UNIVERSITY of WORCESTER

CHANGE TODAY
PROTECT TOMORROW

Sustainability Report 2023 - 2024

15 years of sustainability at the University of Worcester 2007- 2024

2007/8

Comprehensive quantitative and qualitative targets and objectives were set for many areas, including student travel, after two years of preparatory work establishing baselines. Fairtrade status awarded Carbon Trust Standard for reducing our carbon footprint over 3 years. Student herb gardens were planted next to Student Halls.

2009/10

16th in the People and Planet Green League, a rise of 77 places in two years. First annual sustainability report. Won the international Gold Green Apple award with Worcester City Council for a 120% increase in hall recycling. SU participated for the first time in the Sound Impact Environmental Award Scheme and achieved a Bronze Award. We were the first English University to achieve EcoCampus Platinum status in June 2010. Students' Union gets a silver Green Impact (renamed Sound Impact) award.

2011/12

Ranked 3rd in the People and Planet Green League and introduced sustainability electives. The Riverside building won the Architects Journal Retro Fit award and was shortlisted for a Green Gown. Received grants for energy reduction and bike loan expansion. The Students' Union achieved the Gold Green Impact award. The opening of The Hive, a joint University and local authority library and history centre. It is the first of its kind in Europe. Winner of two international awards for building design and sustainability.

2013/14

£70k investment in automatic meters to monitor energy at building level. Solar PV was installed on Woodbury and the Arena. 2nd in the Green League out of 151 universities. Finalist in 6 categories in the Green Gown awards, winning for our Bike Loan scheme. Collaborated with Worcester Polytechnic Institute, Massachusetts, hosting teams of undergraduates for 7 weeks undertaking community sustainability projects in Worcester, UK. Teme Hall students won the European energy saving competition, winning 400 euros.

2015

Achieved NUS Responsible Futures accreditation for our approach to social responsibility and sustainability, one of the first universities to accomplish this. Launched Midlands Sustainable Education Network, bringing together education, politics and business to work on place-based solutions and develop leadership skills. Skills for Tomorrow is an annual two-day event focusing on job roles for school children recognised by GuildHE as best practice in citizenship.

2016

Transitioned to the ISO 14001:2015 standard, the second university in the UK, with our documentation being used by the auditors as best practice examples, thereby sharing our knowledge within the sector and across businesses. Worcester Bosch joins Energize Worcester research supplying 5 new energy-efficient boilers and smart controllers to student-rented houses. Data loggers give real-time information on decision-making.

2017

Selected for Leadership Foundation Innovation for Collaborative Teams for our EAUC Emerging Leaders project to develop the leadership capabilities of sustainability professionals. Bringing together three areas of strategic importance for UW – developing leadership, working within our communities and sharing good practice.

2018

Students' Union and University jointly sign up to the SDG Accord. Two long-term collaborative projects promoting sustainable living with Worcester City Council and Worcester Bosch won international silver Green Apple Awards. Reaccredited NUS Responsible Futures with an increased score. It is the best-performing university in England with the smallest gender pay gap.

2019

Ranked 1st in the UK and 26th globally for Quality Education in the Times Higher Education Impact Rankings. Won a Green Gown for Sustainability Institution of the Year and was highly commended for Campus for the Future. Declared a Climate Emergency in July 2019. Partnerships provide free and subsidised sustainable travel for prospective students. Part of a £50m deal to buy renewable energy from British windfarms.

2020

Reaccredited with a higher score by SOS UK Responsible Futures and gained ISO5001:2018 energy management accreditation. Received a small grant from the Local Government Association Net Zero Innovations fund for an employer-led e-bike share pilot with Worcester City Council. Won an International CSR Excellence Award and were Highly Commended in the 2020 International Green Gown Awards for Sustainability Institution of the Year, held in New York during the UN High-Level Political Forum.

2021

We are in the top 10 of universities across the UK to best reflect society in terms of socio-economic class, according to an analysis by the Higher Education Policy Institute, an independent higher education think tank. The University of Worcester is eighth out of 132 UK universities for ensuring that people from all backgrounds have the chance to study at university.

2022

Created a digital twin of the Sheila Scott building on our St John's campus to contribute to the Decarbonisation programme. A digital twin is a live model of a building and allows viewing of live data of the environment, such as temperature, humidity, Co2 levels and occupancy. The data collected by the sensors feeds to the digital twin and will allow the University to suggest changes to the equipment or settings to improve building efficiency and save carbon.

2023

Professor Mahmut Tor leads an international research program enhancing plants' natural defenses. This work aims to develop low-cost, eco-friendly solutions to boost plant yield, positively impacting global food security. The program has made significant progress in identifying effective bio-pesticides, which offer economic, environmental, and ethical advantages over synthetic chemical products.

2024

Dr Cedric Nkiko and Professor Alan Dixon part of a global research project looking at climate-induced migration and building resilience for communities. The £2.3million three-year research project, aims to address the challenges of climate-induced migration and enhance the resilience of both migrants and host communities in the Lake Victoria Basin - Kenya, Uganda and Tanzania - and Great Lakes Region - USA and Canada.

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

Contents

A Message from our Vice Chancellor and Chief Executive

As we navigate the complexities of the 21st century, the climate crisis stands as the most pressing challenge that demands our collective action and unwavering commitment. In this past year we have seen yet more devastating destruction as a result of our changing climate, such as the wildfires of Los Angeles or Typhoon Yagi in south-east Asia. It is clear we must act together, and the time is now.

Universities, as epicentres of knowledge and innovation, are pivotal in cultivating climate-conscious leaders and pioneers of sustainable solutions.

Our dedication to sustainability is not just a mission; it is a moral imperative. At the heart of our endeavours lies a steadfast alignment with the United Nations Sustainable Development Goals (UN SDGs), ensuring that our strategies and actions resonate with global efforts to foster a sustainable future. We strive to integrate these principles into every facet of our operations, from research and education to campus-wide initiatives aimed at reducing our carbon footprint.

At Worcester, we are committed to leading by example, embedding sustainability into all areas of our work and empowering our students to become advocates for the environment, equipped with the knowledge and skills necessary to drive transformative change.

Moreover, our own actions speak volumes. We have undertaken significant measures to reduce our carbon emissions, creating one of the Country's largest electric vehicle charging stations through to installing solar panels across much of our estate. These efforts represent our tangible commitment to a greener, more resilient future. We were delighted that this work resulted in yet another First Class Honours award from the People & Planet University League, the 15th year in a row that we have now achieved this accolade.

In this report, you will discover the strides we have made over the past year. As we continue this journey, we acknowledge that the path ahead is fraught with challenges. However, we remain resolute in our belief that through education, innovation, and collective action, we can and will make a difference.

Professor David Green CBE DL
Vice Chancellor and Chief Executive

Introduction

The University is thoroughly reviewing its Strategic Plan 2019 in 2024-2025, consulting our many stakeholders. No doubt sustainability and net zero carbon will remain critical goals.

This is the sixteenth Sustainability Report for the University of Worcester. Universities recognise their contribution in delivering a range of positive economic, social, and environmental impacts and their role in mitigating and reducing negative impacts, such as lowering direct and indirect carbon emissions. Equally, we recognise our role in fostering and empowering our students and staff as a force for change through critical academic engagement and generating new knowledge to support the United Nations Sustainable Development Goals (SDGs). This report describes the institution's most significant environmental aspects and how these are managed and mitigated to fulfil our commitment to continual sustainability improvement. It also maps our projects and progress related to the SDGs. Summarising our position enables the University to report our progress to the SDG Accord, which we do in partnership with the Students' Union. We signed up to the SDG Accord on 26 September 2018 and report our progress annually. The Sustainable Development Committee, reporting to the University Executive Board, oversees the strategic management of research, teaching, and campus operations under the sponsorship of the Vice Chancellor. It is chaired by Pro Vice-Chancellor Research, Prof John-Paul Wilson. It reports via the Learning Teaching and Student Experience Committee and Research and Knowledge Exchange Committee p53. An Energy Committee chaired by the Pro Vice-Chancellor of Finance and Resources, reporting to the University Executive, leads on energy efficiency and investments to reduce costs and carbon associated with energy. A Sustainability Forum has been established, and we will meet twice a year to ensure all interested stakeholders can help shape our policies and strategies as we advance. A new Travel and Transport Steering Group has been established with external stakeholders following an internal audit recognising this area's significant impact on carbon and sustainability.

The Sustainable Development Committee undertakes a series of workshops to ensure its work, and this report continues to be:

- Transparent, accessible and stylish so attractive to read
- Identifies University of Worcester's risks, opportunities and materiality
- Sets out our clear governance for sustainability
- Ensures quality stakeholder engagement
- Uses various external accreditations to offer independent assurance

It also keeps under review the most valuable metrics and benchmarking tools to ensure the University is reporting appropriately on its sustainability journey. We have adopted the new sector-wide Standardised Carbon Emissions Reporting Framework for Further and Higher Education (SCEF). This framework aims to standardise reporting on carbon emissions across the further and higher education sectors.

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

The University needs third-party assurance of our data and programmes, which is why we invest in partnerships to ensure others have oversight in our work.

Level of assurance and methodology

We are also very committed to students learning these valuable auditing skills. Modules in Worcester Business School audit the University, and students and others are invited to help with the ISO14001:2015 internal audits and to be observers on the external audit visits. This report has been drafted to provide an accurate picture of the university. We publish our historical data and show our failures to meet targets and successes. We welcome and encourage feedback, and the student module is an excellent vehicle to make sure what we present is relevant to our students, who are one of our key stakeholders.

