Environmental Sustainability Report 2024

UNSW Estate Management

2025

UNSW SYDNEY

Acknowledgement of Country

UNSW acknowledges the Biripai, Dharug, Gadigal, Gumbaynggirr, Ngunnawal and Wiradjuri peoples, who are the Traditional Custodians of, and whose communities remain connected to, the unceded territories upon which the University's main campuses are located. We pay our respects to Aboriginal and Torres Strait Islander Elders past and present for their custodianship of Country, and celebrate the cultural knowledges, stories, songlines, ancestors and dreamings of Aboriginal and Torres Strait Islander people, the First Peoples of Australia.

Contents

Contents

A message from the Vice-Chancellor and President

I am pleased to introduce the UNSW Environmental Sustainability Report 2024, the final progress report of our *Environmental Sustainability Plan 2022–2024.*

Climate change is arguably the most urgent issue of our time, with enormous ramifications for future generations.

As a public university, driving positive societal impact is at the core of what UNSW does. In 2025, we launched our new *UNSW Strategy: Progress for All.* Its objective – collective progress – is about contributing to a better society through our education, research and engagement on critical issues.

Accelerating the transition to a sustainable society and planet is one of the nine Strategic Pillars that will guide our Strategy over the next decade. It is a complex challenge and an area where UNSW can have distinctive and significant impact through our deep expertise in climate science and environmental sustainability.

UNSW's Environmental Sustainability Plan 2022–2024 drives action in three areas: Climate Action, Living Campuses and Resource Efficiency. This Environmental Sustainability Report highlights our actions and progress against the plan in each of these areas.

Our credentials in this sphere were recognised with UNSW's strong performance in the 2025 QS World University Rankings, maintaining our global top 20 position and ranking equal 12th worldwide in sustainability.

UNSW leapt to seventh in the world in the 2024 Times Higher Education (THE) Impact Rankings, which assess universities' contributions to the United Nations (UN) Sustainable Development Goals (SDGs) via teaching, research and campus operations. Our University ranked second in the world for SDG 13 Climate Action for the second consecutive year, and rose to third in the world for SDG 6 Clean Water and Sanitation, propelling UNSW's move into the global top 10 overall.

In this reporting period, UNSW continued to make significant strides in climate action on our campuses, completing Stage 1 of the Electrification Strategy and delivering our first all-electric buildings at Paddington campus and Kensington Colleges.

In 2024, we completed climate risk and opportunity assessments to inform future climate reporting and resilience planning. We developed carbon dashboards to support faculties and divisions to tackle emissions from their supply chain and travel activities.

We continued to implement the Sustainable Procurement Framework, updated the UNSW Supplier Charter and undertook supplier engagement in support of UNSW environmental and social goals.

The Laboratory Efficiency Assessment Framework (LEAF) program, an internationally recognised accreditation program that builds a culture of sustainability in laboratories, went from strength to strength, with 58 teams accredited. More than 40% of UNSW lab space is now managed by LEAF-registered teams.

In 2024, we embarked on a pilot program to increase nature value at our Kensington campus through native planting, green infrastructure and enhanced grounds management. We completed the Sydney CBD campus interior fit-out incorporating top-tier sustainability features and aiming for a Green Star Interiors Five-Star rating.

We reaffirmed our commitment to resource efficiency, developing a new Waste Management Plan to improve waste sorting, reduce contamination, increase landfill diversion and comply with updated regulations for food organics recycling.

The Environmental Sustainability Plan 2022–2024 sets ambitious and wide-ranging targets which reflect our focus on positive environmental impact. We made meaningful progress, but also experienced challenges that prevented us from achieving every goal. The valuable insights we gained as a result will help guide us as we develop our new plan, aligned with the sustainability ambitions set out in *UNSW Strategy: Progress for All.*

The achievements highlighted in this report showcase the continuing advancement UNSW has made in pursuit of our mission to be an exemplar climate-resilient, nature positive, net zero emissions university that empowers our community.

We are privileged to have a University community dedicated to minimising our environmental footprint and enhancing our performance across all areas of operation. Thank you to everyone who has contributed to these accomplishments as we continue to seek the real-world solutions needed to achieve a healthier and more sustainable future for all.

Professor Attila Brungs
Vice-Chancellor and President
UNSW Sydney

Environmental sustainability at UNSW

UNSW Sydney is a world-leading university, known for driving progress that benefits everyone. Since our foundation in 1949, our collective aim has been to have a positive global impact, improving and transforming lives through excellence in research and outstanding education.

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.

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

UNSW's commitment to environmental sustainability is reflected in *UNSW Strategy: Progress for All*, released in February 2025, in particular:

Pillar 6: Accelerate the transition to a sustainable society and planet

Be an exemplar climate-resilient, nature positive, net zero emissions university that empowers our community.

Contents

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 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.

Living campuses

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

- 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.
- 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.
- 15.1 By 2030, 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.

Resource 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.
- 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.
- 12.7 Promote public procurement practices that are sustainable, in accordance with national policies and priorities.

How we measure progress

Our *Environmental Sustainability Plan 2022-24* addresses our key operational activities and environmental issues. Our approach in each area is structured by:

> Targets: specific, measurable outcomes that we measure our progress against.

> Key initiatives: the main strategies that enable the realisation of our targets

The *Environmental Sustainability Plan 2022-24*[1] contains 13 targets. Progress towards each of our targets is reported in its respective sections using the following categorisation:

Status	Symbol	Description	Count
On track	○	Targeted outcome is on track for achievement but target period is beyond the reporting period	1
Achieved	△	Targeted outcome was achieved by the end of the reporting period	7
Not achieved	△	Targeted outcome was not achieved by the end of the reporting period	5

Our performance is reported in the sections that follow, and progress towards all targets is summarised on page 24.

[1] https://www.sustainability.unsw.edu.au/sites/default/files/documents/UNSW_Environmental-Sustainability-Plan-2022_v2.1.pdf

2024 highlights

Climate action

- UNSW Sydney maintained our top 20 position in the 2024 QS World University Rankings. UNSW performed particularly strongly in sustainability, where we ranked equal 12th globally.
- UNSW leapt to seventh in world in 2024 Times Higher Education Impact Rankings, which assess universities' contribution to the UN SDGs via teaching, research and campus operations. UNSW placed second globally for SDG 13 – Climate Action.
- *UNSW Strategy: Progress for All* developed, placing environmental sustainability at its centre via the impact focus area: '*Accelerate the transition to a sustainable society and planet*'.
- UNSW achieved its target of a 30% reduction in total emissions by 2025.
- Electrification Program Stage 1 completed, with Paddington Campus, David Philips Fields and seven buildings at Kensington Campus fully electrified.
- New solar photovoltaic (PV) systems for the Robert Webster Building, Manly Vale campus and David Philips Field.
- Climate risk assessments undertaken to inform resilience planning and reporting.
- Interactive carbon dashboards engage UNSW staff to tackle emissions.

Living campuses

- Expanded the LEAF program, with 59 laboratory teams now accredited University-wide.
- CBD Campus and Wagga Wagga Biomedical Sciences Centre opened, incorporating leading sustainable design features and driving social sustainability to the forefront.
- Climate Fresk program engaged 160 students and staff in climate science and solutions.
- Undertook a pilot initiative to track to nature value at Kensington campus and embed nature objectives in campus planning.

Resource efficiency

- Green cleaning standards established and rolled out at Kensington campus.
- The first University-wide lab swap events were run, saving consumables, costs and carbon emissions.
- Sustainable Procurement Framework formally endorsed by the University Leadership Team (ULT); supplier engagement uplifted to drive emission reductions.
- Two more food and drink retailers achieved a Plastic Free Dining Gold Award, with 100% of retailers achieving a gold or silver award by the end of 2024.

Contents

Climate action

Climate action

Goal: Take urgent action to achieve net zero emissions across our operations and value chain.

Highlights

> Electrification Program Stage 1 completed, with Paddington Campus, David Philips Fields and seven buildings at Kensington Campus fully electrified.

> New solar PV systems for Robert Webster Building, Manly Vale campus and David Philips Field.

> Climate risk assessments undertaken to inform resilience planning and reporting.

> Interactive carbon dashboards engage UNSW staff to tackle emissions.

Sustainable Development Goal(s)

Our activities in this area contribute to the following SDGs: 7 and 13

Focus on these targets:

> 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.

Why this matters

Climate change is an existential threat and tackling it is a top priority for our students, staff and communities, as well as a key UNSW research and teaching focus. Our 'Climate action' theme includes measures to reduce operational (scope 1 and 2) emissions such as switching to renewable energy and electrifying our campuses, as well as tackling value chain (scope 3) emissions by engaging with our key suppliers and divesting from fossil fuel investment holdings.

How we are responding

Our approach is underpinned by a comprehensive annual inventory of our greenhouse gas (GHG) emissions undertaken since 2018, and our target to reduce total (scope 1, 2 and 3) emissions in line with efforts to limit temperature increase to 1.5°C, the goal of the Paris Agreement. We will continue to monitor our performance and review our target to ensure it reflects best practice and maximum effort towards – or beyond a fair share of – the necessary 50% global emission reduction by 2030 identified in the Intergovernmental Panel on Climate Change (IPCC) Special Report on Global Warming of 1.5°C[2] .

Value chain emissions result from activities such as construction, procurement, travel and investment activities, some of which organisations can influence but not directly control. Tracking and reducing these emissions is highly complex. We are actively engaging with UNSW suppliers and other stakeholders to reduce value chain emissions, driven by our Sustainable Procurement Framework.

