

# Carbon Management Plan

## Executive summary

This Carbon Management Plan (CMP) summarises the University's approach to achieving Net Zero Carbon (NZC) for Energy used by 2035 and across all areas by 2045 through reduction of demand, production of cleaner energy, and offsetting of emissions. It describes how Carbon accounting will be carried out annually to track progress and that an interim carbon reduction target has been set for 2026/27.

This will see not only the University reducing its environmental impact but that of our suppliers, partners, and contractors alike, demonstrating responsibility in line with our Civic responsibilities towards the health of the city and the region's business, communities and citizens.

This plan has been reviewed and approved by the Sustainability Steering Group.

## Introduction

As a University founded on social responsibility, we deliver sustainability through pioneering research and innovative education, the behaviour and actions of our students and staff, and engagement with our local communities. This is reflected by the [sustainability pillar](#) of our 2030 Strategic Framework. The University of Birmingham has [committed to reaching Net Zero Carbon \(NZC\)](#) for emissions associated with Energy (Scopes 1 and 2) by 2035 and indirect emissions (Scope 3) by 2045, against a 2020/21 baseline, in absolute terms.

## Student Involvement

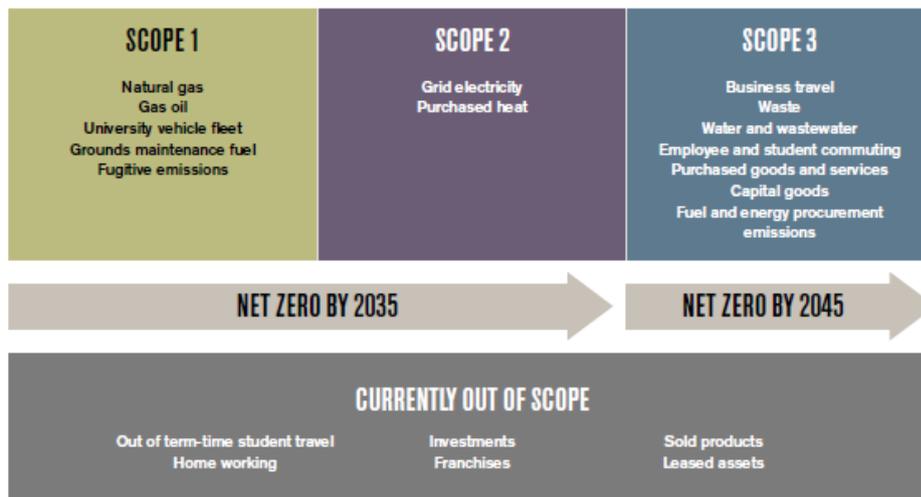
The University's Guild of Students were involved in shaping the 2030 Strategic Framework and setting our NZC targets. The [NUS Carbon Targets](#) initiative has ranked us as "Leading the Way" on commitments to reduce carbon emissions and take action against the climate emergency.

To deliver on our 2035 and 2045 targets, we have embarked upon an ambitious plan that includes and engages our students, colleagues, and other stakeholders. This Carbon Management Plan (CMP) outlines our approach to achieving NZC targets, through reduction of demand, production of cleaner energy, and offsetting of emissions.

## Carbon accounting and emission scopes

The Greenhouse Gas (GHG) Protocol is the recognised global standard for carbon accounting. This categorises emissions into three 'Scopes' so that responsibility for them can be accurately allocated. Essentially, Scope 1 and 2 are those emissions that are owned or controlled by an organisation, whereas Scope 3 emissions are a consequence of the activities of the organisation but occur from sources not owned or controlled by it.

Figure 1 below summarises our Scope 1, 2 and 3 emission sources. Those emissions currently out of scope will not necessarily remain so, and will be regularly evaluated as we continue to bolster the quality and breadth of data we collect and with alignment to the Environmental Association of University and Colleges' (EAUC) Standardised Carbon Emissions Framework (SCEF) which launched in January 2023.



