

# ENVIRONMENTAL SUSTAINABILITY PLAN 2019–2025



THE UNIVERSITY OF  
NEWCASTLE  
AUSTRALIA





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**RANKED 214**  
in the world<sup>1</sup>

**TOP 200**  
10 subjects ranked  
in the top 200 in the world<sup>2</sup>

**TOP 8**  
in Australia for research  
'well-above world standard'<sup>3</sup>

**OVER 95%**  
of our research is 'at' or  
'above world standard'<sup>3</sup>

**37,677**  
students from 114 nations,  
educated and supported by 2,680 staff<sup>4</sup>

<sup>1</sup>QS World Rankings 2019 <sup>2</sup>QS World University Rankings by Subject 2019 <sup>3</sup>Excellence in Research Australia 2018 <sup>4</sup>2018 UON Annual Report



## MESSAGE FROM THE VICE-CHANCELLOR

It has never been more vital for the University of Newcastle to embed its principles of environmental and social sustainability into a strategic plan that will position us well and truly within the global efforts to tackle the effects of climate change.

Guided by the Sustainable Development Goals (SDGs) set down by the United Nations in Paris in 2015, we have created this Plan to identify our targets and priority actions to 2025. We regard our role as host to one of the UN's 17 International Training Centres for Authorities and Leaders (CIFAL) as a great honour, and we are conscious our pivotal role in promoting and increasing understanding of the SDGs begins within the grounds of our own campuses.

We recognise that through research, knowledge and actions, we can help shape the future towards a sustainable world. It is our social responsibility as an eminent research

and teaching university to engage in public debate. To this end, we have set our targets and priority actions to position ourselves as an example of an ecologically and socially sustainable community. Our commitment to sustainability is bold and unwavering.



**Professor Alex Zelinsky AO**  
Vice-Chancellor and President



# ENVIRONMENTAL SUSTAINABILITY

The University of Newcastle stands tall on the international, national and regional stage as an institution leading the way in research excellence and education. As such, it is our responsibility to take our place within the global effort facing the challenges of building a more sustainable world.

Our commitment to equity, sustainability and the creation of a better future is driven not only by our allegiance to international initiatives but also by the voices within our own four walls. In our recent history, our students, our alumni, our researchers, our stakeholders and our staff have all been united in their vision to see the University address environmental and social sustainability as a guiding principal of our activities. This vision has shaped and guided our core value of sustainability, which is at the heart of our strategic plan.

Underpinning our efforts to reduce our environmental footprint and forge a future of sustainability and strength is our commitment to embedding the Sustainability

Development Goals (SDGs) within our culture and actions. The University is also a signatory to the *Talloires Declaration of University Leaders for a Sustainable Future*\*.

With social and environmental sustainability at our core, we are shaping public conventions and principles in all areas of our engagement and initiating positive change in communities, societies and economies. We are making significant contributions to the economic, social and environmental capacity of our communities and our responsible management of our unique campus environments ensures we are safeguarding the needs of the next generation.

\* The 1990 declaration is an international, voluntary 10-point action plan for incorporating sustainability and environmental literacy in University activities.

## STRATEGY

Environmental and social responsibility is extremely important to our University community. When it came to developing a meaningful Environmental Sustainability Plan (ESP) that would address those needs and initiate positive action, we wanted input from across that community. To that end, we held a series of enthusiastically attended stakeholder workshops.

What we learned was crucial to this Plan and allowed us to create a strategy that was led by the need for tangible environmental sustainability outcomes.



“It’s important the University focuses on carbon emissions reduction, including setting an appropriate reduction target.” – Newcastle University Students Association (NUSA)

“The most important issues are a fossil free divestment strategy for the University’s investment portfolio, and a commitment to reducing CO<sub>2</sub>e emissions through investment in renewable energy.” – Newcastle University Students Environment Committee (NUSEC)

“It’s critical the University increases environmental sustainability engagement initiatives to encourage better waste management practices.” – University Library Champions4Change



# GLOBAL CONTRIBUTIONS

The University is host to one of 17 International Training Centres for Authorities and Leaders (CIFAL) located across Asia, Africa, Europe, the Americas and the Caribbean, giving us a pivotal role in promoting and increasing understanding of the UN SDGs. The SDGs were launched and adopted by almost 200 countries, including Australia, in September 2015.

The goals are a universal call to end poverty, protect the planet and ensure opportunity to peace and prosperity for all.

Affiliated to the UN through its parent body UNITA, the core mission of the CIFAL network is to build the capacity of cities and communities through education, training and by serving as hubs for the exchange of knowledge between government, the private sector and the community.

We are proud of our close links to this global pathway and this Plan actively supports and incorporates its principles at a campus and community level.

Our commitment to sustainability has a substantial history and we have been a signatory to the Talloires Declaration of University Leaders for a Sustainable Future since its inception in 1990.

# THE PLAN AT A GLANCE



## ENERGY AND CARBON

Deliver 100% renewable electricity across our Newcastle and Central Coast campuses from 1 January 2020.

Achieve carbon neutrality by 2025.



## WATER

Achieve a 15% reduction in mains water usage per square metre across our Gross Floor Area by 2025 (on a 2015 baseline).



## WASTE AND RECYCLING

Achieve a 70% recycling rate for general solid waste generated across the University by 2021.



## BIODIVERSITY AND LANDSCAPING

Implement a university-wide Biodiversity Management Plan by end 2020.



## ENVIRONMENTALLY SUSTAINABLE DESIGN

All new buildings will achieve a minimum six-star Green Star 'Design & As Built' by 2025.



## TRANSPORT

No net increase in car space provisions across UON (on a 2018 baseline).

Complete an inventory of all emissions from staff air travel and fleet vehicles and offset emissions by 2025.



## INVESTMENTS

Improve the ESG score of our investment portfolio by 20-30% by 2020, based on a 2017 baseline. Reduce the carbon footprint of our share portfolio by 20% by 2020, based on a 2016 baseline. Divest from fossil fuel companies that don't meet our requirements for managing the transition to a low carbon economy by 2020. Invest 10% of the portfolio (or approximately \$50 million) in investments aligned with the UN Sustainable Development Goals (SDGs) by 2020.



