



BIRMINGHAM CITY
University

Birmingham City University's

Net Zero Carbon Plan



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Introduction

This Plan outlines BCU’s approach to reaching net zero for scopes 1 and 2 of carbon emissions by 2035/36 and Scope 3 by 2042/43, and was approved by the University Executive Team in September 2026.

As one of the founding cities of the Industrial Revolution, Birmingham’s prosperity was historically driven by the widespread use of fossil fuels. Birmingham City University (BCU) has a unique position in supporting the region, and beyond, to a more sustainable future through our graduates, research, and as an anchor institution in the city. As part of this goal, and in the context of a climate emergency, we have set challenging net zero ambitions.

This high-level plan outlines how BCU aims to become a net zero carbon organisation, and how we will use climate adaptation to respond to climate change risks.

Committing to net zero by 2035/36, while recognising the significant financial pressures this will entail, positions BCU as a forward-thinking leader in sustainability and long-term resilience.

Our Strategy 2030 is built on three core pillars that draw on the University’s strengths and community needs, emphasising the University’s responsibility to its local community in Birmingham and the West Midlands. Our Net Zero Plan is key in the delivery of the environmental sustainability success criteria of Strategy 2030, with our net zero targets included as a key performance indicator of the strategy.

The Plan is important in supporting the student experience, helping to create an estate that runs efficiently, creating comfortable indoor conditions by tackling climate change mitigation and adaptation.

We have a responsibility to reduce our impacts on the planet, and this Plan supports our commitment to reducing our emissions and supporting solutions through our curriculum and research.



Ian Blair
Pro Vice Chancellor
Academic and Sustainability

Vision

Birmingham City University has an ambition to become net-zero for Scope 1 and 2 by academic year 2035/36 (baseline 2022/23) and scope 3 by academic year 2042/43 (baseline 2023/24).

Context

The climate emergency refers to the urgent, global need to reduce greenhouse gas emissions and protect ecosystems to avoid the most severe impacts of climate change on people, economies, and the environment. There are several greenhouse gases (GHGs) that are responsible for driving climate change, but carbon dioxide (CO₂) accounts for the largest share, primarily produced by the combustion of fossil fuels, and is used as a proxy for discussing all emissions, commonly referred to as carbon dioxide equivalent (CO₂e).

The concentration of GHGs has been rising steadily and the 2023 Intergovernmental Panel on Climate Change (IPCC) outlined that human activity has caused 1.1°C of warming, driving rapid and widespread impacts. We need to take action to reduce the amount of emissions we are generating and use our role as a higher education institute (HEI) to support the development of solutions.

Net zero is the target of balancing the amount of greenhouse gases produced with the amount removed from the atmosphere, so that overall emissions are reduced to as close to zero as possible, in line with the UK’s legally binding goal of reaching net zero by 2050. BCU has adopted the Science Based Targets initiative (SBTi) approach by:

- Developing a near-term and long-term net zero target.
- Including scope 3 emissions within our target.
- Aiming to make an absolute reduction of 90%, allowing for a 10% offset.

BCU reports GHG emissions in line with the Standardised Carbon Emissions Framework (SCEF), ensuring consistent, transparent, and comparable carbon and energy data across operations.

The GHG management hierarchy is a structured approach to prioritising actions that reduce or eliminate emissions in the most effective order, rather than relying on offsetting as a first response (see opposite). This hierarchy will be used when tackling our emissions at BCU, with offsetting as a last resort.

Eliminate

Eliminate (avoid/prevent): The most effective way to reduce emissions is to remove the source entirely. This includes eliminating unnecessary energy consumption, reducing wasteful processes, and avoiding carbon-intensive activities wherever possible.



Reduce

Reduce: Where emissions cannot be eliminated, we focus on reducing them through improved efficiency, smarter operations, behavioural change, and the adoption of best practices across our estate and activities.



Substitute

Substitute (replace): We replace high-carbon technologies, fuels, materials, and processes with lower-carbon or renewable alternatives. This includes transitioning to renewable energy sources, electrification, and the adoption of innovative low-carbon solutions.



Remove

Remove: For residual emissions that cannot currently be eliminated, reduced, or substituted, carbon removal and offsetting measures may be considered as a last resort. These help address unavoidable emissions while longer-term reduction solutions are developed

As outlined in our sustainability strategy, Our Sustainable Future, we are aligning our work to the United Nations Sustainable Development Goals (UN SDGs).

The SDGs are a set of 17 global goals established by the United Nations to address challenges like poverty, inequality, climate change, and environmental degradation by 2030.

This plan supports and contributes to the following Sustainable Development Goals (SDGs). While these are the primary SDGs it aligns with, the plan will contribute to additional SDGs beyond those listed:

- SDG 7: Affordable and Clean Energy
- SDG 9: Industry, Innovation and Infrastructure
- SDG 11: Sustainable Cities and Communities by driving cleaner energy systems, greener industries, and more sustainable urban development
- SDG 13: Climate Action, because cutting greenhouse gas emissions is central to tackling climate change.



United Nations Sustainable Development Goals



Our principles

To support the delivery of our net zero ambitions in line with Strategy 2030 and our sustainability strategy, we have developed the following principles:

1. Create an inclusive and responsible net zero plan and delivery model working in collaboration with partners locally and beyond Birmingham City University.
2. Strengthen campus climate resilience and adaptation to support a positive, accessible, and comfortable student experience.
3. Adopt a climate-first approach that prioritises eliminating (preventing) impacts, then reducing, reusing, and recycling resources, with disposal as a last resort.
4. Foster strong, inclusive partnerships that enable shared responsibility, collaborative problem-solving, and collective progress towards our net zero goal.
5. Recognise and respond to the global climate emergency by embedding urgent, science-led action across all decisions and activities.