Loreus has undertaken an independent verification of this Sustainability Report (2023-24), which has been prepared in accordance with the core option of the Global Reporting Initiative (GRI) Sustainability Reporting Standard. The scope of Loreus' verification covers the data and information used to evaluate the University's sustainability performance from 1st August 2023 – 31st July 2024. The evidence-gathering process was designed to obtain a reasonable level of assurance as set out in the GRI External Assurance of Sustainability Reporting guidance. The verification process included reviewing relevant documentation, interviewing responsible personnel with accountability for preparing the report and verifying a sample of data and information.

Loreus was not involved in calculating, compiling, or developing the Sustainability Report. Loreus verification activities are fully independent from the University of Worcester.

After reviewing this annual sustainability report, it is the opinion of the Principal Assessor that the information contained within, and the completeness of the reporting represents an example of best practice within the higher education sector.

REPORTING ON OUR KEY COMMITMENTS

The University uses several impact and outcome benchmarks to help us continuously improve. The Sustainability Leadership Scorecard is one such method. Workshops are held with academic, professional services and students' union colleagues to decide where we are placed (see page 56). These guide detailed action planning and resourcing and help us continue to improve. We are engaged in a wide-ranging body of environmental research.

Name of Principal Assessor at Loreus

Khaled Belgasmi

Khaled Belgasmi
Date of audit
16 January 2025

The Elizabeth Garrett Anderson building has been developed to make maximum use of daylight, both to provide an exemplary environment and also to reduce energy consumption.

Strategy

The University has a long-standing commitment to act sustainably and environmentally responsible. In July 2019, the University Board of Governors declared a Climate Emergency, giving clear leadership for the University to identify the step-change measures required for net zero carbon by 2030. The Strategic Plan 2019 is committed to creating possibilities, developing potential and increasing community engagement. It outlines our approach: 'We promote educational and social inclusion and equality. We behave with kindness and respect; we expect ethical and professional behaviour. We practice environmental sustainability and social responsibility'. This vision encapsulates our overarching aim to fully accept our broad responsibilities to society and develop our physical assets to provide excellent facilities and opportunities for students, staff, and the wider community, but in ways that promote and champion sustainability and social responsibility.

The University's Sustainability Strategy aims to balance supporting the Global Goals and promoting positive societal impact while mitigating our negative impacts by reducing our net carbon emissions to zero by 2030. The University's Sustainability Strategy is structured around four core themes, which map to all 17 UN Sustainable Development Goals.

Theme 1: Promoting sustainability, social responsibility and wellbeing

Our key commitments are:

1. To embed sustainability principles within our community's working and social lives
2. Encourage active citizenship both locally and globally
3. Provide projects and programmes that directly enhance wellbeing

Theme 2: Integrating sustainability through knowledge, skills and experience

Our key commitments are:

1. Embed inclusion of sustainability principles in the formal curriculum, learning and teaching practice
2. Provide appropriate sustainability training for all our staff and students and encourage them to engage in sustainability practices.
3. Ensure there are opportunities for students and volunteers to engage in applied projects

Theme 3: Mitigation, adaptation and resource efficiency

Our key commitments are:

1. Manage our estate to mitigate against climate change (through reduction of carbon emissions) and to ensure future resilience through engagement in adaptive strategies
2. Optimising resource efficiency and stimulating a shift to sustainable models of consumption
3. Minimising pollution

Theme 4: Global Sustainability Ethics Partnerships and Leadership

Our key commitments are:

1. To invest in pedagogic innovation, scholarship and research on sustainability with global impact
2. To enhance our positive social and environmental contributions through our supply chain
3. To build beneficial partnerships and collaborations through our sustainability activities and enhance our international sustainability visibility

A Summary of Our Current Research

Dr Peter Unwin and Professor Gyozo Molnar are engaging in a programme of research and knowledge exchange focused on the lived experience of Gypsy, Roma and Traveller (GRT) communities of health and social services. Most recently, they have received funding from Understanding Patient Data to explore the attitudes and perspectives of Gypsy, Roma and Traveller communities on the collection of ethnicity data in health services and develop recommendations to ensure these groups are better represented in healthcare data.

Researchers in education have worked closely with partner schools to explore the impact of school health and well-being leads on supporting families in poverty. The research has highlighted the efficacy of these roles in supporting children and families during the cost-of-living crisis. However, it argues that such roles will only be successful and sustainable if the government also addresses the need for early intervention, funding and the workload crisis in children's services and schools.

Professor Mahmut Tor is leading our Molecular Plant and Microbial Biosciences Research Unit in a vital research programme examining interactions between plants and pathogens, such as downy mildew, which kill or, at the very least, reduce the yield of these plants. The programme of research, largely funded by the Biotechnology and Biological Sciences Research Council and science funders in Turkey and the USA sets out to understand these interactions at the microbial level, exploring the plants' natural defences and finding ways of enhancing these natural defences. The programme has the potential to improve food security through increasing crop productivity whilst also reducing the use of harmful pesticides. Professor Tor has brought his research to the broader public through, for example, an event held at the University to coincide with the UN's Day of Plant Health (May 12th 2024). This event, which involved a series of talks, displays and hands-on demonstrations, sought to shed light on the often-overlooked significance of plants in sustaining life and maintaining the health of our ecosystems.

Professor Derek Kyte, lead of our Living Well with Long-Term Conditions Research Group, is engaged in a long-term research programme exploring patient-reported outcomes and monitoring (PROMs) across various conditions and clinical areas, including chronic kidney disease, cancer and musculoskeletal care. The research has demonstrated the positive impact of PROMs on patient wellbeing and quality of life, and the drive is to take its findings into policy and practice within the NHS and beyond.

Our Biomedical Research Group, in collaboration with Worcestershire Acute Hospitals NHS Trust, have discovered a new way of identifying cardiac patients at risk of a second heart attack and the type of heart attack that might be. The research looked at biomarkers in the blood of patients presenting with an Acute Coronary Syndrome event and found that the biomarkers predicted future heart attacks. This research can potentially improve the ongoing care for these patients and lead to better outcomes.

Researchers in our Mood Disorder Research Group continue to publish experimental studies in collaboration with institutions all over the world which have explored the genetic make-up of bipolar and other mood disorders. For example, the group has been part of a global study that has implicated genetic factors in suicide attempts. This work will have longer-term translational impacts, but the team has also engaged in work that brings more immediate benefits to those affected by mood disorders, for example, through its mood monitoring, which enables people with a mood disorder to better track and understand changes in their mood. Another key area of work within the group is focused on understanding perinatal mental health, in particular risk factors for postpartum psychosis and depression: Perinatal sleep disruption and postpartum psychosis in bipolar disorder: Findings from the UK BDRN Pregnancy Study.

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

Researchers in our Social Pedagogy Research Group, led by Dr Carla Solvason and Dr Alison Prowle, are working with Blaenau Gwent Disability Services on a longitudinal project that seeks to understand better the support provided by Blaenau Gwent for children and young people with a range of disabilities, at various phases during their lives. Data will be collected at regular intervals across five years, with four groups of children aged 14, 17, 20 and 23 at the start of the research. The project aims to create a picture of the child's support experience across their transition from teenager to adult and to provide recommendations for the future development of the service. The project also has the potential to feed into disability services elsewhere in the UK.

Dr Jessica Mee has received £950k from the UKRI Future Leaders Fellowship scheme for the project "Improving females' health and performance by mitigating heat strain. Most of the evidence available on the impacts of heat on the human body has been built on research which involves males, and little is truly understood about the impacts on the female body. From the effects of the warming climate to hot offices, the project, which began in April 2024, will explore how heat affects females of varying ages and levels of activeness..

Researchers in our Sustainable Environment Research Group, led by Professor Ian Maddock, are engaged in a research and consultancy programme focused on natural flood management. Professor Maddock, working with colleagues at Cardiff University, identified that river barriers like those built by beavers can protect communities at risk of flooding. These "leaky" dams, made from trees, branches, logs and leaves, were monitored for two years. The research found that the barriers deliberately increased water levels upstream to slow river flow and provided benefits to the river and nearby farmland.

We are working on a Community Heat Network for the City to decarbonise our and others' heating using the River Severn as the energy source. The Business School supports the local authority's Start-up Business Mentoring Programme by delivering free training to mentors. It has also launched the Herefordshire and Worcestershire Help to Grow Management Programme for local business leaders. 21 students completed the 12-week programme in the first year. The Department for Business, Energy and Industrial Strategy (BEIS) has agreed to provide funding for the University to expand the course.

INTRODUCTION STRATEGY **RESEARCH** CASE STUDIES KEY TARGETS GOVERNANCE

Over the last 12 months, staff from across the University have written and edited books aimed at educators, students and professionals in health, teacher education, social work and law, each striving to enhance educational quality. These include Andrews, Scott (2023) Learning and Researching with Case Studies: A Student Companion for Business and Management Research. Routledge, London.

Tapuwa Mwedzi, a doctoral student funded by the University of Worcester, under the lead supervision of Dr Laila Kasem, is investigating precarity amongst forced migrant entrepreneurs in the UK. His study will look at the challenges experienced by forced migrant entrepreneurs in the United Kingdom at different stages of the entrepreneurship journey, how they manage these challenges, and the support they need to succeed as entrepreneurs.

Robin Bell, Professor of Entrepreneurship, has engaged in a research programme focused on enterprise education in an international context. His research has informed the development of entrepreneurial education curricula across Europe, Asia, and Africa, increasing capacity for sustainable entrepreneurial development. Some of his most recent work has focused on disabled entrepreneurs and how they can be supported best.

Dr Sajad Rezaei has led a project funded by the Economic and Social Research Council to explore how AI-powered knowledge management systems (AI-KMS) enhance productivity, planning and strategic decisions among leadership teams of care homes and home care businesses in England. The project team have gathered new data to investigate the leadership team's strategic approach to shaping productivity issues and proposed and empirically tested an AI-KMS model incorporating personalised and tailored care services to the unique needs of elderly people.

