As a values-based university, we use our shared core ethical values of respect, responsibility, fairness, integrity, and empathy to guide our decision-making and the actions we take. Our commitment to sustainability is a reflection of these values, and it is our moral obligation to enable a swift transition to a sustainable world for future generations.

To create a sustainable future, Victoria University of Wellington, and the world at large, need more than just economic viability—we need strong social cohesion and a healthy natural environment. In our role as a global-civic university, the University is championing this pathway to a sustainable future through our academic expertise, through the preparation of our graduates for global citizenship, through our civic engagement, and through our own operational practices. The thought leadership provided by the University is part of growing public sentiment for valuing sustainable development, and our stakeholders are increasingly engaged with issues of sustainability and want to contribute. This is generating great opportunities for new partnerships, research, teaching programmes, and the wider student experience.

The transition to a sustainable future will contain many complex challenges, and understanding and finding solutions to these challenges will require a collective commitment and cooperation across all sectors and societies. We look forward to working alongside others for a world in which sustainability is the norm.

This report details the breadth of work we are undertaking across the University, and demonstrates how we are working to make a sustainable future a reality.

Professor Grant Guilford
Victoria University of Wellington is one of New Zealand’s oldest and most prestigious tertiary institutions with a proud history of academic excellence.

Our vision is to be a world-leading capital city university and one of the great global–civic universities.

The University’s mission is to undertake excellent research, teaching, and public engagement in the service of local, national, regional, and global communities.

Our core ethical values are respect, responsibility, fairness, integrity, and empathy. These values are manifested in our commitment to civic engagement, sustainability, inclusivity, equity, diversity, and openness. We prize intellectual rigour and independence, academic freedom, critical inquiry, and excellence.

In 2017, the University had 22,273 students enrolled, with 3,548 of them coming from 114 different countries outside New Zealand. In total, 4,543 qualifications were awarded to the graduating class of 2017. Academic staff at the University produced 2,021 research publications and made 609 expert contributions on topical issues in broadcast media. The University employed 2,263 full-time equivalent (FTE) staff and generated total revenue of $448 million. As a large organisation, we can make a significant contribution towards a sustainable future through teaching, research, engagement, and organisational operations.
This report is complementary to the University’s Annual Report and aims to summarise the University’s contribution towards a sustainable future in 2017 through the description of initiatives, examples of research, news and public engagement activities, management processes, and performance metrics. It covers a holistic view of sustainability, whereby it considers social and cultural aspects of sustainability as well as environmental aspects. Financial sustainability is covered in the Annual Report.

The report has been structured into four sections that reflect the University’s Sustainability Framework (right): Leadership and Governance; Partnerships and Engagement; Learning, Teaching, and Research; and Facilities and Operations. The framework is based on the LiFE (Learning in Future Environments) index that was developed by sustainability practitioners in tertiary institutions across New Zealand, Australia and the United Kingdom to structure a holistic approach to sustainability action.

For many of the performance indicators, 2017 is the first year of data collection. As this reporting is repeated in the future, we will be able to track progress with year-on-year comparisons.

Each section includes commentary on how the University is making relevant contributions to the delivery of the sustainable development goals (SDGs). It also includes a sample of relevant news stories from throughout 2017 that demonstrate the breadth of sustainability action at the University.
Leadership and governance relate to our strategic direction for sustainability and building capacity through people and processes. Embedding sustainability into strategic decision-making and everyday practices generates long-term benefits and can be demonstrated externally to build our reputation as a leader in sustainability.

The University’s commitment to sustainability is formalised through a number of external agreements that it is a signatory to, including the Talloires Declaration, the Okanagan Charter, the Universities Commitment to the Sustainable Development Goals, and Principles for Responsible Management Education.

The University demonstrates sector leadership through its involvement with Australasian Campuses Towards Sustainability (ACTS). In 2017, the University’s sustainability manager was appointed to the board of ACTS to champion collective sustainability action across the tertiary sector.

