



Climate Action

Annual Report 2023-24



UNIVERSITY OF
BATH

Message from our Vice Chancellor

“At the University of Bath, we acknowledge our responsibilities and recognise the role we can play in addressing society’s biggest challenges, including sustainability and climate change. Through our institutional response, we are striving not only to empower our students and deliver research with impact but also to consider how we, as a large organisation, can make operational and behavioural changes to reduce our environmental footprint.

In the past year, we have been delighted to maintain our leading status in both national and world rankings, including being awarded triple Gold in the Teaching Excellence Framework (TEF) 2024 in recognition of our strong focus on both education and student experience. Embedding sustainability into the curriculum means our students will have the knowledge, skills and capabilities to become innovators and leaders who tackle the challenges of climate change both now and in the future.

We were also pleased to be in the Top 100 in the QS World University Rankings: Sustainability 2024. The University ranked 92nd out of 1,403 universities, scoring highly in each of the three performance categories of Environmental Impact, Social Impact and Governance. Our research has developed solutions which are already delivering real emission reductions, whilst current work will generate solutions for the future – not only in transitioning to the low carbon economy but also in building adaptive capacity and resilience for a changed climate.

Within our University Strategy, we have a clear commitment to environmental best practice and, in the past year, we have extended this commitment through the appointment of a new Director of Sustainability, Richard Jackson. Richard will lead on further strengthening the University’s efforts in embedding sustainability in our operations, working with key stakeholders, within and outside of the University, to deliver on opportunities that align with our sustainability agenda and the United Nations Sustainable Development Goals.”

Professor Ian White, Vice-Chancellor and President

“Institutions like the University of Bath have a fundamental role to play in addressing the sustainability challenges facing our society and planet. Whether it is climate change, unsustainable consumption or biodiversity loss, the University can and must look at how education, research, engagement, partnerships, and our own operations can be shaped to tackle these challenges. This report illustrates the great progress that Bath is making to embed sustainability across all of these activities whilst acknowledging that there is more to be done. I am really excited to join the University and looking forward to working with colleagues, students and partners to move things onwards and upwards.”

Richard Jackson, Director of Sustainability

“The Climate Action team do a wonderful job in driving the University’s commitment on climate action. Considering sustainability is an issue that students in Bath deeply care about, we as the SU profoundly endorse the effort to make some changes on how we approach sustainability. We have worked alongside the Climate Action team to produce our own in-house initiatives, and we very much support those efforts put forward and described in this report. Considering both the SU and the University have declared climate emergencies, it is vital that we continue to approach the issue of climate change with the urgency and seriousness it requires.”

Jimena Alamo, Students’ Union President

Internal audit

The University of Bath's Internal Audit Department undertook an independent assessment of the carbon data presented within the Climate Action Annual Report. The opinion of the Internal Audit was as follows:

"In our opinion, we consider that Reasonable Assurance can be given with respect to the adequacy and effectiveness of the University's arrangements for managing the risks relating to the accuracy and reliability of the information and data collected relating to the University's Carbon footprint. Based on the procedures we have performed nothing has come to our attention that causes us to believe that the carbon emissions reported within the Climate Action Annual Report 2023-24 for the year ended 31 July 2023, has not been prepared, in all material respects, in accordance with the adopted University methodology that also materially complies with the Alliance for Sustainability Leadership in Education-Standardised Carbon Emissions Reporting for Further and Higher Education."*

The full report of the findings of the Internal Audit, together with any identified areas of improvement to the collection processes, methodologies, and documentation, will be presented to the Audit and Risk Assurance Committee.



*This is based upon the upon the guidance of the internationally recognised Greenhouse Gas Protocol.

Contents

Executive summary	5	Partnerships	32
Introduction	7	Organisational change	37
Monitoring progress	9	Students' Union	42
Education	12	Horizon Scanning	45
Research	19	An external view of our progress	48
Footprint	25	Appendices	50

Executive Summary

In May 2020, the University of Bath declared a climate emergency and set out a Climate Action Framework around four thematic areas (education; research; footprint; and partnerships) and 11 guiding principles. This Annual Report sets out progress against these guiding principles over the past year.

The Climate Action Framework represents a whole institution endeavour. Fundamental to its success is building climate action into the Institution's strategies, policies, and plans. Over the past year, the Institution has moved forward with particular attention to embedding climate into governance, decision-making, and strategic risk management.

Integrating Climate Action into our Education and Research programmes and projects is a significant part of the Framework and is helping to set Bath as a benchmark for other Higher Education Institutions. The work on embedding sustainability and climate into curriculum transformation is now well underway, and over the next year, we will be assessing its impact.

Similarly, Bath is leading several research projects focused on building our understanding of the climate crisis, its impact and some of the ways in which we might mitigate this. Whether it is understanding the economic impact of climate change or finding alternatives to fossil fuel products, Bath has experts across its academic portfolio involved in climate-focused research.

In comparison to last year, our total emissions have increased by 24% to 130 ktCO₂e. This is due to a number of factors which include: changes to emissions factors for travel and electricity which have negatively affected our figures; increases in our business activity following the COVID downturn; and the effects of inflation on the costs of products which we use (and therefore reflected in scope 3 emissions).

Despite this, work on reducing our scope 1 and 2 emissions is ongoing and we are increasingly looking to use our data to shape these efforts. Initiatives such as the Thermal Comfort Policy and the Laboratory Efficiency Assessment Framework (LEAF) will help to drive down our energy use and subsequently reduce our emissions too. We are also beginning to look at opportunities for decarbonising some of the energy systems through our Estates Strategy and capital programme. Scope 3 emissions are an enormous challenge for all organisations, both in terms of measuring and reducing them, and Bath is leading the way amongst universities in addressing this area.

There remain some areas which need further consideration. Internationalisation is a necessary part of the way we operate and engage with the world, but it is recognised as a cause of climate impact. This area needs wider engagement across the Higher Education sector, and we will look to work through bodies such as the EAUC to identify potential opportunities.

Our community remains supportive of the institution's ambitions around the climate crisis, and we hope that this report provides the motivation and inspiration for further engagement and participation from the community.

Education	Research	Footprint	Partnerships	Organisational Change
<p>49% of students are experiencing some level of climate or sustainability education through their course.³</p> <ul style="list-style-type: none">✔ held the biggest ever UK Climate Fresk (an interactive climate change workshop)✔ new MSc Decarbonisation course launched <p>Read more about these and other innovative curriculum development projects on page 13</p>	<p>29% staff and 38% students are conducting research that aligns with a 1.5°C future.²</p> <ul style="list-style-type: none">✔ launched several multimillion-pound research projects to tackle climate change in various focus areas, including construction, transport, energy and food production✔ 38 labs certified sustainable to Bronze LEAF standard, and one Gold <p>Read about impactful new projects launched in the past year on page 19</p> <p>Find out about sustainability actions being taking in labs on page 20</p>	<p>The University carbon footprint has increased 24% compared to the previous year, due to factors both within and beyond our control.</p> <p>See full details on page 26</p> <ul style="list-style-type: none">✔ new Thermal Comfort Policy could save up to 15% of gas use annually✔ spend on beef and lamb in catering and The Market down 90% <p>Read more in the case study on page 28</p> <p>Read more in the case study on page 30</p>	<ul style="list-style-type: none">✔ launched Climate Ambassadors scheme to connect climate experts with local schools✔ ActNowFilm premiered at COP28 where the University joined the official delegation <p>Read more about this on page 35</p> <p>Discover more about this pioneering project on page 36</p>	<p>73% of staff and 55% of students are aware of the University's response to climate change.³</p> <ul style="list-style-type: none">✔ first Climate Action Awards celebrated 150+ staff and student change makers✔ pilot Climate Action training launched with Campus Services department <p>Find out more about the pioneering change makers who are making waves for sustainability on page 40</p> <p>Hear how this is making impact in the case study on page 41</p>

Introduction

Welcome to our Annual Climate Action Report 2023-24

When the University declared a climate emergency in May 2020, it set out a ground-breaking vision to deliver a joined-up, whole institution response focusing on [11 Climate Action principles](#) across four thematic areas:

- ✔ **Education** – Empowering students as change makers for climate change
- ✔ **Research** – Delivering solutions to tackle the climate emergency
- ✔ **Footprint** – Net zero carbon emissions by 2040, reducing our institutional contribution to climate change
- ✔ **Partnerships** – Working to bring wider societal transformation in response to the climate crisis

As part of the University of Bath's Climate Action Framework, and our University Strategy 2021-26, the institution has stated that it will monitor carbon emissions as a measure of progress towards our net zero targets. This report details progress against the targets as well as the four thematic areas and 11 principles. It shares actions and updates from the past year (May 2023-May 2024), though the carbon footprint data covers the period August 2022-July 2023.



Climate Action and Sustainability

Climate change and biodiversity loss are arguably two of the biggest challenges facing humankind. Whilst they are often considered environmental in nature, their effects will impact on our economies and societies and are inherently interconnected to the UN's 17 [Sustainable Development Goals](#) (SDGs).

In this regard, whilst the scope of this report focuses explicitly on our response to the climate emergency, we recognise that climate action is positioned within broader sustainability challenges.

In November 2023, University of Bath appointed a Director of Sustainability, with responsibilities for overseeing the Climate Action Framework as well as considering how we articulate the University's contribution to the SDGs through our education, research, partnership and operational activities. Our approach to climate change will act as an important guide to how we address broader sustainability issues.

Sustainability and climate action continue to be driven forward by our internal community and external stakeholders, and we have as a University made progress in engaging individuals, groups and organisations in impactful action. Despite this, progress towards our Net Zero targets remains a significant challenge.

The results of the third Climate Action Survey reinforce the ongoing support and commitment from our community for the whole-University vision and strong action across all aspects of university life.



