy providers.

UNSW expanded the Green Impact sustainability engagement program in 2020, with 277 students and staff in 50 teams logging 1123 actions to make their workspaces more sustainable – almost double the 2019 total. The 2020 Green Impact awards showcased the hard work and innovative thinking of participants, with teams recognised for various achievements including their commitment to sustainability in their households while working from home or running workshops for the UNSW community.

As we moved into 2021, we were thrilled that Scientia Professor Martin Green, who is often described as the father of modern photovoltaics, received one of the world's most prestigious awards, the Japan Prize. This is given to scientists who have helped make significant advances in the fields of science and technology worldwide, furthering the cause of peace and prosperity of humanity. Professor Green, Director of the Australian Centre for Advanced Photovoltaics, was recognised for his work in developing high-efficiency silicon photovoltaic devices.

In terms of the 2021 THE Impact Rankings, which measure the progress of universities against the United Nations Sustainable Development Goals (SDGs), UNSW placed in the top 100 for seven SDGs, an increase from four last year, and ranked 96 in the world overall out of 1240 institutions from 98 countries. Now in their third year, the Impact Rankings are the first global attempt to measure university progress towards the SDGs adopted by all United Nations (UN) members states in 2015 and are gaining momentum across the sector, resulting in a 47 per cent increase in the number of universities participating. To help increase UNSW's contribution to the SDGs through our learning and teaching programs, UNSW's SDG Toolkit was completed over the past 12 months and is now available to support our academics to integrate 'SDG thinking' across all our education platforms.

Our University's environment and renewable energy research is arguably some of the most impactful in the world, so it is only right that we honour that legacy by applying the same rigour to the sustainability of our immediate surrounds, including through our new Plastic Free Dining initiative. We are working with our campus retailers to transition to fully compostable single-use food packaging in 2021 and have introduced a compostable waste stream as part of a new three-bin system. Students and staff can support this initiative by using the correct bin and bringing their own cups, containers and utensils to campus.

And, of course, with this being the final year of our Environmental Sustainability Plan 2019-21, we now turn our attention to developing our new plan and setting ourselves even more ambitious goals.

The lessons we learnt as a society from the global threat of COVID-19 – to our way of life and even our existence – can be applied to how we tackle the climate crisis if we accept it as the acute threat that the world has allowed it to become.

Communities and nations reflexively took collective action because they knew it was for the greater good. Whether it was the population locking down to flatten the curve, or governments around the world contributing to the World Health Organization-led Covax scheme to help ensure vaccines are shared fairly among all nations, we witnessed the power of collaboration.

The global momentum on climate action is building and UNSW will remain a leader in this crucial area as we strive to achieve our 2025 vision of improving lives globally

Professor Ian Jacobs
UNSW President and Vice-Chancellor

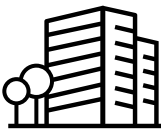
2020 highlights

2020 was an unusual year and the impacts of the COVID-19 pandemic led to disruption of many University activities including some sustainability initiatives. Nonetheless, several key milestones were achieved:



Climate Action

- Switched to renewable electricity, achieving our net zero energy emissions goal.
- Approved a science-based target to achieve net zero total emissions.
- Completed our Net Zero Strategy.



Buildings and Campus

- Roundhouse public domain works completed including additional native trees and shrubs.
- Schematic design completed for the new Health Translation Hub and Biomedical Science Centre buildings in line with UNSW sustainable design requirements.



Learning and Teaching

- Completed the SDG Toolkit to support academic staff to incorporate sustainability thinking into their course content.
- SDG Module is on track for completion in 2021.



Goods and Services

- Our Net Zero Strategy defines an action plan to reduce our supply chain carbon footprint.
- Established a compostable food and drink packaging agreement.



Energy and Water Efficiency

- Energy efficiency initiatives implemented including controls and set point optimisation.
- Reductions in energy (7 per cent) and water usage (45 per cent), mainly due to reduced campus activity.



Engagement and Integration

- Expanded the Green Impact sustainability engagement program.
- Created a new Kensington campus sustainability map.



Investments

- Updated the Investment Policy to reflect our divestment and ESP commitments.
- Developed a Responsible Investment Framework.



Waste and Recycling

- Waste Management Plan completed.
- New furniture reuse portal established.
- New three-bin system introduced to outdoor areas to capture food waste, drink containers and general waste.



Research and Advocacy

- Grand Challenge: Thriving in the Anthropocene explored how humanity can thrive in the Anthropocene.
- UNSW Sydney formed the International Universities Climate Alliance (IUCA).



Travel and Transport

- Light Rail L3 Kingsford Line opened.
- New pop-up cycleway on High Street, Kensington.

Environmental sustainability at UNSW



UNSW Sydney is an education and research-intensive university, which delivers outstanding teaching alongside cutting-edge research. Established in 1949 and with campuses in Sydney and Canberra, UNSW is principally focused on the scientific, technological and professional disciplines. Environmental sustainability is a key element of our updated 2025 Strategy, released in 2020.

Our Environmental Sustainability Plan 2019-21 supports the 2025 Strategy, in particular:

Theme 03 - Sustainable Development:

Objective 2. - Reduce our environmental footprint by using natural resources more efficiently, reducing waste and ensuring investments are consistent with the UN SDGs

Enabler 04 - Enhance Our Campuses:

Objective 2. - Position our campuses and the activities they support as leaders in sustainability practices. We can do this by minimising our environmental footprint and improving resource efficiency

Objective 4. - Create a modern campus that is resilient to environmental changes such as heatwaves and storms and can support local communities during times of emergency response to climate extremes

Many of our students and staff are actively engaged in environmental and social issues. We recognise that we are uniquely positioned to contribute to solving global environmental challenges through teaching, research, thought leadership and demonstrating leading practices on our campuses. This unique role is reflected in our vision:

To be a catalyst for an environmentally sustainable future through excellence in research, teaching and campus operations.

UNSW's environmental sustainability program is led and coordinated by the Sustainability unit within Estate Management, in collaboration with students and staff across academic faculties and divisions.

Creating a sustainable future

Our vision is to be a catalyst for an environmentally sustainable future through excellence in research, teaching and campus operations. We measure our impact across 10 focus areas.

OUR INFLUENCE ON THE WIDER WORLD

We work with our partners to tackle global challenges like climate change.

Page 09



Climate Action

Switch to **100% renewable power**



Investments

Establish a **Responsible Investment Framework**



Goods & Services

Align procurement processes with **ISO 20400**



Buildings & Campus

Maintain **tree canopy cover of 28%** (102,593m²) at Kensington campus



Energy & Water Efficiency

Achieve a NABERS Energy-equivalent rating of **4*** for 10 buildings



Engagement & Integration

Increase **student and staff engagement** in environmental sustainability

OUR SUSTAINABLE CAMPUSES

We seek to conserve natural resources and provide places where people and nature can regenerate and thrive.

Page 15



Travel & Transport

Increase **active commuting** to 20%



Waste & Recycling

Reduce **general waste** by 10% per student



Learning & Teaching

Develop an **'SDG thinking'** module for learning & teaching programs



Research & Advocacy

Continue **research and thought leadership** on global environmental challenges

OUR CATALYSTS OF CHANGE

Our students and staff underpin our contribution to a sustainable world.

Page 20



UNSW and the global goals

The 2030 Agenda for Sustainable Development, adopted by all UN member states in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are the 17 SDGs, which aim to tackle the world’s most pressing challenges by 2030 – including ending poverty, delivering more equitable prosperity and protecting the planet.

Universities have a critical role to play in the achievement of the SDGs. The Environmental Sustainability Plan supports UNSW’s contribution to the following eight SDGs and their associated targets.