Caring responsibilities routinely and disproportionately fall on women in most societies. Our researchers in the Association of Dementia Studies have engaged in research to support formal and informal carers in their roles. Crossing the Line, a project funded by the National Institute of Health Research from 2022-24, set out to provide a comprehensive understanding of the personal care giving experiences of family carers who support someone with dementia. The mixed method project surveyed 300 personal carers and conducted 28 interviews with personal carers. The research findings have informed the production of resources for family carers and social care organisations, co-created with professionals and those with lived experience, which provide support, advice and guidance for personal carers.

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

Our Association for Dementia Studies (ADS) is involved in two long-term research and implementation programmes, which strive to create sustainable community-based approaches to improving the lives of people living with dementia and their families and carers.

The Dementia Meeting Centre Programme began in 2014 through a project funded by the Economic and Social Research Council, which explored the efficacy of the Dutch Meeting Centre model in a UK context. Meeting Centres are a community-based support system for people living with dementia and their families and carers. The project showed that the model brought significant benefits for people recently diagnosed with dementia, including reducing the use of antipsychotics and for those around them. Research into Meetings Centres has continued with the team completing an NIHR-funded project in 2023, which examined the sustainability of the Meeting Centre model, and the team has been awarded further NIHR funding to explore food interventions in community-based support systems, which began in Spring 2024. Alongside the research, the team has been supporting organisations to implement meetings centres. ADS is working with Worcestershire County Council to roll out 9 centres across the county, whilst in Scotland the meeting centre model is highlighted as part of the National Dementia Strategy. At the time of writing there are over 50 Meeting Centres in the UK and many more internationally.

ADS is also involved in a programme of research focused on Housing and Dementia. It hosts the Housing and Dementia Research Consortium (HDRC), a membership group of housing and care organisations and academics who are committed to deliver timely, appropriate, high quality research in order to build a stronger evidence base to support the way services and buildings are designed for people with dementia, and to directly influence policy and practice in relation to accommodation and care services for people with dementia in the UK and beyond. One of its projects, DemECH (Supporting People Living with Dementia in Extra Care Housing), funded by the NIHR SSCR, finished in 2023 and the project findings were officially launched at the House of Lords in March 2023. Three 'Key Insights' booklets were produced for different audiences (people and families affected by dementia, Extra Care Housing providers, and adult social care commissioners). Additional funding from the NIHR SSCR has allowed the team to develop additional, more accessible resources, including videos and infographics, over the past year which will widen the reach of the research.

This year, the UN recognised us as one of only five business schools from a global network of more than 800 to be awarded a Recognition for Excellence in SIP (Sharing Information on Progress) Reporting award under the UN's Principles of Responsible Management Education (PRME) banner.

Beas Banerjee is currently undertaking a funded doctoral project within the group, supervised by Professors Alan Dixon and Ian Maddock, to explore how anticipatory action can reduce disaster risk in the Global South. The project focused specifically on Nepal and involved collaboration with Nepal Flying Labs, a non-profit social enterprise, and Naxa, a Geo-ICT tech consulting firm based in Nepal. Over one billion people worldwide live in countries that lack the resilience to adapt to the environmental changes they are expected to face between now and 2050. This resilience is a function of the environment of a specific location and the socio-economic and political context of that place, and hence why, there is growing urgency to integrate a more holistic understanding of risk, vulnerability and resilience into hazard and disaster management planning. A key challenge to adopting such an approach is ensuring the data quality that informs our assessment of place-specific environmental and socio-economic risks. For example, remote sensing imagery in assessing proximity to hazards has often been limited by poor spatial resolution that is insufficient to delineate individual households accurately. This results in risk assessment only being applied at the whole community level, even though vulnerability will vary by household, depending on physical and socio-economic factors. Meanwhile, the use of UAVs for environmental monitoring and mapping has seen exponential growth in recent years, leading to a revolution in assessing physical hazards. UAVs offer a much higher spatial resolution alternative to satellite imagery that can delineate individual households. At the same time, their ease of use and ability to generate bespoke flights that match locational and time-critical needs could drive significant advances in the resolution and, therefore, the accuracy of hazard mapping and risk assessment. They also offer considerable potential to democratise data collection and analysis, enhancing local users' capacity to take ownership of their disaster risk assessment.

Holly Roberts, an MPhil student at the University of Worcester, under the lead supervision of Dr Kate Ashbrook, investigated microplastic pollution at UK lakes. Her research highlighted the flow of plastic pollution between soil, water and the aquatic invertebrates feeding in these habitats.

Tobias Hickey's Oceans project and book *2023 SEA CHANGE – Save the Ocean, Otter-Barry Books* brings illustrators from around the world to highlight marine pollution.

Over 400 artists worldwide, including Axel Scheffler, Jackie Morris, Roger Mello and Nicola Davies, have sent illustrated postcards to form an exhibition drawing attention to the growing threat to our ocean and seas.

Joe Leaper, a doctoral student funded by the University of Worcester, Perry Foundation and the Bumblebee Conservation Trust, under the lead supervision of Dr Kate Ashbrook, is investigating the impact of wildflower habitats on pest regulation, soil health, biodiversity and vine health in UK vineyards. The objective is to develop a more resilient and sustainable approach to grape production in the UK.

Andrea Tapia Arenas, a doctoral student funded by the University of Worcester and Bumblebee Conservation Trust, under the lead supervision of Dr Kate Ashbrook, is using multi-scale remote sensing data to understand pollinator habitat preferences in grasslands to inform conservation management.

Hundreds of wildflowers have been planted in Worcester to enhance the natural habitat. The project saw 2.6kg (5.73lb) of seeds sowed by hand over an area the size of two-and-a-half tennis courts at the University of Worcester's St John's Campus.

The meadow has been planted with 28 wildflowers, including betony, lady's bedstraw, field scabious and musk mallow, and five types of grass, including crested dog's-tail and small cat's-tail. The project was funded with part of a grant from the Natural Networks Programme.

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

Our Constitutions, Rights and Justice Research Group researches the nature of constitutions, different categories of rights (i.e., social, political, legal and employment) and the importance of justice in its many forms. This innovative group brings together academics at the university and other institutions, legal practitioners, and active and retired judges to work together on a myriad of issues and seek scope for collaboration in the broader academy and legal practice.

Over this past year, Professor Nicoleta Cinpoeș has been helping citizens in Ukraine preserve their theatrical heritage. Moved by what she had seen happening to the country, Nicoleta was keen to help with its long-term recovery plan. She has been working to help train colleagues in how to write theatre history and supporting practitioners through the European Shakespeare Research Association.

The University, led by Professor Alan Dixon and Dr Cedric Nkiko, is part of a large multinational research project, bringing together collaborators from the UK, USA, Germany and Canada with researchers and communities in Central Africa, in particular Kenya, Tanzania and Uganda, to explore the factors that contribute to climate-induced migration and to build resilience in these communities.

The CLARS (Climate Adaptation and Resilience Strategies) project, which has received £2.3m funding, will seek to increase understanding of climate change in African communities and develop effective responses that reduce poverty in these communities.

Case Studies

Foodbanks

We continue to encourage students and staff to donate items for The Worcester Foodbank. It provides emergency food and support to local people and is part of a nationwide network of foodbanks, supported by The Trussell Trust, working to combat poverty and hunger across the UK. The cost of living is putting pressure on foodbanks and their users - foodbank networks have reported increased demand and falling food donations.

Community Cupboard

The Students' Union accepted donations for their Community Cupboard. These donations of toiletries and non-perishable food and drink are warmly welcomed to help provide free items to students.

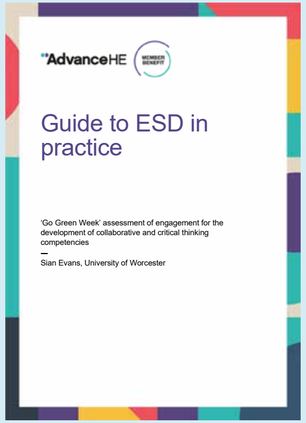
Health and Wellbeing

The University of Worcester is passionately committed to promoting and developing good health and wellbeing among its student and staff community, the wider county, and beyond. Running Out of Time, a national relay raising awareness of the climate emergency, has called in at the University of Worcester on its journey through the City.

The Running Out of Time Climate Relay travelled the length of Great Britain over the summer with a baton passed between runners, walkers, wheelers and cyclists. Inside the baton is a message calling for action to cut emissions, restore nature and support those hardest hit by climate change. The baton arrived at the University's Severn Campus where it was handed over to University students by schoolchildren. The University's Pro Vice Chancellor, Professor Sally Moyle, and Lord Victor Adebowale, Chair of the NHS Confederation, spoke to those assembled. The University is also working with organisations across the City on a number of projects including tackling air quality.

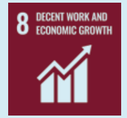
Go Green Week Advance HE case study

'Go Green Week' assessment of engagement for the development of collaborative and critical thinking competencies University of Worcester is a case study published by Advance HE in February 2023 as part of their Guides to Education for Sustainable Development Good Practice Guides. The case study shows how the 'Go Green Week' assessment involves students designing and implementing sustainability activities as part of their coursework. They work in teams, engage with the community, and reflect on their experiences. The assessment includes group presentations and individual reflections, focusing on problem-solving, teamwork, and personal sustainability practices. This initiative helps students develop critical thinking and employability skills through active participation in real-world sustainability projects.



