



Annual Carbon Report (2021)

Covering academic year 2019/20

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1. Summary

- Scope 1 and 2 CO₂ emissions dropped by 15.3% between 2018/19 and 2019/2020. Of this 7.5% was due to the changes in conversion factors, and the remaining 7.8% reduction was due to lower consumption.
- Electricity usage per floor area continues to fall across the Estate, reflecting ongoing improvements in energy efficiency.
- Rapid societal shift in response to the COVID pandemic led to an initial fall in electricity and gas consumption from March 2020, when compared to the previous year. From a carbon perspective the overall picture is more complex once the campus started to open up with COVID-secure measures in place. From September 2021 onwards, electricity consumption remained high and gas consumption was significantly higher than 'normal years', despite reduced campus usage, reflecting the more energy intensive requirements of these measures.
- We have achieved the target set out in the University's 2011 Carbon Management Plan (CMP) "to reduce direct Scope 1 and 2 CO₂ emissions (due to electricity and gas use) by 43% by 2020 from a 2005 baseline." At the end of this period we have achieved a 45% reduction, this is slightly more than anticipated partly due to the national fall in carbon intensity in electricity and partly due to the impact of lockdown during the period April – July 2020.
- Scope 3 emissions make up over 75% of our overall footprint, mainly due to travel and the procurement of goods and services. A key focus for 2021 is therefore establishing an accurate scope 3 baseline and developing a reduction plan.
- Our research continues to make significant contributions to reducing carbon emissions in wider society.
- We delivered a climate literacy course for incoming students and offer further enrichment opportunities through our pilot Climate Leaders course and Vertically Integrated Projects.
- In May 2020, the University Council declared a Climate Emergency and approved the adoption of the 11 Climate Action Framework (CAF) Principles to guide our response. This is a whole institution response considering the impacts of our core mission, research, learning and teaching and engaging with our community and initiatives to address climate action in our region.
- The CAF Principles include new and challenging carbon targets commensurate with the timescales required to address the Climate Emergency:
 - Being Net Zero Carbon in its Scope 1 and 2 emissions by 2030.
 - A 50% reduction in its Scope 3 emissions by 2030.
 - Being Net Zero Carbon in its Scope 1, 2 and 3 emissions by 2040.
- A new Climate Action team, including four new posts, has been established to push forward these ambitious objectives.

2. Scope of this Report

- Reports University of Bath's carbon emissions for academic year 2019/20.
- Explores our whole institution response to climate change up to March 2021 and the formation of the new Climate Action Team.
- Introduces our plans for the new Climate Action team to take this agenda forward, building on past success.

3. Sources of Carbon Emissions:

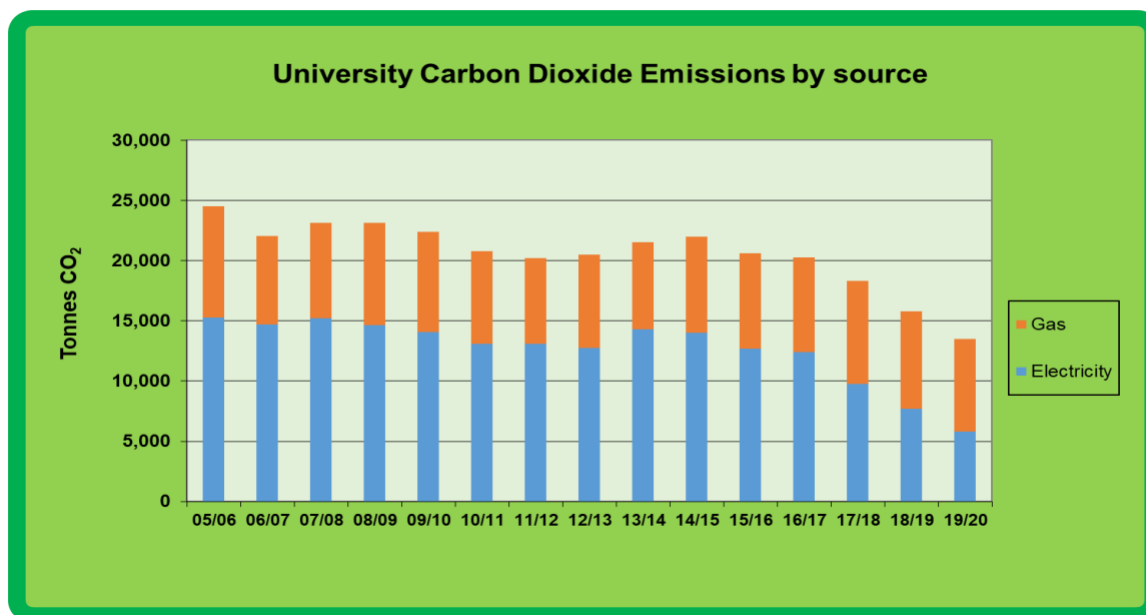
Greenhouse gas emissions are currently emitted from a range of on-campus and off-campus activities. To better understand the source of these emissions, and so take action to minimise them, they are broken down into three categories¹:

- **Scope 1** covers direct greenhouse gas emissions from sources owned or controlled by the University. This is mainly the gas used to power boilers, fuel used in university owned vehicles, but also includes emissions from fleet, fugitive emissions and refrigerant leakage.
- **Scope 2** covers indirect emissions from electricity consumed by the University which it does not generate itself.
- **Scope 3** covers the other indirect emissions that occur upstream and downstream, associated with the University's activities, including carbon emissions generated from commuting, business travel, procurement, waste, water, construction.

¹ Greenhouse gas emissions are categorised into three groups or 'scopes' by the most widely-used international accounting tool, the Greenhouse Gas (GHG) Protocol.

