

Greenhouse Gas Emissions Inventory and Annual Streamlined Energy & Carbon Report

Gloucestershire College
Academic Year 2019 - 2020



The emissions outlined in this report cover the 19/20 academic year - reporting period 1st August 2019 to 31st July 2020. The 2016/17 academic year is also included for comparative purposes.

INFORMATION ON EMISSIONS

The tables below refer to emissions independent of any GHG trades such as sales, purchases, transfers, or banking of allowances

Alongside the required Scope 1 and Scope 2 emissions outlined within this report, Gloucestershire College has selected to report the following Scope 3 emissions in this report:

- Fuel from Transport – Grey Fleet
- Consumption - Waste
- Consumption – Water

2019/20 ACADEMIC YEAR

The energy consumption (kWh and fuel consumption) used to calculate scope 1 and 2 emissions set out below is **4,477,744**. This is comprised as follows:

Emissions scope 1 and 2 (kWh):	4,902,037
Minus Market based Renewable Energy at	-432,826
Total	4,469,211
Emissions scope 1 (fuel consumption):	8,533
Total	4,477,744

EMISSIONS	TOTAL (TCO ₂ e)					
	Emission Type	Emission Group	Emission sub-group	Emission Sub-category	Annual TCo2e 2019/20	
Scope 1 and 2	1	Fuel	Gas	Natural Gas	482	
		Transport	Own Fleet	Diesel mini vans	22	
	2	Fuel	Electricity	Grid electricity	584	
				Market based renewable energy certificates	-111	
				Self generated renewable electricity	0	
	Grand Total					977
	Scope 3 (as outlined above)	3	Emission Type		2019/20	
Grey Fleet Transport			58			
Waste			7			
Water		8				
3 Total				73		

Total – all scopes	Annual TCo2	Intensity Ratio (Staff Headcount)
	1,050	1.30

2016/17 ACADEMIC YEAR

The information set out below is included for comparative purposes. This uses the **2016/17** academic year as a base year.

The energy consumption (kWh and fuel consumption) used to calculate scope 1 and 2 emissions set out below is **6,314,240**. This is comprised as follows:

Emission scope 1 and 2 (kwh):	6,301,299
Minus Market based Renewable Energy at	0
Total	6,301,299
Emission scope 1 (fuel consumption):	12,941
Total	6,314,240

EMISSIONS	TOTAL (TCO _{2e})				
	Emission Type	Emission Group	Emission sub-group	Emission Sub-category	2016/17
Scope 1 and 2	1	Fuel	Gas	Natural Gas	580
		Transport	Own Fleet	Diesel mini vans	34
	2	Fuel	Electricity	Grid electricity	1,180
				Market based renewable energy certificates	0
				Self generated renewable electricity	0
	Grand Total				
Scope 3 (as outlined above)	Emission Scope	Emission Type		2016/17	
		3	Grey Fleet Transport		91
	Waste		13		
	Water		14		
3 Total				117	
Total – all scopes	Annual TCo2	Intensity Ratio (Staff Headcount)			
	1,911	1.90			

METHODOLOGIES AND EMISSION FACTORS

This report and methodologies used within have been produced in line with the 2019 Government Environmental Reporting Guidelines and GHG reporting protocols.

Emissions calculations are based on the UK Government conversion factors for the relevant year(s) as provided by the Department for Business, Energy and Industrial Strategy.

INTENSITY RATIOS

The college has chosen to use TCO2e per staff member as the intensity ratio in the report to align with the recommended ratio for the sector. This is displayed as both headcount and FTE.

MEASURES TAKEN TO IMPROVE ENERGY EFFICIENCY

The below provides as summary of key points relating to the measures that Gloucestershire College has taken to improve energy efficiency to date:

The College has put in place a series of measures to reduce its carbon emission in recent years. In November 2018, the college moved to its new campus in Cinderford. Constructed as an environmentally friendly building under BREEAM standards, the new facility has reduced GHG emissions by 210 tonnes per annum. As well as this development, other Energy Savings Measures have been started at the Gloucester and Cheltenham sites including those set out in the extract below:

What have we done?	
Energy	<ul style="list-style-type: none"> ✓ Move to thin client for PCs – less electricity usage ✓ Lights replaced when end life with LED lighting ✓ New Gas and Electricity contract implemented 1st October 2016 with additional half hourly metering implemented to more closely monitor and control usage ✓ Introduced access card control on all Gloucester lifts which has reduced excessive use by non-essential users ✓ All new project work has sensors installed, LED lighting running at 20% energy consumption of the former lighting. ✓ Altered on/off timers and installed additional controllers to reduce the running speed of the heating and extraction systems in Glos. ✓ Since 2016, the new energy contract is providing online reporting of all college sites. ✓ Automated total campus heating on/off criteria introduced and published to all staff and now in operation ✓ BMS systems implemented
Waste	<ul style="list-style-type: none"> ✓ All sites use compactor and recycle off site ✓ Reduced number of bins for more sustainable recycling ✓ Print defaults to Black and White ✓ Print usage and monitoring ✓ Priority for unwanted furniture reuse to staff and community groups
Water	<ul style="list-style-type: none"> ✓ New taps – do not allow to leave tap running ✓ Move to short/long flush boxes as upgrades made to toilets ✓ All adjustable taps now adjusted to lower run times ✓ Three toilets refurbished 18-19
Catering	<ul style="list-style-type: none"> ✓ Reduced single use plastics in catering service. ✓ Reusable coffee cups ✓ Paper straws ✓ Wooden forks ✓ Non-meat options - education
Travel	<ul style="list-style-type: none"> ✓ Bus travel subsidy schemes for students (stagecoach) ✓ Agree stagecoach routes each year ✓ Travel claims – additional premium where take extra passenger ✓ Car park enforcement ✓ Roll out of teams and virtual meetings ✓ Consideration of minibus replacement to low carbon alternative
Procurement (under review)	<ul style="list-style-type: none"> ✓ Consider full life costs (source to end-of-life) when making purchasing decisions – aimed at reducing negative impacts on Co2 emissions, waste management and water consumption. ✓ Avoid use hazardous substances. ✓ Encourage suppliers to commit to improving environmental performance. ✓ Ensure sustainability is embedded within the design and construction process for building or refurbishments. ✓ Consideration of packaging costs and removal.

