



THE UNIVERSITY OF
MELBOURNE

Sustainability Report 2018



The end of 2018 marks the halfway point of the Sustainability Plan period 2017 to 2020

About this Report

The Sustainability Report (Report) summarises the University's 2018 progress towards the targets and priority actions in the Sustainability Plan 2017 - 2020 (Plan) and also responds to the University's material topics. Material topics are those identified by stakeholders as the most important and having the most significant impact. The material topics are shown in Appendix 1. The Report is structured using five themes – Governance, Core Activities, The Campus, University Community, and External Relationships – which organise the sixteen material topics for ease of reading. Plan targets are reported in relevant topic sections and a collective summary of progress

towards priority actions is reported in Appendix 2. Frameworks such as the Global Reporting Initiative Standard (GRI) and the Sustainable Development Goals (SDGs) informed the development and disclosures in the Report.

This Report and the Plan relate to activities under the University's operational control.¹

The Plan focuses on environmental aspects of sustainability, together with their inherent social impacts. The Plan does not focus on areas commonly considered as 'social sustainability'. These areas are covered in other University strategies

such as Reconciliation, Health and Safety, and Diversity and Inclusion. Where areas of social sustainability have been raised by stakeholders as material topics, this Report provides a summary and references other University publications to provide a complete picture. A complete list of reference documents are provided in Appendix 3.

For feedback on this report, please contact Associate Director, Sustainability, Clare Walker, (walker@unimelb.edu.au).

¹ See [2018 Annual Report](#) for details. This excludes affiliated colleges which are not under the University's operational control.

Message from the Vice Chancellor Duncan Maskell



I am pleased to present the University of Melbourne Sustainability Report for 2018.

The University of Melbourne is recognised nationally and internationally as a world-leading teaching and research institution. Since commencing as Vice-Chancellor at Melbourne in October 2018, I have thoroughly enjoyed getting to know the University better, including learning about many pockets of excellence across a great breadth of disciplines. With such excellence, I believe, comes a responsibility to inform public debate, promote critical and free enquiry, nurture the leaders of the future, and exercise strong leadership in addressing the most pressing of global questions. In particular, the University of Melbourne is demonstrating a deep commitment to making a difference by using our unique resources and breadth of teaching and research expertise to tackle the challenges of climate change.

This Report marks a significant milestone in the University's sustainability agenda, as we are now halfway through our Sustainability Plan 2017–2020 (Plan). The Plan sets ambitious targets across all areas of our institutional activities and operations. The Plan is underpinned by the Sustainability Charter, which articulates the University's long-term commitment in this field. We are well on the way to meeting some of our toughest goals outlined in the Plan. This includes being on track to achieve zero net emissions from electricity used by the University by 2021, after making two wind farm Power Purchase Agreements.

In 2018, researchers across the University were awarded over \$13 million in funding for sustainability-related projects by the Australian Research Council. This highlights one of the University's strengths, namely helping drive the engine of discovery and innovation as the world responds to environmental and climate challenges. We also completed a \$9.1 million project, funded by a loan from the Clean Energy Finance Corporation, to reduce our energy demand and generate 'cleaner' energy. Importantly, 2018 saw engagement from hundreds of staff and students in the 'Green Impact Program', which has helped foster sustainability awareness and activity at local levels across our campuses.

As our students will remind us, there is still much to do! However, I am confident that the achievements outlined in this report show the determination and capacity of the University community at all levels to play a leading role in responding to the challenges we face across all areas of sustainability, including climate change.

Yours sincerely

A handwritten signature in blue ink that reads "Duncan Maskell". The signature is stylized and written in a cursive-like font.

DUNCAN MASKELL

Vice Chancellor,
University of Melbourne

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Get in touch online

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- sustainablecampus.unimelb.edu.au
- ourcampus.unimelb.edu.au
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A new University-wide interdisciplinary breadth subject offered for the first time in 2018.

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A curated database of hands-on sustainability experiences for students designed to augment their formal curriculum-based learning.



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Participation in two partnerships enabling the construction of new wind farms in regional Victoria.

2018 Sustainability performance at a glance

Research focus and impact



**\$13.3 million +
in funding**

Awarded to University researchers for 17 sustainability-related projects from the Australian Research Council



**990+ external
relationships**

Initiated and engaged by the University's Interdisciplinary Research Institutes ²



**sustainability
research**

Ongoing challenge to meaningfully and practically define "sustainability research" – working with University peers to share approaches

Engagement and awareness



**1,377
verified actions**

Completed in the Green Impact program which grew to 44 registered staff teams



**increased
satisfaction**

By staff and students with the University's efforts in encouraging sustainability ³



**over 2,100
people**

Attended 28 sustainability events run by Campus Services

Climate change mitigation, resilience and adaptation



**60 – 70%
reduction**

Foundations in place for a 60 – 70% reduction in the University's carbon footprint by 2021



**increased
emissions**

Air travel emissions remain a challenge. Reported emissions per full-time equivalent staff member grew by 10% ⁴



**outcome
focused**

Maturing approach to climate risk, from asset-focused to outcome-focused

Selected 2018 performance points for the five most material sustainability-related topics, as identified by University stakeholders. More information on these and additional identified topics, as well as performance against all of the Plan targets and priority actions, is contained in this Report.

Teaching and learning



1,500th graduate

From the Master of Environment coursework degree



Our Planet, Our Health

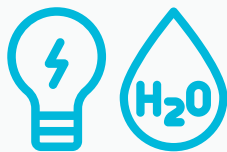
Is a new University-wide interdisciplinary breadth subject ⁵



Faculty fellowships

Faculty-based sustainability fellowships developed in 2018, launching in 2019

Resource use in operations



energy and water

Consumption per square metre floor area remained steady



waste per person

Has increased slightly from last year, prompting renewed efforts










zero net emissions

On track for zero net emissions from electricity by 2021 due to wind farm Power Purchase Agreements

Overall Performance of Targets

The Sustainability Plan 2017 - 2020 has 41 targets. The table to the right shows the number of targets currently at each status level. Each target is detailed in its respective section of the report.

Status of targets

Exceeded or met target	 	5
On track	 	21
In progress	 	10
Needs attention	 	5

² The IRIs also sponsored, facilitated and attended as a speaker over 486 public events

³ Specifically in the areas of sustainable transport, improving biodiversity, reducing carbon footprint and using the campus as a living lab

⁴ 50% of the 2018 air travel emissions have been offset

⁵ Introducing students to the interconnectedness of human and animal health, and the environment, coordinated by the *Faculty of Medicine, Dentistry and Health Sciences* and the *Faculty of Veterinary and Agricultural Sciences*, in partnership with the *Peter Doherty Institute for Infection and Immunity*



Our sustainability agenda is intrinsic to the University values and principles. We aim to leverage our capability through research, teaching and engagement to drive sustainable development, building a future that is ecologically sound, socially just and economically viable.

Introduction

Who we are

The University of Melbourne was established by the University of Melbourne Act 2009 (Vic) and is governed by a Council and Academic Board. The University is managed by a Vice-Chancellor and senior leadership team. It comprises ten faculties, three institutes and six interdisciplinary institutes. The University also includes non-academic departments including MUSport and Melbourne Theatre Company, as well as subsidiary companies.⁶ It does not include the affiliated colleges.

In 2018, the University community comprised 52,745 students (equivalent full-time student load) and 8,983 staff (full-time equivalent), based at our main campus in Parkville and six campuses located throughout metropolitan Melbourne (Southbank, Werribee, Burnley) and regional Victoria (Shepparton, Dookie and Creswick). A new campus is also under development at Fisherman's Bend on the outskirts of the Melbourne CBD.

The University aspires to be one of the finest universities in the world, contributing to society in ways that enrich and transform lives. Success is measured by the ten strategic goals articulated in the University's institutional strategy, *Growing Esteem 2015–2020*.⁷ Growing Esteem frames our ambitious aspirations for

teaching, learning and the student experience, and for research which is globally recognised for its quality and impact.

Growing Esteem embeds the principles of sustainability in our work and declares our ambition to be 'recognised as a leader in embedding sustainability in all aspects of the University's operations, teaching and learning, research and engagement'. Throughout 2015 and 2016, the Sustainability Executive led development of the University's framework for sustainability, comprising the *Sustainability Charter*, *Sustainability Plan 2017-2020* and annual reporting. The Sustainability Executive specifically provides the governance of the Plan implementation and related strategic decisions.⁸ Sustainability teams are based in Chancellery's Administration and Finance and Campus Services within University Services.⁹ These teams manage sustainability governance and strategy, and sustainable campus operations respectively.

Operating Environment

The higher education sector exists within a dynamic operating environment where traditional practices are continually challenged

in order to respond to evolving societal expectations of the role of a University. The digital age, globalisation, political uncertainty and the need to respond to grand challenges such as climate change combine to create the context within which the University operates. At the centre of this is the imperative of the unique Melbourne student experience.

The University must remain agile in its response to the changing legislative environment. For example, the passing of the *Modern Slavery Act in 2018* has implications throughout our entire supply chain, from the materials used in construction on campus, to how we dispose of our waste. These issues are explored further in section 4.

In 2018, *Times Higher Education (THE)* launched *university impact rankings* to assess institutional performance towards the Sustainable Development Goals (SDGs). The University has chosen to participate in this pilot and will review its ongoing involvement. This development flags a wider uptake of the SDGs through 2018, and increasing recognition of the value of the SDGs as measures of impact and as a framework to inform institutional endeavour.

⁶ See *2018 Annual Report* for details.

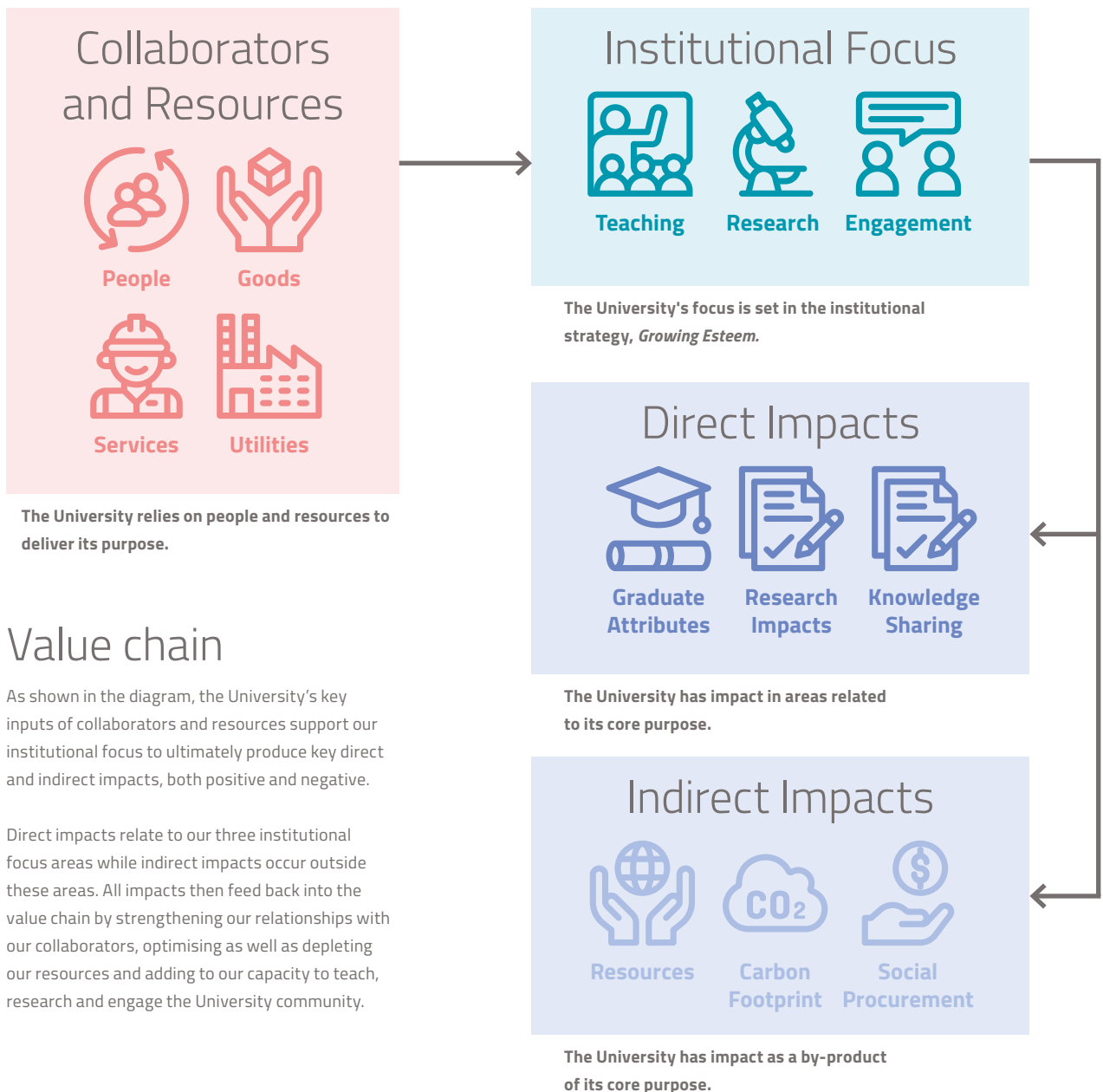
⁷ Note that a new institutional strategy is being developed during 2019.

⁸ The University's sustainability framework and role of the Sustainability Executive are discussed further in the Governance section of this Report.

⁹ Further information on the sustainability teams can be found in the Trust and values section, and the Resource use in operations section of this Report.

How we create value

While the University is a large and complex organisation, its key collaborators and resources, institutional focus and direct and indirect impacts can be summarised by the following value chain diagram. With the size and complexity of the organisation in mind, this value chain focuses on the material topics identified by stakeholders for this report.



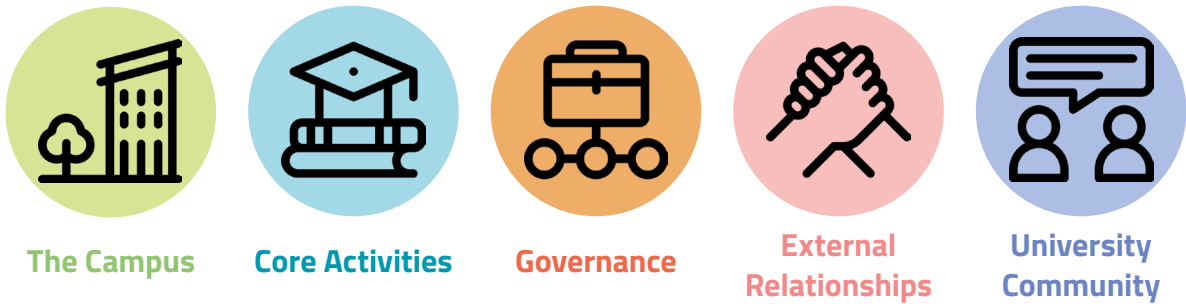
Value chain

As shown in the diagram, the University's key inputs of collaborators and resources support our institutional focus to ultimately produce key direct and indirect impacts, both positive and negative.

Direct impacts relate to our three institutional focus areas while indirect impacts occur outside these areas. All impacts then feed back into the value chain by strengthening our relationships with our collaborators, optimising as well as depleting our resources and adding to our capacity to teach, research and engage the University community.

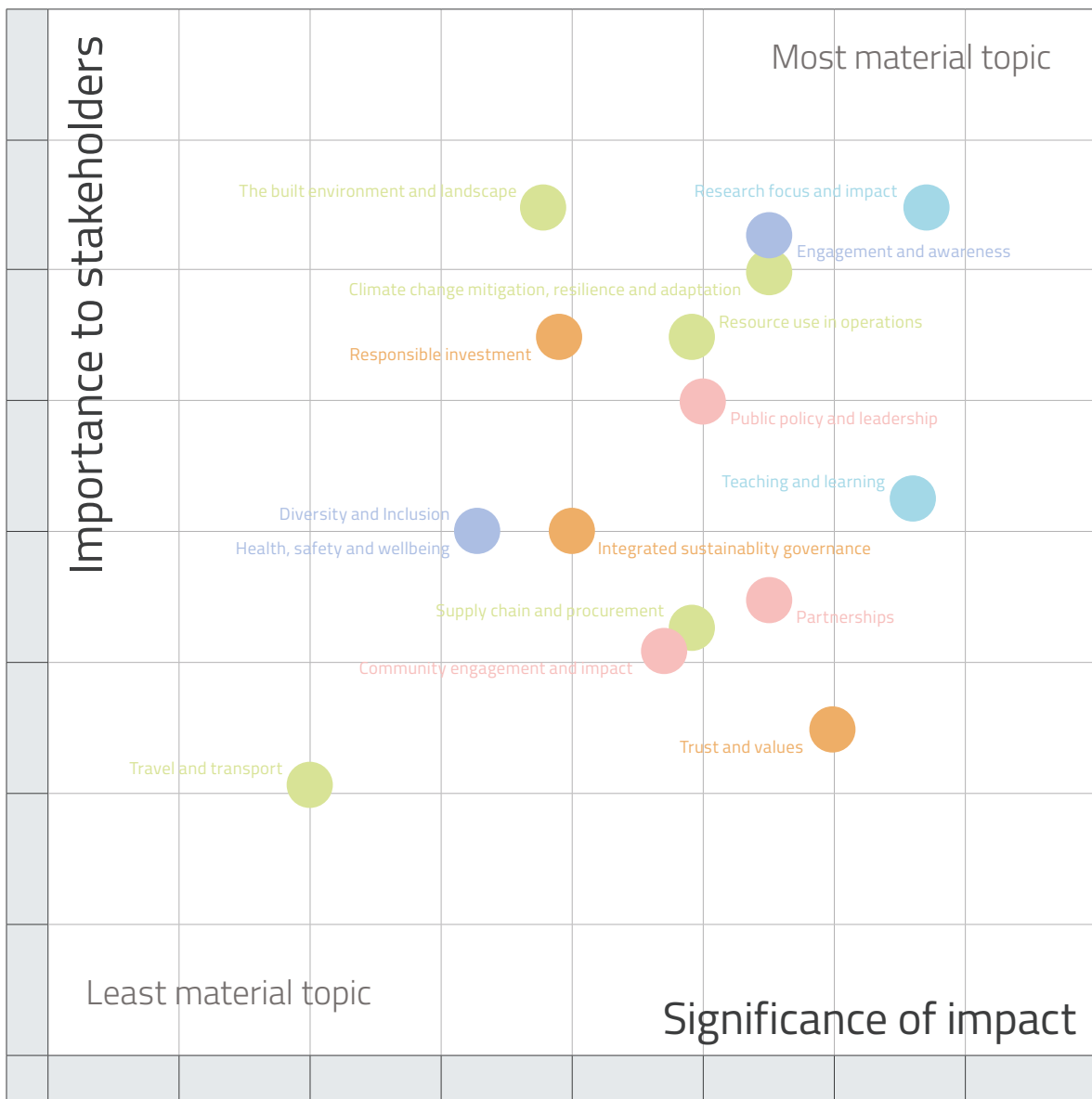
Materiality themes

The materiality assessment produced 16 material sustainability topics and their relative level of materiality which were grouped into five themes. These have been used to guide the structure and content of this report, while the level of materiality has been used to guide the level of detail for each topic. Further definition and detail of these themes and topics is provided throughout this report and in Appendix 1.