## PROCUREMENT

Develop, implement and communicate a Supplier Code of Conduct with a recognition scheme by 2020.



## ENGAGEMENT

Increase staff and student awareness of university environmental sustainability issues via the Your Voice survey (on a 2016 baseline), and the Student Feedback on the University (SFUN) annual survey (on a 2018 baseline).



## EDUCATION

All students graduating from the University of Newcastle will have exposure to environmental sustainability principles through their degree by 2025.



## RESEARCH

Lead partnerships with local, regional and global industries to deliver environmental sustainability research innovation projects with a focus on energy efficiency and renewable energy.



## GOVERNANCE

Develop and implement a University-wide Environmental Sustainability Charter that includes the United Nations Sustainability Development Goals to embed environmental sustainability across the University by end 2019.



## COMPLIANCE AND REPORTING

Report publicly on the University's environmental sustainability impacts via the University Annual Report.

# OUR OPERATIONS

With more than 37,000 students and 2,600 staff across 14 campuses and affiliated centres, it is the University's responsibility to lead by example and develop and maintain our operations as sustainable communities.

We have campuses at Newcastle (Callaghan and Newcastle CBD), Central Coast (Ourimbah) and Port Macquarie. We also have a presence in Sydney, Taree, Tamworth, Orange, Moree and operations internationally in Singapore. Additionally, we occupy space at several offsite locations including the Hunter Medical Research Institute, the Mater Hospital, Tamworth Base Hospital, Wyong Hospital and Gosford Hospital.

Our asset portfolio consists of 275 buildings with an asset replacement value of more than \$1.6 billion. The current property portfolio, including leased space and fully owned space, consists of approximately 350,000m<sup>2</sup> Gross Floor Area (GFA) with our total land holdings comprising approximately 261 hectares.

We are committed to protecting the biodiversity of our campuses; and to continuing and accelerating our environmental sustainability efforts.

Our targets in this Plan reflect our absolute undertaking to embedding sustainability principles across all operations; and our priority actions include procurement and supply chains; technological, investment and social innovation; and dynamic water capture and preservation measures.

## ENERGY AND CARBON

Reducing fossil fuel consumption and supporting clean energy sources is paramount to managing climate change. This Plan undertakes a commitment to deliver 100% renewable electricity across across our Newcastle and Central Coast campuses from 1 January 2020.

The University continues to publicly report its greenhouse gas emissions under the National Greenhouse and Energy Reporting Scheme at the facility level for our Callaghan campus. Electricity consumption generated approximately 90% of our Scope 1 and 2\* emissions – approximately 34,000 tonnes in 2019 from running our facilities. We will make a material impact in reducing emissions by implementing the findings of recent energy audits, the 100% renewable electricity contract, and continue investigating ongoing opportunities for on-site renewable energy installation.

*\*Scope 1: All direct GHG emissions (eg mains gas); Scope 2: Indirect greenhouse gas emissions from consumption of purchased electricity, heat or steam. Emissions figures are represented as tonnes of carbon dioxide equivalent.*

### PRIORITY ACTIONS:

- Establish a dedicated Energy Management Project Board to oversee the development and implementation of the Energy and Carbon Management Strategy, including the investigation of energy self-generation, storage, feedback to the network grid and building strategic relationships with the retailers
- Implement the 100% renewable electricity contract from 1 January 2020

### MEASURES OF SUCCESS:

- Deliver 100% renewable electricity across across our Newcastle and Central Coast campuses from 1 January 2020
- Achieve carbon neutrality by 2025

## SUSTAINABILITY IN ACTION

In a sector-leading move, we are the first University in Australia to sign up to Red Energy's new 100% renewable electricity contract.

The desire by our students, staff and communities to do the right thing for our environment has never been stronger. For this reason, we have been rigorously searching the market for a sustainable, cost-efficient solution to our electricity needs.

Thanks to a seven-year contract with Red Energy, owned by Australian business Snowy Hydro, all electricity across our Newcastle and Central Coast

campuses will be 100% renewable from 1 January 2020. The first year of the contract, 2019, will be a transition year while Red gears up its solar, wind and hydro capacity.

As leaders in environmental sustainability, we are proud to be the first university in Australia to partner with Red Energy on 100% renewable electricity. Indeed, we will be one of the first universities in Australia to achieve 100% renewables. Not only is green electricity better for our environment, it is also more cost-efficient than non-renewable electricity.

*Image courtesy of Snowy Hydro*



## WATER

We acknowledge we are a significant water consumer and in 2018 this totalled approximately 280,000 kilolitres of mains water. In the face of a warming global climate, we have committed to using and monitoring natural irrigation for our extensive native bushland campuses to reduce demand for potable water. Our focus will be integrating best-practice water-efficiency measures across infrastructure and aim for Green Star ratings in new builds.

### PRIORITY ACTIONS:

- Increase the natural irrigation of the extensive native bushland campus to reduce the demand for potable water
- Integrate Water Sustainable Urban Design (WSUD) principles into landscape management
- Integrate water efficiency as a key project design component as part of the new Environmental Sustainable Design (ESD) Guideline Tool

### MEASURES OF SUCCESS:

- A 15% reduction in mains water usage per square metre across our Gross Floor Area by 2025 (on a 2015 baseline)

## SUSTAINABILITY IN ACTION

The development of a water audit across the Callaghan campus has allowed us to better understand our water consumption and identify opportunities for water efficiency. The audit broke down our water consumption, pinpointed water leaks and identified areas where further water efficiency measures were possible.

WASTE AND RECYCLING

Significant improvements to our waste management practices mean we increased diversion of general waste away from landfill. We remain actively committed to strengthening our waste management practices and principles.

As an example, in 2018 we partnered with an external organisation to deliver a soft plastics recycling program. Soft plastics have very low rates of recycling and are a significant contributor to landfill volumes. These items can also degrade into smaller plastic pieces that can enter the food chain and cause wider environmental pollution.

The University trialled a program, in partnership with Plastic Police, to turn these bags into benches providing added outdoor seating across campus. The program has collected and recycled over 115,000 pieces of soft plastic to date.