4. Our Carbon Footprint: Academic Year 2019/20

4.1. Scope 1 and 2 Emissions



	2015/16	2016/17	2017/18	2018/19	2019/20
Gas (kWh)	43,043,165	42,917,332	46,584,471	43,916,251	41,778,678
Electricity (kWh)	28,263,326	27,782,197	27,707,328	27,190,769	22,732,151
Total CO₂ (tonnes)	20,619	20,290	18,320	15,952	13,508
Reduction from 2005 baseline²	8%	9%	25%	35%	45%
Kg CO₂/m² (°)	83.2	77.5	70	58.3	48.64

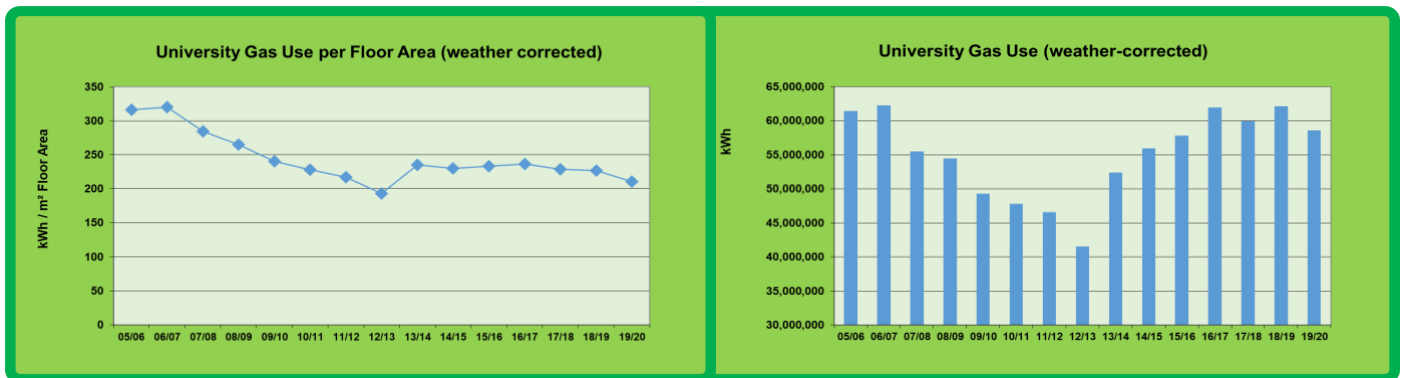
- CO₂ emissions dropped by 15.3% between 2018/19 and 2019/2020. Of this 7.5% was due to the changes in conversion factors⁴, and the remaining 7.8% reduction was due to lower consumption:
 - 4.4% is due to a reduction in our use of electricity over this period
 - 3.4% to a reduction in gas usage.
- The University's 2011 Carbon Management Plan (CMP) set out the target "to reduce direct Scope 1 and 2 CO₂ emissions (due to electricity and gas use) by 43% by 2020 from a 2005 baseline." At the end of this period we have achieved a 45% reduction, this is slightly more than anticipated partly due to the national fall in carbon intensity in electricity (see section 4.4) and partly due to the impact of lockdown during the period April – July 2020.
- Achieving the absolute CMP target we set ourselves in 2005 has been achieved against a backdrop of significant expansion - over that period we have increased in size by 41% (by building floor area) which is the equivalent of 8.6 Chancellors' Buildings.
- The University has set itself new and challenging carbon targets commensurate with the timescales required to address the Climate Emergency:
 - Being Net Zero Carbon in its Scope 1 and 2 emissions by 2030.
 - A 50% reduction in its Scope 3 emissions by 2030.
 - Being Net Zero Carbon in its Scope 1, 2 and 3 emissions by 2040.
- In 2021 we will be looking to extend our data capture to all scope 1 emissions, including: own vehicles, fugitive emissions, refrigerant leakages, academic fuel usage, and laboratory chemicals.

² 2005 was the baseline year for the Carbon Management Plan, with a total CO₂ of 24,513 tonnes.

³ Relative reductions are useful to understand underlying trends and carbon efficiency, however the challenge of reaching net zero requires a focus on absolute annual emissions, in line with our new carbon targets.

⁴ Calculated by using the 2018/19 conversion factors on 2019/20 data. See section 4.4 for further explanation on the impact of grid factors.

4.1.1. Gas Usage



- Gas usage is heavily dependent on weather. ‘Normalised’ gas usage, using statistical temperature records, shows the long-term trend is almost level, even with a significant expansion in the Estate.
- The drop in usage in 2019/20 is partly attributable to the impact of the COVID pandemic (see section 6).
- It should be noted that gas use increases as our electricity self-generation increases through gas-fired CHP. However, this rise is more than offset by the financial and carbon savings.

4.1.2. Electricity Usage



- Electricity usage per floor area continues to fall across the Estate, reflecting ongoing improvements in energy efficiency
- Total electricity ‘consumed’ (i.e. imported/bought in plus self-generated) has stayed roughly constant in recent years with new buildings and growth in student numbers being partially offset by increases in self-generation and energy efficiency savings.
- 2018/19 saw an absolute fall in electricity use of 3%, the subsequent fall in use in 2019/20 is partly attributable to the impact of the COVID pandemic (see section 6).

4.2. Energy provision on Campus

4.2.1. Grid Electricity

- Electricity is bought on a ‘green’ renewables tariff; this applies to 100% of the campus electricity supply and all our off campus supplies too. This means that for each unit of electricity used, our supplier purchases a unit of renewable energy on the University’s behalf (“Renewable Energy Guarantee of Origin”.

4.2.2. Self-Generation

4.2.3. Solar Photovoltaic

- Our solar photovoltaic (PV) network generated 118,785 units of electricity in 2019/20, saving 28 tCO₂ and equivalent to £17,000 worth of electricity.

- There is some scope for further roof-mounted PV systems and plans are being developed to maximise these, which could potentially triple our current capacity. This will require an investment of around £600k with paybacks of 8-10 years, but the maximum will generate only 1-2% of our current annual demand. The priority should always be for demand reduction which has a much better return on investment and effort (the 'greenest' energy is that which is not used in the first place).

4.2.4. Solar Thermal

- Four blocks of the Westwood residences, Woodland Court and 4 West have all benefitted from solar thermal systems. Used to generate hot water they typically produced around 22,000kWh of heat each year. Due to the age of these systems and reliability issues some of these have been recently decommissioned, with plans to replace them with solar PV where possible.

4.2.5. Combined Heat & Power (CHP)

- Gas-powered CHP is a particularly efficient form of generating electricity as it allows the waste heat to be 'recycled' locally on site.
- There are now 4 CHP engines on campus.
- These systems generated 2.16 million units of electricity in 2019/20, enough to power 620 houses with a financial value of around £300k.
- They also generated around 2.4 million units of heat that was captured and used on campus; this heat would have otherwise been wasted through conventional generation at a power station.
- Over their lifetime so far these systems have now generated over 17 million units of electricity, saving a total of 6000 tCO₂ and £1.5m.

4.3. Funds for Investment in Efficiency Projects

- In 2015 the University successfully bid for £600k from a HEFCE/SALIX Revolving Green Fund for investment in efficiency projects adding to an existing £250k fund.
- These are both 'revolving' funds whereby energy savings are fed back into the fund for future use and hence are self-replenishing.
- Both funds continue to be re-invested in energy saving projects, but these funds have strict criteria.
- The original revolving fund has now been spent three times over, saving £1.35m and 6,700 tCO₂ to date.