Education

98% of people support climate education at Bath¹



Research

40% of students and 39% of staff support rewarding research that tackles the climate crisis¹



Footprint

99% of people support changing how we produce goods and services¹



Partnerships

59% of people support the development of policies to guide who the University partners with²



Community

92% of our staff and students are worried about climate change³

Monitoring Progress




To help you understand the progress the University is making against the [11 principles of our Climate Action Framework](#), we've categorised progress according to these statements:

 **We understand the challenges**

 **Initial progress has been made to tackle these challenges**

 **Plans are underway, and we're making progress**

 **Change is embedded and ongoing**

Principle	Progress
Carbon emissions reduction	 <ul style="list-style-type: none"> ✔ Emerging analysis of plans for campus decarbonisation ✔ Working to embed in new Estates Strategy, and to develop campus decarbonisation plan ✔ Piloting actions in key areas (such as procurement tenders) ✔ Behaviour change programme (LEAF) targets lab sustainability actions
Research and innovation	 <ul style="list-style-type: none"> ✔ Sustainability a core pillar of University Research strategy ✔ Ongoing research/operational collaborations through Living Lab projects such as with the Departments of Psychology and Architecture & Civil Engineering
Learning and teaching	 <ul style="list-style-type: none"> ✔ Climate Literacy and Climate Fresk workshop opportunities for new students ✔ Embedding of climate in all courses through curriculum transformation, but no systematic assessment of progress yet ✔ 3 courses piloted Global Citizenship module incorporating Climate Literacy

Monitoring Progress

Principle	Progress
University strategy	<div style="background-color: red; color: white; padding: 5px; text-align: center;">★ ★</div> <ul style="list-style-type: none"> ☑ Whole Institution approach to climate action ☑ Climate impact being built into all decision-making ☑ Climate mentioned in University strategy as a value ☑ Climate risks are flagged in the Strategic Risk Register
University governance	<div style="background-color: orange; color: white; padding: 5px; text-align: center;">★ ★ ★</div> <ul style="list-style-type: none"> ☑ All UEB, and Council papers include an assessment of climate action impact ☑ Annual publication of emissions, including all scopes ☑ Governance structure through Steering Group and reporting to Council ☑ New Director of Sustainability appointed
University campus emissions reduction and climate change adaptation	<div style="background-color: red; color: white; padding: 5px; text-align: center;">★ ★</div> <ul style="list-style-type: none"> ☑ Low carbon design considered on a case-by-case basis on individual projects ☑ Consultancy study has identified potential pathways to net zero ☑ Workshops to be held on adaptive needs of campus and supply chains
Internationalisation strategy	<div style="background-color: purple; color: white; padding: 5px; text-align: center;">★</div> <ul style="list-style-type: none"> ☑ Carbon impact of internationalisation recognised internally ☑ Initial discussions to explore opportunities for reducing impact of internationalisation on the climate

Monitoring Progress

Principle	Progress
Carbon management: (improving data quality)	 <ul style="list-style-type: none"> ✔ Measuring and reporting scope 1, 2 and 3 data, supported by analysis of data quality ✔ Independent internal audit and verification of data ✔ Initial work to explore how carbon goals can be integrated into capital projects
University finances	 <ul style="list-style-type: none"> ✔ Initial contextual information on carbon considered in funding decisions but systematic strategic approach not yet developed ✔ Carbon intensity of investment portfolio measured and reported, with intention to reduce intensity. Further work required
University community awareness and action	 <ul style="list-style-type: none"> ✔ Ongoing annual engagement programme across student and staff community ✔ Majority of University community aware of climate commitments
University of Bath: local leader and partner	 <ul style="list-style-type: none"> ✔ Participate in sector climate initiatives ✔ Involved in local forums ✔ Projects developed to support the local area/region to transition to net zero

Education

Empowering our students (and staff) through [education is a key tenet of our Climate Action Framework](#). Over the past year, we have made significant progress to embed climate change into teaching and learning at Bath.

Embedding climate change in education

We are on a journey to embed climate change across our education framework, and climate action is now integrated into the education strategy and development through:

- ✔ the Education Strategic Implementation Plan (ESIP) in which 'Sustainability and Green recovery' is an important objective.
- ✔ the Education, Quality and Standards Committee (EQSC) require all papers to explicitly include climate action.
- ✔ the Teaching Development Fund (TDF) criteria include Climate Action Principles.

Other work is taking place in faculties and departments to include climate action in Quality Assurance (QA) processes including Teaching and Learning Quality Committees and programme review.

Teaching staff

48%

are delivering climate or sustainability education in their practice³

Students

49%

experience climate or sustainability education through their course³

Developing the curriculum

As part of the University's aim to equip our graduates with the knowledge, confidence, and skills to conserve and protect our planet, we have been addressing the formal curriculum, both through embedding in current courses and by developing new ones. Key achievements in the past year include:

- ✔ the curriculum transformation project has a theme of 'Citizenship and Sustainability', through which climate change learning, skills and knowledge are being embedded. To support this, in collaboration with the Centre of Learning and Teaching, we have:
- ✔ delivered a collaborative pilot workshop as part of the MA Education programme curriculum transformation process, designed to embed sustainability knowledge and skills. This has led to content, assessment and learning outcomes of 10 units being aligned to sustainability and climate change.
- ✔ taken learnings from this pilot workshop to continue developing workshops that aim to provide a structured and accessible way for academic staff to embed sustainability competencies into their teaching.
- ✔ a [new MSc course in Decarbonisation](#) is recruiting for 2024-25.
- ✔ [we held the largest Climate Fresk](#) (an interactive climate change workshop) ever to happen outside France. Around 400 students from the Faculty of Engineering & Design took part, learning about the science behind climate change and how they can take action to help tackle the climate emergency through group activities and discussions.
- ✔ a resource hub has been developed to support embedding sustainability and climate change into curricula and will be launched in 2024.



Enhancing learning experiences

To complement and enhance students' curriculum learning related to climate action, optional informal learning experiences are offered.

- ✔ in 2023-24, we offered all incoming and existing students and staff multiple opportunities to undertake a Carbon Literacy course, with around 100 expected to achieve certification.
- ✔ a new Global Citizenship certificate, comprising Climate Literacy, Active Consent, Be the Change and Wellbeing, has been piloted with around 150 students on three courses.
- ✔ a new cohort of student Climate Leaders was recruited to work on strategically significant projects, which focus on internationalisation, student recognition, promoting climate positive careers, climate-friendly field trips, and embedding climate action into skills training.
- ✔ since 2019-20 the University has run several [Vertically Integrated Projects](#) (VIPs); This year, some of these VIPs have had a specific climate focus, including Students for Sustainable Food and Carers Centre Carbon Reduction Journey.
- ✔ taking Action at Bath was held in October 2023, offering students an opportunity to explore how to take part in extra-curricular activities and contribute to positive climate and social change while studying at Bath.
- ✔ the annual One Young World Bath event was held in March 2024, this year focusing on Climate Justice, Mental Health in Sports, and Peace and Reconciliation, with inspirational speakers, interactive workshops, and networking.



One Young World conference

Students making impact

Successful climate education will equip our students to be innovators and pioneers for change in whatever career or industry they choose, while also providing them with the skills and experience to make change as a student. There are many students and graduates that we would like to celebrate for making waves in the face of the climate crisis and have shared just a few of them here.



Lois Player

Doctoral researcher in environmental psychology

In 2023, Lois took up a policy fellowship with the Climate Change Committee to integrate behaviour change insights into fair climate policy recommendations for the Government.

"This experience reiterated to me that, in my future career, I want to work in an environment where my work has a genuine impact on policy decisions. I learnt a huge amount about how to translate academic research into useful policy insights, the key policy challenges the UK faces, and which evidence gaps are most important to address – which has impacted the way I approach research."

Lois Player



Beatrice Clementel

MSc International Development, Social Justice and Sustainability

Instead of undertaking a traditional dissertation, Bea worked with the Climate Action Team gaining professional experience as part of a practicum placement which involved creating a student guide to living sustainably as a student as well as developing student engagement plans and assets.

"I am so glad I got to do a practicum at Bath: as well as getting valuable experience that I could use in my future career, I met lots of amazing people and have taken the opportunity to put what I learnt into practice and make a real difference for students at my university."

Beatrice Clementel

Students making impact



Kristian Williams

BSc Politics and International Relations

Kristian undertook a placement in the University's Institute for Policy Research (IPR) where he joined the devoted ActNowFilm team to help create an inspirational video that both demonstrated the climate expertise held by young leaders and called for their inclusion in high-level negotiations.

"Contributing to this project, surrounded by such an exceptional, passionate team, provided me with renewed optimism on the possibility of committing my professional life towards the betterment of the world and those living within it."

Kristian Williams



Jessica Carwardine

MA International Higher Education Management

Working with the Climate Action Team as a client for her consultancy project, Jessica investigated the conflict between internationalisation ambitions and net zero targets as an opportunity for the University of Bath.

"This topic is a sector priority but one not many have engaged with in detail, so I was proud to help Bath analyse what more needs to be done and make suggestions for implementable recommendations. I have presented my work at two conferences, an opportunity that added value to my career and Bath's reputation in this area."

Jessica Carwardine

Graduates leading change



Lauren Eatwell

2007 graduate MEng Mechanical Engineering with German

As Head of Engineering at BAR Technologies, Lauren is helping design new ways to decarbonise the maritime sector and has recently been recognised in TIME's 100 Most Influential Climate Leaders in Business 2023. Under her leadership and with work from fellow Bath alumni Josh Chen and Will Hope, BAR Tech brought to market WindWings, large steel and glass sails that can be retrofitted onto cargo ships to harness wind power and reduce fuel consumption.



Guto Williams

2023 graduate MEng Mechanical Engineering

Upon completing his studies, Guto secured work with the Climate Action Team to put his education into immediate practice. Over three months, he developed processes and dashboards to display our Scope 3 procurement emissions. This work has not only improved our footprint calculation methods but also supports the University's journey to net zero with insights and data.

Subliminal curriculum

The [subliminal or 'hidden' curriculum](#) refers to a university's local practices, its campuses and residences, or more broadly, the environment in which students learn. Behaviour change campaigns and local good practices (for example, end-of-term waste initiatives and energy saving campaigns) are recognised as being part of a student's learning experience, as well as having pure operational benefits, and are hence an essential part of the curriculum.

In support of informal learning opportunities linked to climate change, we have:

- ✔ recruited eight students as Climate Champions to work with Campus Services and Climate Action team to deliver peer-to-peer advice that supports student behaviour change for sustainability.
- ✔ provided guidance during the induction process to encourage the inclusion of sustainability principles within student-
- ✔ Through the Climate Action blog, a series of thought pieces have been shared to staff and students and, this year, several pieces have been given to students as professional experience commissions and which provide peer insights and practical advice. created shared living agreements.



Climate champions

Research impact

Sustainability is one of the University's three key research themes, and groundbreaking work is taking place across the spectrum of disciplines covered by our research. In the context of tackling climate change, this includes work that aims to deliver immediate, and potentially shorter-term carbon emissions savings, as well as work where the impacts will be realised over a longer timescale.