PRIORITY ACTIONS:

- Develop and implement a University-wide waste education campaign, including bin labelling and placement
- Achieve best-practice baseline waste data and accurately measure via monthly contractor reports
- Deliver best practice contractor management, including cleaner training, to achieve high levels of general waste separation and recycling targets

MEASURES OF SUCCESS:

- A 70% recycling rate for general solid waste generated across the University by 2021

SUSTAINABILITY IN ACTION

The University's Love Food On-Campus was a year-long project designed and delivered by the Hunter Joint Organisation of Councils and the University.

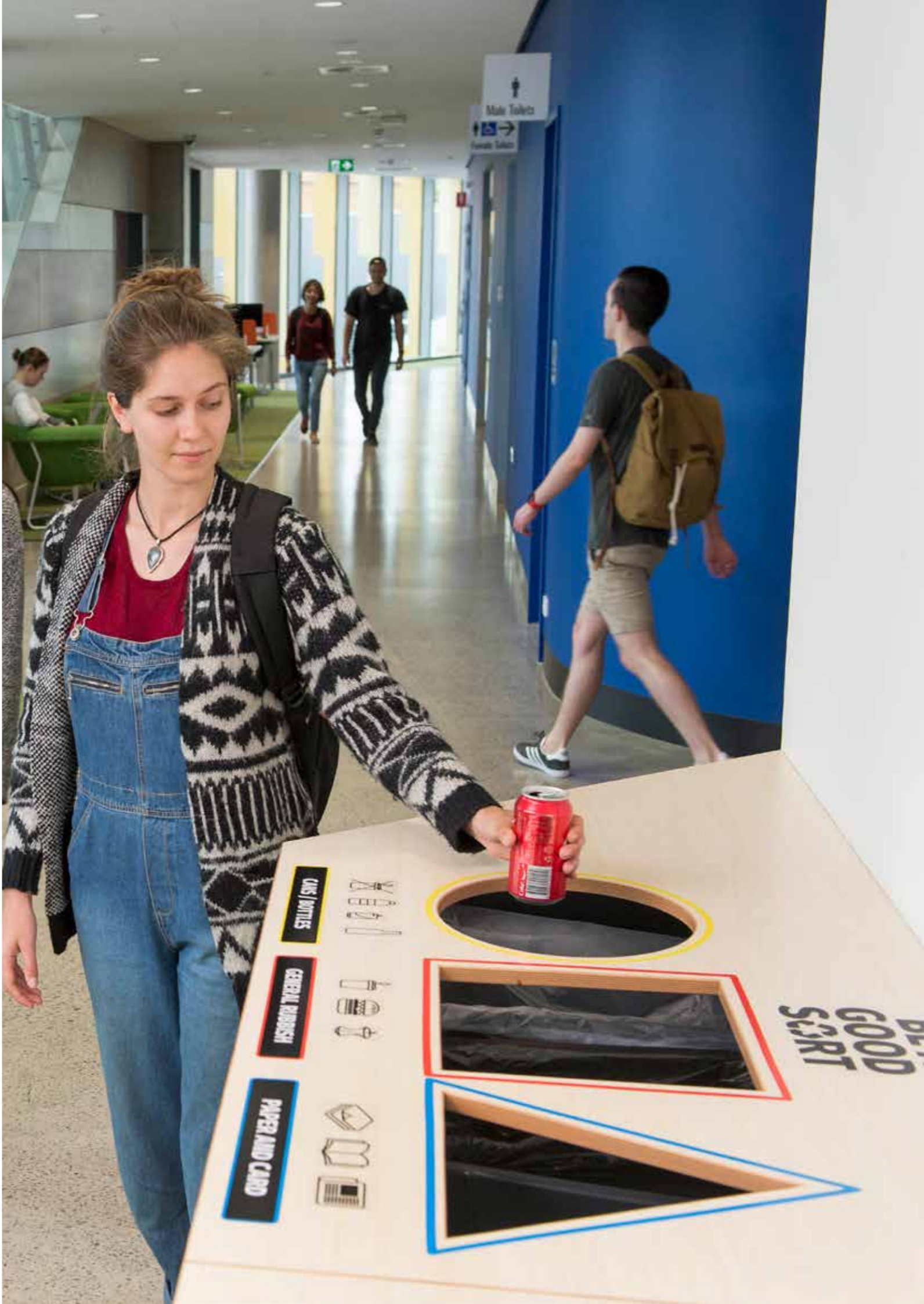
The project researched food-waste habits of resident students with the aim of teaching skills and providing tools and resources to positively improve behaviour.

Over the year, the Student Living team hosted and contributed to a project launch and film screening, focus groups, cooking demonstrations, waste audits and the dissemination of a tailor-made food waste avoidance toolkit.

The initial project consultation revealed that a lack of cooking skills in residents transitioning to living out of home for the first time was a significant barrier to minimise food waste. A professional chef ran two cooking workshops to show students how to plan healthy and budget-friendly meals, manage portion size and store food correctly.

Waste audits were conducted and one week's waste generation of the North Residence was documented. A second audit revealed a 30% reduction of food waste in red-lid bins and increased recycling in yellow-lid bins.

The project was the winner of Behaviour Change in Waste category at the recent Local Government NSW Excellence in Environment Awards.





## SUSTAINABILITY IN ACTION

Our Callaghan campus wetlands are a critical link between land and water and have a direct connection to the Hunter Wetlands Centre, a 'wetland of international importance site' under the Ramsar Convention\*. To safeguard its integrity, it is the University's responsibility to ensure our connecting campus wetlands are healthy. Removing weeds, erosion control, and increasing the biodiversity of our wetlands significantly improves the connecting wetlands.

In 2017 we were awarded the Community Involvement Award at the NSW Coastal Management Awards for our four-year project to restore the upstream catchments of the Hunter Wetland Centre. As part of this, we planted more than 7000 native seedlings in addition to our broader landscape management program.

During the project The Tom Farrell Institute implemented a water monitoring program that undertook biannual water sampling across 22 locations. The research has provided insights into the health of the waterways and will be used by land management agencies to understand water quality on the catchment.

We are committed to ongoing bush regeneration works throughout the life of this Plan with the rehabilitation of approximately 25 hectares of bushland and the planting of more than 3000 seedlings in 2018 alone.

\* The Ramsar Convention is an intergovernmental treaty that provides the framework for national action and international cooperation for the conservation and wise use of wetlands and their resources.