Case Study: 3 South Lighting Upgrade



Around the campus we have a variety of lighting types, ranging from halogen downlighters through fluorescent tube to modern LED fittings. We have been updating fittings to modern LED types over a period of several years, often combined with the introduction of sophisticated lighting controls that can sense ambient light and the presence of people.

45.4

MWh/year estimated energy saving from 3 South Lighting project

We have several aims in updating the lighting:

- it is more energy efficient, which saves money and reduces our greenhouse gas emissions,
- we can often achieve a better quality of light, giving students and staff a better experience, and
- the new lighting systems have a much improved appearance.

12.6

tCO₂/year estimated carbon saving

Our most recent large lighting project was the replacement of the lighting in the offices, laboratories and teaching and workspaces in 3 South building. Following a survey by a lighting designer the lighting in this building, which was predominantly old fluorescent light fittings, has been replaced by over 250 LED light fitting, mainly flat panels that fit into the suspended ceilings, replacing ceiling tiles to give an improved flush appearance.

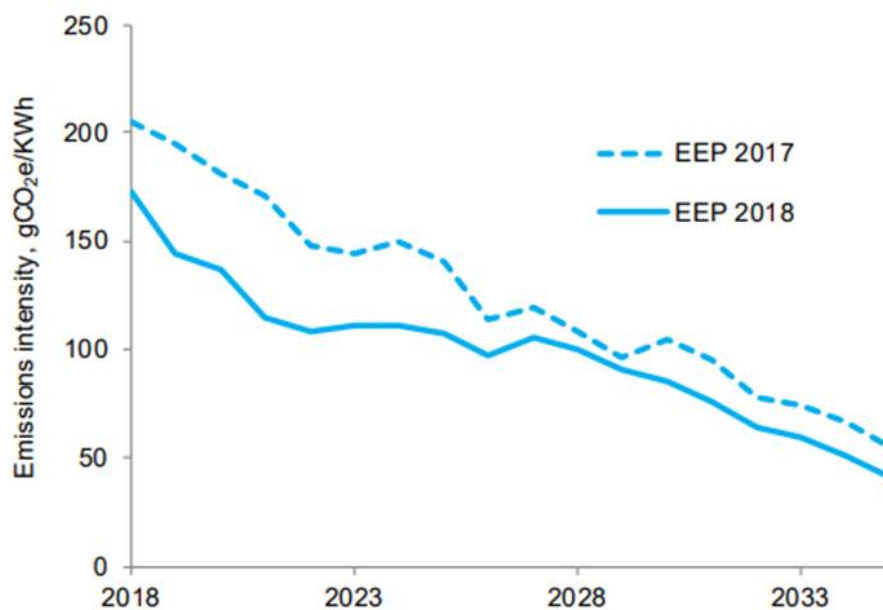
The change in light should result in energy savings of 45.4MWh per year, cost savings of £5.5k per year and carbon savings of 12.6 tCO₂ per year.

The before and after images below give an impression of the improved lighting, which has been very well received by staff in the building.

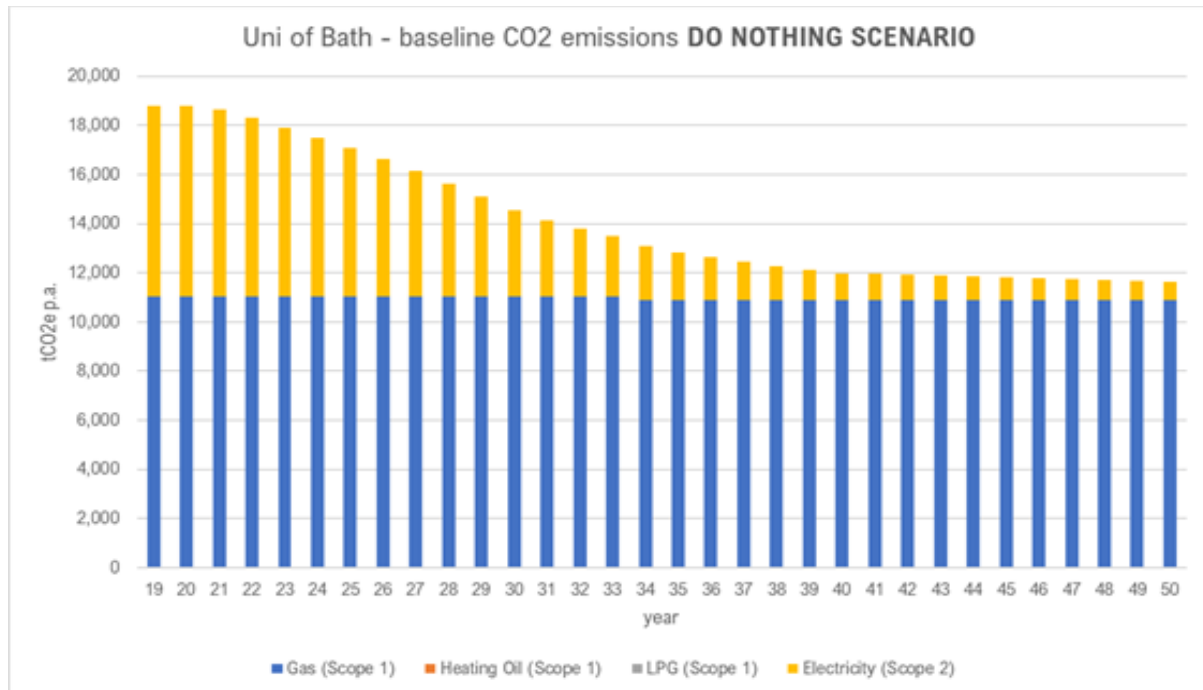


4.4. Decarbonisation of the UK Electricity Grid

- As well as the weather, a major influence on carbon emissions outside the university's control is the grid conversion rate from a unit of electricity to CO₂. These are set each year by the government (DEFRA) and are calculated according to the changing UK electricity generation mix.
- The grid conversion rate has been falling over recent years and this is expected to continue as increased low carbon generation is used:
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- Even if we took no further action to reduce emissions, decarbonisation of UK grid electricity supply would therefore still deliver a considerable carbon emissions reduction.

