



The University of the West of England, Bristol

Presented by

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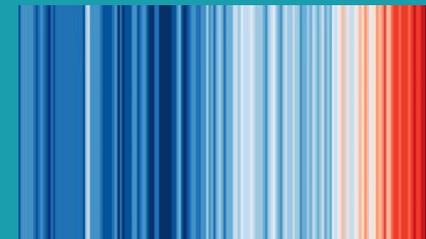
**AVC
Environment
and
Sustainability
UWE Bristol**

Date
29th March 2022

Striving for Net Zero

A case Study of Sustainability at UWE Bristol

21st Annual Bristol Planning Law and Policy Conference



UWE Bristol

- **30 000 students**
- **4000 staff**
- **Annual income of approximately £300 million**
- **3 campus locations Frenchay, City Campus and Glenside**
- **4 Faculties**
 - **Arts, Creative Industries and Education**
 - **Business and Law**
 - **Environment and Technology**
 - **Health and Applied Sciences**

Tomorrow's Graduates Will Live Through the Climate Crisis

- According to Actuary Tables a student leaving a UK university this year can expect to live at least another 60 years.
- Despite the efforts promised by international actors by the 2080s there will be wide ranging, adverse climate and ecological changes.
- The graduates will live through these profound changes.
- How will their educational experience prepare them for the challenges that they will encounter in their professional and private lives?
- Rising levels of eco anxiety amongst students and young people.



The Next Cohort of Students

Will be much more concerned about the climate and ecological emergency.

They will expect their institution

- To take the climate emergency seriously
- To manage their estate wisely
- To include carbon literacy /climate awareness within the formal and informal curriculum
- To prepare them for the challenges they will face across their life course, professional and private, as they live through a changing climate.



Image copyright The Guardian
<https://www.theguardian.com/environment/2020/feb/28/greta-thunberg-bristol-schools-shut-students-join-climate-strike#img-1>

Sustainability at UWE Bristol

- Our approach has been four fold. Embedding sustainability in
 - Curriculum
 - Research
 - Campus Management
 - Community Engagement
- Creating a culture supportive of a sustainable university.
- All in partnership with the Students' Union.
- Net Zero is embedded in this approach.



Sustainability at UWE – a 28 year journey

- 1994 UWE's first Environmental Policy periodically revised thereafter
- 2004 Sustainability Board established
- 2005 First Sustainability Action Plan
- 2007 First Sustainability Strategy
- 2008 Cross university Knowledge Exchange for Sustainability Education (KESE) group established to promote and enhance ESD
- 2010 Strategy 2020
- 2012 Sustainability Plan
- 2012 Annual meeting cycle with individual HoDs instigated
- 2014 Certification to ISO 14001:2004 EMS



Sustainability at UWE – a 28 year journey

- 2015 Internal and external verification that all taught programmes address sustainability in the context appropriate to the individual discipline
- 2015 Bristol's Year as European Green Capital
- 2015 Launch of UWE Green Capital Strategy
- 2015 Launch of HEFCE Funded Green Capital Student Capital project
- 2016 NUS –SOS Responsible Futures accreditation
- 2016 Annual meeting with Faculty Executive groups instigated
- 2016 Launch of Sustainable Development Goal (SDG) Mapping Project
- 2017 Refreshed Sustainability Plan 2.1
- 2017 Transition to ISO 14001:2015 EMS
- 2017 New Environmental Sustainability Policy



Sustainability at UWE – a 28 year journey

- 2018 KESE Group wins UWE's first Advance HE Award for Collaborative Approach to Teaching Excellence (CATE)
- 2019 New Sustainability Communications and Engagement Framework launched
- 2020 Launch of Strategy 2030
- 2020 New Transforming Futures Climate Action and Sustainability Strategy
- 2021 Completion of Phase 1 of the SDG Mapping Project
- 2021 New Action Plans for Education for Sustainable Development, Sustainability Engagement, Sustainable Food, Transport, Carbon and Energy Management, Clean Air, Circular Economy including plastics, and Biodiversity
- 2021 Launch of QAA- Advance HE Education for Sustainable Development Guidance
- 2021 Reaccreditation to NUS -SOS Responsible Futures and ISO 14001
- 2021 Work starts on new student accommodation designed to PassivHaus standard
- 2022 New carbon literacy training programme for staff and students