### PERFORMANCE INDICATORS

#### Gender and diversity

<table>
<thead>
<tr>
<th>Gender and diversity</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female students</td>
<td>55.8</td>
</tr>
<tr>
<td>Professors and associate professors who are female</td>
<td>30.5</td>
</tr>
<tr>
<td>Female members of Senior Leadership Team (as at 31 Dec 2017)</td>
<td>53.8</td>
</tr>
<tr>
<td>Māori students</td>
<td>11.1</td>
</tr>
<tr>
<td>Academic staff who are Māori</td>
<td>4.8</td>
</tr>
<tr>
<td>Pasifika students</td>
<td>5.9</td>
</tr>
<tr>
<td>Academic staff who are Pasifika</td>
<td>2.6</td>
</tr>
</tbody>
</table>

#### Recognition and leadership

<table>
<thead>
<tr>
<th>Recognition and leadership</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustainability award nominations</td>
<td>1</td>
</tr>
<tr>
<td>Sustainability-related media releases</td>
<td>49</td>
</tr>
<tr>
<td>Investments in companies involved in fossil fuel exploration or extraction</td>
<td>0</td>
</tr>
<tr>
<td>FTE professional staff positions focused on environmental sustainability at the University*</td>
<td>4</td>
</tr>
</tbody>
</table>

1. Three full-time positions in the Sustainability Office and one full-time position in Property Services.
CONTRIBUTION TO THE SDGs

The following leadership and governance work contributed to the SDGs.

The availability of the fruit and vegetable co-op, community gardens, the community pantry, and distribution of surplus food from Kaibosh, facilitated by the Victoria University of Wellington Students’ Association.

The services of Student Health and Student Counselling, the staff and student Wellness teams, Victoria Recreation, Disability Services, and the pastoral care provision of Student Accommodation and Victoria International.

Management processes to ensure a consistent high standard of teaching, equal access to education, and increasing numbers of people receiving education.

The continued high proportion of female staff and students and the development of the Equity, Diversity, and Inclusion framework.

The revenue growth of the University and the increasing employment opportunities provided there. The wider Wellington economy also benefits from the increasing student population.

The University-wide commitment to secure the intellectual potential put at risk through experience of disadvantage, particularly for Māori and Pasifika.

The facilities and support provided for the Māori and Pasifika and religious communities on campus, such as Pasifika Haos, Te Herenga Waka marae, Te Pūtahi Atawhai (culturally safe places where Māori and Pasifika can study and seek advice), and prayer rooms.

Public reporting of environmental impact (through this report) and responsible investment decisions (such as the divestment from companies involvement in the exploration and extraction of fossil fuels).

Management processes to fairly elect representatives to governance positions (University Council, Academic Board, and so on) and transparency of annual reporting (in the University’s Annual Report).

EXAMPLE NEWS STORIES

30 January 2017
Renowned social scientist to lead National Science Challenge

Victoria University of Wellington academic Professor Sally Davenport will head a team of more than 100 researchers as she steps into a new role leading the Science for Technological Innovation National Science Challenge.

Professor Davenport has been involved in the Challenge since its inception, including co-leading an observational research programme ‘Building New Zealand’s Innovation Capacity’, which is working closely with the Challenge’s science and engineering teams to learn more about how to develop relational capacity with industry and Māori organisations.

“It’s an exciting National Science Challenge and it’s already making great progress in its goal to develop world-leading science and technology that will help New Zealand businesses grow. We’re building a network of partnerships between researchers, businesses and Māori organisations, to achieve this and there’s much to learn about what processes work best.”

22 June 2017
Victoria leads in commitment to sustainable development goals

Victoria University of Wellington has become the first New Zealand university to sign up to a new international initiative known as the University Commitment to the Sustainable Development Goals.

The commitment is an initiative of the Sustainable Development Solutions Network Australia/Pacific to showcase the leadership role that universities can play in the United Nations’ Sustainable Development Goals (SDGs). The 17 SDGs, agreed by all UN member countries in 2015, aim to tackle poverty, promote prosperity and wellbeing for all, protect the environment and address climate change, and encourage good governance and peace and security.

Victoria joins eight Australia universities as a signatory to the commitment. The universities agree to a number of measures, including undertaking research into sustainable development challenges and providing opportunities for students to learn about sustainable development.

“I am proud that Victoria is the first New Zealand university to pledge its commitment to the sustainable development goals,” says Victoria University Vice-Chancellor Professor Grant Guilford.

“As a world-leading capital city and global–civic university, Victoria has much to contribute to this societal conversation. We are committed to building a sustainability culture across the University through leadership, research, teaching, our wider public engagement, and in how we operate.”
Partnerships and engagement relate to the relationships and collaboration with external and internal stakeholders on sustainability initiatives. The University recognises its civic duty to engage with the wider community including business, government, and civil society on sustainability issues. Authentic engagement with the wider community also requires strong engagement with sustainability from staff.