Materiality matrix

To understand which aspects of the University's operations have the most significance and importance with regard to sustainability, the University undertook a materiality assessment process. See Appendix 1 for further details on the process. Material topics are positioned in the matrix below in terms of their relative importance along two axes: importance to stakeholders and significance of impact. This matrix has been used to guide coverage of each topic in the Report.





Governance

Integrated Sustainability Governance



Growing Esteem recognises sustainability as an organising principle for decisions about the future of the University. The University's sustainability framework comprises a [Charter](#), [Plan](#) and [annual reporting](#).

The Charter is an enduring statement of sustainability values and principles, identifying specific commitments across Research, Teaching and Learning, Engagement, Operations and Governance. The Plan operationalises the Charter commitments, identifying targets and priority actions to 2020. Annual reporting enables regular review of the University's material sustainability impacts and priorities. The Report provides public disclosure of how impacts are being addressed and tracks Plan performance in alignment with the Charter and *Growing Esteem*. It is essential to work in synthesis with University-wide strategy and take the opportunity to further embed sustainability as part in the new institutional strategy being developed through 2019.

Integrated sustainability governance refers to embedding sustainability into decision-making processes, influencing and aligning institutional strategy, and adopting a holistic systems-thinking approach.

The Sustainability Executive provides governance of the Plan and guides the University's positioning on environmental sustainability. It comprises

senior academic and professional staff, together with student nominees from the University of Melbourne Student Union (UMSU) and the Graduate Student Association (GSA), providing leadership and governance in line with the commitments of the Charter and Plan. The Sustainability Executive meets quarterly, with its senior leadership representation demonstrating the University's commitment to embedding sustainability into processes at the highest level.

The Sustainability Executive has been recognised as exemplary in the sector, winning the 'Outstanding Leadership Team' category at the [2018 Green Gown Awards Australasia](#). The [Staff and Student Sustainability Survey \(SSSS\)](#), however, suggests that there is more work to be done in terms of the Sustainability Executive being most effective and communicating what it does, with 34% of respondents satisfied / extremely satisfied with 'Leadership and governance by the Sustainability Executive' and 13% extremely / somewhat dissatisfied.

Governance

Trust and values



'Trust and values' refers to building trust with stakeholders by having a clear purpose and set of values, and ensuring that these are reflected in everything that the University does. This is particularly significant in the context of increased public scrutiny of the integrity and moral positioning of institutions generally. The University must respond appropriately to reinforce the position of trust inherent in its role as a public-spirited institution.

Effective and transparent stakeholder engagement is foundational to solidifying the University's values and building trust. Internal stakeholder engagement with students and staff has been a hallmark of development of the sustainability framework, and continues through partnerships with students and staff to deliver campus events, such as forum discussions on topical issues. Students also participate in University sustainability centrally through UMSU and GSA presidents' nomination of members to the Sustainability Executive.

The University has engaged in extensive internal and external stakeholder engagement to develop this Report (see the materiality review in Appendix 1 for further detail). This engagement showed that students are rightly concerned regarding the world they are inheriting from previous generations. Student groups are active in investigating issues requiring University response, including global reliance on fossil fuels and its impact on the environment.

As identified through stakeholder engagement and noted in *Growing Esteem*, sustainability is an organising principle of the University. Demonstrating a commitment to this value is crucial in building trust with University stakeholders. Surveys such as the SSSS and the International Student Barometer and Student Barometer Surveys

(ISBSB) provide some feedback on how well the University is demonstrating its commitment to sustainability. Results suggest that the University can do more to communicate and demonstrate this commitment.

University, sector and government publications and policies articulate responses to issues of trust and values in higher education, including:




- [Universities Australia 'Guidelines for university responses to sexual assault and sexual harassment'](#), July 2018, as part of 'Respect. Now. Always' campaign
- Appropriate Workplace Behaviour, LGBTI+ awareness and other initiatives as articulated through University Diversity and Inclusion initiatives and People Strategy
- Proposed legislation to address '[contract cheating](#)', creating a criminal offence to provide or advertise cheating services to university students¹⁰

Looking Forward

In order to effectively enact the Charter and deliver on the Plan, The University's sustainability efforts must continue in synthesis with University-wide strategy. With the new institutional strategy being developed through 2019, we have an opportunity to further embed sustainability as part of University strategy and reinforce sustainability as an organising principle of the University. A new strategy will establish the principles on which future Sustainability Plans will be based. The findings from the SSSS and ISBSB have prompted the development of a strategic communications plan to elevate understanding of the Plan and the Sustainability Executive, the University's sustainability performance and its central role in University activities.

¹⁰ 'Contract Cheating' is a practice whereby companies or individuals seek payment to take exams or write essays for students.

Governance Performance

Target	Status	Comment
Ensure that sustainability remains enshrined at the highest level of University strategies	 On track	Portfolio responsibility for sustainability strategy and governance sits within Chancellery Administration and Finance, with the Vice-President (Administration and Finance) and Chief Operating Officer, who is also Chair of the Sustainability Executive. This ensures that sustainability remains an important consideration in University-wide strategic development.
Report annually and publicly on the University's sustainability impacts and performance using global best practice standards	 On track	The University has released a Sustainability Report annually since 2015.
Uphold the principle of stakeholder inclusiveness in our reporting and decision-making processes	 On track	The process for this annual Report has included interviews with internal and external stakeholders, a workshop with Sustainability Executive and sustainability team, complemented by sources gathered throughout 2018 such as the biennial Staff and Student Sustainability Survey (SSSS) .

Governance

Responsible Investment



Responsible investment refers to implementing investment strategies consistent with the University's commitment to sustainability and its financial and legal obligations. The University believes that companies which effectively manage their environmental, social and governance responsibilities should deliver better risk-adjusted returns over the long term, and hence be better positioned to manage the transition to a low-carbon economy and the physical impacts of climate change. In the Plan, the University committed to developing a Sustainable Investment Framework (SIF) by the end of 2017, to integrate climate change risk more systematically into investment management. The SIF was approved in 2017 and released in March 2018. It outlines the University's approach to sustainability, particularly climate change, in its investment portfolios and processes. The requirements in the SIF cover many of the Plan targets and actions.

Performance

Implementation of the SIF has progressed throughout 2018. All activities are on track to ensure that the University will meet its Plan commitments. The performance of the University's investment managers are measured against the SIF, which outlines the key criteria in integrating climate change risk into investment decision-making. This assessment has been performed by a specialist advisor, Mercer,¹¹ with input from the University. The SIF prescribes that the policies of the

University's primary investment manager, the Victorian Funds Management Corporation (VFMC), be assessed to determine alignment with the University's beliefs; Mercer's assessment concluded that these policies demonstrated strong alignment in 2018, as demonstrated by VFMC's clear direction and commitment setting. This is evident from VFMC's climate change position statement released early in 2018, its November 2018 update to its Environmental, Social and Governance (ESG) policy and beliefs, and the VFMC ESG Roadmap in its Annual Report. A summary of performance against key SIF criteria is shown in the first table to the left.

Looking Forward

The University will continue to focus on SIF implementation and complementary activities including:




- Becoming a direct signatory to the Principles for Responsible Investment (PRI) and considering membership of other relevant peer organisations.
- Assessing the 2°C scenario analysis recently conducted by Mercer on the investment portfolio¹² which will form the basis of further exploration of risk and opportunity considerations with VFMC.
- Developing a plan for impact investing or investing in climate change solutions.
- Expanding the SIF to property and infrastructure.

¹¹ Mercer Investment (Australia) (Mercer).





¹² Please note that the University cannot publish these results due to commercial confidentiality requirements.

Governance

Performance against the SIF criteria

SIF performance criterion ¹³	Status	Comment
Fund Managers' performance in integrating climate change risk and opportunity into the investment process ¹⁴	 On track	Mercer review completed. In summary, VFMC demonstrated strong alignment with the SIF. The University will continue to monitor and engage with VFMC to assess progress towards meeting SIF commitments.
Listed equity carbon footprint, as measured by the weighted average carbon intensity (WACI) of the portfolio	 On track	A portfolio carbon footprint was undertaken for the University portfolio, prepared by Mercer. The University used this information to discuss carbon intensity with the fund manager.
Active Ownership activities, with a specific focus on how the Fund Manager(s) is/are incorporating climate change into its proxy voting and engagement activities	 In progress	Mercer has assessed our fund manager, VFMC, as compliant with the SIF's active ownership requirements. They have also highlighted an opportunity for the University to improve monitoring and oversight in this area, which the University will address in 2019.

Sustainability Plan 2017 – 2020 Targets and Performance

Target	Status	Comment
By 2021, the University's investment portfolio will:		
a) Have divested from, or be in the process of divesting from within a reasonable period, any material holdings that do not satisfy the requirements of the University's sustainable investment framework for managing material climate change risk	 On track	a) See SIF reporting (table above).
b) Incorporate a meaningful allocation of impact investments in the strategic asset allocation, potentially in partnership with peer organisations (SIF)	 On track	b) The University is developing a plan for impact investing.
Establish a separate specific investment fund where a donor wishes to stipulate (subject to certain conditions) investment parameters for their endowment that are not accommodated through the existing portfolio	 On track	No such request has been made.
Become a direct signatory to the PRI	 On Track	Our advisor Mercer has prepared a guidance report and the University will progress in 2019.

¹³ VFMC's progress in integrating climate change was found to be acceptable, and therefore did not need to have an additional climate change risk assessment as allowed for in the SIF as the University did not have concerns about ongoing progress.

¹⁴ For the full list, please refer to the SIF.



The University is working to define sustainability at a disciplinary level and support cross-disciplinary perspectives

Core Activities

Teaching & Learning



Teaching and learning's focus is delivering an education that develops the sustainability leaders of the future, prepares students for meaningful and future-focused employment, and evolves ahead of emerging trends and expectations.

One of the greatest contributions a University can make is in the attributes of its graduates, whose University experiences and learnings help shape their personal and professional lives and contribution to society.

The hallmarks of [the Melbourne Graduate](#) are academic distinction, active citizenship, and integrity and

self-awareness. The integration of sustainability thinking and practice through both disciplinary depth and academic breadth has an important role to play in the delivery of these aspirations for the University's graduates.

[Chancellery](#) oversees the Melbourne Curriculum which is designed to harness and develop potential, and prepare graduates who are distinguished by their broad outlook and openness to different perspectives, thus supporting *Growing Esteem's* vision and objectives for learning and teaching, academic performance and engagement.

Performance

Chancellery has been working on solutions to provide students in all undergraduate programs with relevant and useful sustainability knowledge. A collaborative approach with faculties will be further developed in 2019 to support the University's students to maximise their contribution to a sustainable future.

An understanding of the meaning of sustainability in the context of each discipline is required in order to embed sustainability practice in the curriculum. To this end, in 2018 the concept of faculty-based



Sustainability Fellowships has been under development. The intention is to provide leadership in defining sustainability at disciplinary level, incorporate elements into curriculum development, and contribute to a University-wide cross-disciplinary cohort of leaders for sustainability in curriculum. A proposal regarding inaugural Sustainability Fellowships is to be progressed in early 2019.

Curriculum work in 2018 also involved a review of existing University Breadth Subjects (UBS) under the Melbourne Curriculum. Emphasis is being placed on subjects that examine current critical issues using techniques and approaches from multiple disciplines.

Looking Forward

Implementation of the new range of University breadth subjects will provide greater opportunity for cross-disciplinary learning as part of the curriculum for all undergraduate students. Integration of knowledge from interdisciplinary perspectives prepare students for the multi-faceted issues they will face in the workplace, including the development of sustainability thinking and practice.




'Sustainability knowledge and values' must also be articulated in terms of the disciplinary expertise required to practice within each faculty. The Sustainability Fellowships program will provide the leadership required to develop and implement the unique elements of sustainability knowledge and values into each participating faculty's undergraduate curriculum. This will collectively contribute to the development of a University-wide interdisciplinary community of practice.

The University will develop bespoke frameworks for mapping all curriculum to sustainability (and specifically to the SDGs) in 2019 and 2020.



Teaching and learning

Targets and Performance

Target	Status	Comment
By 2020, all undergraduate degree programs can demonstrate (at the course and/or major level) that core and compulsory curriculum enable students to understand and apply sustainability knowledge and values to practice in their field, consistent with the Melbourne graduate attributes	 In progress	<p>In 2018, Chancellery progressed the development of mechanisms for incorporating sustainability into the undergraduate curriculum. To be completed in 2019, this will include:</p> <ul style="list-style-type: none"> Review of breadth subjects Sustainability Fellowships
Increase the number of University of Melbourne graduates who can demonstrate a specialisation in environment and sustainability as defined by the National Learning and Teaching Academic Standards Statement for Environment and Sustainability, thereby contributing to their employability	 In progress	Enrolments in the University's Office for Environmental Programs (OEP) graduate environmental programs have increased slightly from 2016. It is expected that total enrolments for 2019 will increase further.
Evidence of increased student engagement with organisations positively contributing to sustainability through work-integrated and classroom activities	 Attention needed	Currently, evidence is qualitative, for example the Sustainability-based Learning Experience Database project (SLED), funded by a Sustainability Teaching and Learning grant (see case study)

Case Study

Office for Environmental Programs

The Graduate Environmental Program offered by the Office for Environmental Programs (OEP) is the University's preeminent multidisciplinary graduate coursework degree in Environment and Sustainability. The OEP unifies teaching efforts across ten faculties, offering graduate students a wide range of disciplinary specialities including sustainable cities, governance, policies and markets, integrated water catchment management, environment and public health, conservation, and environment and social change. Flexible entry and exit points are offered through the Graduate Certificate, Graduate Diploma and Master of Environment degrees, attracting international and domestic students from a diversity of professional, disciplinary and cultural backgrounds.

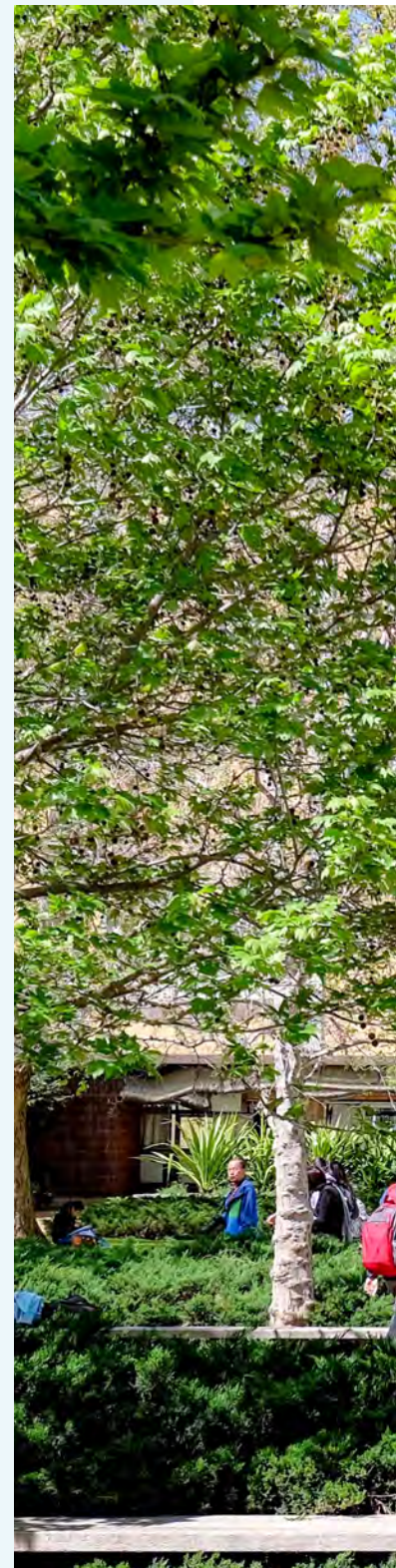
In 2018, over 150 students enrolled in the program, 40% international and 60% domestic students. OEP graduates are employed in all sectors of the environmental economy. The State Government's Department of Environment, Land, Water and Planning (DELWP) is a major employer, with five graduates gaining positions in 2018. Local councils such as Moreland City Council are also major employers. Additionally, in 2018 graduates found employment at Seek Sophie (Cambodian Development Agency), Universida Cientifica del Sur, Mexico City Council, Infonavit, and some graduates

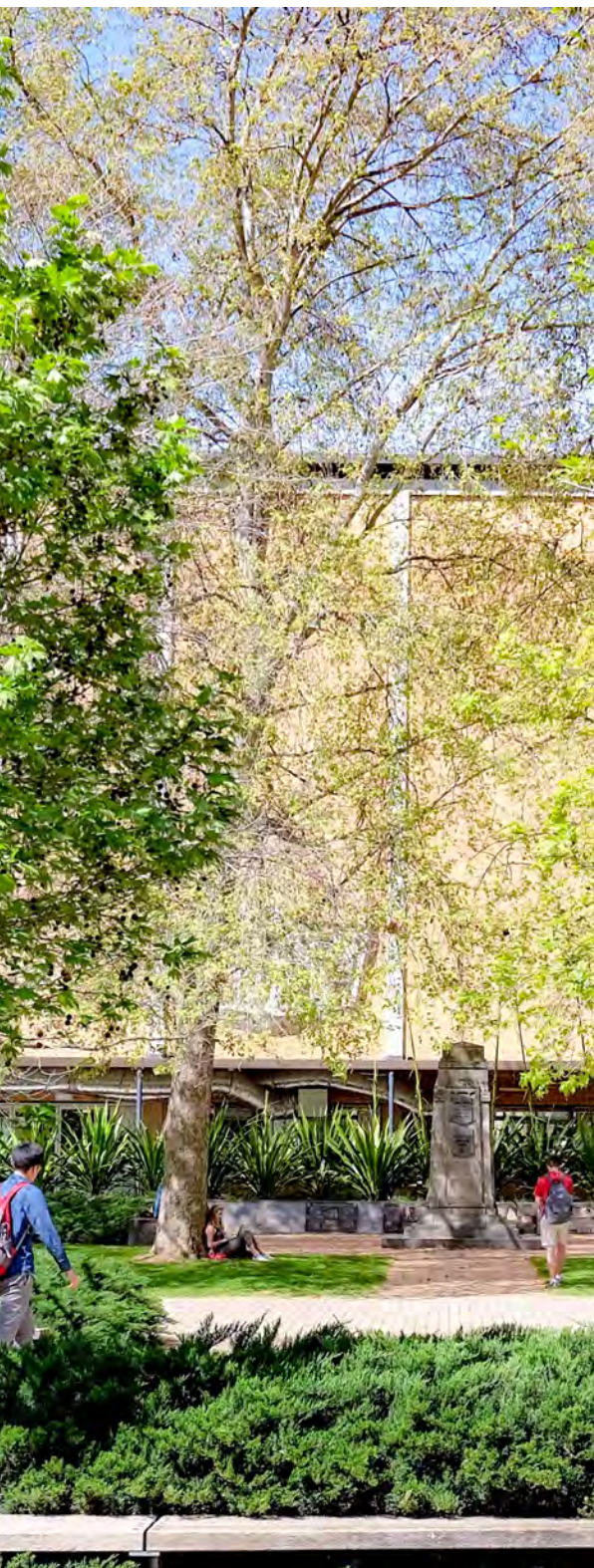
initiated their own social enterprise start-ups in Melbourne and abroad.