Our commitments

To support the University in tackling the impacts of climate change, we have established a set of commitments aligned with the key pillars of our sustainability strategy.

We are committed to achieving a transition to net zero for Scope 1 and 2 emissions by the 2035/36 academic year (baseline 2022/23) and Scope 3 emissions by the 2042/43 academic year (baseline 2023/24).

Recognising that climate action requires collaboration, our approach is aligned with the ambitions and priorities of our local and regional partners, including Birmingham City Council, West Midlands Combined Authority, and other public, private and community organisations. By working together, we can maximise our collective impact, share knowledge and resources, and contribute to a coordinated transition to a low-carbon, climate-resilient region.

Alongside reducing greenhouse gas emissions, Birmingham City University is committed to strengthening the resilience of its estate, operations and community to the impacts of a changing climate. Our Climate Risk and Resilience Assessment has identified increasing risks from heat stress, flooding, drought, storms and water scarcity across the University's estate, with these risks expected to increase over time. We will embed climate adaptation into estate planning, asset management and business continuity, prioritising nature-based solutions, improving the resilience and efficiency of existing infrastructure, and ensuring that future investment supports both decarbonisation and long-term climate resilience.

This approach is underpinned by a robust framework of plans and policies that define how we operate sustainably and reduce emissions. These plans include:

- Strategy 2030 and Beyond
- Our Sustainable Future
- BCU Travel Plan 2025–30
- Sustainable Catering Plan
- Climate Risk and Resilience Plan (in development)
- Thermal Comfort Policy
- Procurement Policy and Plan
- Estates and Facilities Business Strategy Plan
- IT Digital Strategy

Current position and future considerations

Universities will need to align institutional strategies with the UK's legally binding net zero by 2050 target under the Climate Change Act 2008, while responding to regulatory expectations from the Office for Students and funding conditions linked to UK Research and Innovation. In doing so, they will operate within a wider policy and delivery landscape that includes collaboration with local authorities such as Birmingham City Council, regional initiatives led by the West Midlands Combined Authority, the development of heat networks to decarbonise urban energy systems, and national policies and funding programmes set by central government.



Scopes of emissions

The GHG Protocol framework shown in Image 4 illustrates how organisational emissions are categorised across Scope 1, Scope 2 and Scope 3. While Scope 1 represents direct emissions from sources owned or controlled by the reporting organisation, and Scope 2 covers indirect emissions associated with purchased energy, Scope 3 captures the wider value-chain emissions occurring both upstream and downstream of an organisation’s activities.

For BCU, this distinction is particularly important because a significant proportion of its carbon footprint is likely to sit outside its direct operational boundary. Upstream Scope 3 emissions include the production and transportation of purchased goods and services, construction materials, capital projects, waste management, and business travel, while other indirect emissions arise from staff and student commuting, leased assets, and the use of externally provided services. Downstream categories, although more limited for a university, may include the impacts associated with the use and disposal of purchased products and equipment.

The scale of Scope 3 emissions presents a major challenge because they extend beyond BCU’s direct control, requiring collaboration with suppliers, contractors, students, staff, local partners, and wider national initiatives supporting sustainable procurement and decarbonisation.