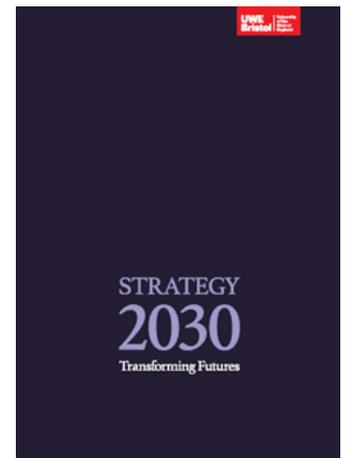
Key Success Factors

- Student expectation and demand
- Staff engagement
- Senior staff leadership
- Strategy and clear direction of travel
- Willingness to embrace change
- Learning from failure
- External certification
- Partnership with the Students' Union
- Bristol – A European Green Capital



Sustainability Ambitions in Strategy 2030

- *Through our 2030 Strategy we will work to address the urgency of the climate and ecological emergency and strive to fulfil our role in the achievement of the United Nations' Sustainable Development Goals.*
- *UWE Bristol Declaration of a Climate and Ecological Emergency [here](#)*
- *Seven ambitious commitments in Strategy 2030.*
- <https://www.uwe.ac.uk/about/values-vision-strategy/strategy-2030>



Sustainability Commitments in Strategy 2030 (abridged)

1. Net-zero emissions of greenhouse gases by 2030.
2. Clear targets and plans to reduce water and energy use, cut waste generation including food waste, and support biodiversity. Towards a circular economy.
3. Eliminate all but essential single-use plastic by 2025.
4. Establish all our campuses as clean air zones.
5. Secure year-on-year improvement in sustainable travel.
6. Work with our students to explicitly address climate change and environmental challenges in the curriculum.
7. Support research that addresses climate change, environmental challenges and biodiversity.

Climate Action and Sustainability Strategy (CASS) 2030

The Climate Action and Sustainability Strategy develops the key ambitions of Strategy 2030, explicitly linking the sustainability and climate actions with the purpose, the people and the place of the university.