## BIODIVERSITY AND LANDSCAPING

Our Callaghan campus is a strategic bushland zone of about approximately 140 hectares. Twenty-five of these are dedicated ecological conservation zones and freshwater wetland areas. It is our responsibility to ensure its ecological sustainability and safeguard the ecosystems within it as well as the greater system of which it is a part. To do this, we are committed to actively managing our campus to restore, improve and maintain this unique biodiversity.

Three important ecosystems exist within it – the Coastal Foothills Spotted Gum (Ironbark Forest), the Riparian Closed Forest and freshwater wetlands – in which lives 188 native flora species, 116 bird species, 14 native mammal species, 11 frog species and 18 reptile species.

A range of migratory and threatened species are also occasionally seen here, including the Powerful Owl, the Little Lorikeet, the Little Eagle, the Varied Sittella and the Grey-headed Flying Fox.

Further, the University's Central Coast campus covers an area of approximately 113 hectares. The western half of the site contains the University's Central Coast campus

(Ourimbah). The eastern half comprises extensive areas of natural bushland and several headwater tributaries of Bangalow Creek, itself a tributary of Ourimbah Creek. The area has extensive riparian zone vegetation along Bangalow Creek which includes Narrabeen Warm Temperate Subtropical Rainforest, an Endangered Ecological Community (EEC).

### PRIORITY ACTIONS:

- Continue to implement the annual Bushfire Management Plan 2016 recommendations across Callaghan and Ourimbah campuses
- Develop and implement a revised university-wide Biodiversity Management Plan by end 2020
- Integrate indigenous considerations into the University-wide Biodiversity Management Plan

### MEASURES OF SUCCESS:

- The implementation of a university-wide Biodiversity Management Plan by end 2020

**ENVIRONMENTALLY  
SUSTAINABLE DESIGN**

As we consider the future of our campuses, a changing education model and maintaining a world-class university in harmony with our environmental and social responsibilities, our ambitious capital works will see our sustainability principles at work. By 2025, the following campus development projects will be built: Bioresources Building (Callaghan campus); STEMM (Callaghan campus); the the first stage of the Honeysuckle City Campus Development; and the Central Coast Medical School and Research Institute (Gosford, NSW).

The University recognises the importance of developing these large infrastructure projects with ESD principals embedded across the life cycle, with a particular focus on energy and CO2 reduction.

**PRIORITY ACTIONS:**

- Embed Environmentally Sustainable Design (ESD) principals through all capital projects
- Implement the UON ESD Tool across all University-wide refurbishment projects to achieve a five-star Green Star or equivalent rating from 2019

**MEASURES OF SUCCESS:**

- A minimum six-star Green Star ‘Design & As Built’ across all new buildings by 2025

**SUSTAINABILITY IN ACTION**

In 2017, the University opened NeW Space, a transformational project for the University and our region located in the heart of inner Newcastle. As a catalyst for the redevelopment of the physical and cultural heart of the city, NeW Space was squarely in the public eye.

NeW Space focused on a sustainable design and has been awarded a 5 Star Green Star – Education Design V1 Certified Rating by the Green Building Council of Australia. The dramatic design not only looks striking and at one with the environment in which it sits, but also features a myriad of environmentally sustainable features. They include high performance double glazing and thermally engineered aluminium frames. The building has also been designed to maximise natural ventilation by drawing ambient air into the building through large ducts. Rainwater is harvested and reused for toilet flushing and landscape irrigation and a state-of-the-art secure bike storage facility for more than 215 bikes and impressive end-of-trip facilities encourages cycling for staff and students.





## TRANSPORT

As a distinguished education institution and corporate citizen, the University is committed to its responsibility of leading by example. With the opening of our inner-city campus in 2017, it is incumbent on us to help shape the planning and rolling out of sustainable commuter transport within the city, as well as to local networks.

Another area this Plan addresses is the need for better understanding of CO<sub>2</sub>-e emissions resulting from staff air travel, how we can reduce the University's vehicle fleet and how we can influence a transport module shift for staff and students.

### PRIORITY ACTIONS:

- Advocate for more sustainable transport options to local and State government, including active travel to and from our campuses
- Implement the University-wide Strategic Transport Management Plan to encourage and support more sustainable transport options for staff and students by 2020
- Collaborate with the University's key suppliers to measure and understand Scope 3 emissions from travel (air travel and fleet vehicle use) in 2018

### MEASURES OF SUCCESS:

- No net increase in car space provisions across the University (on a 2018 baseline)
- Complete an inventory of all emissions from staff air travel and fleet vehicles and offset emissions by 2025

## SUSTAINABILITY IN ACTION

Late in 2017, we commenced a shuttle bus service between our Callaghan and Newcastle City campuses. The service operates every 30 minutes Monday to Friday, is free to all staff and students, and offers complimentary WiFi so that people can choose to work on the go. In 2018, a daily average of 1000 staff and students used this service, decreasing the need for car travel and reducing carbon emissions and traffic congestion in Newcastle. In 2019 the service has been enhanced with additional pick up and drop off points at Callaghan, improving convenience and reducing the need for car travel around the campus.

## INVESTMENTS

The University currently has an investment portfolio of approximately \$400 million (2018), invested in both long-term and short-term asset pools. The majority (55%) of the University's long-term pool is invested in equity funds (Australian and international shares) with the remainder being split between property, infrastructure and alternatives (31%) and fixed-interest funds (14%). The University's short-term pool is invested entirely in fixed interest funds.

The University's investment strategy is governed by its Investment Policy which establishes an Environmental, Social and Corporate Governance (ESG) framework. The Finance Committee is responsible for approving the University's ESG Framework and the mix and percentage weighting in each asset class. The Finance Committee also appoints our investment portfolio manager to oversee and monitor the investment of funds and investment performance.

In March 2016, the University appointed Mercer Australia as its investment portfolio manager. Since the appointment, we have been working closely with Mercer to address the issues of environmental sustainability, including climate change, across the investment portfolio. As a result, we no longer directly invest in fossil fuel companies, and we have integrated Mercer's ESG ratings across the University's investments. In 2017, the University approved the transfer of all international investments into the Mercer Global Socially Responsible share funds. This will see an improvement in the overall ESG rating and weighted average carbon footprint of the investment portfolio.