The Master of Environment coursework degree was first offered through the OEP in 2002. Notably, in 2018, the Master of Environment degree saw the graduation of its 1,500th student, Alejandro Correa Rivera from Chile. Alejandro specialised in Governance, Policy and Markets and was sponsored in his studies by the Chilean government through an international study award. Alejandro's story is a great representation of the interdisciplinary and international nature of the program.


The Graduate Environmental Program's most popular subjects in 2018 were:


- **Sustainability Governance and Leadership** (135 students)
- **Interdisciplinarity and the Environment** (108 students)
- **Sustainability and Behavior Change** (78 students)






 **150+**
students enrolled in the program in 2018

 **1,500th**
student graduated from the M.Environment degree

 **40%**
international students

 **60%**
domestic students

Case Study

Our Planet, Our Health

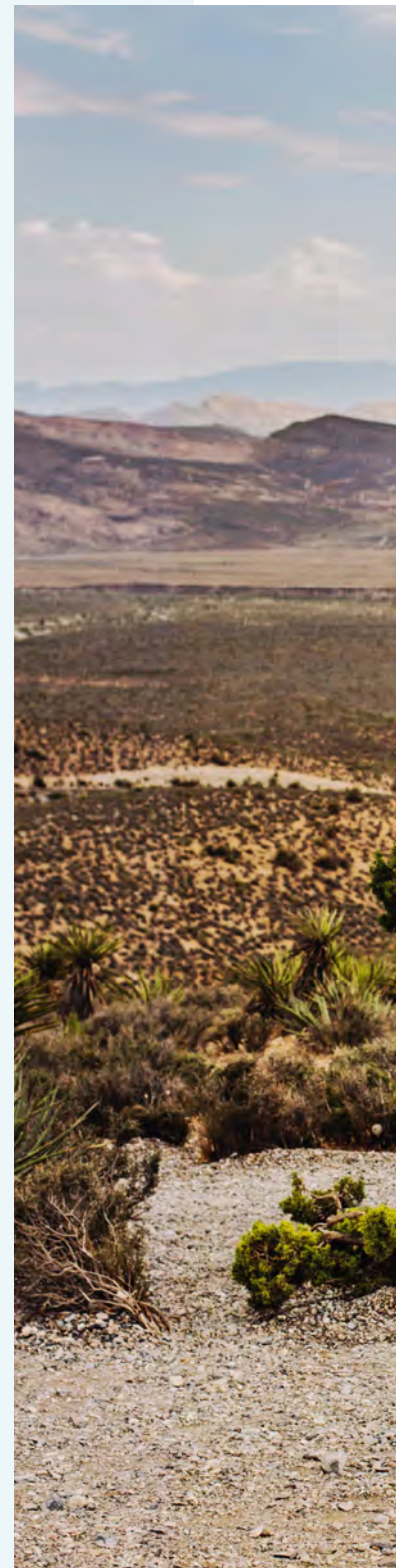
- University Breadth subject

Our Planet, Our Health is a new University-wide interdisciplinary breadth subject offered for the first time in 2018. It was jointly coordinated by the Faculty of Medicine, Dentistry and Health Sciences and the Faculty of Veterinary and Agricultural Sciences, in partnership with the Peter Doherty Institute for Infection and Immunity. The subject introduced students to the concept of 'One Health', describing the fundamental interconnectedness of human health, animal health, and the environment.

Our Planet, Our Health, addresses a rapidly growing area of research currently gaining wide currency in international publications such as 'The Lancet Planetary Health' and 'Nature Sustainability' journals. The subject attracted over 100 students from the faculties of Arts, Medicine, Dentistry & Health Sciences, Business & Economics, Architecture, Building & Planning, Fine Arts & Music and Science, as well as international exchange students.

The course was highly interdisciplinary and interactive, drawing on a wide range of case studies from Australia and internationally, including:

- Ethical, political, cultural and governance challenges in the 'One Health' domain
- Animal health, wildlife health, and environmental conservation from a historical perspective
- Emerging infectious diseases at the animal/human interface
- The role of agricultural practices in foodborne diseases and the development of antimicrobial resistance
- Sustainable agricultural development, food security and human nutrition
- Holistic conceptions of environmental health and human wellbeing in Australian Indigenous contexts





Image

Red Rock Canyon National Conservation Area, Las Vegas, United States (Olenka Kotyk).

Case Study

Students offered Sustainability Learning Experience

The Sustainability Learning Experience Database (SLED) is a curated database of sustainability experiences for students designed to augment their formal curriculum-based learning. Funded by a 2018 Learning and Teaching Initiative grant from the Melbourne Centre for the Study of Higher Education, SLED encourages and enables students to apply their theoretical sustainability learning in practical hands-on situations and to build transferrable professional skills.

Nine science and resource management subjects offered over 50 sustainability experiences, ranging from Billibellary's Indigenous cultural interpretation walk on campus to more regular volunteer work, such as being a Track Ranger with Parks Victoria. Supporting materials were developed to integrate SLED with formal teaching curricula and assist students to critically evaluate and reflect on their experiences.

As part of the pilot study, a comprehensive evaluation was undertaken to determine if

participating in sustainability-related extra-curricular activities increased environmentally sustainable attitudes and behaviours in students. The SLED pilot demonstrated that students valued a university-curated database of relevant sustainability experiences. Participating in these voluntary activities increased the depth of their critical thinking and their engagement with environmentally-aware behaviours and practices. Next steps for SLED include extending the range of subjects and investigating integration with more formal experiential learning initiatives across the University.





Image
Billibellary's Walk totem pole signage,
Parkville Campus.



The University is a world-leader in research, with many researchers excelling in sustainability-related fields

Core Activities

Research focus and impact



Research focus and impact refers to the research undertaken by University academics and the impact it has, how it is conducted, who the collaborators are, and where funding comes from. Implicit is the need for the University to articulate what it means by 'sustainability research' so the impact related to sustainability can be tracked and engagement with funding sources, collaborators and projects can be considered.

The University of Melbourne prides itself on being a world-leading research university, and research is a fundamental component of Growing Esteem's measures of success for 2020. The University's researchers

are at the forefront of international scholarship in fields as diverse as bioscience, human rights law, climate change, telecommunications and medical research. As such, the University can have a significant impact on the world through its research. The focus must be on ensuring the net impact of this research is positive for sustainability.

Fundamental to [research at the University of Melbourne](#) is the core value of academic freedom - academics determine their own research path, provided it complies with the [University's ethics and integrity](#) requirements. Within this context of academic freedom, the

University has three levers it uses to drive research direction and quality; people, collaborations and settings (including facilities, funding and focal points). The University's research strategy, [Research at Melbourne: Ensuring Excellence and Impact to 2025](#), identifies three focal points for research, known as The Grand Challenges, to raise the University's research quality and impact in areas of social imperative and where the University has critical mass:

- Understanding our place and purpose
- Fostering health and wellbeing
- Supporting sustainability and resilience



Image
(Christopher Lance/Flickr),
others from top: Prof M Kearney with
his brother, out in the field.

Performance

Defining sustainability research

Defining sustainability research remains an ongoing challenge for the University. In the [Research strategy](#) published in 2013, the focus is on planetary boundaries, however the role of creative arts and music in rebuilding communities after a natural disaster is also noted. [Growing Esteem](#) refers to sustainability for the institution in terms of organisational, financial, social and environmental dimensions. The Charter implies a triple bottom line interpretation, stating 'Achieving a sustainable Earth requires global values and actions that are ecologically sound, socially just and economically viable'. The Sustainable Development Goals, to which the University is a [signatory](#), break the triple bottom line down further, identifying 17 goals covering 169 targets and 230 indicators.

The University has been actively exploring how to map its research activity against different interpretations of sustainability, with none of the methods trialled to date proving adequate. This challenge is not unique to the University of Melbourne. The University is engaging in cross-sector collaboration, for example through the Sustainable Solutions Development Network (SSDN) and Australasian Campuses Towards Sustainability (ACTS), to identify ways to more effectively identify and encourage research related to sustainability.

Attracting, supporting and developing excellent people

The University has many excellent researchers who excel in fields related to sustainability, including:

- Highly-cited researchers¹⁵ such as Professor Jane Elith (Biosciences), Professor Jim He (Agriculture and Food), Professor Ary Hoffmann (BioSciences), Associate Professor Michael Kearney (Biosciences) and Professor Staffan Persson (Biosciences)

¹⁵ Defined as researchers who have produced multiple highly cited papers that rank in the top 1% by citations for field and year in Web of Science. See <https://hcr.clarivate.com>



Case study

The sleepy lizard and climate change

As boys, Associate Professor Michael Kearney and his brothers found what they thought was a pine cone. It turned out to be a 'sleepy lizard', also known as the stumpy-tail, shingleback, bobtail or pinecone lizard in other parts of Australia.

They didn't naturally occur in the eastern suburbs of Melbourne, so Michael concluded it was an escaped pet, but also wondered why this kind of lizard didn't naturally occur in his backyard.

Over 30 years later, a more general form of this question – what limits the distribution and abundance of animals? – is the central focus of his ecology research program at the University of Melbourne.

In 2018, Michael and his colleagues published a paper that represents the culmination of a 20-year journey of working out how to answer this question – and the star of the paper is the sleepy lizard.

The approach blends physics and ecology to enable researchers to predict the hourly patterns of body temperatures, activity and trajectories of growth and reproduction with high accuracy.

But real insights from these kinds of 'first-principles' models often come from examining anomalies. One such insight was that the lizards are highly sensitive to water loss, which was surprising because lizards have water-tight skin.

This is an important insight for efforts to predict the effects of climate change on lizards and other 'dry-skinned' creatures such as insects and spiders.

Importantly, the modelling approach tested on the sleepy lizard can be applied to any other kind of animal, and so could be used to help manage our precious fauna in the face of climate change.

Source: [Pursuit Article](#)



The University's researchers performed well in Australian Research Council funding awarded in 2018. At least 17 sustainability-related projects received over \$13.3 million.

- Professor Pierluigi Mancarella, Program Leader for Energy Systems at the Melbourne Energy Institute, who was awarded the [2018 Newton Prize](#) for research on resilient planning of low-carbon power systems in countries vulnerable to environmental hazards
- Professor Don Henry of the [Melbourne Sustainable Society Institute \(MSSI\)](#) was awarded an Order of Australia medal
- Professor Michele Acuto (Professor of Global Urban Politics and Director, Connected Cities Lab)

The University's researchers also performed well in Australian Research Council (ARC) funding awarded in 2018. At least 17 sustainability-related projects received over \$13.3 million, including over \$3 million each for Professor Madeleine van Oppen, for research into microbes that increase coral climate resilience, and Professor Jonathon Barnett, for research into catalysing solutions to climate change in low-lying islands.

Another funding success was the Australian Renewable Energy Agency ([ARENA](#)) research grant awarded to University of Melbourne and partners, including University of New South Wales (UNSW), Energy Power Systems Australia, Meridian Energy

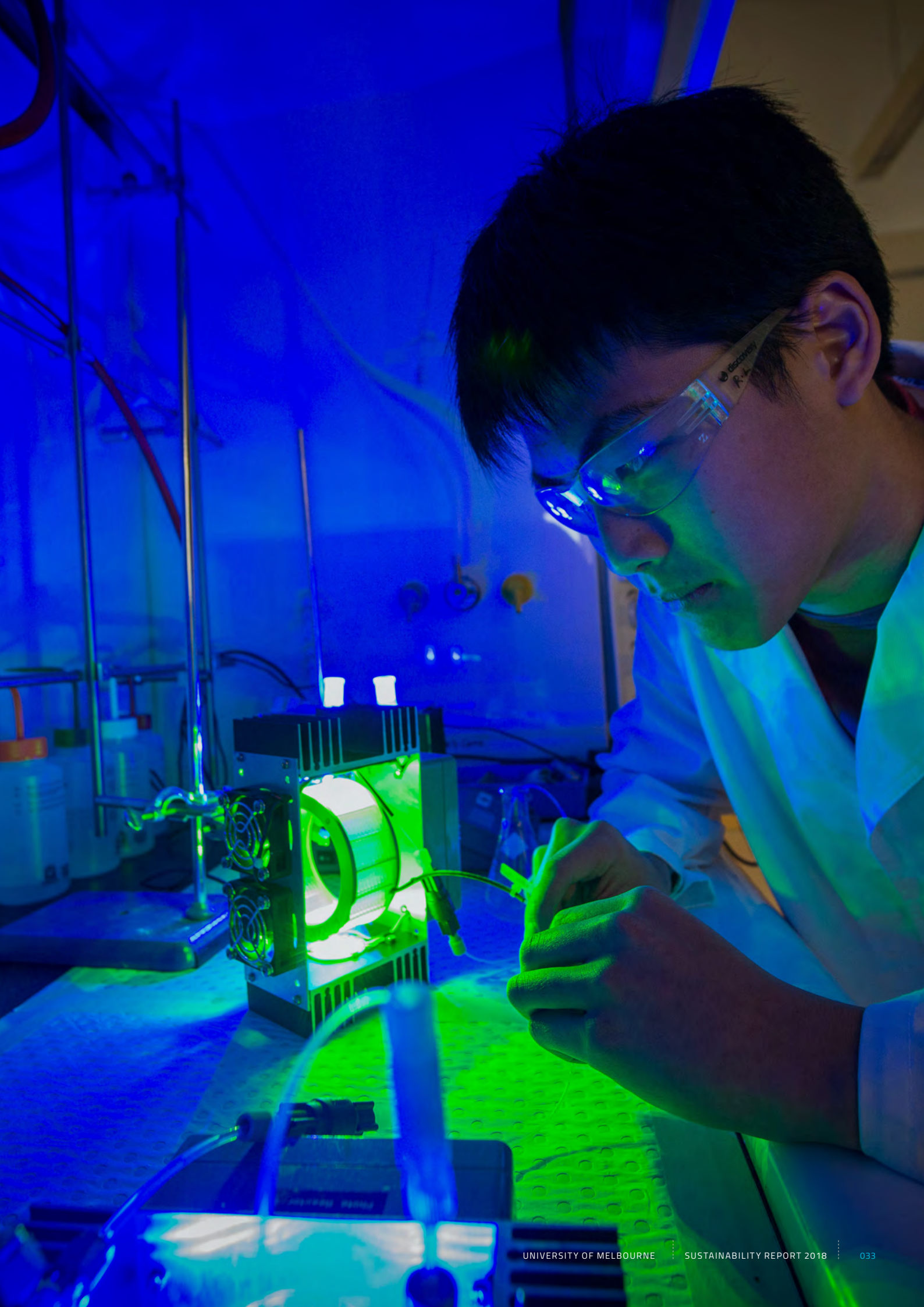
Australia, Continental and MAN. The grant supports an \$8.6 million research project investigating the performance and value of efficient, heavy duty, reciprocating engines running on renewable hydrogen.

Building stronger local and global networks for collaboration

The University fosters collaborations that lead to high-quality research and impact in target areas through Melbourne Interdisciplinary Research Institutes (MIRI) and Hallmark Research Initiatives (HRI).

MIRIs strengthen and spark interdisciplinary research at the University in existing and developing areas of importance to society. They work with industry, government and not-for-profit organisations in Australia and overseas to challenge current thinking and offer new solutions that change our world.

While many of the MIRIs touch on aspects of sustainability – including the [Melbourne Disability Institute](#), [Melbourne Energy Institute](#) and [Melbourne Social Equity Institute](#) – the [Melbourne Sustainable Society Institute \(MSSI\)](#) has an explicit sustainability focus. MSSI's mission is twofold – to build ambition and activity across the University's faculties and disciplines in sustainability-focused research, and to be a portal to the outside world for translating and disseminating sustainability knowledge. MSSI's 2018 activities included 62 publications, participation or support of 486 events, and 990 external relationships initiated or actively engaged.



The HRI program fosters collaboration in priority areas, enabling the maturing of interdisciplinary research communities that build on existing strengths across the University. In 2018 funding was allocated to five new interdisciplinary initiatives to be launched in 2019:

- Affordable Housing HRI
- BioInspiration HRI
- Creativity and Wellbeing HRI
- Future Food HRI
- Indonesia Democracy HRI

The University is also part of national and international collaborations. Examples of national collaborations are the [Clean Air and Urban Landscapes \(CAUL\) Hub](#), led by Associate Professor Kirsten Parris, the [Threatened Species Recovery Hub](#), led by Professor Brendan Wintle, and the [Australian National Development Index](#).

An international example is the [Climate Energy College](#), which is a collaboration between the University of Melbourne, the Potsdam Institute for Climate Impact Research, the University of Potsdam, the Humboldt University of Berlin and the Technical University of Berlin. The college has been developing early career researchers since 2013, including study opportunities in Germany. A key source of the college's impact is a regular series of events with specialist speakers from academia, government and industry.

Campuses as Living Labs and facilitators

The University uses its campuses as living labs and also designs physical environments to facilitate collaboration.

An exemplary living lab in 2018 was the New Student Precinct project which was a focus for [two research projects](#). Dr Rimi Khan is researching how the Precinct's co-creation process contributes

to new forms of engagement, community and citizenship among students, and what this means for our understanding of the 'student experience'. Alex Morse undertook a Masters by research in 2017 - 2018 into the use of sensory technology to determine how users engage with public spaces.

The University develops physical environments that facilitate collaboration, demonstrated in 2018 by progress in the [Melbourne Connect project](#) and the new campus at Fishermans Bend.