Across the University we have experts researching solutions to the climate crisis from multiple angles, from changing behaviours and challenging the politics of climate change, to developing low carbon solutions to support the decarbonisation of industry.

In the past year, significant new projects with a sustainability focus include:

- ✔ [assessing the complete impact of different aviation fuels and resources](#)
- ✔ [a pioneering project aiming to make clean hydrogen buses a reality](#)
- ✔ [developing a tool to calculate the embodied carbon in buildings and projects](#)
- ✔ [exploring and developing revolutionary advances in food production](#)
- ✔ [investigating digitising power systems for the Department for Energy Security and Net Zero](#)
- ✔ [creating a new hydrogen research hub.](#)

In the headlines

In the past year, University of Bath researchers have published studies with striking conclusions for climate change, including:

- ✔ [week-long weather projections for 2080 illustrate danger of extreme future heatwaves](#)
- ✔ [fears about the future of the planet will impact all of us; it's how we act on them that matters](#)
- ✔ [secondary education needs to empower students to respond to climate emergency](#)
- ✔ [decarbonising UK industries could add less than 1% to prices](#)
- ✔ [Bath's Net Zero Carbon planning policy likely to drive more efficient buildings and cut energy bills](#)
- ✔ [university of Bath is home to UK's first pilot plant for recycling plastic lab waste](#)
- ✔ [scientists make common pain killers from pine trees instead of crude oil](#)

Reducing the impact of how we conduct research

Alongside the content and impact of our research, we are also considering the carbon impact of the way we conduct our research.

As signatories to the [Research Integrity Concordat](#), the University has launched a new dedicated digital platform to support our approach to research ethics governance. This recognises and incorporates a consideration of the ethical implications of our research on climate change, and how we reduce carbon emissions from our research.

Considering research infrastructure, we continue to embed sustainability in our lab practices and capital infrastructure investments. This includes doubling down on mechanisms to maximise equipment sharing, avoiding unnecessary duplication, and embedding sustainability criteria as part of the tender evaluations of new instrument purchases. Additional initiatives, such as providing remote access to key research instrumentation at weekends and evenings, help researchers quickly check on experiments without additional travel. Key Performance Indicators are due to be drawn up for the new Core Research Facility structure, which will include further targets for sustainable operations of this critical infrastructure, and guidelines will be developed to support academics when including sustainability statements for instrumentation included in grant proposals.

Work through the Laboratory Efficiency Assessment Framework (LEAF) has continued with ongoing efforts to recruit and certify labs:

- ✔ 114 labs across 10 departments are signed up to LEAF
- ✔ 38 of those have achieved Bronze accreditation
- ✔ [one lab in the Department of Electronic & Electrical Engineering achieved both Silver and Gold certification in February 2024](#)
- ✔ the Faculty of Humanities & Social Sciences is the first faculty to achieve 100% Bronze accreditation

Commencing in January 2024, the Climate Action Team is running a 7-month project funded by the Enhancing Research Culture fund. It is designed to facilitate and accelerate changes in research culture to further embed sustainability and empower colleagues to collaboratively drive change, through the LEAF platform. Outputs from the project will include a new Sustainable Labs Hub, containing practical guidance, information and supporting resources, tailored to the needs of lab users.

Experience elsewhere has shown that on average each LEAF accredited lab group can save £3-5k each year as well as minimising its environmental impact. Here at Bath, the [adjustment of Ultra Low Temperature \(ULT\) freezers in Life Sciences and Health has already saved 30% of their energy and carbon and around £15k running costs every year.](#)



CASE STUDY

Considering sustainability in research design

Considering and reducing environmental impact is increasingly being recognised as a critical issue and demanded by research funders, such as through UKRI's [Environmental Sustainability Strategy](#) and [Concordat](#) and Wellcome Trust's [Guidelines on Good Environmental Practice](#). In the past year, a number of research funding applications have required explicit recognition of associated environmental impacts, with commitments to sustainability made at the application stage.

An example of this is the new £13m national Centre of Excellence in water-based community health monitoring which is due to be established at Bath. Led by Professor Barbara Kasprzyk-Hordern, a co-director of Bath's Water Innovation Research Centre and a member of the University's Institute for Sustainability, the research bid demonstrated the new focus on sustainability in its application. Commitments included developing a comprehensive Net Zero strategy covering all areas of its operations as well as providing sustainability training to all staff and student members.

The integration of sustainability into the design of research conducted through this centre, fundamentally underpins the sustainability-positive focus of the centre itself, with significant positive impacts for local wildlife.



“As society takes measures to tackle the climate crisis, funders are recognising, with increasing importance, the need to reduce the impact of research. Instrumental to our successful bid was the early collaboration with the Climate Action Team, to complete a full carbon assessment and subsequent explanation of how we planned to minimise our impact; a requirement of the bid, introduced by Research England”

Professor Barbara Kasprzyk-Hordern, co-director of Bath's Water Innovation Research Centre and a member of the University's Institute for Sustainability

Collaborating for impact

Bath Beacons

This multidisciplinary initiative, empowers our research community to tackle major global challenges by building consortia for large-scale funding. A number of Beacons have focused on climate change, including 'Sustainable and automated transport research', 'Living well now and by 2050', and 'Future fuels'.

Earth System Governance Project

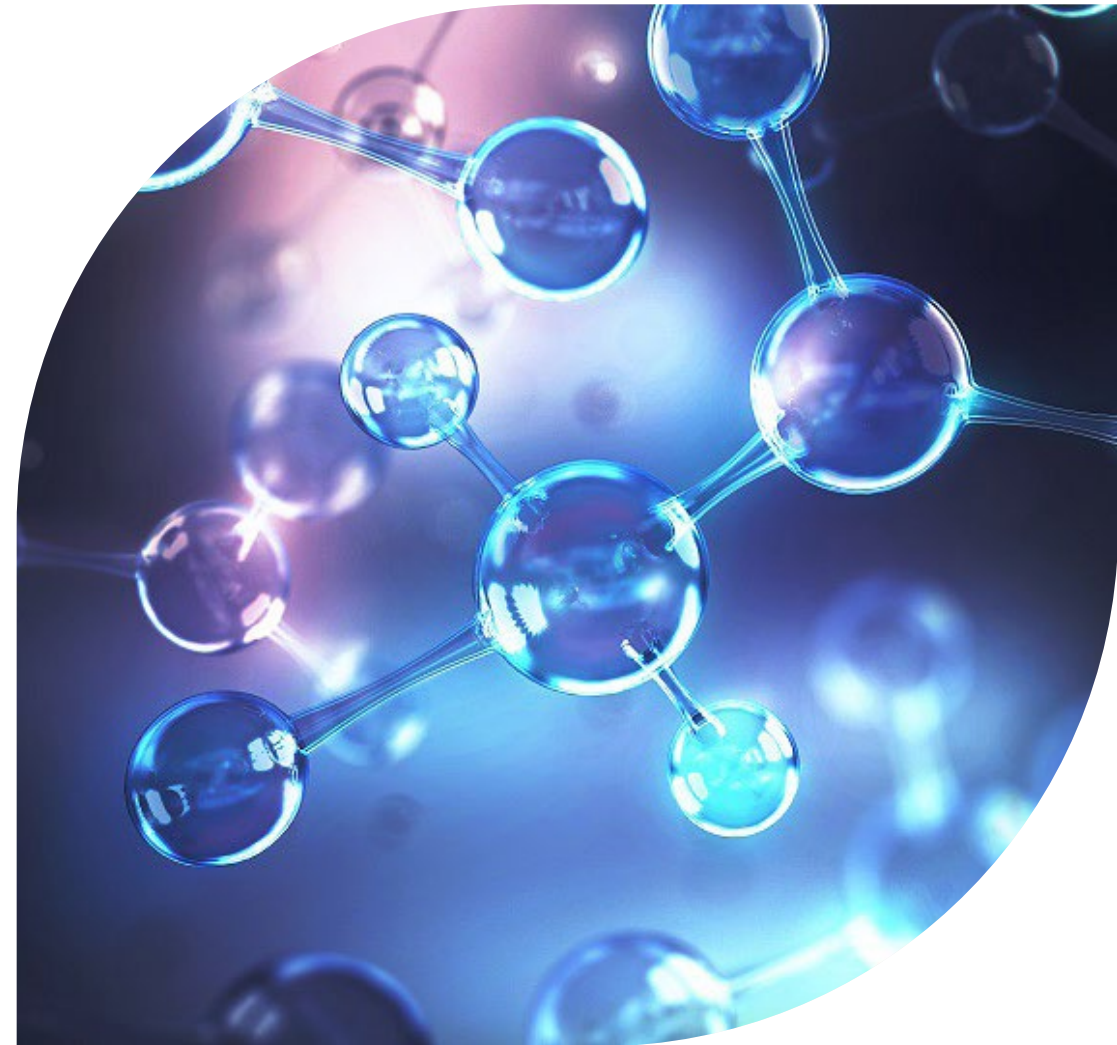
The University entered this new global interdisciplinary research network partnership in September 2022 to establish the Research Centre Bath as part of a Global Alliance. This will increase our international standing and reputation in the field of climate change and sustainability.

Ellen MacArthur Circular Economy Scheme

In June 2022, University of Bath was recognised by the Ellen MacArthur Foundation for its work on promoting a circular economy through learning and teaching, applied sustainability research and our Climate Action Framework.

GW4 Climate Alliance

This alliance brings together four research-intensive universities – Bath, Bristol, Cardiff, and Exeter – connecting researchers with policymakers, industry, and the public to influence change through long-term partnerships. In 2023, [Bath led a pilot project with GW4 investigating Scope 3 measurement and supply chain engagement](#), as we continue to be pioneers in the sector on this challenging aspect of climate action.



Retrofitting homes to push beyond Net Zero

A research project led jointly by the University of Bath and Cardiff University launched in 2023 to co-design energy efficient and low carbon housing with communities in Bristol and Swansea, thanks to £4.6 million from the Arts and Humanities Research Council (AHRC).

In this exciting partnership project, researchers from across the GW4 Alliance of Bath, Bristol, Cardiff, and Exeter universities will work with industry, community groups and local authorities to transform existing housing into 'Beyond Net Zero' liveable homes.

