Streamlined Energy and Carbon Report 2021-2022

Introduction

In line with the ESFA Streamlined Energy and Carbon reporting (SECR) 2020 guidance, and as set out in the College Accounts Direction, Grantham College can report the figures as below, calculated using the Greenhouse gas emissions calculation tool 2021-2022 factors.

The emissions reported cover the period 1st August 2021 to 31st July 2022 with the base year being 1st August 2020 to 31st July 2021. The report covers leased and owned assets of the college and emission change in reporting year versus base year is also shown and includes Scope 1 & 2 emissions.

Benchmarking and Intensity Metrics

Grantham College has chosen to utilise an intensity metric that will support comparison to the baseline emissions in future years and will hopefully also seek to measure its emissions against peers for transparency. The chosen intensity measurement ratio is total gross emissions in metric tonnes CO2e per staff member.

In financial year August 2021 to July 2022 the College employed 345 members of staff, equating to 159 FTE. The total gross emission per member of staff is 1.406 tonnes CO2e.

College Premises

The college consists of 3 owned sites and 1 leased site, all with their own gas fuelled boilers and electricity purchased from the grid network. Buildings on the college sites date from late 1800's, Grade 2 listed Stonebridge House, Grade 2 Elsham House and Riverside House, to early 2000's, with the majority of the buildings dating from 1960 to 1980's.

Grantham College has solar panelling installed across some of the main site college buildings and the self-generated renewable power information is shown within the report.

The College was successful in their capital bid to Greater Lincolnshire Local Enterprise Partnership for capital investment to accommodate a Renewable Energy Centre. This has allowed the college to refurbish the existing Link Block and Engineering areas including replacing single glazed, steel framed windows, insulating and replacing existing roof, substitution of light bulbs with LED lighting and specialist equipment to assist with teaching and learning in the Renewable Energy sector.

Scope 1

Natural gas consumption data has been extracted from meter readings supplied and are supported by supplier invoices and no other form of heating fuel is used within the college.

It was projected that the continued enhanced ventilation strategy as per government guidance to reduce the spread of Covid, would have an increase in natural gas consumption due to increased heating of rooms to negate this, however this has not been the case. Gas consumption for 2021-22 is lower than 2020-21 and 2019-20.

The college owns 7 diesel vehicles. 2 minibuses, 2 vans and 3 pool cars and also leases an accessible diesel minibus.

Transport fuel consumption data has been calculated by taking the total fuel expenditure for the year and recorded mileage for all vehicles.

Transport emissions for 2021-22 are higher than those in 2020-21 due to educational visits recommencing and our day care centre for young adults with learning and/or physical disabilities being re-opened following COVID, and subsequent restrictions removed.

These emissions, however, are still lower than those in 2019-20 and in March 2022, the college purchased its first fully electric vehicle, with plans to purchase more in 2022-2023 to assist further in reducing carbon emissions.

Scope 2

Scope 2 emissions are made up of both purchased electricity and self-generated renewable power.

Consumption data has been extracted from meter readings and supplier invoices in respect of purchases electricity, and self-generated data has been supplied by meters readings from the inverter and supported by information provided by the supplier of our Feed in Tariff.

Electricity consumption for 2021-22 has increased compared to the previous year as staff and students returned to the college sites with less reliance on remote learning/working. Electricity consumption for 2021-22 however is lower than 2019-20 which included lockdown and remote working.

Self-generated renewable power for 2021-22 has decreased to previous years due to the removal of some solar panels located on our Link block to allow building work to take place for our Renewable Energy Centre.

Scope 3

Scope 3 emissions has not been included in the report; however, this information will be included where possible for future reporting years.

Energy Efficiency Actions

The college is proactively engaged with the sustainability agenda on several fronts including engagement with students and staff, working towards improving the energy efficiency of its buildings and the recycling of some waste streams but there is still room for improvement and focus. The college calendar includes an Environmental Awareness week, and curriculum areas are also asked to involve and discuss with students the environmental and sustainability within their sectors.

Supply Chain

The college continues to look at ways it can reduce carbon emissions and assist with our environmental, sustainability and energy efficiency strategic goals and tries where possible to work with suppliers who are also working towards sustainability and reducing carbon emissions.

