

Net zero progress report: year 3

October 2024

In common with most other non-industrial organisations, we do not measure all GHG emissions directly. Instead, we apply emissions factors to our emissions-related activity data, such as energy use (kWh), mass of refrigerant (kg), distance travelled (km), time worked in a heated space (h) or value of goods purchased (£). The GHG Protocol provides guidance on the most appropriate activity data and calculation methods but in some cases generalisations and approximations are necessary where specifics are unknown.

We report based on the most accurate estimate of emissions available and since our first NZPR we have worked to improve both the completeness of our activity data and the appropriateness of emissions factors we use across a number of categories. We will continue to improve our reporting annually by gathering more specific data, such as the measured quantity of paper that we use in our magazines and the emissions intensity of the specific paper mills in our supply chain, prioritising areas of highest impact where more granular monitoring may improve decision making. This year we have focused on the material-intensive categories of catering and paper.

Directly controlled sources of emissions – Scopes 1 and 2

The table below presents Scope 1 and 2 emissions from 2019, our baseline year, through to 2023. These sources of emissions are under our direct control and relate to the buildings we own and operate. Scope 1 includes direct emissions from gas boilers (referred to as ‘stationary combustion’) and fugitive emissions from air conditioning units in the buildings we operate. Scope 2 represents indirect emissions from our grid electricity consumption, based on billing data and national (location based) emissions factors.

Activity type	Greenhouse gas emissions ¹ /(tCO ₂ e)					Change against 2019 baseline
	2019	2020	2021	2022	2023	
Stationary combustion	79	71	83	86	70	
Fugitive emissions from air-conditioning	3	1	115	5	1	
Scope 1 total	82	71	199	90	71	-13%
Purchased electricity – location-based	363	263	199	194	180	
Scope 2 total	363	263	199	194	180	-50%
Scope 1 + 2 total	444	335	398	285	251	-43%

Table 1: breakdown of our Scope 1 and Scope 2 GHG emissions since 2019

Our facilities team continued to succeed in driving down energy consumption so that by the end of 2023, emissions from our buildings had declined by 43% from our 2019 baseline.

Although weather introduces year-to-year variability in heat and cooling demand, we have reduced total electricity consumption by 39% against baseline through a combination of improvements in the control of heating and lighting, installation of low-energy LEDs across our UK buildings, and a focus on minimising out-of-hours consumption. Gas use has decreased by 10% against baseline despite increased ventilation to minimise respiratory disease transmission. This has been achieved by optimised building control at our main office building, defaulting to heat pumps within the ventilation system and only using gas for hot water, cooking and to top-up heating on the coldest days. However, these energy savings may have been offset by an increase in energy consumption in the homes of staff working remotely which we have accounted for in our Scope 3 data, below.

¹All greenhouse gas emissions are rexx

Figure 1: greenhouse gas emissions over time by GHG Protocol category

Broadly, our estimate of emissions from purchased goods and services has risen to 36% over baseline. This substantial increase is in large part due to an increase in total spend, the proxy for emissions that our calculation methodology

We have for the first time used supplier-specific data in the material-intensive sectors of catering, paper and magazine distribution. The emissions associated with food, paper and distribution are substantial relative to the price paid for them and so present significant opportunities for emissions reduction. Through working with the catering suppliers to our UK buildings we have identified all of the food consumed and have applied category-specific emissions factors. Similarly, our paper suppliers have quantified the paper used to produce our books and magazines and identified the emissions from the relevant paper mills. This presents a significant improvement in accuracy over using sector-wide spend-based emissions factors, and we intend to repeat this process with other suppliers in coming years. It has also illustrated how the choices made to reduce the environmental impact of the food we serve, for instance substituting a proportion of beef for lentils in burgers, have led to nearly halving emissions from this category. We are now working with our paper suppliers to do the same with our paper choices and drive down emissions.

Emissions from commuting and homeworking continue to be calculated using internal data and a travel survey conducted in October 2023 for our major office in the Cambridge Science Park. The homeworking calculation uses the [EcoAct methodology](#) and its emissions factors, known specifications of IT equipment issued to staff, HR data and travel survey data. Emissions from this source have increased year on year and, although there are indications of more staff cycling to our major office, and the start of a switch to electric vehicles which now comprise 7% of commuting journeys, this has not outweighed recent growth in staff numbers.