- ✔ the housing sector is responsible for around 20% of the UK's carbon footprint
- ✔ 80% of the homes that will be occupied in 2050 have already been built
- ✔ therefore, retrofitting the country's existing housing stock, to improve energy efficiency, is critical to achieving the UK's Net Zero targets

Billions of pounds in investment is needed to improve the energy efficiency of homes across the country. However, retrofitting is a significant design challenge and poorly executed measures can lead to problems with damp and mould, and poor design can cause damage to building fabric and cultural heritage. Current approaches rely heavily on synthetic and non-renewable materials, which can have negative environmental impacts. In some cases, the embodied carbon emissions of retrofitting measures can even exceed the carbon savings from reduced energy use.

The team will design, test, implement and monitor innovative, prototype, bio-based, lower-carbon solutions, to improve the energy efficiency and resilience of housing, and evaluate their performance compared to traditional synthetic materials. The goal is to create scalable and transferable designs and solutions to retrofit a greater number of houses and different house types.

"It is not enough to simply implement design solutions; we need to create comfortable liveable homes that are resilient to climate change and will withstand future weather events. Our design process will embed community participation at its centre by creating spaces for co-developing knowledge, sharing experiences, and reshaping designs for Beyond Net Zero homes. Our innovative solutions will use bio-based and non-extractive materials together with renewable energy supply and storage. We will explore the impact of these materials not only on achieving Net Zero design but also the potential impact on residents' comfort and wellbeing."

Professor Pete Walker, Department of Architecture & Civil Engineering and member of the Institute for Sustainability

Chris Skidmore OBE joins University to boost sustainability and climate research

Author of the Independent Government Review of Net Zero, Chris Skidmore OBE, has joined our Institute for Sustainability as a Professor of Practice, focusing on Net Zero Policy.

Chris Skidmore has held a number of ministerial positions and was twice Minister of State for Universities, Science, Research and Innovation from 2018-19 and then 2019-20, where he signed the UK's Net Zero targets into legislation.

As a Professor of Practice, he will join a community of academics working at Bath on the closely linked challenges of sustainability and climate change, including within the Institute for Policy Research, Institute for Sustainability and the Centre for Climate Change and Social Transformations. He brings a wealth of experience that he will use to contribute to Bath's leading work in these areas.



"I am delighted to have been appointed a Professor of Practice at Bath University, where I will be focusing on sustainability and net zero policy. I am pleased to have been given this opportunity to work alongside some leading academic practitioners, both in sustainability and the sciences, who are working on new technologies and materials to deliver on net zero, as well as University of Bath playing a key role in the Western Gateway and the GW4 Alliance of Universities who have done so much to lead on climate change policy."

Chris Skidmore OBE, Professor of Net Zero Practice

What is the cause of the carbon emissions we produce at the University?

Universities have a unique role to play in addressing the climate emergency, through our education and research, but also recognising our responsibility to reduce our own emissions.

- ✔ our research plays a critical role in understanding and fighting climate change, but it also [generates carbon emissions and environmental impacts](#) through the way it's carried out.
- ✔ our teaching empowers students to become future leaders and innovators in our response to the climate crisis, but it also produces emissions in its delivery and the movement of large volumes of students to and from Bath each year.
- ✔ the University campus is like a small town and, in common with the rest of society, produces emissions from the way our community travel, what we eat, our choices as consumers and the use of energy to heat and power our buildings and equipment.

These carbon emissions make up our carbon footprint.

Our emissions explained

Our greenhouse gas emissions are categorised into three scopes as per the international accounting tool, the [Greenhouse Gas Protocol](#), and tonnes of carbon dioxide equivalent (tCO₂e) is the standard unit for measuring carbon footprints.

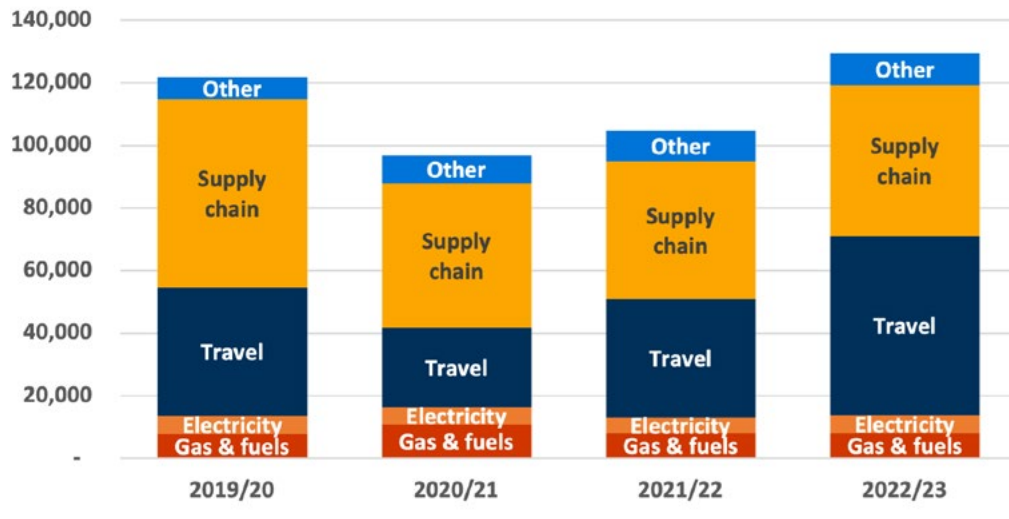
- ✔ **Scope 1** covers direct greenhouse gas emissions from sources owned or controlled by the University (mostly gas use in buildings).
- ✔ **Scope 2** covers indirect emissions from the electricity consumed by the University, which it does not generate itself.
- ✔ **Scope 3** covers the other indirect emissions that are associated with the University's activities, including construction, purchasing goods and services, staff business travel, student travel, commuting, waste, water, and investments.

In comparison with last year, our total emissions have increased by 24% to 130 ktCO₂e. A considerable proportion of this increase is outside the control of the University, such as air travel emissions factors.

What is an emissions factor?

An emissions factor is a numerical value representing the amount of a specific pollutant emitted, per unit of activity or product. It is essential for estimating and managing environmental impacts. They are defined annually by UK government (DEFRA).

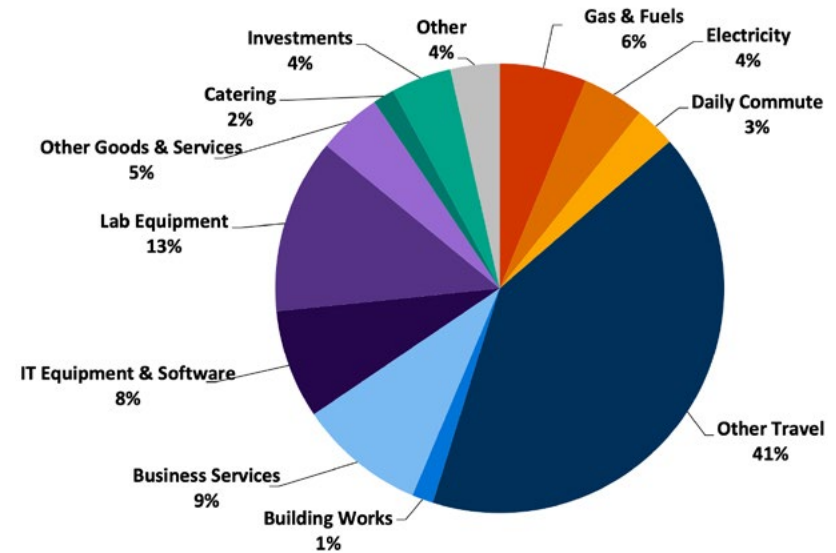
University Total Carbon Footprint (tCO₂e)



Changes to our footprint from 2021-22 and 2022-23:

- ✔ **Scope 1** emissions have been steady at 8,100 tCO₂e.
- ✔ **Scope 2** emissions have increased by 18% to 5,800 tCO₂e – this is due in approximate equal parts due to IAAPS becoming fully operational and an increase in the national grid emissions factor.
- ✔ **Scope 3** emissions have increased by 26% to 116,000 tCO₂e – top contributors to this change are:
 - 12 ktCO₂e: This increase is beyond the University's control due to a temporary 23%-37% rise in the emissions factor for air travel, which we anticipate will fall again in the next year or two.

In the 2022-23 academic year, our footprint comprised of:



- 10 ktCO₂e: We calculate the carbon emissions of our purchased goods and services based on expenditure. Last year, we spent approximately £20 million more on goods and services (excluding utilities and building construction). Inflation is a significant factor in this rise, but it is likely that purchasing of goods and services increased due to a 'return-to-normal' post-Covid.
- 5 ktCO₂e: The return-to-normal post-Covid in 2022-23 also led to a significant leap in business travel and associated emissions. This excludes the change in air travel emissions factors.

See Appendix 1 for an assessment of the confidence in the data in each category of our footprint.

Reducing our campus emissions

We are continuing to work on reducing emissions produced from our campus and operations, in line with our net zero targets.

The University was the first in the UK to set carbon targets in 2003. Between 2005-20 we achieved a 44% reduction in Scope 1 and 2 emissions against a backdrop of significant University expansion – our carbon emissions per square metre floor area, per student, or per £ turnover all fell by around 60%, with a saving of £1.5m every year. This makes achieving new carbon targets an even greater challenge and illustrates that many of the easier quick wins have already been achieved. Many of the remaining challenges are those with longer paybacks, more complex technical issues, and greater policy challenges.

A previously commissioned study on campus has identified interventions needed for achieving significant carbon reductions in campus buildings. It modelled various pathways optimised for carbon, cost, and disruption levels, and conclusions are now being integrated into a Scope 1 and 2 action plan, as well as into the University's long-term maintenance programme to enhance carbon reduction efforts.