Melbourne Connect will foster collaboration that can expedite and amplify innovation for future challenges, contributing to greater wellbeing of societies globally. The future home of Melbourne Connect (formerly known as Carlton Connect) commenced construction in 2018, while at its current location, events were held to inspire, inform, showcase and entertain.

For the Fishermans Bend campus, the University finalised the purchase of the land and began masterplanning. Set to open in the early 2020s, the new campus will allow students and academics to connect and collaborate with leading local and international organisations, across the transport, energy, manufacturing, water, food, mining, defence and infrastructure sectors.

Specialist testing facilities and a living lab campus will drive research and innovation to address socially and environmentally poignant issues affecting the world.

Research due diligence

Following a broad consultation during 2018, a principle-based framework was developed to guide decisions about undertaking research with external parties. The University has extensive external collaborations and research relationships which are crucial to our *Growing Esteem*, Research at Melbourne, and Enterprise strategies.





Image

Wombat Flux Research Site (Wombat State Forest), helping to assess the impact of future environmental change on forest ecosystems in Australia.

The framework complements University and national policies governing the ethical and responsible conduct of all research. It provides additional guidance and a decision-making pathway for determining when particular research and research partnerships present potential risks to the University's research values and reputation and/or jeopardise the integrity and independence of its research. The Research Due Diligence Advisory Group, chaired by the Deputy Vice-Chancellor Research, was established to provide a point of review of research due diligence processes and risk matrices, and to consider emerging and potential risks at sector and country level.

The conduct of research at the University is governed by a suite of policies, principles and procedures, which is overlaid by the Australian Code for the Responsible Conduct of Research. However, larger context questions, such as decisions about engaging with external research partners or opportunities, remain open to further consideration. Decision-making on these matters requires thoughtful review of benefits and risks in light of university policies and values, and community standards. The expertise and nuance of academic judgement are crucial, and hence most decisions will continue to be resolved at the level of Academic Divisions. The decision-making pathway maps a process for when matters cannot be resolved at the academic level, or when concerns and reputational risks threaten to escalate in such a manner that further direction is required and review by the Due Diligence Advisory Group is deemed appropriate.





Looking Forward

Looking forward, the priority task is to develop a practical definition of 'sustainability research', for example through reference to the Sustainable Development Goals or other recognised frameworks. The University is actively collaborating with other Universities to develop a definition and approach to mining its research outputs and funding data (e.g. quantitative, social network analysis, case studies etc).



Research focus and impact

Targets and Performance

Targets	Status	Comment
Equip ourselves to be a prominent actor in annual global sustainability policy development	 On track	The University equips itself for world-class research and impact through people, collaborations and research settings. Sustainability-related research is encouraged through Interdisciplinary Research Institutes and Hallmark Research Initiatives.
Develop industry partnerships that emphasise our resources for sustainability research including the campus as a living laboratory	 In progress	The University has many industry partnerships, some of which have an emphasis on sustainability-related research. Promoting our campuses as living labs to industry partners could be strengthened. Masterplanning for the new Fishermans Bend campus began in 2018 with an explicit focus on an industry-focused living laboratory.
Ensure strong research links to campus sustainability operations and planning	 In progress	There has been focused effort to draw on academic expertise in major projects such as the new student precinct, in prioritising energy-saving opportunities in existing buildings, and for campus biodiversity. There is further opportunity to leverage research expertise for campus sustainability.
Communicate University sustainability research knowledge to the broader community	 On Track	The University's academics regularly disseminate their findings and share their expertise with a wide audience, for example through the <i>MSSI Annual Report</i> and stories in <i>Pursuit</i> , <i>The Conversation</i> , and podcasts.



The University is leveraging its skills and influence to help mitigate climate change

The Campus

Climate change mitigation and resilience



Climate change mitigation and resilience refers to assessing our climate change impacts and risks, and developing a strong response through the University's campus operations, in ways that demonstrate our values and complement our research, teaching and learning, policy and leadership.

Climate change is one of the most significant issues facing the world and consequently one of the most significant sustainability issues for the University. In terms of mitigation, staff and students tell us that climate change and carbon emissions are some of the [most important environmental issues](#). External

stakeholders are also interested in what the University is doing regarding climate change. In 2018, there were several extreme weather events that impacted the University and its community. A storm in November caused significant flooding and damage to the Lincoln Square Fitness Centre, resulting in it being closed for approximately five months.

We know that extreme weather impacts campus experience and can threaten the continuity of the University's operations. As such, the University has an obligation and an opportunity to leverage its skills and influence (policy leadership, research and investment) to help

mitigate climate change, including demonstrating how to achieve deep reductions in greenhouse gas emissions and increase resilience.

Performance

In 2018, the University continued working to improve the way in which climate change is understood and addressed. Notably, the University has matured in its approach to climate risk, from asset-focused planning to recognising that assets are enablers of the things that the University wants to achieve: high-quality campus experiences, preparing students through teaching, and impact through research and engagement.



Image
Caryophyllidae garden bed,
south western edge of the
System Garden.

Climate change is one of the most significant issues facing the world and consequently one of the most significant sustainability issues for the University

The University's activities related to climate change touch on many topics covered in detail elsewhere in this Report, including:

- Governance - Responsible investment
- Core activities - Research
- The Campus - Resource use in operations, travel and transport
- External relationships


Looking Forward

The University will undertake climate adaptation planning for the remaining campuses, ideally coinciding with the development of Campus Development Frameworks. Opportunities are also being explored to align climate adaptation work with other business continuity activities for maximum benefit.



Mitigation and Resilience

Targets and Performance

Targets	Status	Comment
Develop and implement Climate Adaptation Plans for each University campus by 2020	 On track	Adaptation plans have been prepared for Parkville and Fishermans Bend campuses, as well as major projects. In addition, the University has also investigated the vulnerability of trees at Parkville campus to increasing temperatures and how the University can help students cope during extreme weather.

Key climate resilience activities



STUDENT RESEARCH PROJECT: HELPING STUDENTS COPE IN EXTREME WEATHER

Two students explored how the University can help students better manage the impact of extreme weather.



FISHERMANS BEND CAMPUS DEVELOPMENT FRAMEWORK

Climate resilience considered during planning for a new campus at Fishermans Bend.



NEW STUDENT PRECINCT

Climate resilience considered during design of a major redevelopment at Parkville.



EMBEDDING IN UPDATED BUILDING DESIGN STANDARDS

More effectively embedding climate resilience into future projects.



The University's Estate Plan will comprehensively link the built environment and landscape to academic and strategic goals

The Campus

Built environment and landscape



Built environment and landscape refers to how we plan, develop and use our University Estate to achieve academic and strategic goals, including environmental impact, campus experience and wellbeing. The University's built environment is important for several reasons:

- The vast majority of students, staff and visitors experience the University through the buildings and landscape, with students who spend more time on campus tending to achieve better academic results.
- The University owns 400 buildings and leases 24 buildings, with

a total ground area across all campuses of 2,520 hectares. This will increase in coming years, with the new campus at Fishermans Bend.

- There is a strong relationship between the scale of the University's built environment and the University's resource consumption.
- The buildings and landscape are seen to represent what the University values. The 2018 SSSS respondents ranked 'Using the campus as a testing ground/showcase for sustainability activities', which is often

referred to as the campus being a 'living lab', as the 4th highest sustainability area of importance for the University.¹⁶

- The University's campuses are home to a range of flora and fauna which enhance campus experience and staff and student wellbeing, provide ecosystem services and in some cases have regulatory compliance requirements for their protection.

In 2018, the University approved an Estate Plan which will more effectively link the built environment and landscape to academic and strategic goals including



¹⁶ Discussed further in the Research section.

Built environment and landscape

Green Star timeline¹⁷

2008



Faculty of Business and Economics (The Spot)

Certified 5-Star¹⁸

2011



Melbourne Brain Centre

Certified 5-Star

2012



Peter Doherty Institute

Certified 5-Star

2014



Melbourne School of Design

Certified 6-Star

2015



Student Village

Certified 5-Star

2016



Arts West, and Bio21 Stage 2B

Certified 5-Star



green building council australia
MEMBER

¹⁷ Further details available at www.gbca.org.au/project-directory.asp
¹⁸ 5-Star equates to 'Australian Excellence'; 6-Star equates to 'World Leadership'.

2018+ BUILDING PROJECTS

Through its Sustainability Plan and Estate Plan, the University will comprehensively link the built environment and landscape to academic and strategic goals.



Melbourne Conservatorium of Music

Targeting 5-Star
(stretching for 6-Star)



The Stables

Targeting 5-Star



Western Edges Biosciences Stage 1

Targeting 5-Star
(stretching for 6-Star)



Werribee Teaching & Learning

Targeting 5-Star
(stretching for 6-Star)



Melbourne Connect

Targeting 5-Star (student accommodation) and 6-Star (office)



New Student Precinct - Student Pavilion

Targeting 6-Star



New Student Precinct - Arts & Culture

Targeting 6-Star

sustainability. Key activities include strategic planning of campuses, development of project business cases and allocation of funds, project delivery, and operations and maintenance.

Performance

The results from the 2018 International Student Barometer and Student Barometer Surveys (ISBSB) suggest that 90% of students are satisfied or very satisfied with the quality of campus buildings and 94% are satisfied or very satisfied with the quality of the external campus environment, however the University cannot be complacent about these results. The 2018 SSSS reported that only 53% of respondents agreed that 'The University's major building developments embed environmentally sustainable design principles' and 51% of respondents agreed that 'Campus Sustainability has greatly improved in recent years'.

The University continues to use the [Green Star rating scheme](#) to guide the sustainability of new buildings. Several significant buildings were under construction and/or completed during 2018, including The Stables and Melbourne Conservatorium of Music at the Southbank campus, Learning and Teaching Building at Werribee campus, Western Edge Biosciences Program – Stage 1 and Melbourne Connect at Parkville campus.

During 2018, increasing attention has been given to ensuring that the areas within Green Star targeted by projects correspond with the University's priorities with regards to resource efficiency and campus experience.

Biodiversity is managed through a Biodiversity Management Plan (BMP) and developing sub-plans, such as a campus Urban Forest Plan. Activities in 2018 included:

- The first annual Threatened Species Day symposium was held for approximately 60 delegates with speakers highlighting the plight

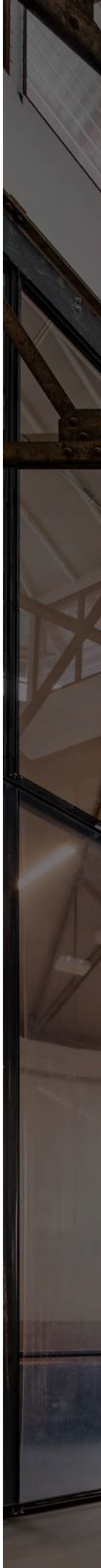
of rare species. There was a visit from the visually stunning giant Tasmanian crayfish 'Asta' created by the Bob Brown Foundation.

- Collaboration with a Melbourne School of Design (MSD) student to exhibit powerful owl/prosthetic habitats research in MSD exhibition.
- A team of students began work on mapping garden beds on the Parkville campus to give a baseline for 'no net loss' outlined in the (BMP).
- A definition of 'No Net Loss' for trees on campus is to be included in the 2019 update of the University Design Standards.
- Monthly Biodiversity tours for staff and students were run across the Parkville campus.

Looking Forward



The University will build on its positive progress and performance to date. The development of a new campus at Fishermans Bend provides an unprecedented opportunity for the University to embed sustainability in its built environment. A challenge for this, and other upcoming projects, is to think beyond the current Plan and targets because these projects will begin operation after the current Plan and targets are complete.

For biodiversity, there are opportunities to better co-ordinate the BMP with the Estate Plan and related campus planning activities to identify mutually beneficial outcomes and aligned work.







Buildings

Targets and Performance

Targets	Status	Comment
Achieve Green Star Communities accreditation for the Parkville campus by mid-2017	 Exceeded or met	Achieved a 6-Star rating rather than the 5-Star rating initially targeted.
Maintain minimum 5-Star Green Star 'Design and As Built' rating (or equivalent) for all new buildings, achieving a minimum 6-Star or equivalent by 2020	 On track	Refer to building project timeline.

Biodiversity

Targets and Performance

Target	Status	Comment
Publish a University-wide Biodiversity Management Plan by March 2017	 Exceeded or met	Plan published in March 2017.
Establish biodiversity baseline data for Parkville and Southbank campuses by mid-2017	 Attention needed	Baseline data collection for Parkville has started, with mapping of the garden beds and an inventory of all the trees completed. This has been done with significant input from a student cohort that was engaged in the mapping exercise. Additional data needs to be collected. Southbank campus baseline data has yet to be started.
Establish biodiversity baseline data for the remaining campuses by end-2018	 Attention needed	Baseline work has not yet been completed for other campuses.
Complete campus-specific plans and commence implementation by the end of 2020	 Attention needed	Background information to inform these plans is being gathered – plant inventories and maps have been developed. Surveys of character and 'special habitat' will be conducted in 2019. These will be collated and used to produce the plans.



The University is committed to sustainable campus operations

The Campus Resource use in operations



The University has a commitment to sustainable operational practices, demonstrated by minimisation and optimisation of resource use across all campuses, including water, waste, energy and carbon footprint.

The University is a significant consumer of natural resources due to its size and the nature of its core activities. It continues to strive to create conditions that enable staff and students to work sustainably, and to reduce the impact of operations. As Australia's leading University, it is focussed on leading by example, utilising its campuses as 'living laboratories' of sustainability innovation and best practice.

In 2018, there was a strong focus on the reduction of energy consumption, with completion of the University's \$9.1 million energy reduction and clean energy program. This program included solar photovoltaic installations, LED lighting upgrades, ultracold storage freezer upgrades, and feasibility studies into wind generation.

Our University Services team manage the operations of our campuses. The Sustainability Team based in Campus Services comprises experts in several different sustainability streams, reporting to the Sustainability Manager. The team aims to establish and progress

campus sustainability in accordance with the Plan. This involves engaging and empowering staff, students and the community on sustainability issues, addressing University-wide targets to reduce energy, water and waste, and prioritising and managing sustainability projects, thus fulfilling the University commitment to achieving a sustainable campus. The Sustainability Team aims to ensure a positive environmental and social outcome from projects, while improving efficiency and saving resources.

The University is a member, signatory or participant in many national and international associations



and initiatives supporting sustainability-related operations, including those below:

- International Sustainable Campus Network (ISCN) – member, joined 2012
- TAKE2 – Victorian Climate Change Pledge Program – founding partner
- University commitment to Sustainable Development Goals – signatory
- Fair Trade Association of Australia & New Zealand – certification
- Tertiary Education Facilities Management Association (TEFMA) – member
- Tertiary Sustainability Network – member
- Australasian Campuses Towards Sustainability (ACTS) – founding member
- Go8 Sustainability Managers – member

Energy

Energy use, primarily electricity, increased by approximately 1.8% in 2018. Notably, however, only half of this increase was supplied from the grid as the other half was supplied from new on-campus solar installations. Energy intensity was unchanged at 0.76 GJ/m²GFA.¹⁹

Activities undertaken in 2018 include:

- Completion of \$9.1 million project to reduce energy demand and generate clean energy.
- Construction of 13 new solar photovoltaic (PV) installations at Parkville, Southbank, Dookie and Werribee campuses, bringing the total to 21 installations with more than 7,000 solar PV panels on four campuses saving approximately 2,900 tonnes of carbon emissions per year.
- Utilising the digital model output of the 2017 UoM Campus Building Stock Decarbonisation Project to quantitatively assess various energy efficiency measures, resulting in the Smart Campus Energy Upgrades program to be rolled out over the next four years with a budget of \$45 million.
- Two renewable Power Purchase Agreements

(PPAs) were finalised at the end of 2017, with wind farm construction progressing through 2018. These PPAs will enable the University to achieve its target of zero net emissions electricity by 2021:

- Crowlands wind farm: The University joined 13 partners in the Melbourne Renewable Energy Project (MREP).
- Murra Warra wind farm: The University joined a second consortium, finalising a PPA in December 2017.

Carbon Emissions

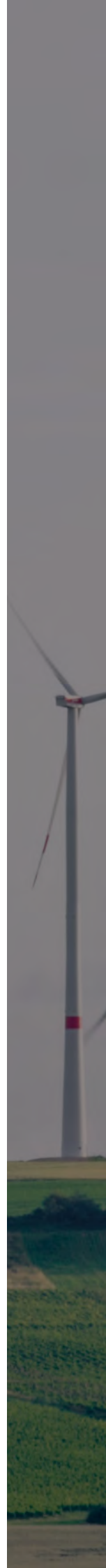
Understanding, managing and reducing the University's carbon footprint is a highly collaborative activity for the University, involving all divisions.

In 2018 the University once again completed a Greenhouse Gas Inventory (GHGI). The GHGI revealed that Scope 1 and 2 emissions were similar to recent years, despite the University's implementation of energy demand reduction projects. The University's challenging target to reduce Scope 2 net emissions from electricity to zero by 2021, will be primarily achieved through the renewable energy PPAs to be implemented in 2019.

Additionally, Scope 3 emissions have increased, primarily due to an increase in reported business flights and hotel accommodation. Historically, travel data was fragmented and incomplete, and 2018 was the first full year of data from the new Unitravel booking system. With staff increasingly utilising Unitravel, data capture has improved significantly. It is likely, therefore, that reported air travel and associated emissions have increased mainly due to improved data capture and analysis rather than increased business travel. Emissions intensity (excluding any offsets) has remained consistent since 2016.






Purchased electricity is the largest individual contributor to emissions, accounting for more

¹⁹ GJ/m²GFA is gigajoules per square metre of external gross floor area.



Resource use in operations

Targets and Performance

Target	Status	Comment
Achieve carbon neutrality before 2030	 On track	The University has laid a foundation for significant reductions to be achieved in coming years. An annual Greenhouse Gas Inventory will enable the path to carbon neutrality to be mapped and implemented before 2030.
Achieve zero net emissions from electricity by 2021	 On track	The University's two renewable energy Power Purchase Agreements (MREP and Murra Warra) will ensure that this target is met.
Reduce emissions by 20,000 tonnes of carbon per year by 2020 through on-campus energy projects	 In progress	Emissions reductions have been achieved through the \$9.1 million energy reduction and clean energy program, and plans are in place for a four-year, \$40 million program targeting the most energy-consuming buildings. This target has been somewhat superseded by the signing of renewable energy Power Purchase Agreements (PPAs) which will enable the achievement of zero net emissions electricity in a cost-effective manner. Nevertheless, the University will continue its enduring commitment to reducing energy consumption.
Reduce mains water usage by floor area by 12% from 2015 baseline	 In progress	The University's focus has been on reducing water intensity within new infrastructure and developing water harvesting and reuse projects. Water reduction technologies will continue to be implemented as its campuses continue to grow.
Reduce waste to landfill to 20kg per person by 2020	 In progress	The University has implemented changes over the last few years to reduce waste to landfill intensity, however progress has slowed as wider industry issues have had an impact. A new strategy, Towards Zero Waste Strategy, is under development for implementation in 2019.

than 60% of total emissions for 2018. Once fully commissioned, The University's renewable energy PPAs will provide the equivalent, on average, of the current electricity demand. Hence the University's electricity emissions will be reduced or offset to zero by 2021. Emissions from flights will also be fully offset from 2020.

