



UWS Delivering Sustainability

2018/19



Foreword

UWS takes its responsibility to sustainability seriously. Collectively, we have an obligation to embed sustainability across our key functions of learning, teaching and research and to ensure we are instilling a commitment to sustainability in our staff and student populations. We are committed to making a positive environmental impact and are broadening our work to address the wider Sustainable Development Goals of the United Nations.

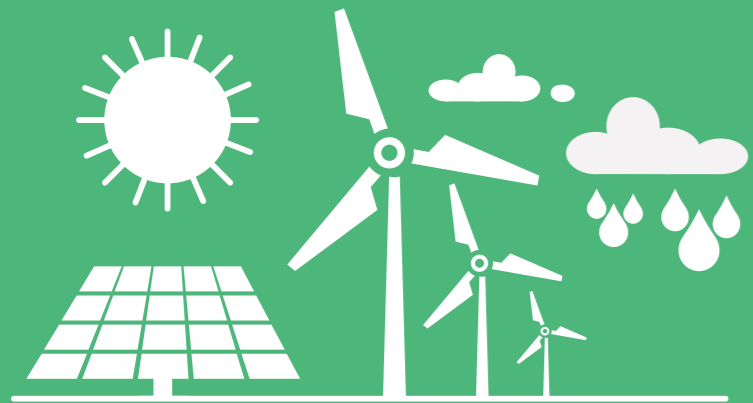
I am delighted that we have cut our carbon emissions by 4670 tonnes of CO₂e (42%) since 2012/13, this is double the targeted 20% by 2020 and testament to our vision to create sustainable, forward thinking environments, such as our award winning Lanarkshire Campus. This takes a significant step towards achieving Scotland's world-leading climate change legislation, targeting net-zero emissions of all greenhouse gases by 2045.

Looking forward, at a time when young people around the world demand action on Climate Change, we will step up and play our role in achieving this. In the year ahead we will develop a new Sustainability Plan to address the challenges of the United Nations Sustainable Development Goals through our research, education, public engagement and our own campus operations. We will set a further ambitious carbon reduction target and are excited about the opportunities the United Nations Climate Change Conference, COP26, brings to our doorstep in Glasgow in November 2020.

A handwritten signature in black ink, reading 'C Mahoney'.

Professor Craig Mahoney
Principal & Vice Chancellor

2018/19 Sustainability Report Highlights



42%

reduction in carbon emissions



47%

increase in the number of catering customers using reusable cups



Introducing chemical free cleaning across campuses



All electric or hybrid fleet cars



60

sustainability research projects with a value of £4.4M



Guardian, Green Gown and NUS National Sustainability Award Winner



Meat Free Mondays



308

trees planted through our partnership with Coffee Conscience

United Nations Sustainable Development Goals

"The 2030 Agenda for Sustainable Development, adopted by all United Nations Member States in 2015, provides a shared blueprint for peace and prosperity for people and the planet, now and into the future. At its heart are 17 Sustainable Development Goals (SDGs). They recognize that ending poverty and other deprivations must go hand-in-hand with strategies that improve health and education, reduce inequality, and spur economic growth – all while tackling climate change <https://sustainabledevelopment.un.org/>" (source United Nations)

As a global University with a commitment to delivering stand-out impacts, this report outlines the progress UWS has contributed to achieving the ambitions of the UN Sustainable Development Goals.



Free Sanitary Products

Through an initiative supported by the Scottish Government, UWS provides access to free sanitary products to support equality and dignity for those who menstruate and to ensure that lack of access to sanitary products does not prevent an individual from engaging in education. In order to reduce waste, reusable sanitary products are also available.

Circular Economy Initiatives Provide Access to Free Essential Goods and Food

UWS Students' Association (SAUWS) works in partnership with UWS Residences at Ayr and Paisley Campuses to reuse and redistribute unneeded goods from Halls at the end of each term. Items received included good quality clothing and bedding, over 400 duvets and pillows and hundreds of kitchenware items. Goods were used for student free shops at UWS and distributed through local charities and organisations, providing home starter kits, bedding for animal charities and good quality clothing to local charity shops.

Further to this work, the SAUWS VP Societies and Citizenship has commenced the process of introducing a Community Fridge for students. This is an exciting new project to be trialled at Paisley campus and launched during academic year 2019-20, developing partnerships with local food businesses to provide students access to free food that would otherwise go to waste.