**TARGETED SUSTAINABILITY OUTCOMES**

- The University’s sphere of sustainability influence is increased
- Sustainable solutions are enhanced through partnerships and perspectives
- A culture of sustainable practice is established among the University’s staff

The teaching and research activities of the University have established a myriad of connections with external partners. With more than 200 individual academics actively involved in sustainability-related research, the engagement across all sectors is extensive. Of particular note are the formal partnerships with Wellington-based organisations Wellington City Council, Zealandia, and Wellington Zoo.

Beyond the academic connections formed, the University is seeking to grow external engagement with sustainability through our management and operational practices. Cross-sector collaboration is supported through involvement with Australasian Campuses Towards Sustainability, the Sustainable Development Solutions Network and the Tertiary Wellbeing Aotearoa New Zealand Network. The business sector is engaged through relationships with our suppliers and tenants to improve sustainable performance and through memberships such as to the Sustainable Council, Sustainable Business Network and the New Zealand Green Building Council. We work closely with both the Wellington City and Greater Wellington Regional Councils to provide input on environmental sustainability-related planning issues such as transport, land use, and waste. There is also strong engagement with central government agencies such as the Energy Efficiency and Conservation Authority, the Department of Conservation, and the Ministry for the Environment. The primary method of sustainability-related engagement with the wider community is through events such as public lectures, conferences, and workshops, or through the student body participating in advocacy or volunteer activities.

Embedding a culture of sustainability across an organisation of more than 2,000 staff is challenging, but critical in building the capacity of the University to deliver all the targeted sustainability outcomes. Staff engagement with sustainability is being built through the strategic prioritisation it is given, increased visibility, opportunities for staff to connect, and our leaders’ role modelling sustainable behaviour. However, many of our staff believe we are not doing enough to deliver on our social and environmental responsibilities. The responses to the Your Voice survey questions relating to sustainability (see next page), were one of the University’s poorest performing areas in comparison to other benchmarked Australasian universities.
PERFORMANCE INDICATORS

**External engagement**

<table>
<thead>
<tr>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organisations in sustainability networks that the University is actively engaging with</td>
</tr>
<tr>
<td>Public sustainability-focused events hosted and promoted through a media release</td>
</tr>
<tr>
<td>Organisations that the University students have volunteered for through Victoria Plus that contribute to sustainability</td>
</tr>
</tbody>
</table>

**Staff engagement (Perceptions of sustainability³)**

<table>
<thead>
<tr>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Staff who agree or strongly agree that the University is socially responsible</td>
</tr>
<tr>
<td>Staff who agree or strongly agree that the University is environmentally responsible</td>
</tr>
</tbody>
</table>

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1. Members of Sustainable Business Network, Sustainable Business Council, Sustainable Development Solutions Network, or Australasian Campuses Towards Sustainability that have actively engaged with the Sustainability Office or Career Hub.

2. From review of Victoria Plus portfolio submissions.

3. From results of the 2015 Your Voice staff survey.

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CONTRIBUTION TO THE SDGs

The following leadership and governance work contributed to the SDGs.

- **7. Affordable and clean energy**
  - The purchase of competitively priced electricity from a renewable generator—Meridian Energy.

- **8. Decent work and economic growth**
  - The commercialisation of research delivered by VicLink and the facilitation provided by Careers and Employment to connect employers with students.

- **11. Sustainable cities and communities**
  - The facilitation of volunteer opportunities for students and staff offered by CareerHub and the provision of public access to the University’s facilities such as sports fields, art galleries, and so on.

- **12. Responsible consumption and production**
  - Sustainable procurement practices, the promotion of fair trade on campus, and the collaboration with retailers on campus to encourage sustainable practice.

- **13. Climate action**
  - The partnership with Wellington City Council to deliver the annual Climathon event and through the connection to the numerous organisations involved in helping reduce the carbon emissions of the University.

- **14. Life below water**
  - The Coastal Ecology Lab held open days for the public.

- **15. Life on land**
  - The annual Growing Graduates tree-planting event hosted for students and delivered in partnership with the Wellington City Council.

- **17. Partnerships for the goals**
  - Participation in the Sustainable Development Solutions Network, which was specifically established to promote the goals, as well as other sustainability-focused partnerships and networks.
4 May 2017

Exploring New Zealand’s rivers and other realities

Victoria University of Wellington’s Cultural Anthropology programme is hosting a public lecture on the current state of New Zealand’s rivers by Professor Dame Anne Salmond, as part of its fiftieth anniversary celebrations.