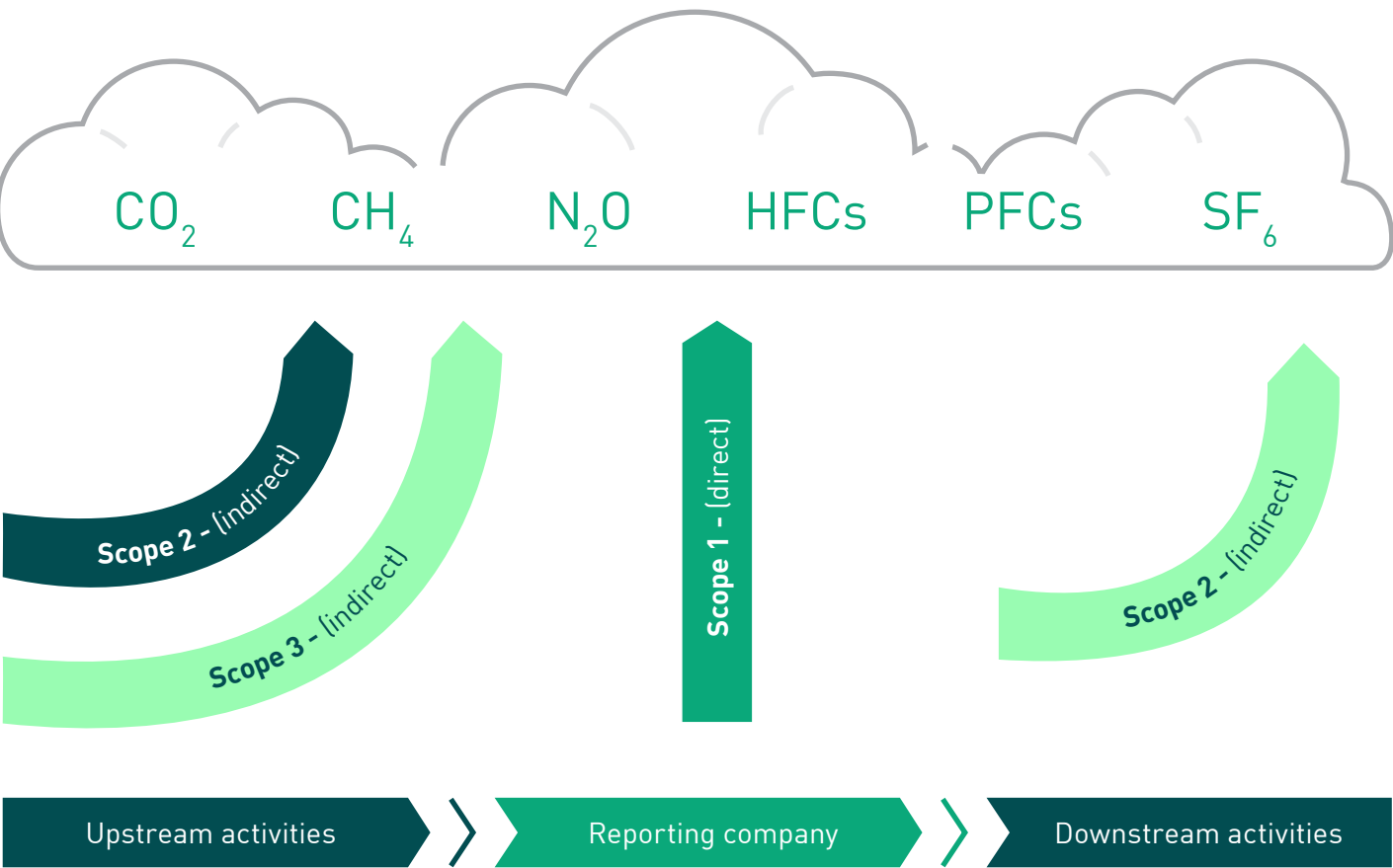
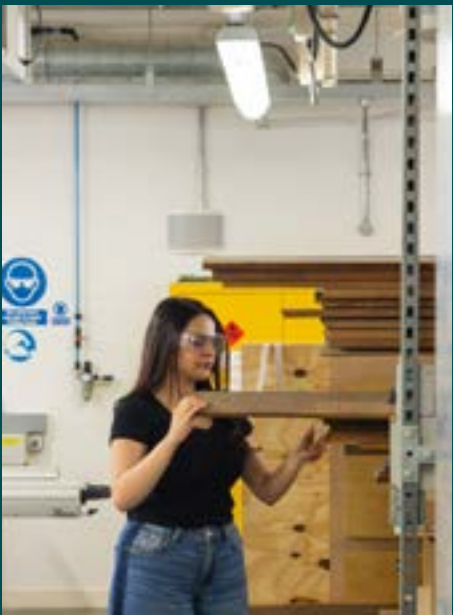


Image 4: GHG Protocol of scopes and emissions. Source: GHG Protocol



Scope 1

Covers direct GHG emissions from sources owned or controlled by an organisation. For BCU, these primarily arise from the combustion of natural gas for heating, fuel used in university-owned vehicles, and fugitive emissions from refrigeration and air conditioning systems. Reducing these emissions typically requires improvements to building heating systems, electrification of the vehicle fleet, and enhanced maintenance of cooling equipment.



Scope 2

Comprise of indirect GHG emissions associated with the generation of purchased electricity, heat, steam, or cooling consumed by an organisation. For BCU, these emissions primarily arise from the electricity used to power teaching spaces, laboratories, libraries, offices, student facilities, and digital infrastructure across its estate. Although these emissions occur at the point of energy generation rather than on campus, they remain the university’s responsibility under greenhouse gas accounting. Reducing Scope 2 emissions can be achieved through energy efficiency measures, the procurement of renewable electricity, and, where appropriate, connection to low-carbon heat networks as they become available.



Scope 3

Represent all other indirect greenhouse gas emissions arising from activities not directly owned or controlled by an organisation but linked to its operations and wider value chain. For BCU, these emissions are likely to represent the largest and most complex proportion of its carbon footprint, reflecting the extensive range of activities associated with a higher education institution. They include emissions from purchased goods and services, construction and refurbishment projects, staff and student commuting, business travel, waste management, digital services, catering, and the embodied carbon associated with buildings and infrastructure.

Unlike Scope 1 and Scope 2 emissions, Scope 3 sources are often influenced by external suppliers, contractors, transport providers, and individual behaviours, making them more challenging to measure and reduce. Addressing these emissions will require collaboration across BCU's supply chain and with wider partners, including Birmingham City Council, the West Midlands Combined Authority, transport providers, heat network operators, and central government initiatives that support sustainable procurement, low-carbon development, and regional decarbonisation.



Scope 1

At BCU, scope 1 emissions are predominantly generated through the burning of gas in our boilers. However, Scope 1 also includes emissions from our petrol and diesel vehicles and leaks from air conditioning/cooling systems.