The University of Birmingham has accounted for carbon emissions (2020/21) and this forms the baseline for measuring further reduction<sup>1</sup>. The carbon footprint for the University's UK activities for 2020/21 was 280,504 tCO<sub>2</sub>e. Scope 1 & 2 emissions accounted for c 17% (48,893 tonnes) of our total carbon emissions with Scope 3 emissions accounting for 83% (231,611 tonnes).

We will follow the principles of the SCEF in the carbon accounting for 2021/22 and re-baseline our emissions for 2020/21, including carrying out a review of emissions that are currently out of scope. Note that this may require interim targets to be updated accordingly.

### Targeting carbon reduction

The University of Birmingham has a long history of carbon management, reduction and reporting dating back to 2006, with the publication of our first carbon management plan (CMP) in the first phase of the Carbon Trust's *Higher Education Carbon Management Programme* which was revised in 2010 to support HEFCE's undertaking to reduce the carbon footprint of the higher education sector by 43% by 2020. We achieved our 2020 target to reduce our Scope 1 & 2 carbon emission by 20% in absolute terms against a backdrop of increasing student numbers, construction of new buildings and increasing turnover.

This CMP outlines our approach towards the University's Intuitional Measure of Success (or KPI) for achieving NZC emissions across all scopes by 2045, 5 years ahead of the [UK Government's 2050 legally binding target](#).

### Targets

The NZC overall and interim targets for absolute emissions reduction will support delivery of the UK's legally binding target and aligns with the COP21 Paris Agreement, which seeks to limit the increase in global temperature to 1.5°C above pre-industrial levels. The University's strategic and interim targets are set out here:

- Milestone 1 – By 2027, 18% carbon reduction, for Scopes 1 & 2 (against 2020/21 baseline)
- Milestone 2 – By 2035, to deliver NZC for Scopes 1 & 2 (against 2020/21 baseline)
- Milestone 3 – By 2045, to achieve NZC for Scope 3 (against 2020/21 baseline)

<sup>1</sup> The emissions accounted for and measured in this report are those related to our UK activities and do not currently extend to our international Dubai campus. We are working towards including this campus in future emissions reporting.

## Baselines

The table below shows the breakdown of the University's carbon footprint across each scope for the baseline year. This provides context for the number of areas where emissions reduction will need to be targeted.

Scope	Source	Baseline emissions (tCO <sub>2</sub> e)	Contribution to total (%)
1	Gas	43,692	15.58%
	Fugitive emissions	225	0.08%
	Other fuels	192	0.07%
	Vehicle fleet	75	0.03%
2	Electricity	4,685	1.67%
	Heat	24	0.01%
3	Procurement (supply chain) <sup>2</sup>	210,091	74.90%
	Staff and student commuting	11,343	4.04%
	Staff & student business trips <sup>3</sup>	9,364	3.34%
	Waste (including construction)	628	0.22%
	Water	185	0.07%
	<b>Total</b>	<b>280,504</b>	<b>100%</b>

## Monitoring and Reporting

Our Milestone 1 interim target will remain under review pending the proposed development of sector specific guidance, e.g. EAUC guidance and verification framework for universities and colleges. This approach is consistent with our position as a [global leader in climate change research](#) and will ensure our continuing alignment the COP21 Paris Agreement.

Carbon emissions will be calculated and published annually, allowing the monitoring and adjustment of our pathway to NZC with increasing accuracy. We intend to take a transparent approach to reporting, holding ourselves accountable to our NZC commitments by publishing our progress in annual updates to the CMP.

## Implementing carbon reduction

A range of activities will be required to deliver carbon reductions in line with the respective 2027, 2035 and 2045 milestone targets. Focus of this activity will be in four parts:

- Scopes 1 and 2
- Scope 3
- Behaviour Change
- Offsetting

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<sup>2</sup> Procurement includes purchased products & services, capital goods and fuel & energy procurement.

<sup>3</sup> Staff & student business trips includes business travel and grey fleet. Student fieldtrips are currently excluded but will be included as part of the forthcoming re-baselining exercise.