Professor Salmond’s talk, Alternative Facts and Uncommon Truths: Rivers and Other Realities, will focus on debates about New Zealand’s rivers, whakapapa and the law. She will look at the Te Awa Tupua Act that recognises the Whanganui River as a legal person and will explore the possibility of reconciling guardianship (kaitiakitanga), public trusteeship, and ecological health for other New Zealand waterways through legal and other frameworks.

Professor Salmond DBE is a distinguished professor of Māori studies and anthropology at the University of Auckland. She was New Zealander of the Year in 2013 and has won the Rutherford Medal from the Royal Society of New Zealand.

This lecture is part of a three-day programme of events to celebrate the fiftieth anniversary of Victoria’s Anthropology programme. The programme highlights the history of anthropology at Victoria, explores the changing conditions that shape the discipline and looks to the future of anthropological knowledge.

2 November 2017

Community rooftop gardens concept wins Wellington Climathon

The idea to create community gardens on rooftops in Wellington’s central city has taken the top prize at the Wellington Climathon.

Victoria students Chris Fink and Tadhg Connolly, and electrical engineer Naomi Gillgren—who had not met each other prior to the annual Victoria and Wellington City Council event—developed the idea and presented their business case to the judging panel after a 24-hour marathon of concept analysis, research, and idea development.

The Wellington Climathon event was run simultaneously with events in Christchurch, Auckland, and 230 other cities around the world.

It was delivered by MOTIF and VicLink, Victoria’s commercialisation arm, with additional support from Enspiral company EXP, and supported by the Deep South National Science Challenge, Royal Society of New Zealand, and Victoria University of Wellington Students’ Association.

Prizes were donated by the group leading Victoria University’s Enhancing Resilience and Sustainability area of academic distinctiveness, VicLink’s Victoria Entrepreneur Bootcamp, Greater Wellington Regional Council, the Low Carbon Challenge, ethical business advisory and investor MOTIF, and social enterprise development organisation the Ākina Foundation.
Learning, teaching, and research relate to how sustainability is integrated into core academic practices and the wider student experience, which is where the University can make the greatest contribution to a sustainable future. However, influencing positive changes to existing academic and student support processes requires a very tactical and collaborative approach.

**TARGETED SUSTAINABILITY OUTCOMES**

- Sustainability in teaching and research is encouraged and promoted
- Sustainability initiatives support research outputs and student recruitment
- Sustainability is embedded in the student experience

The University has developed academic strength in sustainability-focused teaching and research. This is recognised through the establishment of ‘Enhancing the resilience and sustainability of our natural heritage and capital’ as one of eight distinctive themes of academic emphasis in the Strategic Plan. This has prompted increased support and priority for academic work on sustainability, with a particular emphasis on growing interdisciplinary connections. This was reflected in the internal funding provided to nine research teams from across the University that delivered projects that included an international symposium on eco-translation and the future of cultural sustainability; community engagement towards biodiverse cities; climate adaptation by local councils; a sustainable food law; and policy forum, to name a few. There have also been several networking events to help grow connections in the community of academic expertise in sustainability.

In 2017, the teaching and research activity across the University that contributes to the SDGs was mapped. It demonstrated that there is sustainability-related teaching and research activity occurring in all schools and faculties across the University. This provides all students with the opportunity to include sustainability perspectives as part of their study and enables multidisciplinary perspectives to strengthen research work. Over the past 10 years, total student enrolments in courses with a strong focus on sustainability have doubled, reflecting the growing student demand for learning about sustainability.

In addition to the core business of teaching and research, the wider student experience at the University also contributes to sustainable development. Beyond the provision of services to promote student wellbeing detailed in the Leadership and Governance section of this report, the student leadership programmes—Victoria Plus and Victoria International Leadership Programme—have a significant focus on sustainability. Additionally, the University has a strong relationship with the Victoria University of Wellington Students’ Association and relevant student clubs in promoting sustainable actions for, and by, students.
PERFORMANCE INDICATORS