Our first NZPR identified our investment portfolio as a significant source of emissions in our baseline, approximately one third of the total. Data availability remains poor for this source relative to others so as with last year it is not reported quantitatively in the table above. However, an estimation is included graphically below for context. During 2022–23 the allocation between investment types in our portfolio changed to reflect revised priorities for our investment strategy. Through this process, we are working with our investment managers and advisers to achieve greater transparency and more robust quantitative measures to monitor performance on the transition to net zero.

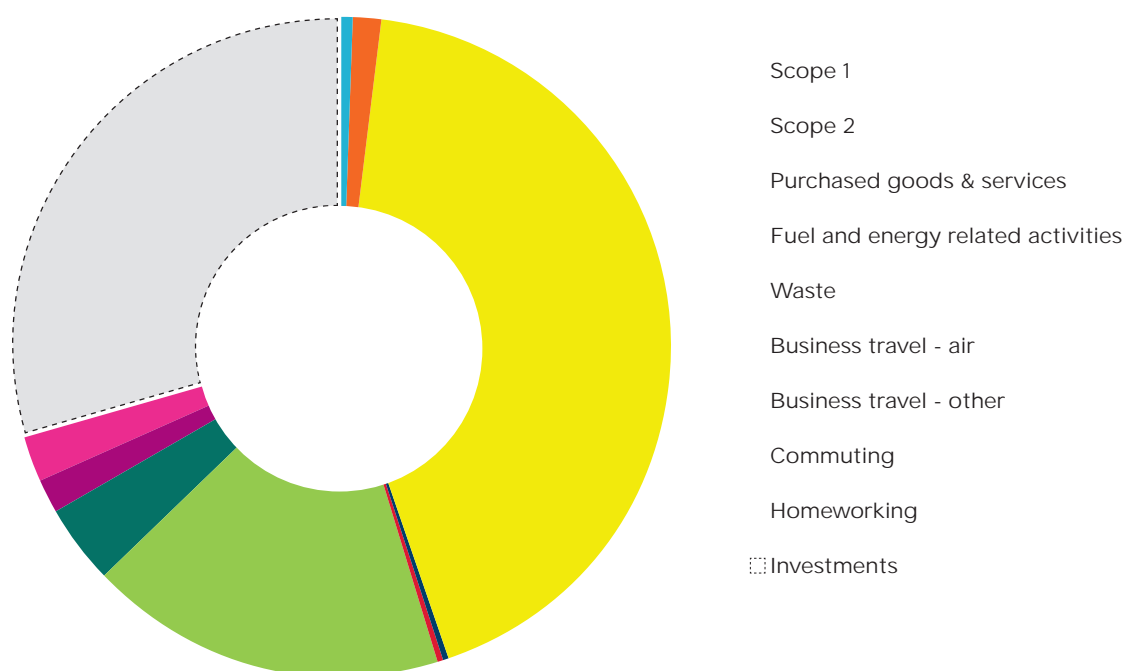


Figure 2: our greenhouse gas emissions in 2023 by GHG Protocol category

Summary

Overall, we estimate our quantified GHG emissions to have increased by 25% from our 2019 baseline. These increases are all associated with our indirect emissions from the goods and services we buy in to the organisation and we expect they are an overestimate to some extent due to the lag in emissions factors correcting for recent price inflation.

We have continued to show good progress reducing the direct emissions from our buildings through a number of proactive measures but this has been outweighed by a rebound in travel post-COVID restrictions and a significant increase in total spend on goods and services, particularly IT.

While the pandemic has led to a large and persistent reduction in commuting to our headquarters in Cambridge, this has been counterbalanced to some extent by emissions associated with home heating while our staff work remotely. Personal car travel is by far the largest source of commuter emissions, so we will continue to support the uptake of public transport, walking, cycling and electric vehicles.

	Greenhouse gas emissions ¹ /tCO ₂ e					Change against 2019 baseline
	2019	2020	2021	2022	2023	
Scope 1	82	71	199	90	71	-13%
Scope 2	363	263	199	194	180	-50%
Scope 3	6,336	<i>Data incomplete</i>		5,580	8,338	+32%
Total	6,780	<i>Data incomplete</i>		5,865	8,483	+27%

Table 3: summary view of our GHG emissions

¹All greenhouse gas emissions are reported as tonnes of carbon dioxide equivalent (tCO₂e) using the 100 year Global Warming Potential (GWP) metric. Figures are rounded to whole numbers so may not total in a given category.

Appendix 1: objectives