## Scopes 1 & 2

A number of key actions will be required to deliver our Scope 1 & 2 target. With 89% of Scopes 1 and 2 emissions are from gas usage, the priority for decarbonising will be to move away from using gas to produce heat and power, to become an electrically-powered campus (i.e. installation of heat pumps to decarbonise our Energy Centre). As a responsible business, initial activity will focus on reducing our demand as much as possible e.g. through installation of LED lighting, upgrading energy intensive infrastructure and retrofitting buildings with improved glazing and insulation. We will also consider opportunities for on and off-site renewable generation, such as solar photovoltaics.

## Scope 3

In setting a target for Scope 3 emissions we will look to address the full impact of our carbon emissions. This gives us the opportunity to focus our efforts and resources on carbon reduction measures that deliver the greatest impact and value for money. Work has started on improving our data, so that we can engage with the suppliers we believe can be most impactful in reducing our emissions, with greater confidence that our emissions data are accurate and consistent with best practice in the sector. We will bring this information together to report on progress towards development of a pathway for reducing Scope 3 in the next version of this CMP.

## Behaviour Change

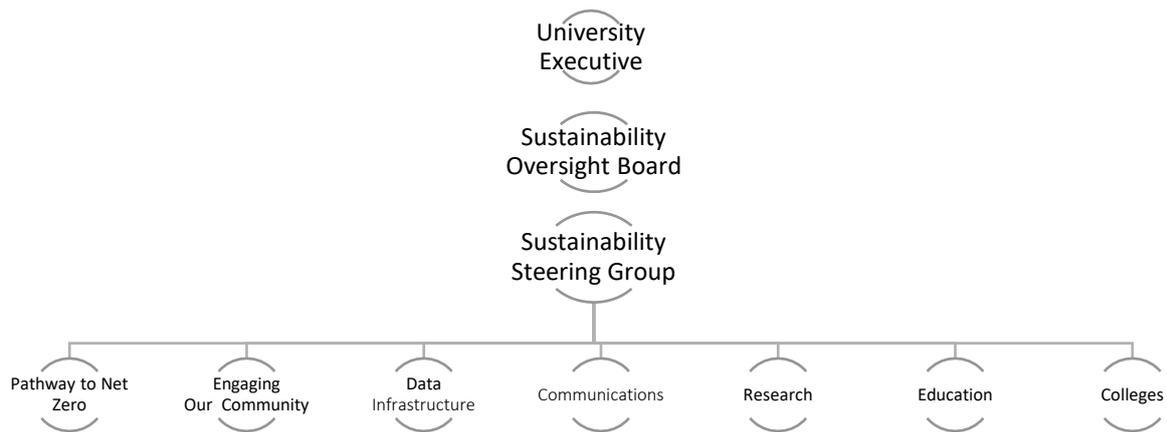
While a significant component of achieving NZC involves action beyond the control of the individual (e.g. upgrades to buildings, changes to the energy centre), it is clear that, across all three scopes, there will be a need for everyone in the University community to take action. Having a focus on behaviour change will ensure that staff and students alike are educated and supported to take personal action in a way that is aligned to our NZC targets. Existing and new channels are being identified, that will be the most appropriate to influence behaviour change.

## Offsetting

As a University, our position is that we do not offset carbon at the current time. We recognise that to meet our Net Zero Carbon targets, it will be necessary to offset those residual emissions – those emissions that are impossible to reduce. However, at this stage, we recognise that there is much we can still do to reduce absolute emissions before the need to offset. During 2024 we will publish our approach to offsetting as our thinking develops.

## Governance, Authority and Reporting NZC

There is a strong governance model in place for ensuring the Net Zero Carbon targets are met. This has been developed to drive action linked to strategy by providing a mechanism for effective reporting into senior leadership and optimising engagement with key stakeholders. The governance model is set out below.



### Sustainability Oversight Board (SOB)

The SOB is chaired by the Vice-Chancellor and is responsible for:

- Holding the Sustainability Steering Group to account for progress against the University’s sustainability ambitions, as set out in the Strategic Framework;
- Reviewing and approving plans that deliver against the University’s sustainability ambitions;
- Reviewing the effectiveness of management processes and controls over delivery against the sustainability ambitions;
- Overseeing the resource profile for delivery of the University’s sustainability plans;
- Ensuring connectivity between Sustainability and other key strategic initiatives.