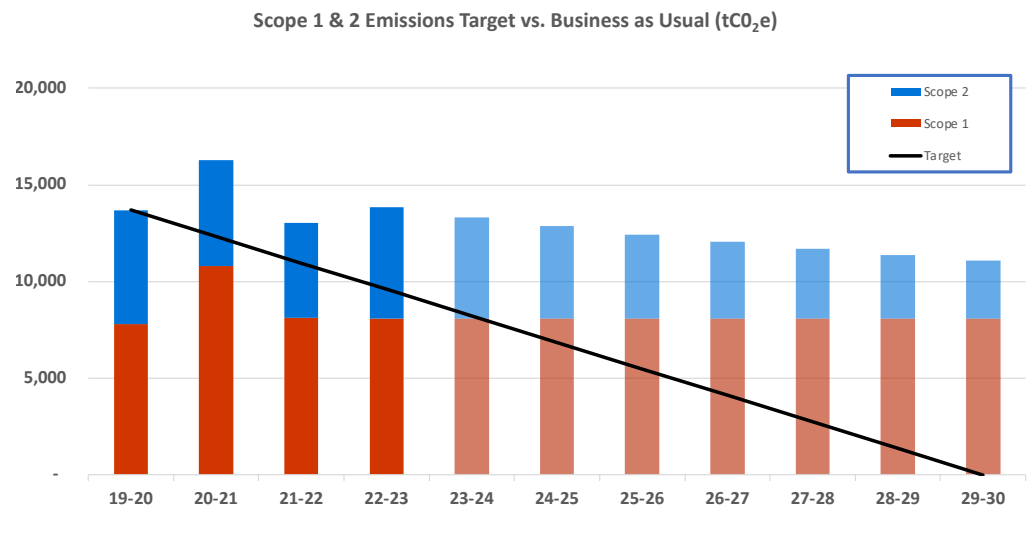
The University is looking at ways to embed sustainable building principles into current and future capital works. As part of this, Campus Infrastructure is working with the Climate Action Team to explore how net zero targets can be integrated into all capital projects.

The University is developing a new Estates Strategy, and carbon reduction and net zero targets will be a core priority for this.

The University is exploring an internal price of carbon to drive carbon reductions on projects. This would help to internalise the externalities associated with carbon emissions by assigning a monetary value to carbon pollution.

Decarbonising our campus will not be achieved through technical solutions alone, and behavioural interventions are vital to enable us to reach our Net Zero targets.

The graph below shows four years of actual scope 1 and 2 emissions, along with projected progress against our net zero target. Underlying these figures, gas consumption reduced by 2% to 43.3 GWh, and electricity consumption increased by 10% to 27.9 GWh. The projected scope 2 (electricity) reductions arise from forecast changes to UK grid emissions as further renewable energy is installed. This highlights the ongoing need to focus on the more challenging area of the decarbonisation of heat and other gas use.



Bold colours = reported figures (2019-23), Faint colours = projected figures with a business as usual approach (2023-30)

Case Study

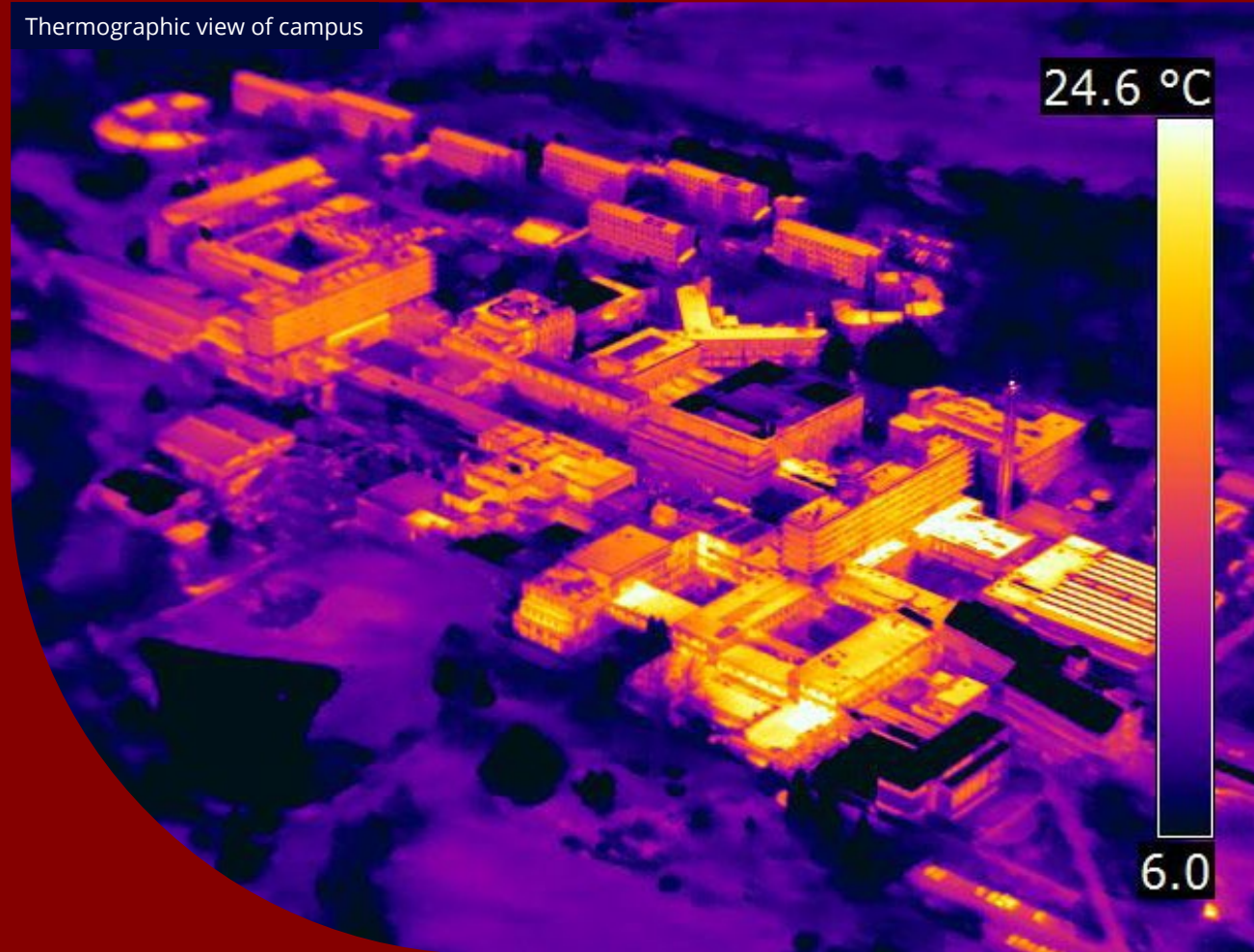
Thermal Comfort Policy

The University's commitment to reduce emissions includes being net zero in scope 1 and 2 emissions by 2030. An important part of realising this, is achieving good control of our use and consumption of gas and electricity. Most of the University's gas consumption heats our buildings, however previously there was no agreed policy on building internal temperatures and heating times which resulted in some buildings being heated above required temperatures for longer than needed.

The introduction of a **Thermal Comfort policy** in November 2023 will reduce energy consumption, and therefore associated financial costs and CO₂e emissions.

The introduction of this policy has the potential to save up to 15% of our annual gas consumption, reducing emissions by up to 1,700 tonnes of CO₂e annually.

Thermographic view of campus



Decarbonising our supply chain

Purchasing goods and services represents 36% of the University's carbon footprint and so is a key area of focus. Activities undertaken in the past year to support this include:

- ✔ developing a programme of support and operational mechanisms, which will include a new Sustainable Procurement Policy, to enable colleagues to effectively 'buy less and buy better'.
- ✔ trialling embedding carbon considerations in tenders and signalling to our suppliers that this will become an increasing area of focus.
- ✔ scope 3 planning tool developed to enable scenario modelling and high-level reduction planning.
- ✔ scope 3 supply chain dashboard created to allow emissions analysis and data sharing by faculties and departments.
- ✔ developing new policies, guidance and processes focused on IT equipment reuse and disposal.
- ✔ all new University suppliers are now encouraged to sign up to the NetPositives Net Zero Tool to support them in their own decarbonisation journeys.



Reducing emissions by changing our food offering

Moving into the second year of our Sustainable Food Commitment (SFC) we can reflect on some of the successes and challenges, reviewing our purpose, and setting out our vision for the future.

Key successes in 2022-23 academic year include:

- ✔ reducing dairy: Student-led Vertically Integrated Project supported the removal of an additional charge for oat milk in hot drinks in all campus outlets.
- ✔ reducing meat consumption: 90% spend reduction on ruminant meat in internal catering and The Market outlet, and the opening of Parade as a vegan cafe in September 2023.
- ✔ reducing food waste:
 - The Market and Fresh sold 681 Too Good to Go bags of short-dated food, saving 1,702.5 kg of CO₂e.
 - 3,860 Munch Boxes were sold, saving thousands of meals from going to waste.
 - 1.64 tonnes of coffee grounds from catering outlets were mixed with leaf mulch and used as soil enricher on campus.
- ✔ minimising packaging: 150,606 hot drinks were sold in reusable cups in campus outlets and the Exchange scheme has been extended to include cold drinks. Additionally, a Pizza box Exchange scheme has been introduced in The Lime Tree.

Ongoing challenges remain however, including aligning our commitments with sales and profitability, and sourcing high quality data to measure our impact and the effect of interventions.



Vegan verses non-vegan brownie challenge

With the cost-of-living crisis, it is also imperative that we balance interventions alongside a need to support our staff and students.

As we move forwards, we will continue to seek and act upon community feedback while exploring how we can align SFC objectives with catering performance. A key focus will also be to improve information displayed on the sustainability credentials of food and drink provision.

Case Study

Fitting out the top floor of our School of Management

During the summer and autumn of 2023, the top floor of the School of Management building underwent a full fit out. With a first for the University, the main contractor – Overbury – was required to provide a whole life carbon assessment of the work completed during the contract. The report received from Overbury at the end of the contract meets the requirements of the original tender and calculated the embodied carbon (emissions related to the materials used and the construction process) of the project at 162.2 tCO₂e. Their comprehensive report also provided the lifecycle emissions of the project, as well as detailed analysis of the methodology underlying the calculation.

We also compared the Overbury analysis against the expenditure methodology the university uses for our goods and services footprint. The cruder expenditure methodology calculates this project as having scope 3 emissions of 241 tCO₂e, which is 48% higher than the Overbury value. This demonstrates the benefits of a more accurate calculation.



School of Management building

Partnerships

We develop meaningful collaborative partnerships to help address the climate emergency across the higher education sector, nationally and internationally. Additionally, we form more local place-based relationships with the West of England Combined Authority (WECA) and Bath and North East Somerset (B&NES) Council.