Heat Network

The University has been working with key organisations in Worcester to help develop a heat network for the city centre. The DESNZ has given Worcester City Council almost a quarter of a million pounds to develop plans to use the River Severn to heat parts of the city centre. The idea is to develop a new underground 'heat network' that would distribute hot water to help heat older buildings, including homes and businesses in Worcester city centre, using power generated by the River Severn. The 'heat network' could power all the University of Worcester's buildings as well as those owned by Worcester City Council, Sanctuary Housing's head office and several other buildings in the city centre. Worcester City Council and Worcestershire County Council would contribute £5,000 each towards the plan with the Worcestershire Local Enterprise Partnership (LEP) putting aside £40,000 and the University of Worcester providing £10,000.



The Business School's BOSS competition

A Dragon's Den-style contest offers entrepreneurial students, from across the University, the opportunity to pitch their ethical and sustainable business idea in front of a panel of distinguished business leaders in the hope of scooping a cash investment. After a successful first year, attracting dozens of applications, the competition grew with an even bigger prize pot in 2023/24. The Business & IP Centre (BIPC) Worcestershire is now placed within The Hive, our joint university and public library, enabling all students access to free IP/Patent advice, grant advice and workshops to attend. In 2023 Worcester's inclusive apprenticeship provision was praised by Ofsted who said the curriculum "prepares apprentices well for their next steps" and that "apprentices are ambitious to achieve to advance their career".

EV charging points

This year we were named the most Electric Vehicle (EV) friendly university in the UK after installing 100 EV charging points at our Severn Campus, which are available for anyone to use, not only future proofing for the University but helping our community to decarbonise. The University was awarded £3m from the Worcestershire Local Enterprise Partnership (LEP) towards the development of the Severn Campus. The investment came as part of the Government's Getting Building Fund from which Worcestershire was awarded £12m.

Worcester Access Map

A group of students with both hidden and visible disabilities worked with Worcester Community Rail Partnership (WCRP) to develop the Worcester Access Map https://wcrp.org.uk/wp-content/uploads/2023/11/Worcester-Access-map-2023_n_Web.pdf The map contains information on the best walking, wheeling, cycling routes for people with hidden and visible disabilities. It is available either as a download or as a printed copy. We hope the map will encourage Worcester visitors to use sustainable forms of transport – such as rail – to both access and move around the city. It has been created by WCRP with funding from Great Western Rail. We worked in partnership with Gloucestershire Community Rail Partnership (GCRP). The students received training and guidance from GCRP on how to walk the routes and collect data, which was sent to the designer for input onto the map.

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

The Hive

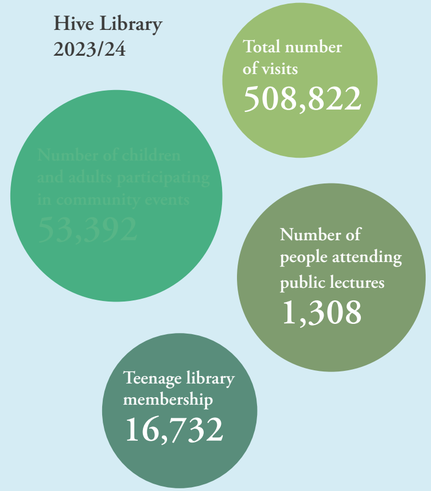
Since opening in 2012, The Hive has introduced more than 500,000 children to library services. In 2023, it relaunched its 'learning outside the classroom' programme to support children and young people at all stages of their education. The programme saw engagement swell from around 15,000 children and young people in 2021/22 to almost 30,000 in 2022/23. It also launched the Careers Worcs Youth Hub, a dedicated space for young people aged 15-24 to help find the right pathway into employment, training, and education.

More than 4,700 adults have been supported with community learning and developing vital job skills in The Hive's first decade.

There is a weekly Job Club to assist people in creating CVs and applying for jobs, and there are opportunities throughout the year for young people to gain work experience.

This year total visits to The Hive rose by more than 125,000 compared to last year and teenage library membership rose by almost 6,000. The number of children and adults participating in community events was up by over 20,000 and the number of people attending public lectures almost doubled.

By opening our facilities in imaginative ways for the public benefit, we encourage cohesion and contribute to our community becoming even safer, stronger, and more engaged.



Fairtrade

The University of Worcester has held Fairtrade status since 2008 and is reaccredited until June 2025. Our Fairtrade promotions and campaigning work has expanded this year with more pop-up stands at events, including Welcome Fairs and Society events.

In 2023 we started running Repair Cafés, inviting staff, students and members of the community to bring their items for repair. This helps to reduce waste by helping to get things back in working order.

We are delighted to say it's been successful.

Earth Day

On Saturday, 20th April, we joined with the team at The Hive and other local organisations to put on various activities and information stands to raise awareness of sustainability and what children and families can do to be more sustainable. Activities included making wildflower seed bombs, postcard bird drawing workshops, and creating bunting from repurposed old student nurse uniforms. Attendees were also invited to help make a cardboard city. The inflatable world made a spectacular focal point as students and staff from the university spoke with over 2,000 visitors throughout the day.

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

Sea change

Students undertook a workshop on Ocean Literacy, raising awareness about the threats to our oceans, such as pollution, overfishing, and climate change. It celebrates the ocean's role in promoting biodiversity and its cultural significance. Learning its principles including One Big Ocean: 97% of Earth's water is in the ocean, covering 70% of the planet, Shaping Earth: The ocean shapes Earth's features through sea level changes and other processes and Influence on Weather and Climate: The ocean drives weather patterns and climate through water evaporation and condensation.

This initiative highlights the importance of the ocean and encourages sustainable practices to protect it.

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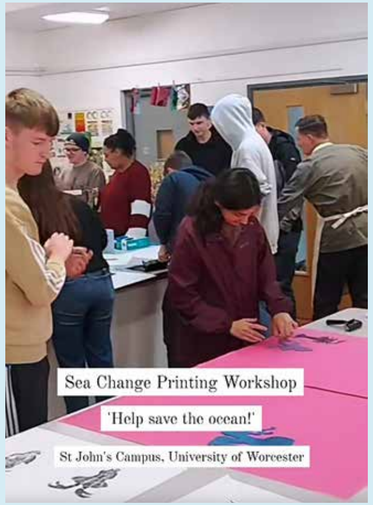


17 PARTNERSHIPS FOR THE GOALS

Worcester Polytechnic Institute – a collaboration with our USA partners.

Lord Richard Faulkner presided over our 12th annual Worcester Polytechnic Institute (WPI), student presentations, held at 'our' Worcester in the UK. The Massachusetts WPI students are encouraged to travel abroad to over 40 destinations to undertake an IQP. An IQP or Inter Qualifying Project is an opportunity for students to immerse themselves in new cultures and tackle unstructured, real-world problems in ways that are meaningful to local sponsors in real communities. The University of Worcester housed and hosted 24 students and their professors for seven weeks, and this event is the culmination of their research and hard work. Their research topics ranged from raising carbon literacy awareness in Worcestershire Libraries, engaging Worcester Cathedral visitors on green living, exploring community engagement with local nature recovery, investigating green skills in secondary schools, increasing the uptake of a global Sustainability Literacy Test and with Worcester Bosch understanding community perceptions of Hydrogen boilers

SUSTAINABILITY REPORT 2023 - 2024 33

Reporting on our annual key targets

It is important the university is transparent with our progress each year on how well we are meeting our targets, whether there are quantitative or actions to help move us closer to meeting our key targets.

Key Targets

The university uses a framework of twelve different areas to map and monitor our progress, these cover campus, community and curriculum.

We set both quantatative consumption, weight and other countable targets. We need both because carbon factors can change so we need to use our progress on, for example, how much energy or water we have managed to save.

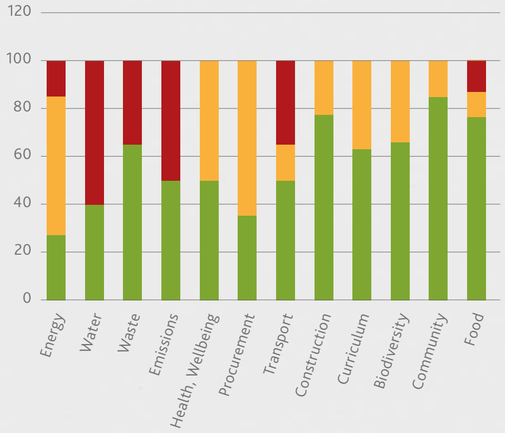
We RAG rate our progress. This is shown in the summary table and following pages.