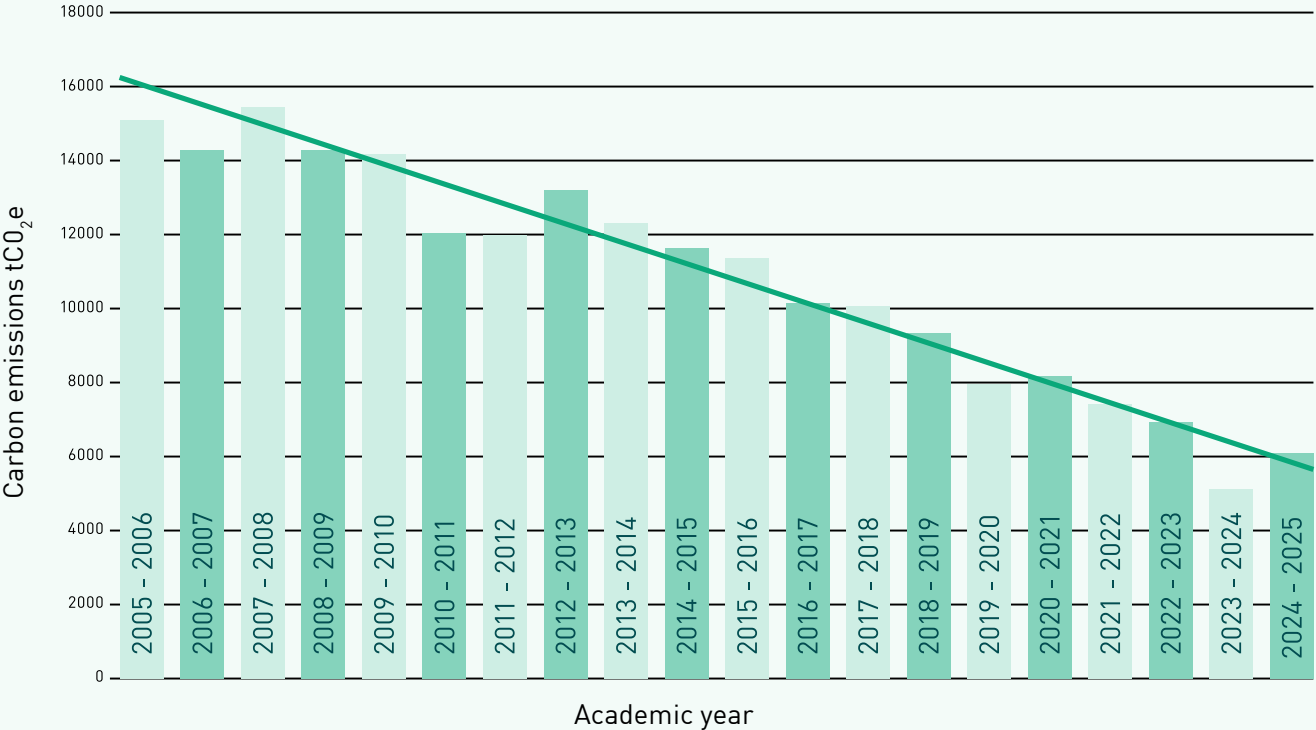
Several steps have already been taken to reduce our Scope 1 emissions. These include:

- Installation of Air Source Heat Pumps (ASHP) at Seacole Building.
- Decarbonisation of heat at Benjamin Zephaniah building.
- Enabling works completed to install ASHP at the Pavilion.
- Increased monitoring of the gas Half Hourly (HH) profile data and raising any issues for investigation through our Building Management System (BMS).
- Reducing set point temperatures across the estate in line with our Thermal Comfort Policy.

Through our net zero pipeline project we will develop a structured delivery plan with clear priorities, identify finance options, establish ownership and define measurable outcomes focused on further reducing our Scope 1 emissions. We will:

- Commission and activate the ASHP system at the Pavilion, once all substation planning and technical issues have been addressed and resolved.
- Review expanding heat decarbonisation across the estate putting into practice lessons that we have learned from current installations.
- Continue our involvement in Birmingham's District Heat Network discussions.
- Work with our landlords and tenants in leased premises to reduce environmental impact and carbon emissions.
- Develop a BMS strategy to strengthen our data led management approach and to identify thresholds for anomalies, have a clear chain of assigning and identifying visible trends.

Scope 1 and 2 emissions 2005 - 2025



The graph above visually represents our Scope 1 and 2 emissions journey comparing our emissions to 2005-06. We are tracking our direct and indirect greenhouse gas emissions over each academic year. In 2005/2006 we recorded 15,124 tCO₂e and in 2024/25 this reduced to 6,100 tCO₂e, a reduction of 9,024 tCO₂e.

Scope 2

Scope 2 emissions are generated at BCU via electricity we purchase and consume on site to power our buildings and equipment. Actions to reduce scope 2 emissions include:

- Procuring renewable energy. Our current contract which ends September 2026 uses 100% renewable energy. Our electricity contract from October 2026 is a vintage Corporate Power Purchase Agreement (CPPA) and is 100% renewable electricity generated in the UK either via wind, solar or hydro assets.
- Upgrading lamps to LED alternatives at end of life.
- Monitoring HH profile data to identify any anomalies and investigating further.
- Extended our on-site solar generation capacity to 762 panels across 5 sites.
- A comprehensive solar PV panel cleaning and maintenance exercise was completed to enhance system efficiency and maximise generation capacity.
- Piloting smart building technologies by installing and monitoring network sensors within Joseph Priestley building to evaluate performance and operational efficiency.
- Identifying sub-meters that supply our catering outlets to monitor catering consumption as part of our Sustainable Catering Policy.
- We've established a network with our Environmental Champions and created Green Impact actions to reduce energy consumption and emissions.
- Produced communication articles to encourage behavioural changes to switch off unused equipment.
- Completed a tender exercise to upgrade obsolete lighting to LED lamps, at Parkside. Work started in June 2026 to install 3,961 new LED lights and emergency lights across the site.