Collaborating locally

- ✔ In November 2023, [Green Open Homes B&NES was held in Bath](#), to actively engage local residents in the opportunities for retrofitting their homes for energy efficiency. The project was supported by the Department of Architecture & Civil Engineering who provided academic expertise in developing case studies and advice for attendees, whilst students gained experience on the range and breadth of retrofit challenges in the community.
- ✔ In collaboration with Bath & West Community Energy and B&NES Council Green Transformation Team, University of Bath have formed a strategic retrofit advisory group. The aim is to increase the pace and scale of building decarbonisation through a fusion of research insights and retrofit practice.
- ✔ In support of staff and student participation in sustainable and nature-based activities, a [Pollinator Group was setup in 2023](#), bringing together over 50 volunteers to develop a previously unloved area of campus with funding provided by WECA.
- ✔ The University is jointly funding a Senior Travel Plan Officer role with B&NES Council, Royal United Hospitals Bath, and Bath Spa University, to ensure collaborative work across the region, improving our sustainable traffic networks and their accessibility for all.



Green Open Homes

Case Study

Our Shared City

The Student Community Partnership (SCP) is a joint venture between the Higher Education Institutions in Bath, including University of Bath and our Students' Union, and B&NES Council, to improve the relationship between long-term residents and student residents living in Bath.

Through this partnership, the following environmental projects have been carried out over the past year:

- ✔ taking part in the British Heart Foundation's annual Pack for Good campaign where donated clothes, books and household items saved an estimated 46.4 tonnes of waste from landfill and is expected to generate over £80,000 for the charity in 2022-23 (from all Bath sites).
- ✔ coordinated 10 community litter picks around Bath bringing together students, partner organisations and community members to participate in looking after our local environment.



"The SCP provides an effective framework for the eight partner organisations to work collaboratively to achieve their goals around sustainability. The SCP's Green Group is a key forum for sharing best practice and enabling partnership working to deliver greater impact of our joint initiatives."

Ghika Savva, Student Community Partnership Manager

Case Study

Pioneering for sustainable construction in Bath

Buildings and construction pose a considerable decarbonisation challenge, accounting for around 39% of global emissions. With academic expertise in this area, the University partnered with B&NES Council to help deliver their new, cutting-edge set of sustainable construction policies.

Introduced in January 2023, the new policy was the first of its kind to be adopted by a local authority. It goes beyond the current UK Building Regulations, covering both operational emissions (from heat, power and cooling), as well as the 'embodied' emissions that are released in a building's construction and maintenance.

A review led by Dr Will Hawkins into the first six months of the UK's first Net Zero Carbon construction policy, found that the policy is likely to establish significant carbon savings in new buildings and reduce energy bills for occupants.



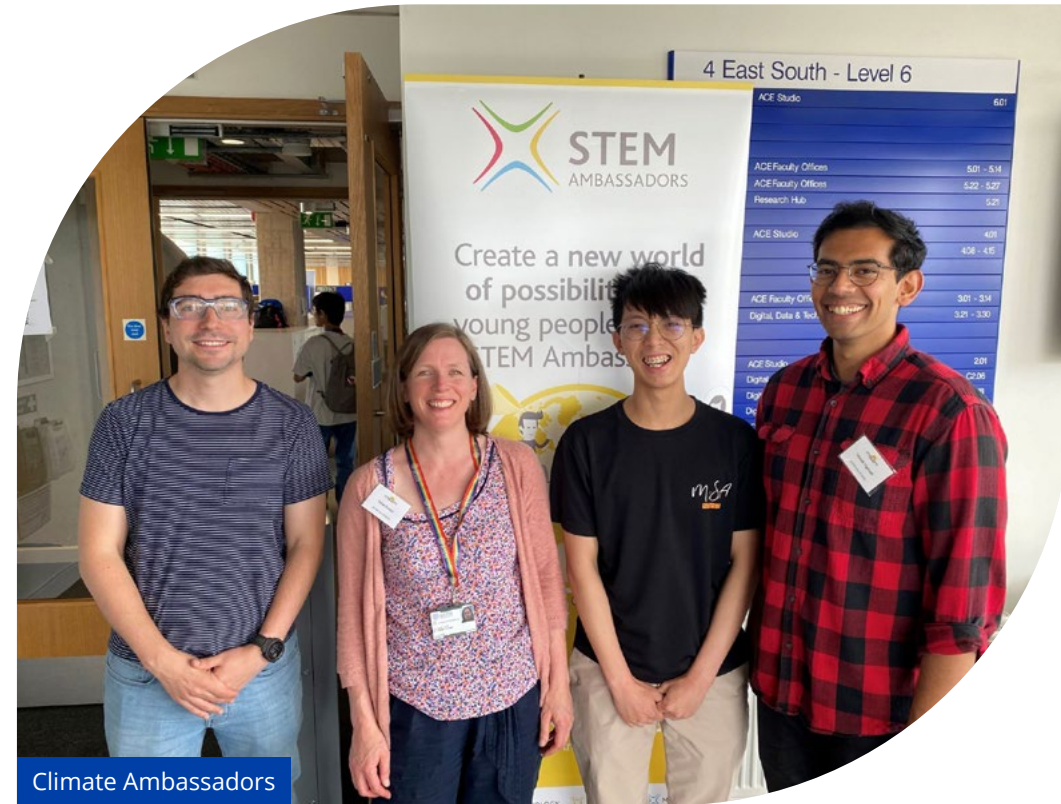
“Buildings directly account for a quarter of the UK’s greenhouse gas emissions, so early pioneers like B&NES Council can have big impacts both locally and further afield. Our collaboration aims to maximise the benefits for builders, developers and building occupiers, as well as the environment.

We found evidence that this policy is likely to make all new buildings much more energy efficient and will also boost the introduction and take-up of renewables, compared to the previous guidelines. This isn’t fully proven yet as the buildings are still to be built, but the evidence available so far is very encouraging in terms of carbon reduction.”

Dr Will Hawkins, Department of Architecture & Civil Engineering and member of the Institute for Sustainability

Regional impact

- ✔ As part of Santander's Employability Projects Scheme, [three students undertook funded internships](#) in summer 2023, with two of them taking on projects contributing to charities' carbon reduction plans. Jian Xin Lim and Eleanor Jones worked with Age UK and Froglife where they completed reviews of the charities' emissions and provided recommendations, with support from our Climate Action Team.
- ✔ University of Bath has joined a nationwide [Climate Ambassadors](#) initiative to connect climate leaders with schools and colleges to empower them and their students with skills to fight climate change. The scheme launched at Bath in 2023, accepting both student and staff volunteers from a range of disciplines and roles. At the end of June 2023, [the university hosted an inspiring Climate Ambassadors partnership event](#), welcoming students from schools across the Southwest for an immersive sustainability learning experience.
- ✔ In October 2023, the University ran a workshop bringing together local climate policy makers from B&NES Council and WECA with our researchers, to explore areas where we could contribute academic expertise to collectively tackling climate change challenges in the region.



National and global connections

- ✔ The University is an active member of EAUC (The Alliance for Sustainability Leadership in Education). In June 2023, we hosted the EAUC's Annual Conference, with the theme 'Conversations on Climate Solutions', which brought together sustainability professionals from across the higher education sector for two days of workshops, talks and enriching conversations.
- ✔ The University is a member of the Universities Policy Engagement Network (UPEN), comprised of 80 UK universities working together to increase public policy impact from their research. This offers a dedicated contact point for policymakers, and a collective response to requests for evidence.
- ✔ The Institute for Policy Research runs a popular Senior Civil Service Fellowship Programme, designed for senior policymakers and decision-makers from government and the third sector who want to develop their professional knowledge on enabling net zero for transport, buildings, and infrastructure. In the past year, it has successfully engaged and supported 22 policy fellows from organisations including the Environment Agency, DEFRA, the Department for Energy & Net Zero and Western Gateway. Academics from all Faculties and School have provided expertise through this programme.
- ✔ The ActNowFilm project is a film series which aims to amplify youth voices in the urgent climate debates. It's produced by our Institute for Policy Research (IPR) and Cambridge Zero and supported by the UK Universities Climate Network (UUCN). The latest film, [ActNowFilm: young people in conversation with climate experts](#), was shown at COP28 for the Youth, Children, Education and Skills Day and, from University of Bath, featured alumni and youth advocate Ione Howells, Professor of Environmental Psychology Lorraine Whitmarsh MBE, and Chris Skidmore OBE, Professor of Net Zero Policy.
- ✔ For the first time, University of Bath was part of the official United Nations Framework Convention on Climate Change (UNFCCC) delegation at COP28 in Dubai. Led by Amy Thompson, Head of Policy Programmes and Communications at the Institute for Policy Research (IPR), it was also attended by Dr Yixian Sun, Department of Social and Policy Sciences, and opens opportunities for Bath colleagues to attend future global conferences.

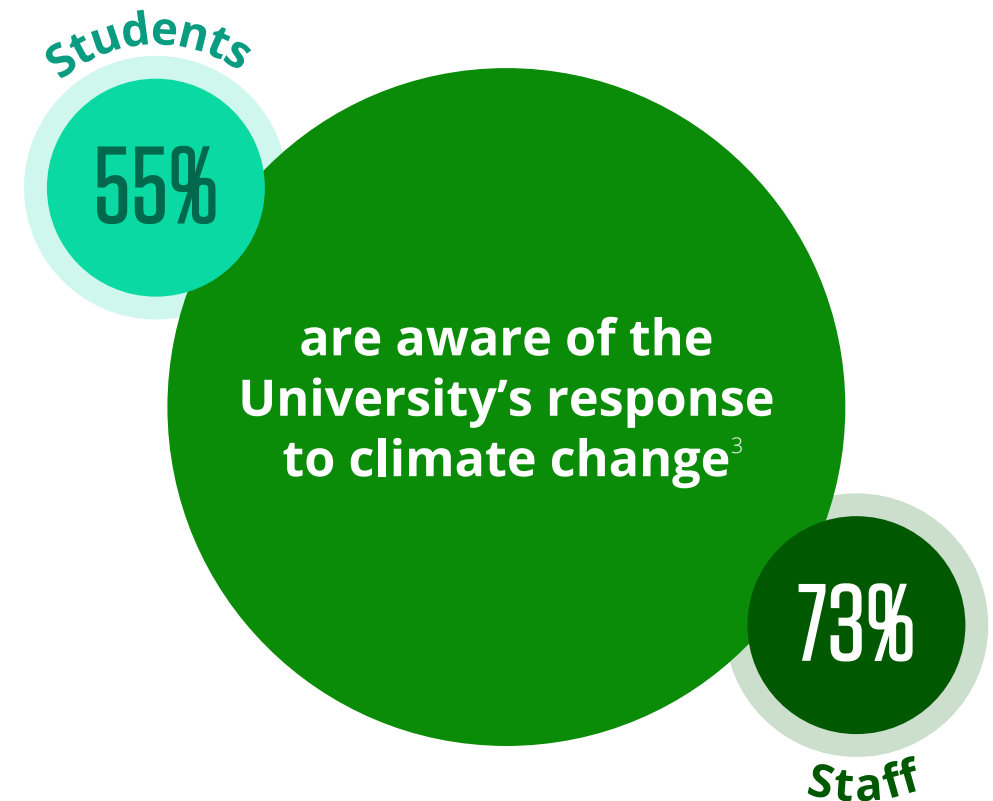
Organisational Change

We are on a journey to transform into a university that aligns with a 1.5°C world, and this requires fully embracing the concept of a whole institution approach to action. The scale of changes required are far-reaching and challenging in scope, yet our University community is engaged and motivated to respond to the climate crisis with both scale and urgency.

