

Carbon Reduction Plan

Supplier name: Imperial College London
Publication date: June 2025

Commitment to achieving Net Zero

Imperial College London is committed to achieving Net Zero emissions (scopes 1 and 2) by 2040, minimising Scope 3 emissions where possible.

Baseline Emissions Footprint

Baseline emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Baseline Year: 2018-19 academic year	
Additional Details relating to the Baseline Emissions calculations:	
<p>Imperial College London’s Scope 1 and 2 CO₂e emissions relate to the building operations and calculated from a combination of billed energy consumption, meters and budget figure or estimated based on previous usage data. The Higher Education Statistics Agency (HESA) methodology for the annual Estates Management Record (EMR) is used as the basis for this data collection. Department for Energy Security and Net Zero’s CO₂e figures are used to convert energy use into CO₂ emissions.</p> <p>Baseline Scope 3 emissions were calculated using the conversion factors based on Procurement spend categories. Emissions are calculated from total spend in line with the methodology set out by HESA. Emission sources are broken down and categorised to allow intra-sector comparison with peers and other organisations in the sector.</p> <p>We are bringing our methodology in line with the sector methodology set out by the Environmental Association for Universities and Colleges (EAUC) which is based on the GHG Protocol Reporting Framework.</p>	
Baseline year emissions:	
EMISSIONS	TOTAL (tCO₂e)
Scope 1	39,794 tCO ₂ e (scope 1 utilities) + Ca.21 tCO ₂ e (fleet emissions)
Scope 2	15,454

Scope 3 (Included Sources)	163,041
Total Emissions	218,289 TOTAL (tCO₂e)

Current Emissions Reporting

Reporting Year: 2023-24 academic year	
EMISSIONS	TOTAL (tCO₂e)
Scope 1	19,492 tCO ₂ e (utilities) + 17 tCO ₂ e (fleet emissions)
Scope 2	22,874 tCO ₂ e
Scope 3 (Included Sources)	201,174 tCO ₂ e (83%) Of which: <ul style="list-style-type: none"> - Business travel: 34,473 tCO₂e (17%). - Employee commuting: 1904 tCO₂e (0.95%) - Waste generated in operations: 92 tCO₂e (0.045%) - Upstream and downstream transportation and distribution: These two categories are reported implicitly within our scope 3 emission data. We do not yet have the data to break this out from the wider emissions from purchased goods and services. We expect this to be a small part of our emissions compared to the larger impacts of producing the goods we buy.
Total Emissions	244,000 TOTAL (tCO₂e)

Emissions reduction targets

In order to continue our progress to achieving Net Zero, we have adopted the following carbon reduction targets.

We project to achieve carbon net zero by 2040 for Scopes 1 and 2 emissions as well as reducing our Scope 3 emissions as much as possible.

We aim to reduce total Scope 1 and 2 carbon emissions arising from energy consumption by 15% by 2025–26 against the baseline year 2018–19. We are currently on target due to the work to remove steam from the South Kensington Campus, as well as energy efficiency works including LED installation and solar photo voltaic panels at Silwood Campus.

Carbon Reduction Projects

Completed Carbon Reduction Initiatives

The following environmental management measures and projects have been completed or implemented since the 2018-19 baseline.

LED lighting upgrades

In July 2024, upgrade works began to switch to low energy, light emitting diode (LED) technology as part of our net zero by 2040 commitment. Our priority is to reduce demand to reduce our carbon emissions and by switching to LED, we can save power on lighting. Any new-builds and refurbishments in recent years have been fitted with LEDs, but this programme is the first series of interventions carried out without being part of other work.

Further lighting surveys will begin to identify the works needed in the next 18 buildings. A survey of the City and Guilds building has been completed. It will become a showcase for the energy reductions that can be achieved including extensive metering systems. Works commenced in autumn 2024.

Out of steam

This year, we completed major works to remove the old steam heating network from South Kensington Campus. The move to only use a low-temperature hot water system running at 80°C enables us to run our CHP and top-up boilers more efficiently in the immediate future.

This work prepares us for further heat decarbonisation as we reduce our carbon footprint to achieve a net zero estate by 2040. The direct results from the work are:

- Increase efficiency to 87%, from 79%, through extracting more waste heat from CHP engines.
- Significant reduction in NOx emissions, associated with poor air quality and respiratory conditions.
- Projected savings of more than 2,400 tonnes of CO₂ per annum.

Sustainable Procurement Policy

We have published our refreshed sustainable procurement policy, strategy and toolkit which outlines our practical plan to help us reduce emissions from our supply chain. Implementation is being led by the central procurement and sustainability teams and major purchasers, who have been trained up on sustainable procurement practices. We have started by focusing on our biggest suppliers and purchases. The policy requires a 20% sustainability weighting in the tendering process for major procurements, while smaller procurements will have a 10% sustainability weighting.

In the future we hope to implement further measures such as:

Continuing with our journey to a net zero estate by 2040

Our priority is to reduce demand for electricity and heat and focus on areas with the most impact. These aren't always visible interventions: largely hidden work on building controls will be more impactful than rooftop solar. For us to reach our net zero buildings goal by 2040, our funds are best spent improving building fabric to reduce energy use, such as wall and roof

glazing and insulation, and replacing gas boilers with heat pumps. These interventions will have the biggest impact on reducing electricity demand and our carbon footprint.

Pilot ICTEM Building Management System (BMS) Optimisation Study with ARUP

ARUP's BMS optimisation study, part of our net zero plan, identified 29 potential interventions to improve energy efficiency and reduce carbon emissions by enhancing heating, ventilation and air conditioning control. Imperial's Energy, Engineering and Environment Team is evaluating which actions are practical to implement without disrupting building operations. Early indications suggest that the potential energy savings could exceed those projected in the net zero plan.

White City's carbon pricing and budgeting

Alongside the commitment for new buildings at White City to be fossil free, the team has developed a proposed internal carbon pricing (ICP) framework, along with a masterplan carbon budget to manage residual emissions. This framework will be refined as more plot-specific details become available, enabling the calculation of anticipated carbon offsetting payments and setting precise targets for carbon reduction across the campus. The development of ICP reflects the programme's forward-thinking approach to achieving net zero and supports our ambition for net zero academic buildings.

Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard¹ and uses the appropriate Government emission conversion factors for greenhouse gas company reporting².

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard³.

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of the Supplier:



Dean of the Faculty of Engineering, Chair of the Sustainability Strategy Committee

Date: 10 June 2025

¹<https://ghgprotocol.org/corporate-standard>

²<https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

³<https://ghgprotocol.org/standards/scope-3-standard>