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University of Strathclyde

Net Zero Carbon Management Plan

Version Control Log:

Version	Date	Description	Author	Approval
1.0	October 2024	**Net Zero Carbon Management Plan**	David Charles Amy Ritchie	Rufus Logan

Contents

1 Introduction

1.1 Context: Carbon Management at the University to Date

There have been several iterations of Carbon Management Plans at the University dating back to 2006. The most recent plan aligned with KPI 16 of the University's Strategic Plan 2015-2020. The plan aimed to achieve a 25% reduction in scope 1 and 2 carbon emissions by 2020 compared to a 2009/10 baseline. An emissions reduction of over 9,000 tCO2e was achieved during the period 2009 to 2020 equating to a reduction of 30%.

This iteration of the plan aligns with the University's new strategic vision, Strathclyde 2030, which was published in January 2024 and further expanded our Net Zero KPI. We recognise that further updates to this plan will be required at regular intervals to ensure alignment with up-to-date climate science and best practice. At the time of publication, the University's new Social and Environmental Sustainability Strategy is also in development, which will further inform the direction of this plan and thus a further update will likely be published in early 2025.

The 2020 footprint included emissions from: electricity, natural gas, fuel and gas oil and petrol and diesel used in University vehicles. The majority of the emissions reductions were achieved in the University's electricity supply mix during the period. In part, this was due to national grid decarbonisation but also aided by the University's investment in energy efficiency, Combined Heat and Power (CHP) and solar photovoltaic panels.

1.2 Our Strategic Ambitions

The face of carbon management has been forever changed by the political activism and resultant global change in 2018. 2019 Saw many governments and organisations across the world and UK declare a climate emergency. Consequently, strategies and policies across all sectors have become more closely aligned with the Paris Agreement1 and net zero targets. The University of Strathclyde is no exception.

The University launched its Strathclyde 2030 Strategic Plan in January 2024. Our Net Zero target is included as strategic KPI 16:

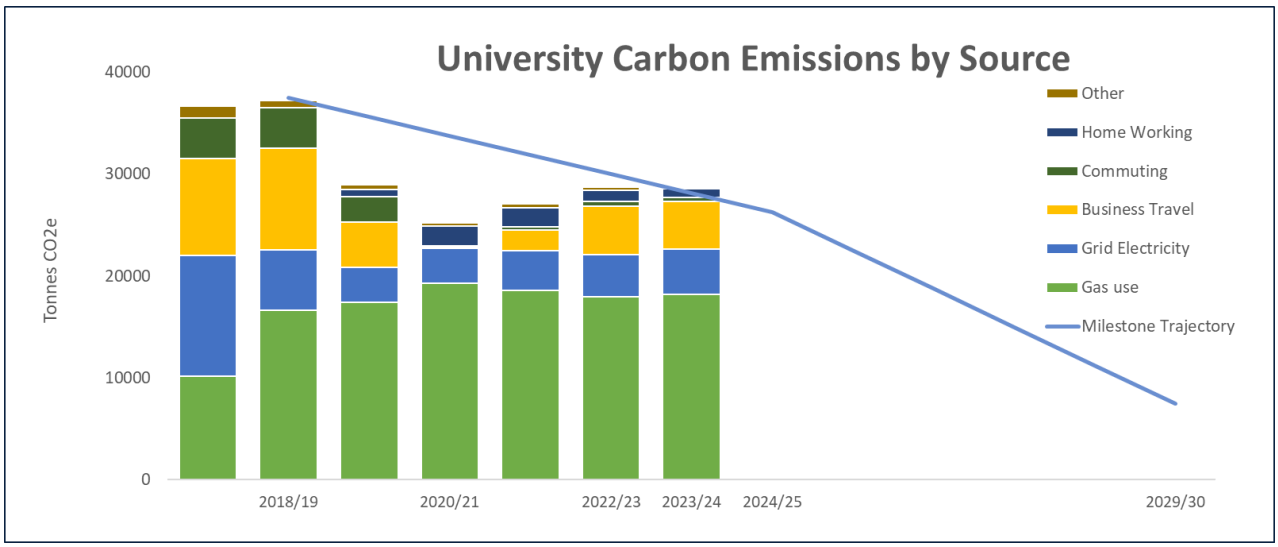
> **2030 Strategic Plan, KPI16:** 80% reduction from 2018/19 baseline for Scope 1, 2 and Scope 3 (where this is quantifiable) by 2030, with the remainder of Scope 3 and 4 to be routinely reviewed and played in as appropriate over the planning period, achieving Net Zero by 2040 at the latest
>
> *This KPI refers back to a 2018/19 baseline and will evolve over the period of the Strategy.*