Climate Action

- 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.
- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.



Goods and Services

- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.
- 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities.



Buildings and Campus

- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.
- 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains and drylands, in line with obligations under international agreements.



Energy and Water Efficiency

- 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.
- 7.3 By 2030, double the global rate of improvement in energy efficiency.



Waste and Recycling

- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.
- 12.3 By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses.
- 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.



Travel and Transport

- 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all, improving road safety, notably by expanding public transport, with special attention to the needs of those in vulnerable situations, women, children, persons with disabilities and older persons.



Learning and Teaching

- 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development.



Research and Advocacy

- 7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil fuel technology, and promote investment in energy infrastructure and clean energy technology.
- 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per one million people and public and private research and development spending.



Engagement and Integration

- 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development.
- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.
- 12.8 By 2030, ensure that people everywhere have the relevant information and awareness for sustainable development and lifestyles in harmony with nature.



Contents
Message from the President and Vice-Chancellor
2020 highlights
Environmental sustainability at UNSW
Creating a sustainable future
UNSW and the Global Goals
How we measure success
Our influence on the wider world
Our sustainable campuses
Our catalysts of change
Target status summary
Environmental data
Relevant standards and frameworks

How we measure progress

Our Environmental Sustainability Plan 2019-21 addresses our key activities and environmental issues through 10 focus areas. Our plans in each area are structured as follows:

- **Commitments:** High-level statements setting out our planned direction.
- **Targets:** Specific, measurable indicators that we will report our progress against.
- **Activities:** The planned actions that support the realisation of our commitments and targets.

Each focus area has a dedicated section in this report.

Target status reporting

Our Environmental Sustainability Plan contains 22 targets. Progress against our targets is reported in its respective section of the report using the following categorisation:

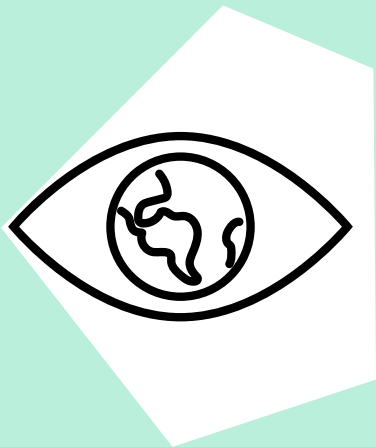
Status	Symbol	Description	Count
Achieved	●	Target had been achieved by the end of the reporting period	2
On track	○	Performance is on track to achieve the target	16
Not on track	△	Performance is not on track to achieve the target	4

Progress against our Environmental Sustainability Plan commitments and activities is reported in the sections that follow, and performance against all targets is summarised on p25.

Our influence on the wider world

We work with our partners to tackle global challenges like climate change





Climate Action

Highlights

- Switched to renewable electricity, achieving our net zero energy emissions goal.
- Approved a science-based target to achieve net zero total emissions.
- Completed our Net Zero Strategy.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDGs:



And are especially focused on these targets under SDGs 7 and 13:

- 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.
- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

Introduction

Climate change is one of the greatest challenges of our time. To keep warming within a ‘safe’ limit of 1.5°C, urgent transformation at an unprecedented level is required.

The urgency of this challenge means climate action is our top environmental sustainability priority, and UNSW is choosing to focus on the areas that matter most to our students and staff. This includes our transition to renewable energy, measuring our GHG footprint and reducing it to net zero, and future-proofing our operations against climate risks.

Energy sourcing and onsite solar energy projects are managed by Estate Management. Measuring and reducing our total GHG footprint engages staff involved in facilities management, construction, procurement, merchandising, travel and investment services, as well as suppliers and academic experts.

By demonstrating leadership on our campuses and within our wider community, we hope to act as a catalyst for a broader societal-level commitment to addressing climate change.

Commitments

- Transition to renewable energy and reduce net greenhouse gas emissions to zero.
- Ensure our campuses and operations are resilient to future climate risk.

Targets	Status
Reduce net emissions from building energy use to zero by 2020	●
Expand onsite solar energy generation to 1.2 MWp by 2022	○
Reduce total scope 1, 2 and 3 emissions in line with a 1.5°C global warming scenario	○

2020 progress

2020 was a year of significant progress under the Climate Action focus area. November 2020 saw a major landmark passed when UNSW began receiving emissions-free renewable electricity, enabling our vision of achieving net zero energy-related emissions from 2020 to be realised (see case study).

We commenced construction of a new 60 kW solar photovoltaic (PV) system on the top level of the Botany Street car park, which will also provide six charging stations for electric vehicles. This project was made possible due to a generous philanthropic donation from the Tidswell family and will enable our 1.2MW onsite solar generation target to be achieved in 2021.

Signalling the next phase of UNSW's journey to net zero, UNSW Council approved a science-based target which formalises our commitment to reducing total value chain emissions to net zero in line with efforts to limit global temperature increase to no more than 1.5°C. Our Net Zero Strategy, which sets out our plan to achieve our 2030 target, was completed (see case study).