We recognise the transformative power of physical activity and sport in enabling health and wellbeing. Priority areas of learning, teaching and research focus on local needs that can be applied globally, including ageing, sport, health, economics and the future of work and care.

As the largest provider of nursing education in Scotland, UWS makes a considerable contribution to the health of the nation, as well as improving health and wellbeing internationally.

Free Gym Memberships for Students

In a sector-leading development, UWS provides free gym memberships for all students to use UWS-operated fitness facilities. Student wellbeing is a core value for the University and being active is intrinsically linked to this, with physical and mental health benefits as well as bolstering students' social lives.



NUS Green Impact Community Action Award



Keira Austin, UWS Residence Service Manager Paisley, won the NUS National Community Engagement Award, in association with Defra's Year of Green Action. Keira impressed Defra with the Brodie's Bike Project which gives students access to a free bike on a short-term loan basis. The Brodie's Bike project was launched in memory of UWS Student Brodie Eaton who passed away in 2016. Brodie loved to cycle and his family donated bikes and equipment to provide UWS Ayr student resident's access to a free bike. Through Keira's work and funding from Cycling Scotland, the scheme has now been extended across two other residences, offering more students the opportunity to explore the local Scottish countryside in a sustainable way, save money and improve mental and physical health. As part of this award, Kiera was invited to Defra's Year of Green Action, Boardroom in the Forest event.



Student Mental Health Agreement:



Our joint actions for promoting student mental health in 2018/19 aimed to:

- Promote overall **wellbeing**
- Challenge **stigma and discrimination**
- **Combat barriers** to accessing support
- Improve **signposting to appropriate support**
- Raise awareness of **suicide**
- Promote engagement in **physical activity**
- Promote, review & develop our **mental health work**



UWS Wellbeing Research

The Role of Fish Aquaria in Workplace Well-Being

Heather Clements, Stephanie Valentin, Nicholas Jenkins, Jean Rankin, Nancy Gee, Donna Snellgrove, Katherine Sloman

Research suggests that exposure to animals and nature in the workplace can positively impact employee well-being. Although fish aquaria provide opportunities for both exposure to nature and human-animal interaction, the role of fish aquaria in workplace well-being is currently unknown. This research is being conducted as part of a PhD funded by Mars Petcare UK, examining the influence of fish aquaria on human well-being at different stages of life.



Transport, Urban Regeneration and Health: An Issue across Scale

Dr Julie Clark (UWS) and Dr Angela Curl (University of Otago) investigate a range of international examples to illustrate the opportunities and tensions inherent in Transport, Urban Regeneration and Health. From encouraging positive mental wellbeing to being a leading cause of death, there are a plethora of health impacts related to urban mobility. Published in the Routledge Handbook of Global Urban Health, a high quality and comprehensive examination advanced and cutting-edge theoretical and methodological approaches to the study of health in urban populations.

At UWS we pride ourselves in providing quality education and a supportive environment for our students. The following league table results reinforce our success in delivering an excellent student experience:

- The highest ranked modern university in Scotland, and in the top 100 in the UK (source: The Times/ The Sunday Times Good University Guide, 2019)
- UWS was ranked at No. 3 in Scotland for student experience and teaching quality (source: Times/ The Sunday Times Good University Guide, 2019)

Internationally-Recognised Quality Learning

In 2019, the Quality Assurance Agency recognised the University of the West of Scotland as meeting the stringent, international quality standards for higher education. A rigorous institutional self-assessment and review by a panel of experienced higher education specialists affirmed UWS' high-quality education. The review team identified and commended the University's student-centred culture, the transformation in learning and teaching, and the University's strategic approach and commitment to widening access.

World-Leading Education

In 2019, the Times Higher Education World University Rankings recognised UWS as one of the world's top 500 universities. At the same time, UWS was lauded as one of the top 150 modern universities in the world (THE Young University Rankings), recognising the commitment to being one of the UK's most innovative modern universities.



UWS Sustainability Action – Embedding Sustainability Research in Education

Dr. Abeer Hassan, Senior Lecturer in Accounting.