Embedding climate action into University decisions

The transition to a low carbon University requires the consideration of climate impacts to be embedded throughout policies, procedures and decision making. This is an ongoing aspect of the Climate Action project, both proactively facilitating discussions on climate issues in key material areas, alongside influencing key strategies and policies during normal review cycles. The Climate Action Framework approaches complex issues in a collaborative way involving staff from all faculties and at different levels of their careers, unions, and students to develop solutions.

As part of this embedding process the University is trialling a Climate Action Impact Assessment Tool to support colleagues who are submitting business plans, where they are now asked to explain the climate impact of proposals and demonstrate consideration of mitigation and reduction measures.



Organisational Change

Engaging our community

To increase awareness of climate action work being undertaken at the University, various communications and engagement work has been carried out in the past year. This serves multiple purposes: to increase knowledge and understanding across our community; to promote active participation within this work; and to influence personal behaviour changes.

In the past year, it has included:

- ✔ collaboration with the Psychology Department to conduct our third annual Climate Action Survey, achieving a very encouraging response rate of 30% from staff and 8% from students.
- ✔ Climate Action survey results show that there is considerable motivation from students to be part of transformational change to tackle the climate crisis, and there are many co-curricular opportunities to allow them to do so in a supported way. To raise awareness of these and increase engagement with them, an introductory event (Taking Action at Bath) was held in October 2023, followed by Green Week with a full schedule of activities in March 2024.
- ✔ an active travel communications campaign was carried out in spring to encourage behaviour change around commuting habits, for both staff and students and was accompanied by a range of engagement events.



Active Travel - Staff cycling group

Supporting projects across our community

Solutions to the University's carbon reduction challenges come from many parts of our community. To support and encourage participation in action, the **Net Zero Carbon Campus Fund** provides small grants for student and staff projects that reduce carbon emissions in their own departments or across campus.

The fund is designed to support a range of projects including those that deliver actual carbon reductions as well as ones providing insight into how specific barriers at the University can be addressed to achieve this. Tackling the University's emissions requires action on a wide range of fronts, and this is reflected in the diversity of projects being funded.

Projects funded in the past year have included:

- ✔ the University's Bicycle Users Group (BUG) hosted a Dr Bike event which provided free basic bike repairs to support a growing community of staff and student cycling commuters.
- ✔ the Department of Electronic & Electrical Engineering instigated a project to assess and propose solutions to e-waste produced by teaching laboratories.
- ✔ the student Chemical Engineering Sustainability Group (CESG) developed and ran a competition to engage students in investigating and proposing solutions to cut the University's carbon emissions.



Dr Bike

Organisational Change

Embedding transformational change processes

To deliver the scale and extent of change required to fulfil the University's ambition of a whole institution response to the climate emergency, requires the entire University community to participate.

- ✔ a '[Climate Advocates' network was launched](#) as a pilot project in the Faculty of Engineering & Design and the Department of Life Sciences, to recruit seven staff members with specific workload allocation in each department.
- ✔ in September 2023, the first Climate Action Awards were held to bring together and celebrate the individuals and groups who are taking a lead on climate action within and beyond our community. Over 150 [colleagues](#) and [students](#) were honoured with Climate Action badges in recognition of their efforts.
- ✔ in August 2023, [two University of Bath students joined the Climate Action team](#) for their placement year to work on a range of projects where they can benefit from hands-on work in support of their education, but they can also provide benefit to the team through their unique insight and experience as students.



Case Study

Embedding Climate Action in Campus Services

The University's Campus Services department have been working over many years to embed climate action into all aspects of their operations, decision-making, policies and procedures. To continue and further these efforts, they undertook a pilot training programme with the Climate Action team in 2023 which included a day and a half of training and workshops for their management team, focused on collaboratively identifying solutions and developing plans for future actions.

In the past year, some of the key actions being taken by Campus Services to tackle the climate crisis include:

- ✔ leading action through the University's Sustainable Food Commitment
- ✔ actively engaging students living in University accommodation to change behaviours
- ✔ tackling waste and recycling across the whole University such as trialling a food waste collection from Quads accommodation in June 2023 which saved 34 full crates of food from landfill
- ✔ tackling waste and recycling across the whole University
- ✔ leading efforts across campus to maintain and enhance green spaces and biodiversity

Following feedback and evaluation of the pilot training programme with Campus Services, further training opportunities and workshops will be developed by the Climate Action Team for additional colleagues and departments.



Students' Union (SU)

Student voice for climate change

The Students' Union declared a climate emergency in 2020, alongside the University, and since then has sought significant and impactful transformation from the University to back this up.

In 2023, Ryan Bird joined the SU as Chief Executive and, as part of developing a new SU strategy, he is working with colleagues and sabbatical officers to actively embed sustainability across all areas of activity and engaging with all areas of the SU.

"The SU is proud to partner with staff and students across campus to further our work on climate action. As the SU develops its new strategy, we are clear that sustainability will be a core and embedded aspect of our work as we move forward. We see this through our operational work and our representative and campaigning work. Students have been clear they are concerned about the challenges facing us, and therefore, the Students' Union needs to take a leading role alongside the University to take important and time critical action. As we move forward, we are keen to ensure everyone has the opportunity to contribute in some way."

Ryan Bird, Chief Executive of the Students' Union



Supporting student action

The SU support students to make sustainable and low carbon changes, as well as encouraging them to carry out projects to effect change within and beyond the University. This includes:

- ✔ launching new SU Sustainability Award to encourage groups and teams to take action on climate and sustainability, and to build recognition for those pioneering for change.
- ✔ new sustainability-focused student groups were created and supported, including: Sustainable Fashion Society, Duck Society and Chemical Engineering Sustainability Group.
- ✔ 'Green Dayz' was celebrated in March as part of a Green Week collaboration with the University. Events and activities were held by and for students to empower and enable them to take action on climate and sustainability.

- ✔ V Team, the University's largest student volunteer group, received a Bath Award for Volunteering Group of the Year 2023. They've carried out a number of projects this year:
 - V-Eco brings students into small groups for EcoTogether workshops where they can discuss ideas and pledge actions to make positive impacts on the environment.
 - V-Clean undertook regular litter picks, joining forces with local residents to help clean the city, and hosted an annual beach clean with Marine Conservation Society.
 - V-Repair hosted Repair Cafés throughout the year, providing students and staff opportunities to have clothes and household items repaired for free.
 - V-Nature run regular sessions to help conserve parks and this year planted bulbs and wildflowers at Brickfields Park in partnership with Your Park Bristol & Bath.
 - V-Collect encouraged students to leave non-perishable items at donation points on campus before the winter holidays to tackle food waste and support charities.
 - V-Wildlife is working on habitat improvement projects to make our campus hedgehog friendly.



Students' Union (SU)

SU carbon footprint

In parallel with the University, the SU is taking action to reduce its environmental impact.

In July 2023, they were awarded a 'Very Good' rating from the NUS Green Impact Accreditation, a simple framework designed to support continuous improvement in sustainability standards.

Key achievements to reduce the SU's footprint this year include:

- ✔ reducing emissions at SU flagship events and general bar operations, including using reusable cups in all events.
- ✔ supporting students to change behaviours and encouraging sustainable food choices through actions such as removing ruminant meat from all food outlets and changing marketing choices in line with the University's Sustainable Food Commitment.
- ✔ Freshers' Week t-shirts no longer have the year printed so they can be used for future Freshers' Weeks.



Freshers' Week volunteers

Horizon Scanning

The University's approach to climate action is interconnected with that of the whole higher education (HE) and research sectors, our own community, and the political and social context in which we live, study and work. The transformational shift to embed climate considerations into our institution must therefore be understood within this broader perspective.

At Bath we strive to be leaders in HE sustainability, seeking out opportunities and undertaking pioneering work within the sector to influence and be a catalyst for wider change. As we look ahead to the next year and beyond, it is important to be aware of emerging issues and shape our programme of work to respond to these.



University campus lake and amphitheatre

Horizon Scanning

Offsetting emissions

Many Universities are beginning to consider the options for offsetting. We will be looking to work alongside sector organisations such as the EAUC to explore the options and considering what is being driven forward across the sector. For example, [University of Edinburgh has committed to an ambitious carbon sequestration plan to help achieve net zero carbon by 2040](#), which allow them full control and visibility, while reducing potential risks associated with offsetting and to additionally benefit nature through restoring peatlands and expanding forests in Scotland.

Communicating climate action

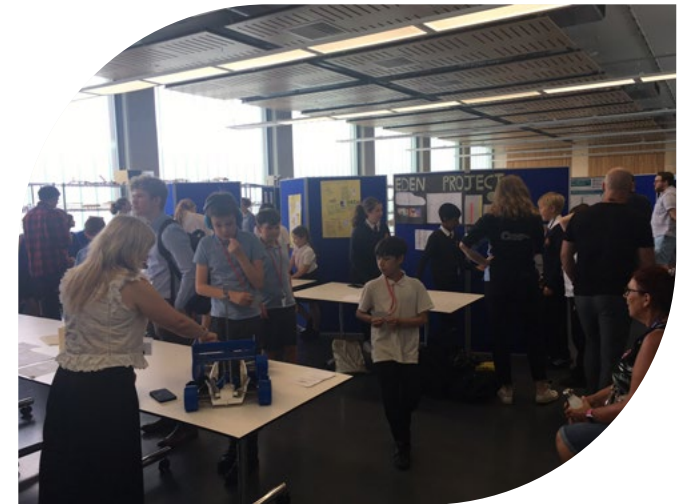
There is increasing scrutiny of environmental and emissions targets and an associated reputational risk to organisations if they are seen to be 'greenwashing'. The Advertising Standards Authority (ASA) has launched a [Climate Change and the Environment project](#) signalling their commitment to tackling misleading information and greenwashing and we will continue to work to ensure that our approach to climate change and sustainability is open and transparent.