Waste

After a consistent downward trend in waste to landfill intensity from 2012–2017, the University had an increase in 2018. The waste industry in general experienced significant upheaval in 2018, following China's restrictions on the import of certain waste materials. This, along with the temporary close of the Furniture Reuse centre, contributed to a decrease in recycling and reuse, and an increase in waste to landfill.

To overcome these broader challenges and reverse the 2018 increase in waste to landfill, The University is implementing a number of initiatives including:

- Relocation and additional resourcing for the Reuse Centre
- Waste Logistics Strategy development for Parkville Campus (to be finalised in 2019)
- Waste management upgrade implemented at Southbank campus
- Mentoring to engineering IT Students culminating in a prototype 'WASTE BIT' app
- Development of online dashboard showing progress towards the target of '20 kg per person by 2020'

Furthermore, the University is drafting a Towards Zero Waste Strategy to progress reducing waste to landfill and increasing reuse and recycling rates, in response to widespread upheaval in the waste industry in 2018. The aim is to encourage and support reuse in particular. The Towards Zero Waste Strategy will focus on identifying areas of opportunity to change infrastructure, supporting behaviour change through the Green Impact

program, and delivery of specifically targeted waste focused events and workshops.

Water

The University has a challenging target to reduce mains water usage by floor area by 12% to 0.47 ML/m²GFA.²⁰ Usage reduced slightly from 0.53 ML/m²GFA in 2017 to 0.52 ML/m²GFA in 2018, with total mains water usage also reducing. This was due to ongoing water conservation activities, including the extension of water harvesting and reuse infrastructure from South Lawn irrigation to include toilet flushing in the John Medley building.

Looking Forward

The University has set challenging targets for the reduction of resource consumption by 2020. With the zero net emissions electricity target on track to be achieved by 2021, the next emissions reduction focus will be the development of a Carbon Neutral Strategy out to 2030. In 2017 and 2018, the University's priorities have been the achievement of energy reduction targets and implementation of the University-wide Green Impact program.

In 2019, the University will increase efforts to reduce our waste to landfill through the development and implementation of the Towards Zero Waste Strategy, and increasing engagement of staff and students.

The University will continue to engage through the Green Impact program and maintaining a regular presence at the Melbourne Farmers Market (voted as 'most visible activity' in the 2018 SSSS). It is likely that progress towards the water target will be delayed, as resources will be directed to the areas identified as having the greatest positive impact (emissions, energy and waste).

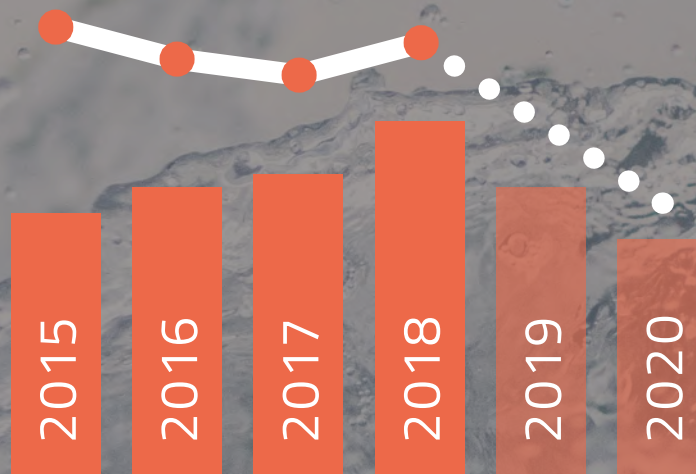
²⁰ ML/m²GFA is megalitres of water per square metre of external gross floor area.

Resources use in operations

Waste to landfill

After a consistent downward trend from 2012-2017, waste to landfill increased in 2018.

- Waste to landfill (tonnes)
- Waste to landfill intensity (kg per person)
- ● ● Trajectory to meet Sustainability Plan 2020 target (kg per person)



Water usage

After a slight peak in 2017, usage reduced a little in 2018.

- Municipal water usage (ML)
- Municipal water usage intensity (ML/m²GFA)
- ● ● Trajectory to meet Sustainability Plan 2020 target (ML/m²GFA)

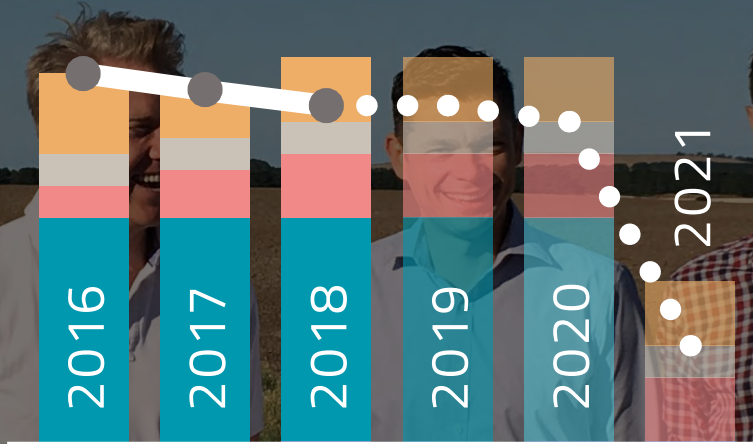


Resource use in operations

Summary of GHG emissions

The following figure indicates the projected change in carbon footprint to 2021. Compared to 2016, emissions in 2021 are expected to be ~60% less (excluding offsets) and ~75% less (including offsets).

■ Electricity (Scope 2) ■ Natural Gas ■ Offsets - flights and fleet
■ Business flights ■ Other ■ Total
● ● ● Trajectory to achieve zero net emissions from electricity by 2021



Operational Boundary	Associated Inventory/Service	2016	2017	2018
Scope 1	Natural Gas, Transport Fuels, Stationary Fuels	15,871	15,197	14,743
Scope 2	Purchased Electricity	119,483	118,516	119,113
Scope 3	Equipment, Flights, Third Party Services, Off-site Waste Disposal, Transmission & Distribution losses, Fuel Extraction, Production & Distribution losses, Other Utilities	68,066	66,336	74,118
Gross Total		203,421	200,050	207,974
Offsets	Other offsets (to offset fleet emissions in 2016/17/18 and 50% of flight emissions in 2018)	-765		-15,748
Net total (Scope 1-3)		202,656	200,050	192,226
Scope 1, 2		135,354	133,713	133,856
Emissions Intensity	(tCO ₂ -e/m ² extGFA)	0.23	0.22	0.23

GHGI Notes:

- Emissions from refrigerants (Scope 1) has not been included for 2018, as the data is difficult to collect and the impact was low at 0.3% (518 tCO₂-e) of the total GHGI in 2017.
- Fleet emissions are offset every year on a financial year basis, using [Greenfleet](#) carbon offsets which directly fund native reforestation projects around Australia. Due to the reporting timeline the FY2017/18 fleet offsets have been counted in 2018, however the FH2016/17 offsets were counted in 2016.
- Flight offset purchases to offset 2018 air travel will be completed in 2019.

Case Study

The Power of Partnerships

The University of Melbourne is a large global university equivalent to the fifth largest city in Victoria.

Operations across seven campuses create significant energy demand, including ~110,000 gigawatt hours (GWh) of electricity in 2018, our greatest source of carbon emissions.

To achieve the University's target of zero net emissions from electricity by 2021, the University completed negotiation of two consortium-based power purchase agreements (PPAs) in late 2017, enabling construction of two new wind farms through 2018.

Melbourne Renewable Energy Project – Crowlands wind farm

The University joined with 13 leading corporations and councils, universities and cultural institutions in the purchase of 88 GWh of energy per annum over a ten-year period, which is 37% of the 80-megawatt wind farm's total output and avoids more than 96,000 tonnes of greenhouse gas emissions each year. The Crowlands wind farm is generating electricity since January 2019.

Murra Warra wind farm

In a separate consortium, led by Telstra, the University together with ANZ Bank and Coca-Cola Amatil negotiated a PPA enabling development of the 226-megawatt first stage of the Murra Warra wind farm in western Victoria, due for completion in the latter months of 2019. Murra Warra will generate more electricity than any other wind farm operating in the southern hemisphere when fully constructed.

Power purchase agreements such as these demonstrate that large organisations with long term supply requirements can successfully pool their demand to negotiate commercially viable supply contracts. PPAs provide some pricing certainty and protection against the volatile electricity market and provide a long-term pathway to lower emissions.

For the renewable energy developer, the combined purchasing power of a buying group enables progress of financing and construction arrangements for project development.



Image: Acting Lord Mayor Arron Wood with City of Melbourne, Melbourne Renewable Energy Project team and Pacific Hydro Executive Team.

Development of two new wind farms in regional Victoria in 2018 - 2019 contributes to the revitalisation of local economies, displacing coal-fired power generation and therefore reducing the carbon emissions from the electricity grid. The volume of the University's purchases will match, on average, its current total electricity consumption.

These consortium arrangements demonstrate that partnerships between strategically aligned and progressive organisations can cause a shift from long-entrenched and perverse paradigms. Our projects demonstrate that well-constructed and executed PPAs can provide significant enduring financial, environmental and social benefits.

Operation of the Crowlands and Murra Warra wind farms during 2019 provides tangible evidence of the power of partnerships to reshape our institution and the Victorian economy for a more sustainable future.



Of the 40,000 staff and students who travel to the University's campuses, 90% use sustainable means

The Campus

Travel and transport



Travel and transport refers to providing or facilitating more environmentally-friendly and healthy commuting and business travel options for students and staff.

Transport describes a broad collection of activities, some managed by different parts of the University, others managed by the individuals who are travelling. The Plan and a draft Sustainable Transport Plan attempt to coordinate and prioritise the key aspects of transport for the University.

Transport is an important activity for the University. From a commuting perspective, on a typical semester

day, over 40,000 people travel to the University's campuses. Moving this many people has a significant environmental impact. The greatest impact within the University's operational control is air travel by staff. However, air travel is historically an important part of the University's core activities, particularly for researchers who need to be engaged and connected with their global peers.²¹

Closer to campus, 2018 saw an increase in safety and amenity risks at Parkville because of the large amount of construction on and near campus, due to University projects and the construction of the Melbourne

Metro Tunnel. This resulted in a requirement for spaces to be shared by pedestrians, cyclists and vehicles.

Performance

The drafting of a Sustainable Transport Plan revealed that the University has an incomplete understanding of transport issues and opportunities. This is because the University's travel footprint is a result of many people making individual choices about how they commute to, from and around campus, as well as travel for business purposes.

Encouragingly, the percentage of people satisfied with the University's efforts at 'Encouraging sustainable

²¹ European and US academics have commented on the professional pressures and status incentives for academics to travel: www.mdpi.com/2071-1050/11/1/80, theconversation.com/researchers-set-an-example-fly-less-111046 and www.huffpost.com/entry/opinion-dolsak-prakash-carbon-tax_n_5abe746ae4b055e50acd5c80

Image

The first 'Pride2Uni Breakfast', celebrating diversity and sustainability, at the South Lawn underground car park.

travel and transport' has risen from 51% in 2016 to 59% in 2018. In addition, 74% of respondents to the SSSS agreed that 'the University provides adequate facilities to enable staff and students to walk, run or cycle to campus', which provides a solid base to build on as new end-of-trip facilities are rolled out across campus.

The University has a range of web-conference and tele-conference systems available to staff and students, however usage data is not available for all systems. It is also unclear whether the use of the systems reduces air travel or enables interactions to occur that otherwise would not have. Anecdotally it is understood that these systems are used for purposes such as:

- Holding meetings and workshops with international research collaborators
- Participating in overseas thesis defence presentations
- Faculty meetings between campuses

More work is needed to understand how these systems are used and how to raise awareness of the opportunities these systems offer to reduce travel.

Usage statistics for University web-conferencing (Skype for Business and Zoom) in 2018:

- Over 160,000 audio and/or video sessions using web-conferencing
- Over 221,000 participants
- Over 9,900,000 minutes of use

Looking Forward

The key transport-related tasks for the year ahead are to finalise the Sustainable Transport Plan, provide systems and information to help staff to reduce their air travel, and advocate to Government for sustainable transport infrastructure to Fishermans Bend.



Travel and transport

Targets and Performance

Target	Status	Comment
Complete a Sustainable Transport Strategy for all University campuses by end-2017	 In Progress	<p>A Sustainable Transport Plan has been drafted and is awaiting approval before publishing. It fulfils three main purposes:</p> <ul style="list-style-type: none"> To provide an evidence-based rationale for proposed actions (including reinforcing the importance of actions and targets proposed in the Sustainability Plan) To identify gaps and propose additional actions where justified To coordinate action related to transport <p>Many of the actions proposed in the Sustainable Transport Plan are able to be implemented without requiring approval of the overall plan and, as such, they are being progressed. Examples include:</p> <ul style="list-style-type: none"> Upgrading end-of-trip facilities at Parkville campus Advocating for high-quality public transport and cycling connections to the new Fishermans Bend Campus Exploring the feasibility of using electric vehicles for the campus grounds, maintenance and security
Offset staff air travel emissions – 50% by 2018, 100% by 2020	 On track	For 2018 air travel, 1,500 tonnes of National Carbon Offset Standard (NCOS) accredited offsets is being purchased from the Aboriginal Carbon Foundation and 13,500 tonnes from South Pole.
Reduce air travel emissions per staff member by 5 to 10% for international, 10% for domestic by 2020	 Attention needed	The reported air travel emissions per Full-Time Equivalent (FTE) staff member increased from 2.9 to 3.2 t CO ₂ -e/yr/FTE, from 2017 to 2018, which is an increase of 10%. It is likely this increase is mainly as a result of improving air travel data collection.
Reduce fuel emissions from fleet vehicles by 25% from the 2015 baseline by 2020	 On track	Vehicle emissions have reduced by 17% from 573 tCO ₂ -e in 2015 to 472 tCO ₂ -e in 2018.
Offset 100% of remaining fleet emissions annually	 Exceeded or met	The Greenfleet offset figures for June 2017 to May 2018 are 748t (174 vehicles). Greenfleet will plant 2,792 native trees on the University's behalf.
Reduce the University's car fleet by 20% from 2015 baseline by 2020	 On track	Vehicle fleet reduced 12% from 183 vehicles in 2015 to 161 at the end of 2018.
Replace 10% of University car parking spaces with bicycle parking by 2018	 Exceeded or met	<p>The University has reduced the number of car parks on campus from 3,135 (October 2017) to 2,542 (March 2019), a reduction of 593 spaces or 19%. Over the same period, the University has added bike parks. Some of these compensate for losses of bike parks due to construction works. The additions include:</p> <ul style="list-style-type: none"> Parkville – Western Edge Biosciences (B125), 44 bike parks Southbank - Building 873, 175 bike parks

Case Study

Air Travel Offsets

Air travel was the second largest contributor to the University's carbon emissions in 2018, after electricity, at approximately 28,000 tCO₂-e. Over 50% of these emissions will be offset by purchasing carbon credits from local and international projects.

The University decided on two providers, South Pole and the Aboriginal Carbon Foundation, to work with to select an appropriate portfolio of carbon reduction projects which include many co-benefits. These carbon credits will offset more than 50% of the 2018 air travel emissions.

South Pole is the world's largest developer of climate action projects, with expertise working on carbon, water and deforestation projects aligned with the SDGs. They provided the University with several options, including local projects and projects based in the home countries of many on the University's students. The University selected:

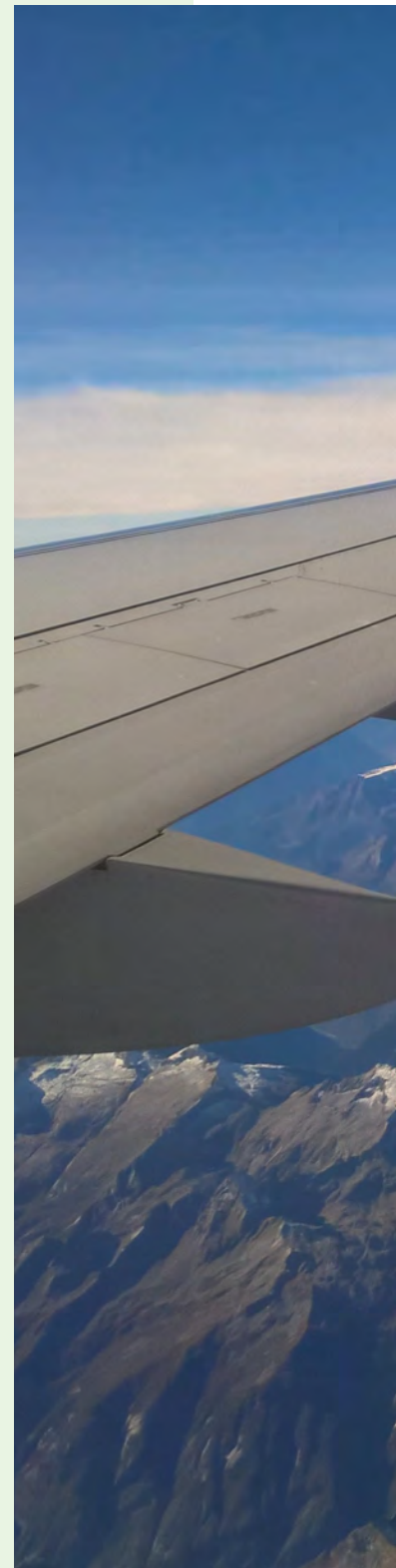
- Renewable wind energy from the Mytrah wind project in India, which provides a range of co-benefits to local communities including educating young girls in gender rights, health and further training in addition to primary emissions abatement outcomes.

- EcoAustralia credits, which combine a DELWP biodiversity registry credit with an international carbon credit from the Grouped Small Hydro project in China, which mitigates greenhouse gas emissions, prevents local air pollution and benefits local communities.

The vision of the Aboriginal Carbon Foundation is to catalyse life-changing, community prosperity through carbon farming. Through its Reducing Carbon Building Communities (RCBC) Fund, it trades Australian Carbon Credit Units (ACCUs) that demonstrate environmental, social and cultural values. The University selected Ochre credits (ACCUs) which are the highest level of RCBC Fund credits. Buying these credits contributes to the following outcomes:

- Elders being supported to share traditional ecological knowledge with young people
- Protection of rock art and sacred sites
- Supporting meaningful employment that aligns with the interests and values of Traditional Owners
- Protection of threatened species and endangered habitats.

These purchases will be finalised in the first half of 2019.





+50%

of current emissions offset by purchasing carbon credits



28,000

tonnes of carbon emissions from air travel in 2018



128

million kilometres flown in total by University staff

Image
Passenger jet over the Swiss Alps
(Andrea Vincenzo Abbondanza).



Procurement choices can have a positive and powerful impact throughout the supply chain

The Campus

Supply chain and procurement



Supply chain and procurement refer to how the University procures from and engages with suppliers of consumer and construction-based goods and services, aiming to minimise negative and maximise positive impacts on the environment and society.

The University spends close to approximately \$1 billion annually with suppliers, meaning that it has a significant impact through its supply chains. This spend covers a wide range of goods and services, some of which are covered elsewhere in this Report, such as utilities, air travel, and new building construction. It also includes outsourced services (e.g. cleaning), professional services

(e.g. architects, engineers, lawyers, marketing), consumables (e.g. office stationery, tea, coffee, milk, catering), goods and equipment (e.g. furniture, electronic equipment, lab supplies) and travel (taxis and other transport, hotels, meals).

The \$1 billion does not include goods that the University effectively wants and arranges for, but does not spend money on, such as food and beverage retail across campus which is via spaces leased to tenants. While this is not typically considered 'procurement' within the University's operating structure, it was by those interviewed for the materiality review.

Performance

Procurement policy and guidance

The University's [procurement policy](#) was updated in November 2018 regarding requirements for spending above \$400,000. One of the objectives of the policy is to '... ensure procurement processes fulfil the University's broad social and environmental obligations set out under the Sustainability Charter and Plan'.

The policy is supported by a range of processes, guidance and templates. For example, the Request for

Quotation template includes a schedule asking about the potential supplier's social, environmental, sustainability, safety and supply chain auditing activities. Guidance on evaluation recommends a 10% weighting for 'Social, Environmental and Ethical Supply' considerations.

Modern Slavery

The issue of modern slavery gained increasing attention in 2018, with the Commonwealth [Modern Slavery Act 2018](#) (the Act) being passed by the Australian Parliament in November 2018 and entered into force on 1 January 2019. The Act requires large organisations, such as the University, to publicly report each year on their efforts to understand and address modern slavery risks in their operations and supply chains. The University's first modern slavery report will be due for the 2020 calendar year.

To prepare for this reporting, the University has undertaken preliminary research to understand likely risk areas, as well as engage with industry bodies to explore opportunities for sector-based approaches to reporting.

Our preliminary research suggests that products at risk of modern slavery include electronics, clothing, fish, rice and cocoa. In building construction, materials at risk of modern slavery include imported fabric, concrete, timber and stone. As part of updating the [University's Design standards](#), a requirement has been added asking project teams for major projects to review modern slavery risks related to the proposed building design and materials.

Encouraging sustainability through Fairtrade certification and preferred suppliers

Following the leadership of a group of students in 2011, the University gained Fairtrade accreditation



100%

Fairtrade consumables across uni kitchenettes



100%

recycled copy paper across the university



340

tonnes of carbon emissions reduced per year



2,600

estimated trees saved



Fairtrade kitchenette consumables

Following the leadership of a group of students in 2011, the University gained Fairtrade accreditation in May 2013. A requirement of this accreditation, is that Fairtrade certified tea and coffee are the default options at all University meetings and kitchenettes. Previously, only 5% of kitchenette consumables were Fairtrade products.

In 2018, aligning with the University's Sustainability Plan, the University Chancellery Executive approved moving to 100% Fairtrade Kitchen consumables – this includes tea, coffee, drinking chocolate, sugar and soap.

Choosing Fairtrade products helps reduce poverty, promote environmental sustainability, and make a real difference to the lives of farmers and communities in the developing world and beyond.

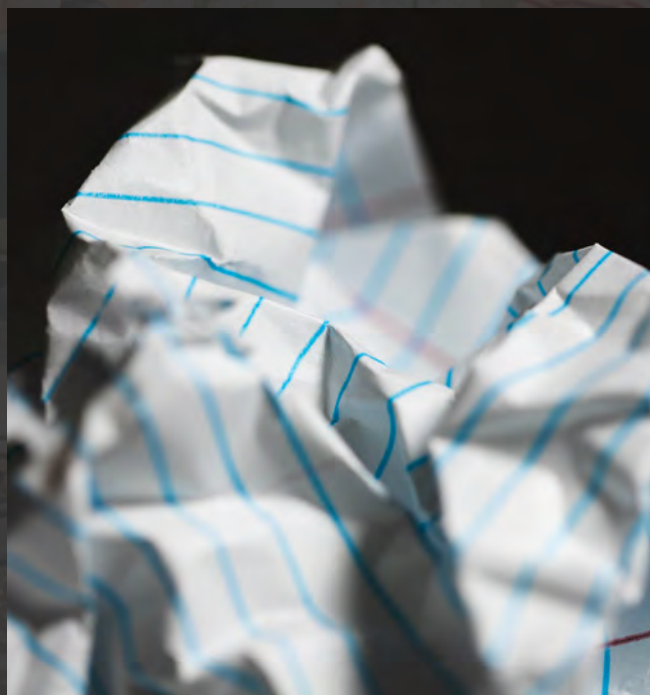


Recycled copy paper

On 21 March 2018, the University Executive approved moving to 100% recycled copy paper across the University. Previously, only 29% of copy paper purchased was on recycled product.

Importantly, this initiative aligns with the University's Sustainability Plan, and will save an estimated 2,600 trees as well as reducing our carbon emissions by 340 tonnes per year.

From 23 April 2018, our stationery provider's (COS) website was amended to only allow for the purchase of 100% recycled copy paper.



Image

Teresa Kurgat, tea farmer and member of Sireet OEP co-operative, Kenya (Simon Rawles).

The consumer choices we make on campus matter. As a community of 58,000 consumers, we can make a world of difference.

in May 2013. A Fairtrade Steering Committee has been operating for many years, involving students and academic and professional staff. The University worked with this steering committee in 2018 to mandate the use of 100% Fairtrade (including UTZ and Rainforest Alliance)²² consumables in office kitchens (including tea, coffee, sugar, soap and chocolate). This was implemented and rolled out University-wide.

The University also transitioned during 2018 to 100% recycled printer paper.

Preferred suppliers are another way that the University supports and encourages sustainable procurement. For example, the University is a member of [Supply Nation](#), which is a directory of indigenous businesses. Staff are encouraged to use this directory in support of the University's commitments under the [Reconciliation Action Plan 2018 - 2022 \(RAP 3\)](#).

The University also has social enterprise preferred supplier options for catering – including Streat, The Mission Caters and Asylum Seeker Resource Centre Catering – and utilises food rescue company OzHarvest for redistribution of unused food.

Furniture and equipment reuse

In 2018, the Furniture and Equipment Reuse centre facilitated the reuse of 4,413 items, diverting an estimated 89,000 kg of waste from landfill and saving the University an estimated \$2.4 million (based on estimated retail value).

Influencing tenants

An area of developing activity in 2018 was more actively influencing food and beverage retail tenants on our campuses. This is an evolving area of activity, aiming towards achieving sustainability outcomes from the opening of the New Student Precinct and closure of Union House on Parkville campus in coming years. The initial area of focus has been on waste, with a tableware washing service being set up in Union House and opening in 2019.

Looking Forward



The main strategic activity going forward is the further development and embedding of the procurement framework, which is intended to include social and sustainable procurement objectives and targets, approaches for implementation, supplier code of conduct, and response to modern slavery.

The University's Sustainability and Space Management teams will continue to collaborate on influencing tenants on campus to be more sustainable.

²² UTZ is a certification program for sustainable farming of coffee, tea, cocoa and hazelnuts. The program is part of the Rainforest Alliance, an international non-profit organization working to create a better future for people and nature.

Supply chain and procurement

Targets and Performance

Target	Status	Comment
Develop and implement a Supplier Code of Conduct by March 2017	 In Progress	The supplier code of conduct was deferred in 2017 in favour of developing a broader procurement framework that considered emerging issues such as modern slavery. A supplier code of conduct is expected to sit within the framework.
Achieve commitments under the University's Fairtrade certification	 Exceeded or met	In 2018 moved to 100% Fairtrade kitchen consumables .





Staff and students can have a positive impact reaching far beyond the work done on campus

University Community Engagement and awareness



The University aims to engage staff and students in sustainability programs and activities to build a committed, engaged and well-informed University community with the skills and motivation to contribute to the necessary transition to a more sustainable future.

Embedding an awareness and understanding of sustainability in staff and students enables the University to have a positive impact reaching far beyond the work done on campus. Staff and students are equipped to foster positive change in the broader community and their future workplaces, leading to positive environmental outcomes.

Our Campus Services sustainability team organise a range of programs and activities across the University. This includes events, presentations, forums and tours, all relating to sustainability.

Performance

In 2018 the sustainability team ran a total of 28 successful events, with approximately 2,150 attendees across all events. Examples of the types of events are; quarterly ride to uni breakfasts, SummerFest and GSA welcome events, Open Day, Green Campus Day, potting workshops, Green Impact training events, the annual Fairtrade Fortnight market, Fairtrade movie screening, world

environment day, Green Impact awards ceremony and many more.

In addition to events, the sustainability team also successfully engaged staff and students through delivering multiple presentations, forums and tours. These include:

- 32 sustainability-based presentations, engaging 1,241 attendees
- 10 Forums, engaging 215 attendees, including: Sustainability Advocates Forums, Fairtrade Steering Committee, Tertiary Sustainability Network (TSN) and Go8 sustainability managers forum



- 17 tours, engaging 374 attendees: sustainability, biodiversity and specialised 'follow your waste' tours
- Four quarterly newsletters, 12 monthly 'What's On' published and regular direct action communications through multiple channels
- Active on Facebook, Instagram and Twitter social media accounts

The effectiveness of the University's engagement of staff and students in sustainability can be evidenced by several prestigious awards. Notably, there were two winners and two highly Commended at the 2018 Green Gown Awards Australasia.

John Pederick (Facilities Manager - Bioscience) won the ACTS Award of Excellence Staff and the University's Sustainability Executive won the Sustainability Leadership Award. Fair Food Challenge (student-led initiative) was highly commended in the Student Engagement category and the University was highly commended in the Continuous Improvement: Institutional Change category.





To encourage further engagement, the University has published the 'Introduction to Sustainability', a training module available in Train ME for all staff. This project was as a direct result of the Green Impact program. An aspiration of the sustainability team for many years, it was through the legal and risk team participating in Green Impact that a collaboration was initiated and the training module implemented.

The Green Fund was also developed and launched (re-activated from an earlier scheme in 2010). This green grant scheme has distributed \$30,609 to seven projects across Parkville and Southbank campuses.



Engagement and awareness

Targets and Performance

Target	Status	Comment
<p>Increase staff/student level of awareness in University sustainability issues to over:</p> <ul style="list-style-type: none"> 15% with high level of awareness; and 70% with moderate level of awareness or higher 	 <p>In Progress</p>	<p>The University completed its 2018 SSSS, with 1,200 respondents. Results showed:</p> <ul style="list-style-type: none"> High awareness increased from 10% in 2014 and 2016 to 11% in 2018 The Moderate and High awareness total was 53% in 2014, 59% in 2016 and 55% in 2018 <p>Engagement with staff and student populations is quite different, hence survey results can vary depending on the ratio of staff/student respondents. Students are transient, so messaging must be immediate for them to feel the university is 'being sustainable'. Waste management, for example, is a highly visible activity. Staff, however, can see real progress as it is being made. They are also more likely to be aware of activities across campus, often through internal communication channels.</p> <p>The purpose of the Green Impact program in 2017 was to enhance staff engagement and incorporate greater participation. It also involved working with a committed number of students through volunteering activities. Over 200 Expressions of Interest (EOIs) were received from interested students in 2018 and 140 students were directly involved. This will be enhanced in 2019 by engaging with a greater number of students through more volunteering activities, and engaging more broadly with students on multiple topics through, for example, increased presence at the Melbourne Farmers Market.</p>
<p>Increase staff/student sustainability participation</p>	 <p>On track</p>	<p>This can be measured via the Green Impact (GI) program by analysing the number of staff and students achieving actions through participation on campus. This direct engagement metric has only been available since 2017. In 2018, 443 people participated and undertook 1,377 verified actions. This is an increase of 61% and 134% from 2017 respectively. The program also demonstrates the breadth of departments and faculties taking part. Each team (of which there were 44 in 2018) are representative of a separate building, department, faculty or campus.</p>
<p>Increase staff/student sustainability personal undertaking</p>	 <p>On track</p>	<p>Staff and students want to do more but are often unsure how or lack the ability to do so. GI gives staff and students the framework to make individual and/or collective change, within their workspaces, influence others and also empowers people to either make the change they want to see or the change they feel they can make. The 2018 SSSS shows that simple, small lifestyle changes such as recycling, switching off lights and the use of non-disposable bottles are most frequently undertaken, while choosing Fairtrade products and organic waste recycling are undertaken less frequently.</p>
<p>Increase staff/student sustainability satisfaction with University efforts</p>	 <p>On track</p>	<p>More staff and students are satisfied with the University's efforts with implementing sustainability, and this figure is rising as evidenced by the 2018 SSSS. In addition, the Sustainability team is now capturing event feedback to determine how attitudes change over time.</p>

The 2018 Green Impact Program grew significantly, following on from the successful pilot in 2017.

Looking Forward

The Green Impact program has played a significant role in raising awareness of sustainability and increasing direct engagement and action by participants – both staff and students. Going forward, it is planned to increase the scope of this program through delivery across more campuses, and potentially colleges, engaging increasing numbers of the University community.

In addition, engagement activities will be enhanced with a regular presence at the Melbourne Farmers Market to target new audiences and thus raise awareness on a larger scale, with a broader remit. Work with our student volunteers will continue, with opportunities for student participation increasing. We will also focus on engaging all staff and students in a University-wide 'zero waste' awareness campaign.



1,377

sustainability-based actions



1,630

engaged staff overall



443

people directly engaged



44

registered staff teams

Case study

Green Impact Program

The University-wide change and engagement program **Green Impact** ran for its second year in 2018 following the successful pilot the previous year. The University of Melbourne was the first organisation in Australasia to implement the Award-winning international program in 2017, leading the way for an additional seven Australasian universities to launch Green Impact in 2018.

The second year at the University saw a significant increase in engagement with a total of 44 registered staff teams (up from 15 in 2017), of which 39 had actions verified by a student audit. A specialty Laboratory section was added to the program in 2018, resulting in six lab-based teams receiving a Labs award at the end of the program cycle.

Overall, the program engaged 443 people directly to complete 1,377 sustainability-based actions, with an estimated wider impact of 1,630 engaged staff. Over 100 student volunteers were trained as Project Assistants and placed with teams to support them during the program cycle. In addition, 40 student auditors were trained. This is the most students any university, globally, has trained in any one year.

The Awards ceremony on 22nd November 2018, celebrating the achievements of all participants, was attended by 120 guests. The program directly addresses the engagement targets within the Plan. The 2019 program was launched on 28 February 2019.



Images (from top)
Project Assistant training,
Community Garden planting workshop,
Green Impact staff training.

University Community

Diversity and Inclusion



Diversity and inclusion continues to be of strategic importance for the University. In 2019, with the leadership of the Vice-Chancellor, a Diversity and Inclusion project office is being formed to provide strategic oversight, monitoring and reporting on the University's progress. The focus on gender equality continues to improve with the number of female executives increasing in 2018 from 36 to 46, compared with the male executive increase from 46 to 47 over the year.

Further information and statistics are available in the [2018 Annual Report](#).

The [Melbourne Disability Institute \(MDI\)](#) was established by the University in 2018. MDI is an inter-disciplinary institute with the vision 'To transform the social and economic wellbeing and the health of people with disability through high-quality research, teaching and training, and knowledge translation'.

[Pride in Action Ally Network](#) for staff and students is now in place with the launch of the Committee early in 2019. Awareness briefings were delivered throughout 2018 and were available to all staff.

In 2019, the University will launch its first Diversity and Inclusion survey to deepen its understanding of our people and their views so that we can together grow a more diverse and inclusive workforce.



Image: University of Melbourne contingent at Midsumma Pride March, St Kilda.

Indigenous development

The [Reconciliation Action Plan 2018 – 2022 \(RAP 3\)](#) was launched in May 2018.

RAP 3 represents a commitment from the University to use its expertise and resources in research, teaching, learning and engagement to make a sustained contribution to Indigenous development. It contains 14 signature projects under the following themes:

- Leadership for Change
- Our Place
- Purposeful Partnerships
- International Engagement

The first annual RAP 3 Progress Report assessing the University's progress towards our Signature Project Target Measures with a 2018 target timeline has indicated excellent progress.



Image: Head of the Wilin Centre and Associate Dean (Inclusion and Diversity), Faculty of Fine Arts and Music, Richard Frankland (far left) with community research collaborators, students and staff at the Research Unit for Indigenous Arts and Cultures launch, 2017.

Health, safety and wellbeing

Health, safety and wellbeing refers to looking after the physical and mental health, safety and wellbeing of students and the workforce.

It is also about getting the University's culture right and providing the necessary policies, resources, infrastructure, spaces and support services to go beyond standard Occupational Health and Safety and optimise physical and mental health outcomes.

Ensuring sensitive or controversial content is delivered to students in an appropriate manner, providing decent and meaningful work for

our workforce with the opportunity for professional development and training, adequate pay and reward and recognition, are also all part of this material topic.

Throughout 2018 the University increased efforts to support our students and workforce in many ways, including embarking on a campaign to increase the awareness of sexual violence and promote the University's values and available support resources. This and other health, safety and wellbeing initiatives, along with relevant performance statistics, are detailed in the University's [2018 Annual Report](#).



Image: Paws for Positivity, outside 1888 Building.



Engagement with others enables the University to achieve its academic aspirations and create economic, social and cultural value

External Relationships

Partnerships, policy and community



Partnerships, public policy and leadership, along with community engagement and impact, are intertwined activities. There are many examples of the University engaging and partnering with others, including communities, to influence policy or create economic, social and cultural value. As such, these topics have been defined separately before discussing the University's performance across these topics collectively.

Partnerships

Partnerships refers to developing relationships with values-aligned industries, institutions and organisations to encourage innovative

and interdisciplinary collaboration which respond to the sustainability challenges and opportunities facing our world.

Our partnerships include those with other universities, governments, industry, and NGOs, and have the power to further research, influence policy and benefit communities.

They also include the University's participation in relevant networks, such as the Sustainable Solutions Development Network (SDSN), Australasian Campuses Towards Sustainability (ACTS) and International Sustainable Campus Network (ISCN).