As an active researcher who publishes in the area of Corporate Social Responsibility Accounting, Dr Hassan is keen to link research and teaching. Involving students in practical research is crucial to the development of graduate attributes related to individual future careers. Bridgstock (2009) argued that graduates should gain the interpersonal skills to proactively navigate the world of work and self-manage the career building process. As a result, Dr Hassan develops students' transferrable skills in addition to their academic skills while designing third year continuous assessment. Coursework is employed based on investigating the environmental activities of companies, students carry out critical analysis of environmental and social responsibility.



Global Citizenship

UWS is committed to equality and diversity, we act responsibly and ethically in conducting our business and recognise our role in promoting global citizenship. Equality, diversity and inclusion is embedded within our institutional culture.

Our 'equality culture' is supported by a range of high-profile activities, prominent policy developments and leadership in a number of key areas. In 2018-19, UWS took a number of positive steps forward including:

- Building on our reputation and experience as one of the largest providers of higher education for care-experienced students. In 2018-19, 56 students with care experience were enrolled at the University. To support our students, UWS engaged with the Who Cares? Scotland 'Pledge to Listen' campaign, tackling discrimination for young people leaving the care system
- Celebrating women's leadership and enabling success. In 2019, the University's first Women's Leadership and Development Programme was initiated, delivering a series of workshops and networking events for 14 UWS women, encouraging women in academic and professional roles to think of themselves as leaders, to develop leadership skills, and maximise their potential
- Published our British Sign Language Plan 2018-2024. The plan raises the profile of BSL at UWS, improving access to information and services, including BSL videos on our website and highlighting BSL accessible ways to get in touch
- Established a Black and Minority Ethnic Staff Network. The network is a safe space for BME staff to discuss issues that affect them
- LGBT+ staff network (UWSLiberty) established, alongside great work with Stonewall Scotland working to integrate best practice in our day to day operations

Widening Access

UWS is Scotland's most successful university for widening access, and is recognised as an innovative leader in widening access to higher education from all parts of the community.

In 2018-19, 27% of entrants to undergraduate study came from areas within the 20% most deprived in Scotland (of Scottish-domiciled undergraduates). This exceeded the average across Scotland of 14.8%. In total, almost a quarter of all students from the most deprived 20% of Scotland's communities were studying at UWS.

Recognising that an effective learner journey, and flexible, local paths to university are critical, UWS has deep, strategic partnerships with eight colleges in the West of Scotland to enable students to articulate from HNC and HND programmes into degree programmes with no loss of time (e.g. students with HNDs starting at year 3). In 2018-19, over 1,350 students articulated into our degree programmes.

The UWS student body is untypically diverse in many ways. In-line with the UWS commitments to gender-equality, 66% of entrants to undergraduate programmes were female, and over 50% of the Scottish-domiciled entrants in 2018-19 were mature students (aged 21 or over).

Promoting Gender Equality in Science, Technology, Engineering and Mathematics (STEM)



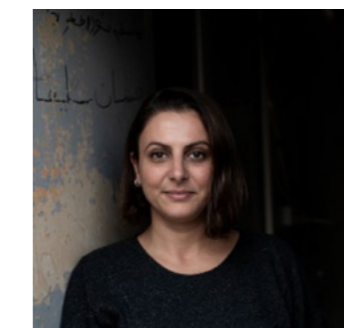
Over the past two years UWS has welcomed more than 1500 girls from local schools through the doors of its campuses to enjoy SmartSTEMs events, hearing from speakers and learning about prospective careers.

UWS has also launched a partnership with PACE Theatre Company to deliver an interactive, drama-based workshop aiming to inspire primary school children to consider careers in STEM. Researchers from UWS' Schools of Media, Culture & Society and Computing, Engineering & Physical Sciences are behind the initiative, which examined Scottish industrial heritage, addressing gender bias and stereotypes in industrial history through the creative arts. **"We are passionate about creating opportunities for young people to explore their full potential, and performance art experiences are a great way to unlock a whole host of other skills. Drama can be a really useful tool to provoke discussion and get young people to think differently, and so we're really pleased to be partnering with UWS on this project."**

Jenni Mason, Artistic Director of PACE

Inspiring Women

The Inspiring Women Lecture Series was developed to provide an opportunity for staff, students and members of the public to hear from women who have been successful within their field, be that within science, arts, humanities, business or other areas. In June 2019 UWS hosted an Inspiring Women Celebration event with a range of truly inspirational speakers including: Sarah Murray, a Senior NASA leader currently in the Mission Support and Partnership Council Executive at NASA Headquarters; Ron Coghill, Director of Major Project Delivery Globally at Barclays; Taban Shoresh, A former child genocide survivor, founder of The Lotus Flower, a non-profit working in Kurdistan, Iraq with conflict survivors; Karen Darke MBE, Rio 2016 Paralympic Champion and World Record breaker for land-speed by arm power, achieved in the Nevada desert in 2018.