<table>
<thead>
<tr>
<th>Teaching</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools providing sustainability-related course content</td>
<td>100%</td>
</tr>
<tr>
<td>Courses offered that contain content on sustainable development themes</td>
<td>322</td>
</tr>
<tr>
<td>Enrolments in sustainability-focused courses</td>
<td>3,826</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Research</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Researchers undertaking work with significant contribution to sustainable development</td>
<td>177</td>
</tr>
<tr>
<td>Internal funding allocated to sustainability-focused research</td>
<td>$778,765</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Student experience</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Student population for whom sustainability at the University is important or very important</td>
<td>83%</td>
</tr>
<tr>
<td>Total members of sustainability-focused student clubs</td>
<td>1,072</td>
</tr>
<tr>
<td>Scholarships available for sustainability-related study (excluding summer scholarships) (worth $238,750)</td>
<td>26</td>
</tr>
</tbody>
</table>

1. Based on a sustainability mapping of course content from keyword search of course outlines.

2. Ibid.

3. Sustainability-focused courses include those with content relating to three or more sustainable development goals.

4. Researchers with at least three publications relating to sustainable development, based on keyword search of ‘elements’ and ‘research master’, since 2015.

5. Based on keyword search of ‘grant management system’ (GMS) project description. This excludes external research revenue as the project descriptions provided in GMS were insufficient to provide a reliable keyword search. Alternative information sources will be explored in future years to capture external revenue.

6. Results from annual student experience survey.


8. Based on review of description of scholarships posted by the Scholarships Office.

CONTRIBUTION TO THE SDGs

The following learning, teaching and research work contributed to the SDGs.

The University is actively teaching and researching specific subject material relating to all 17 of the SDGs. We have particular academic strength in SDG 3—Good Health and Wellbeing; SDG 8—Decent Work and Economic Growth; SDG 9—Industry, Innovation and Infrastructure; SDG 11—Sustainable Cities and Communities; SDG 13—Climate Action; and SDG 16—Peace, Justice, and Strong Institutions (as identified through mapping of academic activity).

The provision of scholarships and the hardship fund for students challenged financially.

All of the tertiary teaching the University provides; the early childhood, primary and secondary teacher training that the University provides; and extracurricular learning provided through opportunities such as Victoria Plus and Victoria International Leadership Programme.

The interdisciplinary research, which connects the University academics with external stakeholders to contribute to the goals.
Improving integrated health services for Pacific families

A Victoria University of Wellington-led project has been awarded almost $1.2 million to investigate how New Zealand’s health and social services systems could better support Pacific families.

The project, funded by the Health Research Council of New Zealand (HRC), calls into question the one-size-fits-all approach to health and social services delivery.

“Life expectancy for Pacific people is five years lower than for non-Māori or non-Pacific people in New Zealand,” says project lead Professor Jacqueline Cumming, director of Victoria’s Health Services Research Centre, which sits within the new Faculty of Health.

“Pacific people have high rates of chronic conditions, and experience many barriers to obtaining the services they require to meet their needs. If the country is to better meet their health and social services needs, it’s essential that we don’t rely on implementing strategies that are not well researched from the perspectives of Pacific people.”

Professor Cumming says the project will involve focus groups of up to 30 families and in-depth case studies with 15 families.

Wellington scientists getting hybrid planes off the ground

A team of Victoria University of Wellington researchers is hoping to use their technology to help build the world’s first hybrid-electric jet plane.

Victoria’s Robinson Research Institute is an international leader in the field of superconductivity—a key mechanism needed to develop cleaner aviation technologies, says principal engineer and deputy director Dr Rod Badcock.

“Flying is the most climate-intensive form of transport and contributes hugely to global warming. Emissions from planes have grown by 75 percent since 1990, double the rate of other sectors of the economy. It’s important that a cleaner alternative is found—and fast.

“Electric vehicles have been around for a long time. However, electric planes pose a bigger challenge as they will require very high-power propulsion systems that are subject to stringent weight constraints. Existing electrical machines are simply too heavy. The only feasible approach is high-torque, high-speed machines that employ high-temperature superconductors.”

The Institute’s international reputation for superconductor science and engineering has caught the eye of NASA and the United States Air Force, which are part of global efforts to develop the world’s first hybrid-electric jet plane. Three researchers from the institute have been invited to talk to a NASA special session in Wisconsin next month, about the development of electric aircraft using superconducting technology. Two members of the Institute have been part of the team working on NASA’s Electric Aircraft Technology Roadmap. A hybrid-electric aircraft would increase aircraft fuel efficiency by more than 33 percent over today’s jet engines, by employing high-speed electric motors to drive aerodynamically optimised turbo-fans.

