



**Riverside
College**

Widnes & Runcorn

Riverside College

Streamlined Energy & Carbon Report 2023-2024
Kingsway and Cronton Sixth Form Campuses

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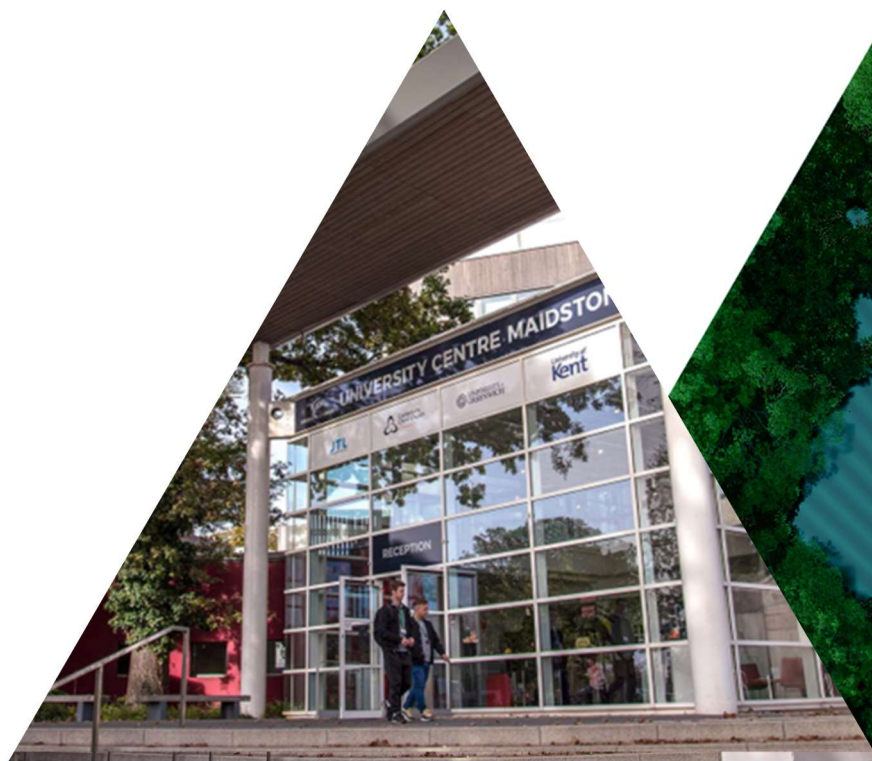


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Executive Summary

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 Riverside College for the period from 1st August 2023- 31st July 2024. This will cover both campuses of the College (Kingsway Campus and Cronton 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 CO₂e, 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 ₂ e	TCO ₂ e
Kingsway Campus	Gas (kWh) (Scope 1)	699,192	198,510	198.51
Kingsway Campus	Electricity (kWh) (Scope 2)	735,498	152,300	152.30
Cronton Sixth Form Campus	Gas (kWh) (Scope 1)	333,367	60,970	60.97
Cronton Sixth Form Campus	Electricity (kWh) (Scope 2)	840,947	174,140	174.14
FGAS Emissions	R32 (kg)	4	2,610	2.61
Own fleet, Generator	Petrol (Litres)	14,333	29,990	29.99
Own fleet, Generator	Diesel (Litres)	14,333	36,320	36.32
Grey Fleet	Petrol (Litres)	1,775	3,710	3.71
Grey Fleet	Diesel (Litres)	1,775	4,500	4.50
Total			663,053	663.053

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 Riverside College of 5,667, the resulting value is 0.117 TCO₂e/Pupil, compared to a previous year intensity ratio of 0.091TCO₂e/pupil, and a base year intensity ratio of 0.14 TCO₂e/pupil.

The Responsibilities of the College

Based on the SECR requirements, Riverside 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, Riverside College is situated across two campuses in Widnes (Kingsway Campus), and Runcorn (Cronton Sixth Form Campus). 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 Riverside 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 kgCO₂e: 0.18290
- Electricity kWh to kgCO₂e: 0.20707
- Diesel consumption kWh to kgCO₂e: 0.23907 (x10.6 conversion for litres to kgCO₂e)
- Petrol consumption kWh to kgCO₂e: 0.22166 (x9.44 conversion for litres to kgCO₂e)
- R-32 FGAS emissions: GWP 675

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 several vehicles, and natural gas is used for heating at both sites. A diesel generator was used until recently at the Cronton Sixth Form campus as a temporary electrical supply, fuel consumption of this unit has been reflected in the fuel consumption figures included within this report. The split of fuel for the College fleet and generator was not provided, and as such it was assumed to be a 50/50 split between petrol and diesel. For both the generator and College Fleet, fuel spend was provided, which was converted to litres for each month based on average costs from the Office for National Statistics weekly road fuel prices publication.

Site	Fuel Type	Consumption	kgCO ₂ e	TCO ₂ e
Kingsway Campus	Gas (kWh)	699,192	198,510	198.51
Cronton Sixth Form	Gas (kWh)	333,367	60,970	60.97
Own fleet/Diesel Generator	Diesel (Litres)	14,333	29,990	29.99
Own Fleet	Petrol (Litres)	14,333	36,320	36.32
FGAS Emissions	R32 (kg)	4	2,610	2.61
Total			328,400	328.40

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.