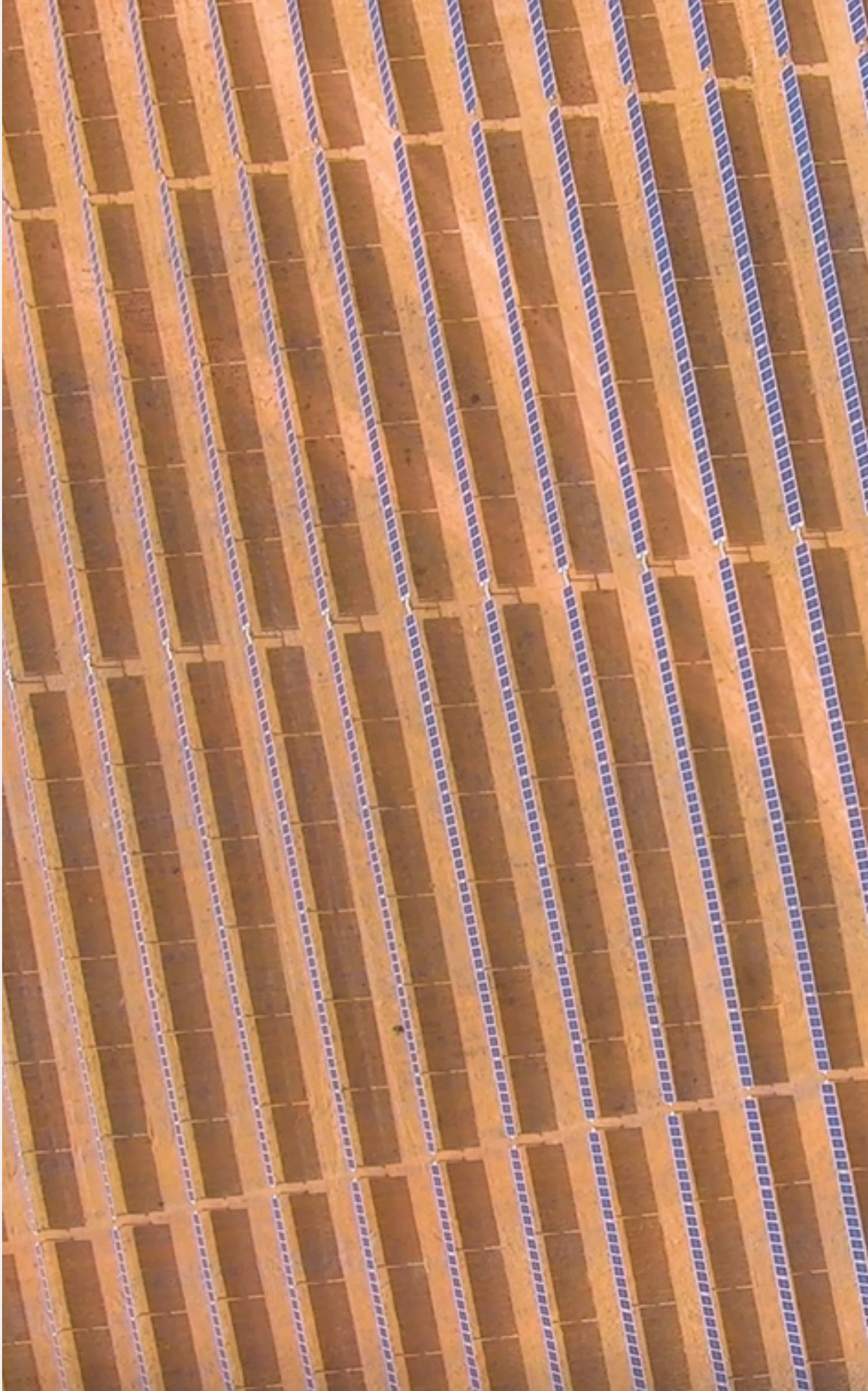




Climate Action



Contents
Message from the President and Vice-Chancellor
2020 highlights
Environmental sustainability at UNSW
Creating a sustainable future
UNSW and the Global Goals
How we measure success
Our influence on the wider world
Our sustainable campuses
Our catalysts of change
Target status summary
Environmental data
Relevant standards and frameworks



Case studies

UNSW flicks the switch on 100 per cent renewable electricity

In 2018, President and Vice-Chancellor Professor Ian Jacobs announced that UNSW Sydney would transition to 100 per cent renewable electricity from 2020. In November 2020, this vision became a reality when the Sunraysia Solar Farm started supplying renewable electricity to UNSW via an innovative solar Power Purchase Agreement (PPA) signed in 2017. The agreement will see the University save 1.25 million tonnes of greenhouse gas (GHG) emissions over the 15-year term of the PPA.

“Switching the electricity supply to our campuses to solar renewables is a landmark step for UNSW, and it is fitting in the context of UNSW’s long history of pioneering work in the development of solar photovoltaic technology,” said Professor Jacobs.

Jeff Peers, UNSW Chief Technology and Infrastructure Officer, said that switching to renewable energy is a major step in the University’s response to climate change.

“Through the solar PPA we are switching to 100 per cent renewable electricity, by surrendering renewable energy certificates equivalent to our total electricity consumption. Our ultimate goal is to eliminate emissions from fuels and other direct sources, which will require longer-term technological change. In the meantime, we purchase carbon credits to offset our remaining emissions from fuels and other direct emissions sources, enabling us to achieve net zero energy (scope 1 and 2) emissions from 2020,” Mr Peers said.

Investing in nature-based solutions to climate change

To meet our commitment to offset direct emissions, in 2020 we sourced a portfolio of 8,153 high-quality carbon credits accredited under the Australian Government Climate Active program. Project selection was guided by a preference for projects that protect and restore natural ecosystems in Australia, and also provide social benefits to local communities, in particular indigenous people. The three projects selected were:

- **Paroo River North Environmental Project, Queensland (2000 units¹)**
This project is working to assist the regeneration of native forest along the Paroo River, which had been suppressed by agricultural land uses. A portion of the project is on land over which the Budjiti Aboriginal people have native title interest, and the project has enabled them to gain access to the land and also share in the project revenue.
- **Paddington Reforestation Project, New South Wales (3,000 units²)**
This project helps to regenerate degraded agricultural land through sustainable management practices including lower stock numbers, rotational grazing and upgraded boundary fences to limit access to feral animals. The regenerating forest provides ecosystem services and increases carbon storage in soil and vegetation.
- **Envira Amazonia REDD+ Tropical Forest Conservation Project, Brazil (3,153 units³)**
Prevents deforestation of critical habitat and supports sustainable economic alternatives to converting tropical rainforest into a large-scale cattle ranch. Project activities include offering agricultural training courses; patrols of potential deforestation sites; granting land tenure to local communities; and commercialising the collection of medicinal plants and açaí.

UNSW outlines science-based pathway to net zero total emissions

Having achieved net zero energy-related (scope 1 and 2) emissions, our focus moves to the indirect (scope 3) emissions across our value chain. This includes emissions from purchased goods and services, construction, investments and travel, which can be greater but are complex and require deeper organisational change and supply chain engagement over a long timeframe to address. Value chain emission sources are not typically included in university targets and emissions strategies.

During 2020, UNSW Council approved UNSW’s new carbon reduction target, developed using the methodology developed by the Science Based Targets Initiative (SBTi)⁴. The target is to reduce total emissions in accordance with a 1.5°C science-based target, which translates to:

- 30 per cent reduction by 2025
- 50 per cent reduction by 2030
- Net zero emissions by 2050.

UNSW is taking a global leadership position by committing to a 1.5°C-aligned target including total value chain (scope 3) emissions.

Our Net Zero Strategy was developed in 2020 and sets out how we plan to achieve our 2030 target of a 50 per cent reduction, focusing on our largest remaining emissions sources: our supply chain and investment activities. The Net Zero Strategy comprises nine initiatives, through which we will reduce emissions by engaging our suppliers, changing our behaviours and adapting our processes.

¹Australian Carbon Credit Units (ACCU)
²Australian Carbon Credit Units (ACCU)
³Climate, Community and Biodiversity Standard (CCBS) and Verified Carbon Standard (VCS)
⁴Sciencebasedtargets.org

Contents
Message from the President and Vice-Chancellor
2020 highlights
Environmental sustainability at UNSW
Creating a sustainable future
UNSW and the Global Goals
How we measure success
Our influence on the wider world
Our sustainable campuses
Our catalysts of change
Target status summary
Environmental data
Relevant standards and frameworks

UNSW's total greenhouse gas footprint decreased by 43 per cent in 2020

The 2020 update to our greenhouse gas footprint showed that total emissions reduced by 43 per cent, with the majority of the reduction resulting from two key factors.

Switching to renewable electricity and surrendering Large-scale Generating Certificates (LGCs) equivalent to our 2020 electricity use reduced scope 2 emissions to zero and total emissions by 70,810 tonnes or 15 per cent (see case study). We also purchased carbon offsets equivalent to our emissions from use of gas and other fuels, but we do not count offsets towards our total emissions target.

UNSW's response to the financial impacts of COVID-19 saw significantly reduced spending, which contributed to reductions in emissions from purchased goods and services (15 per cent reduction in total emissions), capital goods (7 per cent) and travel (6 per cent). Emissions from employee commuting contributed a further 1 per cent reduction due to staff working from home, which was partially offset by emissions from staff energy use while working at home. Emissions from Investments increased total emissions by 3 per cent, due to a proportional increase in the value of investment holdings.