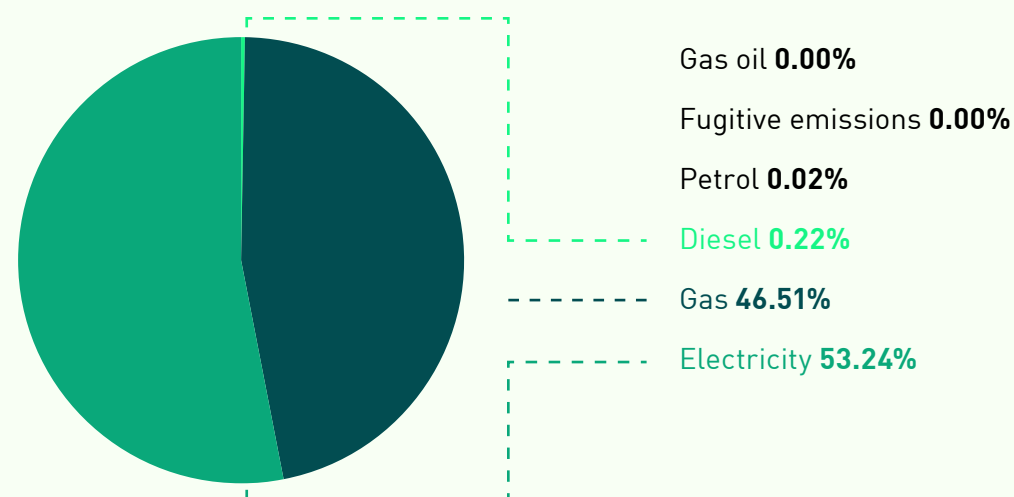


Through our net zero pipeline project we will develop a structured delivery plan with clear priorities, identify finance options, establish ownership and define measurable outcomes focused on further reducing our Scope 2 emissions. Reductions in scope 2 emissions are effectively about using cleaner electricity, less electricity and smarter use of electricity.

We will:

- Continue to upgrade obsolete lighting in Curzon, Millennium Point, School of Art and School of Jewellery.
- Work with Events, Timetabling, Space Management, Engineering and IT to monitor room usage and building operational hours to reduce electricity and gas consumption.
- Review the list of sub-meters on BMS to develop a robust monitoring schedule and to set reduction targets.
- Promote awareness of reduction goals and practices.
- Promote a staff scheme to feedback ideas for improvement.
- Continue to work with our network of Environmental champions via the Green Impact activities to further reduce our energy consumption.
- Create a mothball procedure to ensure all leased assets not in use are using minimal energy and reduce the risk of unnecessary energy use.
- Work with landlords to reduce our electricity consumption.
- Commit to future leases with EPCs of B or above.
- Identify building use via a range of parameters such as m2, building users, and operational hours.

Scope 1 and 2 CO₂ emissions - 2024/25



Source BCU data

The above illustrates the breakdown of Scope 1 and Scope 2 CO₂e emissions for the 2024/25 reporting year by energy source. Electricity consumption represents the largest proportion of emissions, accounting for 53.24% of total Scope 1 and 2 emissions, followed closely by gas at 46.51%.

All other sources contribute only a small proportion of overall emissions, including diesel (0.22%), petrol (0.02%), and gas oil (0.00%), whilst there were no fugitive emissions during this period.

The emissions profile highlights that electricity and gas are the primary areas of focus for emissions reduction initiatives. Continued efforts to improve energy efficiency and optimise building and operational energy use will have the greatest impact on reducing overall carbon emissions.

Scope 3: The majority of BCU's carbon footprint is formed of Scope 3 emissions which in 2024/25 is estimated to equate to 61,463 tCO₂e and 90.9% of our overall carbon footprint. Significant sources of scope 3 emissions are our purchased goods and services (69.7%) and travel, with UK student travel and international student travel being responsible for 13.5%.

Scope 3 emissions represent a significant proportion of BCU's overall carbon footprint, highlighting the importance of addressing emissions beyond those directly controlled by the University. The following section explores how each emissions scope relates to BCU, the actions already undertaken, and the proposed measures to further reduce emissions across the estate, operations, and wider supply chain.

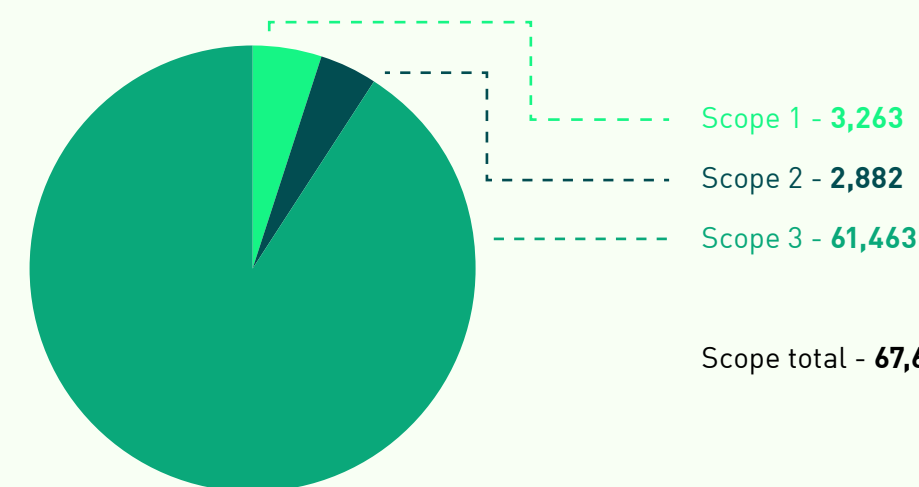
A key challenge in addressing Scope 3 emissions is the complexity and scale of global supply chains. As a single organisation, BCU has limited direct influence over the wider market and can be considered a small actor within a much larger system. However, we will use our procurement processes, supplier engagement, and contract requirements where possible to encourage more sustainable practices, improve emissions transparency, and support suppliers in reducing their carbon impacts. Ultimately, achieving significant reductions in Scope 3 emissions will require coordinated action across global supply chains, industries, and markets beyond the University's direct control.