6 CLEAN WATER AND SANITATION



14 LIFE BELOW WATER



A range of UWS partnership research outputs focus on water quality, impact on human health and water ecosystems. The following examples of global research projects demonstrate UWS impact in this area.

Public Health Challenges as a Result of Contaminated Water Sources in Kumba, Cameroon

Therese Nganje, Esther Agbor, Christopher Adamu, Andy Upong, Bridget Katte, Aniekan Edet, Andrew Hursthouse

Kumba, the largest city in the Southwest Region of Cameroon, is characterized by the prevalence of waterborne diseases due to ingestion of contaminated water. Results revealed that 74% of the water samples are in the class of high risk to grossly polluted. Findings demonstrated water sources, especially those ingested by humans in Kumba, should be properly managed including regular treatment to protect the health of humans and improve the quality of life.

Sepiolite-Based Adsorbents for the Removal of Potentially Toxic Elements from Water: A Strategic Review for the Case of Environmental Contamination in Hunan, China

Zhenghua Wang, Lina Liao, Andrew Hursthouse, Na Song, Bozhi Ren

The last few decades have seen rapid industrialization and urban development in many regions globally, with associated pollution by potentially toxic elements, which have become a threat to human health and the food chain. This is particularly prevalent in a number of regions in China that host multiple mineral resources and are important agricultural locations. Solutions to protect contamination of the food chain are more effective and sustainable if locally sourced materials are available, and in this context, a review was carried out identifying the potential of local (sepiolite) mineral deposits to treat water contamination.

Can the Legacy of Industrial Pollution Influence Antimicrobial Resistance in Estuarine Sediments?

Kiri Rodgers, Iain McLellan, Tatyana Peshkur, Roderick Williams, Rebecca Tonner, Andrew Hursthouse, Charles Knapp, Fiona Henriquez

Antimicrobial resistance (AMR) represents a major global health threat, as well as a major hazard to sustainable economic development and national security. This review highlights the complexity of estuarine environments, through which a variety of possible chemical and biological pollutant stressors can promote the emergence and dissemination of antimicrobial resistance.