The University is also still working towards a 30% reduction milestone by 2025 (also against 2018/19 baseline), which was agreed by senior management and first included in our 2025 Strategic Plan, Vision 2025[2].

1.3 Progress towards Net Zero

Our emissions figures for the 2023/24 academic year show the impact of the challenging landscape in which we are operating.

[1] https://unfccc.int/process-and-meetings/the-paris-agreement/the-paris-agreement
[2] https://www.strath.ac.uk/media/1newwebsite/documents/Strategic_Plan_2025.pdf

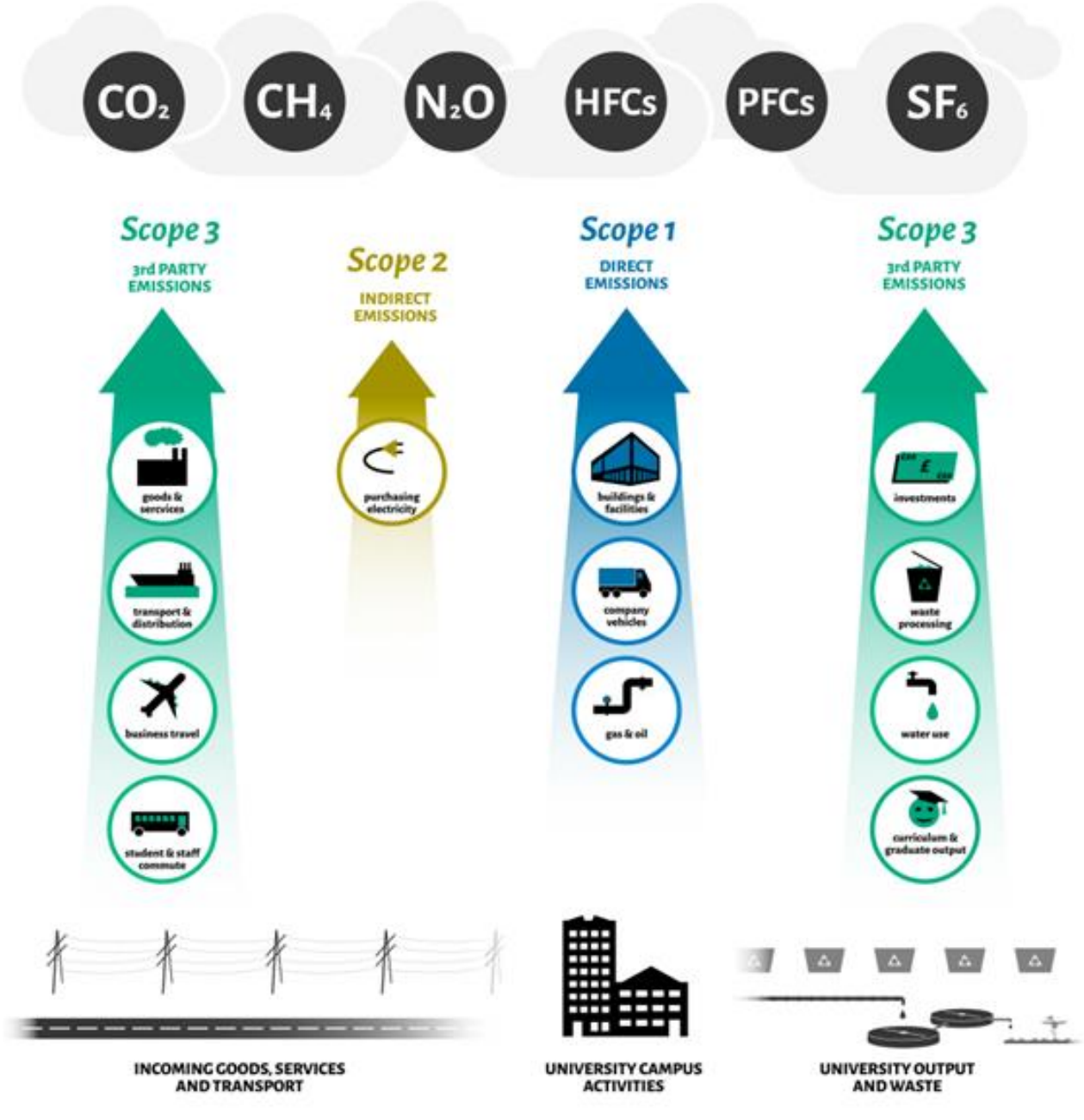


Total University emissions, for the purposes of Strategic KPI16 reporting (all scope 1 & 2, some scope 3 emissions) are projected at 28,595TCO2e. This equates to a 5% overall increase from 2022/23. The University remains on track to achieve its revised 2025 milestone of 30% reduction provided further carbon savings are realised through policy developments and campus investments over 2024/25. Emissions increased in key areas such as energy use and business travel but reduced/remained stable in areas such as commuting and waste.

Significant reductions were seen in 2020/21 as a result of the COVID-19 pandemic, particularly in areas such as business travel. Emissions associated with grid electricity usage have also decreased as grid decarbonisation accelerates. However, as activities have returned to "business as usual", University emissions have returned to a steady level.

Further detail on the steps we are taking to ensure we achieve our milestone are set out later in this document.

Strathclyde's Emissions



2 Context and Drivers for Carbon Management