### PRIORITY ACTIONS:

- To continue to work with Mercer to improve our weighted average ESG rating across the University's investment portfolio, and benchmark ESG ratings of peers' institutions to the University's Finance Committee to advise on best practice to address environmental sustainability impacts
- Measuring and monitoring the carbon footprint of the University's listed equity investments, with the aim of keeping the carbon footprint below the relevant market indices, and investing in a manner that is consistent with the University's broader sustainability commitments
- To integrate environmental sustainable principals into all finance business case decisions from 2019

### MEASURES OF SUCCESS:

- Improve the ESG score of our investment portfolio by 20-30% by 2020, based on a 2017 baseline.
- Reduce the carbon footprint of our share portfolio by 20% by 2020, based on a 2016 baseline.
- Divest from fossil fuel companies that don't meet our requirements for managing the transition to a low carbon economy by 2020.
- Invest 10% of the portfolio (or approximately \$50 million) in investments aligned with the UN Sustainable Development Goals (SDGs) by 2020.



PROCUREMENT

We are a significant purchaser of goods and services in the local, regional and national economy and it is vital sustainability principles are instilled into our procurement activities. These considerations will include relevant environmental, social and financial sustainability issues of our suppliers and partners.

To meet the changing expectations of key stakeholders, we are committed to understanding and managing social, ethical and environmental issues along the supply chain in a responsible manner. This includes compliance with the Modern Slavery Act 2018 . This Supplier Code of Conduct has been developed to help meet this commitment and outlines the minimum terms and conditions of doing business with the University of Newcastle. This Code is mandatory for all suppliers.

We require that they ensure compliance to the standards set out in this Code within their own operations and that they actively work with us to assess and manage compliance in their supply chain.

This Code is based on the University own Ethical Framework and the Ethical Trading Initiative (ETI) Base Code.

The ETI Base Code is founded on the conventions of the International Labour Organisation (ILO) and is an internationally recognised code of labour practice.

The ETI base code reflects the commitment to ethical trade by stipulating the need for freely chosen employment, freedom of association, safe working conditions, and reasonable working hours.

PRIORITY ACTIONS:

- Implement the Ethical Decision Making Framework for Procurement across the University by end 2019
- Implement the University Green Supplier Checklist across 50% of key suppliers by end 2019, and 100% of suppliers by end 2020
- Ensure Fair Trade Association of Australia and New Zealand certified products are available on the University's purchasing catalogue, and expand the availability of Fair Trade products via the food outlets on Campus by end 2019
- Develop and implement a Supplier Code of Conduct with a recognition scheme published on the Univeristy's website by 2021

MEASURES OF SUCCESS:

- Implement the Green Supplier Checklist across 50% of major suppliers by end 2019, and 100% of suppliers by end 2020
- Develop and implement a Supplier Code of Conduct with a recognition scheme published on the Univeristy's website by 2021

SUSTAINABILITY IN ACTION

Our Ethical Framework will guide and support decision-making at all levels and be a compass for navigating the University's complex ethical landscape.

Within this framework sits the Ethical Decision Making in Procurement Framework with the imperative that there is a responsibility to act ethically in the purchasing of products or services on behalf of the University. Our ethical principles are:

- We will act on the basis of sound reasons, solid evidence and impartial judgement – even when our findings are unpopular
- We will be accountable for the choices we make
- Integrity
- Impartiality and fairness
- Transparency
- Confidentiality
- Morality and social responsibility



ENGAGEMENT

Positive environmental and social sustainability outcomes are driven by an engaged and committed university community. We are enhancing and fortifying the engagement of our students, staff, partners and stakeholders by increasing awareness of our commitment to sustainability. As we lead by example, our campuses are becoming living laboratories.

PRIORITY ACTIONS:

- Annually implement and promote relevant research programs to become living laboratory campuses
- Develop and implement a university-wide comprehensive environmental sustainability communications and engagement strategy to achieve stronger stakeholder awareness, engagement and behavioural change by 2020
- Annually investigate and implement suitable University-wide environmental sustainability programs to encourage behavioural change across stakeholders

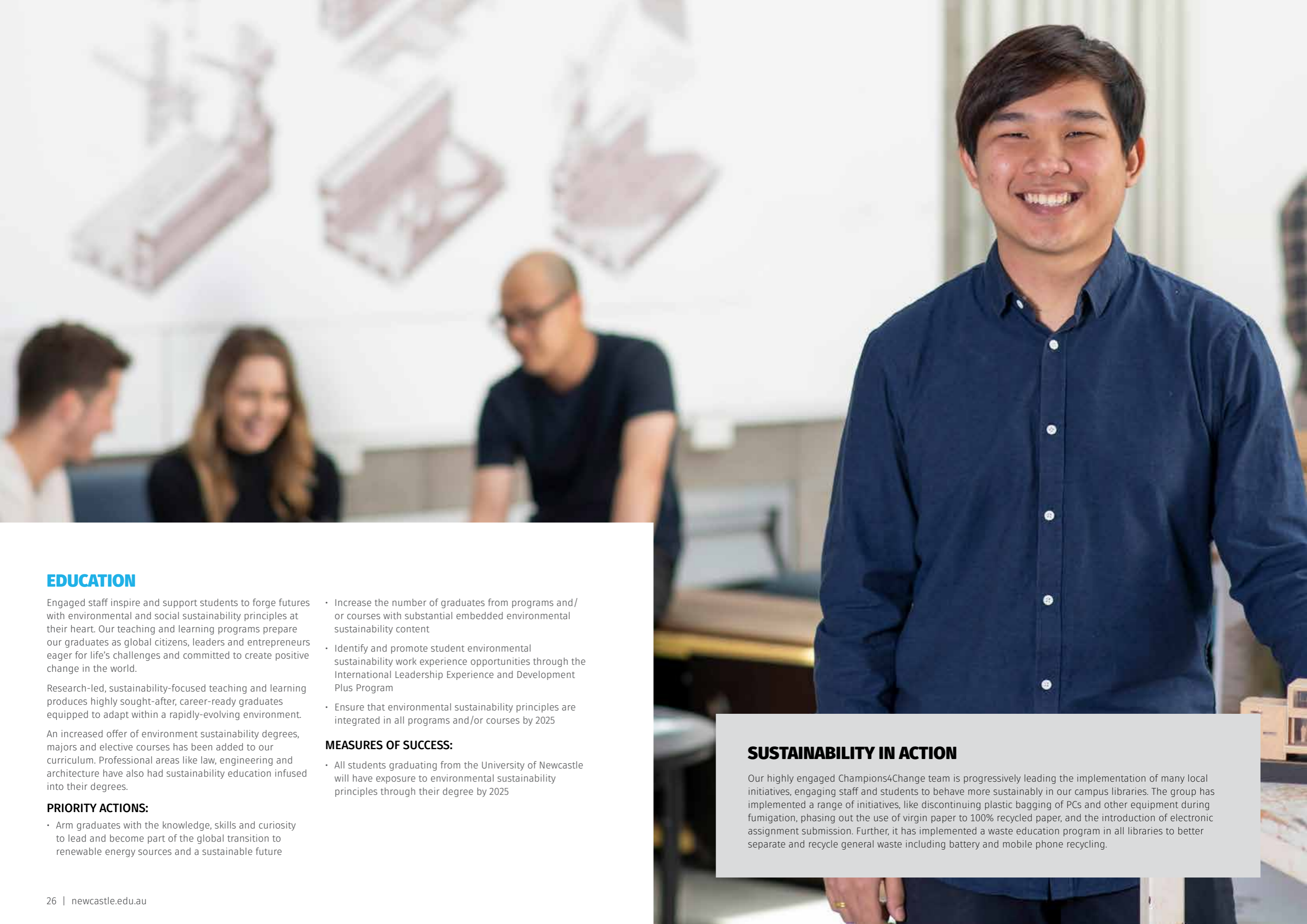
MEASURES OF SUCCESS:

- Increase staff and student awareness of our environmental sustainability initiatives via the Your Voice survey on a 2016 baseline, and the Student Feedback on University of Newcastle annual survey on a 2018 baseline

SUSTAINABILITY IN ACTION

A recent sustainability campaign has been shifting the collective University mindset from automatically driving the car to alternative transport methods – like cycling, walking and using public transport. To this end, we installed bike hubs with end-of-trip facilities, lockers, and secure bike storage solutions across our campuses. These hubs immediately reached maximum capacity daily. More hubs are in the works, as are additional cyclist infrastructure and cycling initiatives for staff and students.

Our Active Travel Initiative offers maps, tips, and workshops to support walking and cycling to campus and also promotes the use of public transport.



**EDUCATION**

Engaged staff inspire and support students to forge futures with environmental and social sustainability principles at their heart. Our teaching and learning programs prepare our graduates as global citizens, leaders and entrepreneurs eager for life’s challenges and committed to create positive change in the world.

Research-led, sustainability-focused teaching and learning produces highly sought-after, career-ready graduates equipped to adapt within a rapidly-evolving environment.

An increased offer of environment sustainability degrees, majors and elective courses has been added to our curriculum. Professional areas like law, engineering and architecture have also had sustainability education infused into their degrees.

**PRIORITY ACTIONS:**

- Arm graduates with the knowledge, skills and curiosity to lead and become part of the global transition to renewable energy sources and a sustainable future

- Increase the number of graduates from programs and/or courses with substantial embedded environmental sustainability content
- Identify and promote student environmental sustainability work experience opportunities through the International Leadership Experience and Development Plus Program
- Ensure that environmental sustainability principles are integrated in all programs and/or courses by 2025

**MEASURES OF SUCCESS:**

- All students graduating from the University of Newcastle will have exposure to environmental sustainability principles through their degree by 2025

**SUSTAINABILITY IN ACTION**

Our highly engaged Champions4Change team is progressively leading the implementation of many local initiatives, engaging staff and students to behave more sustainably in our campus libraries. The group has implemented a range of initiatives, like discontinuing plastic bagging of PCs and other equipment during fumigation, phasing out the use of virgin paper to 100% recycled paper, and the introduction of electronic assignment submission. Further, it has implemented a waste education program in all libraries to better separate and recycle general waste including battery and mobile phone recycling.

A photograph of Professor Paul Dastoor, a man with glasses and a purple shirt, working with a flexible solar cell. He is holding a strip of the solar cell, which is curved and shows a grid of blue and red lines. The background is a blurred outdoor setting with trees and a building.

## SUSTAINABILITY IN ACTION

A first of its kind in Australia, the Priority Research Centre for Organic Electronics is focused on the scientific challenges in the development of organic photovoltaics for the next generation of environmentally friendly energy sources, photonics and biosensors. It focuses on the development of new electronic devices at the intersection between semiconductors and plastics.

A key member of the centre, Professor Paul Dastoor is designing revolutionary devices including electronic inks and needle-free glucose tests, with his innovations set to improve the environment and lives of communities around the world. At the global forefront of printed solar technology, Professor Dastoor and his team of 30 researchers at the University of Newcastle's Centre of Organic Electronics have become the first in the world to demonstrate printed solar cells at a commercial scale, signalling the imminent arrival of this new-breed renewable energy technology.

Organic electronics deals with carbon-based electronic materials that are soluble in a variety of liquids. This means they can be dissolved into solutions which can be printed, painted or sprayed onto different surfaces while being able to conduct electrical charges.

The cells are lightweight, low cost, can be manufactured at rapid speed, produce energy at lower light levels than existing solar-based silicon cells and are recyclable.

## RESEARCH

Spanning disciplinary and geographic boundaries across the globe, the University takes its place among research leaders in environmental sustainability research and innovation. Research underpins our contribution in this area. It requires effective collaborations with industry, harnesses the power of collective expertise and has a voice in the public discourse. We have actively created and fostered world leading environmental sustainability research facilities to carry out our sustainability research agenda.

### Newcastle Institute for Energy & Resources (NIER)

NIER provides a multidisciplinary model for transformational research in energy and resources. Driven by a vision of global leadership, NIER addresses challenges of the rapidly emerging issues of resource sustainability, productivity and competitiveness associated with energy and resources infrastructure. It delivers solutions contributing to the sustainability of resources and the environment; and addresses emerging issues including critical resource sustainability, the transformation of the energy system, and national productivity. NIER includes the Global Impact Cluster for Energy, Resources, Food and Water.