Scope 3 emissions relate to a wide range of categories within BCU including business travel, staff and students commuting, waste disposal and treatment, transportation and distribution, water supply and treatment and wastewater treatment and Well to Tank energy (WTT).

Action has been focused on improving our data capture to enable us to clearly and transparently report on our emissions, establish baselines, and be able to more accurately monitor, measure, and reduce going forward.

2024/25 Carbon Emissions (tCO₂e)



Source BCU data

The emissions profile in the above chart highlights that indirect value chain emissions (Scope 3) represent the overwhelming majority of BCU's carbon footprint, indicating that the greatest opportunities for emissions reduction lie in engaging with suppliers, improving procurement practices, reducing business travel and transport impacts, and addressing other value chain activities alongside continued improvements in operational energy efficiency.

Total carbon emissions for 2024/25 were 67,608 tCO₂e. The largest contributor was Scope 3 emissions, accounting for 61,463 tCO₂e (approximately 91% of total emissions). Scope 1 emissions totalled 3,263 tCO₂e (around 4.8%), while Scope 2 emissions were 2,882 tCO₂e (around 4.3%).

Actions to reduce Scope 3 emissions so far:

- Rolling out water loggers to most of our buildings to give visibility to 24-hour water consumption to quickly and efficiently identify anomalies.
- Creating the Travel Plan with a clear travel hierarchy which prioritises virtual meetings and making public transport our default travel option. This has improved how our travel emissions are recorded.
- Identifying business travel as a key focus area, embedding emissions reduction into decision-making, supported by a Travel and Expenses Policy with a clear travel hierarchy.
- Reusing furniture and equipment wherever feasible.
- Participating in the Net Zero Carbon Supplier Tool (NZCST) to improve the quality of data from our supply chain.
- Align the digital strategy, IT technology investments and procurement decisions with the wider net zero ambitions.

Going forward, we aim to:

- Monitor and measure the Travel Plan.
- Establish a baseline for water consumption and set reduction targets.
- Deliver targets to eliminate and reduce waste.
- Work with Procurement colleagues to assess emissions associated with purchasing and take appropriate action.
- Be involved in future projects to ensure scope 3 emissions are captured during the construction or refurbishment of our estate.
- Work with our partners and contractors to establish a clear chain of communication in capturing emissions and environmental data and minimising impact.
- Develop a sustainable procurement action plan to further embed sustainability in our procurement processes to reduce emission
- Develop a Digital Carbon Assessment to establish a carbon baseline across end-user devices, data centres, networking infrastructure, public cloud services and SaaS platforms.

Key future considerations for all scopes include:



Clear, funded roadmaps – Setting science-aligned interim targets with measured milestones together with transparent delivery plans and capital investment strategies.



Whole-estate decarbonisation – Prioritising demand reduction, fabric upgrades, low-carbon heat, smart energy systems and resilience to climate risks.



Sustainable finance – Balancing carbon reduction ambitions with financial pressures through phased investment, lifecycle costing and green funding mechanisms.



Curriculum and research integration – Embedding sustainability across disciplines and aligning research strengths with national decarbonisation priorities.



Data and governance – Improving carbon accounting, risk management and board-level oversight to ensure credible progress and transparent reporting.



Collaboration and civic leadership – Partnering with local authorities, industry and communities to support regional decarbonisation and skills development.



Research and development within BCU

The Centre for Future Homes is making a significant contribution to net zero through applied research, industry collaboration, and education. Its work includes externally funded demonstrator projects such as Project 80 and Gedling Green, which evaluate homes designed to meet future low-carbon standards. Research activities have focused on indoor air quality, overheating, heat pump performance, and reducing single-use plastics in construction, while also supporting the decarbonisation of energy-intensive manufacturing sectors.

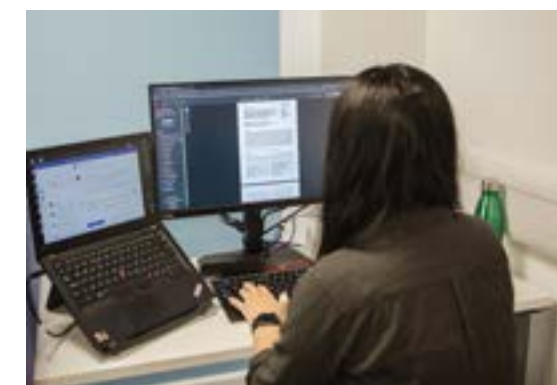
The Centre's research has informed the development of the Future Homes Standard and is expected to contribute to REF 2029 impact case studies. Future initiatives include the development of an energy efficiency and carbon reduction dashboard, a home retrofit demonstrator, and independent advice services for homeowners. Through evidence-based research, stakeholder engagement, and industry education, the Centre supports the delivery of measurable carbon reduction outcomes and informed policy development.