Site	Energy Type	Consumption	kgCO ₂ e	TCO ₂ e
Kingsway Campus	Electricity (kWh)	735,498	152,300	152.30
Cronton Sixth Form	Electricity (kWh)	840,947	174,140	174.14
Total	Electricity (kWh)	1,576,445	326,440	326.44

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 Riverside College, grey fleet fuel card spend has been provided to the HI Group which has been used alongside average monthly fuel costs for the year in question to estimate fuel consumption, to which emissions conversion factors have been applied to calculate the following emissions profile.

Site	Energy Type	Consumption	kgCO ₂ e	TCO ₂ e
Both	Petrol (Litres)	1,775	3,710	3.71
Both	Diesel (Litres)	1,775	4,500	4.50
Both (Total)	Litres	3,550	8,210	8.21

During 2022, Riverside College commissioned a full organisation carbon foot printing exercise, performed by Hillside Environmental Services. As a part of this exercise, various Scope 3 emissions were voluntarily disclosed, including those arising from water consumption and treatment, waste disposal, grey fleet emissions, consumption of various curriculum materials, and student & staff commutes.

Intensity Ratio

Based on the organisation type, the College has adopted a carbon footprint intensity ratio based on student population. As discussed earlier in this document, this represents a continuous improvement from the previous year- despite the increased size of the student cohort, the total emissions reported this year have decreased, demonstrating that Riverside College is continually progressing towards its decarbonisation goals.

Student Population	Total Emissions/TCO ₂ e	Calculated Intensity Ratio (TCO ₂ e/Student)
5,667	663.053	0.117

Energy Efficiency Measures 2023/24

Since the previous SECR report, the following energy efficiency measures have been adopted.

- Installation of new air-source heat pumps for gas boiler replacement at Kingsway Campus.
- LED lighting installation for the remaining areas not covered by LED lighting as of the previous report.
- Point-of-use domestic hot water outlets incorporated at both sites to replace existing fossil fuel based hot water generation.
- Air conditioning units installed at various locations throughout both sites to replace existing fossil fuel-based room heating systems.

Reporting History

Three previous SECR exercises have been completed for Riverside College, in the academic years 2020-2021, 2021-2022 and 2022-2023. Displayed below is a comparison of the previous report findings, and this year's findings. A reduction in energy consumption has been noted once fuel consumption is converted into kWh consumption, however the emissions profile has increased since the previous year, which can be attributed to increased electricity consumption at the two sites in addition to increased carbon conversion factors associated with grid electricity from the previous year.

	Base year: AY 2020	Previous reporting year: AY 2022	Previous reporting year: AY 2023	Current reporting year: AY 2024
(Scope 1) /TCO ₂ e	290.26	301.8	298.75	328.40
(Scope 2) /TCO ₂ e	315.81	311.09	271.47	326.44
Total gross TCO₂e (S1&2)	606.07	618.67	570.22	654.84
Scope 3 Emissions/TCO ₂ e	7.88	5.78	2.75	8.21
Energy consumption used to calculate the above emissions (kWh)	2,903,499	3,038,356	2,923,521	3,282,338

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 two sites in kWh.
- Diesel and petrol consumption for the own fleet and diesel generator of the College was provided in the form of fuel card spend. This was converted to litres of consumption based on average fuel price for the months in question, which was then converted to an emissions profile using conversion factors as stated below.
- Grey fleet petrol consumption was provided based on expense claims; however, this did not distinguish between petrol and diesel consumption. As such, it was assumed to be a 50/50 split and the same methodology was used as the own fleet and diesel generator data to estimate consumption and therefore emissions.

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 ₂ e	TCO ₂ e
Kingsway	Gas (kWh)	kWh	0.18290	198,510	198.51
Cronton	Gas (kWh)	kWh	0.18290	60,970	60.97
Kingsway	Grid Electricity (kWh)	kWh	0.20707	152,300	152.30
Cronton	Grid Electricity (kWh)	kWh	0.20707	174,140	174.14
Kingsway	Own fleet, Generator	Petrol (Litres)	0.22166	29,990	29.99
Cronton	Own fleet, Generator	Diesel (Litres)	0.23908	36,320	36.32
College	Grey Fleet Petrol (Litres)	Petrol (Litres)	0.22166	3,710	3.71
College	Grey Fleet Diesel (Litres)	Diesel (Litres)	0.23908	4,500	4.50
College	FGAS Emissions (R32 kg)	KG	GWP 675	2,610	2.61

Appendix 2- Assessment Parameters

Baseline year	2019/20
Reporting Organisation	Riverside College
Person Responsible	Simon Smith
Reporting Period Covered	Annual full year from 1 st Aug 2023
Organisation boundaries	Facilities and operations over which Riverside 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, waste
Included Scope 3 emissions	Grey fleet
Scope 2 emissions	Combined location & market-based emissions factors
Sequestration	None