Public Policy and Leadership

Public policy and leadership refers to influencing stakeholders and shaping public policy by being leaders in sustainability, sparking debate and producing and communicating the results of evidence-based research on critical sustainability issues.

Influencing policy is an important area of potential impact for the University, and is specifically noted as one of the targets in the Research section of the Plan. Showing leadership is both an obligation on the University to demonstrate best practice, as well as an opportunity to add credibility to



research and demonstrate how improvements can be made.

Community Engagement and Impact

Community engagement and impact refers to engaging with the broader community to understand their values and needs, in order to ensure that the University's work is responding and creating positive impact. It also includes communicating the University's work and impact to the external community to support the value proposition of the University and identify the potential for new relationships and opportunities.

Engagement at the University encompasses the mutually beneficial relationships the institution has with society. It connects teaching, students and research work with communities – locally, nationally and globally – to help the University achieve its academic aspirations and create economic, social and cultural value. Importantly, engaging with the community creates opportunities for students and strengthens relationships between students, the workforce and the broader community.

Performance

As noted in the Research section of the Report, the Melbourne Interdisciplinary Research Institutes collectively produced over 62 publications, were involved in over 486 events, and initiated or were actively engaged in over 990 external relationships related to sustainability. Many other parts of the University similarly published or were involved in events and developed external relationships, including:

- The [2018 Ethical Enterprise Conference](#), for which the University and Melbourne Business School partnered with Moral Fairground
- [The Indigenous Design Symposium](#), hosted by

the Melbourne School of Design

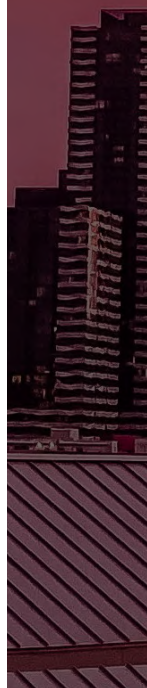
- [Place Week](#) and [The Living Stage](#) (Lorne), both involving the Thrive Research Hub
- A variety of seminars organised by the [Climate Energy College](#)
- [The Being Human Festival](#), hosted by the Faculty of Arts
- [The Dungala Kaiela Oration](#) co-hosted by the Kaiela Institute and the University of Melbourne on Yorta Yorta country, in the Goulburn Murray region

Looking Forward

In the coming year, the University will continue to purposefully partner and engage for impact across a wide range of activities, develop systems and processes that support these activities, and incentives and recognition to foster staff and student interest.



Activities will include:

- Developing systems and a reporting dashboard to capture the impact and value of strategic partnerships.
- Further work on a potential public policy precinct in Parkville.
- Further work on the potential for an advanced leadership program to assist established professionals to transition their careers toward areas of public priority.
- Progressing work on an award system for staff and students to recognise projects or initiatives demonstrating excellence in sustainability.



External relationships

Targets and Performance

Target	Status	Comment
Ensure the University's convening power is used to bring together policy leaders, industry and academic experts to advance issues of sustainability	 On track	<p>The University regularly convenes conversations with policy leaders, industry and academic leaders in a range of forums that address issues of social cohesion, international diplomacy, economic, cultural and environmental sustainability.</p> <p>For example, in a collaboration between Asialink, the Wheeler Centre, ABC TV and the University, led by Ali Moore (Vice-Chancellor's Fellow and acclaimed broadcaster), a captivating series of four hypotheticals was produced. The 'This Is Not A Drill' hypothetical scenarios used some of the big issues faced in the 21st century to examine the complexities of the Asia-Australia relationship and demonstrate the challenges and connections Australia shares with the region. Illustrating the value of the production, the Federal Government and health authorities have requested the use of one hypothetical in their training programs.</p>
Deeply embed sustainability considerations within the six University-wide Keystone Engagement Programs of the Engagement Strategy	 On track	<p>Significant work has gone into embedding sustainability considerations into the planning and execution of the Keystone Engagement Programs. Examples:</p> <ul style="list-style-type: none"> ▪ In 2018 the Engaged-Led Research Summit in Shepparton focused on identifying research collaborations to help advance Indigenous self-determination in the Goulburn Valley. ▪ The newly developed Reconciliation Action Plan 2018 – 2022 contains 14 signature projects under four overarching themes, all addressing varying aspects of sustainability from an Indigenous perspective. ▪ The Science Gallery Melbourne continues to use sustainability in its planning and programming. In 2019 the exhibition program has a theme of 'Disposable' focusing on the problems and opportunities of human wastefulness.

Mini Case Study

Policy Workshops

In 2018, the University convened workshops with 40 policy-focused academics, Parkville precinct partners and policymakers, which revealed a strong shared interest in developing a public policy precinct, recognising the

distinctiveness of the stakeholders in the precinct and the opportunity to leverage this further.

Delegates discussed potential models for the precinct and acknowledged the

significant policy expertise already co-located around the University. A program of work, focused on deepening capabilities and collaboration within the precinct, continues to be progressed.

Case Study

Health Sciences Global Learning Partnership

The [Global Learning Partnership \(GLP\)](#) is a student experience program that brings together health professional academics and students from across U21 universities together with an institution in a developing country.

The GLP aims to build health science students' knowledge of sustainability and the skills to address the targets embedded within the Sustainable Development Goals. In 2018, academics from the U21 Health Sciences Group SDG Initiative worked in collaboration with academics from the Kathmandu University School of Medical Sciences, Nepal.

The GLP primarily addresses SDG Goal 3 (Good health and wellbeing) and Goal 17 (Building partnerships across institutions). During the four-week in-country program, Dr Gillian Webb from the University of Melbourne led 21 students and six academics (local and international) to complete health promotion projects that align with the SDGs in a rural setting.

The project had multiple positive outcomes for students, academics and local community partners. Student outcomes included the development of cross-cultural and interprofessional

competencies, and a deeper understanding of community-informed health promotion in complex and challenging contexts. Academics had the opportunity to build strong relationships and international research collaborations across institutions, along with deeper knowledge of health and wellbeing in complex, under-resourced health settings. Partner communities in Nepal benefited by having health and wellbeing needs recognised and addressed within local community contexts, increased health literacy and improved health and wellbeing, especially in the domains of women's health, oral health and chronic condition self-management.

The GLP is currently introducing the model into other countries such as Malawi and Mexico and within less resourced contexts of 'developed' countries such as Indigenous community settings in remote Australia.

From a wider University perspective, student and staff participation in the GLP is a dynamic example of our active commitment to the SDGs and contributes to meeting our Sustainability Charter targets in teaching and learning.





Image
U21 Health Sciences Group students and academics leading a class in Nepal.

Appendices

1. Materiality review

2. Sustainability Plan
priority actions

3. List of references

Appendix 1 : Materiality review

The University commissioned a sustainability materiality review of activities. This review was undertaken by external consultants and involved desktop reviews, interviews and a workshop.

Desktop reviews included:

- Six peer University sustainability reports
- Media mentions in 2018
- Times Higher Education Ranking (THE) process
- Sustainable Development Solutions Network guide to the Sustainable Development Goals for Universities
- University of Melbourne 2018 results from the externally-administered International Student Barometer and Student Barometer Surveys and internally administered Staff and Student Sustainability Survey
- The Plan and 2017 Sustainability Report

Interviews were undertaken with 28 external and internal stakeholders.

A stakeholder was defined as an entity or individual that can reasonably be expected to be significantly affected by the reporting organisation's activities, products or services; or whose actions can reasonably be expected to affect the ability of the organisation to implement its strategies or achieve its objectives.

External stakeholders included people from international non-government organisations (NGOs), relevant industry bodies, and consultants and contractors providing services to the University. Internal stakeholders included students, faculty staff, academics, professional staff and senior University leadership.

As part of the interviews, interviewees were asked to identify the SDGs that the University could impact most, either negatively or positively.

Appendix 2 : Sustainability Plan priority actions


Governance

Trust and values












Priority action	Status	Comment
Integrate sustainability principles and practices with Academic Division business planning	In Progress	The Sustainability Fellowships program is being developed to integrate sustainability into curriculum at faculty level. Sustainability principles were included in the facility masterplanning for the Melbourne School of Engineering and Faculty of Medicine, Dentistry and Health Sciences.
Ensure through periodic reviews that the governance structure remains fit for purpose	On track	The terms of reference and membership of the Sustainability Executive were reviewed during 2018, and will be reviewed again in 2019 in line with the new institutional strategy.
Ensure effective coordination for sustainability across the whole University	In Progress	Organisational restructure in 2019 will enable consolidation of some operational functions. Formal and informal networks are used to coordinate sustainability across the University, with opportunities to improve effectiveness.
Incorporate the UN Global Compact principles and Sustainable Development Goals into strategies, policies and procedures	In Progress	A University-wide approach to the SDGs is under development. The University participated in the first Times Higher Education Impact rankings, based on the SDGs. The SDGs have been used as part of sustainability frameworks for facility masterplanning and Fishermans Bend Campus Development Framework.
Maintain appropriate memberships and relationships with leading organisations in the sustainability field	On track	The University is a member and active participant in many organisations, including: <ul style="list-style-type: none"> International Sustainable Campus Network (ISCN) Australasian Campuses Towards Sustainability Property Council of Australia Green Building Council of Australia (GBCA) Tertiary Education Facility Management Association
Ensure there are appropriate mechanisms for students and staff to raise sustainability issues	On track	Mechanisms include: <ul style="list-style-type: none"> sustainable-campus@unimelb.edu.au Sustainability Advocates Forum UMSU and GSA nominees are included as members of the Sustainability Executive
Ensure appropriate data monitoring and collection	In Progress	Data related to campus operations is readily available. Data related to research outputs and impacts, and teaching and learning is under development.
Work collaboratively across the University to ensure effective communication of sustainability information	In Progress	The University-wide sustainability engagement network will be re-established in 2019. Other formal and informal networks are used to coordinate sustainability across the University, with opportunities to improve effectiveness.
Involve the University community in decision-making during the periodic reviews of the Sustainability Plan	NA	The mid-point review of the Plan will be conducted in 2019, led by the Sustainability Executive and informed by development of the new institutional strategy.

Appendix 2 : Sustainability Plan priority actions

Priority action	Status	Comment
Strengthen the link between the Sustainability Advocates Forum and the Sustainability Executive to improve two way communication and transparency	 In Progress	Sustainability Advocates meetings are held quarterly. University Services and Chancellery members of the Sustainability Executive are involved in the Sustainability Advocates group. There is an opportunity to strengthen and formalise this connection for communication and transparency.

Responsible Investments

Priority action (summary) ²³	Status	Comment
Develop and implement a Sustainable Investment Framework (SIF)	 On track	Development complete and implementation on track. See SIF reporting in the Responsible Reporting section.
The process for developing the framework will be determined and communicated at the latest by the end of quarter 1, 2017	 Exceeded or met	Complete.
Actively engage with fund managers regarding the appropriateness of their climate risk management	 On track	Action is included in the SIF. See SIF reporting in the Responsible Investment section.
Enhance reporting on climate change risk	 On track	Action is included in the SIF. The University has committed to report annually on its performance in this Report. See SIF reporting in the Responsible Investment section.
Conduct scenario analysis on the potential impact of climate change on the investment portfolio	 On track	Action is included in the SIF. See SIF reporting in the Responsible Investment section
Reflect the University's climate-related investment beliefs in the Statement of Investment Objectives and Policy (SIOP)	 Exceeded or met	Complete: SIOP updated to the Statement of Investment Management and Principles (SIMP) to reflect the adoption of the SIF.
Engage specialist advisors to provide on-going advice on the management of climate change risk	 Exceeded or met	Complete: Specialist advisors Mercer Investments have been appointed.
Investigate integrating impact investments into the University's strategic asset allocation	 On track	A plan for impact investing is being developed.
Work with peer organisations to build strategic partnerships and increase the aggregate influence of the group	 In Progress	Mercer has prepared a report on appropriate peer organisations to be reviewed by the University Investment Management Committee (IMC) early in 2019. This action will then be progressed in 2019.








²³ For the full wording of targets and actions please see the Plan p. 37.

Appendix 2 : Sustainability Plan priority actions








Core Activities

Teaching & Learning






Priority action	Status	Comment
Chancellery will:		
Ensure appropriate leadership of the project	 Attention needed	This action will be reviewed in 2019.
Establish baseline knowledge by mapping current teaching and learning courses and subjects that develop sustainability values and knowledge	 Attention needed	This action will be reviewed in 2019.
Make sustainability curriculum innovations a priority area for teaching and learning innovation and engagement grants	 In Progress	Student Engagement Grants are available for student-led initiatives that aim to: <ul style="list-style-type: none"> ▪ address social, economic, environmental or cultural issues ▪ provide skills and leadership development for students ▪ implement constructive change in the local, national or international community ▪ provide opportunities for students to develop their social and civic responsibilities ▪ encourage interdisciplinary collaboration Melbourne Engagement grants include a category for Public Conversations and Policy Development, awarded to a project on Circular Economy in 2018.
Support faculty-based Education for Sustainability leaders and activities	 On track	Faculty-based sustainability fellowships program developed in 2018 for launch in 2019.
Academic Board will:		
Ensure all formal course proposal and review processes require Academic Divisions to identify how graduate attributes relevant to sustainability are developed through teaching and learning	 Attention needed	This action will be reviewed in 2019.
Encourage graduate attributes, including leadership for sustainability, to be documented in students' Australian Higher Education Graduation Statements	 Attention needed	This action will be reviewed in 2019.
Centre for the Study of Higher Education will work with Academic Divisions to:		
Communicate a clear vision of how knowledge and values for sustainability can be practically incorporated in diverse curricula	 On track	We have established a clear vision and examples of practices within curricula. This is hosted on the CSHE website .

Appendix 2 : Sustainability Plan priority actions

Priority action	Status	Comment
Centre for the Study of Higher Education will work with Academic Divisions to:		
Provide annual professional development opportunities for Education for Sustainability	 On track	<p>Teaching and learning seminars have included Education for Sustainability, as well as sessions in the Teaching and Learning Conference.</p> <p>CSHE were instrumental in developing the faculty-based sustainability fellowship program. We are also looking at establishing a Community of Practice that will include the faculty-based sustainability fellows, once they are announced.</p>
Recognise and reward good practice through establishment of a named award for excellence in advocacy and innovation in Education for Sustainability	 On track	Award for Excellence in Education for Sustainability launched in 2018.
Academic Divisions will:		
Ensure mechanisms are in place to enable integration of sustainability in curriculum	 In Progress	Faculty-based sustainability fellowships program developed in 2018 for launch in 2019.
Ensure Associate Deans (Teaching and Learning) and Directors of Teaching have responsibility for Education for Sustainability and work with staff and students to advocate and lead action for embedding sustainability in teaching and learning in courses	 Attention needed	This action will be reviewed in 2019.
Review course level curriculum to ensure sustainability values and knowledge are fostered through core and compulsory curriculum, and in ways that are relevant to the profession or discipline	 In Progress	Faculty-based sustainability fellowships program developed in 2018 for launch in 2019.
Initiate and support development of teaching and learning support packages (see following page) and the potential for new dedicated units that enable a wider range of undergraduate and graduate students to apply sustainability knowledge and values to practical, campus-based problems	 In Progress	Faculty-based sustainability fellowships program developed in 2018 for launch in 2019.
Identify course pathways and options, either through distinct majors or recommended elective and breadth sequences, to allow all bachelor degree students to study the environment and sustainability, and to promote these specialist options to potential and current students and to employers	 In Progress	

Appendix 2 : Sustainability Plan priority actions



Teaching & Learning (continued)

University Services will:		
Support student awareness of environmental and sustainability specialist pathways through dedicated marketing and course advising materials and events	 Attention needed	This action will be reviewed in 2019.
Assist with development of teaching and learning support packages	 Attention needed	This action will be reviewed in 2019.
Investigate provision of student record software that will enable documentation of curricular and extracurricular activities demonstrating graduate attributes such as sustainability leadership	 On track	The Leaders in Communities Award (LiCA) is designed to assist students: <ul style="list-style-type: none"> ▪ Make the most of their volunteering activities ▪ Develop their professional skills ▪ Get their extracurricular experiences recognised on their transcript





Core Activities

Research focus and impact



Priority action	Status	Comment
Chancellery will:		
Develop methods and metrics to measure research outcomes and positive impacts relating to sustainability	 In Progress	The University participated in the Australian Research Council Engagement and Impact Assessment 2018 – 2019. This included assessment of Engagement and Impact Outcomes and detailed Impact Studies . A challenge remains in terms of defining sustainability in the research context. The University has piloted mapping its research outputs data to a simple triple bottom line definition and in 2018 to the Sustainable Development Goals. It is collaborating in cross-sector discussions about how to more effectively define sustainability research.
Promote and support University of Melbourne research initiatives, institutes and entities that deliver partnerships and sustainability policy advancement	 On track	See the Melbourne Interdisciplinary Research Institutes and Hallmark Research Initiatives .

Appendix 2 : Sustainability Plan priority actions





Priority action	Status	Comment
Chancellery will:		
Continue to share and communicate the University's sustainability research to the broader community and key policy influencers, for example through collaboration and engagement, effective policy advocacy and evidence-based input to government processes, and circulation of publications covering our research such as the Sustainability at Melbourne brochure	 In Progress	The University shares and communicates its research through a variety of channels. A challenge remains in distinguishing 'sustainability' research from other research.
Academic Divisions will:		
Promote these targets, where appropriate to disciplinary context, to extend and deliver on research in sustainability	 Attention needed	The absence of a practical definition of 'sustainability' research hinders the ability of Academic Divisions to appropriately complete this action in ways relevant to each discipline.
Consider the sustainability impacts of research activities, pursuing sustainable alternatives where possible	 Attention needed	It is unclear to what extent the academic divisions are considering the sustainability impacts of research activities. An area requiring University-wide collaboration in the coming years will be carbon emissions associated with air travel.
Work closely with alumni and partners to connect our research in sustainability to action and outcomes	 Attention needed	The University's Academic Divisions regularly work closely with alumni and partners to have research impact. The lack of a practical definition of 'sustainability' research makes it difficult to clearly separate this from other work related to research impact.
University Services will:		
Support and identify opportunities for 'campus as a laboratory' in support of research activity	 In Progress	There are ad hoc examples of the campus being used as a living lab, often generated by a small number of passionate professional staff members rather than as a result of systems or culture.
Develop actions informed by our research	 In Progress	There are ad hoc examples of campus planning and operations being informed by research. These are typically the result of a small number of passionate professional staff members rather than as a result of systems or culture.