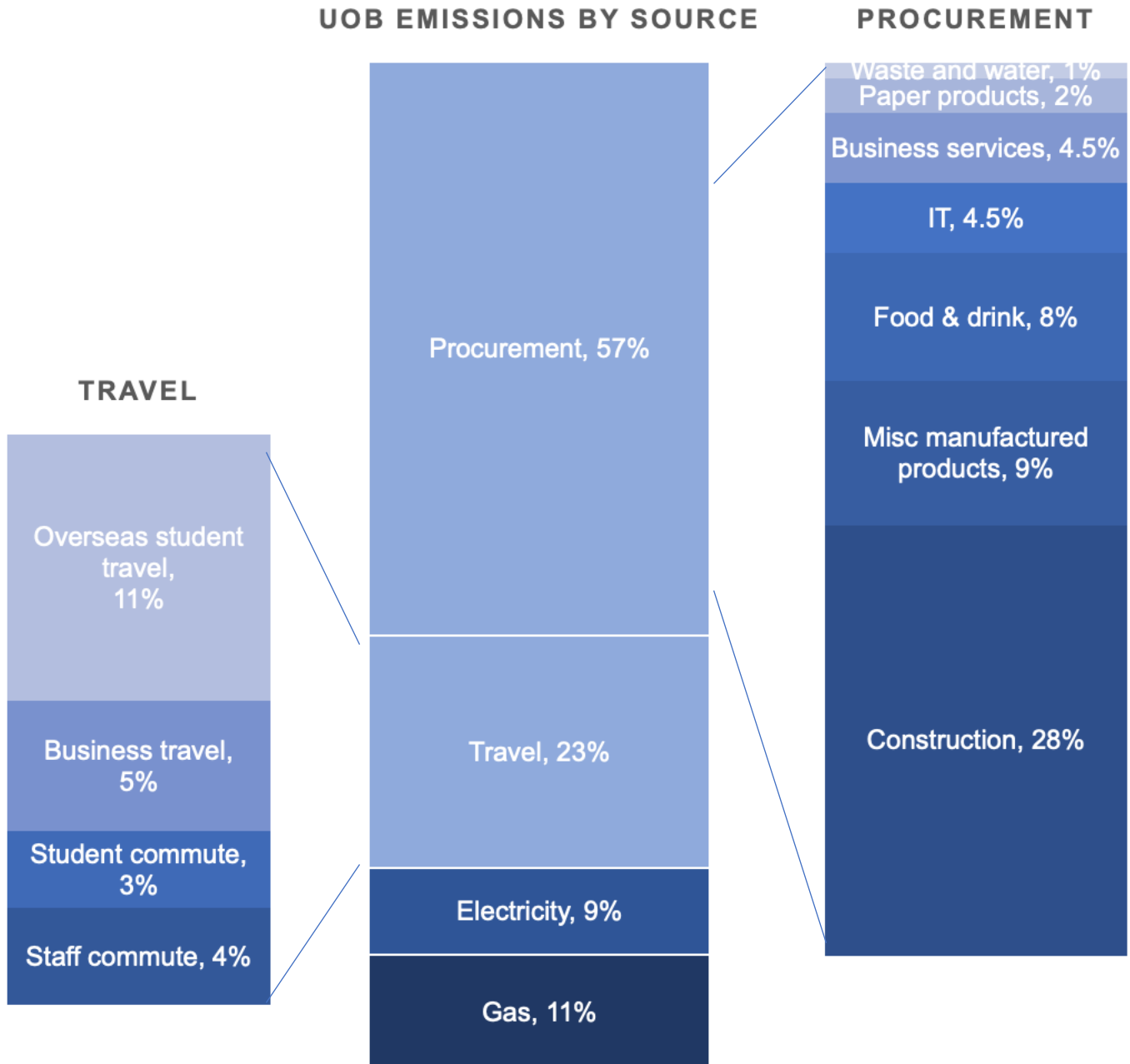


- An equivalent decarbonisation of the gas supply network (Scope 1) remains unlikely in the medium term.
- Decarbonisation of the UK electricity supply is positive news but leads to a fundamental change in priorities for reducing carbon in Scope 1 and 2.
- The priority for carbon saving for the UK and the University must now shift to reducing gas usage; continued electricity efficiency work will save money but a rapidly diminishing amount of carbon. Switching from gas use to electricity for heating will also be needed. However, this brings additional complexity:
 - Electricity is currently significantly more expensive than gas (approx. five times the cost per unit) and is increasing in cost at a greater rate than gas.
 - Electrification of heating through the use of heat pumps is technically complex, especially in existing buildings, requiring investment in the heating systems, but also often the fabric of the building and insulating properties to enable the change of heating source.
 - Reducing Scope 1 carbon emissions related to gas usage will increase Scope 2 emissions and costs will inherently increase where the alternative technologies are powered by electricity.
 - Although electricity is decarbonising, the University still needs to reduce consumption, in line with the carbon reduction hierarchy⁵, and this is where the greatest financial gains are
 - Renewable energy is likely to be part of the solution but opportunities here will be limited by various factors (for example tripling the current number of solar panels would still only generate 1-2% of University electricity use).

⁵ The carbon reduction hierarchy lays out a priority order of implementation for emissions reduction: 'avoid, reduce, replace and offset'.

4.5. Scope 3: Indirect Emissions from Goods and Services We Procure

- For the University the major components of Scope 3 emissions are due to travel and the procurement of goods and services.