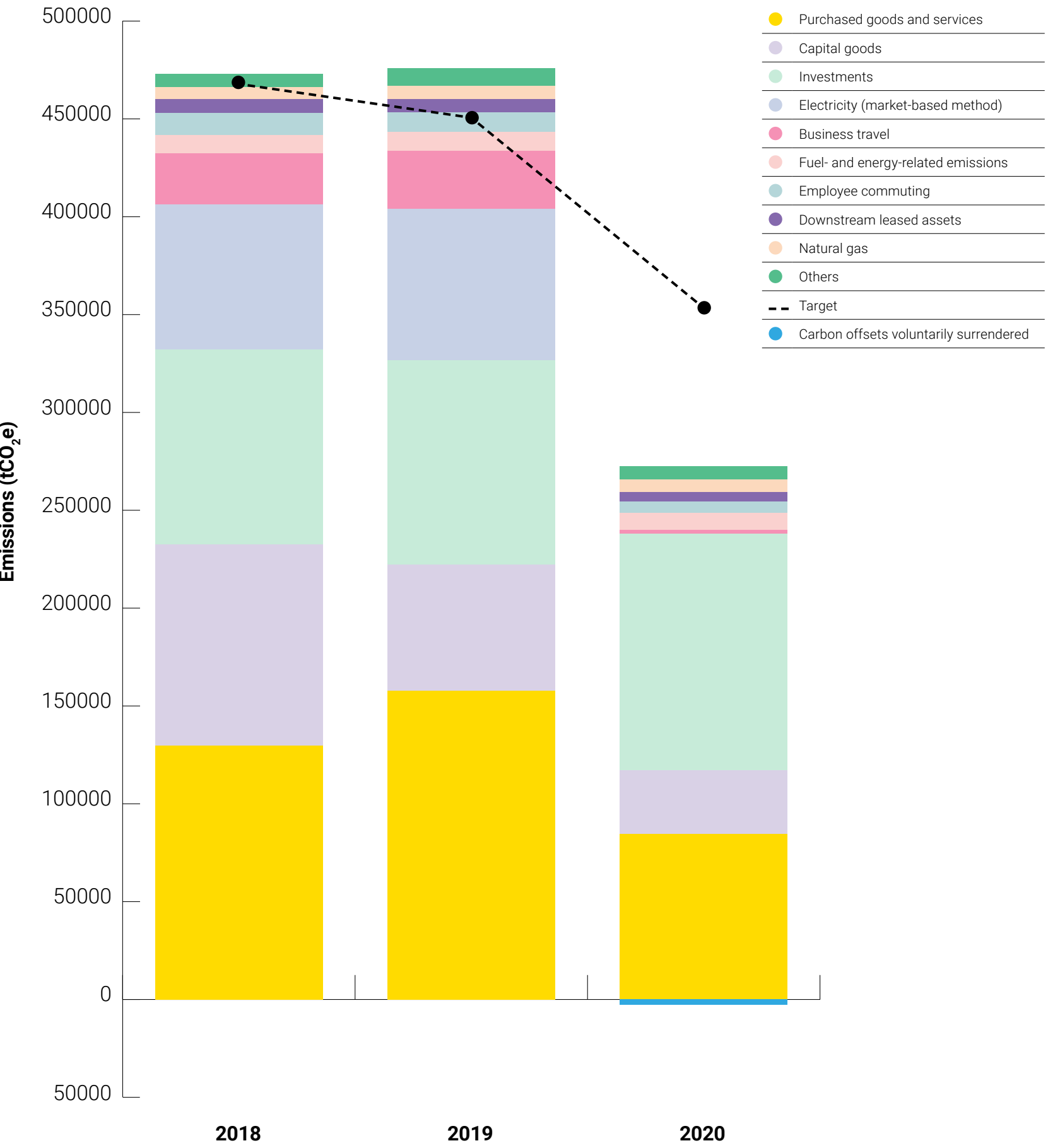
Emissions scope / category	Emissions		
	2018	2019	2020
Scope 1: direct emissions	7793	8608	8089
Natural gas	6302	7007	6344
Liquid fuel for transport	801	934	807
Liquid fuel for stationary energy	59	59	44
Refrigerant and laboratory gases	631	608	642
Livestock emissions	-	-	252
Scope 2: indirect (electricity) emissions	74,398	77,509	70,810
Electricity (location-based method) ⁵	74,398	77,509	70,810
Scope 3: indirect (value chain) emissions	390,765	389,833	264,362
Category 1: Purchased goods and services	129,698	157,834	85,613
Category 2: Capital goods	102,814	64,152	32,817
Category 3: Fuel- and energy-related emissions	9292	9753	8926
Category 4: Upstream transportation and distribution	307	251	485
Category 5: Waste generated in operations	1757	3766	2451
Category 6: Business travel	25,903	29,505	1844
Category 7: Employee commuting	11,553	9949	5745
Category 8: Upstream leased assets	-	-	-
Category 9: Downstream transportation and distribution	2589	2810	1923
Category 10: Processing of sold goods	-	-	-
Category 11: Use of sold products	466	467	80
Category 12: End-of-life treatment of sold products	40	49	14
Category 13: Downstream leased assets	6851	6764	4931
Category 14: Franchises	-	-	-
Category 15: Investments	99,496	104,533	120,677
Sub-total (before surrenders)	472,956	475,949	343,260
Scope 1 voluntary surrenders (ACCU, VER, VCU)	-	-	8089
Net scope 1 emissions (including offsets)	7793	8608	0
Scope 2 voluntary surrenders (LGC) ⁶	-	-	70,810 ⁷
Net scope 2 emissions (market-based method)	74,398	77,509	0
TOTAL EMISSIONS (excluding offsets) ⁸	472,956	475,949	272,451
Net emissions (including offsets)	472,956	475,949	264,362

⁵ Calculated using the NSW grid average electricity emission factor (i.e. excluding renewable electricity purchases)

⁷ 90,251 LGCs were surrendered, equivalent to 90,251 MWh of electricity and 70,810 tCO₂e of electricity emissions when calculated using the NSW grid average electricity emission factor. Offsetting with LGCs is permissible under the market-based method for accounting for emissions from purchased electricity.

⁸ Measures performance against UNSW's science-based target under the market-based method (includes scope 2 emission reduction from the surrender of LGCs, but not the surrender of carbon offsets).

UNSW total greenhouse gas emissions, 2018-2020



Overall, in 2020 UNSW's 43 per cent reduction in total emissions almost met our 2030 target of a 50 per cent reduction on an absolute basis, and emissions intensity (measured per \$m total revenue) also decreased by 47 per cent. However, 2020 was an anomalous year and emissions performance was boosted by the reduction in spend activity. Nonetheless our analysis indicates that switching to renewable electricity alone would have seen our emissions performance on track to meet our 1.5°C pathway. As activity returns to normal in future years, spending and associated emissions can be expected to increase again, but the Net Zero Strategy aims to tackle emissions from these key sources.



Goods & Services

Highlights

- Our Net Zero Strategy defines an action plan to reduce our supply chain carbon footprint.
- Established a compostable food and drink packaging agreement.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDG:



- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.
- 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

Introduction

The purchasing decisions that we make every day have an impact on people and the planet. Through our procurement practices we aim to source goods and services with the lowest environmental impact and greatest economic and social benefits.

In order to focus on where we can make the most difference, we take a risk-based approach, informed by an assessment of the environmental, social and economic risks and opportunities in our supply chain.

Our aim is to address these risks and opportunities and align our procurement practices with the International standard ISO 20400:2017 Sustainable procurement – Guidance.

Our activities in this focus area, coordinated by our Strategic Procurement team, mainly involve staff and how we select and work with our suppliers.

Commitments

- Integrate sustainability and ‘circular economy’ principles into procurement practices.

Targets	Status
Align procurement processes with ISO 20400 by 2022.	<div></div>

2020 progress

Procurement activity was heavily impacted by the response to the COVID-19 pandemic, which saw significant reductions in spend and a restructuring of the procurement function.

Our comprehensive supply chain carbon footprint was updated ([see p12](#)) and shows that reduced spend contributed to a significant reduction in greenhouse gas emissions, though the reduction is likely to be temporary unless strategic action is taken to reduce supply chain emission intensity.

The Net Zero Strategy ([see p11](#)) sets out how UNSW will achieve its 2030 target of a 50 per cent total emissions reduction, focusing heavily on our largest emissions source: our supply chain. The strategy outlines how UNSW plans to engage with our suppliers to set science-based targets, collect carbon data, and target key opportunities across specific procurement categories.

