Carbon Management Plan

The University of Manchester has been tracking its direct ("Scope 1 and 2") carbon emissions since 2007. Since then, our emissions have fallen by 34% but we are committed to doing much more.

	2007/08	2008/09	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Gas	26,442	26,698	28,654	29,712	27,177	29,272	25,851	26,467	25,058	25,395	26,081	25,883	25,131	31,538
Electricity	53,496	51,563	52,171	47,826	47,586	46,754	45,796	46,898	44,334	38,048	31,367	27,750	22,711	20,942
Oil	272	178	497	185	246	621	142	170	189	197	228	242	166	190
Fleet Vehicles	340	398	344	336	355	333	205	197	172	146	139	141	104	101
Total	**80,550**	**78,837**	**81,666**	**78,059**	**75,364**	**76,980**	**71,994**	**73,732**	**69,753**	**63,751**	**57,815**	**54,014**	**48,112**	**52,771**
% change on baseline		-2.1	1.4	-3.1	-6.4	-4.4	-10.6	-8.5	-13.4	-20.9	-28.2	-32.9	-40.3	-34.5
% change on previous year		-2.1	3.6	-4.4	-3.5	2.1	-6.5	2.4	-5.4	-8.6	-9.3	-6.6	-10.9	9.7

Fig 1: Scope 1&2 carbon emissions in tonnes CO2 at the University of Manchester 2007-2021

In 2019 the University committed to becoming zero carbon in its direct operations by 2038. This target is in line with the one adopted by the city of Manchester and was set by colleagues at the University's Tyndall Centre for Climate Change Research. The 2038 target commits the University to reducing its carbon emissions by an average of 13% each year between the baseline of 2018 up to 2038 in order to stay within its "carbon budget". Milestones were set by the Manchester Climate Change Partnership (MCCP).

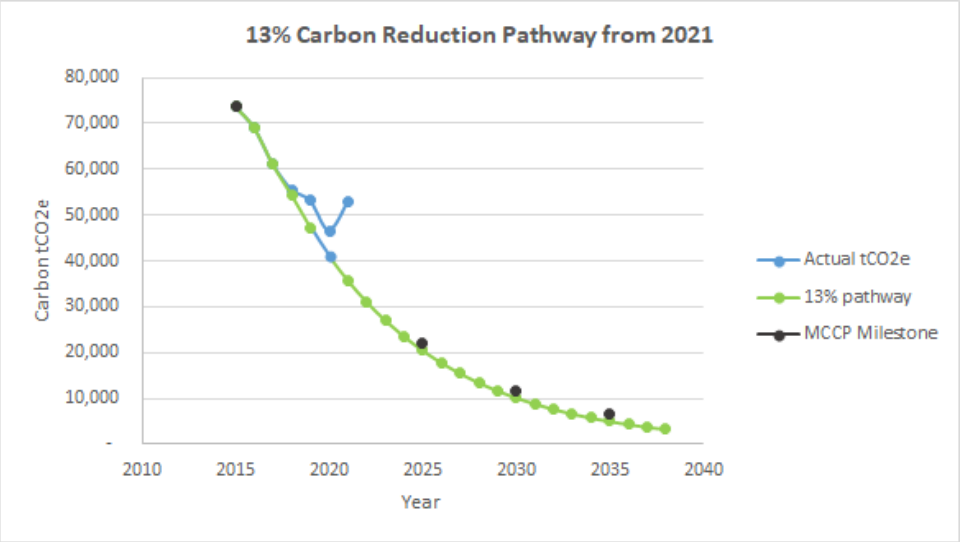

Fig. 2: actual and proposed carbon reduction pathway from 2021 to 2038

In 2021 the University produced its first "Zero Carbon Masterplan" (ZCM), an exploratory document highlighting the strategic and technical actions required to achieve the 2038 target.

The main recommendations of the ZCM are:

1. The University should embark on a programme of energy efficiency measures which will reduce our energy consumption and carbon emissions and save money in the longer term;
2. The University should enter a "Corporate Power Purchase Agreement" (CPPA), meaning the University's electricity demand will be matched by a developer generating renewable energy on our behalf. Critically, the electricity generated must be "additional" to what would have been created should the CPPA not exist;
3. The University should decarbonise its heating through a gas boiler and heat network replacement programme. Air source heat pumps are currently considered the most viable alternatives to gas.

Actions

As a result of the ZCM, the Vice-President for Social Responsibility proposed:

1. Entering into a CPPA, commencing April 2023. This will supply additional renewable energy to the grid on behalf of the University at the earliest opportunity.
2. Developing an energy reduction programme. Funding for this project in 2022/23 is £11.5m. Subject to Board approval, it is expected that a total of £136m will be committed to energy efficiency projects by 2032/33; this figure has already been approved by Finance and Capital Planning Sub-Committee. The funding quoted here is in addition to the annual budget of the Environmental Sustainability team, which can be found here.
3. Exploring opportunities to replace our gas boilers and heat networks. Although this work is not currently funded, there may be opportunities to find additional funds in the coming years, including from external sources such as the Public Sector Decarbonisation Scheme (PSDS). We have already received £850k from the PSDS and will be using this to install air source heat pumps in our Booth Street East building. We will actively pursue other funding opportunities as they arise.

A summary of the ZCM and the proposed actions was received by the Board of Governors on May 25th 2022. While appreciative of the funding difficulties in delivering the full decarbonisation strategy, the above actions were supported. The CPPA is expected to commence in April 2023 and a project manager for the energy efficiency work is being recruited.

Carbon emissions attributed to residential accommodation

The Carbon Management Plan includes Scopes 1&2 emissions for residences owned by The University of Manchester. In 2019/20 (our latest confirmed data), carbon from these residences made up 13% of our total Scope 1 &2 footprint.

Description	2019-20	Historical Data		
		2018-19	2017-18	2016-17
Residential scope 1 and 2 carbon emissions total (t CO2e)	6,331	7,369	8,354	9,232

Scope 3

The University's "Scope 3" emissions – which are emitted as an indirect result of our activities – are not included in the 2038 target. However, we recognise the great importance of this area and are currently developing a Scope 3 target. Details on this can be found in our Scope 3 report.

Governance

The ZCM will be overseen by a committee specifically established to manage the project. This in turn will report into the Environmental Sustainability Committee (ESC), which meets quarterly. The ESC reports into the Policy and Resources Committee, which is the University's most senior governing body.

The Vice-President for Social Responsibility, Prof Nalin Thakkar, is accountable for the ZCM. The Director of Estates and Facilities, Diana Hampson, is responsible for the delivery of the ZCM. The Head of Environmental Sustainability, Richard Smith, is responsible for day-to-day management of the ZCM.

The targets and our progress against them will be continually reviewed to ensure they are relevant and being acted upon. Where necessary we will update them.

Richard Smith, Head of Environmental Sustainability, University of Manchester 01.07.2022

Date of next review: 12th July 2023