Progress against non-carbon quantitative and qualitative targets 2023-2024

Targets

Our performance against each target is represented as follows:

RED = did not meet target
AMBER = partially met target
GREEN = met target



Clause from Sustainability policy	Target	Progress	Annual action	Progress
Energy Optimise resource efficiency Manage our estate to mitigate against climate change and to ensure future resilience through engagement in adaptive strategies with the objective of net carbon neutrality by 2030. Reduce use of natural resources such as energy and water.	**Consumption** Reduce natural gas consumption by 8.4% per annum, from a 2018/19 baseline of 9,692 MWh.	**Consumption** Gas consumption ↓16% (from 7,683 MWh to 6,472 MWh) between 22/23 – 23/24. The target to reduce consumption by 4,040 MWh by 2023/24 from the 2018/19 baseline was missed, achieving only a 3,220 MWh reduction. This is 820 MWh short of the goal needed to stay on track for the University's net zero carbon target by 2030. Electricity consumption increased by 1% (from 4,424 MWh to 4,457 MWh) between 2022/23 – 2023/24. This is despite emissions from electricity reducing across the same period.	Continue participation in city-wide heat network detailed design project and report regularly to UEB / Community Forum	Consultants appointed – PVC Finance & DoS to be on Stakeholder Group
	Reduce electricity consumption by 1.7% per annum, from a 2018/19 baseline of 8,696 MWh Reduce combined energy intensity by 5.9% per annum, from a 2018/19 baseline of 162 kWh/m2.yr **Carbon** Reduce emissions from energy by 8.4% per annum, from a 2018/19 baseline of 3,230 tCO2e.	**Carbon** Emissions from energy consumption decreased by 11% (from 2376 tCO2e to 2107 tCO2e) between 2022/23 and 2023/24. However, the overall reduction target of 1,330 tCO2e by 2023/24 from the 2018/19 baseline was missed, achieving only a 1,073 tCO2e reduction. This is 257 tCO2e short of the goal needed to stay on track for the University's net zero carbon target by 2030.	Oversee delivery of a stock condition survey, outputs of which will include a report on energy and carbon saving opportunities.	This work is on-going and is expected to run into the new financial year.
			Pilot the integration of energy data with the University's Building Management System (BMS) in the newly refurbished EGA building	Contractor appointed to complete outstanding BMS works at EGA building, currently negotiating integration of energy data.
			Improve Automated Meter Reading data quality of identified 'priority submeters' to within 3% accuracy of physical reads.	49% of submeters require some form of intervention to improve data quality (inc. submeters not on AMR); data improvement plan in place with service provider EMT.
			Review lighting estate and identify outstanding opportunities to replace inefficient lighting with efficient LED alternatives.	Work has been on-going for the past period but staff shortages have meant progress has been slower than anticipated. Some lights recovered from Bredon (that were relatively new) have been re-deployed.

Clause from Sustainability policy	Target	Progress	Annual action	Progress
	Consumption		Roll out auto shutdown functionality to all audio-visual devices (where practicable).	**New rooms:** Power down after 3 hours of inactivity (applies to all upgrades since 2023). This will increase as more rooms are upgraded. **Motion sensors:** Investing in motion sensors to shut down AV if no movement is detected. This may apply to new room upgrades at an additional cost. **Manual shutdown:** Devices that can be manually programmed (e.g., display screens) will shut down at 21:15. **Licenses for ViewSonic screens:** Licenses can be purchased to remotely set startup and shutdown times for ViewSonic screens, useful for digital signage. This will be adopted as screens are replaced. **Awareness campaign:** Focus on training and awareness for shutting down AV equipment.
			Investigate feasibility of and develop a costed plan to develop the University's on-site generation (solar thermal and solar PV).	Not yet started; plans to begin work in spring.
			Run Student Switch Off competition in halls; increase participation to pre-pandemic levels (54% of students).	Campaigns throughout academic, year. Participation poor in semester 1. Semester 2 much better engagement now made competition between RSL. Vesta Tilley came 3rd in latest climate quiz, competing across all SSO universities.
			Review process for embedding energy efficiency considerations in the design and refurbishment of buildings.	Ongoing work with consultancy to enhance BMS specification and energy modelling of the Teaching Building; wider work to review and standardise approach not yet started.

Clause from Sustainability policy	Target	Progress	Annual action	Progress
Water Optimise resource efficiency Manage our estate to mitigate against climate change and to ensure future resilience through engagement in adaptive strategies with the objective of net carbon neutrality by 2030. Reduce use of natural resources such as energy and water.	Reduce water consumption by 3% per annum, from a 2018/19 baseline of 60,267 m3.	**Consumption** Water consumption increased by 11%* (from 63,499 m3 – 70,216 m3) between 2022/23 – 2023/24. The overall consumption reduction target of 8,135 m3 by 2023/24 from the 2018/19 baseline has also been missed, with an overall increase of 9,949 m3. *both years exclude water data from EGA / ECB (same feed), and LC.	Implement recommendations from water audit reports, including reducing shower and hand basin tap flow rates.	'Not started – needs full review. Staff vacancies have impacted ability to start this work'.
	Reduce water intensity by 3% per annum, from a 2018/19 baseline of 0.74m3/m2.yr.	Water intensity increased by 11% (from 0.72 m3/m2.yr - 0.80 m3/m2.yr) between 2022/23 – 2023/24. The overall consumption reduction target of 0.11 m3/m2.yr by 2023/24 has also been missed, with an overall increase of 0.06 m3/m2.yr.		
	Carbon Reduce emissions from water by 2.5% per annum, from a 2018/19 baseline of 22.6 tCO2e	**Carbon** Emissions from water consumption decreased by 4% (from 11.24 tCO2e to 10.75 tCO2e) between 2022/23 and 2023/24. The overall reduction target of 2.8 tCO2e by 2023/24 from the 2018/19 baseline was exceeded, achieving an 11.8 tCO2e reduction. Note that some water data was unavailable for 2022/23 and 2023/24, and changes in emissions conversion factors for waste make monitoring this category difficult.	Review process for embedding water efficiency considerations in the design and refurbishment of buildings	Water efficiency considerations designed into Teaching Building specification; no more new developments planned for short medium term. Standardised approach paused.

Clause from Sustainability policy	Target	Progress	Annual action	Progress
Waste Optimise resource efficiency. Manage our estate to mitigate against climate change and to ensure future resilience through engagement in adaptive strategies with the objective of net carbon neutrality by 2030.	**Carbon** Reduce emissions from waste by 5% per annum, from a 2018/19 baseline of 9.1 tCO2e	**Carbon** Emissions from waste reduced by 15% (from 7.44 tCO2e – 6.30 tCO2e) between 2022/23 – 2023/24. The overall emissions reduction target of 2.28 tCO2e by 2023/24 has been exceeded, with an overall reduction of 2.82 tCO2e having been achieved. Please note that due to considerable changes in emissions conversion factors used for waste, it is difficult to meaningfully monitor this emissions category.	Increase the value of British Heart Foundation donations from £8,500 in 2023 by 5% in 2024	New target would be £8,850 if we achieve a 5% increase. This failed. We were advised donations have been down nationally.
			Continue work with Worcester Repair Café to increase workshops in the Student Union to at least one per semester.	Repair Cafés took place on 25 November 2023 and 3 February 2024, launching Go Green Week 2024 and held in The Hanger
Emissions and discharges Prevent pollution by reducing emissions and environmentally harmful discharges.	**Carbon** Maintain fugitive F Gas emissions to under 10 tCO2e annually	**Carbon** Due to a significant leak of refrigerant at University Arena, F-gas emissions for 2023-24 increased to 93 tCO2e	Do additional promotion of pollution awareness-raising including annual spill test drill	All new starters who are first responders trained on Pollution Prevention. Annual practice drill by 31st March. New Spill kits purchased and strategically placed across all sites. Training completed with all relevant staff and there is now an on-line training package available for new staff.
Procurement Optimise resource efficiency and ethical procurement including Fairtrade and stimulating a shift to sustainable models of consumption. Reducing single use plastics and other disposable items.	**Carbon** Reduce emissions from procurement by 5% per annum, from a 2018/19 baseline of 18,701 tCO2e	**Carbon** Emissions from procurement reduced by 38% (from 15,540 tCO2e – 9,617 tCO2e) between 2022/23 – 2023/24. The overall emissions reduction target of 2,446 tCO2e by 2023/24 from the 2018/19 baseline has been missed with a reduction of 167 tCO2e having been achieved. This is 2,279 tCO2e shy of the overall reduction required to maintain alignment with the University's pathway to net zero carbon by 2030.	Complete a materiality exercise to identify high spend and high emissions procurement categories and plan action to reduce them	Initial analysis completed with high-level action plan currently being developed
			Pilot working with a selection of local and national suppliers using a more accurate methodology to define the University's supply chain emissions	This work has been built into the JD for the student placement role; new starter to take up role in August 2024. Expected completion date to be updated to Jan '2025.

Clause from Sustainability policy	Target	Progress	Annual action	Progress
Transport Encourage sustainable transport and implement a sustainable travel plan.	**Carbon** Reduce emissions from staff and student commuting by 5% per annum, from a 2018/19 baseline of 8,190 tCO2e.	Emissions from staff and student commuting increased by 86% (from 4,296 tCO2e to 7,993 tCO2e) between 2022/23 – 2023/24. The overall emissions reduction target of 2,048 tCO2e by 2023/24 from the 2018/19 baseline has been missed, with an overall reduction of 197 tCO2e having been achieved. This is 1,851 tCO2e shy of the overall reduction required to maintain alignment with the University's pathway to net zero carbon by 2030.	Undertake annual staff and student travel surveys, disseminate survey findings	Annual Travel Survey commenced 30 November 2023, date extended to 3 May to allow LfRS research students to get a higher response rate. 250 staff (ok) 110 students (very poor)
	Reduce emissions from use of fleet vehicles and business travel by 9% per annum, from 2018/19 baselines of 42.4 tCO2e (fleet) and 530 tCO2e (business travel)	Emissions from use of fleet vehicles increased by 13% (from 24 tCO2e to 27 tCO2e) between 2022/23 – 2023/24. The overall emissions reduction target of 19.08 tCO2e by 2023/24 from the 2018/19 baseline has also been missed, with an overall reduction of 15.85 tCO2e. This is 3.23 tCO2e shy of the overall reduction required to maintain alignment with the University's pathway to net zero carbon by 2030. Emissions from business travel increased by 30% (from 232 tCO2e to 302 tCO2e) between 2022/23 – 2023/24. The overall emissions reduction target of 238.5 tCO2e by 2023/24 from the 2018/19 baseline has also been missed, with an overall reduction of 228 tCO2e. This is 10.5 tCO2e shy of the overall reduction required to maintain alignment with the University's pathway to net zero carbon by 2030.	Monitor introduction of Sojo GB behaviour change app; analyse and report on impact and publish research findings	Sojo funders in Switzerland undertaking a full review of the software. Project on hold.
			Participate in the Air Quality Working Group to establish a Worcestershire wide Air Quality Action Plan	Close working relationship with regulatory services, attended GGW, approved AQ awareness engagement tool. LfRS students undertaking further road shows. Live Realtime monitors now live across Worcestershire https://www.worcsregservices.gov.uk/all-services/pollution/air-quality/interactive-air-quality-maps-current-status/
			Monitor and report on university-owned EV charge point use	Monthly reports received.