Another 2020 success was setting up a compostable food and drink packaging agreement in support of a key 2021 sustainability initiative: Plastic Free Dining. The agreement allows UNSW campus retailers to access approved, certified compostable products at bulk prices.



Investments

Highlights

- Updated the Investment Policy to reflect our divestment and ESP commitments.
- Developed a Responsible Investment Framework.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDG:



And are especially focused on this target under SDG 7:

- 7.2 By 2030, increase substantially the share of renewable energy in the global energy mix.

Introduction

As a university, our influence on the wider world is partly driven by our investment decisions. These decisions reflect our values, organisational strategy and research objectives, while still seeking to deliver acceptable risk-adjusted returns for the University.

UNSW does not typically invest directly in companies, rather exposure is obtained by investing in a range of diversified financial products, usually commingled funds. As a result, we engage with the investment managers of these funds to meet our responsible investment commitments.

By engaging our investment managers and the rest of our community, UNSW aims to accelerate the transition to a sustainable, decarbonised economy.

Commitments

- Integrate best practice environmental, social and governance principles within our investment activities.
- Assess and mitigate investment climate risks and invest in solutions to climate change.

Targets

Align investment portfolio emission intensity with Paris Agreement commitments by 2020.

Status



2020 progress

In 2020 the UNSW Investment Policy was revised to reflect the divestment resolution by UNSW Council in 2019, and commitments in the Environmental Sustainability Plan (ESP). Following a consultation period in early 2021 the Policy was reviewed by UNSW Council and will be adopted.

UNSW developed a Responsible Investment Framework in order to effectively link UNSW's investment activity to the ESP, its targets and UNSW's other responsible investment commitments. The Responsible Investment Framework was approved by UNSW Council on 23 April 2021.

These items address several recommendations of the climate risk assessment completed and considered by the Investment Sub-Committee (ISC) in 2020 in line with the Taskforce on Climate-related Financial Disclosures (TCFD).

At the end of 2020 UNSW's investments in:

- Solutions to climate change had increased to \$12.4m (1.9 per cent of investments in equities), compared to \$5.9m (1 per cent) in 2019.
- Companies that directly own fossil fuel reserves had decreased to \$14.3m (2.2 per cent of investments in equities), compared to \$19.2m (3.1 per cent) in 2019.

Investment decisions made in 2021 are expected to lead to a material reduction in both the absolute and intensity metrics of the Australian equity portfolio.



Our sustainable campuses

We seek to conserve natural resources and provide places where people and nature can regenerate and thrive.





Buildings & Campus

Highlights

- Roundhouse public domain works completed including additional native trees and shrubs.
- Schematic design completed for the new Health Translation Hub and Biomedical Science Centre buildings in line with UNSW sustainable design requirements.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDGs:



And are especially focused on these targets under SDGs 12 and 15:

- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.
- 15.1 By 2020, ensure the conservation, restoration and sustainable use of terrestrial and inland freshwater ecosystems and their services.

Introduction

Through the planning and management of our campuses we aim to provide healthy and regenerative places for learning and work where people can connect with nature.

This focus area includes how we plan, develop and manage our campuses – activities led by Estate Management in collaboration with students and staff across UNSW faculties and divisions, consultants, contractors, government bodies, local organisations and the wider community.

We aim to repurpose and improve utilisation of existing spaces to reduce the need for new construction, and when new assets are required to minimise use of natural resources in construction.

Our approach is underpinned by minimum standards for new buildings and refurbishments. We seek to deliver environmentally sustainable design while providing flexibility to choose the tools best suited to each project.

Commitments

- Embed leading environmental sustainability principles and practices throughout the planning and operation of our buildings and campuses.

Targets	Status
Design and build new buildings to minimum 5* Green Star Design & As Built or equivalent and 5.5* NABERS Energy equivalent.	<div></div>
Ensure no net loss in tree canopy cover compared to the 2018 baseline (28 per cent).	<div></div>

2020 progress

The events of 2020 and UNSW’s response saw investment in campus infrastructure cancelled or paused. However, there were several projects progressed which have an environmental sustainability component:

- The Roundhouse public domain works were completed, activating the first section of College Walk, a new pedestrian focused route linking to the newly opened light rail stop on Anzac Parade. The project remediated historical soil contamination and expanded the campus rainwater capture system with a new a 540m³ infiltration tank added. Overall the project provided a net increase of 17 native trees, with new plantings having been carefully selected to provide species diversity and be appropriate for a highly pedestrianised area.
- Schematic design was completed for the new UNSW Health Translation Hub (HTH) in line with UNSW minimum sustainable design requirements equivalent to 5* Green Star Design & As Built and 5.5* NABERS Energy ratings. Part of the Randwick Health and Innovation Precinct, HTH will bring together educational and medical researchers, clinicians, educators, industry partners and public health officials, to support the rapid translation of research, innovation and education into improved patient care, delivering better health outcomes to the community.
- Schematic design was completed for a new multi-level Biomedical Science Centre to facilitate expansion of the current medicine program by the UNSW Rural Clinical School (RCS) Wagga Wagga campus. The project is targeting sustainable design performance equivalent to 5* Green Star Design & As Built and 5.5* NABERS Energy ratings.





Energy & Water Efficiency

Highlights

- Energy efficiency initiatives implemented including building controls and set point optimisation.
- Reductions in energy (7 per cent) and water use (45 per cent), mainly due to reduced campus activity.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDGs:



And are especially focused on these targets under SDGs 6 and 7:

- 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater.
- 7.3 By 2030, double the global rate of improvement in energy efficiency

Introduction

Our campuses are significant consumers of energy and water – resources we rely on to carry out the core activities associated with higher education and research.

As a result, we are focused on improving our energy and water efficiency as we aim to create sustainable campuses for students and staff. This includes investing in smarter buildings and systems through more efficient equipment and fittings, together with new technologies, which will also result in cost savings for the University. In doing so, we also address key environmental and operational impacts.

Energy and water efficiency initiatives at our campuses are led by the Facilities Management Utilities team, with support from other Estate Management units and the wider University.

Commitments

- Continually improve energy efficiency and electrify our campuses.
- Reduce potable water use and return water to the hydrological cycle.

Targets	Status
Achieve a NABERS Energy equivalent rating of 4* or above for 10 existing buildings by 2022.	○
Increase average energy efficiency of existing buildings by 3 per cent by 2022.	○
Increase water efficiency per Equivalent Full-Time Student Load (EFTSL) by 2 per cent.by 2022.	○

2020 progress

Most of the energy and water efficiency initiatives planned for 2020 were cancelled due to revision to budgets in response to the impacts of COVID-19. Initiatives implemented included:

- Building controls upgrade for the central energy plant in Ainsworth Building (J17) to improve system performance and energy efficiency.
- Introduction of demand-based control for Hilmer Building (E10) air conditioning system including installation of additional passive infra-red motion sensors (PIR) and integration with building management system (BMS) to efficiently condition occupied spaces.
- Optimisation of air conditioning setpoints, which were relaxed based on ambient temperature for most major buildings with BMS, to reduce heating and cooling demand.

A clear benefit of the reduced campus activity was significant reductions in energy use (9.6 gigawatt hours or 7 per cent) and water use (255 megalitres or 45 per cent). All three targets under this focus area are scored ‘on track’, although water target performance is boosted by reduced campus activity in 2020 having been behind targeted performance in 2019.





Waste & Recycling

Highlights

- Waste Management Plan completed.
- New furniture reuse portal established.
- New three-bin system introduced to outdoor areas to capture food waste, drink containers and general waste.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDGs:



And are especially focused on these targets under SDG 12:

- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.
- 12.3 By 2030, halve per capita global food waste at the retail and consumer levels.
- 12.5 By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

Introduction

Waste management is a key priority for students and staff and perhaps the most visible day-to-day environmental issue on campus.