Carbon Management at the University is driven by a number of legislative, policy and regulatory requirements set at national, regional and institutional level. The University's approach has been informed by these requirements, and actively engages with the formation and review of new policy and regulatory measures through various channels. On a national and regional level, the University is an active member of the Sustainable Scotland Network (SSN), a public sector network which gathers voices from the public sector to inform consultations and shape policy.

The Environmental Association for Universities and Colleges (EAUC) is a sustainability body focussed on the education sector and is a respected organisation which regularly feeds into reviews and policy responses to government at draft and consultation phases. The University is heavily involved within the EAUC topic support networks and has representation on the Scottish Office Bearers Group, to ensure we are at the forefront of engagement activity and new sustainability drivers.

Locally, the University engages with Local Authorities on planned interventions and action plans to actively contribute to their development and rollout. For example, The University has representation on all 4 of Sustainable Glasgow's thematic hubs.

Table 1 outlines the key legislative and regulatory drivers which influence this carbon management planning, providing context for this Plan.

Table 1: Legislative and Regulatory context

Legislation / Policy / Regulation Name	Scope	Stakeholders	How does it apply to the University?
The Paris Agreement 2016	Imposes requirement on signatories to limit global warming to well below 2, preferably to 1.5 degrees Celsius, compared to pre-industrial levels	196 parties were signatories in November 2015, of which the UK was one, with the agreement coming into force in 2016.	The University aims to be compliant with the terms of the Paris Agreement by limiting and reducing carbon emissions from all activities. This is detailed further in the University's Strathclyde 2030 Strategic Plan.