Partnerships for change

The Department of Education has committed £2m to the expansion of the Climate Ambassadors programme, [encouraging volunteers from industry and academia to support education institutions in producing Climate Action Plans](#). At Bath, we encourage students to consider volunteering as [Climate Ambassadors](#), and already have more people signed up than any other UK University.

Research funding

Considering and reducing environmental impact is increasingly recognised as a critical issue and demanded by funders, such as through UK Research and Innovation's [Environmental Sustainability Strategy](#) and [Concordat](#), and Wellcome Trust's [Guidelines on Good Environmental Practice](#). As well as supporting researchers minimise their impact through schemes such as LEAF, we have also helped input to several bids that have had these requirements.



Climate Ambassadors event

External campaigns

Student-led groups [People & Planet](#) and [SOS-UK](#) lead several campaigns focusing on sustainability action in Universities. This includes:

- ✔ [People & Planet's Fossil Free Careers campaign](#) calls on university careers services to end recruitment pipelines into the oil, gas and mining industries. Seven UK universities have committed to this.
- ✔ there is increasing scrutiny of universities' divestment from fossil fuels with focus not just on direct investment, but also addressing indirect links through research, partnerships and careers services. A group of UK universities has [recently issued a Request for Proposals to financial institutions for cash products, such as deposits and money market funds](#), which promote sustainability and do not contribute to the financing of fossil fuel power stations or exploration.

At Bath, we will work as an institution to understand and respond to these campaigns.

Staff retention

Increasing awareness amongst academics about the impact of the research they undertake, and the commitments of the university they work for, has the potential to become a [significant consideration for recruitment and retention](#).

The 2024 annual Climate Action Survey found that 50% of staff believe that the University is taking meaningful action on the climate emergency, and 6% of current staff members were attracted to work here by the University's response to climate change.³ The survey also found that 25% of staff would be attracted to work at an alternative university if they saw they were taking more action against the climate emergency compared to University of Bath.³

The work outlined in this report demonstrates Bath's ongoing commitment to be a leader in climate action and in doing so, reinforce the attractiveness to current and future recruitment.

An External View of our Progress

Whilst external rankings and league tables focus on specific areas of a university's contribution, and are often contentious, they provide a snapshot of progress at a point in time and highlight areas which external stakeholders identify as key.

QS World Sustainability Rankings

In the [2024 QS World Sustainability Rankings](#), Bath achieved a significant improvement on 2023's ranking of 321-340, ranking in the top 100 at 92nd out of a total 1,403 universities.

We scored highly in each of the 3 performance categories of Environmental Impact, Social Impact and Governance. Out of the 12 ranking criteria we scored over 90% in 7 areas: Employability and Opportunities, Equality, Governance, Knowledge Exchange, Health and Wellbeing, Social Impact, and Environmental Research.

Our lowest ranked criteria were Environmental Education with 41.7%, Environmental Sustainability with 59.7% and Environmental Impact with 64.5%. We are working to further understand the score and identify opportunities for the future.

People and Planet University League Table

Our 2023-2024 People and Planet University League Table ranking was joint 74th, a significant rise from 107th in 2022-2023. We scored particularly well in Education scoring 100%, 63% in Energy Sources, 70% in Carbon Management, 60% for Sustainable Food, and 65% for Workers' Rights.

We scored lower in Water Reduction with 17%, 38% for Waste and Recycling, and 30% for Auditing and Environmental Management System (EMS).

SOS league table for carbon targets

We scored in the top tier of universities for our targets, scoring 81/100, a reasonably high score due to our ambitious net zero targets across scope 1, 2 and 3, limiting offsetting to unavoidable emissions, and our student and staff representation in developing these. However, we have room for improvement in publishing a carbon action plan, including a planned emission reduction curve, and using a 'science-based targets' approach to ensure the plan is achievable and effective. This reflects our current work programme.

1.5 Degrees International University Rankings Based on Sustainability

[The 1.5 Degrees International University Rankings based on Sustainability](#), analyses the top 20 universities ([according to THE](#)) that teach economics, law, politics, engineering, and education and health; and how these courses align with the actions needed to tackle the climate emergency and ecological crisis. This highlights the increasing interest across the sector in understanding where real progress is being made. Bath does not feature in this top 20.

Find out more

go.bath.ac.uk/climate-change

blogs.bath.ac.uk/climate-action

Get in touch: climateaction@bath.ac.uk

Sources

www.bath.ac.uk/publications/climate-action-survey-results/

1. **2021-22 Climate Action Survey results**
2. **2022-23 Climate Action Survey results**
3. **2023-24 Climate Action Survey results**

The Climate Action Survey is undertaken annually and targets all staff and students at University of Bath. The aims of the survey are to help the Climate Action team to track progress against targets, to understand community opinion regarding the University's response to the climate emergency and to support communication and raising awareness of University actions.

The survey is well promoted to staff and students through all available communication channels, including all-staff and all-student emails. As survey data is collected, demographic data is monitored for more representative sampling and shared widely and openly to prioritise fairness and transparency across our community.

Demographics, departments, role types and job families are all represented in our latest survey results. Additionally, the results have demonstrated that respondents expressed a wide variety of different attitudes and opinions, and we gathered rich data exploring different levels of support and prioritisation given to climate action at the University.

The latest survey was completed by 2803 people, representing 30.2% of University staff and 8.4% of students.

A key part of our footprint methodology is having confidence in calculated figures. There are two key components to the calculation, accuracy of the data and calculation methodology.

The accuracy relates to how the data is recorded. For example, if the University's gas footprint was based upon estimated bills rather than actual meter readings, the confidence would be low. The units used for the data directly affects the accuracy of a carbon footprint. For example, procurement data is (like most organisations) currently estimated based upon expenditure, which means that if two suppliers are supplying identical equipment, but one is 50% more expensive, then the carbon footprint of supplies from the costlier company would also be 50% greater, despite the equipment being the same. This highlights how many data issues are outside our direct control – only a very small proportion of our suppliers can supply accurate data for their products that we buy, and in the meantime we have to use these cruder estimates.

Taking into account both of these factors, the levels of confidence in the individual categories of our carbon footprint are outlined in the table below, which also shows changes since the previous year.

Poor data accuracy and poor-quality calculation ←————→ high data accuracy and high-quality calculation									
1	2	3	4	5	6	7	8	9	10
	Category	2021-22	2022-23	Comments (for changed data)					
Scope 1	Natural gas	10	10						
	Fuels	7	8						
	Fugitive emissions	2	5	Higher confidence in the completeness of the data after two years of monitoring					
Scope 2	Electricity	10	10						
Scope 3	Purchased goods and services	3	3						
	Capital goods	3	3						
	Fuel and energy related activities	8	9	Higher confidence in the fuels data					
	Upstream transportation and distribution	1	1	Calculation still dependent upon estimations					
	Waste generated in operations	5	6	Higher confidence in the completeness of the data after two years of monitoring					
	Business travel	4	5	Expanded capture of non-travel company data					
	Employee commuting	1	4	Poor methodology replaced by Sustainability Survey analysis					
	Downstream transportation and distribution	3	5	Expanded calculation to include placement students and improved frequency of travel					
	Investments	4	3	The footprint has not been updated in 2022-23 as it is recalculated every 3 years, so now using year-old figures					

We report on all emissions within our footprint boundary:

- ✔ **Scope 1 and 2:** This covers our electricity use and the natural gas used to power boilers in our buildings on our main Claverton Down Campus, off-campus sites and student accommodation blocks. It also covers university owned vehicle fuel and fugitive emissions.
- ✔ **Scope 3:** We report all emissions associated with staff and student travel, supply chain expenditure, investments, waste, deliveries, fuel and energy related activities.

The last year has seen several changes and improvements to the footprint, both in terms of coverage and quality. The latter has been dealt with above, with the material changes to the footprint as follows:

- ✔ placement student home travel was added to the footprint, which was applied across all four years since the 2019-20 baseline.
- ✔ full data for IAAPS was obtained, after a lack of natural gas data last year. The footprint was also expanded to include their use of fuels, commuting and the supply chain.
- ✔ the daily commuting portion of the footprint has been recalculated, using the results from our 2023 Climate Action Survey as its primary source.
- ✔ following two independent surveys from the University of Bath and the University of Arts London, the number of home journeys assumed to be undertaken by international students was recalculated with better data, and thus increased. This data was also backdated to recalibrate the baseline footprint.

Appendix 3: Scope 1, 2 and 3 Emissions since 2005/06

	05/06	06/07	07/08	08/09	09/10	10/11	11/12	12/13	13/14	14/15	15/16	16/17	17/18	18/19	19/20	20/21	21/22	22/23
Scope 1																		
Natural Gas	9,251	7,324	7,917	8,504	8,289	7,707	7,130	7,741	7,276	7,959	7,920	7,882	8,579	8,079	7,759	10,688	8,063	7,916
Fuels	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	42	37	52
Fugitive Emissions	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80	39	135
Scope 2																		
Electricity	15,262	14,723	15,216	14,615	14,082	13,067	13,079	12,771	14,274	14,014	12,699	12,408	9,741	7,707	5,899	5,487	4,891	5,765
Total Scope 1 & 2	24,513	22,047	23,134	23,119	22,371	20,775	20,209	20,512	21,551	21,973	20,619	20,290	18,320	15,786	13,691	16,297	13,030	13,869
Reduction from 2005 baseline	0	10%	6%	6%	9%	15%	18%	16%	12%	10%	16%	17%	25%	36%	44%	34%	47%	43%
kg CO₂/m	126.1	113.4	118.5	112.7	109.1	99.0	94.2	95.4	96.8	90.3	83.2	77.5	70.0	57.7	49.1	58.7	44.7	44.6
Totals																		
Scope 3*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	108,151	80,518	92,122	115,633
Scope 1, 2 & 3*	-	-	-	-	-	-	-	-	-	-	-	-	-	-	121,842	96,815	105,152	129,502

*Scope 3 footprint numbers for the baseline year and subsequent years are working values, as the calculation data available is frequently changing, in terms of both availability and quality.



Climate Action



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