- Computer equipment – we have seen a reduction in non-recycled waste in relation to the supply of computer equipment, as our current procured supplier delivers equipment in a more environmentally friendly way. Equipment is no longer delivered in individual boxes packed with polystyrene; a number of units are now delivered in one box with a reusable protective cover. Old equipment is also taken away and recycled.

- Catering – our used cooking oil is taken away and recycled by a company who converts it into biofuel.

Capital & Maintenance Program

As part of the college's capital and summer works program areas are also now required to consider:

- Environmental impact of the work required.
- Does the work contribute to reducing the college's carbon emissions?
- Does the work contribute to increasing the college's energy efficiency and sustainability?

It is anticipated that the measures the college is putting in place during 2022-23 and beyond will reduce emissions in the future.

Grantham College & University Centre

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Greenhouse gas emissions and energy use data	2021/2022	2020/2021	2019/2020
Energy consumption used to calculate emissions (kWh)	2,536,473	2,406,591	2,616,635
Energy consumption break down (kWh) (optional):			
Gas	1,881,006	2,071,328	1,926,352
Electricity - Location Based Power	526,936	227,585	533,917
Electricity - Self Generated Renewable Power	61,997	63,084	72,388
Transport fuel	66,534	44,594	83,977
Scope 1 emissions in metric tonnes CO2e			
Gas consumption	344.52	380.86	356.16
Owned transport	15.76	10.73	20.54
Total scope 1	360.28	391.59	376.7
Scope 2 emissions in metric tonnes CO2e			
Electricity - Location Based Power	111.888	53.06	136.47
Electricity - Self Generated Renewable Power	13.16	14.71	18.5
Scope 3 emissions in metric tonnes CO2e			
Business travel in employee owned vehicles	0	0	0
Total gross emissions in metric tonnes CO2e	**485.33**	**459.36**	**531.67**
Energy Intensity ratio			
Tonnes CO2e per member of staff (staff/TC02e)	**345 / 1.406**	**398 / 1.154**	**397 / 1.334**
Tonnes CO2e per Staff FTE (staff/TC02e)	**159 / 3.060**	**178 / 2.5745**	**191 / 2.769**

Grantham College	Annual SECR disclosure	Academic year 2021 - 2022
Base Year for emissions disclosure	2020 - 2021	
Reporting Organisation	Grantham College	
Person Responsible	Anita Harrison	
Academic Reporting year	2021 - 2022	
Type of Reporting Organisation	Individual College	
Methodology used	GHG protocols Corporate standards & SECR guidelines for College Corporations	
Emissions factors used	UK Government conversion factors for Company set	
Included Scope 3 emissions	, , , ,	
Scope 2 emissions	Location Based Power,	
Exclusions	None	

Report Year Scope 1 emissions	**Fuel Source**	**Volume**	**Unit**	**TCO_2e**	**Emissions change v Base Year**
Heating	Natural Gas	1,881,005.62	kWh	344.52	-10%
		-		-	
Transport	Diesel	66,533.87	kWh	15.76	47%
		-		-	
		-		-	
Fugitive Emissions		-		-	
	Scope 1 Sub-Total			360.28	-8%
Report Year Scope 2 emissions					
Location Based Power	Electricity	526,935.79	kWh	111.88	111%
Self Generated Rewnewable Power	Electricity -	61,997.00	kWh	13.16	-10%
	Scope 2 Sub-Total			**125.05**	85%
Report Year Scope 3 emissions					
		-		-	
		-		-	
		-		-	
		-		-	
		-		-	
		-		-	
		-		-	
		-		-	
	Gross TCO_2e pre offset			**485.33**	6%
Offsets					
		-		-	
		-		-	
		-		-	
	Net TCO_2e			**485.33**	6%

Report Year		**Report Year**		
Energy Intensity Ratios (S1&2)	**Quantity**	**kWh's / Unit**	**TCO_2e / Unit**	
Floor area	17,016	145.42	0.02852	6%
Staff FTE	159	15,601.99	3.06010	19%
Student FTE	-			
Number of Staff	345	7,172.39	1.40676	22%
Transport Intensity Ratios (S1&2)	**Quantity**	**kWh's / Unit**	**TCO_2e / Unit**	
Miles	50,101.00	1.33	0.000315	-56%
Per Vehicle	9	7,392.65	1.751024	33%

Context