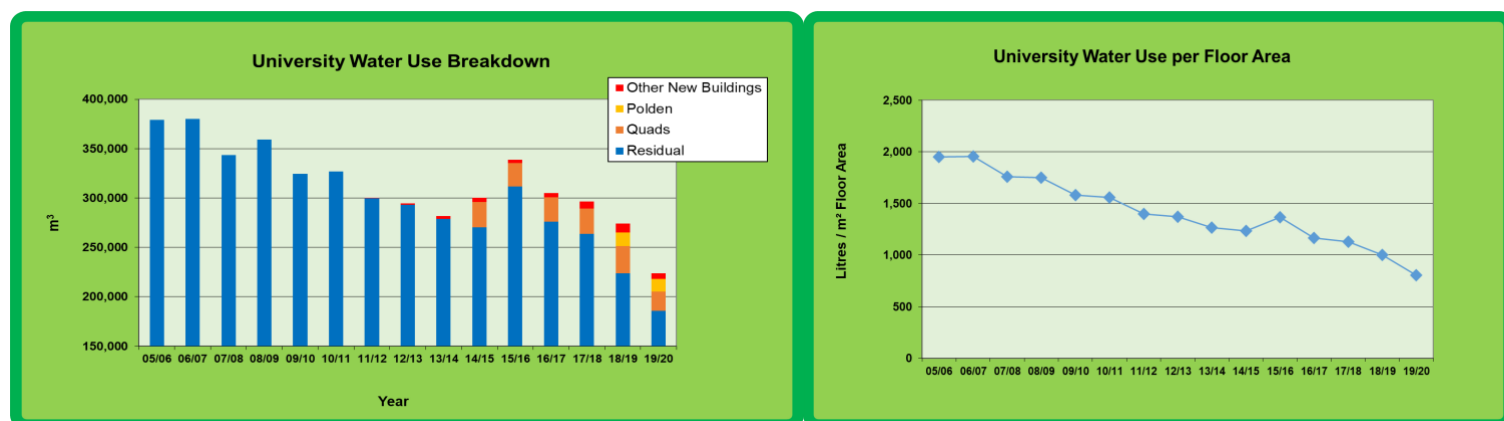


- Historically work within the University has focussed on reducing Scope 1 and 2 emissions.
- Although Scope 3 emissions make up over 75% of our overall footprint, it would however be inappropriate to focus on these emissions at the expense of Scope 1 and 2. Organisations are expected to address their direct impacts first, or preferably alongside, their indirect emissions up and down stream.
- Our Scope 3 emissions are someone else's Scope 1 and 2, so addressing these emissions requires wider engagement with the University community and our supply chains.
- We are currently estimating our scope 3 emissions based on extrapolation, and therefore have not modelled the impact of procurement changes due to lockdown on these emissions. The following table shows the proportion of our overall footprint attributable to different sources - the electricity and gas data reflects the 2019/20 year, whilst other areas are for a 'normal' year.
- A key focus for 2021 is establishing an accurate scope 3 baseline and developing a reduction plan.

4.5.1. Emissions from Commuting

- Our Environmental Policy includes a specific objective to minimise carbon emissions from regular commuting to and from campus by encouraging the use of car sharing, public transport, cycling or walking.
- The University monitors greenhouse emissions associated with commuting travel using the historic travel survey data, plus more recent annual traffic count data.
- The last travel survey was undertaken in 2014⁶ and the emissions per annum for staff and student commuting, based on 2019/2020 staff and student numbers and the 2019 Traffic and Transport survey data are:
 - Staff 2,541 tCO₂/year
 - Student 2,358 tCO₂/year
 - 0.264 tCO₂/year per FTE staff/student – less than 0.5% higher than the 2014/15 baseline
- Set against the staff and student population increasing by around 49% between 2007/8 and 2019/20 the annual transport surveys indicate that in this period:
 - Daily vehicle flows have increased by 6%
 - Car trips per FTE staff/student head have fallen by 29%
 - Bus trips per FTE staff/student head have increased by 10%
 - Cycle/Walk trips per FTE staff/student head have increased by 29%

4.5.2. Emissions from Water Usage



KPI	2015/16	2016/17	2017/18	2018/19	2019/20
Total water use (m ³)	338,886	305,090	296,320	274,017	223,610
Water use per area (m ³ /m ²)	1367	1165	1131	1001	805

- Carbon emissions from water usage⁷ in 2019/20 was 220 tCO₂.
- Water use in 19/20 fell due to Covid and is also an estimated figure as the main campus supply was being upgraded.
- Through efficiency work our consumption continues to fall – actual consumption has fallen over the last 15 years despite the University growing significantly (floor area up by 40%), and the normalised figure has been halved over this period, even before this atypical year.

⁶ This Travel Survey is from 2014 and is therefore unlikely to accurately reflect current travel modes, especially given the likely impact of COVID on commuting preferences. During 2021 we will be looking at appropriate methods of gaining insight in to commuting patterns both to more accurately calculate emissions, and to understand underlying barriers to active travel methods.

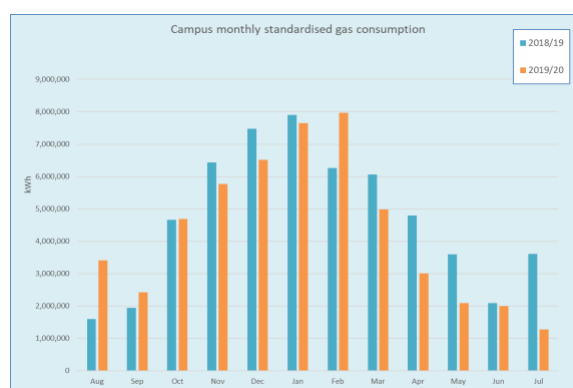
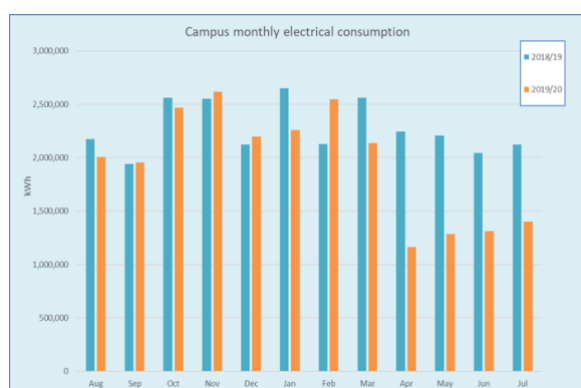
⁷ Emissions generated from the use of water on campus, accounting for both the supply and treatment of wastewater. Based on analysis carried out with our water supplier, we assume 90% of our water supply is returned to the sewer.

5. Offsetting

- Carbon offset schemes allow companies to invest in projects which remove carbon emissions from the atmosphere or prevent emissions from being released, in order to compensate for their own residual emissions, and support their transition to a zero carbon organisation. Carbon offsetting is considered as the position of last resort on the carbon reduction hierarchy of 'avoid, reduce, replace and offset' and there is debate around its validity as an approach. Whilst we are committed to systematically working to reduce our carbon emissions, it may be necessary to offset *residual* emissions to achieve carbon neutrality in Scope 1 and 2 in 2030, and Scope 3 in 2040.
- When considering offsetting and emission reduction approaches, it is important that choices made do not simply export carbon emissions (e.g. to the Global South), instead of reducing them.
- In 2021 we will be looking to develop a position on travel offsetting for projects, rather than at the organisational level. This is in response to the Wellcome Trust's change in grant conditions⁸ which asks the people they "fund to look for every opportunity to do things differently, so that travel only happens when it's essential and it has a carbon neutral impact."
- Sector-wide responses to offsetting are beginning to emerge and we will look to engage with these – for example:
 - The Oxford Principles for Net Zero Aligned Carbon Offsetting brings together the key elements of credible offsetting, exploring considerations such as under what conditions they should be used, and the shift to permanency,
 - EAUC Sector Wide Offsetting Initiative to pilot a credible sector-wide offset solution, based on the Oxford Principles.