Appendix 2 : Sustainability Plan priority actions





The Campus




Sustainable Buildings and Communities

Priority action	Status	Comment
Embed Environmentally Sustainable Design (ESD) principles throughout project lifecycles	 On track	Design standards have been updated and relevant sustainability subject-matter experts are involved in projects from business case stage.
Investigate leading global standards applicable to precinct-level design and development	 On track	Explored approaches such as regenerative development and circular economy as part of planning for the new Fishermans Bend Campus.
Review and update the University's Design Standards to enable integration of sustainability commitments	 Exceeded or met	As part of updating the design standards, the University has identified how sustainability initiatives align with and support other desirable outcomes, such as academic strategy and campus experience.
Develop guidelines for ESD standards for both major and minor refurbishments	 Exceeded or met	Included as part of updating the University's Design Standards.
Apply 'zero emissions-ready' approach to all campus development projects	See <i>Energy and Emissions</i>	Please see the <i>Energy and Emissions</i> section across the page, under priority action <i>Develop new buildings on campus with 'zero emissions-ready' approach</i> .




Biodiversity




Priority action	Status	Comment
Adopt a 'no net loss' approach to arrest the decline of the number of trees on campus	 On track	A 'no net loss' policy definition has been developed and will be incorporated into the next iteration of the University's Design Guidelines for Projects, to be published in 2019.
Integrate biodiversity considerations in campus planning and design	 On track	Biodiversity Coordinator now included in all relevant project planning and decision-making processes.
Maintain or increase the number of species to ensure the health of ecosystems and aid in resilience to climate change	 In Progress	Baseline species data gathering in progress. The tree climate adaptation project outcomes will be implemented in new plantings.
Establish a 'Research Action Partnership' to integrate ecological and biodiversity research findings and expertise with the BMP	 In Progress	The Action Research Partnership has yet to be formally established, however current informal partnerships exist, for example with the Melbourne School of Design, looking to create specialised artificial habitat for the Critically Endangered Powerful Owl.

Appendix 2 : Sustainability Plan priority actions


Priority action	Status	Comment
Share outcomes of developing and implementing the BMP with our community, other universities and organisations	 In Progress	BMP implementation is underway. Experiences related to BMP have been shared internally with the UoM community, for example at the Threatened Species Day Symposium and campus biodiversity tours. There has been limited regular external engagement, however a presentation was given at the ACTS conference in November 2018 on tree mapping and evaluation at the Parkville Campus.

Energy and emissions

Priority action	Status	Comment
Further develop and implement the Carbon Neutrality strategy	 On track	Strategy for 2021 – 2030 to be developed in 2019.
Model off-campus renewable energy supply options	 Exceeded or met	Complete. Wind farm PPAs signed.
Complete a full energy audit across all campuses by end 2017	 Exceeded or met	Completed in collaboration with Melbourne School of Engineering.



Priority action	Status	Comment
Develop new buildings on campus with 'zero emissions-ready' approach	 In Progress	'Zero emissions-ready' means not using gas in a building. This has been feasible on new buildings, such as the Ian Potter Southbank Centre, that are stand-alone for utilities. Redevelopments within the boundary of the traditional Parkville campus are more challenging. For the New Student Precinct, the heating hot water distribution network has been designed to enable the central gas boilers to be readily replaced with electricity heat pumps in the future.
Complete Greenhouse Gas Inventory by mid-2017, to be included in annual Sustainability Report	 Exceeded or met	Reported annually since 2016.
Monitor and report energy intensity	 Exceeded or met	Reported annually.

Water







Priority action	Status	Comment
Complete annual report and review of Water Management Plans for each campus	 Attention needed	Draft Water Management Plan for Parkville requires update. Plans for other campuses have not yet been developed.

Appendix 2 : Sustainability Plan priority actions



Water (continued)

Priority action	Status	Comment
Commission the existing Parkville purple pipe network to facilitate use of harvested water	 Attention needed	A section of the purple pipe was commissioned between the tank at the MSD and the System Garden, encountering a number of challenges. This highlighted that the use of the purple pipe will require significant work if it is to go ahead.
Implement infrastructure to monitor all harvested water usage	 In Progress	Infrastructure to monitor harvested water is currently being trialled.







Waste and recycling

Priority action	Status	Comment
Ensure waste minimisation considerations are incorporated into procurement decisions	 In Progress	Developing stronger linkages between sustainability and procurement was evident in 2018 with success in key areas e.g. business case for 100% recycled printing paper to be used across the University was accepted and implemented.
Maximise recycling rate by enhancing bin labelling and placement	 On track	New bin signs designed to take into account new recycling rules – to be rolled out University-wide in 2019.
Expand the Reuse Program to include recovery of all equipment and furniture	 Attention needed	Down 20% on last year due to the physical relocation of the re-use centre. \$2.45 million saved, 4,400 items redeployed, 90 tonnes diverted from landfill.
Investigate broader scale organics recycling options	 In Progress	Search for better organics solutions is on-going. An organics recycling system for the New Student Precinct is a priority.
Measure waste data by disposal method daily, with regular reporting	 In Progress	Data analyst employed to convert daily data from the contractor into a dashboard displaying up-to-date data for all waste streams.
Improve contractor management to ensure effective waste disposal	 Attention needed	This will be addressed in the Towards Zero Waste Strategy in 2019.




Travel and transport

Priority action	Status	Comment
Report air travel emissions derived from University business, starting 2017 calendar year	 Exceeded or met	Air travel emissions have been reported as part of the Greenhouse Gas Inventory since 2016.
Investigate opportunities to reduce air travel through enhanced teleconferencing facilities and other means	 Attention needed	The University has a range of web- and tele-conference systems available to staff and students. More work is needed to understand how these systems are used and how to raise awareness of the opportunities these systems offer to reduce travel.

Appendix 2 : Sustainability Plan priority actions

Priority action	Status	Comment
Optimise composition and management of vehicle fleet and increase pooling of vehicles	 On track	In 2018, Fleet Services incorporated a permanent discount rate of half price for the use of the electric vehicle (EV), further incentivising the use of sustainable vehicles. An uptake of GoGet memberships was achieved by communicating this service when University staff and students apply for pool car use, reducing the burden on University vehicles and thus enabling a further eight vehicle reduction in the fleet size. Disposing of older vehicles and transferring existing younger vehicles between faculties has also resulted in a reduction in the average fleet age.
Improve the pool car booking system and automated pickup process to facilitate higher utilisation	 On track	Another five vehicles have been transferred to the automated pickup process, reducing administrative burden and contributing to overall reduction in fleet size.
Review the University Fleet Vehicle policies to promote timely uptake of sustainable vehicle options (eg. hybrid and electric vehicles)	 On track	Update of the Vehicle Fleet Procedure proposed for 2019.
Prioritise pedestrian and bicycle transit and end of trip facilities as a strategic priority across our campuses	 On track	Planning at the Parkville campus is for a vehicle-light campus. Additional end of trip facilities are being installed.
Provide greater sustainable transport choices for students, staff and visitors	 On track	The University continues to advocate for improved public transport to its campuses, as well as providing end of trip facilities. Web- and tele- conference systems are available for use.
Actively manage staff and student incentives that contribute to transport emissions	 On track	Review of commuter club proposed, with intention to include V/Line passengers.

Supply chain and procurement





Priority action	Status	Comment
Review implementation and governance of the University's Procurement Policy, ensuring procurement processes fulfil the University's social and environmental obligations established through the Sustainability Charter and Plan	 Exceeded or met	Procurement Policy updated in 2018.
Review existing procurement contracts and practices, relative to supply chain and product life cycle sustainability requirements	 In Progress	Procurement framework being developed that identifies priority sustainability issues and opportunities by procurement category.
Procure only certified tea and coffee products as listed by the University's supplier	 Exceeded or met	University Executive committed 100% Fairtrade consumables in office kitchens.

Appendix 2 : Sustainability Plan priority actions

University Community

Engagement and awareness









Priority action	Status	Comment
Build community capacity and engagement through the number and quality of engagements (through events, programs and online) and key programs: Sustainability Advocates; Sustainability Advocates Forum; Fair Trade Steering Committee; Engagement Working Group, and C16Hack	 In Progress	<p>The Sustainability Team deliver a large portfolio of activities to increase staff and student engagement and participation across the University (see earlier list of events, forums and tours). This is to support a continually growing desire and expectation from the community.</p> <p>The team has also launched a number of new initiatives, such as the Green Fund and new training module, alongside its existing activities to further build capacity. Green Impact has also been able to foster greater staff/student collaboration across many parts of the University. This has helped enhance a number of work-based learning skills for students and greater capacity for staff teams.</p>
Facilitate on-campus research opportunities by working with the University community to promote a living laboratory and to lead Australia in terms of categorisation, evaluation and implementation of the Campus as a Living Lab – utilising the campus as a test bed for research projects and teaching and learning opportunities	 In Progress	<p>There are a range of examples of the campus being used as a living lab. The new Fishermans Bend Campus will have a strong focus on being an industry-focused living lab.</p>
Promote behaviour and policy within the University community towards more environmentally sustainable ways of studying and working	 In Progress	<p>The Green Impact program engages a wide range of staff.</p> <p>More information will be provided to staff regarding air travel alternatives and options in 2019 as part of trying to manage air travel emissions.</p>
Utilise the University's academics and their expertise to create best-practice University operations	 On track	<p>Examples from 2018 include Melbourne School of Engineering researchers and students to inform a \$40 million energy efficiency program planned for coming years.</p>

Appendix 2 : Sustainability Plan priority actions

External Relationships

Community engagement



Priority action	Status	Comment
Position the University at the centre of one of Australia's most influential public policy precincts, enabling us to advance policy discussion and debate on important social and environmental challenges	 In Progress	In 2018, workshops with 40 policy-focused academics, precinct partners and policymakers revealed a strong shared interest in further developing a public policy precinct, recognising the distinctiveness of the existing asset and the opportunity to leverage this further. Delegates discussed potential models for the precinct and acknowledged the significant policy expertise already co-located around the University. A program of work, focused on deepening capabilities and collaboration within the precinct, continues to be progressed.
Explore the potential for an advanced leadership program to assist established professionals to transition their careers toward areas of public priority, including those redressing complex social and environmental challenges	 In Progress	A feasibility report on the proposed advanced leadership program has been drafted with work to continue in 2019 on shaping the structure and refining the proposed offering.
Make publicly accessible the University's sustainability expertise and resources, engaging the public in our work to address sustainability challenges	 On track	The University has sustainability articles in Pursuit, academic participation in media stories, continued presentation of the Made Possible by Melbourne campaign, research stories in TedX and web forums.
Articulate a social compact that expresses the University's commitment to developing relationships with communities of place and interest, providing a framework for engagement and setting core principles for developing mutually beneficial, multilateral partnerships	 Attention needed	This initiative has been revised and is no longer an area of specific focus within the Engagement at Melbourne 2015 – 2020 strategy. The University's new institution-wide strategic plan (currently under development) will determine the approach to be taken here.
Develop a framework for understanding and reporting on the value and impact of strategic partnerships for the University and its partners	 In Progress	Work has progressed on developing a Client Relationship Management system and a reporting dashboard to capture the impact and value of strategic partnerships.
Establish a Sustainability Excellence Award open to students and staff	 On track	Excellence in Education for Sustainability award was established in 2018. Sustainability team progressing work on an award for staff and students to recognise projects or initiatives demonstrating excellence in sustainability.

Appendix 3 : List of references

Document	Link
2018 Dungala Kaiela Oration	https://engagement.unimelb.edu.au/public-value/2018-dungala-kaiela-oration
2018 Ethical Enterprise Conference	https://moralfairground.com.au/the-2018-ethical-enterprise-conference/
2018 Green Gown Awards Australasia	https://ggaa.acts.asn.au/past-awards/ggaa2018/
2018 Newton Prize	https://energy.unimelb.edu.au/news-and-events/news/professor-pierluigi-mancarella-awarded-2018-newton-prize
2018 Sustainability Survey full report	https://sustainablecampus.unimelb.edu.au/_data/assets/pdf_file/0009/2898018/2018_Sustainability_Survey_REPORT.pdf
Aboriginal Carbon Foundation Reducing Carbon Building Communities Fund	http://aboriginalcarbonfoundation.com/rcbcfund
Annual Reports	https://about.unimelb.edu.au/strategy/annual-reports
ARENA renewable hydrogen research grant	https://energy.unimelb.edu.au/news-and-events/news/renewable-hydrogen-research-grant-awarded-to-university-of-melbourne
Australian National Development Index (ANDI)	http://www.andi.org.au/
Australian Research Council data portal	https://dataportal.arc.gov.au/
Biodiversity at University of Melbourne	https://sustainablecampus.unimelb.edu.au/key-areas/biodiversity
Centre for the Study of Higher Education - Education for Sustainable Development in the Curriculum	https://melbourne-cshe.unimelb.edu.au/_data/assets/pdf_file/0010/2822194/24164-16579-Education-for-sustainable-development_v2.pdf
Clean Air and Urban Landscapes (CAUL) Hub	https://nespurban.edu.au/
Climate Energy College	http://climatecollege.unimelb.edu.au/
Excellence in Education for Sustainability award	https://melbourne-cshe.unimelb.edu.au/awards/university-of-melbourne-awards-for-excellence/categories/the-melbourne-strategic-priority-awards/award-for-excellence-in-education-for-sustainability
Global Reporting Initiative Standard (GRI)	https://www.globalreporting.org/standards/
Green Star rating scheme	https://new.gbca.org.au/green-star/
Growing Esteem	https://about.unimelb.edu.au/strategy/growing-esteem
Leaders in Communities Award	https://students.unimelb.edu.au/skills/leadership/lica
Melbourne Connect project	https://melbconnect.com.au/
Melbourne Disability Institute	https://disability.unimelb.edu.au/
Melbourne Energy Institute	https://energy.unimelb.edu.au/
Melbourne Renewable Energy Project (MREP)	https://www.melbourne.vic.gov.au/business/sustainable-business/mrep/Pages/melbourne-renewable-energy-project.aspx
Melbourne School of Design	https://msd.unimelb.edu.au/
Melbourne Social Equity Institute	https://socialequity.unimelb.edu.au/
Melbourne Sustainable Society Institute (MSSI) 2018 annual report	https://sustainable.unimelb.edu.au/_data/assets/pdf_file/0010/3049282/MSSI_ANNUAL_REPORT_2018_w1.pdf
Modern Slavery Act 2018 reporting requirement	https://www.homeaffairs.gov.au/help-and-support/how-to-engage-us/consultations/modern-slavery-reporting-requirement
MREP media release	https://about.unimelb.edu.au/newsroom/news/2019/january/university-of-melbourne-welcomes-new-wind-farm
Murra Warra wind farm project	http://murrawarrawindfarm.com/
Murra Warra windfarm media release	https://about.unimelb.edu.au/newsroom/news/2017/december/university-of-melbourne-joins-major-new-renewable-energy-project-in-regional-victoria
New Student Precinct teaching and learning initiatives	https://students.unimelb.edu.au/student-precinct/the-project/teaching-and-learning
Pride in Action Ally Network	https://about.unimelb.edu.au/news-resources/pride-in-action-ally-network

Appendix 3 : List of references

Document	Link
Principles of Responsible Investment Pursuit	https://www.unpri.org/
Reconciliation Action Plan 2018-2022	https://pursuit.unimelb.edu.au/
Research at Melbourne	https://ourcampus.unimelb.edu.au/RAP-3
South Pole carbon credits	https://research.unimelb.edu.au/_data/assets/pdf_file/0011/1665722/MelbUniResearchVision_Apr2013.pdf
Southbank campus end of trip facilities	https://www.southpole.com/sustainability-solutions/carbon-credits
Staff and Student Sustainability Survey (SSSS)	https://www.sxwa.com.au/UNIVERSITY-MELBOURNE-EOT
Student Engagement Grants	https://sustainablecampus.unimelb.edu.au/a-z/sustainability-survey-report
Supply Nation	https://provost.unimelb.edu.au/_data/assets/pdf_file/0008/2931263/2018-SEG-Recipients-updated-v3.pdf
Sustainability Charter	https://supplynation.org.au/
Sustainability Plan 2017-2020	https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.um-ourcampus.files/8915/0545/5459/UoM_Sustainability-Charter_Feb_18.pdf
Sustainability Reports	https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.um-ourcampus.files/2914/8480/0942/UoM_Sustainability_Plan_2017-2020_40pp.pdf
Sustainability strategy	https://ourcampus.unimelb.edu.au/sustainability
Sustainable Campus	https://ourcampus.unimelb.edu.au/sustainability
Sustainable Development Goals (SDGs)	http://sustainablecampus.unimelb.edu.au/
Sustainable Investment Framework (SIF)	https://www.un.org/sustainabledevelopment/sustainable-development-goals/
The Conversation	https://ourcampus.unimelb.edu.au/sustainability/sustainable-investment-framework
The Melbourne Graduate	https://theconversation.com/institutions/university-of-melbourne-722
Threatened Species Recovery Hub	https://provost.unimelb.edu.au/teaching-learning/SL/the-melbourne-graduate
Thrive Research Hub	http://www.nespthreatenedspecies.edu.au/
Times Higher Education (THE) university impact rankings	http://www.thrive-research.com.au/
U21 Health Sciences Global Learning Partnership	https://www.timeshighereducation.com/rankings/impact/2019/overall
Universities Australia 'Guidelines for university responses to sexual assault and sexual harassment'	http://u21health.org/2018-global-learning-partnership
Universities Australia contract cheating	https://www.universitiesaustralia.edu.au/Media-and-Events/media-releases/Students-at-the-centre--new-guidelines-for-university-responses-to-sexual-harassment-and-sexual-assault#.XL0TZX5S90s
University commitment to the Sustainable Development Goals	https://www.universitiesaustralia.edu.au/Media-and-Events/media-releases/New-penalties-support-unis-in-the-fight-against-contract-cheating
University of Melbourne Chancellery (Academic)	http://ap-unsdsn.org/regional-initiatives/universities-sdgs/university-commitment/
University of Melbourne design standards	https://provost.unimelb.edu.au/
University of Melbourne Engagement	https://about.unimelb.edu.au/strategy/governance/regulatory-framework/design-standards
University of Melbourne Fairtrade	https://engagement.unimelb.edu.au/
University of Melbourne Office of Research Ethics and Integrity	https://sustainablecampus.unimelb.edu.au/key-areas/fair-trade#about
University of Melbourne podcasts	https://research.unimelb.edu.au/ethics-integrity
University of Melbourne procurement policy	https://about.unimelb.edu.au/news-resources/podcasts
University of Melbourne Research	https://policy.unimelb.edu.au/MPF1087
University of Melbourne strategies	https://research.unimelb.edu.au/
Victorian Funds Management Corporation (VFMC)	https://about.unimelb.edu.au/strategy
	https://www.vfmc.vic.gov.au/