Information Technology

BCU's net zero approach recognises that digital technology is both an enabler of sustainability and a source of carbon emissions in its own right. The University is working to align its digital strategy, technology investments and procurement decisions with its wider net zero ambitions. As part of this, IT Services has commissioned a comprehensive Digital Carbon Assessment to establish a carbon baseline across end-user devices, data centres, networking infrastructure, public cloud services and SaaS platforms. The assessment is intended to identify the highest-impact opportunities for carbon reduction and inform future investment decisions.

A key focus for IT Services is the development of a Smart Campus capability, using digital technology, data and automation to improve the efficiency of campus operations while enhancing the student and staff experience. This includes greater use of data platforms, sensor technologies, building systems integration and analytics to support more informed decisions about energy use, space utilisation and resource management. Smart Campus is identified within BCU's digital transformation ambitions alongside learning analytics, AI and modern digital services.

Information Technology (IT) has a much broader role in climate change than simply reducing its own carbon footprint. It is increasingly recognised as a critical enabler of both climate risk management (understanding and responding to risks) and climate adaptation (making organisations more resilient to future climate impacts). This can be through data collection and monitoring, predictive analysis, digital infrastructure resilience, research and innovation, communication and education.



Our Climate Risk and Resilience report covered 20 built assets across city centre, city south and satellite sites. It identified that heat stress was our most significant risk affecting 75% of assets with several buildings (Seacole, School of Jewellery and University Locks) at very high risk. Recommended actions include developing a portfolio wide Climate Change Adaptation Plan, reviewing and optimising existing cooling and BMS controls, adopting nature-based and deep-retrofit solutions where needed, integrating adaptation into planned maintenance and refurbishments and to regularly review adaptation plans as new data and climate projections become available.

Current and planned IT activity contributing to the net zero agenda includes:

- Establishing a university-wide understanding of the digital carbon footprint, covering devices, networks, cloud services and data centres, and developing evidence-based reduction plans.
- Modernising technology infrastructure, including cloud adoption and data centre transformation, to improve efficiency and reduce energy consumption.
- Developing data platforms, governance and analytics capabilities that can underpin Smart Campus and sustainability initiatives.
- Exploring Smart Building technologies, networked sensors, automated monitoring and enhanced building management capabilities as part of future sustainability planning.
- Reviewing lifecycle management of end-user devices, including extending equipment life, reuse and “second-life” approaches to reduce embodied carbon.
- Evaluating the sustainability implications of technology choices such as classroom computing models, teaching technology, displays and data centre capacity.



Biodiversity

The University is committed to reducing greenhouse gas emissions while recognising the important role of trees in carbon capture, air quality improvement, and climate resilience. The BCU estate contains more than 1,300 trees across 1.508 hectares, with sycamore (*Acer pseudoplatanus*), field maple (*Acer campestre*), and Canadian poplar (*Populus x canadensis*) being the most common species. A 2021 iTree Eco assessment by the U.S. Forest Service found that BCU’s urban forest has high species diversity, with 9% of trees native to Europe and 62% originating from Europe and Asia.

BCU’s tree canopy generates approximately 17.1 hectares of leaf area, enabling it to remove around 96.07kg of air pollutants annually, sequester 6.422 metric tons of carbon each year, and store approximately 244 metric tons overall. Sycamore accounts for 87.6% of stored carbon, while Canadian poplar contributes 69.4% of annual carbon sequestration. The University’s trees also produce around 17.12 metric tons of oxygen each year and reduce surface water runoff by an estimated 289 cubic metres through rainfall interception and improved soil absorption.

Through its Biodiversity Action Plan, BCU is enhancing the quantity and quality of green space, with a focus on increasing native tree species and achieving a biodiversity net gain of more than 15% by 2035. Plans to plant over 500 additional trees will strengthen habitats, improve the campus environment, and further increase carbon storage, air quality, urban cooling, and sustainable water management.



Challenges around net zero

Achieving net zero presents' challenges at both national and organisational levels.

A low carbon economy means shifting away from fossil fuels for generating electricity, powering transport, and heating buildings.

Upgrading the grid to handle increased electrification is required. To pay for this, the government will increase tariffs on business electricity invoices adding further costs to customers as well as considering private investment. Adding these costs to the high cost of retrofitting existing buildings could cause budget restraints.

One of the biggest challenges for the UK is how to decarbonise the provision of heat in buildings. The most appropriate technology depends on the specific characteristics of each building, so it is likely a blend of technologies will be deployed. This can be done using the following options, but each has its drawbacks:

District heating

There are already five heat network systems in operation within Birmingham with a plan to expand the heat network. BCU has been approached by a private organisation that runs an existing heat network together with BCC who are exploring District Heating Zone networks with the Department for Energy Security and Net Zero (DESNZ). Joining a scheme can be very complex and expensive and requires being tied into long term contracts (10-15 years). BCU has been holding discussions with various organisations to fully understand the opportunities available to our estate.

Through the **West Midlands Combined Authority, the Regional Energy Strategy 2025** (delivered by Energy Capital) sets out its vision for the West Midlands:

"By 2041, the West Midlands will have trailblazed the route to a smarter UK energy system, creating prosperity for the region and enabling a fairer net zero transition for our communities." West Midlands Combined Authority. (2025). West Midlands Regional Energy Strategy. Energy Capital Partnership.

<https://www.wmca.org.uk/media/2mcjtntr/west-midlands-regional-energy-strategy.pdf>

BCU will continue to track progress in this area to ensure informed decision making, particularly in line with our Masterplan and future developments.