The Climate Change Act 2008	The Climate Change Act 2008 sets a legal framework for the UK to cut greenhouse gas emissions to 80% below 1990 levels by 2050. It requires the government to set binding, five-yearly carbon budgets based on the latest science, and in light of economic circumstances. This was updated in 2019 to reach a 100% reduction by 2050 on 1990 levels.	The targets within the Act are set at a UK level by the government. The Act commits the UK government by law to reducing greenhouse gas emissions by at least 100% of 1990 levels (net zero) by 2050.	As the University is based within the UK, it is expected to meet the targets set out within the act. However, more ambitious targets have been set within the Climate Change (Emissions Reduction Targets) (Scotland) Act with details provided below.
Climate Change (Emissions Reduction Targets) (Scotland) Act 2019	The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, which amends the Climate Change (Scotland) Act 2009, sets targets to reduce Scotland's emissions of all greenhouse gases to net-zero by 2045 at the latest, with interim targets for reductions of at least 56% by 2020, 75% by 2030, 90% by 2040.	The targets and requirements of the Act cover all of Scotland.	The requirements of the Act have been translated into the University's Strathclyde 2030 Strategic Plan, with more ambitious targets set by the University as detailed below.

The Greenhouse Gas Emissions Trading Scheme Order 2020	A UK Emissions Trading Scheme (UK ETS) replaced the UK's participation in the EU ETS on 1 January 2021. The 4 governments of the UK have established the scheme to increase the climate ambition of the UK's carbon pricing policy, while protecting the competitiveness of UK businesses.	The UK ETS applies to energy intensive industries, the power generation sector and aviation. It covers activities involving combustion of fuels in installations with a total rated thermal input exceeding 20MW (except in installations for the incineration of hazardous or municipal waste).	The University is required to get its combustion activity officially verified and submitted to SEPA annually. Based upon the emissions reported, the University must purchase a carbon allowance for every tonne of carbon emitted.
Glasgow City Climate Emergency Implementation Plan 2020	The Council declared a climate and ecological emergency at its meeting of 16 May 2019. The Climate Emergency Working Group produced a report, with the input of many expert stakeholders, which made 61 recommendations, with a target for the city to achieve carbon neutrality by the year 2030.	Businesses, academic institutions, and all organisations operating within the Glasgow City Council area are encouraged to engage with the council and the Plan to achieve the targets it sets out.	The University are actively engaging with Glasgow City Council to work collaboratively in achieving the aims of the Plan.

Race to Zero (Universities and Colleges)	Race To Zero is a global campaign to rally leadership and support from businesses, cities, regions, investors for a healthy, resilient, zero carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth. Signatories commit to achieving net zero carbon emissions by 2050 at the latest.	The Race to Zero is a coalition of cities, regions, businesses, investors, and universities and colleges. Globally, 70* Higher and Further Education institutions, representing 8,655,259 students are currently registered signatories.	The University is a signatory to the Race to Zero, and engages with the EAUC and partners to achieve the aims of the initiative.
Strathclyde 2030 Strategic Plan - University of Strathclyde	The Strategic Plan 2025 – 2030 builds on the previous Vision 2025 and sets out the vision of Strathclyde as a leading international technological university that makes a positive difference to the world. It identifies 5 goals to achieve this and places heightened importance on Social and Environmental Sustainability. Our Net Zero ambitions are set out as KPI 16 which sets the target of 80% reduction for Scope 1, 2 and Scope 3 (where this is quantifiable) by 2030 and Net Zero by 2040 at the latest. This KPI refers to a 20018/19 baseline and will evolve over the period of the Strategy.	The Strategic Plan covers all activities of the University and its operations, staff, students and partners as they relate to university business. It encourages engagement beyond the university, working with businesses and organisations local, national and international to achieve its aims.	The Strategic Plan identifies the targets and goals the university is working towards across all activities. KPI 16 specifically identifies the target for carbon reduction for the university.