This focus area includes our efforts to eliminate single-use plastics, maximise recycling and minimise what we put in landfill, in accordance with the waste hierarchy.

By improving waste practices and behaviours we aim to conserve natural resources, make cost savings and improve waste awareness among our students and staff.

Commitments

- Close the loop by minimising waste, improving resource efficiency and managing waste responsibly.

Targets	Status
Reduce general waste by 10 per cent per Equivalent Full-Time Student Load (EFTSL).	
Maintain general waste landfill diversion at 90 per cent+.	
Achieve minimum 90 per cent recycling of construction and demolition waste.	

2020 progress

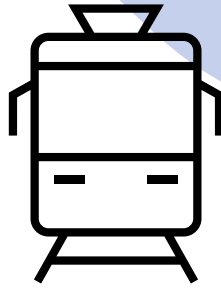
In early 2020, UNSW completed a new Waste Management Plan, setting out the future direction for sustainable waste management. It includes an action plan to improve waste segregation, satisfaction and sustainability outcomes.

Key initiatives completed or progressed in 2020 included:

- Our Plastic Free Dining initiative, while delayed due to the reduction in campus activity, included the development of a supporting communication campaign and was launched at the start of Term 1 2021. Plastic Free Dining involves three key initiatives:
 - all single-use campus food packaging will be fully compostable from 2021
 - UNSW students and staff are encouraged to dine in and BYO cups and containers
 - a new three-bin system for outdoor areas means we will now sort waste into food waste (and compostable packaging), drink containers and general waste.
- A new furniture reuse portal was established, allowing used furniture to be stored when not required and made available to any UNSW unit through an intuitive online interface. The system helps to avoid waste to landfill while making efficient use of University resources. A sale of excess furniture held in early 2021 saw 126 furniture items sold to students and staff at nominal prices.

Total general waste decreased by 50 per cent in 2020 due to the reduction in campus activity. Our landfill diversion rate improved as our contractor's waste processing facility resumed operation from March, but at 65 per cent was still short of our 90 per cent target.





Travel & Transport

Highlights

- Light Rail L3 Kingsford Line opened.
- New pop-up cycleway on High Street, Kensington.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDGs:



And are especially focused on this target under SDGs 11:

- 11.2 By 2030, provide access to safe, affordable, accessible and sustainable transport systems for all.

Introduction

Access to and around our campuses is an important issue for our staff, students and visitors. In order to minimise congestion, reduce environmental impact and improve health and wellbeing outcomes, we promote the use of active and public transport modes as much as possible.

This focus area includes how people travel to and around our campuses, and how staff and students travel for University purposes as part of our efforts to address scope 3 emissions.

Other key stakeholders include local and state governments as well as the local community.

Commitments

- Ensure our campuses are easily accessible by multiple transport modes and our community is supported to make active and sustainable transport choices.

Targets

Increase the percentage of staff and students commuting by active travel modes to 20 per cent by 2022.

Reduce air travel emissions by 1 per cent by 2022.

Status



2020 progress

Travel was an area more impacted than most by the COVID-19 pandemic in 2020, as students and staff learned and worked from home during the lockdown and most only began to return to our campuses in the later part of the year.

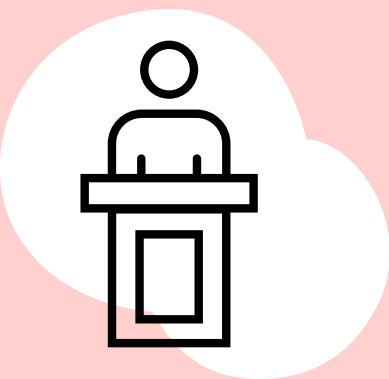
A substantial reduction in commuting and travel on University business led to emission reductions, while circumstances accelerated the adoption of virtual working practices and collaboration and virtual working platforms including Microsoft Teams.

2020 highlights included:

- UNSW welcomed the opening of the L3 Kingsford Light Rail Line on 3 April. Light rail is one of the most significant pieces of infrastructure to benefit the University in its 70-year history, providing a high capacity, clean, reliable and sustainable transport option for staff and students. Together with the L2 Randwick Line opened in 2019, light rail now services the upper and lower ends of UNSW's Kensington campus.
- Transport for NSW announced that it would install pop-up cycleways on Todman Avenue, Kensington and High Street, Randwick, providing a safe option for travel during COVID-19 and an alternative to catching public transport or driving. UNSW has advocated for segregated cycleways in the local area, including on High Street, for many years and welcomed the new cycleway which opened on 21 April 2021.
- A reduction in travel on University business saw greenhouse gas emissions from air travel reduced by over 27,000 tonnes of carbon dioxide equivalent, or 94 per cent, compared to 2019.

Our catalysts of change

Our students and staff underpin our contribution to a sustainable world.



Learning & Teaching



Highlights

- Completed and launched the SDG Toolkit to support academic staff to incorporate sustainability thinking into their course content.
- SDG Module is on track for completion in 2021.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDGs:



And are especially focused on these targets under SDG 4:

- 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development.

Introduction

UNSW offers a range of educational programs in sustainability-related disciplines including renewable energy, climate science, materials science, built environment, biological, earth and environmental sciences, business, engineering and law.

All six faculties at UNSW offer opportunities to undertake studies with a sustainability focus. While sustainability is taught as a subject in its own right, UNSW educators are increasingly embedding sustainability considerations into the fabric of all courses, with a focus on the UN SDGs.

Our courses aim to equip graduates with the critical thinking capabilities they will need to become future leaders in their fields, including by helping them develop an informed approach to environmental sustainability risks and opportunities. In this way, our graduates are well-prepared to fulfil their potential and contribute to the society-wide challenge of nurturing a more sustainable planet and a fairer, more just society.

Commitments

- Offer learning and teaching programs that inspire students to contribute to a sustainable world.
- Provide leading interdisciplinary education in environmental management.

Targets

The SDG Module is offered across the FULT (Foundations of University Learning and Teaching) program.

One course per program of study per faculty includes the SDG module as an assessed activity by 2021.

One course per program of study per faculty incorporates SDG thinking using the SDG Toolkit by Term 2 2021.

One project per SDG is developed and integrated as an assessed activity by Term 1 2022.

Continue to offer interdisciplinary education in environmental management in line with the Learning and Teaching Academic Standards Statement for Environment and Sustainability.

Status



SDG Toolkit launched

The SDG Toolkit is a new educational resource that supports academic staff to incorporate sustainability thinking into their course content. It is interdisciplinary in scope and can be adapted for many educational contexts, and was developed by the Office of the Pro Vice-Chancellor Education and Student Experience (PVC-ESE).

UNSW staff can view the SDG Toolkit in Moodle. An accompanying series of videos features UNSW educators and leaders explaining the challenges and opportunities associated with each SDG, and is available via a YouTube playlist.

The SDG Toolkit was launched in Term 3 2020 and saw encouraging uptake by the end of 2020:

- There were 6615 views of SDG resources by 517 students across five courses in 2020
- The SDG introduction video was watched almost 10,000 times
- Other popular SDGs were SDG3 (Good Health and Wellbeing) and SDG12 (Responsible Consumption and Production).

Dr Daniel Hempel, from Educational Delivery Services in the PVC-ESE portfolio, developed the Toolkit in collaboration with the Estate Management Sustainability unit.

“The Toolkit is broad and flexible in the hope that it will become a resource that is adopted widely across the University. The input from UNSW leaders and academics makes it familiar and relevant to staff and students alike,” he said.

Professor Ben Newell, Professor of Cognitive Psychology and Deputy Head of the School of Psychology, who is featured in the Toolkit, said, “This is an incredibly useful resource that can be readily integrated into a variety of courses. Think of it as a source of ideas for engaging our students in meaningful discussions about the future of our planet.”



Research & Advocacy

Highlights

- Grand Challenge: Thriving in the Anthropocene explored how humanity can thrive in the Anthropocene.
- UNSW Sydney formed the IUCA.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDGs:



And are especially focused on these research-focused targets under SDGs 7 and 9:

- 7.a By 2030, enhance international cooperation to facilitate access to clean energy research and technology, including renewable energy, energy efficiency and advanced and cleaner fossil fuel technology, and promote investment in energy infrastructure and clean energy technology.
- 9.5 Enhance scientific research, upgrade the technological capabilities of industrial sectors in all countries, in particular developing countries, including, by 2030, encouraging innovation and substantially increasing the number of research and development workers per one million people and public and private research and development spending.

Introduction

As one of Australia’s leading universities, UNSW’s research and advocacy confronts complex problems and finds solutions with real world impact that extend to the wider community.

We’re continually breaking new ground in sustainability-related disciplines including solar energy, sustainable materials technology, biodiversity and conservation, and climate science.

As an international thought leader, we also have the responsibility to ask the big questions. Our Grand Challenges program, for example, actively confronted the greatest issues facing humanity by leading research, policy and public conversations that can change the world.

This focus area underpins our contribution to a more sustainable planet and a fairer society.

Commitments

- Support researchers to develop solutions to global environmental challenges.
- Be a leading advocate for a sustainable world by advancing policy discussion and debate.

Targets

Implement one sustainability-related research showcasing project on campus by 2020.

Status



2020 progress

In 2020, a range of sustainability-related research outputs were produced and communicated to the UNSW community and broader society. The UNSW Futures Institutes provide a unique platform for addressing humanity’s major challenges by facilitating cross-faculty and cross-disciplinary work, driving innovative approaches to research.

- The UNSW Materials and Manufacturing Futures Institute seed-funded three interdisciplinary research projects focused on local renewable energy research and manufacturing.
- Highlights from the UNSW Digital Grids Futures Institute (DGFI) community included:
 - a range of researchers helped to secure \$7m in ARENA funding to address solar panel efficiency, cost reductions and end-of-life waste issues.
 - DGFI Director Professor Joe Dong launched the ARC Hub for Integrated Energy Storage Solutions.
 - DGFI funded 19 seed fund projects seeking to advance the transition to renewable energy with a view to attracting further industry and other funding.





Research & Advocacy

Case studies

Grand Challenge: Thriving in the Anthropocene

Despite ending prematurely due to COVID-19, the Grand Challenge Thriving in the Anthropocene laid the foundations for UNSW to lead the global debate on how humanity can thrive in the Anthropocene. The Vision for the Anthropocene series brought together researchers from different disciplines to map out a sustainable course for the future. Topics included:

- Exploring how underground space has the potential to make our cities more sustainable (Dr Marilu Melo Zurita, Lecturer in Human Geography).
- Considering how we might find the right balance between technical and societal solutions that help humanity become more mindful of our planetary boundaries (Professor Thomas Wiedmann, Professor of Sustainability Research in the Faculty of Engineering).

Thriving in the Anthropocene also facilitated conversations within and beyond the UNSW Sydney community, including:

- Providing new approaches to talking about climate change beyond the political divide (Presented by UNSW Centre for Ideas and supported by UNSW Science as part of the UNSW x National Science Week 2020 program).
- Demonstrating how plant-based nutrition can improve the health of people and the planet (Panel at UNSW Centre for Ideas in August 2020).

More information →

World's top universities unite to tackle climate change amid COVID-19 challenge

UNSW Sydney brought together the International Universities Climate Alliance (IUCA), a global alliance of top climate change researchers to form a new, international platform for universities to communicate climate research.

The IUCA comprises 40 of the world's leading climate research universities in the united goal of ensuring governments, the public, media and industry have better access to research-based facts on climate change science, impacts, adaptation and mitigation.

UNSW President and Vice-Chancellor, Professor Ian Jacobs, said: "The climate alliance will elevate the voices of exceptional researchers by providing a new, global platform for universities to communicate climate research with authority internationally."

"This new platform is needed now more than ever as the world grapples with providing a coordinated approach to tackling climate change."

More information →





Engagement & Integration

Highlights

- Expanded the Green Impact sustainability engagement program.
- Created a new online Kensington campus sustainability map.

Sustainable Development Goal(s)

Our activities in this focus area contribute to the following SDGs:



And are especially focused on these research-focused targets under SDGs 4 and 12:

- 4.7 By 2030, ensure that all learners acquire the knowledge and skills needed to promote sustainable development.
- 12.2 By 2030, achieve the sustainable management and efficient use of natural resources.

Introduction

Our students and staff are our catalysts of change, and many of them are highly engaged in environmental sustainability issues.

This focus area covers our efforts to build a culture of environmental awareness and good practice on campus, and to integrate the Environmental Sustainability Plan into the fabric of the University.

Students can get involved in sustainability through a range of Arc@UNSW sustainability groups and activities such as the Environment Collective, the Producers, eReuse, Bikeology and the Stationery Reuse Centre. Other initiatives and groups such as Green Impact, UNSW Urban Growers and the Climate Change Network actively involve both students and staff.

Engagement in sustainability issues can help our people find meaning and purpose in their lives and prepare them to be effective catalysts of change in contributing to a more sustainable world.

Commitments

- Build a community of environmental awareness and good practice.
- Integrate this plan across University decision-making, planning and management processes.

Targets

Increase levels of student and staff engagement in environmental sustainability.

Status



2020 progress

Following a successful pilot in 2019, the Green Impact sustainability engagement program was expanded in 2020. The impact of COVID-19 resulted in most students and staff being away from the campus for much of 2020, and in response Green Impact was revised to enable teams to complete actions from home as well as their work spaces. The 2020 program saw 277 students and staff in 50 teams log 1123 actions – almost double the 2019 total.

Participating teams have had their actions audited by 21 student auditors who received International Society of Sustainability Professionals (ISSP) accredited audit training.

As part of Green Impact, a team including Arc's volunteer program The Producers, with support from Estate Management, developed an Indigenous edible garden on College Walk near Alumni Park. The garden is planted with local Eastern Suburbs Banksia Scrub, native Geraniums and Creeping Violets which will be harvested for traditional bush tucker. The garden is intended as a base for educational and awareness events.

A new online map was created on the Sustainability website outlining sustainability features at the UNSW Kensington campus. The map features useful facilities such as water refill stations, bicycle repair facilities and showers, along with layers showing energy and water density of each building and information about every tree on campus.



Focus area	Target	Definition	Performance			Status
			2018	2019	2020 ¹⁰	
Climate Action	Reduce net GHG emissions from building energy use to zero by 2020	Tonnes of carbon dioxide equivalent (tCO ₂ e)	81,745	84,515	0	●
	Expand onsite solar energy generation to 1.2MWp by 2022	Installed capacity in megawatts potential (MWp)	0.79	1.16	1.16	○
	Reduce total Scope 1, 2 & 3 GHG emissions in line with a 1.5°C global warming scenario	Tonnes of carbon dioxide equivalent (tCO ₂ e)	472,956	475,949	272,451	○
Goods & Services	Align procurement processes with ISO 20400 by 2022	Processes aligned (Y/N)	N	N	N	○
Investments	Align investment portfolio emission intensity with Paris Agreement commitments by 2020	Tonnes of carbon dioxide equivalent (tCO ₂ e) per \$	N	N	N	△
Buildings & Campus	Design and build new buildings to minimum 5* Green Star Design & As Built or equivalent and 5.5* NABERS Energy equivalent by 2022	Number of new buildings designed and / or delivered to target	0	2	2	○
	Ensure no net loss in tree canopy cover compared to a 2018 baseline	Tree canopy cover (%)	28%	-	-	○
Energy & Water Efficiency	Achieve a NABERS Energy equivalent rating of 4* or above for 10 existing buildings by 2022	NABERS equivalent rating	4.00	7.00	7.00 ¹¹	○
	Increase average energy efficiency of existing buildings by 3 per cent by 2022	NABERS equivalent rating	3.30	3.50	3.50	○
	Increase water efficiency per EFTSL by 2 per cent by 2022	Kilolitres per Equivalent Full time Student Load (EFTSL)	13.92	15.13	8.67	○
Waste & Recycling	Reduce general waste (mixed, paper, food & recyclables) per EFTSL by 10 per cent by 2022	Kilograms per Equivalent Full time Student Load (EFTSL)	63.46	63.20	32.91	○
	Maintain general waste landfill diversion at 90 per cent+	General waste diverted from landfill (%)	94%	49%	65%	△
	Achieve minimum 90 per cent recycling of construction and demolition waste	Requirement in place (Y/N)	N	Y	Y	○
Travel & Transport	Increase the percentage of staff and students commuting by active travel modes to 20 per cent by 2022	Staff and students walking or cycling as main travel mode (%)	16%	25%	-	○
	Reduce air travel emissions by 1 per cent by 2022	Tonnes of carbon dioxide equivalent (tCO ₂ e)	23,595	25,958	1844	○
Learning & Teaching	At least 1 option for the SDG module is offered across the FULT program of study	SDG module offered (Y/N)	N	N	N	○
	At least 1 course per program of study includes the online course as an assessed activity	Requirement achieved (Y/N)	-	-	-	△
	At least 1 course per program of study incorporates SDG thinking using the SDG toolkit	Requirement achieved (Y/N)	-	-	-	△
	At least 1 project per SDG is developed and integrated as an assessed activity	Requirement achieved (Y/N)	-	-	-	○
	Offer interdisciplinary education in environmental management line with LTASSES	Program offered (Y/N)	Y	Y	Y	○
Research & Advocacy	Implement one sustainability-related research showcasing project by 2020	Number of projects implemented	-	1	-	●
Engagement & Integration	Increase student and staff levels of engagement in sustainability	Number of Green Impact actions completed	-	768	1123	○

¹⁰ In several cases, 2020 target performance was affected by reduced campus activity, travel and expenditure in response to the COVID-19 pandemic. These changes mean that, for some targets, 2018 may no longer be a representative baseline. For transparency, where 2020 performance against individual targets appears to have been enhanced by COVID-19 impacts, this has been explained in the body of this report as clearly as possible.

¹¹ Comparable NABERS equivalent ratings could not be produced for 2020 due to the change in operating hours. 2019 performance is therefore used as a proxy.

Contents
Message from the President and Vice-Chancellor
2020 highlights
Environmental sustainability at UNSW
Creating a sustainable future
UNSW and the Global Goals
How we measure success
Our influence on the wider world
Our sustainable campuses
Our catalysts of change
Target status summary
Environmental data
Relevant standards and frameworks

Environmental Data

Energy & Water Efficiency

(Kensington campus only)

Energy	Unit	2016	2017	2018	2019	2020
Purchased electricity	Kilowatt hour (kWh)	82,393,960	85,338,861	89,978,545	96,878,516	89,195,147
Electricity from onsite solar		853,279	854,312	996,305	1,140,316	1,069,695
Gas		26,586,582	31,580,074	36,857,403	39,791,111	34,696,593
Water						
Potable water	Kilolitre (kl)	361,000	367,000	351,000	367,000	199
Bore water		282,000	264,000	272,000	311,000	173
Total water		643,000	631,000	623,000	677,000	371
Bore water as a % of total	%	44%	42%	44%	46%	46%



Waste & Recycling

(Kensington, Paddington and Randwick campuses)

General waste	Unit	2016	2017	2018	2019	2020
Paper/cardboard	Tonne	1306	1413	1114	658	380
Mixed metals	Tonne	158	164	120	29	36
Drink containers	Tonne	0	0	84	122	188
Mixed plastics	Tonne	0	0	0	0	24
Food and organics	Tonne	382	251	278	80	0
Food waste	Tonne	102	118	228	257	51
Residual	Tonne	796	8,58	1017	1692	730
Total		2744	2804	2841	2838	1409
Destination						
Recycling	Tonne	1948	1946	1824	1146	679
Processed engineered fuel (energy recovery)	Tonne	667	672	858	244	241
Landfill	Tonne	129	186	159	1447	490
General waste recycling rate	%	71%	69%	64%	40%	48%
General waste landfill diversion rate	%	95%	93%	94%	49%	65%

Paper and cardboard: Segregated paper, confidential paper and paper recovered from general waste at Material Recovery Facility (MRF)

Mixed metals: Reported as recovered from general waste at MRF

Drink containers: Collected through Return and Earn reverse vending machine on Kensington campus

Mixed plastics: Reported as recovered from general waste at MRF

Food and organics: Reported as recovered from general waste at MRF

Food waste: Segregated food waste collected from retailers and colleges

Residual waste: Contaminated paper, plastic, food packaging and other non-recyclable waste destined for energy recovery and landfill

Relevant standards and frameworks

THEME	STANDARD OR FRAMEWORK	DESCRIPTION
Climate Change	Greenhouse Gas (GHG) Protocol	Global standard for greenhouse gas emissions accounting and reporting, developed by the World Resources Institute and World Business Council for Sustainable Development.
	Science Based Targets Initiative (SBTi)	GHG reduction target setting methodology aligning with the GHG Protocol and the Paris Agreement objective of limiting global temperature increase to no more than 1.5-2°C.
Sustainable Development	United Nations Sustainable Development	17 global goals aiming to tackle the most pressing environmental, social and economic issues by 2030. Used to connect organisational sustainability strategy and reporting to the global agenda.
Learning & Teaching	Goals (SDGs)	17 global goals aiming to tackle the most pressing environmental, social and economic issues by 2030. Used to connect organisational sustainability strategy and reporting with the global agenda.
Sustainable Buildings	Green Star Design & As Built	Certification standard for the sustainable design and construction of buildings, administered by the Green Building Council of Australia (GBCA).
Sustainable Procurement	ISO 20400	Provides guidance on integrating sustainability principles within procurement activities.
Investments	United Nations Principles for Responsible Investment (PRI)	Six principles providing guidance for responsible investment, aiming to support signatories to incorporate sustainability issues into investment decision-making and ownership practices.
	Task Force on Climate-related Financial Disclosures (TCFD)	Industry-led initiative created to develop a set of recommendations for voluntary climate-related financial disclosures.

Acknowledgements

The Estate Management Sustainability team would like to extend thanks to the following people who contributed to this report:

Alex Blagus, Alison Smith, Amber Greenhalgh, Andrew Fellowes, Aya Horne, Chaseley Cameron, Ian Joson, Irene Chan, Jatinder Kaur, Jessie Gao, Jose Bilbao, Julianne Stewart, Kudakwashe Vere, Laura Stevens, Lucia Schiavo, Mark Clark, Mark Halliday, Niki Douglas, Ray Galway, Rica Cardinales, Saeed Mostafavi Tehrani, Sharon Post, Tanya Sgouras and Thomas Chow.

Additional thanks go to our commercial partners who provided data and supporting information.

Design by Ian Joson.