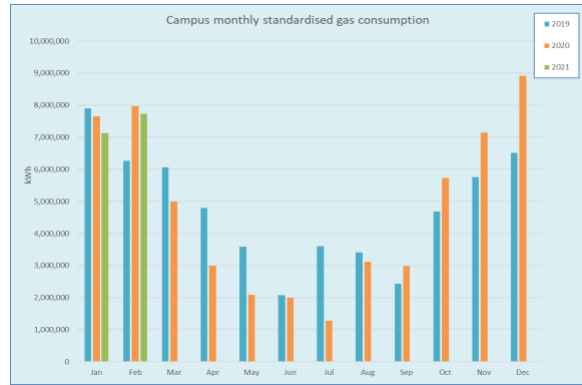
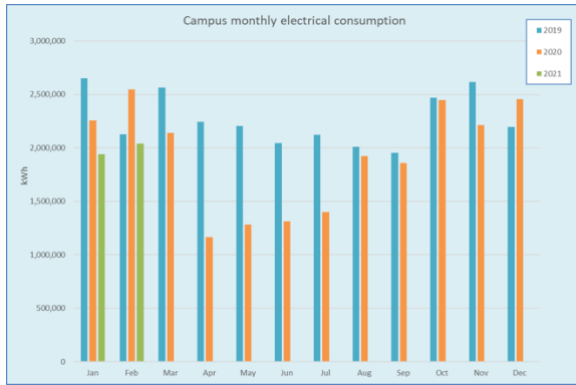
6. Impact of the Covid Pandemic on our Carbon Emissions

- Rapid societal shift in response to the COVID pandemic lead to an initial fall in electricity and gas consumption from March 2020, when compared to the previous year.
- Consumption continued through the period of the first lockdown as a number of students remained in residences on campus, and whilst many teaching, research and office spaces were unoccupied it was not possible to 'mothball' buildings in their entirety.



- From a carbon perspective the overall picture is more complex once the campus started to open up with COVID-secure measures in place. From September 2021 onwards, it can be seen that electricity consumption remained high and gas consumption was significantly higher than 'normal years', despite reduced campus usage, reflecting the more energy intensive requirements of these measures
- This is also reflected in the consumption figures during the national lockdown throughout January and February of 2021. Whilst a stay at home order was in place, standardised gas consumption is still equivalent to the previous year, and electricity usage is at approximately 75% of pre-COVID levels.

⁸ <https://wellcome.org/grant-funding/carbon-offset-policy-travel>



- The impact on our indirect emissions (Scope 3) from the goods and services we procure were mixed; business travel declined substantially, in contrast to increases in procurement of PPE and IT equipment to enable home working. It is difficult to quantify the impact of these changes on our carbon footprint, as we have not yet established our scope 3 baseline (see section 4.5).
- Building climate conscious decisions into the response to COVID-19 and the post-COVID recovery is not straightforward. Many decisions to provide a COVID-secure campus are unavoidably carbon negative, and we recognise that careful consideration will be required in unwinding these positions.

7. Learning & Teaching

The Climate Action Framework expresses a desire to build a world class reputation for high quality education on climate related issues with global reach and scale. In 2020 we designed and rolled out a climate literacy course as part of the induction activities available to all incoming students (see box). We followed this up with a pilot Climate Leaders course for self-selected students. In the first year we used this to foster a community of interest with enrichment activities such as online workshops. We hope that some of the Climate Leaders will join our [Vertically Integrated Projects \(VIPs\)](#), three of which are climate related:

- Decarbonising heat
- Changing behaviour to address the climate crisis
- Sustainable transport.

In 2021 we are planning to develop these activities further to reach more students and create more impact. We are developing a new postgraduate programme, provisionally entitled Zero Carbon Futures. We aim to further embed climate action in our VIPs, the TDF (Teaching Development Fund) scheme, and all our teaching through the curriculum transformation process. We are evaluating various ways of using the [AdvanceHE/QAA guidance on Education for Sustainable Development](#) to align our programmes with our ambitions. We are also working to embed climate action in our Education Strategy.

Case Study: Climate Literacy in Induction



An interdisciplinary group of academic and professional services staff collaborated to provide a Climate Literacy induction course for all incoming University of Bath undergraduate and postgraduate students in September 2020.

40

students signed up to the Climate Leaders programme

The course provides new students with an opportunity to familiarise themselves with some of the learning technologies used during the new semester, including Moodle and Zoom, whilst also engaging with the topic of climate change and the climate emergency and gaining an insight into the University's applied teaching and research in this area.

250

students made a personal pledge to take action

Dr Steve Cayzer, Learning & Teaching Lead for the Climate Action Project: "This course provides our students with an invaluable opportunity to engage with the climate emergency and our research in the area. Just as importantly, it connects students both within their faculty and across the institution. It emphasises our ambition to empower our students with the knowledge, skills and supportive network so they can have a positive impact on the world. Making this activity the first thing students engage with is a real statement of how seriously we take both the climate emergency and the agency of our students."

Participants were able to enhance their digital skills by contributing to Moodle discussions, uploading formative submissions, and participating in live online events which included polls and breakout rooms. These activities gave students from different faculties and courses the opportunity to get to know each other and discuss how their individual disciplines can work together to tackle the global challenges of the climate emergency.

At the end of the induction over 250 students made a personal pledge via Moodle to take action. These included: 'As a student, I pledge to be more conscious in the way I purchase food. This will include buying food with less plastic packaging and consuming more meat alternatives. As a global citizen, I pledge to use my voice in support of environmental issues - this will include specifically signing petitions and voting for campaigns with a green message.'

As a result of the induction course, around 40 students signed up to a Climate Leaders programme, where they are able to continue pursuing their interest in climate change matters through a range of interdisciplinary activities, including talks and workshops to develop their own ideas for tackling climate change.

8. Research

Outside of our impact as an organisation, our research also makes significant contributions to reducing carbon emissions in wider society. Recent examples include:

- working together with the Ford Motor Company to reduce carbon dioxide emissions from their vehicle fleet, equivalent to removing 109,000 cars from the road every year
<https://iaaps.co.uk/research/article/novel-research-technique-for-ford-results-in-huge-co2-savings/>
- work to extend the life of our civil engineering infrastructure
<https://www.bath.ac.uk/case-studies/visualising-the-last-mile-of-electricity-networks/>
- working with Western Power Distribution to visualise the last mile of electricity, enabling lower network voltage which can reduce energy demand and consumption
<https://www.bath.ac.uk/case-studies/visualising-the-last-mile-of-electricity-networks/>

Moving forward with implementation of the Climate Action Framework we will seek to:

- Support further development of world-class trans-disciplinary research work on climate emergency and carbon reductions through investments in research facilities and people.
- To work in partnership and proactively with funding agencies, government and policy bodies, non-governmental organisations, established businesses and start-ups to conduct world leading climate emergency related research.
- Develop staff training and investment to support a transition to more sustainable research working. Support researchers to quantify and minimise the carbon emissions in preparation of research proposals and conducting their research projects.
- Support and encourage use of the university campus and community in Living Lab research

9. Accommodation & Hospitality Services (AHS)

This department runs a number of initiatives under the 'Protecting What Matters' and 'Leave No Trace' campaigns and supports Estates' initiatives such as 'Student Switch Off'. The campaign launched in 2016 across the University's accommodation, hospitality and retail outlets. Leave No Trace encourages all University students, staff and visitors to reduce their environmental impact.