Clause from Sustainability policy	Target Consumption	Annual monitoring	Annual action	Progress
Health & Wellbeing Deliver projects and programmes that directly enhance wellbeing including healthy and sustainable food.	Comply with best practice set out in the University Mental Health Charter Framework	This voluntary, membership-driven programme supports institutions in adopting a holistic approach to student mental health and wellbeing, fostering a network for peer support and the exchange of best practices. We have started work on this.	Implement services with the Students' Union to support student mental health through the academic year	Cost of Living campaign work – Community Cupboard, new Community Cupboard Express offer & period products - reducing stress financially on students Engagement with Nature Society & Gardening & Allotment Society
			Investigate additional wellbeing opportunities at Lakeside campus for students, staff, and the wider community, using the Green Impact programme	GI project creating Nature Trail well underway, first phase ready by the Spring/Summer
			Develop a plan for seeking accreditation under HEI new wellbeing accreditation called the University Mental Health Charter by Summer 2024	This is still being developed
Construction & Refurbishment Optimise resource efficiency. Manage our estate to mitigate against climate change and to ensure future resilience through engagement in adaptive strategies with the objective of net carbon neutrality by 2030	All new builds should achieve an EPC rating of A All refurbishment builds should achieve SKA Gold (RCIS SKA assessment framework) All new builds should achieve the following water intensity targets: - 1.35m3/m2.yr (residential) - 0.71m3/m2.yr (non-residential)	No new buildings occupied during this year	Work with appointed consultancy to ensure proposed specification for the Teaching Building is energy efficient, incorporates low carbon technologies, and achieves EPC A when modelled	Latest model as at Jan 2024 shows EPC A expected July 24 – No change EPC A still anticipated
			Continue enhancing building control and performance during 'soft landing' phase of EGA refurbishment	Working on the post occupancy soft landings ongoing
			Work with appointed consultancy to hit non-residential water targets for the Teaching Building	Work ongoing to develop appropriate targets

Clause from Sustainability policy	Target	Progress	Annual action	Progress
Biodiversity Enhance biodiversity and incorporate biodiversity in environmental management, creating new opportunities for wildlife on campus.	Implement the University's Biodiversity Strategy and Biodiversity Action Plan	Annual Report on good progress of Biodiversity Action plan produced	Deliver a further 650m2 of botanically enhanced habitat	Over 1500m2 of grass containing wildflower to be left unmown for the growing season at City Campus. 75M Native hedge row containing 300 whips planted at St Johns campus, to the side of car park M, running between the car park and the top Astro turf.
			Revise the Biodiversity Strategy to include new campus developments and biodiversity net gain requirements	The new BSG chair has been working on the revised strategy in-house and it was agreed at the Sustainability Strategy Committee on 1 July 2024 along with the Biodiversity Action Plan.
			Host the University's first 'bioblitz' on campus and recruit schools and community groups to take part	On hold due to prioritising Biodiversity Strategy revision inhouse. Plans to run the first Bioblitz in May 2025.
			Plant 20m2 of native lavender to support student lavender bags project	This project is now scaled back due to financial situation
			Pilot new methodology for recording biodiversity on campus	This is a Green Impact project and pilot going well.

Clause from Sustainability policy	Target	Progress	Annual action	Progress
Education for Sustainble Development Ensuring curricula reflect and align with our values for inclusion, internationalisation, ethical and socially responsible global citizenship. Invest in pedagogic innovation, scholarship, and research on sustainability with global impact. Provide appropriate sustainability and environmental training for all our staff and students. Encourage active citizenship locally, nationally, and globally.	Increase staff and student participation in NUS SDG teach-in by 5% from 2022/23 levels	Top ten educators pledging, fewer than last year and fewer students reached (29 educators pledge (2023, 41 educators), reaching 1628 students – 17% of the student body (2023, 4374 students – 48% of the student body).	Comply with the Responsible Futures framework; maintain accreditation.	RF reaccreditation audit took place 4-6th June 2024. Reaccreditation secured,
	Increase student participation in the Sustainability Literacy Test by 5% from 2022/23 levels	Sulitest - In August/September 2023, 501 students enrolled for the test (696 in 2022) and 396 completed (518 in 2022). Decrease in participation. Sulitest participation was investigated by the WPI project, which was reported in April 2024, suggesting ways to improve engagement, which will be trialled in September 2024. Working with L & T co-ordinators in Schools to promote at induction	Engage with at least one course team in each academic school to promote awareness of education of sustainable development, map course curricula to the SDGs, and embed education for sustainable development competencies	Workshop for School of Psychology 29/11/2023 on embedding ESD in the curriculum. New ESD workshop for individual academic staff delivered May 2024. Workshops will be offered again for 2024/25. Preparation of guidance materials for course teams in progress to be ready for September 2024.
			Initiate the 7th call for LfRF projects and, increase the number of submitted projects, recruit student researchers to support the work.	Call initiated three proposals submitted – two progressed for further discussion. Three students were recruited as LfRF researchers. Unfortunately, no projects have progressed.
	Support 600 staff and students (combined) to undertake Carbon Literacy training and 50% gain accreditation	Work ongoing Grant received to employ students, students trained, collaboration With The OU finalised	Complete QAA enhancement project on embedding education for sustainable development in QA&E processes and implement good practice in UW QA&E processes	Project completed in 2023. Presentation proposal accepted for ESD conference at MMU April 2024 and plans for an academic paper arising from work. Presentation to QA committee at RAU in July 2024. Further guidance added to course handbook template for 2024/25 linked to measurement of GAs and learning gain.
			Apply for SAP project on embedding the SDGs and sustainability competencies/graduate attributes in the curriculum.	Successful application for SAPs project December 2023. One student applicant for project who has subsequently pulled out. Project did not progress.

Clause from Sustainability policy	Target	Progress	Annual action	Progress
Community Involvement Build beneficial partnerships and collaborations through our sustainability activities and enhance our sustainability reputation internationally. Promote communication with, and information to, internal and external interested citizens and organisations. Responding appropriately to reasonable requests for information about our sustainability performance.	Increase the number of Green Impact Teams to 20 in 2023/24	15 teams audited- 23 Teams initially	Work closely with and support student societies and the to raise awareness on sustainability and social justice issues.	Workshop held in Go Green Week on democratise/decolonise/decarbonise, well attended and positive feedback from attendees and workshop on Careers also well attended.
	Increase student awareness of the University's sustainability activities from 47% in the baseline year of 2016/17, to 65% by 2024.		Recruit 4 additional student Digital Creative part-time posts to help publish and promote the University's digital sustainability magazine and increase readership by 5% from July 2023 baseline of 100 engaged readers include in formative assessment for year three creative arts students.	New students recruited. website reviewed by 3rd year web design students. Taking forward their recommendation's analytics will be monitored to look for increased readership.
			Report on sustainability issues regularly to the University Community Forum.	Report submitted to Community Forums held on 17 October 2023, 6 February 2024. & 30 April 204
		Awareness measured over 9 categories is currently at 67%	Promote collaborative working within UW and with Worcestershire County and Worcester City Councils and other 3rd sector organisations. Coordinate regular meetings and actively seek out initiatives where resources can be shared.	DoS attends regular cross sector meetings and promotes collaborative working with our partners such as West Mercia Police.
			Host 6 Worcester Polytechnic Institute student research projects in March-May 2024.	6 projects commenced and students arriving in Worcester on 8 March. Presentations of projects took place on 26 April 2024.

Clause from Sustainability policy	Target		Progress	Annual action		Progress
Food Provide projects and programmes that directly enhance wellbeing including healthy and sustainable food. Optimise resource efficiency and ethical procurement including Fairtrade and stimulating a shift to sustainable models of consumption.	Retain Sustainable Restaurant Association 3-star certification.		3-star SRA accreditation retained	Implement, measure, and report on the defined key performance indicators outlined in the catering contract, including to reduce environmental impacts and promote positive societal impacts associated with food products and services.		3 star SRA accreditation retained which measures these areas and is independent. Delayed until August due to maternity leave
				Continue to promote food bank collections amongst students and staff to support those in food poverty.		Community Cupboard promoted and cheapest places to shop posts updated on STO
				Establish a 'Social Kitchen' where the University's Head Chef teaches students how to cook plant-based meals in a workshop format.		Social Kitchen events planned for March and May. Only 1 held.
	Obtain MSC status.		MSC status not yet re-accredited.	Invite plant-based universities to a Midlands Sustainability Network meeting to share learning and best practice; implement Green Impact plant-based diet project.		Meeting held.
	Retain Fairtrade Status in June 2025.		Fairtrade every 2 years due July 2025	Launch reusable food containers in the main dining room.		'Caulibox was launched week commencing 05/02/2024 in the main Dining Hall. Successful launch, but early stages. This will be reviewed with an aim to expand across more outlets by September 2024.

Detailed Summary of Carbon Emission Targets

The University's aim is to achieve net zero emissions by 2030 against a new baseline year of 2018/19.

The University's total emissions during this new baseline year were 21,931 tCO2e.

As set out in the Strategy, the University aims to reduce its direct and indirect carbon emissions by 50%. It will offset the remaining emissions in credible sector-specific offsetting and carbon sequestration schemes. The following report discusses the University's performance against our overarching carbon emissions targets with year-on-year comparisons.