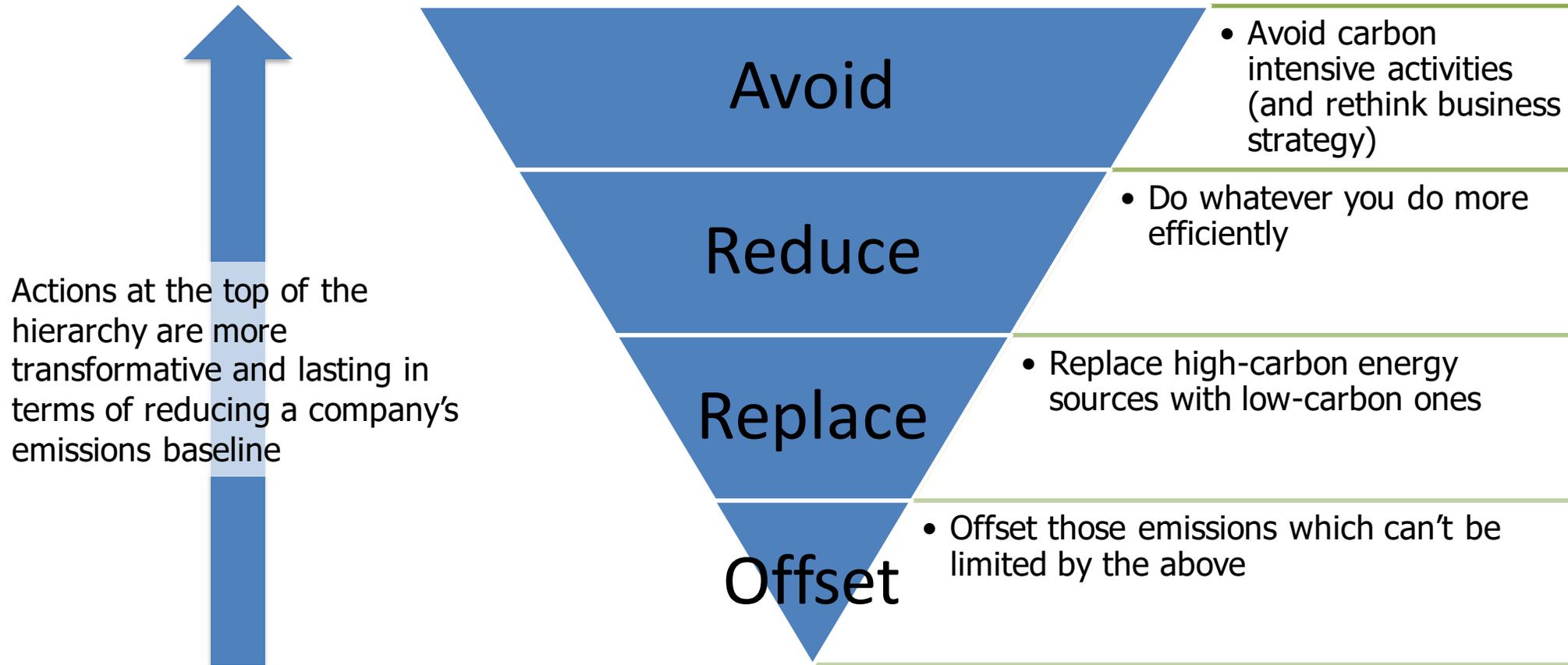


Climate Action and Sustainability Strategy (CASS) 2030

- Our Commitment to Sustainability
- How We Will Manage and Report on Our Actions
- Practising Sustainability
- Understanding Sustainability
- Influencing Sustainability and cross cutting each element Adapting to a Changing World



The Carbon Management Hierarchy



UWE's Carbon Baseline 2018/19

	Location based, tCO ₂ e	Market based, tCO ₂ e
Scope 1	6,175	6,175
Scope 2	6,030	36
Scope 3	68,794	68,794
TOTAL	80,999	75,005

Managing Carbon at UWE

- Climate Emergency Declaration by Board of Governors
- Institutional Strategy defined
- Net Zero 2030 Target
- Carbon and Energy Management Plan 2020-2030 developed using Green House Gas Protocol and Science Based Targets Initiative.
- Baseline Scope 1, 2 and 3 established
- Scope 3 Action Plan developed
- Offsetting Plan drafted
- Carbon a KPI on Strategy 2030 Progress Tracker
- Climate on UWE Risk Register

Managing Carbon at UWE

- Direct Power Purchase Agreement for renewable energy
- REGO certified electricity for residual electricity demand
- PV arrays at each campus
- CHP and District Heating Network on Frenchay Campus
- Electrifying the university vehicle fleet
- Promoting active travel
- EV cars available for use by staff and students
- Voi Scooters and Big Issue Electric Bikes for staff /students on campus
- Pedal cycle scheme for students
- Busy bus interchange on Frenchay Campus

Solar PV Installations and Capacities

Campus	Building / PV array name	No. of panels	Declared net capacity (kWp)
Frenchay	R-block 1	46	9.92
Frenchay	R-block 2	51	32.33
Frenchay	Centre for Sport	216	49.68
Frenchay	WPR1	25	6.25
Bower Ashton	Bower A	12	3
Frenchay	T-block N	962	250
Frenchay	T-block S	770	200
Glenside	Laundry	22	6.6
Bower Ashton	Building D	62	17.67
Frenchay	Z Block	145	48.58
			624.03

CHP and DHN

- CHP engines: 2 x Bosch engines, each with 500kW heat (i.e. total heat capacity 1MW) and 400kWe power (i.e. total power capacity 800kWe).
- These are heat-led, so no heat is dumped.
- The DHN provides heat to 50% of Frenchay campus.