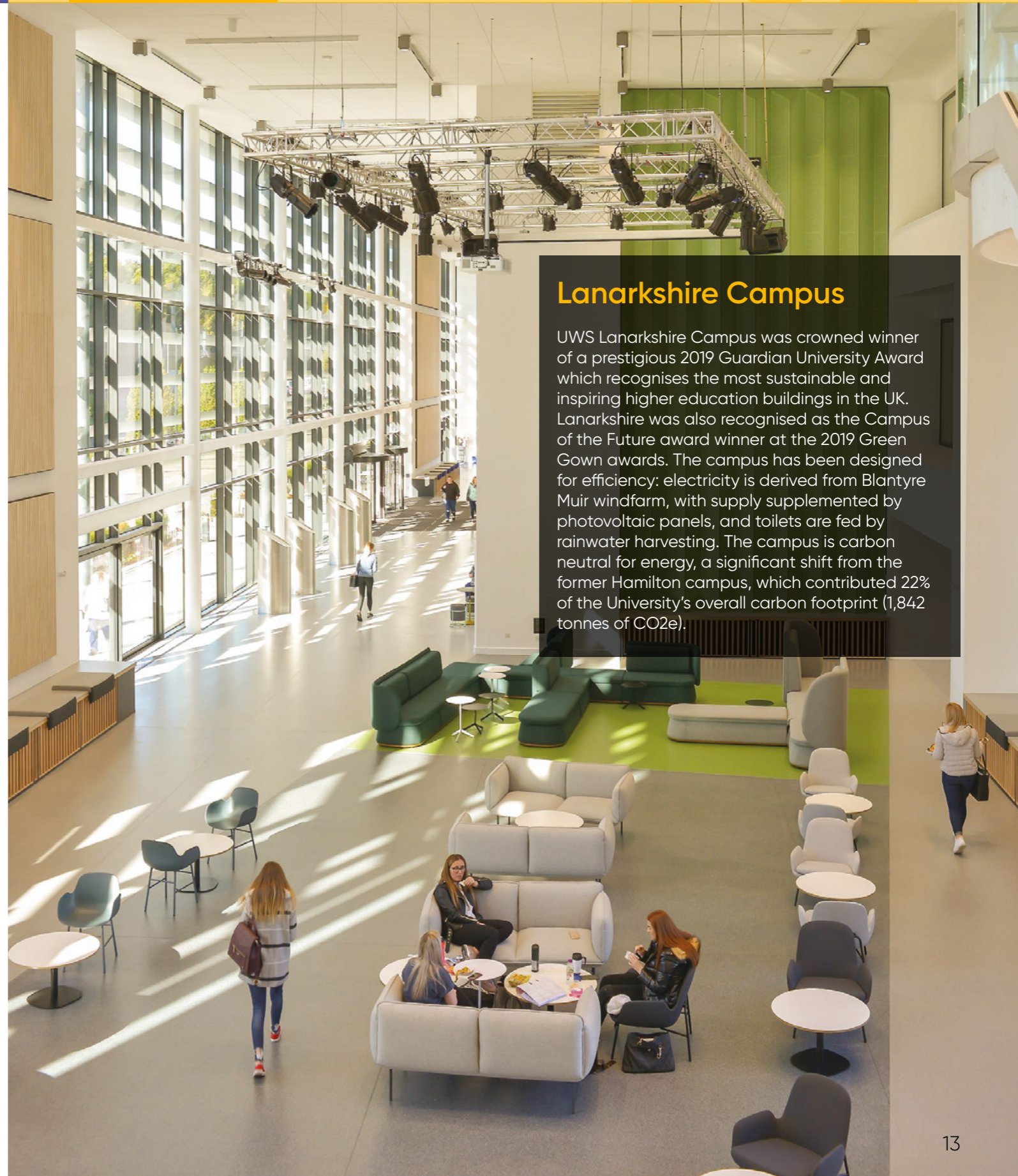


7 AFFORDABLE AND CLEAN ENERGY



Lanarkshire Campus

UWS Lanarkshire Campus was crowned winner of a prestigious 2019 Guardian University Award which recognises the most sustainable and inspiring higher education buildings in the UK. Lanarkshire was also recognised as the Campus of the Future award winner at the 2019 Green Gown awards. The campus has been designed for efficiency: electricity is derived from Blantyre Muir windfarm, with supply supplemented by photovoltaic panels, and toilets are fed by rainwater harvesting. The campus is carbon neutral for energy, a significant shift from the former Hamilton campus, which contributed 22% of the University's overall carbon footprint (1,842 tonnes of CO₂e).





Sustainable Procurement

UWS utilise the Sustainable Flexible Procurement Framework as a methodology for embedding Sustainability in procurement activity.

- The University is proud of its contribution to the local community and to supporting small businesses. In 2018-19:
- UWS partnered with Haven Recycle (Supported Business) for the disposal of IT equipment, which guaranteed 0% of equipment ended up as waste
- Investment was prioritised to support smaller, innovative businesses = with 64.1% Of all spending spent with SMEs
- Our impact on our communities also led to 36.1% of all spend being concentrated in the greater Glasgow/Strathclyde area

Strengthening Scotland

UWS is a global university based in Scotland. The University has local, national and international impact. During 2019, Biggar Economics conducted a detailed economic impact assessment and identified that:

- UWS created £877m of gross-value added to the Scottish economy per year. This was an increase from £537.8m in 2014.
- Across the UK, UWS supported more than 7200 jobs
- The investment in Lanarkshire will contribute £443million to the local economy over 25 years



