Streamlined Energy & Carbon Report 2023-2024

for Barnstaple, Tiverton and Brannams Campuses

Addendum - Updated 2021/22 Student Figures

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Executive Summary

What is Streamlined Energy and Carbon Reporting?

The 2018 Streamlined Energy and Carbon Reporting (SECR) Regulations are designed to increase awareness of energy costs within organisations, provide them with data to inform adoption of energy efficiency measures and to help them to reduce their impact on climate change. They also seek to provide greater transparency for stakeholders. Within the scope of SECR reporting is the disclosure of energy use for heating, power and transport, as well as associated information on intensity ratios against previous (base) years. The Department for Business, Energy and Industrial Strategy have confirmed that Colleges are within the scope of legislation that mandates SECR reporting.

This report has been produced to meet SECR requirements for Petroc College for the period from August 2023- July 2024. This will cover both all three of the main campuses associated with Petroc College (Tiverton, Barnstaple and Brannams Campus).

2023-24 Energy and Carbon Information

The below is a summary of the findings of this report in terms of energy consumption and associated equivalent emissions. Emissions are given in terms of CO_2e, which uses the global warming potential (GWP) of Carbon Dioxide as a unit to express the emissions of any greenhouse gas.

Site	Fuel	Consumption	$kgCO_2e$	TCO_2e
Tiverton Campus	Gas (kWh) (Scope 1)	698,103	127,700	127.70
Barnstaple Campus	Gas (kWh) (Scope 1)	2,949,867	539,620	539.62
Brannams Campus	Gas (kWh) (Scope 1)	50,976	9,320	9.32
Tiverton Campus	Electricity (kWh) (Scope 2)	324,521	67,200	67.20
Barnstaple Campus	Electricity (kWh) (Scope 2)	1,170,268	242,330	242.33
Brannams Campus	Electricity (kWh) (Scope 2)	63,297	13,110	13.11
Own fleet	Miles (Average Diesel Van)	1,272	470	0.47
Grey Fleet	Mileage	119,620	32,080	32.08
General Waste	Tonnes	176	3,210	3.21
WEEE	Tonnes	4.6	100	0.10
Total			**1,034,670**	**1,034**

To maintain consistency across the sector and between reporting years, Colleges are encouraged to adopt an intensity ratio of tonnes of CO2e per pupil. For the current student population at Petroc

College of 4042, the resulting value is 0.26 TCO_2e/Pupil, compared to a previous year intensity ratio of 0.19TCO_2e/pupil, and a base year intensity ratio of 0.22 TCO_2e/pupil.

The Responsibilities of the College

Based on the SECR requirements, Petroc College qualifies as a reporting body and must disclose the energy consumption figures and carbon footprints, as well as commentary on them, further analysis and intensity ratios, and a narrative regarding planned energy efficiency measures. These are covered in the following sections.

SECR Eligibility

The College

As previously discussed, Petroc College is situated across three campuses in Devon (Barnstaple, Tiverton and Brannams Campuses). Based on the College's number of employees and financial figures, it qualifies as a reporting organisation under the scope of requirements of Streamlined Energy & Carbon Reporting.

SECR Requirements

The updated regulations published in 2018 introduced further disclosure requirements, broadening the scope of eligible organisations. The following requirements determine whether a given organisation is defined as 'large' under SECR guidelines, and therefore required to report emissions:

- Turnover: £36 million or more
- Balance sheet total: £18 million or more
- Number of employees: 250 or more

It has been confirmed by the Education Skills Funding Agency (ESFA) that Colleges meeting the above criteria will fall within the scope of the SECR regulations.

Under SECR guidelines, eligible organisations are required to disclose the following:

- Energy consumption by the organisation's operation in the UK:
  - Electrical consumption, including for the purpose of transport (kWh)
  - Gas consumption, including all stationary and mobile activities
  - Energy consumption for the purposes of transportation (own fleet, grey fleet, hired vehicles, business trips, on-site transport.)