### Cooperative Research Centre for Contamination Assessment and Remediation of the Environment (CRC CARE)

CRC CARE is a research network covering the whole of Australia to tackle the critical areas of contamination assessment and remediation, with the goal of cutting the nation's pollutants and improving the health of its people, cities, food, soil, air and water. In the past ten years, the CRC has made major contributions to a cleaner country by developing leading-edge assessment and remediation methods and testing them in the field at sites owned by some of the nation's largest mining, energy and industrial firms.

### Global Centre for Environmental Remediation (GCER)

The Global Centre for Environmental Remediation aims to safeguard people's social, economic and physical health and wellbeing by developing innovative, cost-effective and sustainable technologies and solutions that reduce the impact of pollutants on the environment.

GCER's mission is to be a world-leading environmental remediation research centre that enhances Australia's economic, environmental and social wellbeing and boosts its international competitiveness.

### CRC for High Performance Soils (HPS)

The CRC-HPS brings together 42 partners spanning industry, government, research, NFP and business sectors to help bridge the gap between soil science and farm management. The investment from federal government will be supported by more than \$136 million in contributions from industry and other partners (cash and in-kind) over 10 years.

### PRIORITY ACTIONS:

- Develop and implement global environmental sustainability research innovation projects and implement across our campuses to support the University becoming a Living Laboratory
- Lead industry research partnerships to shift the regional economy towards more renewable energy sources

### MEASURES OF SUCCESS:

- Lead partnerships with local, regional and global industries to deliver environmental sustainability research innovation projects with a focus on energy efficiency and renewable energy

GOVERNANCE

The University is committed to environmental and social sustainability actions contributing to the targets set in the UN Sustainable Development Goals (SDGs) and we are steadfast in ensuring senior management support for environmental sustainability.

Governance is considered essential to this commitment and UON will continue to review the structure and processes around governance regularly to ensure sustainability principles remain at the heart of decision-making.

As host to one of 17 International Training Centres for Authorities and Leaders (CIFAL) we have a pivotal role in promoting and increasing understanding of the UN SDGs. In this role, we serve as a hub for the exchange of knowledge between government, the private sector and the community. This Plan actively ensures this is embedded in our governance to ensure its principles are supported and incorporated at a campus and community level.

The Environmental Team sits within the Campus Strategy Team, inside Infrastructure and Facilities Services (IFS).

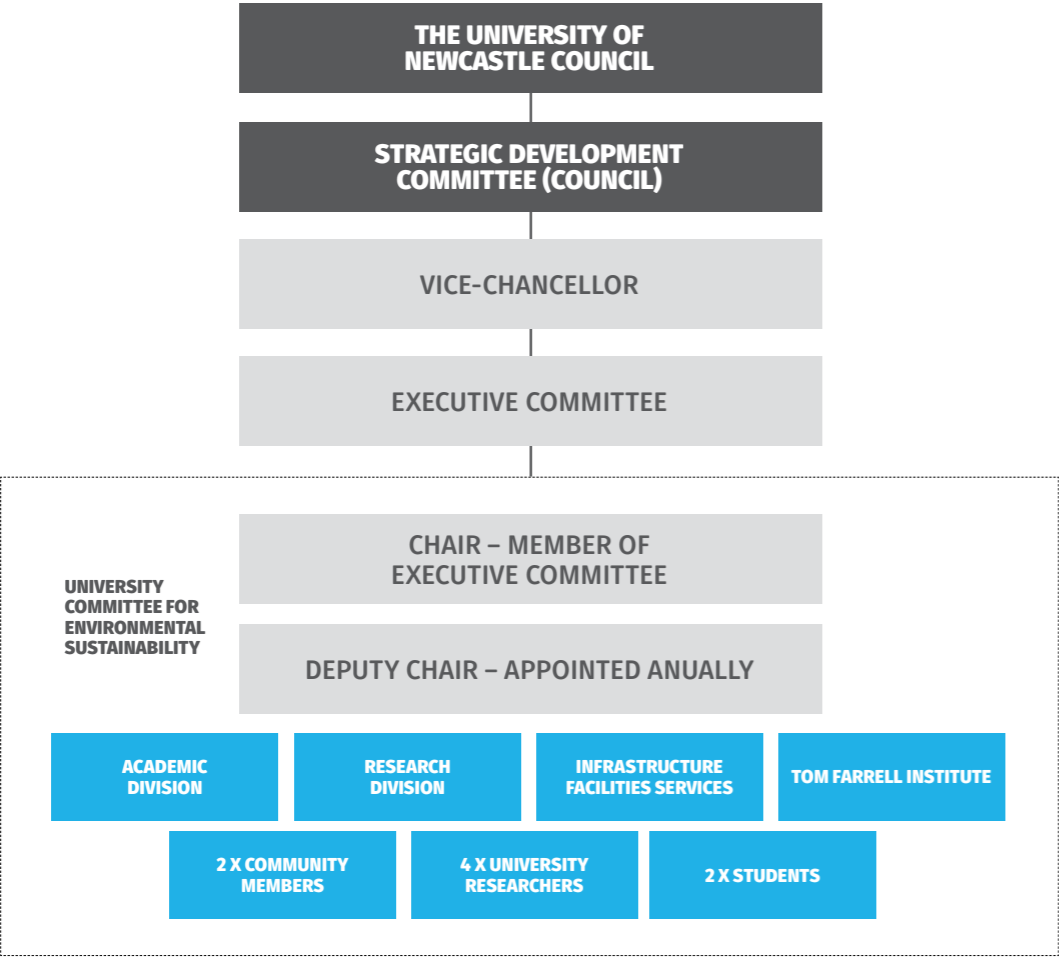
IFS is a department within the University's Resources Division. This is complimented by the University Committee of Environmental Sustainability (UCES), chaired by the Pro Vice-Chancellor (Learning and Teaching). The Deputy Chair is a member of the Committee appointed annually by the Chair in consultation with the Committee.