Direct Emissions (Scopes 1&2)

The University's direct carbon footprint includes both Scope 1 and Scope 2 emissions.

Scope 1 emissions include emissions from:

- Gas burned in university boilers
- Fuel used in university fleet vehicles
- Fugitive emissions from any leaks in university air conditioning and refrigeration units
- Any other fuels burned on-site

Scope 2 emissions include emissions from:

- Purchased electricity

Of these emissions categories, emissions from gas and electricity are the most material and are therefore prioritised for measuring, monitoring, and reporting.

The University measures and reports on its direct carbon footprint in three ways:

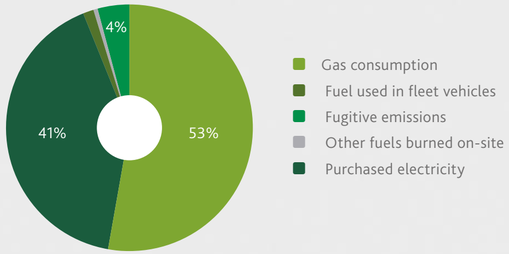
1. Absolute carbon emissions

The University's direct carbon footprint decreased by 7% between 2022/23 and 2023/24, with a decrease of 31% from the 2018/19 baseline year.

2018/19	2022/23	2023/24
3,230 tCO2e	2,409 tCO2e	2,241 tCO2e

As seen in the chart below, emissions from gas comprised 53% of the University's direct carbon footprint across 2023/24, with emissions from electricity accounting for 41%.

Direct Carbon Emissions across 2023/24 by Emission Source



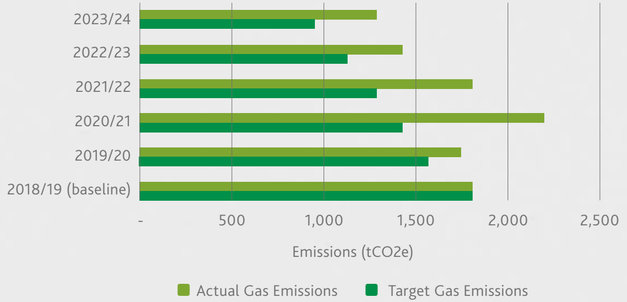
As set out in the Energy and Water Management Strategy, to achieve net zero by 2030, combined emissions from gas and electricity consumption must be reduced by an average of 8.4%. In terms of emissions from gas (baseline figure of 1,782 tCO2e), this translates to an average reduction of 150 tCO2e pa. In terms of emissions from electricity (baseline figure of 1,398 tCO2e), this translates to an average reduction of 117 tCO2e pa.

Between 2022/23 and 2023/24, the University reduced emissions from gas by 265 tCO2e. This is mainly due to the improved implementation of the University's Heating and Comfort Policy, which broadly requires that space heating be kept to 19C (+-1C) across the estate.

Whilst the University has exceeded the 8.4% reduction target for emissions from gas between 2022/23 and 2023/24, the University has not achieved the required overall reduction of 42% from the baseline year.

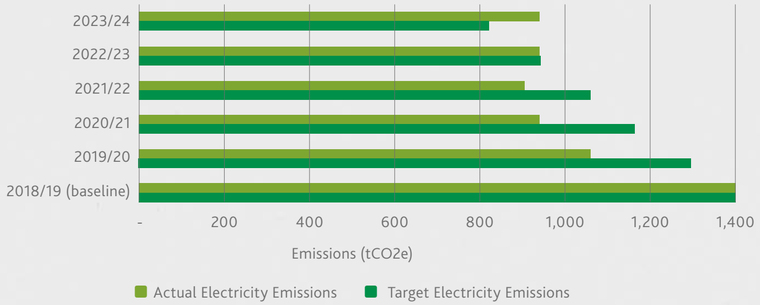
Actual emissions from gas are compared with targeted emissions in the chart below:

Annual Comparisons of Actual Gas Emissions (tCO2e) against Target Gas Emissions



Whilst less progress has been made towards achieving emissions from gas reduction targets, emissions from electricity have reduced considerably since the 2018/19 baseline. The University exceeded its emissions from electricity reduction targets across 2019/20, 2020/21 and 2021/22, achieving an average 12% reduction pa. However, across 2022/23, this progress slowed, and this year, the University has not attained its emissions reduction target for electricity for the first time since the target was set. Performance is shown in the chart (right):

Annual Comparisons of Actual Electricity Emissions (tCO2e) against Target Electricity Emissions



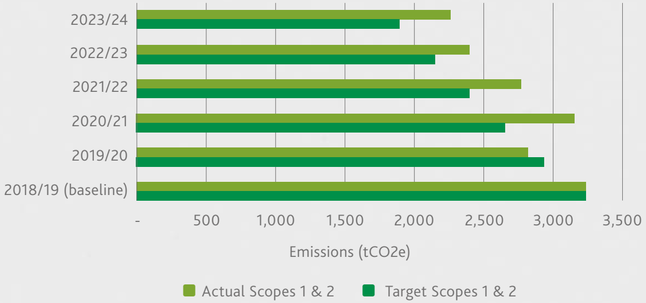
As seen in the chart, emissions from electricity have remained steady since 2020/21, indicating that unless significant action is taken to reduce emissions from electricity, the University is likely to miss future emissions reduction targets.

Carbon emission conversion factors for electricity vary considerably yearly due to ongoing work to decarbonise the national grid. For example, 1kWh of electricity was equivalent to 0.49 kgCO2e in 2014 and 0.21 kgCO2e in 2024. This makes it difficult to set meaningful decarbonisation targets for electricity consumption, as carbon emissions from electricity will reduce over time independent of any steps the University takes to decarbonise its electricity supplies. This report, therefore, recommends shifting away from an emissions reduction target for electricity and instead opting to set targets for kWh consumption and on-site generation. By setting these targets, the University will also be better placed to account for the significant increase in electricity consumption that the University expects to see with the electrification of heat.

As well as emissions from gas and electricity, the University's direct carbon footprint also includes emissions from fuel burned in fleet vehicles, fugitive emissions from refrigerant leaks, and any other fuels burned on-site.

In line with the emissions reduction targets for gas and electricity, the University has set a target to reduce its overall direct carbon emissions by 8.4% annually from a 2018/19 baseline. Progress against this target can be seen in the chart below:

Annual Comparisons of Actual Direct Emissions (Scopes 1&2) (tCO2e) against Target Direct Emissions



2. In relation to the number of students and staff at the University

In 2018/19, the University had 9,304 FTE staff and students combined. Since then, this figure has fluctuated. In 2023/24, the number of FTE staff and students was 9,915, a slight increase on the baseline total.

In 2018/19, direct carbon emissions per FTE staff and student was 0.35 tCO2e/FTE. In 2023/24, this figure had dropped to 0.23 tCO2e/FTE – a 35% reduction in carbon emissions per FTE.

3. In relation to the University's estate

The size of the University's estate has increased considerably since the 2018/19 baseline year, from 81,772 m2 in 2018/19 to 87,405 m2 in 2023/24. At the same time, several energy efficiency projects have been delivered, including the expansion of the University's Building Management System (BMS), the replacement of inefficient lighting with LED alternatives, and the expansion of the University's solar photovoltaic (PV) and solar thermal estate.

In 2018/19, the estate's direct carbon emissions per m2 was 0.040 tCO2e. This figure dropped to 0.026 tCO2e/m2 in 2023/24, representing a 35% decrease in space carbon intensity and evidencing the effectiveness of the various energy efficiency projects that have taken place during this period.

Indirect Emissions (Scope 3)

The University's indirect carbon footprint consists of Scope 3 emissions. Scope 3 emissions include emissions from a wide range of activities, with the most material being:

- Purchased goods and services (procurement)
- Student travel (term-time and out of term-time), and
- Employee commuting

The University's indirect carbon footprint is so-called because these are emissions categories that the University can influence but cannot directly control.

The University does not have a blanket Scope 3 emissions reduction pathway to 2030. However, several Scope 3 activities have individual interim targets. This report assumes a Scope 3 emissions reduction target of 5% pa (from 2018/19).

As seen in the table below, the University's indirect carbon footprint experienced a slight decrease of 4% between 2022/23 and 2023/24. However, there has been a considerable increase of 52% from the 2018/19 baseline year.

2018/19	2022/23	2023/24
18,701 tCO2e	29,673 tCO2e	28,479 tCO2e

Table to show indirect carbon emissions across FYs 2018/19, 2022/23, and 2023/24

In 2018/19, the University's Scope 3 emissions totalled 18,701 tCO2e. Between 2018/19 and 2020/21, the University exceeded its Scope 3 emissions reduction targets, achieving an average reduction of 13% pa across this period. This trend was reversed in 2021/22 due to a significant jump in emissions from procurement driven by major capital projects, namely the redevelopment of the Elizabeth Garrett Anderson building.

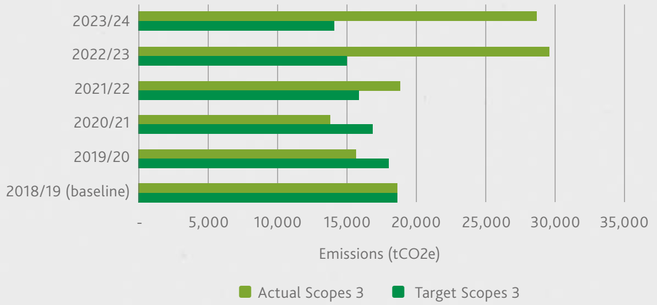
In 2022/23, the University oversaw another significant increase in Scope 3 emissions of 11,136 tCO2e (from 18,537 tCO2e in 2021/22 to 29,673 tCO2e in 2022/23). This increase was due to the expansion of the University's indirect carbon footprint, which included student travel to/from students' home addresses and downstream leased assets. The decision to include these activities in the University's indirect carbon footprint came after the publication of the Standardised Carbon Emissions Reporting Framework for Further and Higher Education (SEF) in 2023. This framework aims to standardise reporting on carbon emissions across the further and higher education sectors.