Managing Carbon at UWE

- New Student Accommodation designed to PassivHaus Standard
- New Engineering Building BREEAM Excellent

BUT

Other developments over the last decade and our historic estate present energy efficiency, emission mitigation and adaptation challenges



Managing Carbon – challenges

- Mitigation is our focus
- Removing gas from the estates an urgent action but the CHP engines are gas fired!
- Understanding the trajectory to 2030 for Scopes 1 and 2
- Better understanding the sources and magnitude of Scope 3 emissions and understanding where the control measures may be located

- What will be our offsetting requirement in 2030
- When to decide on offsetting options
- Bringing adaptation into focus as an equal priority

Managing Carbon at UWE

- Working with national partners
 - EAUC and Climate Commission for Higher and Further Education
 - Helped develop the Climate Action Toolkit for HE and the Climate Roadmap for FE
 - Working with UKRI to develop a 'Charter' on Sustainability in Research and Innovation
 - Supporting QAA and Advance HE in developing and implementing new Guidance on Education for Sustainable Development
 - Supporting DfE in developing their Climate Change and Sustainability Strategy



Managing Carbon at UWE

- Working with local partners
 - Bristol Advisory Committee on Climate Change
 - South Gloucestershire Climate Emergency University Advisory Group
 - Bristol Green Capital Partnership Climate Leaders Programme
 - Bristol Green Capital Partnership Community Climate Action Programme
 - Business West Trading to Net Zero initiative
- Avon Pension Fund engaging with the fund to accelerate decarbonisation of the fund into which Professional Service staff pension contributions are made.



Managing Carbon at UWE

- Changing Climate Research Network established
- Sustainability and Climate Change Resilience Research Beacon established
- Zero Carbon Building MOOC
- Carbon literacy training for staff developed
- Carbon literacy and climate awareness being infused into the curriculum as part of SDG mapping – identifying positive and negative impacts of carbon action on other SDGs.
- Green Skills for Jobs and Entrepreneurship for young adults from under represented groups
- Skills for Clean Growth programme for SMEs in the West of England

SDGs and UWE Curricula

- Making sustainability explicit.
- A unique voluntary mapping exercise undertaken by staff teams.
- The mapping project has developed a suite of maps showing the relationship of the programme to each of the 17 SDGs.
- Phase 1 covers some 80 UG and PGT programmes from across the academic departments.



Adaptation and Climate Risk

- What is the risk profile for the university site?
 - Flood, heat, wind?
- What are the institutional priorities for adaptation?
 - Teaching, Research, Sports, Residences?
- Critical infrastructure resilience.
- Supply chain resilience.
- Maintaining access in extreme weather events.
- Providing cooling and shade.
- Planning for water scarcity.
- Risk assessment of climate impacts not fully developed.
- When do we need adaptations in place?



The Climate Emergency Matters

- It can and must be part of a university mission
- It needs Senior Management leadership.
- It matters to current students.
- It matters to future students.
- It matters to staff.
- It has a place
 - in the curriculum of EVERY discipline,
 - in the university's research activities,
 - In the management of the campus and
 - In the civic / community engagement activities of a university

How can UWE help you on your journey to Net Zero?

- Research
- Consultancy
- Live Brief
- UG Dissertation topics
- MSc Dissertation topics
- Placements
- Part funded internships
- Knowledge Transfer Partnerships
- Partnership PhDs – part funded by UWE
- Networking events

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Public profile

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Sustainability at UWE

<https://www.uwe.ac.uk/about/values-vision-strategy/sustainability>

UWE website

<https://www.uwe.ac.uk/>

