DERBY COLLEGE GROUP

Streamlined Energy and Carbon Report

Reference:	GOV-003
Year:	2021
Designated Owning Department:	Corporate Affairs

Date:	November 2021
Executive Owner:	Deputy CEO – Strategy & Corporate Services
Lead Reviewer:	Director of Estates
Reviewers:	Director of Estates

Introduction

In line with the Guidance for Streamlined Energy and Carbon reporting, as set out in the College Accounts Direction, Derby College Group (DCG) can report the figures as below, calculated and based on UK Government GHG factors for company reporting. (The corresponding period of report spans two calendar years; thus, the appropriate conversion factors have been used unless stated otherwise for the respective months Aug – Dec 20 and Jan – July 21).

The emissions reported correspond with the highlighted period of 1st August 2020 -31st July 2021 from leased and controlled assets for which DCG is responsible. Emissions have been calculated and reported in accordance with their individual scope and classification resulting predominantly from acting as supporting infrastructure for the delivery of the group's core activities of teaching and learning, with a small contribution which could be deemed applicable to commercial activity. In circumstances where recorded data is not available a justifiable method of estimation has been applied based on the context of use and end user knowledge. Calculations and output methodology has also been incorporated where DCG is actively responsible for the consumption of the energy (and as such for the reporting of it), this is currently attributable to a landlord / tenant arrangement for the occupancy of property referred to as the "Johnson Building", where residence is based upon a long-term leasehold agreement - 2009-2029.

Transport fuel expressed as energy consumption and highlighted as kWh output refers to a calculated contribution from in house fleet vehicles, where known engine capacity, recorded mileage and estimated use has been used.
A noticeable reduction in the calculated emissions (metric tonnes) for the Colleges fleet vehicle has been recorded for this period of time to which data utilised and approximated can be caveated by the much-reduced use of the College vehicles due to the implementation of protocols associated with Covid management. Following a re - assessment of guidance vehicles were later released for general use as of 01.08.21

Scope 3 emissions (business travel) calculated in metric tons of CO_2e have been based on an overall mileage figure taken from staff mileage claims paid within the qualifying period using the appropriate conversion figure for a large diesel engine car as directed in the 2021 guidelines only. Similarly to in house vehicle usage, a mixed mode of operation for the relevant staff has resulted in a much reduced claims figure being calculated.

Future submissions will allow prior year equivalent figures to be disclosed for comparison

Group Progress

The Group continues to work with appointed energy consultant Dukefield Energy (UPG) providing service and validation of the Colleges main utility consumption and contractual obligations. A three-year carbon plan is regularly reviewed in, lieu of the annual investment and allocation of capital to works identified. Although the college remained as proactive as possible during the closure periods associated with CV management, only very small internally funded incremental gains have been achieved in comparison to the previous reporting year, mainly attributable to the continued installation associated with LED lighting.

Government funding received as a result of the Further Education Data College survey allowed larger capital investment to a number of College properties resulting in Fabric upgrade, Window and Door replacement and comprehensive external envelope upgrades to help achieve improved heat retention and losses to the environment. Identified below are the works completed in conjunction with this funding

Recent Carbon Projects

Recent projects include:

- Upgrade to Lodge at Broomfield hall – Roof/windows/doors/heating / lighting
- Upgrade, window /door replacement and roof works to the Larches at Broomfield Hall
- External envelope / window / door replacement / light replacement to H1 and Plant Sciences teaching accommodation at Broomfield Hall

A previous submission following a Low Carbon Skills funded feasibility study was made to the National Decarbonisation scheme but was unfortunately not accepted due to over subscription. However, a phase 2 application programme allowed for a resubmission to which the College were successfully awarded £3.6million for the removal of an old and dated Coal fired community heating system. These works commenced in Aug / Sept 2021.

The main focal point of this was to source and install an alternate heat provision on the Broomfield Hall campus due to the ongoing reliance on a Carbon heavy coal fired heating plant. As evident from the current and previously submitted data, this presented a disproportionate total when considering the metric tonnage output of CO_2e.

The combined figure for Scope 1 emissions 4,308.58 Tons (4,586.42Tons - previously 19-20) is a combination of output from mains gas, liquid petroleum gas and coal reflecting a contribution from coal of approximately 2900 tons. Following the successful completion of the works a reduced footprint should be evident in the forth coming years calculations (Aug 21-July 22), with a marked reduction from coal usage in the reporting year Aug. 22 – July 23. Anticipated reduction in Electricity output and consumption has been negated by the implementation of an enhanced ventilation strategy as per national guidance to endure adequate ventilation in the College buildings alleviating concerns associated with the spread of the Covid Virus.

Increased gas usage and output accompanies the development of the “void” in the Hudson building as part of recently funded T level development works, thus adding an additional 725 M² of occupied floor space to the operational total.

The intensity ratio figure has been calculated using a combined staff total from payroll data attributable to DCSU (3),DCG services (25) and DCG (1101) employees as of the 31.07.21 – totalling for means of calculation 1129 members of staff.

10. Disclosure of minimum information to be included on the corporation's website based on the above example				
Note that from the year 2020 to 2021, the previous year's data should also be reported for comparison purposes. Corporations may elect to show this information		**01.08.19 - 31.07.20**		**01.08.2020 - 31.07.21**
Greenhouse gas emissions and energy use data – UK		**2019/20**		**2020/21**
Energy consumption used to calculate emissions (kWh)				
Energy consumption break down (kWh) (optional):		**Kwh**		**Kwh**
Gas		3,422,855.42		4,299,692.91
Electricity		4,373,228.13		4,466,447.20
Transport fuel		179,574.09		84,086.66
Scope 1 emissions in metric tonnes CO2e				
Gas consumption / **LPG / Coal**		4,586.42		4,308.58
Owned transport / **Diesel /Petrol / Electric**		51.59		29.62
Total scope 1		**4,638.01**		**4,338.20**
Scope 2 emissions in metric tonnes CO2e				
Purchased electricity		**1,066.56**		**989.57**
Scope 3 emissions in metric tonnes CO2e				
Business travel in employee owned vehicles / college reimbursed mileage claims		**135.90**		**38.39**
Total gross emissions in metric tonnes CO2e		**5,840.47**		**5,366.16**
Intensity ratio	Staff No`s		Staff No`s	
Tonnes CO2e per member of staff	1,149	**5.08**	1,129	**4.75**