Electrification

The UK electricity grid is rapidly decarbonising, with further reductions expected as offshore wind and nuclear capacity expand and coal and gas are phased out. However, rising demand from electrified heating and transport will make balancing supply and demand more challenging, despite the Government's ambition to fully decarbonise the grid by 2035. Building owners must therefore reduce energy demand and prepare for low-carbon technologies such as heat pumps, though these are not suitable for all buildings due to space, access and cost constraints, including potential heat distribution upgrades. Without demand reduction, increasing competition for grid capacity may also require costly reinforcement works at some sites.

Hydrogen

Hydrogen can be produced from fossil fuels or renewable electricity, and the UK intends to increase the proportion of hydrogen and biogases in the national gas grid. However, challenges around storage and transport mean widespread national adoption is unlikely before the 2030s, with early deployment more probable in regions near production and storage facilities. The Government is currently funding feasibility studies, with a decision on large-scale rollout expected in 2026. While hydrogen is not presently a viable option for BCU, this may change as the technology develops.



Governance and reporting

Going forward, universities will be increasingly judged not only on their operational emissions, but on how effectively they integrate sustainability into teaching, research, estates, procurement and civic engagement—demonstrating measurable progress toward a low-carbon, climate-resilient future.

Strengthening governance and reporting means applying clear structures, accountability, and reliable data in place so sustainability commitments translate into measurable, credible outcomes.

Our net zero ambitions form a Key Performance Indicator for Strategy 2030 and Our Sustainable Future.

Carbon accounting

Through our action plans we plan to develop a consistent, auditable approach to measure emissions across all scopes. This includes improving data quality, increasing the frequency and granularity of reporting, and aligning methodologies with recognised standards. Better carbon accounting enables more accurate tracking of progress against targets and supports informed decision-making.

We shall also explore opportunities to introduce carbon costing and develop carbon intensity metrics, such as emissions per square metre of estate. These measures will provide greater insight into the carbon impact of our buildings and operations, support prioritisation of investment decisions and enable more effective comparison of performance across the estate.

We will also explore opportunities for independent third-party verification of our greenhouse gas emissions data and reporting to enhance confidence, credibility and accountability.

Risk management

Embed climate and energy-related risks into the organisation's wider risk framework. This covers both transitional risks (e.g. regulatory changes, energy price volatility) and physical risks (e.g. extreme weather impacts). By identifying, assessing, and regularly reviewing these risks, the organisation can take proactive steps to mitigate exposure and build resilience, building on the Climate Risk Assessment conducted on the estate in 2025.

Environmental Sustainability has been identified as a risk on our Strategic Risk Register (SRR), which includes climate change and achieving our net zero ambitions. The SRR is tracked and reviewed by UET and BoG, providing another avenue of oversight against our net zero ambitions.

Board-level oversight

Ensure sustainability and energy performance are regularly reviewed at board level through our Sustainability Committee, with clear ownership and accountability. This involves setting defined targets, monitoring progress through meaningful KPIs, and integrating sustainability into strategic decision-making. Strong oversight helps ensure that commitments are taken seriously and resourced appropriately.

The Sustainability Committee will regularly review data on emissions, energy use, and resource efficiency, providing strategic guidance and accountability across all areas of the University. The Committee will also support continuous improvement by identifying opportunities for innovation, sharing best practice, and engaging stakeholders to drive meaningful and measurable change.

Progress against our net zero ambitions will be reported annually through our sustainability report. We will report on our carbon emissions for transparency against SCEF as outlined earlier in the Plan. The annual sustainability report will go to University Executive Team (UET) and Board of Governors for approval.

The Finance Committee will review overall financial performance and identify budgets to support our net zero ambitions biennially. A representative from Finance is included on our Sustainability Committee and a report will be made to the Finance Committee biennially.

Action Plan

The table below outlines how the University’s key sources of emissions will be addressed through the various decarbonisation plans in place across BCU.

Further details are provided within each of the relevant plans.

To support delivery, BCU has developed a pipeline of decarbonisation projects. Implementation is subject to securing funding on a project-by-project basis.



Scope	Category	Baseline year	Baseline	Reduction Plans
1	Natural gas	2022/23	3,576 tCO ₂ e	Net Zero Plan Masterplan
1	Fleet	2022/23	9 tCO ₂ e	Travel Plan
2	Purchased electricity	2022/23	3,275 tCO ₂ e	Net Zero Plan Estates Masterplan Digital Strategy (to be developed)
3	Proportion of actual supplier emissions reported through contracts awarded via the Procurement Team	2023/24	32.8%	Procurement strategy Estates Masterplan
3	Water	2023/24	11.49 (-Millennium Point) 12.64 (+Millennium Point)	Net Zero Plan Climate Risk Assessment Digital Strategy (to be developed)
3	Waste generation in academic buildings	2023/24	539.9 tonnes	Sustainability Strategy

Scope	Category	Baseline year	Baseline	Reduction Plans
3	Business travel - air and rail	2023/24	1,534 tCO ₂ e	Travel Plan
3	Upstream leased assets	Utility consumption is included within the University’s overall Scope 1 and Scope 2 emissions.		Estates strategy Estates Masterplan
3	Staff and student commuting	2023/24	9,805 tCO ₂ e	Travel Plan
3	Food and catering	Because food and catering outlets are not separately metered, their utility consumption is included within the University’s overall Scope 1 and Scope 2 emissions and cannot currently be reported independently.		Sustainable Catering Plan



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