Knowledge Transfer Partnerships

In the academic period 18/19, UWS secured 16 Knowledge Transfer Partnership Awards (KTPs) worth £3.2m and is one of the UK's top universities for knowledge exchange. A KTP enables a business to bring in new skills and the latest academic thinking to deliver a specific, strategic innovation project that delivers business impact and, in some cases, environmental and societal benefits. KTPs are funded by Innovate UK and partner companies and are focused on economic sustainability and business growth in the UK. UWS are number one in Scotland for the number and value of KTP bids submitted. The following examples demonstrate activity linked to the Sustainable Development Goals:

- Reducing waste in farmed salmon. Developing in-house diagnostics and fish health assessments, in partnership with Kames Fish Farming, to lower mortality rates in support of rapid business expansion
- Developing a sustainable industrial platform for the production of algae-based land remediation and odour control products, with the company Odour and Dust Solutions
- Development of new disinfecting solution for hospitals. The partnership with Touch-less Hygiene, embeds engineering and microbiology expertise to facilitate the design, development, testing and launch of the next generation of microbial disinfection and decontamination technology
- Reducing the environmental footprint of Baxter's Food Group Limited, a Scottish food processing company, through embedding waste and process management knowledge and expertise, helping to achieve best-in-class performance and support business growth






Environmental Sustainability is at the forefront of what we do at UWS, it is one of our key research areas and our award winning Lanarkshire Campus is a leading example of an energy carbon neutral building.

By 2018/19 the University had reduced its carbon footprint by 42% since 2012-13, producing only 6405.16 tonnes CO2e. This more than doubled the targeted reduction of 20%, and was a sector-leader in Scottish Universities.

82% 
of emissions are from building electricity and heating

17% 
of emissions are from business travel

1% 
of emissions are from water

0.2% 
of emissions are from waste

Electric Vehicles



A comprehensive review of the UWS vehicle fleet was undertaken in 2019. In order to reduce emissions and provide a fleet that more closely aligns with the needs of the University, all University cars are now electric or hybrid, vans are new and more efficient and the new minibuses have improved accessibility, with wheelchair access.

Global Climate Strike

UWS is committed to operating sustainably and acknowledges the climate emergency faced across the globe. Staff and students were given the opportunity to participate in a co-ordinated 30 minutes of action to maximise the impact and help amplify the voice of colleagues and students across UWS.



Behaviour Change

A new online course, "Reducing your Sustainability Impact" was developed by the Court and Senate Green Impact Team. In taking the course, UWS staff make a valuable contribution not only towards UWS achieving its sustainability targets, but also to reducing their personal carbon footprint. Topics include saving energy and water, sustainable travel, resource efficiency and avoiding food waste.

Paisley Campus Carbon Reduction Projects

UWS received funding for two projects through the Scottish Funding Council's University Carbon Reduction Fund (UCRF). As Paisley is the largest and least-efficient campus, the University prioritised investment in this campus to deliver the biggest impact.

In 2019, UWS upgraded the outdated Building Management System infrastructure at the Paisley Campus to better control the heating systems. This upgrade makes a swift and significant impact, with carbon and financial savings. Carbon savings are estimated to be in the region of 176 tonnes of CO2e a year.

To benefit from newer, more efficient technology, UWS upgraded lighting to ultra-efficient LEDs in the Paisley Campus library, engineering workshop and external flood lighting, estimated to achieve approximately 200 tonnes of CO2e a year.

Sustainable Catering

Moving towards the development of a Sustainable Food Plan in 2020, a range of initiatives have been implemented in the reporting year, including:

- Increased vegan and vegetarian range of products and the introduction of Meat Free Mondays to reduce food carbon
- The introduction of a 25p charge on single use coffee cups resulting in an increase from 3% to 50% of customers using their own reusable cup
- Consolidation of catering supply chain resulting in fewer deliveries to campus, therefore reducing food miles and carbon footprint

Chemical Free Cleaning

UWS Lanarkshire campus has implemented a regime of chemical free cleaning, as well as eliminating the environmental impact of chemicals, the cleaning regime uses equipment and procedures that reduce energy, waste and water.

Responsible Consumption and Production Research

UWS has a long history of research and education in sustainable resource management and reducing its impact on the climate, life on land and water. The following examples demonstrate expertise in this area.