2.1 Internal Funding

The University funds sustainability through capital and revenue budgets. The University's Capital Investment Programme (CIP) aims to spend one billion pounds by 2030 on new build and refurbishment projects. Every building that the University builds will be emitting carbon in 2040. The financial investment made under the CIP is therefore instrumental in enabling the University's net zero transition,

The Sustainability Team manage the spend of around £600,000 per annum in revenue budgets, which funds feasibility work and activities relating to sustainable travel, biodiversity, waste management and staff and student engagement programmes.

2.2 External Funding

The University benefits from grant and loan funding from several partner organisations.

Salix fund the University's Recycling Loan fund through an interest-free loan. Every year the university invests hundreds of thousands of pounds in energy efficiency projects that meet Salix' payback and carbon saving criteria. The University has also benefitted from significant funding from the Scottish Funding Council's Financial Transactions funding, as well as national grant funding for specific infrastructure developments such as the Scottish Government's Low Carbon Infrastructure Transition Programme.

Cycling Scotland, Cycling UK, Sustrans and Energy Saving Trust offer the University grant funding for the investment in deployment of cycling infrastructure and engagement activities. In addition, these funding streams have helped to support the installation of new electric vehicle charging infrastructure at several University sites.

3 Emissions Baseline and Boundaries

3.1 Scope and Boundaries of the Universities Carbon Footprint

Historically the University has set its emissions targets based purely on scope 1 and scope 2 emissions for its estate. This includes fuel used on site for heating, power and transport as well as heat and power purchased through third-party generators.

The scope and boundary have expanded in recent years to include a selection of measurable scope 3 emissions from business travel, waste, water and staff commuting. The current KPI16 is reported against a 2018/19 baseline. As noted in Table 1 in Section 4 of this plan, our Net Zero target has been further expanded in Strathclyde 2030 to account for all other Scope 3 emissions sources such as value chain emissions and student travel. In the coming years, we aim to set discreet reduction targets for each emissions source, and improve the data quality of our reporting particularly on Scope 3 emissions.

Information on a more complete range our scope 3 emissions is included in our annual Public Bodies Climate Change Duties Reporting submitted to the Scottish Government. However, this data is not as accurate as that for our Scope 1 and 2 emissions, hence the relatively recent decision to bring this into the envelope of our Net Zero target.

Definition of the boundaries is determined by the extent of the estate, goods and services over which the University has operational control, and the availability of good quality data.

KPI16 also now refers to Scope 4 emissions, which acknowledges the need for the University to be mindful of our social and environmental impact via, for example, research, teaching and knowledge exchange. Whilst we do not anticipate attributing a carbon value to these activities, we plan to take steps better track them and ensure they are enabling positive change locally and globally.

The University is committed to aligning with best practice in determining the scope and boundaries of our emissions, and any further targets will be developed with this in mind.

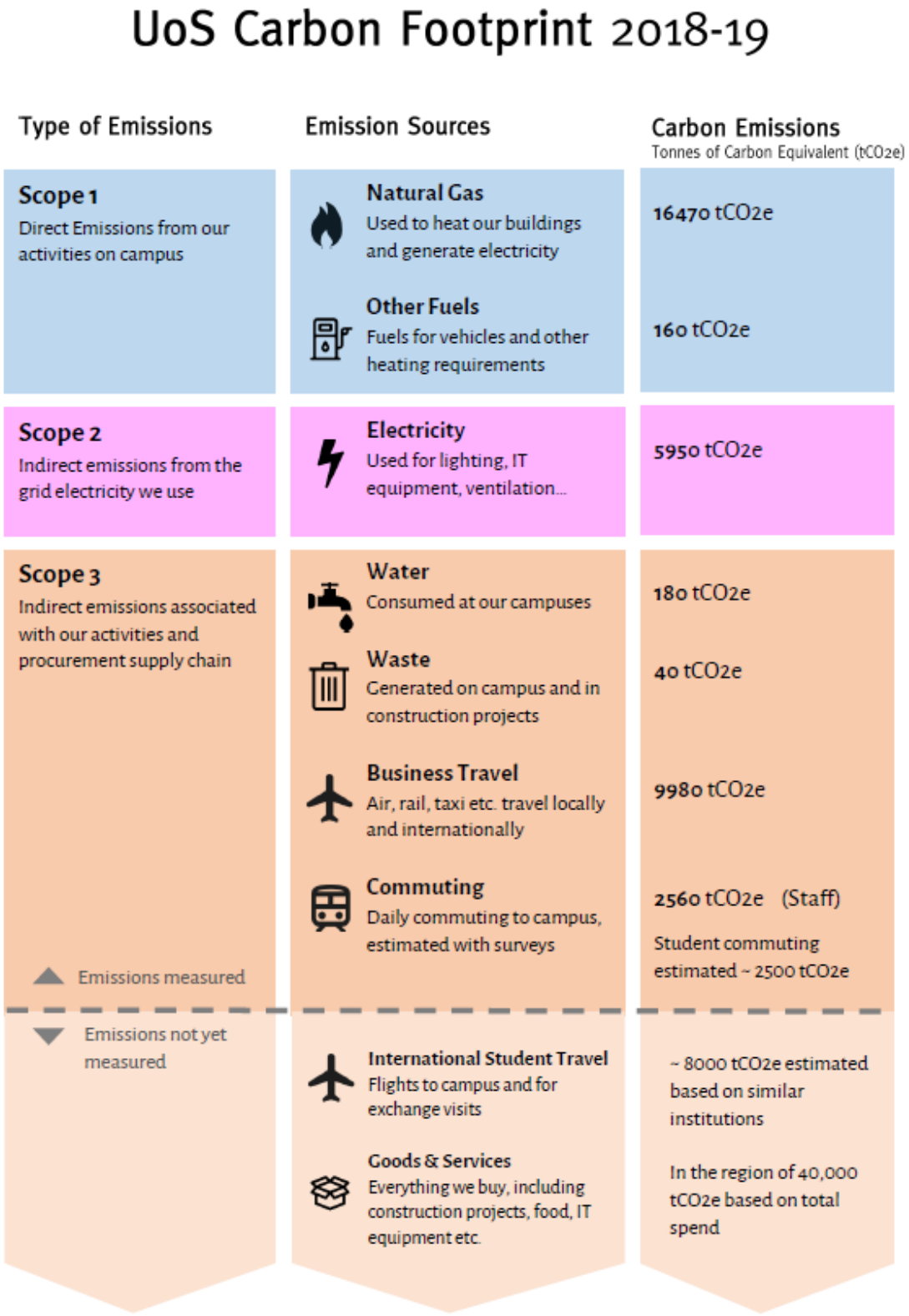
3.2 Organisational Boundary

The University's organisational boundary is determined by the extent of its estate located in the Greater Glasgow area. This includes the following sites and postcodes:

- John Anderson Campus (G1 1XQ)
- Stepps Playing Fields (G33 6ND)
- Ross Priory (G83 8NL)
- Advanced Manufacturing Innovation District (AMIDs), which includes:
    - Advanced Forming Research Centre (PA4 9LJ)
    - National Manufacturing Institute for Scotland (PA4 9 LJ)
- Power Networks Demonstration Centre (G68 0EF)

3.3 Operational Boundary

The figure below illustrates the Operational Boundary of the University.



4 Monitoring & Reporting Framework

A robust approach to tackling the climate emergency requires a transparent and accountable governance structure. All climate change and emissions reporting activities are managed by the Sustainability and Environmental Management Team within the Estates Department, with data inputs gathered from stakeholders across the institution. The PBCCD reporting constitutes the most complete log of the University's greenhouse gas emissions profile and related climate action, and is submitted to Sustainable Scotland Network (on behalf of the Scottish Government) annually on 30 November.

As part of this comprehensive report, institutions are required to provide evidence of all strategic targets and governance relating to climate change, as well as indicating how spending/investment plans are aligned to emissions reduction targets.

The Sustainability Team also provide bi-annual excerpts to Strategy & Planning on progress towards KPI16. These excerpts align with what is reported through PBCCD, but do not include certain Scope 3[3] emissions sources, primarily emissions related to supply chain activities. This is due to the complexity of measuring these emissions sources, and availability of data from our supply chain. Quarterly excerpts are also provided to the Strategic Sustainability Steering Group (SSSG) in the form of a Performance Update.

The Strategic Sustainability Steering Group (SSSG) considers all strategic aspects affecting the delivery of the University's climate targets and make recommendations to the University's Executive Team for approval and endorsement. The group is chaired by the University's Chief Financial Officer, and is attended by the following members of the University executive team:

- 2 x Associate Principals
- Chief Digital & Information Officer
- The University Compliance Officer
- Director of Strategic Planning
- Director of Marketing and Development Services

Other membership includes:

- Director of Estates
- CEO of Strathclyde's Student's Union

[3] https://www.carbontrust.com/our-work-and-impact/guides-reports-and-tools/briefing-what-are-scope-3-emissions

- Student Vice President of Community
- Head of the Centre for Sustainable Development

The work of the Strategic Group is co-ordinated and informed by the Executive Lead Sustainability, with support from Sustainability Team Management. The core remit of the group is to:

- Provide guidance and oversight of the University's existing Climate Change and Social Responsibility (CCSR) Policy and Delivery Plan, and emerging Social and Environmental Sustainability Strategy (SESS, which will replace the CCSR)
- Track progress and hold the University accountable with respect to University's Net Zero by 2040 target and related milestones, included in the University's Strategic Plan, Strathclyde 2030, as KPI 16.
- Supporting in resolving any issues related to climate change and sustainability, and taking action when senior level input is required, including escalation to other University governance groups as required.
- Keeping all parties up to date with project progress.
- Providing a forum for escalating risks and issues to be addressed.
- Overseeing and providing input to the strategic direction of sustainability and climate action at the University

In addition to internal governance reporting and statutory duties to the Scottish Government, the University also submits sustainability reporting information to several external records such as Times Higher Education Impact Rankings, QS Sustainability Rankings and HESA Estates Management Records. The Sustainability and Environmental Management Team also feed into reporting activities coordinated elsewhere in the University, such as Procurement, Finance and activities related to research.

It is our ambition to provide more publicly available, up to date, accurate information on our sustainability reporting activities and progress towards our climate targets.

4.1 Centralising Reporting

Work is ongoing with the Strategy and Policy Team to centralise records of all emission sources into one robust data model. This is accessible as a reporting dashboard of headline figures and graphs used to provide regular updates to the above-mentioned governance structures.

This collaboration has highlighted many areas for improvement in our data sources. These are being addressed to improve the reliability of our emission figures and ensure all sources of emissions are being recorded. As mentioned, work is ongoing to develop real-time dashboards on our progress as part of this improvement process.

4.2 Accessible and Transparent Emissions Data

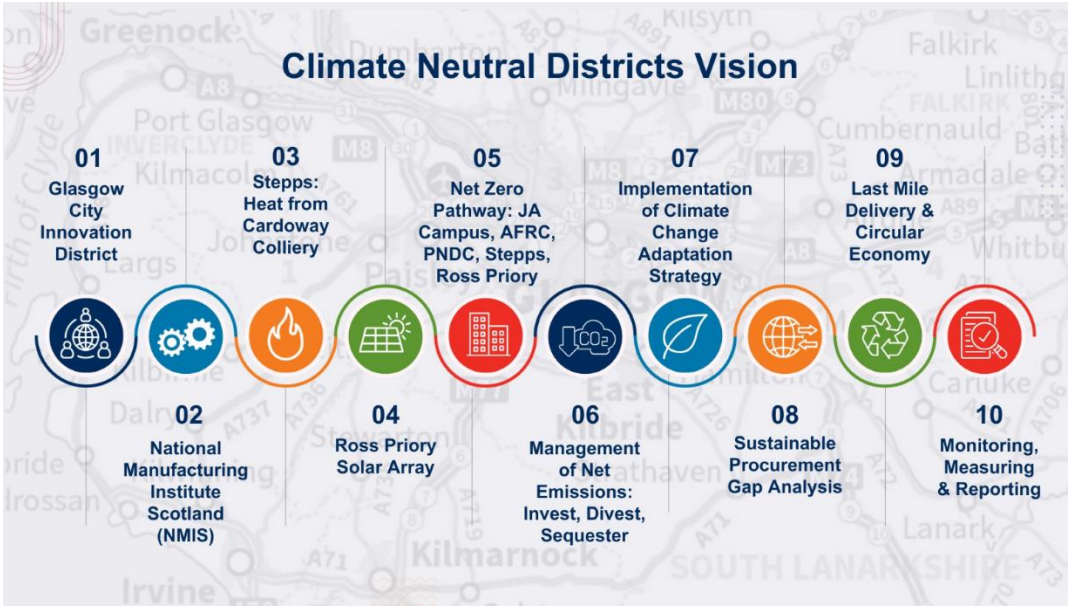
We need support from across the University to tackle our emissions. To obtain support, we need staff and students to understand our current carbon footprint, future targets, and the steps needed to get there. This is not yet widely understood, but by making our emission data accessible and transparent, we are fostering discussions and actions across the University.

Sustainable Strathclyde run several engagement and training initatives in order to improve awareness of climate action and sustainability activities on campus and beyond. We aim to build on these activities to upskill our staff and students on our emissions footprint specifically. Examples of this could include:

- Carbon Literacy and Climate Fresk training, or similar.
- Student Projects with the Sustainability Team exploring issues such as supply chain sustainability.
- More engaging visual content through, for example, social media or on campus screens.

5 Emissions Reduction Pathway

We understand that further reducing emissions in order to achieve our targets requires well timed and resourced interventions, as well as working closely with regional and national partners. Projects to reduce our Scope 1 and 2 emissions are already underway, which are currently underpinned by our Climate Neutral Districts Vision:



This vision underpins the University's commitment to taking ambitious climate action across all of its operational activities. It aims to take a socially inclusive approach to achieve decarbonisation at scale and speed. Ongoing projects include:

- Development of a Net Zero Pathway for our campus, taking a fabric first approach to improving the efficiency of our city centre campus.
- Expansion of the University's city centre heat network to the student Halls of Residences, which will deliver carbon reductions through reduced energy use and increase efficiency of the district heating system.
- Progressing proposals for a ground-mounted solar array & battery storage project at the University's listed Events and Recreation property in the Loch Lomond and Trossachs National Park region. This would decarbonise energy usage at both Ross Priory and the nearby Scottish Water Pumping station and deliver associated benefits to the local community.
- Embedding circular economy principles through working with Recycle Scotland to refurbish and re-use existing furniture on campus, rather than buying new. Activity since early 2024 has already saved over £25,000 and 20,000TCO2e, with plans to roll this initiative out more widely in the coming academic year.

5.1 Offsetting

The University is engaged in the Carbon Coalition Pilot Project. The EAUC Carbon Coalition[4] is a consortium of UK and Ireland higher and further education institutions which aim to collectively offset emissions using combined buying power and knowledge.

The University does not currently actively offset any of our carbon emitting activities, excluding our participation in the UK ETS. As our reporting evolves over the coming years to 2030, we plan to develop a more formal position on carbon offsetting, and where is may pay an appropriate role in the University's carbon reduction strategy. Until such time as this is developed, the University full supports credible best practice developed in this area in line with EAUC guidance and the Oxford Carbon Offsetting Principles[5].

[4] https://www.eauc.org.uk/carbon_coalition
[5] https://www.smithschool.ox.ac.uk/research/oxford-offsetting-principles