The slight decrease in emissions between 2022/23 – and 2023/24 is due to a significant 38% reduction in emissions associated with procurement (from 15,540 tCO2e in 2022/23 to 9,617 tCO2e in 2023/24). However, whilst considerable progress to reduce emissions from procurement was made, emissions from travel (staff and student) increased significantly, with a 31% increase in emissions from student travel (12,903 tCO2e in 2022/23 to 16,948 tCO2e in 2023/24) and a 70% increase in emissions from staff commutes (from 777 tCO2e in 2022/23 to 1,317 tCO2e in 2023/24).

There are several critical contextual factors to consider when considering the changes in these emission categories. For example, whilst the reduction in emissions from procurement should be celebrated, it should also be noted that 2023/24 represented an atypical year for purchasing activities at the University. Therefore, this reduction in emissions is not necessarily part of a sustained trend. Regarding emissions from travel, this increase is due to increased student numbers (particularly international students).

The University's progress against the target of a 5% pa reduction of indirect carbon emissions from 2018/19 to 2030/31 can be seen in the chart below:

Annual Comparisons of Indirect Emissions (Scope 3) (tCO2e) against Target Indirect Emissions



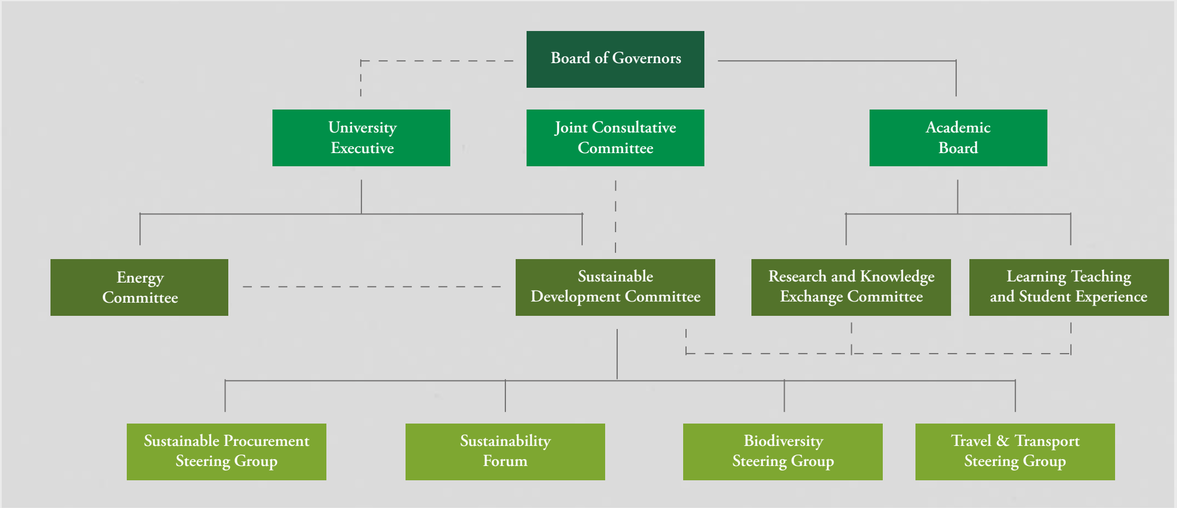
Considering the above, this report recommends that the University review its indirect emissions targets to accommodate for the expansion of the reporting scope discussed above and to account for more recent trends across different emissions categories. Coinciding with a review of targets, this report also recommends refreshing the University's decarbonisation plan and developing a credible offsetting strategy for difficult-to-decarbonise emissions.

Data tables show year-on-year progress against carbon reduction targets across all Scopes using a RAG rating system and are available to view online **www.worcester.ac.uk/documents/Carbon-Emmisions-Targets-Progress-Report-23-24-approved-9.1.25.docx**

Governance and External Accreditations

We were one of the first universities in the country to have student officers as full members of our Board of Governors and its key committees, including the Sustainable Development Committee, Finance and Development, Audit, and the Remunerations Committees. The University's annual accounts public benefit section is mapped to the Sustainable Development Goals.

https://www.worcester.ac.uk/documents/Report-and-Financial-Statements-31-July-2024.pdf



The University continues successfully implementing an Environmental Management System (EMS) through the EcoCampus framework. We completed an ISO14001:2015 certification audit and became the second university in the UK to transition to the new standard in 2016. Our ISO14001:2015 documentation is being used by our auditors as best practice examples, thereby sharing our knowledge within the sector and across industries.

An EMS provides the University with a structured, long-term approach to managing and reducing its impact on the environment and establishing ways of continually improving its performance. The University sets annual quantitative targets and action plans and monitors and publicly reports on scopes 1, 2 and 3 emissions, biodiversity, and food.

More information and documentation can be found at:**www.worcester. ac.uk/about/sustainability/what-we-do/environmental-management-system.aspx**

ENERGY MANAGEMENT SYSTEM

- The University has been accredited with the ISO 50001:2018 Energy Management System covering all activities, products and services across the entire institution.
- The EnMS scope includes the University's two major fuel types, natural gas and electricity. The accreditation is valid until October 2026.

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

Risks, Opportunities and Materiality

This is an important area for the University to keep under review and is an integral part of the University's ISO14001:2015 Environmental Management System. It is designed to identify and give significance to sustainability and environmental materiality, as well as aspects and impacts created by the activities and services. The University of Worcester sees its commitment to society as much broader than mitigating its negative impacts and focusing its resources on the positive societal effects of activities. Higher Education has a unique role in this and is one of the key values of the University. Therefore, while noting and managing potential harm, prominence is given to positive impacts and materiality.

Sustainability education prepares people to cope with, manage and shape social, economic, and ecological conditions characterised by change, uncertainty, risk, and complexity. Teaching our students about this has the most significant societal impact in the formal or informal curriculum.

Sustainable Leadership Scorecard

The assessment of what is material is a matter of professional judgment, and we have utilised the wisdom of the Sustainable Development Committee to help set and identify these over a series of workshops, including reviewing materiality and progress using the sustainability leadership scorecard, where we achieve a gold rating

Gold	
All	**81%**

Leadership and Governance		**82%**
Health and Wellbeing	Platinum	88%
Leadership	Platinum	91%
Risk	Silver	56%
Staff Engagement and Human Resources	Platinum	91%

Estates and Operations		**88%**
Biodiversity	Platinum	100%
Climate Change Adaptation	Gold	72%
Construction and Renovation	Platinum	94%
Energy	Platinum	97%
Resource Efficiency and Waste	Platinum	94%
Travel and Transport	Platinum	91%
Water	Silver	69%

Partnership and Engagement		**74%**
Business and Industry Interface	Bronze	47%
Community and Public Engagement	Platinum	91%
Food and Drink	Gold	75%
Procurement and Supplier Engagement	Gold	81%

Learning, Teaching and Research		**80%**
Learning and Teaching	Gold	81%
Research	Gold	75%
Student Engagement	Gold	84%

INTRODUCTION STRATEGY RESEARCH CASE STUDIES KEY TARGETS GOVERNANCE

Achievements

Responsible Futures Accreditation

We achieved Responsible Futures accreditation from the NUS as one of the inaugural pilots. This accreditation is for our whole institution (University and Students' Union) approach to social responsibility and sustainability. We have been reaccredited four times, the latest in August 2024. The accreditation is valid for two years, and we have a robust action plan in place to take the learning from our last audit to make further improvements in embedding sustainability into the taught, informal, and subliminal curriculum, working closely with the Students' Union.

The Times Higher Education Impact League

The University of Worcester ranked 1st in the UK for Quality Education in the rankings by the Times Higher Education Impact League.

The University has consistently been in the top 5 in the UK in this category every year since the Impact Rankings were introduced in 2019. It has also been ranked in the top 10 in the UK for Gender Equality in all years of the rankings. The Times Higher Education Rankings identify universities around the world which excel in delivering the United Nations Sustainable Development Goals, comparing more than 2000 institutions across the globe.

Green Gowns

The University was shortlisted in the Green Gown Awards 2024, The University's online sustainability magazine 'Sus Things Out' was named as a finalist in the Digital Futures category for this year's Green Gown Awards. The blog was started 10 years ago by students, lecturers, and expert practitioners to share stories about how University of Worcester students and other contributors work to combat climate change and its impacts. Sus Things Out showcases internal and external events, student-led projects, talks, and conferences on campus and in the wider community.

Green Apple

International Green Apple Awards for Environmental Best Practice 2024

The University was Commended in the International Green Apple Environment Awards for its digital publishing project, which celebrated its tenth anniversary in 2024.

People & Planet University League

The University of Worcester has been awarded First Class Honours for environmental sustainability in the latest People & Planet national rankings. This is the 15th straight year that the University, one of Britain's most sustainable, has earned First Class Honours. People & Planet's University League has placed the University ninth out of 149 UK institutions in its latest 2024/25 table.

The University scored 100% in 3 of the 14 categories and 90% or over in another 3 ranking 6th overall.

The league, compiled annually by the UK student campaigning network People & Planet, ranks universities by environmental and ethical performance. They look at aspects including environmental policy, carbon management, how sustainably food is produced, and how the University equips students with the knowledge and understanding of sustainability, energy sources, waste and recycling, and carbon and water use reduction.

For more information see:
www.worcester.ac.uk/about/sustainability
and www.susthingsout.com

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