- The greenhouse gas emissions associated with the above
  - An intensity ratio for in-sector comparison
  - Previous (base) year's figures for energy consumption and GHG emissions.
  - Energy efficiency measures enacted
  - Calculation methodologies to support the energy and emissions disclosures.

With over 500 staff and a balance sheet that exceeds the £18m threshold Petroc falls within the boundaries defined for SECR reporting.

Energy Consumption & Greenhouse Gas Emissions

The following subsections detail the energy consumption and emissions profile of the College for the academic year 2023/24, as well as the chosen intensity ratios. Detailed calculations are available in Appendix 1.

Emissions have been calculated using UK Government GHG Conversion Factors (2023).

- Gas kWh to $kgCO_2e$: 0.18290
- Electricity kWh to $kgCO_2e$: 0.20707
- Own diesel fleet mileage to $kgCO_2e$: 0.37224 (average van)
- Grey Fleet Emissions Mileage to kgCO2e: 0.268168

Scope 1 Energy & Emissions

Scope 1 emissions arise directly from fuel combustion on site for heating or using organisation-owned vehicles or processes. The College fleet is comprised of three vehicles however only one of these uses fossil fuels (the other two are electric vehicles, the electrical consumption of which has been assumed to fall under the overall site electrical consumption below), and natural gas is used for heating at all three sites. As of the time of writing, the only FGAS records which have been provided are for the year 2019, and as such it has not been possible to include fugitive emissions in this report.

Site	Fuel Type	Consumption	$kgCO_2e$	TCO_2e
Tiverton Campus	Gas (kWh) (Scope 1)	698,103	127,700	127.70
Barnstaple Campus	Gas (kWh) (Scope 1)	2,949,867	539,620	539.62
Brannams Campus	Gas (kWh) (Scope 1)	50,976	9,320	9.32
Own fleet	Miles (Average Diesel Van)	1,272	470	0.47
Total			**677,110**	**677.11**

Scope 2 Energy & Emissions

Scope 2 emissions arise from the consumption of grid electricity at a given site, or where applicable, the purchase of heat, steam, or cooling such as that from a heat network. In the case of Petroc College, all Scope 2 emissions are associated with grid electricity.

Site	Energy Type	Consumption	$kgCO_2e$	TCO_2e
Tiverton Campus	Electricity (kWh) (Scope 2)	324,521	67,200	67.20

Barnstaple Campus	Electricity (kWh) (Scope 2)	1,170,268	242,330	242.33
Brannams Campus	Electricity (kWh) (Scope 2)	63,297	13,110	13.11
Total	**Electricity (kWh)**	**1,914,858**	**406,580**	**406.58**

Scope 3 Emissions

Scope 3 emissions comprise any other voluntarily disclosed emissions which fall outside the direct control of the organisation. This can include purchased goods, supply chain transport emissions, distribution and employee business travel. In the case of Petroc College, grey fleet mileage, general waste disposal and Waste Electrical and Electronic Equipment (WEEE) data has been provided to the HI Group which has been used to directly calculate Scope 3 emissions figures.

In the case of General Waste Disposal, the provided dataset includes % recycling figures for 2021-22 however these are not included for the reporting year of 2023-24. The HI Group contacted the College's general waste disposal service provider, SWM, who were able to provide information on how different waste types were handled:

- Metals, cardboard, wood and paper are all recycled
- The only material which is sent to landfill by SWM is asbestos
- All other materials are incinerated

Based on this information, the HI Group were able to build up a profile of emissions factors which were combined with the categorised waste data provided by the College to produce an emissions profile.

Site	Energy Type	Consumption	$kgCO_2e$	TCO_2e
Grey Fleet	Mileage	119,620	32,080	32.08
General Waste	Tonnes	176.29	3,210	3.21
WEEE	Tonnes	4.58	100	0.10
Total			**35,390**	**35.39**

Intensity Ratio

Based on the organisation type, the College has adopted a carbon footprint intensity ratio based on student population. It has been noted that, when compared to results from the previous year, the intensity ratio has increased, which represents a move away from carbon reduction goals at this stage. This can be largely attributed to an increase in the emissions factor associated with UK grid electricity consumption and an increase in overall energy consumption in 2023-2024.