From left, the University’s Dr Ausaga Fa’asalele Tanuvasa and Professor Jacqueline Cumming, and Pasifika Perspectives’ Dr Debbie Ryan.
31 August 2017

Leading in sustainable energy systems

Victoria is on track to being a leader in sustainable energy systems education and research in the Asia-Pacific region.

That goal has been boosted by the appointment of Professor Alan Brent as the inaugural holder of the new Chair of Sustainable Energy Systems in the School of Engineering and Computer Science.

The Chair is funded by Wellington developer Mark Dunajtschik, whose transformational donation has enabled the establishment of the sustainable energy systems academic programme. This is the first chair at Victoria to be funded by a single donor. Alan says the aim of the programme is to enable Victoria, in partnership with other universities and research institutions in New Zealand, to be recognised as the Asia-Pacific’s leading, best-known, and most productive education, research, and development network in the field of sustainable energy systems.

Students will be given the opportunity to study sustainability systems as undergraduates, a specialisation not usually offered until postgraduate level. The approach will be transdisciplinary, giving students the opportunity to provide considerable breadth to their sustainability studies.

Some students will enter the programme through a Bachelor of Science and, in addition to the core courses in sustainable energy systems, these students will be encouraged to take supporting courses in Law or Public Policy, Building Science, Environmental Studies or Māori Studies. This breadth of knowledge will be invaluable for students wishing to pursue a career as an energy or sustainability adviser to local iwi, councils, Pacific Island nations, or forward-thinking communities.

Other students will enter the programme by studying towards a Bachelor of Engineering with Honours, where the emphasis is more on the technical challenges of creating an entire sustainable energy system. All programmes will emphasise the societal, environmental, and climate change impacts of energy decisions.

12 September 2017

New tool to tackle water quality on farms

A Victoria University of Wellington researcher has developed a tool that Ravensdown will use to help New Zealand farmers lower their environmental footprints and better manage nutrient loss into waterways.

Dr Bethanna Jackson from Victoria’s School of Geography, Environment and Earth Sciences originally developed the land utilisation and capability indicator (LUCI) for application in Wales, where she has been working since 2006 on land-use interventions to help mitigate flooding and provide other environmental benefits.

With LUCI operating successfully overseas, Dr Jackson and her research team began collaborating with farmer-owned co-operative Ravensdown in 2015 to see how the tool could be applied to New Zealand farms.

As a result of this partnership, newly developed software building on the core LUCI tool will be used by Ravensdown specialists to help farmers identify ‘at-risk’ areas for nutrient loss.

“Managing nutrient losses on farms has been a hot topic over recent years,” says Dr Jackson. “Central government, iwi, regional councils and the entire agri-sector are all grappling with this challenge and working to find effective solutions.”
Facilities and operations relate to the environmental impact of our campuses and business practices. It provides a visible demonstration of our commitment to sustainability, with tangible environmental and financial benefits.

TARGETED SUSTAINABILITY OUTCOMES

- Exemplar sustainable practice is demonstrated in the facilities and operations of the University
- The environmental impact of the University is minimised and regenerative action commenced
- Operating costs of campus facilities are reduced through sustainability initiatives

For more than a decade, the University has been working to minimise the negative environmental impacts of campus facilities and business operations, which are managed by the Property Services team.

Reducing greenhouse gas emissions has been a major focus. The most significant sources of the University’s emissions are from air travel, energy used in buildings, staff and student commuting to and from campus, and waste to landfill. A full greenhouse gas emissions inventory is at the end of this report. In 2017, one unit within the University, the Antarctic Research Centre, became carbon neutral, and the University as a whole is developing a pathway to carbon neutrality. Since 2007, our total greenhouse gas emissions have fallen by 20 percent.

The demand for air travel is mitigated by the extensive provision of video conferencing facilities across the campuses, but the strategic driver to increase research output and grow international engagement makes reducing air travel challenging. In 2017, total air travel exceeded 50 million kilometres for the first time, and marks a 31 percent increase in air travel per FTE staff member since 2007.

Energy efficiency improved again in 2017. A major lighting upgrade commenced, replacing 4,500 light fittings in hallways and common areas with LEDs. The work to optimise the operation of heating, ventilation, and air conditioning equipment on campus continued and the energy efficiency programme was extended to include the halls of residence. Since 2006, energy efficiency (energy use per square metre of built floor space) has improved by 31 percent.