A Relative Risk Assessment of the Open Burning Of Waste Electric and Electronic Equipment (WEEE)

Alessandra Cesaro, Vincenzo Belgiorno, Giuliana Gorrasi, Gianluca Viscusi, Mentore Vaccari, Giovanni Vinti, Aleksander Jandric, Maria Isabel Dias, Andrew Hursthouse, Stefan Salhofer

Waste Electric and Electronic Equipment (WEEE) represents a potential secondary source of valuable materials, whose recovery is a growing business activity worldwide. In low-income countries recycling is carried out under poorly controlled conditions resulting in severe environmental pollution. High concentrations of both metallic and organic pollutants have been confirmed in air, soil, water and sediments in countries with informal recycling areas. The release of these contaminants into the environment presents a risk to the health of the exposed population that has been widely acknowledged, but still needs to be quantified. The aim of this work was to evaluate the relative risk from inhalation associated with the open burning of different kinds of WEEE. The results provided for the first time a comparative analysis of the risk posed from the open burning of WEEE components, proposing a methodology to address the absolute risk assessment to workers from the informal recycling of WEEE.

Determination of Metal Content of Waste Mobile Phones and Estimation of their Recovery Potential.

Merve Sahan, Mehmet Ali Kucuker, Burak Demirel, Kerstin Kuchta, Andrew Hursthouse

Waste mobile phones constitute one of the fastest growing Waste Electrical and Electronic Equipment (WEEE) types all over the world due to technological innovations and shortening of their life span. They contain a complex mix of various materials, such as basic metals, precious metals and rare earth elements and represent an important secondary raw metal source. The main objective of this study was to estimate the metal recovery potential of waste mobile phones in Turkey, so that proper recycling and recovery strategies can be selected and implemented.



Partnerships

At UWS we develop strategic partnerships with like-minded organisations, for the benefit of our students and wider society.



The Partnership brings together the academic expertise from the University of the West of Scotland, the social justice and anti-poverty campaigning strengths of Oxfam Scotland, and the local knowledge and capacities of a wide range of civil society organisations to conduct research and inform policy debates with the overarching objective to work together for a more equitable and sustainable Scotland.

UWS Scores with Hampden School Science Partnership



UWS has partnered with Scotland's national football stadium, Hampden Park to deliver a series of interactive sessions on the human body to Mount Florida Primary pupils.

To help support the primary six class in their classroom-based learning, UWS' Dr Chris Easton, a Reader in Exercise Physiology in the School of Health and Life Sciences and his colleagues, Lecturer Dr Stephanie Valentin and Interim Assistant Dean (Education), Professor Fiona Henriquez, delivered a four-part series of talks focusing on the heart, lungs, muscles and skeletal system, and microbes and bacteria.

ReMode @ SAUWS

During Fresher's week (Sept. 18), SAUWS partnered with local sustainability organisation ReMode to open the ReMode@SAUWS Shop at Paisley Campus. ReModes' mission is to raise awareness of the environmental impact of the fashion and textiles industry and to furnish young people and the wider community with the knowledge and practical skills needed to reduce this impact.



During the year, in partnership with the Union, ReMode ran a programme of events funded by the Climate Challenge Fund, in total 344 students, staff and members of the local community participated in 26 events and activities. They also held an annual Remoded Fashion Show which was fully booked with 120 members of the community attending.

University of the West of Scotland and Scottish Care Agree Strategic Partnership



Pictured Professor Ehsan Mesbahi, Vice Principal (Academic) and Dr. Donald MacAskill, CEO of Scottish Care.

In 2018 University of the West of Scotland (UWS) agreed a new strategic partnership with Scottish Care, the representative body for independent health and social care services in Scotland. The partnership, the first of its kind in Scotland, provides students with hands-on experience in the care sector through

placements and other practical learning opportunities, as well as providing a unique opportunity for the University's academics and researchers to work alongside the organisation in its role informing health and social care policy.

Looking Forward – UWS Sustainability Plan 2020– 2025

In 2020 we will launch our UWS Strategy 2025. This will set our vision for sustainability, and our commitment to tackling world issues. We will be ambitious as a stand-out university supporting the achievement of the United Nations Sustainable Development Goals and setting our aim to deliver net zero carbon emissions by 2040.

Our Sustainability Plan 2025 will support our priority to enhance our communities and society, and will set out our clear actions to deliver on our corporate social responsibilities through our core functions of learning, teaching and research and through our staff and student body.



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WEST of SCOTLAND

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