The Leave no Trace loyalty card scheme is run in all outlets to help reduce the number of disposable containers used. If a reusable mug or food container is used in place of a disposable alternative, a stamp on a loyalty card and a discount is received. In September 2018 a charge for disposable coffee cups was introduced to further encourage people to bring their own mug and reduce the number of disposable cups used. In 2019 an exchange cup scheme was introduced in the Pitstop and 4W cafe. Unfortunately, some of these initiatives have had to be temporarily put on hold due to COVID.



The end of term 'Pack For Good' campaign is run in conjunction with Estates, the Students' Union, the Student Community Partnership, the local council and Bath Spa University. This campaign collects unwanted items from students as they move out of accommodation and donates it to charity. Whilst this scheme was smaller this year in light of the COVID pandemic, there were 1181 bags of charity donations given to the British Heart Foundation which has raised an estimated £16,534 for the charity, alongside 9 crates of ambient food collected for the Genesis Trust Food Bank. A total of £597,250 has been raised in Bath since the campaign began in 2012.

10. Students' Union

- In May 2020, the Students' Union (SU) declared a Climate Emergency, at the same time as the University. The urgency and importance of this issue has been consistently reflected in the inclusion of environmental campaigns as one of its Top 10 priority campaigns over the past four years:
 - 2019/20 Top Ten: aims "to lobby the University to commit to radical action in its strategy to combat the climate crisis".
 - 2020/21 Top Ten includes a campaign aimed at decarbonising the University's investment portfolio.
- 30 academic reps completed the NUS training on Education for Sustainable Development, with the intention to build on this and offer our own training to future reps. This equips students with an understanding of how they can champion environmental, social, and economic sustainability through their role, and be confident in doing this.

- Alongside campaigning work, the SU recognises that its own enterprise has a carbon impact and is committed to looking at its own practices.
 - signed up to the NUS Green Impact Accreditation to provide a framework to reach considerably improved standards in terms of sustainability and was awarded a "Good" rating in July 2020.
 - working with More Trees BANES (not-for-profit community group) to run a '[Plant Your Votes](#)' scheme which plants 1 tree for every 10 individual votes placed in the SU Officer Elections. Following the 2021 Officer Elections, 378 trees will be planted, and 1 badger and 1 farm animal adopted.
 - Supporting students to make active travel choices in commuting to the campus. This includes a £10,000 grant from the University to invest in making cycling to the campus more accessible through bike and accessories hire, road cycling sessions, and plans to install Grease Monkey's bike repair stations in 2021.

Case Study: Student Switch Off

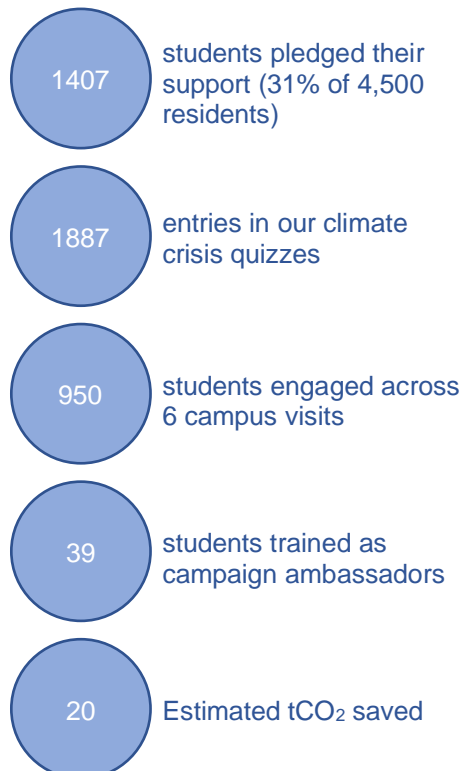


The award-winning student residences energy-saving competition '[Student Switch Off](#)' continues to deliver savings and raise awareness with new students. Each year typically 1500-2000 first year students sign up and pledge to behave in an energy efficient way.

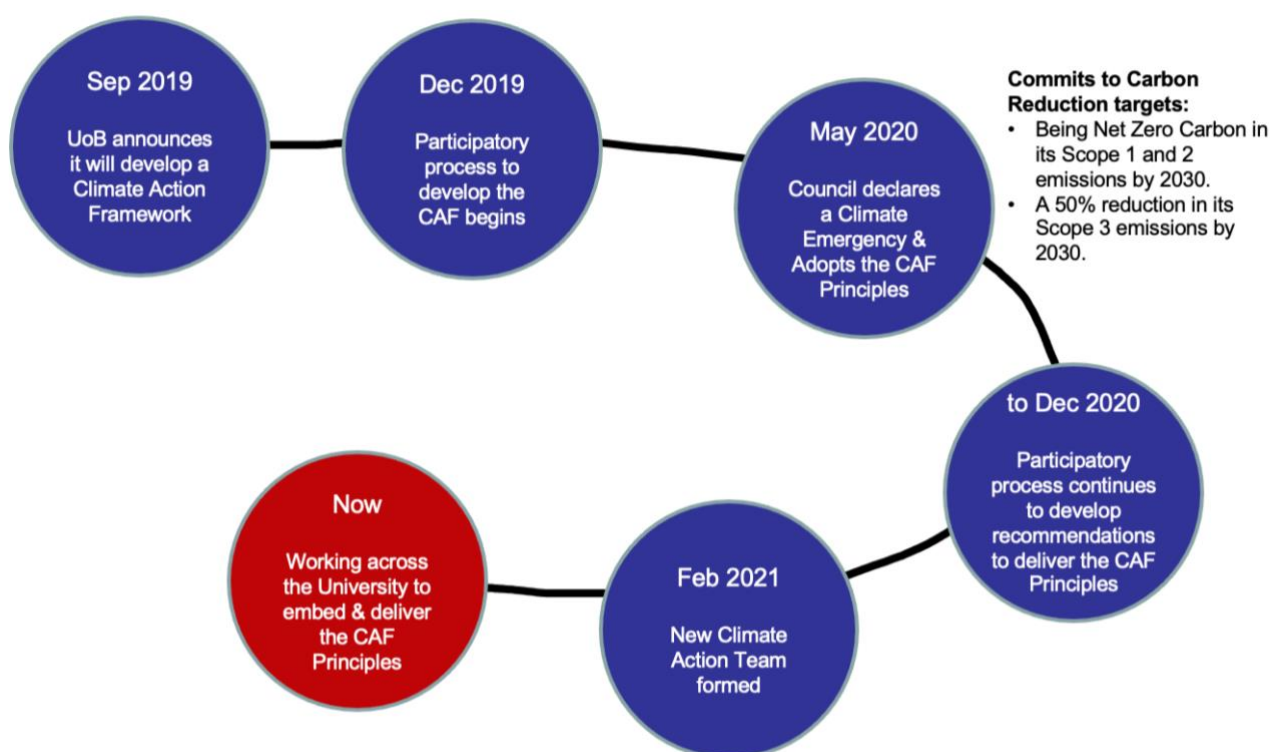
Students are provided with top tips on various social media, plus competitions, quizzes, training, and regular updates including how much electricity they have been using. A 'Beer & Curry' prize is awarded to the winning hall, and there are a number of other prizes given away during the competition.