PRIORITY ACTIONS:

- Develop and implement a University-wide Environmental Sustainability Charter by December 2019 (incorporating the UN Sustainable Development Goals) to ensure environmental sustainability is embedded at the highest levels
- Review the function, structure and effectiveness of the University Committee on Environmental Sustainability (UCES) by end 2020

MEASURES OF SUCCESS:

- Make certain that environmental sustainability is embedded across the highest levels of the University



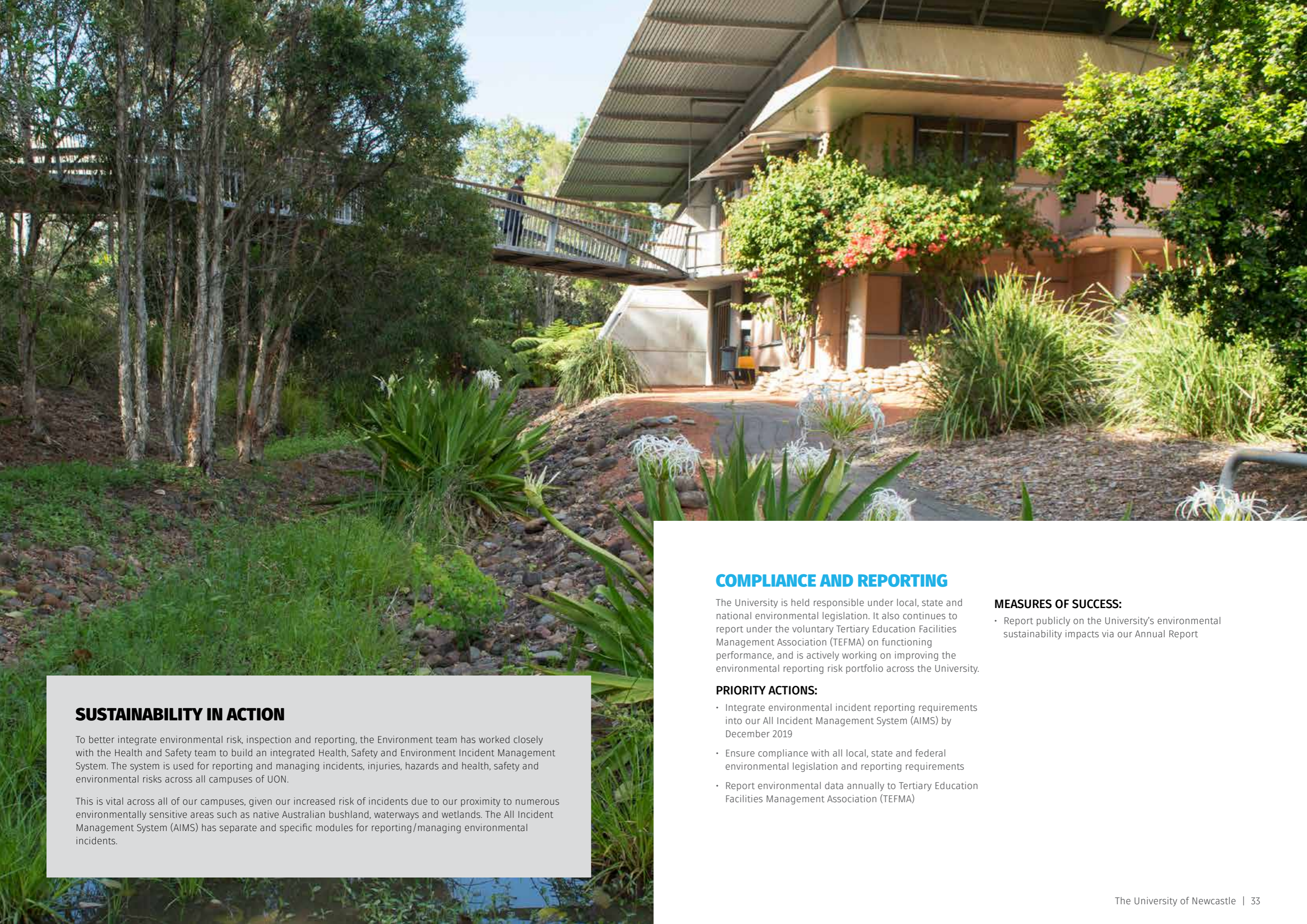
SUSTAINABILITY IN ACTION

The University Committee on Environmental Sustainability (UCES) was established in November 2007 by the University Council to investigate and coordinate the University's ongoing action and progress towards environmental sustainability. The Committee is chaired by the Pro Vice-Chancellor (Learning and Teaching).

The Committee on Environmental Sustainability provides advice to the Vice-Chancellor on environmental matters related to the development of the University's campuses and surrounds; the implementation and maintenance of environmentally sensitive and sustainable practices; and strategies to build environmental awareness across the University and its communities.

It has membership from senior management, staff, students and the community and is responsible for guiding the development of this ESP, and the implementation of actions across the University.

Environmental sustainability issues are also discussed and represented on the Resources Health and Safety Committee and the Healthy University Steering Committee. The objective is to better promote environmental initiatives to increase the awareness and profile of environmental sustainability, embedding sustainable operations and behaviours across the University."



## SUSTAINABILITY IN ACTION

To better integrate environmental risk, inspection and reporting, the Environment team has worked closely with the Health and Safety team to build an integrated Health, Safety and Environment Incident Management System. The system is used for reporting and managing incidents, injuries, hazards and health, safety and environmental risks across all campuses of UON.

This is vital across all of our campuses, given our increased risk of incidents due to our proximity to numerous environmentally sensitive areas such as native Australian bushland, waterways and wetlands. The All Incident Management System (AIMS) has separate and specific modules for reporting/managing environmental incidents.

## COMPLIANCE AND REPORTING

The University is held responsible under local, state and national environmental legislation. It also continues to report under the voluntary Tertiary Education Facilities Management Association (TEFMA) on functioning performance, and is actively working on improving the environmental reporting risk portfolio across the University.

### PRIORITY ACTIONS:

- Integrate environmental incident reporting requirements into our All Incident Management System (AIMS) by December 2019
- Ensure compliance with all local, state and federal environmental legislation and reporting requirements
- Report environmental data annually to Tertiary Education Facilities Management Association (TEFMA)

### MEASURES OF SUCCESS:

- Report publicly on the University's environmental sustainability impacts via our Annual Report



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AUSTRALIA