The promotion of sustainable commuting for staff and students continues and has resulted in a further mode shift to sustainable options. The major success in 2017 was gaining agreement from the Greater Wellington Regional Council to introduce discounted public transport fares for tertiary students.

Car parking capacity continues to be reduced, and parking prices increased, while end-of-journey facilities (bike racks, showers, and so on) continue to be added and improved as part of campus development projects. Since 2007, the mode share of staff that drive to campus has dropped from 39 percent to 29 percent, while student car driving mode share remains consistently low at about 9 percent.

Waste to landfill is an important issue for many staff and students. While there are already significant recycling facilities across campus, the density and visibility of recycling infrastructure needs to increase to increase its effectiveness and build engagement. A more comprehensive waste and recycling process is currently being piloted at Rutherford House, which aims to increase the rate of diversion from landfill, which has historically remained around 30 percent across the University. Paper consumption is a flagship area for waste minimisation: since 2006, total paper use has dropped by 63 percent.

Water consumption continues to be managed closely through the introduction of more water-efficient fittings, increasing amounts of rainwater harvesting, minimised irrigation for grounds, more detailed water metering being introduced, and regular leak-detection audits undertaken. Since 2008, total water consumption has reduced by 31 percent.

The urban setting of the University’s campuses limits the amount of green space available. However, the grounds and gardens can still provide benefits to urban nature and biodiversity. Increasingly, the management of campus grounds are incorporating these values following a Master’s project on campus tree biodiversity.
PERFORMANCE INDICATORS

<table>
<thead>
<tr>
<th>Indicators</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Greenhouse gas emissions¹</td>
<td>15,607 tonnes CO₂e</td>
</tr>
<tr>
<td>Energy used in buildings²</td>
<td>44,390,600 kWh</td>
</tr>
<tr>
<td>Business travel (land and air)³</td>
<td>51,603,000 km</td>
</tr>
<tr>
<td>Car driver mode share (staff and students)⁴</td>
<td>13%</td>
</tr>
<tr>
<td>Mains water consumption¹</td>
<td>197,747 m³</td>
</tr>
<tr>
<td>Paper consumption⁵</td>
<td>36,979 reams</td>
</tr>
<tr>
<td>Waste to landfill⁷</td>
<td>698,911 kg</td>
</tr>
</tbody>
</table>

¹ Annual greenhouse gas inventory conducted in accordance with the Greenhouse Gas Protocol (see inside back cover). 2017 inventory externally verified by AECOM.

² Metered data, inclusive of all areas of operational control.

³ Inclusive of air travel, vehicle fleet, taxis, rental cars, personal mileage claims, and inter-campus Snapper-card use.

⁴ Based on survey responses to staff satisfaction survey and student experience survey.

⁵ Metered data, inclusive of all areas of operational control.

⁶ Reporting of paper purchases by suppliers.

⁷ Reporting of waste collections by contractor, weight derived, not calculated.

EXAMPLE NEWS STORIES

27 September 2017
An innovative 12-month commissioning project to fine-tune the energy systems in buildings on Victoria University of Wellington’s Kelburn campus has been shortlisted for a prestigious sustainability award.

The project led to a 26 percent reduction in energy usage by the University’s Hub and Rankine Brown buildings and has earned Victoria a finalist position in the Built Environment category of the 2017 Green Gown Awards Australasia.

“The university has nearly 300,000 square metres of teaching, learning, research, and recreational space, including some of our halls of residence in Wellington city, with about 25,000 staff and students, so it’s a fairly big footprint. Our chillers and boilers rank at number one and two in terms of energy demand, and lighting comes in at number three. It has a significant cost and emissions profile.”

The numbers forecasted for phase one of this initiative are impressive: an annual energy reduction of 682,100 kWh; an annual CO₂ equivalent saving of 94,129 tonnes per annum; and an estimated energy saving of almost $100,000 per year. With the much longer life expectancy of LED bulbs, it also means big savings on maintenance—831 work hours, saving thousands of dollars a year.

I October 2017
Many lights make hands work

In an ambitious initiative, Victoria University of Wellington is in the process of replacing 4,500 light fittings and energy hungry incandescent bulbs and fluorescent tubes with their far-superior cousins—LED bulbs.

It’s happening with the support of an interest-free Crown loan from the Energy Efficiency and Conservation Authority (EECA), which has a long-running partnership with the university, bringing energy efficiency and carbon reduction programmes to fruition.

Stephen Costley, Victoria University’s director of property services, says that this is just the beginning of a university-wide overhaul of its lighting systems.

“Victoria staff and graduates, energy consultants from Beca, and maintenance contractors all came together to fine-tune the performance of the mechanical systems in the buildings,” says project manager Jonny Parker, from Victoria’s Property Services.

Project manager Jonny Parker in the Hub on the University’s Kelburn campus.
CONTRIBUTION TO THE SDGs

The following facilities and operations work contributed to the SDGs.

Through the water conservation measures such as water-efficient fittings, minimised irrigation, and rain water harvesting initiatives.

Through the significant investment in energy efficiency measures and the increasing use of on-site renewable energy generation.

Through strategic asset management planning and ITS resilience planning to ensure our campus infrastructure is robust.

Through input to public transport planning and promotion, the provision of publicly accessible gardens, the provision of accessible routes and facilities for those with physical disabilities, and our emergency preparedness planning and welfare provisions.

Through waste minimisation and resource-efficiency initiatives, sustainable procurement practices, and appropriate handling of hazardous and trade waste.

Through our initiatives to actively measure and reduce our greenhouse gas emissions from the University’s operations.

Through the appropriate management of waste water to prevent pollution and excessive burden on the city’s infrastructure.

Through the enhancement of biodiversity on campus from pest control and grounds-management practices.

<table>
<thead>
<tr>
<th>Greenhouse Gas Protocol reporting category</th>
<th>Activity/emission source</th>
<th>Kg CO₂e in 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Stationary combustion</strong></td>
<td>Diesel generators—campus and operated</td>
<td>815</td>
</tr>
<tr>
<td></td>
<td>Natural gas—campus and offices</td>
<td>2,273,661</td>
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<tr>
<td></td>
<td>Natural gas—student accommodation (owned and operated by the University)</td>
<td>784,113</td>
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<tr>
<td><strong>Mobile combustion</strong></td>
<td>Petrol—fleet vehicles</td>
<td>69,938</td>
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<tr>
<td></td>
<td>Diesel—fleet vehicles</td>
<td>21,584</td>
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<tr>
<td><strong>Fugitive emissions</strong></td>
<td>Refrigerants (HFC)—campus</td>
<td>307,021</td>
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<tr>
<td><strong>Scope 2</strong></td>
<td>Campus and offices, including assets leased to third parties but operated by the University</td>
<td>2,378,673</td>
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<tr>
<td></td>
<td>Student accommodation (operated by the University)</td>
<td>445,334</td>
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<td><strong>Scope 3</strong></td>
<td>Print and paper</td>
<td>43,597</td>
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<td>Water (campus)</td>
<td>7,027</td>
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<tr>
<td></td>
<td>Student accommodation (not owned or operated by the University)—electricity and gas</td>
<td>156,676</td>
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<tr>
<td><strong>Fuel- and energy-related activities</strong></td>
<td>Transmission and distribution losses for electricity consumed</td>
<td>230,192</td>
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<tr>
<td></td>
<td>Transmission and distribution losses for gas consumed</td>
<td>360,943</td>
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<tr>
<td><strong>Upstream transportation and distribution</strong></td>
<td>Student commuting</td>
<td>1,645,272</td>
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<td></td>
<td>Student inter-campus travel</td>
<td>8,890</td>
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<td><strong>Waste generated in operations</strong></td>
<td>Landfill waste</td>
<td>507,409</td>
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<td></td>
<td>Recycling</td>
<td>191,872</td>
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<td><strong>Business travel</strong></td>
<td>Taxi</td>
<td>46,415</td>
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<td></td>
<td>Rentals</td>
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<td></td>
<td>Public transport (staff)</td>
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<tr>
<td></td>
<td>Air travel</td>
<td>4,543,124</td>
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<td>Pcard fuel purchases</td>
<td>16,462</td>
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<td></td>
<td>Private mileage</td>
<td>15,825</td>
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<tr>
<td><strong>Employee commuting</strong></td>
<td>Public transport</td>
<td>247,548</td>
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<tr>
<td></td>
<td>Private vehicle</td>
<td>633,855</td>
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<tr>
<td><strong>Upstream leased assets</strong></td>
<td>Campus spaces leased from third party</td>
<td>190,551</td>
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<tr>
<td><strong>Downstream leased assets</strong></td>
<td>Office and campus space owned by the University but operated by tenants</td>
<td>406,069</td>
</tr>
</tbody>
</table>