This campaign runs at over 40 universities in the UK; Bath continues to be a leader amongst these in implementation. Thanks to a combined effort between Estates, AHS staff, the SU, and student volunteers, higher levels of engagement are achieved than most other institutes.

The University have been running the campaign for the last 11 years and over this time have saved 740,000kWh, equivalent to 327 tonnes CO₂, or 5,662 years powering a lightbulb.



11. Establishing a Whole Institution Response to the Climate Emergency



Climate Action Framework

In September 2019, the Vice Chancellor announced that the University of Bath would develop an ambitious Climate Action Framework, as our response to the Climate Emergency.

In May 2020, the University Council declared a Climate Emergency and approved the adoption of the 11 Climate Action Framework (CAF) Principles. These principles are a whole institution response, addressing our response to the climate emergency in terms of our core mission and vision, alongside our responsibilities as an organisation.

UNIVERSITY OF BATH CLIMATE ACTION FRAMEWORK PRINCIPLES

The University of Bath commits to:

- CARBON EMISSIONS REDUCTION**
 - Being Net Zero Carbon in its Scope 1 and 2 emissions by 2030.
 - A 50% reduction in its Scope 3 emissions by 2030.

Being Net Zero Carbon in its Scope 1, 2 and 3 emissions by 2040.
- RESEARCH AND INNOVATION:** Supporting world-class research activities at the University of Bath, and in wider collaborations, to deliver impactful research and innovation supporting the transition to the net zero carbon economy.
- LEARNING AND TEACHING:** Developing educational initiatives to build a world class reputation for high quality education on climate related issues with global reach and scale, for example by: providing opportunities for every student to study and work on climate related issues; delivering programmes with a sustainability agenda; delivering pedagogically innovative teaching practices to reduce carbon emissions.
- UNIVERSITY STRATEGY:** Supporting the transition to the net zero carbon economy through the university's strategy, sub-strategies and its core decision making, and throughout its core values and its commitments.

5. **UNIVERSITY GOVERNANCE:** Ensuring there is clear leadership and governance for implementation of the Climate Action Framework, with public accountability through transparent disclosure of progress against our principles.
6. **UNIVERSITY CAMPUS EMISSIONS REDUCTION AND CLIMATE CHANGE ADAPTATION:** Reducing all university campus carbon emissions, in a manner that is consistent with the broader principles of sustainability and in a Just Transition. Understanding and responding to the consequences of climate change adaptation on the campus and the university's supply chain.
7. **INTERNATIONALISATION STRATEGY:** Supporting and encouraging carbon responsible international engagement to ensure sustainable collaborations that meet our strategic internationalisation goals.
8. **CARBON MANAGEMENT:** Improving the data quality relating to the university's carbon emissions, recognising that this is a strategic tool to understand and systematically reduce its carbon footprint.
9. **UNIVERSITY FINANCES:** Taking the principles of the Climate Action Framework into account in all key funding and investment decisions.
10. **UNIVERSITY COMMUNITY AWARENESS AND ACTION:** Supporting behavioural and cultural changes to enable carbon reduction targets through engagement with the university community.
11. **UNIVERSITY OF BATH: LOCAL LEADER AND PARTNER:** Working with key partners from the local community, industry, public sector bodies and third sector organisations, to support the transition to the net zero carbon economy

Case Study: Climate Action Framework Participatory Process



In January 2020, we established the CAF Working Group (CAFWG) to advise on possible next steps.

To ensure meaningful and focused discussion three sub-groups were established on the topics of Research, Learning and Teaching, and Policy, Practice and the University campus.



Over 50 members of the University engaged directly in the CAF process

Membership of these groups deliberately included representation from across our community, including: the Students' Union; People and Planet society, trade unions; academic and professional services staff. In addition, a number of individuals outside the working groups have been engaged on specific areas.

Detailed discussion held in the working and sub-groups led to the development of the 11 CAF Principles, which set out a 'whole institution' response to the challenge of Climate Change.

Following declaration of a Climate Emergency and the adoption of the 11 CAF Principles by the University, the CAF Working, and Sub-groups identified prioritised recommendations for further development, consideration and implementation, with a focus on the short and medium term.

The governance structure for the new Climate Action team builds on the success of this process and has built in participatory groups for the implementation phase.

12. Delivering the CAF Principles

- Since their adoption in May 2020, the CAF Principles have already started to influence the University's decision making and initial steps on embedding have been undertaken.
- Recognising that a systematic approach is required to deliver on these Principles, detailed plans were developed through the participatory process established under the CAF Working Group.
- In December 2020, the University announced the creation of a new Climate Action team, including four new posts, to push forward these ambitious objectives. This investment, against the backdrop of financial uncertainty caused by the COVID pandemic, demonstrates the University's commitment to addressing the Climate Emergency.
- The Climate Action Project is working with teams throughout the University to address how it transitions to a zero-carbon campus, tackles Scope 3 emissions, and supports staff and students to make low carbon decisions easier. In parallel, the team will help the University embed net zero thinking into all policies and aspects of the organisation, whilst building on internal, local and regional partnerships to develop a collaborative approach.

"This is clearly a really difficult time for the University community, but it is also an exciting time. Within the Climate Action process we have set ourselves some really challenging targets, but also embraced the concept of a 'whole institution' approach to addressing Climate Change - looking not just at how we do things (our operations) but what we do (research, teaching, partnerships etc)."

Pete Phelps, Climate Action Project Lead

13. Future Plans

In adopting the CAF Principles, we have not only committed to becoming net zero carbon in Scopes 1, 2, and 3 emissions by 2040 but also to a whole institution response considering the impacts of our core mission, research, learning and teaching and engaging with our community and initiatives to address climate action in our region.

The Climate Action project will start to deliver across the following themes over the next year:

