



Nottingham Trent
University

Net Zero Carbon Roadmap

1. Executive Summary

NTU has a reputation for being one of the most sustainable universities in the world. Embracing Sustainability becoming a strategic theme for 2020-25 envisages a further step change, with implementation across the NTU Community. Sustainability covers many areas. However, as all of these areas have associated carbon emissions, *University, reimagined* has focused on promoting a Zero Carbon Culture. To this end, achieving Net Zero Carbon (NZC) by 2040 is now an institutional strategic KPI.

NZC 2040, with interim milestones for 2025 and 2030, will not only include tackling carbon emissions associated with energy use across the entire NTU estate but also emissions associated with those activities that NTU has less control over, known as scope 3 emissions. These include the supply chain, transport and managed accommodation.

This document is the roadmap that sets out NTU's approach to achieving NZC 2040. It reviews NTU's carbon reduction performance, details NTU's carbon footprint and outlines the implementation plan and delivery and reporting framework.

This plan has been reviewed and approved by the Embracing Sustainability Strategy Board.

2. Introduction

Since 2005 NTU has successfully reduced its scope 1+2 carbon emissions by over 30% in absolute terms and over 51%, when considering the relative emissions associated with its staff and student population¹.

The Embracing Sustainability Theme of *University, reimagined* has the ambition of NTU being '*recognised as the most environmentally responsible University in the UK*' by 2025. To deliver on that ambition, and the agreed University KPI, we now need to embark on an ambitious plan that includes and engages our students, colleagues, and other stakeholders.

One of the four Approaches for achieving this ambition is by setting and meeting... "*specific and challenging targets for reducing our environmental footprint and ensure our campuses are exemplars of sustainable practice.*" Reducing our environmental footprint will be achieved through reducing our carbon emissions.

Achieving our carbon ambitions will improve operational resource efficiency, make a positive contribution to tackling climate change, enhance our reputation and ensure NTU leaves a positive legacy – demonstrating NTU is doing the right thing.

This Roadmap sets out an ambitious approach that will see NTU not only reducing its environmental impact but that of our suppliers and contractors alike.

¹ NTU's carbon footprint and performance is publicly available online:

https://www.ntu.ac.uk/data/assets/pdf_file/0039/878439/2018-19-NTU-Carbon-Footprint.pdf

3. Emission Scopes

Every tonne of carbon saved has the same positive impact on climate change, however some carbon emissions are more easily identified and measured than others. There are 3 scopes to consider, as summarised in Figure 1 below:

- Scope 1+2 - Emissions that are associated with the direct and indirect energy an organisation uses in its buildings, vehicles and processes.
- Scope 3 - Emissions associated with an organisation’s activities, but which are outside its direct control.

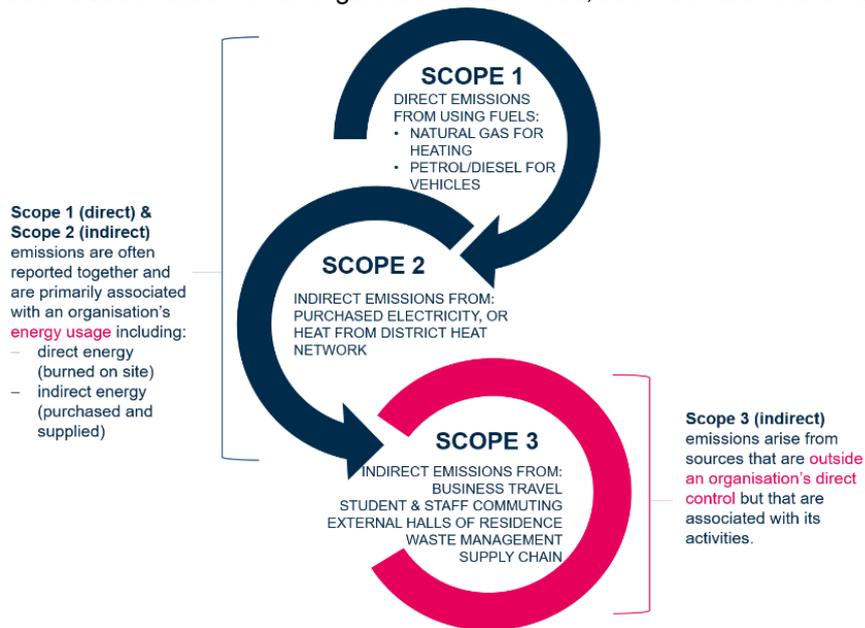


Figure 1 - Standard Categorisation of Carbon Emissions

Scope 1+2 emissions form the basis of many carbon management plans as they are typically much easier to measure, monitor and manage than scope 3 emissions, which by their very nature are outside the direct control of an organisation.

Scope 1+2 emissions typically only represent the tip of the iceberg and do not reflect the true carbon impact of an organisation. In our case, during the academic year 2018-19, scope 1+2 carbon emissions accounted for only 14% (9,969 tonnes) of our total carbon emissions (72,205 tonnes). If we continue to take the traditional approach to reducing our carbon footprint then this would result in NTU not addressing 86% of our emissions (scope 3).

4. Reducing Carbon, the NTU Way

At NTU we have been recording and publicly reporting our Scope 1+2 emissions since 2006 and our Scope 3 emissions since 2012. Given the steps that we have taken to reduce our scope 1+2 emissions, and our belief that we are ahead of the game with regard to Scope 3 emission reporting, the NTU Net Zero Carbon Roadmap will not simply focus on the areas that are within our direct control and easier to measure. We will instead look to address the full impact of our carbon emissions.

In tackling Scopes 1, 2 and 3 emissions we will not only be addressing all aspects of our carbon footprint, but we will also have the opportunity to focus our efforts and resources on carbon reduction measures that deliver the greatest impact and value for money.

The Board of Governors has agreed the strategic KPI for achieving NZC by 2040. As part of the roadmap for getting to NZC, the University's total carbon emissions will be re-baselined during 2020/21 to include Scope 1, 2 + 3. A four-year target of a 24% reduction against the new baseline is proposed, assuming an annual target reduction of 6%. This is summarised below:

- **Milestone 1** – By 2025, to deliver a 24% reduction in NTU's total carbon emissions against a 2018/19 base line.
- **Milestone 2** – By 2030, to deliver a 50% reduction in NTU's total carbon emissions against a 2018/19 base line.
- **Milestone 3** – By 2040, to achieve net zero carbon emissions² across our built estate, 10 years ahead of the UK Government's 2050 legally binding target.

5. Implementation Planning

To meet our ambitious goals, it will be essential that the whole University is engaged. To secure this engagement we propose to build on the work already undertaken as part of *University, reimagined*. We will equip our community with the necessary carbon knowledge and establish Work Streams that will develop and deliver specific carbon reduction plans. Work Streams will contain staff representatives from both the academic and professional services areas of NTU. Student involvement is also essential. This will be channelled via Nottingham Trent Students Union to ensure the right students are actively engaged in the NZC project and their voices are heard.

Table 1 shows the breakdown of NTU's carbon footprint into seven areas. It is proposed that four Work Streams, (Energy & Water; Supply Chain; Travel & Transport; Partner Accommodation) are established to consider specific actions to deliver carbon reductions in line with the relative 2025, 2030 and 2040 milestone targets. Where government guidelines to work from home are in force, we will include Working Elsewhere emissions within our annual carbon footprint. These emissions are not included within the 2018/19 baseline.

Table 1 – Work Streams

Work Stream	2018/19 emissions (tonnes CO ₂ e)	Contribution to NTU carbon emissions	Carbon emissions scope
Supply chain	39,501	55%	3
Commuting (Staff + Students)	15,967	22%	3
Energy use	10,150	14%	1+2
Business Travel	3,682	5%	3
Partner Accommodation (UPP)	3466	4%	3
Water	44	0.06%	3
Waste + Recycling	24	0.03%	3
Total	72,833	100%	

² Net Zero Carbon Emissions are to be achieved through reducing the carbon emissions associated with NTU's activities and via investment in renewable energy generation and responsible carbon offsetting projects.

The Work Streams will take responsibility for developing action plans in their area and for setting and achieving milestones in line with the overarching 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. Methodology and Action Plans are to be developed by October 2021.
2. Identify projects/initiatives, rank and prioritise based on the following criteria.
 - Predicted/Target Carbon saving
 - Investment £/time
 - £&time per tonne carbon saved
 - Other returns £/time
 - Estimated success % (delivery and against adopted targets).
3. Construct a full programme of deliverable projects and initiatives including a forecast of necessary investment by the end of 2021.

6. Authority and Reporting

The Authority and Reporting Structure for Net Zero Carbon 2040 is shown in diagram 3 below.

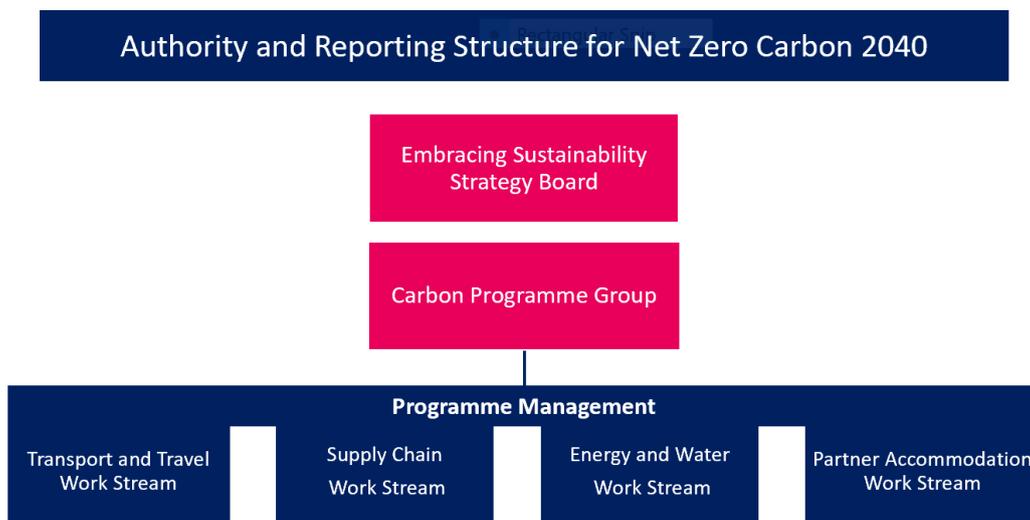


Figure 2 Diagram detailing the Governance, Authority and Reporting for Net Zero Carbon 2040

Embracing Sustainability Strategy Board (ESSB) will ensure alignment with *University, reimagined*, as well as other strategic initiatives such as Smart Campus and Universities for Nottingham. ESSB will also guarantee close and complementary working with the capital investment programme to maintain develop and enhance the NTU estate. ESSB will report progress towards NZC to the University Executive Team and to the Board of Governors.

The Carbon Programme Group will oversee the development and work of NZC Work Streams, checking on progress, monitoring performance and examining all business cases for proposed projects. The Chair will take that group's recommendations to ESSB, reporting on the progress of NZC, providing assurance of delivery, and putting forward proposals for additional resourcing, as appropriate.

6. Conclusion

This document has summarised NTU's *Net Zero Carbon 2040 Roadmap* and carbon reduction programme to be delivered over the longer term as well as specifically within the immediate strategic period of 2020 to 2025. This will see not only NTU reducing its environmental impact but that of our suppliers, partners, and contractors alike, demonstrating responsibility and providing a legacy that endures for NTU, Nottingham and beyond.