Student Population	Total Emissions/TCO2e	Calculated Intensity Ratio (TCO_2e/Student)
4,042	**1,035**	**0.26**

Energy Efficiency Measures 2023/24

This is Petroc College's first SECR report, and as such energy efficiency measures will be disclosed in the next report (AY 2024-2025) for the sake of comparison.

Reporting History

This is the first report the HI Group have produced for Petroc College, however the College have provided three years' worth of data (2021-22, 2022-23 and 2023-24). 2021-22 has been used as the base year for reporting purposes, with 2023-24 as the reporting year. Data from 2022-23 has also been analysed to provide a reference point for the changes in emissions profiles during this period.

	Base year: AY 21-22	Previous reporting year: AY 22-23	Current reporting year: AY 23-24
(Scope 1) /TCO_2e	613.05	546.73	677.12
(Scope 2) /TCO_2e	406.58	335.38	322.64
Total gross TCO_2e (S1&2)	**1019.63**	**882.11**	**999.76**
Scope 3 Emissions/TCO_2e	43.93	48.21	35.39
Energy consumption used to calculate the above emissions (kWh)	5,259,044	4,732,552	5,257,032

AY – Denotes Academic year (September to August)

Appendix 1- Energy & Greenhouse Gas Calculation Methodology

Data was retrieved as follows:

- Energy data for natural gas and electrical consumption was provided by the College, as monthly metered consumption totals for each of the sites in kWh.
- Mileage was provided for the three vehicles which make up the College's own fleet, two of which are electric (electrical consumption of these vehicles was assumed to fall within the overall College electrical consumption). The third vehicle is a van which uses diesel, and the mileage figure was multiplied by the conversion factor for an average van for the relevant year.
- Grey fleet petrol consumption was provided based on mileage, and a straightforward conversion rate multiplication was used to determine associated emissions.
- General waste collection data was provided in tonnes and categorised according to waste type. Tonnes of material collected were totalled based on the category, and emissions conversion rates were applied to each category according to information provided by the waste disposal service provider (SWM).

To develop the carbon footprint profile for each aspect of college energy consumption, the UK Government carbon factors were used for the years 2023-2024.

Site	Fuel	Consumption	Conversion	$kgCO_2e$	TCO_2e
Tiverton	Gas (kWh)	kWh	0.18290	127,700	127.70
Barnstaple	Gas (kWh)	kWh	0.18290	539,620	539.62
Brannams	Gas (kWh)	kWh	0.18290	9,320	9.32
Tiverton	Grid Electricity (kWh)	kWh	0.20707	67,200	67.20
Barnstaple	Grid Electricity (kWh)	kWh	0.20707	242,330	242.33
Brannams	Grid Electricity (kWh)	kWh	0.20707	13,110	13.11
All	Own fleet	Mileage (Diesel)	0.37268	470	0.47
All	Grey Fleet	Mileage	0.268168	32,080	32.08
All	General Waste	Tonnes	0.22166	3,210	3.21
All	WEEE	Tonnes	21.281	100	0.10

Appendix 2- Assessment Parameters

Baseline year	2021/22
Reporting Organisation	Petroc College
Person Responsible	Jason Quinn
Reporting Period Covered	Annual full year from Aug 2023
Organisation boundaries	Facilities and operations over which Petroc College has operational control/influence
Methodology used	GHG protocols corporate standards for SECR Reporting guidelines
Emissions factors used	UK Government conversion factors for Company set
Exclusions	Water
Included Scope 3 emissions	Grey fleet, General Waste, WEEE
Scope 2 emissions	Combined location & market-based emissions factors
Sequestration	None