### Sustainability Steering Group (SSG)

The SSG provides strategic oversight and co-ordination of the University’s approach to sustainability and achieving NZC, and ensure alignment with other strategic goals such as Smart Campus and Capital Master Planning. Specific key tasks carried out by the SSG are as follows:

- Overseeing the development and work of various task & finish groups (see below) which will be responsible for delivery against key areas of the strategy.
- Checking on progress, monitoring performance and examining all business cases for proposed projects and additional resourcing.
- Reporting progress towards NZC to the SOB and University Executive Board.

### Roles and responsibilities of SSG group members:

- Executive Sponsor of NZC - Professor David Hannah – Deputy PVC Sustainability and Director of the Birmingham Institute for Sustainability & Climate Action (BISCA).
- University Lead of NZC - Charmaine Morrell - Head of Sustainability (University Business Lead for Scopes 1, 2 & 3).
- Accountable Lead for scope 1 + 2 - Trevor Payne – Director of Estates Lead
- Accountable Lead for scope 3 - Simon Bray – Director of Campus Services
- Danielle Edwards – Deputy Director of Finance (Projects)
- Jonathan Jones – Head of Procurement

- Monica Guise – Director of Facility Services
- Caroline Durbin – Head of Communications and Engagement
- Alison Lundy – Sustainability Project Officer and EA
- James Sharman – Carbon and Sustainability Manager
- Martin Freer – Director of the Birmingham Energy Institute
- Florence Craddock – Guild of Students representative.

### Task and finish groups

To rationalise the variety and scale of the challenge, a number of groups have been established that currently report into the SSG. A brief description of each group is provided below:

- Pathway to Net Zero Carbon - To develop a clear plan for achieving the University's Net Zero ambitions and to communicate this plan to key audiences
- Engaging the Whole Community in Sustainability - To develop a clear plan for how staff and students engage with Sustainability, and decide on a focus for engagement effort
- Building our sustainability data - To improve the efficiency and effectiveness with which sustainability data can be used
- Communications - Drawing together the communications strategy and delivery of the communications strategy, based on the other workstreams

Membership of each working group has been purposefully designed to promote cross functional working. Similarly, there is expected to be a high degree of overlap between the activity of the groups, to be managed through shared membership, clarity of ownership and joint working.

The above Task & Finish groups are developing detailed action plans to deliver carbon reductions in line with NZC targets. They will also assess resource requirements to ensure priority is given to projects and initiatives that deliver the best return on carbon saving (e.g., £ invested / tonne saved). The actions are summarised below:

1. Publish progress on action plan development and related actions in annual updates of the CMP.
2. Identify projects / initiatives, rank and prioritise based on key criteria e.g. carbon saving, cost, technical risk, etc with methods of prioritisation to be used or developed as needed.
3. Publish a rolling programme of deliverable projects and initiatives in the annual update of the CMP.

### Other groups

The following groups also report into SSG.

- Research / BISCA – This group will ensure that major University initiatives are developed and that they share our research and impact on sustainability and that we contribute to sustainability through collaboration with the city and region. As BISCA shifts from transformative to distributed leadership, a management and advisory group will be formed, and these will report in to SSG.
- Academic Steering Group for Smart Campus Research & Education – To provide strategic oversight and co-ordination of the University's approach to maximise the smart campus as a research and innovation asset.

The Governance structure will be reviewed annually, to ensure it is fit for purpose in supporting the University in achieving its sustainability ambitions. Other work in progress includes:

- Establishment of a College Leads Group – establish to bring together academic Sustainability Leads in each College alongside other sustainability professionals. The College Leads have been engaged and the approach reviewed, with the conclusion that it remains important to continue engagement through the College Lead model.
- Development of a Sustainability education strategy - Using UN Sustainable Development Goals to develop educational material for each discipline. Governance will be developed by the recently appointed to Director of Sustainability Education.