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

Targets	Status	Comment
Maintain net zero operational (scope 1 and 2) emissions	Achieved	Target has been achieved since 2020, when UNSW switched to 100% renewable electricity, in addition to onsite solar PV, efficiency initiatives and carbon offset purchases.
Expand onsite solar PV capacity to 1.5MWp	Achieved	New solar PVs systems installed at Robert Webster Building (95 kW) and Manly Vale campus (66 kW) in 2024, bringing the total to 1.53 MW.
Reduce total (scope 1, 2 and 3) emissions by 30% by 2025, 50% by 2030 and to net zero by 2050	Achieved	2024 calendar year emissions decreased by 8%. Emissions were 32% lower than the 2018 baseline, meaning that the 30% reduction by 2025 milestone was achieved.
Divest investments in fossil fuel companies	On track	UNSW remains on track to meet our commitment to divest listed equities and corporate debt of companies that generate 20% or more of their revenue from the ownership and / or exploitation of fossil fuel reserves by 31 December 2025.

[2] https://www.ipcc.ch/sr15/

Climate action

continued

2023 summary

A major milestone was reached in early 2025 with the completion of Stage 1 of the Electrification Program (see case study). New solar PV systems are on track to be installed on Robert Webster Building, David Philips Field and at Manly Vale campus by Q2 2025, enabling UNSW to achieve our target of 1.5 MW of installed capacity.

UNSW continues to operate using 100% renewable electricity and maintain net zero operational (scope 1 and 2) emissions and remains on track to meet our fossil fuel divestment target.

Interactive carbon dashboards were introduced to engage UNSW staff to tackle emissions, and significant progress was also made in sustainable procurement (see case studies).

Total greenhouse gas emissions reduced in 2024, mainly due to a reduction in emissions from investments and business travel (see case study). UNSW therefore achieved our target of a 30% reduction in total emissions by 2025.

Electrification Program Stage 1 completed

Since 2022, UNSW has been transforming our campuses through the Electrification Program, replacing gas-powered systems with cleaner, more efficient electric alternatives. A major milestone was reached in early 2025 with the completion of Stage 1 of the upgrade program.

Electrification upgrades of the Kensington Colleges were completed, starting with Colombo House, the first building to transition to an all-electric system in August 2024. The program has since also electrified the other four Kensington Colleges, the Goldstein Hall kitchen (D16), which serves more than 1,300 meals daily, as well as the Scientia building, Pooh Corner Childcare, David Phillips Field, and Paddington campus. These upgrades set a strong foundation for future sustainability projects and reinforce UNSW's commitment to reducing our carbon footprint.

Across all colleges, gas-powered systems have been replaced with efficient electric alternatives including seven domestic hot water heat-pumps, 34 heat pump-operated dryers and 34 high efficiency washers, 31 induction cooktops and 10 electric barbecues. These upgrades are powered by 100% renewable electricity, eliminating reliance on natural gas and significantly improving energy efficiency.

The shift to electric kitchens is delivering practical benefits for students and staff. The Goldstein Hall kitchen now features high-efficiency electric fryers, pressurised bratt pans, combi ovens and induction cooktops and improved dishwashing systems. Staff have already noticed faster cooking times, improved food quality, and more efficient oil filtration, reducing both maintenance and waste.

Clean electrification – the process of replacing assets that use fossil fuels such as natural gas with assets that use renewable electricity – is a key component of UNSW's pathway to net zero emissions. UNSW campuses currently use fossil fuels like natural gas for building heating, hot water, steam, vehicles and backup electricity generation.

Stage 2 will include 5 buildings that are major natural gas users at Kensington campus. Concept designs for Stage 2 upgrades have been completed, with detailed design underway and delivery due to commence in 2025. Potential for high-efficiency ambient loop systems and campus-scale energy storage are also being investigated.

Interactive carbon dashboards engage UNSW staff to tackle emissions

UNSW has completed a complete assessment of greenhouse gas emissions annually since 2018, and in 2024 the data captured was used to create interactive dashboards to compare the emissions of each faculty and division and engage UNSW staff in UNSW's net zero mission.

More than half of UNSW's carbon emissions result from travel and the supply chain and are therefore influenced by decisions made across the organisation. UNSW staff can use the dashboards in Microsoft PowerBI to:

> compare emissions between faculties and divisions

> identify activities in their faculty or division with the highest emissions

> explore opportunities to address key emissions sources, for example by avoiding duplication, sharing existing resources and selecting suppliers with certified sustainability credentials

> rethink travel habits and find ways to achieve goals while reducing air travel.

The dashboards are being updated with 2024 emissions data in early 2025.

Climate risk assessments undertaken to inform resilience planning and reporting

UNSW undertook assessments of climate-related risks and opportunities (CRROs) at Kensington campus and entity-level to help inform resilience planning and future mandatory disclosures required for annual reporting. The assessment was undertaken from August to December 2024 and more than 80 stakeholders were engaged across eight workshops. Key outputs included:

> development of three future climate scenarios based on the IPCC showing how warming of <2°C, 2-3°C and >3°C could impact on the higher education sector, relevant to UNSW's operating context

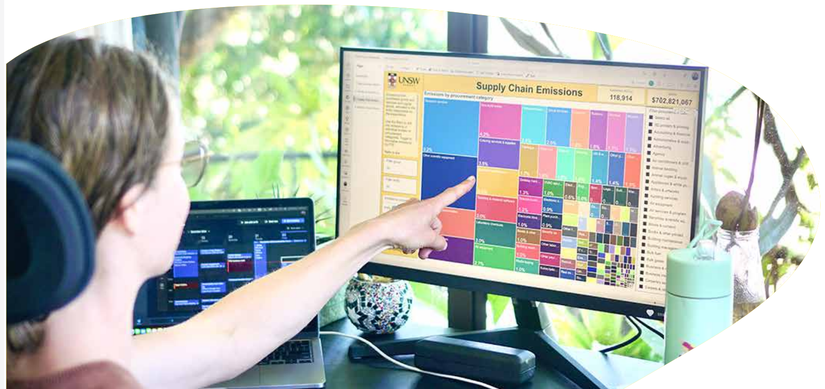
> identification of physical and transition CRROs that UNSW campuses and the operating model could face under the three scenarios

> an assessment of the potential impact of the CRROs, potential mitigation measures and residual impact

> development of metrics for tracking each CRRO.

In early 2025 the focus is on integrating the results of the assessment into the UNSW risk management framework and undertaking additional analysis and resilience planning where required.

The results of the assessment will also inform detailed disclosures on UNSW climate risks, strategy, metrics and governance processes in UNSW annual reports from 2025 onwards, as required under *Annual Mandatory Reporting Requirements TPG23-10*, published by New South Wales Treasury.



Climate action

continued

In depth: tracking our pathway towards net zero emissions

UNSW is committed to reduce total emissions in accordance with a 1.5°C science-based target, which translates to:

- 30% reduction by 2025
- 50% reduction by 2030
- net zero emissions by 2050.

UNSW's carbon reduction target was developed using the Science Based Targets initiative (SBTi)[3] methodology and includes total emissions across UNSW's operations (referred to as 'scope 1 and 2' emissions, mainly from energy use) and value chain (indirect or 'scope 3' emissions from purchased goods and services, construction, investments, travel, tenants, commuting, waste and other sources).

UNSW has publicly reported our scope 1, 2 and 3 emissions since 2019, and since 2023 our greenhouse gas emissions inventory was subject to an independent audit. UNSW is voluntarily providing further detail about our GHG accounting methodology in response to the release of *IFRS S2 Climate-related Disclosures* by the IFRS Foundation[4] , which informs mandatory climate reporting regimes in Australia.

Methodology

The carbon footprint calculated for UNSW covers the calendar year 1 January to 31 December 2024 (CY24) and includes the greenhouse gas emissions that resulted from activities occurring at sites directly operated and business conducted by UNSW in the reporting year. Emissions have been assessed in line with the National Greenhouse and Energy Reporting (NGER) Scheme's Measurement Determination[5], Greenhouse Gas Protocol Corporate Standard[6] and Corporate Value Chain (Scope 3) Standard[7] methodologies. For the first time UNSW also aligned its greenhouse gas inventory with the international standard ISO 14064-1:2018.

The analysis used data based on consumption, spend and processes, and aligned them to life cycle assessment (LCA) databases and other most recently published emission factor sources (e.g. Australian National GHG Accounts Factors) to calculate UNSW's organisational GHG emissions. UNSW has chosen this measurement approach because it provides a complete picture of its material emissions sources and is aligned with global best practice and proposed Australian Accounting Standards Board (AASB) requirements[8]. UNSW's GHG statement and target include the seven greenhouse gases covered by the Kyoto Protocol, expressed in tonnes of carbon dioxide equivalent (tCO_2e).

The organisational boundary includes all UNSW faculties, divisions and Australia-based group entities. The operational control consolidation approach is taken, whereby UNSW accounts for the emissions from operations over which it or one of its subsidiaries has operational control. The operational boundary includes all material scope 1, 2 and 3 emissions. Some scope 3 emission sources (Categories 4, 9, 11 and 12) are excluded where they account for less than 1% of total emissions.

UNSW has incorporated data sourced from a third party in our reporting framework to improve the quality of monitoring and reporting on our responsible investment commitments, including greenhouse gas emissions. This provides more consistent information across investment managers and asset classes and deeper insights into the drivers of performance and risk. UNSW was able to capture emissions data for cash and term deposits, which comprises a significant proportion of the investment portfolio, for the first time in 2024.

Third-party assurance

Independent assurance was obtained from BSI Group ANZ Pty Ltd of UNSW's 2024 scope 1, 2 and 3 emissions. Limited assurance was conducted against the international standard *ISO 14064-1:2018 Greenhouse gases Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals*. Refer to BSI Group Verification Opinion (Appendix 1).

[3] sciencebasedtargets.org
[4] https://www.ifrs.org
[5] https://www.legislation.gov.au/F2008L02309/latest/versions
[6] https://ghgprotocol.org/corporate-standard
[7] https://ghgprotocol.org/corporate-value-chain-scope-3-standard
[8] https://aasb.gov.au/news/exposure-draft-ed-sr1-australian-sustainability-reporting-standards disclosure-of-climate-related-financial-information/

Climate action

continued

Results

The table below shows a detailed breakdown of UNSW's GHG footprint since the 2018 baseline year. Using the market-based method for scope 2 emissions accounting, UNSW's total 2024 emissions are estimated at 215,517 tCO_2e, a decrease of 18,958 tCO_2e (8%) compared to 2023.

The largest decrease was from investments (by 23,523 tCO_2e). While UNSW continues to implement its Responsible Investment Framework including consideration of emission intensity in selecting investment strategies, the largest driver of reduction for 2024 was an improved methodology due to the capture of emissions data for a larger proportion of the investment portfolio, in particular cash and term deposits. The reduction in emissions due to the change in methodology did not meet the threshold for a recalculation of baseline emissions.

Emissions from business travel reduced by 10,182 tCO_2e due to a reduction in the overall emission intensity of air travel bookings. Purchased goods and services increased by 6,394 tCO_2e and capital goods increased by 7,122 tCO_2e, both reflecting an increase in supply chain expenditure despite increased supplier data capture.

Scope 1 emissions increased by 20%, most of which (1,300 tCO_2e) resulted from an increase in refrigerant gases leakages from heating, ventilation and cooling (HVAC) systems. Refrigerant gases typically have a high global warming potential, so leakage of relatively small volumes can contribute significantly to overall emissions. HVAC systems are regularly monitored which led to the identification of the leakages.

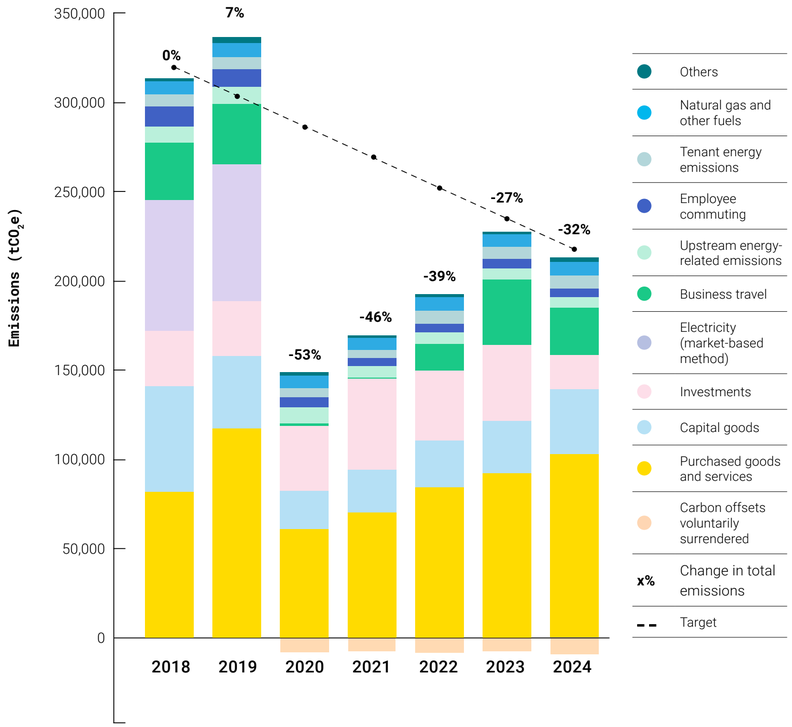
Overall, the 8% reduction in total emissions in 2024 meant that UNSW emissions of 215,517 tCO_2e were 32% lower than the 2018 baseline of 317,278 tCO_2e. UNSW therefore exceeded its target of a 30% reduction by 2025, with the largest reductions coming from electricity (74,398 tCO_2e, capital goods (23,182 tCO_2e) and investments (11,769 tCO_2e).

Additional emission reduction strategies will be required for UNSW to achieve its next milestone target of a 50% reduction in total emissions by 2030. Opportunities are being evaluated in 2025, with particular consideration given to key emission sources and potential to sequester carbon dioxide on UNSW-owned land.

Greenhouse gas emissions statement

Emissions scope / category	Emissions (tCO_2e)						
	2018	2019	2020	2021	2022	2023	2024
Scope 1: direct emissions	**8,151**	**8,965**	**8,194**	**7,571**	**8,638**	**7,680**	**9,217**
Natural gas and other fuels	7,162	8,000	7,195	6,729	7,777	7,238	7752
Refrigerant and laboratory gases	631	608	642	467	580	260	1300
Livestock emissions	357	357	357	374	281	182	166
Scope 2: indirect (electricity) emissions	**74,398**	**77,509**	**70,810**	**64,220**	**64,105**	**62,857**	**64,158**
Electricity (location-based method)[9]	74,398	77,509	70,810	64,220	64,105	62,857	64,158
Scope 3: indirect (value chain) emissions	**234,729**	**254,084**	**142,251**	**163,862**	**186,176**	**222,531**	**206,300**
Category 1: Purchased goods and services	82,599	118,724	61,609	70,861	85,176	93,295	103,918
Category 2: Capital goods	60,024	40,905	21,414	24,355	26,540	29,685	36,842
Category 3: Upstream energy-related emissions	9,292	9,753	8,926	6,779	6,570	6,542	5,999
Category 5: Waste generated in operations	899	2,348	910	707	951	1,052	1,087
Category 6: Business travel	32,387	34,295	1,672	596	15,002	36,940	26,758
Category 7: Employee commuting	11,275	9,861	5,712	4,399	4,929	5,153	5,072
Category 13: Tenant energy emissions	7,030	6,944	5,110	4,746	7,294	6,888	7,170
Category 15: Investments	31,223	31,253	36,898	51,418	39,714	42,977	19,454
Sub-total (before surrenders)	**317,278**	**340,557**	**221,255**	**235,652**	**258,920**	**293,069**	**279,675**
Scope 1 voluntary surrenders (ACCU, VCU)	**0**	**0**	**8,194**	**7,571**	**8,638**	**7,680**	**9,217**
Net scope 1 emissions (including offsets)	**8,151**	**8,965**	**0**	**0**	**0**	**0**	**0**
Scope 2 voluntary surrenders (LGC)[10]	**0**	**0**	**70,810**	**64,220**	**64,105**	**62,857**	**64,158**
Net scope 2 emissions (market-based method)	**74,398**	**77,509**	**0**	**0**	**0**	**0**	**0**
TOTAL EMISSIONS (excluding offsets)[11]	**317,278**	**340,557**	**150,445**	**171,432**	**194,814**	**230,211**	**215,517**
Net emissions (including offsets)	**317,278**	**340,557**	**142,251**	**163,862**	**186,176**	**222,532**	**206,300**

UNSW greenhouse gas emissions, 2018-2024



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

[10] 97,208 LGCs were surrendered, equivalent to 97,208 MWh of electricity and 64,158 tCO_2e of 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.

[11] 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).

Climate action

continued

Supporting solutions to the climate and nature crises

For 2024 emissions, UNSW chose to voluntarily purchase carbon credits equivalent to its scope 1 emissions (9,217 tonnes[12]). UNSW partnered with Greenfleet by purchasing 9,217 offsets from Australian native reforestation offsets, and additionally purchasing the same number of Verified Carbon Credits Units (VCUs) from international projects: essentially a 'double offset'. Greenfleet plants legally protected biodiverse native forests that address deforestation and biodiversity loss, protect the climate, reduce soil erosion and provide critical habitat for wildlife. UNSW's partnership with Greenfleet is contributing to the Three Rivers project on Bundjalung Country, west of Nimbin in the Northern Rivers of New South Wales. The area will be planted in 2025 to create legally protected native forest, helping restore an ecosystem that is home to conservation-significant plants including the critically endangered scrub turpentine and endangered Davidson plum. It also supports various endangered and vulnerable fauna, such as rose-crowned fruit doves, koalas, and giant barred frogs that will find potential habitat in the forest as it grows. Restoring the riparian areas will also enhance potential habitat for species like platypuses and native fish.

UNSW also chose to invest in 9,217 Verified Carbon Standard (VCS)-certified units, including 9,000 units from the Nanning Landfill Gas Power Generation Project in Nanning City, China. This project captures methane from landfill waste and converts it into renewable electricity. By replacing fossil fuel energy, it cuts emissions from both waste and energy production while fostering sustainable waste management and job creation.

[12] Carbon credits do not contribute to UNSW meeting its total (scope 1, 2 and 3 emission reduction target

Living campuses

Contents

Living campuses

Goal: Create healthy, resilient places for learning and research where people and nature thrive.

Highlights

- Undertook a pilot initiative track to embed nature objectives in campus planning; nature value increased at Kensington campus.
- Climate Fresk program engaged 160 students and staff in climate science and solutions.
- Expanded the LEAF program, with 58 laboratory teams now accredited University-wide.
- CBD Campus and Wagga Wagga Biomedical Sciences Centre opened, incorporating leading sustainable design features and driving social sustainability to the forefront.

Sustainable Development Goal(s)

Our activities in this area contribute to the following SDGs: 4, 11,12 and 15

Focused on these targets:

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

Why this matters

Our campuses and field stations are a critical enabler of the daily lives of our students and staff, and we aim to make them vibrant places where people can connect with each other and with nature. This connection not only benefits human occupants, but also the wildlife of ecosystems that we call home. Many of our students and staff are already highly engaged in environmental sustainability issues and their time at UNSW can help prepare them to contribute to a better world.

How we are responding

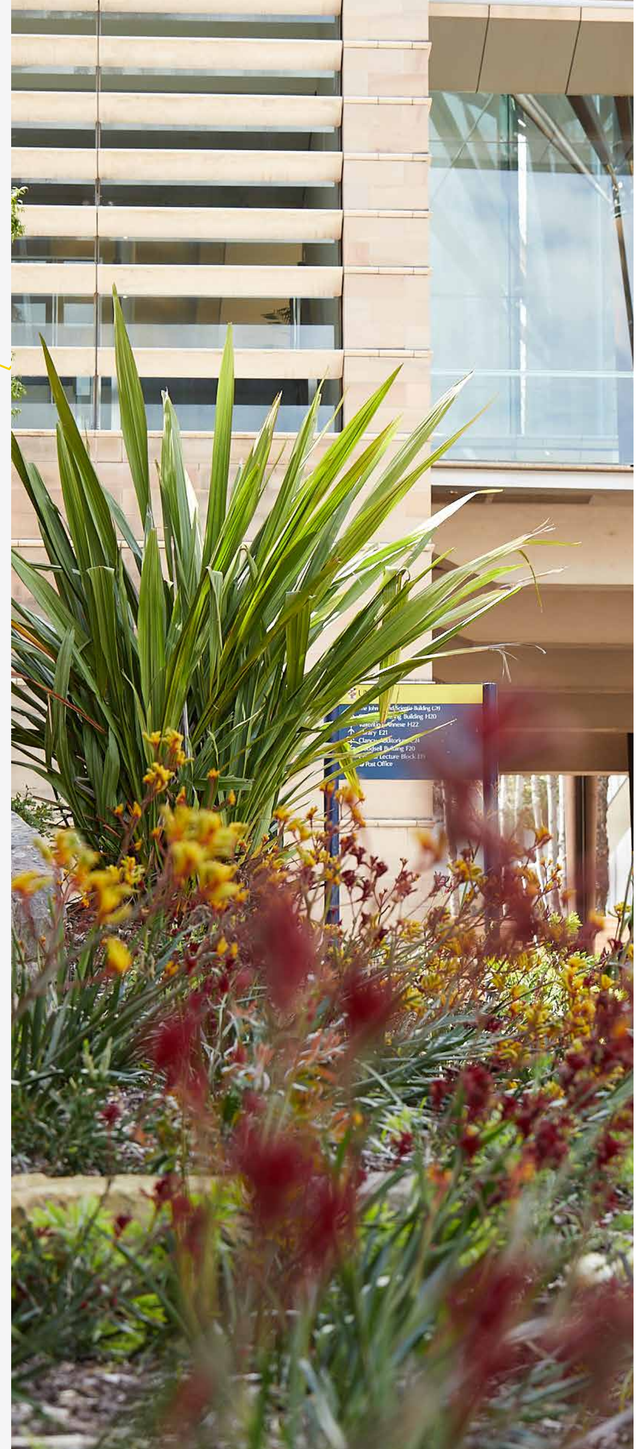
'Living campuses' includes how we design and construct buildings and infrastructure, manage green spaces, how our students and staff travel to our campuses, and how we engage students and staff in environmental sustainability issues.

Through the LEAF program we aim to engage laboratory users in sustainable practices to save energy, water and waste. Beyond our campuses, UNSW is transforming the 39,000-hectare Fowlers Gap Arid Zone Research Station in western New South Wales from a sheep station into a dedicated site for conservation and ecological restoration.

Estate Management is focused on optimising the use of existing buildings and other assets throughout their life cycles. When new buildings and refurbishments are required, our minimum sustainability standards and Capital Projects Sustainability Framework apply.

The planning and management of our campuses is led by Estate Management in collaboration with UNSW faculties and divisions, consultants, contractors, government bodies and the wider community.

Targets	Status	Comment
Capital projects achieve our minimum sustainability requirements	Achieved	UNSW capital projects completed in 2024 met the minimum requirements set out in the *Environmental Sustainability Plan 2022-24.*
Kensington campus achieves a net gain in biodiversity value	Achieved	The nature value metric was measured again at the end of 2024 and shows an increase in nature value at Kensington campus (see case study).
Increase student and staff awareness of environmental sustainability issues	Achieved	The average score rating measured through a student and staff survey increased from 3.03 in 2022 to 3.09 in 2024.
At least 85% of students and staff travel to campus by sustainable travel modes	Not achieved	A survey in late 2024 showed that students and staff travelling by sustainable modes was 84%, just short of the 85% target.



2024 summary

Several initiatives were implemented or progressed in 2024 in support of 'Living campuses' targets.

The LEAF program was expanded further, with 58 labs achieving a LEAF accreditation by the end of 2024 (see case study) and new resources developed to support lab teams looking to embed sustainability principles in their operations. Climate Fresk at UNSW was launched and engaged 160 students and staff in an interactive learning experience that unravels the complexities of climate change while fostering collaboration, reflection and solutions-focused action.

There was significant progress to embed sustainability objectives in capital projects, exemplified by CBD Campus and Wagga Wagga Biomedical Sciences Centre incorporating leading sustainable design features. Work to develop a new Capital Projects Sustainability Framework has been progressed ahead of planned launch in mid-2025.

A pilot initiative track to embed nature objectives in campus planning was progressed and nature value at Kensington campus was reassessed at the end of 2024, showing an increase compared to the 2022 baseline (see case study).

Living campuses

continued

Measuring and increasing nature value at Kensington campus

A metric for measuring nature value at Kensington campus has been under development since 2022 and in 2024, Estate Management started a pilot program aiming to test the nature value metric, develop implementation processes, and identify opportunities to improve nature value across UNSW campuses. The pilot enabled UNSW to progress on our nature positive goals by:

> establishing nature value as an objective for master planning and capital projects

> understanding which opportunities hold most potential for interventions to be impactful

> developing tools and implementation guidelines to brief projects participating in the pilot

> implementing ongoing internal capability training

> comparing the metric with evolving industry measures and benchmarks.

Going forward, UNSW will continue to prioritise nature value at master planning and project scales, seek to anticipate impacts from development and climate change in landscape design, consider embedding additional measures in the nature value metric, and continue to seek industry alignment while a common language and methodology are developed.

At the close of 2024, UNSW measured nature value across Kensington campus in comparison to the 2022 baseline. The table below shows the changes across the 5 measures, with drivers of change including growth in tree canopy, native planting guidelines and the replacement of D14 building with green space. Overall, there was an increase in nature value during the measurement period, meaning that this *Environmental Sustainability Plan 2022-24* target was achieved.

Description	Measure	Baseline data	2024	Key drivers
Tree canopy cover	% of the total surface area that is covered by primary tree canopy	21%*	23%	Natural growth
Native trees	% of all trees that are native species (including locally Indigenous and endemic trees)	80%	81%	Native planting guidelines
Integrated green-blue infrastructure	Total area (m²) of green roofs, walls and facades, ponds, and water features	1094 m²	1094 m²	N/A
Plants and garden beds	% of the total area of Kensington campus that has plants and garden beds (excludes lawns)	13%	13%	N/A
Total green space	% of the total surface area of Kensington campus that is green space (plants and garden beds, and lawns)	25%	26%	D14 building replaced with green space
Overall score (0-50)		25	27	

* Previous measure 19%; remeasured in 2025 using an updated methodology

Living campuses

continued

Playing cards for climate

Climate Fresk at UNSW was introduced in 2024, engaging 160 students and staff in a science-based, interactive learning experience. The workshops unravel the complexities of climate change while fostering collaboration, reflection and solutions-focused action.

While the impacts of climate change intensify, a 2023 Ipsos Climate Change Report revealed that half of Australians still attribute climate change to natural processes, and half feel overwhelmed by conflicting information[13] . Bridging this knowledge gap is critical for empowering individuals and institutions to take meaningful climate action.

Guided by the 'minds, hearts, hands' approach, participants work through three phases:

- **Build knowledge**: Groups map the climate system using cards. Each card represents one climate change concept and is connected to other cards using cause-to-effect grouping.
- **Connect emotionally**: Participants share their reactions in a supportive environment, bridging the emotional gap often caused by climate despair.
- **Move to action**: Teams discuss actionable solutions at and beyond their role at UNSW, fostering collaboration across disciplines and perspectives.

Climate Fresk is also a not-for-profit initiative with more than 2 million participants globally that empowers communities to tackle climate challenges collectively. Keep an eye out for opportunities to participate in Climate Fresk in 2025.

Laboratory sustainability program expanded

The LEAF program returned for a fourth year and successful LEAF teams received awards at an event on 29 November. By the end of 2024, 59 UNSW labs had received LEAF accreditations including 35 bronze, 18 silver and six gold awards (up from 42 accredited labs in 2023).

LEAF is an internationally recognised standard for sustainable laboratory operations developed by University College London. It requires laboratory teams to complete actions to save energy, water and waste, reduce their carbon emissions and improve research quality. Teams are supported with sustainability resources, guidance and funding through the LEAF lab grants initiative. Depending on the actions implemented, lab groups can achieve bronze, silver or gold LEAF awards following an internal audit process.

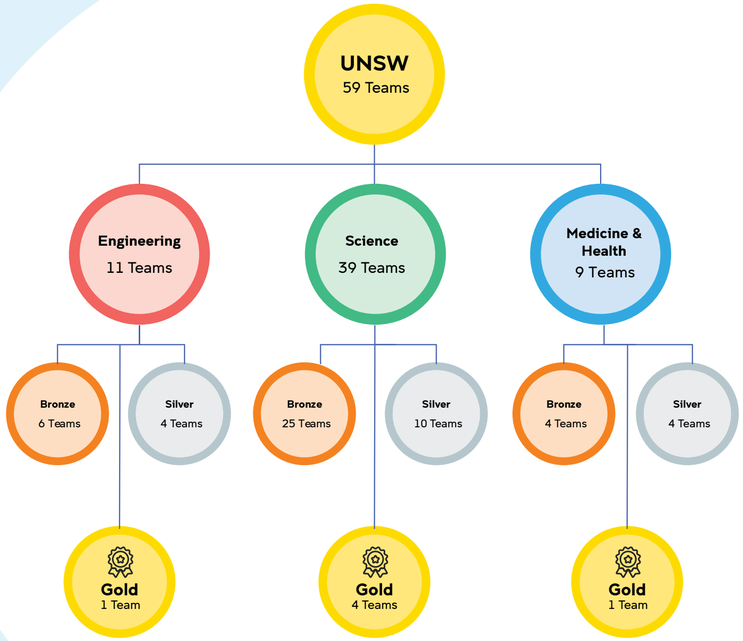
Professor Merlin Crossley, Deputy Vice-Chancellor Academic Quality, congratulated the teams on their achievements.

"Our LEAF accreditations demonstrate UNSW's leadership in sustainability across the sector. Each of us has the power to amplify our real-world impact by sharing our achievements, inspiring colleagues and encouraging other labs to join. Together, we can help shape a more sustainable future," he said.

Life science labs alone are responsible for an estimated 2% of global plastic waste and use 3-10 times more energy per square metre than a typical office. The LEAF program aims to reduce carbon emissions and other environmental impacts, while supporting research quality.

LEAF's online calculators allow lab teams to estimate the financial and environmental impacts of lab operations, helping them identify opportunities and make data-driven decisions to improve sustainability.

Across UNSW Engineering, Medicine & Health, Science and Arts, Design & Architecture as well as the Children's Cancer Institute and the RNA Institute 78 teams were participating in LEAF by the end of 2024, accounting for approximately 40% of lab spaces at UNSW.



[13] https://www.ipsos.com/en-au/climate-change-report

Gold Award

- **Children's Cancer Institute** – School of Clinical Sciences
- **Ferrari Lab** – School of Biotechnology & Biomolecular Sciences
- **Microfluidics Lab** – School of Mechanical & Manufacturing Engineering
- **Smart Materials and Surfaces** – School of Chemistry
- **Teaching Labs 11, 12 and prep space** – School of Biotechnology & Biomolecular Sciences
- **Ramaciotti Centre for Genomics** – School of Biotechnology and Biomolecular Sciences

Living campuses

continued

Silver Awards

- **Australian National Fabrication Facility** – School of Electrical Engineering & Telecommunications
- **Baker Lab** – School of Biotechnology & Biomolecular Sciences
- **Burns Lab** – School of Biotechnology and Biomolecular Sciences
- **C25 Lowy Level 2** – School of Medical Sciences
- **Decision Neuroscience Lab** – School of Psychology
- **Enviro Labs** – School of Chemical Engineering
- **Hunter Lab** – School of Chemistry
- **Implementation 2 Impact** – School of Population Health
- **Kirby Lab** – School of Medical Sciences
- **Lenardon Lab** – School of Biotechnology & Biomolecular Sciences
- **Lessio Lab** – School of Chemistry
- **Lowy LG Green** – School of Medical Sciences
- **Peeks Lab** – School of Chemistry
- **Refrigeration & Energy Storage Lab** – School of Mechanical & Manufacturing Engineering
- **Solar Lab** – School of Mechanical & Manufacturing Engineering
- **Synbiote** – School of Biotechnology & Biomolecular Sciences
- **Synthetic Teaching Lab 262** – School of Chemistry
- **UNSW Stores** – Deans Unit (Science)

Bronze Awards

- **Advanced Characterisation Lab** – School of Photovoltaic & Renewable Energy Engineering
- **Brown Lab** – School of Biotechnology & Biomolecular Sciences
- **Cornsters Lab** – School of Biological, Earth & Environmental Sciences
- **Crossley Quinlan Lab** – School of Biotechnology & Biomolecular Sciences
- **D26 Lv5 PC2** – School of Biological, Earth & Environmental Sciences
- **Field / Ball Lab** – School of Chemistry
- **First Year Teaching Lab** – School of Physics
- **G005 Teaching Prep Area** – School of Biological, Earth & Environmental Sciences
- **Ground floor Teaching Labs 1-4** – School of Biological, Earth & Environmental Sciences
- **High Bay Lab** – School of Materials Science & Engineering
- **Lan Lab** – School of Biotechnology & Biomolecular Sciences
- **School of Mechanical & Manufacturing Engineering Labs**
- **Medicine & Health Teaching Labs** – School of Medical Sciences
- **Nanoionics Lab** – School of Materials Science & Engineering
- **Nanoporous Materials Laboratory** – School of Materials Science & Engineering
- **NanoSoils** – School of Chemistry
- **Oates Lab** – School of Biotechnology & Biomolecular Sciences
- **Ooi Ecology Lab** – School of Biological, Earth & Environmental Sciences
- **OPTOM Preclinical Lab** – School of Optometry & Vision Science
- **Recombinant Products Facility** – School of Biotechnology & Biomolecular Sciences
- **RNA Institute** – School of Chemistry
- **Rural Clinical Campus Port Macquarie** – Clinical Medicine
- **Samuels Level 1 Lab** – School of Biological, Earth & Environmental Sciences
- **Samuels LG Lab** – School of Biomedical Engineering
- **Science Workshop** – Deans Unit (Science)
- **SEACS** – School of Biological, Earth & Environmental Sciences
- **SOVS - PC2 Microbiology Lab** – School of Optometry & Vision Science
- **St George Clinical Campus** – Clinical Medicine
- **Teaching Lab 1 and prep space** – School of Biotechnology & Biomolecular Sciences
- **Teaching Lab 10 and prep space** – School of Biotechnology & Biomolecular Sciences
- **Teaching Labs WW122 and WW123 and prep space** – School of Biotechnology & Biomolecular Sciences
- **Virology Research Laboratory** – School of Medical Sciences
- **Wich Lab** – School of Chemical Engineering
- **Wook Lab** – School of Biotechnology & Biomolecular Sciences
- **Zhang Lab** – School of Biotechnology & Biomolecular Sciences

Living campuses

continued

CBD campus fit-out completed, targeting leading sustainability benchmark

UNSW has opened its new CBD campus, offering a modern and welcoming space to enhance the University's education offerings. The project supports flexible, collaborative learning with spaces that adapt to different group sizes, from intimate meetings to large lectures. The project benefits from the base building's Green Star certification, which supports energy efficiency, active transport, EV parking and high levels of connectivity in a walkable city centre.

The project is seeking 5 Star Green Star Interiors v1.3 certification for the fit-out, with initiatives including:

> high levels of indoor environmental quality achieved through a myriad of initiatives, including improved thermal comfort, daylight and views, non-toxic materials selection, and more than 80 square metres of natural planting which enhance the environment for students

> implementation of UNSW Green Cleaning Standards

> occupant surveys measuring satisfaction before and after the relocation to the new space.

Wagga Wagga Biomedical Sciences Centre opened

UNSW's Biomedical Sciences Centre opened in February 2025 and is the new home to the Faculty of Medicine & Health's Rural Clinical Campus in Wagga Wagga. The purpose of the centre is changing the way medical students are trained in Australian rural, regional and remote communities by delivering high-quality local training to the future regional medical taskforce. This project aims to address the shortage of clinicians in regional areas by allowing students to stay close to family and friends and removing the financial barrier of having to relocate to get a degree.

The new building comprises tutorial rooms and a function space, a lecture theatre, dry labs, research facilities, scenario rooms, staff offices and on-site parking. Sustainability features include:

> all-electric design incorporating air source heat pumps for heating and cooling and rooftop solar PV system

> an 8000-litre water harvesting tank to allow rainwater use for irrigation

> reduced embodied carbon through reduction in Portland cement and steel

> provision of bicycle parking and associated end-of-trip facilities

> developing an Operational Resilience Plan to improve the building's preparedness and responsiveness in the face of climate events and other potential disruptors

> implementing UNSW Green Cleaning Standards to support a healthy indoor environment for all its occupants, as well as reducing the environmental impacts from building operations

> seeking LEAF certification for lab teams to reduce the environmental impacts of laboratory practices.

Living campuses

continued

Health Translation Hub on track to achieve outstanding sustainability benchmarks

The UNSW Health Translation Hub (HTH), part of the Randwick Health & Innovation Precinct, is on track to be completed in late 2025. This significant project will integrate health education, training and research with acute healthcare services, directly benefiting patients, carers and the NSW community. The HTH has been developed to support the acceleration of improved health services for communities locally and globally.

Key sustainability initiatives of this project include:

- outstanding environmentally sustainable design performance seeking the first 6 Star Green Star Buildings v1 certification in NSW
- seeking 5.5 Star NABERS Energy and 5 Star NABERS Water ratings
- targeting 20% reduction in upfront emissions, through post-tensioned slabs to reduce structural mass and specification of low carbon materials including concrete mix, steel and aluminium
- a range of sustainable design features including rainwater harvesting, 100 kW rooftop PV system, all-electric design including heat pumps and facade hoods to reduce solar heat gain
- UNSW Plaza, with 2500 square metres of publicly accessible open space which features native and medicinal landscaping elements, providing access to nature.

Kensington campus blooms with the Bush Tucker Trail

UNSW Kensington campus is increasing its biodiversity with the transformation of the Green Trail into the new Bush Tucker Trail Project. Led by students Anil Babu and Brahada Shanbhag from the Master of Environmental Management (MEM) program under the guidance of Dr Daniel Robinson, alongside Ardra Meletath, Project Administrator at the UNSW Cities Institute, the project involved collaboration with Estate Management, the local Indigenous community and businesses. The project helps revitalise the campus landscape and creates habitat for native flora and fauna.

Phase 1 of the Bush Tucker Trail, completed in October 2024, brought together more than 25 students and staff to plant 265 native bush food plants spanning 26 species selected with expert advice from Peter Cooley, CEO of La Perouse-based native plant nursery IndigiGrow.

The project won first prize at the Global Youth Health Forum: Healthy City Policy Contest in Seoul, part of the 10th Global Conference of the Alliance for Healthy Cities, held in collaboration with the Seoul Metropolitan Government and the World Health Organization (WHO).

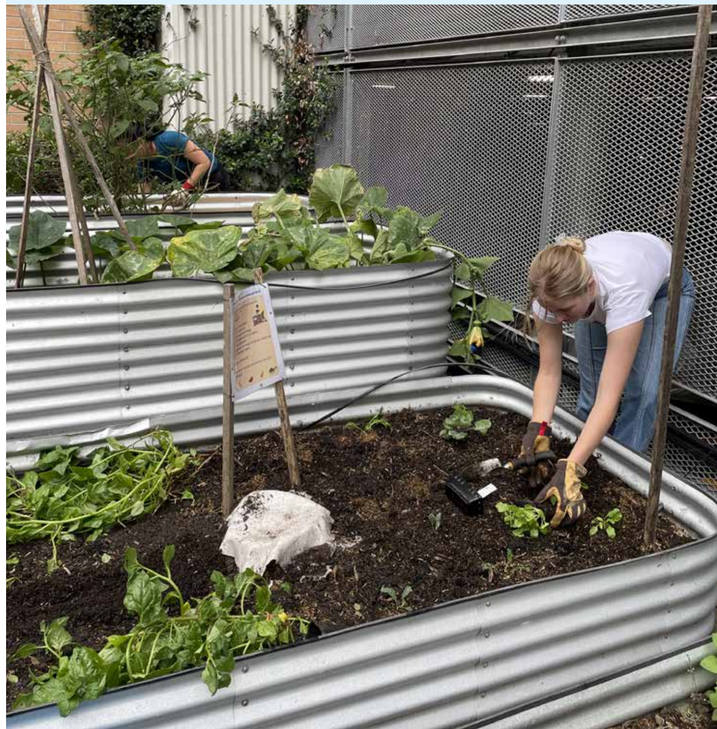
Phase 2 will commence in 2025 and includes designing interpretive signage with audio-visual elements to enhance educational engagement, and installing native beehives and insect hotels to support a thriving ecosystem.

By embedding native plants and cultural storytelling into our urban environment, UNSW continues to transform our campuses into vibrant, sustainable and inspiring spaces for everyone to thrive.

UNSW Urban Growers is back

After a successful winter garden bee, UNSW Urban Growers hosted a spring planting session on 15th October 2024 at the Barker Street Car park garden. This event was a special edition to pre-celebrate World Food Day. Ten enthusiastic staff and students from various faculties and divisions reflected on this theme while planting pumpkin, bean, cucumber and leek seeds. The team also harvested plenty of lettuce and silverbeet, and enjoyed eating fresh strawberries on the spot.

UNSW Urban Growers is a staff and student initiative to cultivate vibrant green spaces across our campuses. Whether you're an experienced gardener or just curious to get your hands dirty, our community gardens offer a unique opportunity for hands-on learning, interdisciplinary research, and reconnecting with nature right here at UNSW. The garden is open to everyone—drop by anytime to enjoy a quiet lunch at the picnic table, explore the plants, or take a break from your busy day to garden.



Resource efficiency

Resource efficiency

Goal: Conserve resources by reducing consumption, prioritising reuse and responsibly managing waste.

Highlights

- Green cleaning standards established and rolled out.
- The first University-wide lab swap events were run saving consumables, costs and carbon emissions.
- Sustainable Procurement Framework formally endorsed by the ULT, supplier engagement uplifted to help drive sustainable outcomes.
- Two more food and drink retailers achieved a Plastic Free Dining Gold Award, with 100% of retailers achieving a gold or silver award by the end of 2024.

Sustainable Development Goal(s)

Our activities in this area contribute to the following SDGs: 6,7 and 12

Focused on these targets:

- 6.4 By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of fresh water 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.
- 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.
- 12.7 By 2030, promote public procurement practices that are sustainable, in accordance with national policies and priorities.

Why this matters

University campuses and activities are significant consumers of energy, water and other natural resources, and generators of waste. Our 'Resource efficiency' theme includes programs to optimise the energy and water efficiency of buildings, promote reuse over single use and improve our recycling systems. By minimising waste and improving waste systems and behaviours, we aim to conserve natural resources, minimise contamination, reduce costs and support sustainable waste management practices among our students and staff.

How we are responding

Energy and water efficiency initiatives and waste management systems are managed by Estate Management in collaboration with contractors and the wider student and staff community. We aim to promote reuse and eliminate single-use plastics from campus through initiatives such as Plastic Free Dining and associated communication activities.

The Waste Management Plan guides improvements to our recycling systems, reuse initiatives such as the furniture reuse program, and efforts to optimise waste segregation.

Targets	Status	Comment
Reduce energy intensity by 5%	Not achieved	Energy intensity increased compared to 2023 due to an increase in electricity and gas consumption and is above the targeted level.
Reduce water intensity by 5%	Achieved	Water intensity reduced compared to 2023 due a reduction in mains and bore water usage. Water intensity is significantly lower than the target.
Divert at least 85% of general waste from landfill	Not achieved	82% of general waste was diverted from landfill in 2024, slightly short of the target. Performance has been affected by compostable packaging being sent to landfill as required under new regulations.
Reduce general waste by 20%	Not achieved	General waste volumes increased due to an increase in activity at UNSW's Sydney campuses. There has been a 19% reduction in general waste since 2018, slightly short of the targeted 20% reduction.
At least 80% of retailers achieve Plastic Free Dining Gold Award status	Not achieved	100% of food and drink retailers achieved a gold or silver award, but the number achieving gold (16 out of 26 retailers, 62%) is short of the target.

Resource efficency

continued

2024 summary

There were both progress and challenges in energy, water and waste management during 2024.

Water intensity continued to reduce due to reductions in both mains and bore water usage. Bore water supplied 52% of water consumption in 2024.

Heating, ventilation and air conditioning (HVAC) retro-commissioning progressed for UNSW Kensington's E8 (Hilmer) and E10 (Science and Engineering) buildings, aiming to improve building efficiency and user comfort. The program will be completed and measurement and verification of results undertaken in Q2 2025. A HVAC optimisation program was also introduced and works completed for the first two buildings, G17 (Electrical Engineering) and G19 (John Niland Scientia). Energy efficiency initiatives were not sufficient for the target of a 5% reduction in energy intensity to be achieved.

Campus retailers continued their plastic free journey, with two more achieving a Plastic Free Dining Gold Award (see case study). Of 26 Kensington campus retailers, all (100%) had achieved a gold or silver award by the end of 2024, however the number achieving gold (16, or 62%) was short of the 80%. Nonetheless, the results highlight the progress made by every UNSW food and drink retailer in eliminating single-use plastics since the introduction of Plastic Free Dining in 2021.

Waste audits and a new Waste Management Plan were completed to guide the update of waste and recycling systems on campus. Look out for updated bin systems and signs being rolled out in 2025.

A continued increase in campus activity saw a slight increase in amount of general waste at Sydney campuses. General waste has reduced by 19% compared to 2018, slightly short of the 20% reduction target.

Inaugural lab swap events were a success

Operating a lab requires constant investment in equipment and consumable products like pipettes, flasks and tubes. Due to the variable nature of research, large volumes of these items often go unused, become redundant or expire. These unused products take up space in labs before eventually being disposed of through University waste streams. Lab consumables and equipment are also one of UNSW's top five supply chain carbon emissions sources.

The Technet committee organised lab swap events on 7 August and 11 December to enable redistribution of unused items between lab teams to save money, free up storage space and avoid unnecessary disposal into waste streams.

Approximately 60 UNSW students and staff participated in the first lab swap, with nearly 80 boxes of consumables and seven pieces of equipment donated. The most popular items were four 3D printers that were quickly snaffled up. It was a successful first event, with more than 70% of items claimed and most remaining consumables donated to UNSW stores. An estimated $26,000 worth of lab items were swapped, resulting in approximately 12 tonnes of CO2e emissions avoided compared with buying the items new. Similar engagement and impact were seen at the second lab swap in December.

Following the success of the first lab swap events, Technet will be running more lab swaps in May and December 2025.

Resource efficency

continued

Green Cleaning Standards developed and rolled out

An opportunity was identified in 2024 to align UNSW's cleaning practices with its commitment to continual improvement and environmentally sustainable operations. UNSW's Green Cleaning Standards outline the requirements for implementing environmentally friendly cleaning practices for contracts held by Facilities Management, with the goal of ensuring a safe, clean environment while promoting sustainability through careful selection, use and disposal of cleaning products.

Purchasing guidelines (or minimum standards) are prescribed for:

> cleaning products

> cleaning equipment

> other cleaning materials.

Contractors are required to use chemicals certified by Good Environmental Choice Australia (GECA), an independent, not-for-profit organisation that runs a multi-sector ecolabelling program. GECA's standards are more rigorous than any other Australian ecolabelling program for commercial cleaning products and signify confidence that whole products are of the highest environmental and human health standards. The agreed standards have been integrated into service agreements for Kensington campus.

In 2025, UNSW Facilities Management are investigating certification under the Cleaning Accountability Framework, which recognises best practice in ethical labour practices and procurement.

Sustainable Procurement Framework launched; supplier engagement uplifted

In July 2024, UNSW's Sustainable Procurement Framework (SPF)[14] and road map received endorsement from the ULT, and implementation commenced with the goal of aligning strategic sourcing processes with UNSW's sustainability objectives across:

> environmental sustainability

> modern slavery

> social procurement (Indigenous suppliers, social enterprises and women-owned businesses).

A core focus in 2024 was strengthening partnerships with strategic suppliers to achieve positive environmental and social outcomes for UNSW supply chains. A key part of this effort involved updating UNSW's Supplier Charter to reflect expectations of UNSW suppliers and subcontractors in greater detail and ensure alignment with UNSW's principles of conduct and integrity.

In 2024, UNSW participated in the Sustainable Value Chain Leadership Accelerator, a six-month program delivered by NSW government through the Sustainability Advantage program. The accelerator was aimed at improving supplier engagement to enhance supplier capability to support scope 3 emissions reductions and involved workshops with strategic suppliers to understand suppliers' sourcing practices, support supplier development and explore opportunities to reduce the environmental impacts of our engagement.

In 2025, our focus continues to be around supplier and staff engagement and training, as well as partnering to drive outcomes within the higher education sector.

Driving sustainable outcomes through procurement activity

In 2024 several procurement projects presented an opportunity to embed sustainability:

> **Cleaning**: As part of a cleaning tender in 2024, UNSW developed an internal Green Cleaning Standard, outlining sustainability requirements for cleaning products and equipment. An elevated sustainability evaluation weighting was attributed to the project, and tendering suppliers were interviewed around their sustainability credentials. Responses were used to develop contract KPIs to improve sustainability outcomes, to inform supplier contract management.

> **Office stationery**: In 2024 we worked with our incumbent office stationery supplier to establish a preferred basket of goods[15] , removing products with excessive packaging, highlighting products with third-party sustainability certifications, products made from renewable and/or recyclable materials and products supporting Indigenous businesses, to make it as easy as possible for UNSW staff to make more sustainable everyday purchasing decisions.

[14] https://www.unsw.edu.au/about-us/excellence/unsw-finance/sustainable-procurement

[15] https://www.sustainability.unsw.edu.au/purchase-sustainably-unsws-winc-preferred-basket

Target status summary

Focus Area	Target	Unit	Performance							Status
			2018	2019	2020	2021	2022	2023	2024	
Climate action	Maintain net zero operational (scope 1 and 2) emissions	Tonnes of carbon dioxide equivalent (tCO_2e)	82,443	86,368	0	0	0	0	0	Achieved
	Expand onsite solar PV capacity to 1.5MWp	Megawatts potential (MWp)	0.79	1.16	1.16	1.23	1.37	1.37	1.53	Achieved
	Reduce total (scope 1, 2 and 3) emissions by 30% by 2025, 50% by 2030, net zero by 2050	Tonnes of carbon dioxide equivalent (tCO_2e)	317,278	340,557	150,445	171,432	194,814	229,218	215,517	Achieved
	Divest investments in fossil companies	% of eligible investments in fossil fuel companies	–	–	–	–	–	–	-	On track
Living campuses	New build and refurbishment projects achieve our minimum sustainability requirements	All relevant projects meeting all requirements Y/N	–	–	–	–	–	–	-	Achieved
	Kensington campus achieves a net gain in biodiversity value	Nature value rating (0-50)	–	–	–	–	25	–	27	Achieved
	Increase student and staff knowledge and awareness of environmental sustainability issues	Average rating from 1 (low) to 5 (high)	-	–	–	3.03	–	–	3.09	Achieved
	At least 85% of students and staff travel to campus by sustainable modes	Travel by modes other than private car (%)	–	85%	–	–	84%	-	84%	Not Achieved
Resource efficiency	Reduce energy intensity by 5%	Kilowatt hours per square metre GFA per year (kWh/m²/year)	195	210	189	179	196	201	210	Not achieved
	Reduce water intensity by 5%	Kilolitres per square metre GFA per year (kl/m²/year)	0.93	0.97	0.62	0.54	0.78	0.75	0.63	Achieved
	At least 85% of general waste is diverted from landfill	% of general waste by weight diverted from landfill	94%	49%	65%	83%	82%	81%	82%	Not Achieved
	Reduce general waste by 20%	Tonnes (t) of general waste per year	2852	2838	1409	1609	1992	2079	2315	Not achieved
	At least 80% of retailers achieve Plastic Free Dining Gold Award status	% of food and drink retailers receiving Plastic Free Dining Gold Award	0%	–	–	–	26%	54%	62%	Not achieved

Environmental Data

Energy and water efficiency

(Kensington, Paddington and Randwick campuses)

Energy	Unit	2018	2019	2020	2021	2022	2023	2024
Consumed electricity	Kilowatt hour (kWh)	84,954,523	92,588,228	85,280,032	81,085,776	85,736,828	90,446,128	94,720,229
Electricity from onsite solar		996,974	1,152,340	1,079,664	1,057,563	1,065,861	1,227,595	1,261,873
Gas		33,841,626	37,653,273	34,102,707	33,434,650	37,876,184	34,839,205	36,756,884

Water	Unit	2018	2019	2020	2021	2022	2023	2024
Potable water	Kilolitre (kl)	289,103	285,834	153,380	138,593	210,094	227,547	187,861
Bore water		272,247	310,899	231,851	201,756	278,539	236,237	204,941
Total water		561,350	596,733	385,230	340,349	488,633	463,784	392,802
Bore water as a % of total	%	48%	52%	60%	59%	57%	51%	52%

Waste and recycling

(Kensington, Paddington and Randwick campuses)

General waste	Unit	2018	2019	2020	2021	2022	2023	2024
Paper/cardboard	Tonne	1125	658	380	538	719	755	927
Mixed metals	Tonne	120	29	36	75	95	179	94
Drink containers	Tonne	84	122	188	151	88	0	0
Mixed plastics	Tonne	0	0	24	41	56	60	52
Food and organics	Tonne	278	80	0	0	0	0	0
Food waste	Tonne	228	257	51	59	48	57	23
Residual	Tonne	1017	1692	730	745	986	1213	1218
Total		**2852**	**2838**	**1409**	**1609**	**1992**	**2264**	**2315**
Destination								
Recycling	Tonne	1835	1146	679	864	1006	994	1096
Processed engineered fuel (energy recovery)	Tonne	858	244	241	477	633	820	794
Landfill	Tonne	159	1447	490	268	353	450	425
General waste recycling rate	%	64%	40%	48%	54%	50%	44%	47%
General waste landfill diversion rate	%	94%	49%	65%	83%	82%	80%	82%

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 container: Collected through designated bins 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, food waste and other non-recyclable waste destined for energy recovery and landfill.

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Verification Opinion

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Verified as Satisfactory	
Based on the process and procedures conducted, there is no evidence that the GHG statement contained in the GHG Report 2024 and Carbon Footprint Inventory: 2024 Basis of Preparation produced by The University of New South Wales (UNSW):	• is not materially correct and is not a fair representation of GHG data and information. • has not been prepared in accordance with ISO14064-1:2018 and it's principles
The following improvements were raised in relation to future reporting	List improvements • Strengthen the selection, collection and use of data GHG quantification by allocation of roles and responsibilities to the data owner through documented process. • Better formalization of control of records and document. • More comprehensive data collection at subcontractor level to ensure more accuracy.
Lead Verifier	**Chris Brian David Chan Yai Ching**
Independent Reviewer	**Vo Hong Kiet**
Signed on behalf of BSI	Charlene Loo, Managing Director, BSI Australia and New Zealand
Issue Date	15/05/2025
BSI Group – Australia and New Zealand. Suite 1, Level 1, 54 Waterloo Road, Macquarie Park NSW 2113	
Note: BSI ANZ is independent to and has no financial interest in UNSW. This third-party Verification Opinion has been prepared for UNSW only for the purposes of verifying its statement relating to its GHG emissions more particularly described in the scope above. It was not prepared for any other purpose. In making this Statement, BSI ANZ has assumed that all information provided to it by UNSW is true, accurate and complete. BSI ANZ accepts no liability to any third party who places reliance on this statement.	

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Verification Engagement

Organization	The University of New South Wales
Responsible party	The University of New South Wales High Street, Kensington, NSW 2052, Australia
Verification Objectives	To express an opinion on whether the organizational GHG Statement which is historical in nature: • Is accurate, materially correct and is a fair representation of GHG data and information. • Has been prepared in accordance with ISO14064-1:2018 the criteria used by BSI to verify the GHG Organizational Statement.
Materiality Level	10%
Level of Assurance	Limited
Verification evidence gathering procedures	• Evaluation of the monitoring and controls systems through interviewing employees observation & inquiry. • Verification of the data through sampling recalculation, retracing, cross checking and reconciliation. • Verification of the default-value/emission factor data through reference of publicly available sources. • Interviews with relevant personnel within different departments/ divisions of UNSW.
The verification activities applied in a limited level of assurance verification are less extensive in nature, timing and extent than in a reasonable level of assurance *verification*	
Verification Standards	The verification was carried out in accordance with ISO 14064-3: 2019, ISO 14065: 2020 and ISO 17029:2019
Note: The University of New South Wales is responsible for the preparation and fair presentation of the GHG statement and report in accordance with the agreed criteria. BSI is responsible for expressing an opinion on the GHG statement based on the verification.	

Appendix 1

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Organizational GHG Statement

Organization		The University of New South Wales High Street, Kensington, NSW 2052, Australia
Organizations GHG Report containing GHG Statement		• GHG Report 2024 V7.0 • Carbon Footprint Inventory: 2024 Basis of Preparation 120525
Organizational Boundary		Operational Control
Locations included in the Organizational Boundary		See Appendix A listed under one same address High Street, Kensington NSW 2033, Australia
Exclusions from Organizational Boundary:		UNSW Group Entities – Overseas • UNSW Centre for Transformational Environmental – Yixing, China • UNSW Sino-Australia Innovative Technology – Shanghai, China • UNSW Global India Pvt Ltd – New Delhi • UNSW Hong Kong Limited – Hong Kong • UNSW does not have operational control over the UNSW Canberra at Australian Defence Force Academy (ADFA) site, therefore, there are no utilities or associated scope 1 or 2 emissions reported for this site. However, UNSW does report some scope 3 emissions relating to UNSW Canberra, including supply chain and travel emissions from operational and capital spend attributed to the entity (scope 3 Categories 1, 2 and 6), as well as employee commuting emissions (Category 7) that relate to UNSW staff based at UNSW Canberra.
Scope of activities:		Education, research, and innovation.
Reporting Boundary:	Direct GHG Emissions (Scope 1)	1.1 Direct emissions (stationary) 1.2 Direct emissions (mobile) 1.3 Process emissions 1.4 Fugitive emissions
	Indirect GHG Emissions from imported energy (Scope 2)	2.1 Imported electricity
	Indirect GHG emissions from transportation (Scope 3)	3.3 Employee commuting 3.5 Business travel
	Indirect GHG emissions from products used by organization (Scope 3)	4.1 Purchased goods/services 4.2 Capital goods 4.3 Purchase Energy Production 4.4 Upstream Electricity generation (Inc T&D Losses) 4.3 Waste disposal
	Indirect GHG emissions associated with the use of products from the organization (Scope 3)	5.2 Downstream leased assets 5.4 Investments
Exclusions from Reporting Boundary:		3.1 (Emission from upstream transport and distribution for goods) 3.2 (Emission from Downstream transport and distribution for goods) 3.4 (Emissions from client and visitor transport) 4.4 (Emissions from the use of assets) 5.1 (Emissions/removals from use stage of sold products) 5.3 (Emissions from end-of-life of sold products) 6 (Indirect GHG emission from other sources)
Criteria for developing the organizational GHG Inventory:		ISO14064-1: 2018 GHG Protocol Corporate Standard NGER Scheme Compliance
Reporting Period		1st January 2024 – 31st December 2024

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Categories	2024 $tCO_2(e)$
Category 1: Direct GHG emissions and removals	**9,217**
Emissions from stationary combustion	6,971
Emissions from mobile combustion	780
Emissions from Process	166
Fugitive Emissions	1,300
Category 2: Indirect GHG emissions from imported energy	**64,158**
Electricity (location-based method)	64,158
Electricity (market-based method)	0
Category 3: Indirect GHG emissions from transportation	**31,830**
Upstream transportation and distribution	-
Downstream transportation and distribution	-
Employee commuting	5,072
Emissions from client and visitor transport	-
Business travel	26,758
Category 4: Indirect GHG emissions from products used by the organization	**147,846**
Emissions from purchased goods and services	103,918
Emissions from capital goods	36,842
Emissions from Purchased Energy Production	2,038
Emissions from Upstream electricity generation (inc T&D losses)	3,962
Emissions from the disposal of solid and liquid waste	1,087
Emissions from the use of assets	-
Category 5: Indirect GHG emissions associated with the use of products from the organization	**26,624**
Emissions or removals from the use stage of the product	-
Emissions from downstream leased assets	7,170
Emissions from end of life stage of the product	-
Emissions from investments	19,454
Category 6: Indirect GHG emissions from other sources	**-**
Total	**279,675**
Scope 2 voluntary surrenders (LGC)	64,158
Total Emission (excluding offsets)*	**215,517**

* Measures performance against total emissions target (includes scope 2 emission reduction from renewable energy purchases and LGCs, but not surrender of carbon offsets.

Appendix 1

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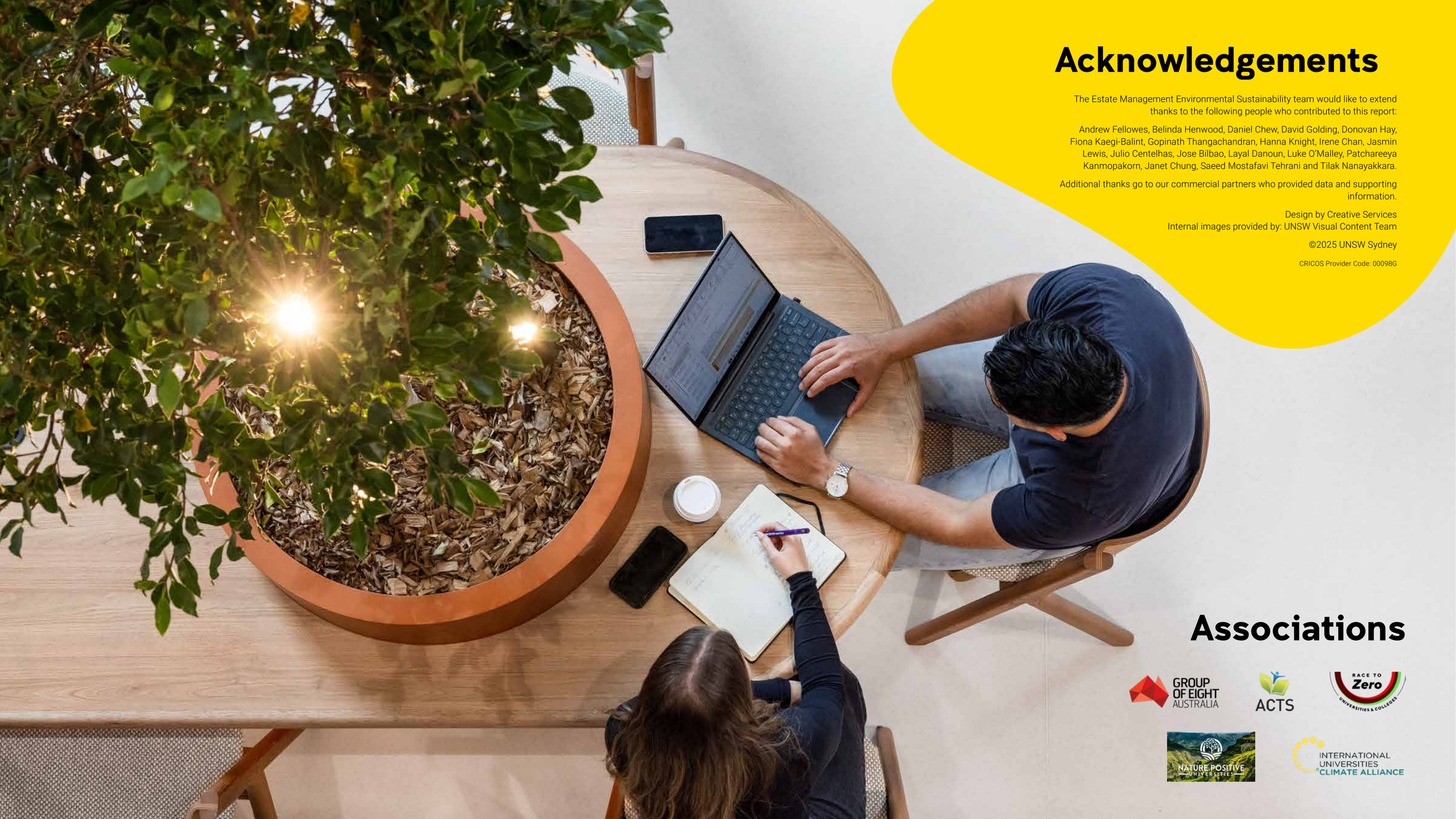
Appendix A

No.	Entities	Addresses
1	The University of New South Wales	High Street, Kensington NSW 2052, Australia
2	UNSW Group entities: 1. UNSW Global Pty Limited 2. Scientia Clinical Research Limited 3. University of New South Wales Press Limited 4. Horizons Future Learning Pty Ltd	 1. Building L5, 223 Anzac Parade Kensington NSW 2033 2. High Street, Kensington, NSW 2052 3. High Street, Kensington, NSW 2052 4. High Street, Kensington, NSW 2052



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Associations

GROUP OF EIGHT AUSTRALIA

ACTS

RACE TO Zero UNIVERSITIES & COLLEGES

NATURE POSITIVE UNIVERSITIES

INTERNATIONAL UNIVERSITIES CLIMATE ALLIANCE