THE CAMBRIDGE *green* CHALLENGE

2019/20 Annual carbon emissions report for the University of Cambridge

Reporting period:	1 August 2019 - 31 July 2020
Our reporting boundary has been defined under:	The Operational Control Approach. Please refer to our Methodology Statement for full details of how we have compiled the figures in this report.
Emissions scopes included in our report:	We have measured our scope 1 and 2 emissions, with the exception of fugitive emissions, and some of our scope 3 emissions. We do not currently have robust data for all of our scope 3 emission sources.
Our carbon reduction target(s):	We have adopted a Science Based Target, which commits us to reduce our scope 1 and 2 emissions to absolute zero by 2048. As an interim target, we need to reduce our emissions by 75% against 2015/16 levels by 2030.
Baseline year for our target and reporting:	2015/16

	Reporting year					
Emission source	**2019/20**	**2018/19**	**2017/18**	**2016/17**	**2015/16 (Baseline year)**	**Commentary, including specific exclusions**
Scope 1						
Gas	19,313	18,399	18,795	18,130	16,385	
Oil	215	205	198	243	239	
Biomass	2	5	1	6	7	The carbon conversion factors used for these calculations only account for the nitrous oxide and methane emissions from biomass combustion; the carbon dioxide emissions value is set to zero to account for the carbon dioxide absorbed by fast-growing bio-energy source during their growth
Fuel used in owned vehicles	248	300	238	277	326	
Fugitive emissions						We do not currently measure fugitive emissions from our estate; we are exploring options for quantifying this emissions source in future
Scope 2						
Electricity - Location based emissions	32,397	37,300	41,049	49,823	56,214	
Electricity - Market based emissions	27,658	37,300	41,049	49,823	56,214	
Purchased heat and steam	1,756	1,663	1,733	1,255	1,658	
Total scope 1 and 2 emissions						
Scope 1 and 2 - Location based emissions	53,931	57,872	62,014	69,734	74,828	
Scope 1 and 2 - Market based emissions	49,192	57,872	62,014	69,734	74,828	
Scope 3						
Purchased good and services	385,000	395,000				We began to estimate our supply chain emissions in 2018/19, using a free online tool provided by the Greenhouse Gas Protocol. This tool estimates emissions on a simple economic input-output basis, so these figures should be regarded as an order of magnitude estimate, rather than an accurate calculation of our supply chain emissions
Capital goods						Not quantified
Fuel and energy related activities not included in scope 1 or 2	419	456	437	345	357	These are emissions associated with our use and disposal of water
Upstream transportation and distribution						Not quantified
Waste generated in operations	68	93	88	112	435	
Business travel	9,218	16,259	17,596	16,254	12,082	
Employee commuting	5,492	13,653	11,392	11,870	8,029	Commuting figures include staff commuting only; we do not currently quantify emissions from student commuting. A 2015 survey found that 91% of students commute by walking or cycling
Upstream leased assets						Not quantified
Downstream transportation and distribution						Not quantified
Processing of sold products						Not quantified
Use of sold products						Not quantified
End of life treatment of sold products						Not quantified
Downstream leased assets						These are emissions from buildings that the University owns, and leases to a thid party. Where the University has operational control over the building, these emissions have been included in our scope 1 and 2 figures.
Franchises						Not quantified
Investments						Not quantified
Out of scope emissions						
Direct carbon dioxide emissions from biomass consumption	41	104	32	169	176	These do not form part of our emissions but we have reported them for transparency

Notes:

We have for the first time this year reported - as our Market based emissions figure for electricity - the carbon reduction achieved through the Power Purchase Agreement (PPA) that the University entered into in late 2019. In this reporting year, the PPA met around 15% of our electricity demand, supplying electricity generated by UK wind farms. As the PPA meets the Greenhouse Gas Protocol's 8 quality criteria for reporting Market based emissions, it results in a genuine carbon reduction. For reasons explained in our Methodology Statement, in tracking progress against our Science Based Target this year, we have applied our Location based emissions figure for electricity.

Reasons for change in emissions:

The national lockdown introduced in March 2020 in response to the Covid-19 pandemic had a significant impact on some of our emissions. In particular, in areas where activity stopped immediately, such as staff commuting and travel, there has been a sizeable drop in our emissions. Perhaps surprisingly, emissions from University buildings did not reduce to such an extent. This is for a number of reasons: 1) The lockdown occured towards the end of the main heating season, so our gas and oil consumption were not significantly affected. 2) In many University buildings, in particular those used for research, energy-intensive building systems such as ventilation are, for safety and regulatory reasons, operated continuously, even when the buildings are at reduced occupancy. 3) A number of University buildings had to remain open, for example to support Covid-19 related research. For those buildings that did close, it took some time to close them safely, meaning their energy consumption did not reduce immediately.