

# WCG (Warwickshire College Group)

## Streamlined Energy and Carbon Reporting.



<b>Date created</b>	09/11/2023
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<b>Statement</b>	WCG (Warwickshire College Group) was responsible for the collection of activity and qualitative energy efficiency actions data. The figures in this report relating to emissions, energy consumption, and intensity ratios have been calculated by the Planet Mark using the data provided.
<b>Emissions reporting period</b>	01 August 2022 to 31 July 2023
<b>Emission sources</b>	Electricity, T&D Losses, On-Site Renewables, Natural Gas, Water, Fleet, Business Travel, Waste, Diesel, Fuel Oil, Gas Oil/Red Diesel, LPG, Petrol, Wood Chips
<b>Organisation boundary</b>	7 Colleges (Royal Leamington Spa, Warwick Trident, Rugby, Moreton Morrell, Pershore, Evesham. Malvern Hills)
<b>Methodology</b>	GHG Protocol Corporate Accounting and Reporting Standard, Planet Mark certification scheme

			01 August 2021 to 31 July 2022			01 August 2022 to 31 July 2023		
Source	Scope	Unit	Amount	Amount (kWh)	Total Emissions (tCO <sub>2</sub> e)	Amount	Amount (kWh)	Total Emissions (tCO <sub>2</sub> e)
<b>Building</b>								
Electricity (location-based)	2	kWh	4,845,845.8	4,845,845.8	937.1	4,787,575.6	4,787,575.6	991.4
Electricity (market-based)	2	kWh	4,845,845.8	4,845,845.8	942.5	4,787,575.6	4,787,575.6	1,744.5
Natural Gas	1	kWh	7,378,937.1	7,378,937.1	1,347.0	6,578,596.9	6,578,596.9	1,203.4
Transmission and Distribution Losses	3	kWh	4,779,844.8	-	84.6	4,710,728.6	-	84.4
Biomass	1	tonnes	82.4	311,193.9	3.3	53.8	203,294.2	2.2
Burning Oil	1	litres	48,039.0	469,004.8	122.0	-	-	-
Gas Oil	1	litres	14,436.0	144,172.3	39.8	17,094.0	170,290.4	47.1
Fuel oil	1	litres	-	-	-	50,172.0	554,651.5	159.3
LPG	1	litres	99,787.0	674,560.1	155.4	95,957.0	650,588.5	149.4
Diesel Fuel	1	litres	-	-	0.0	2,564.6	25,351.0	6.4
Petrol Fuel	1	litres	-	-	0.0	296.7	2,659.5	0.6
<b>Waste</b>								
Landfill	3	tonnes	1,439.5	-	672.2	1,495.7	-	778.2
Recycled	3	tonnes	1,170.0	-	24.9	1,254.4	-	26.7
<b>Water</b>								
Water Supply	3	m <sup>3</sup>	82,251.5	-	12.3	105,042.0	-	18.6
Water Treatment	3	m <sup>3</sup>	82,251.5	-	22.4	105,042.0	-	21.1
<b>Travel</b>								
Vehicle - fleet - diesel	1	litres	40,444.1	403,632.4	103.4	38,457.4	380,151.7	96.6
Vehicle - fleet - petrol	1	litres	2,617.5	23,614.9	5.7	3,602.0	32,291.8	7.6
<b>Procurement</b>								
Vehicle - non-fleet - unknown	3	km	741,744.3	513,072.0	126.6	1,149,667.4	790,143.4	191.6
<b>Total – Location-based</b>			<b>14,764,033.2</b>			<b>14,175,594.3</b>		
<b>Total – Market-based</b>			<b>14,764,033.2</b>			<b>14,175,594.3</b>		
			<b>3,656.6</b>			<b>3,784.6</b>		
			<b>3,662.0</b>			<b>4,537.8</b>		

Intensity Metric	Total	Total tCO <sub>2</sub> e	Intensity	Total	Total tCO <sub>2</sub> e	Intensity
Total per £1m turnover – location-based	49	3,656.6	74.9	52	3,784.6	73.2
Total per £1m turnover – market-based	49	3,662.0	75.0	52	4,537.8	87.7
Total per employee – location-based	9,928	3,656.6	0.4	995	3,784.6	3.8
Total per employee – market-based	9,928	3,662.0	0.4	995	4,537.8	4.6

Comparison	Comparison tCO <sub>2</sub> e	Increase %
Location-based	128.1	3.5
Market-based	875.8	23.9

\* Where relevant the NET CV emission factors have been used to calculate the total kWh associated with fuel use. Net CV or lower heating value (LHV) is the useful calorific value in typical real-world conditions.

## Energy Efficiency Actions

WCG (Warwickshire College Group) has successfully certified to The Planet Mark for the reporting period 01 August 2022 to 31 July 2023, WCG (Warwickshire College Group)'s tenth year of certification. The Planet Mark is a sustainability certification that recognises continuous improvements, encourages action, and builds an empowered community of like-minded individuals. WCG (Warwickshire College Group) also makes a commitment upon certification of the Planet Mark to achieve a minimum 2.5% reduction in their measured carbon footprint year on year alongside launching its revised Sustainability Strategy and Climate Action Roadmap.

WCG (Warwickshire College Group) has a detailed Environmental Policy which is fundamental to its business strategy and linked to its Sustainability Policy. Warwickshire College Group has also reviewed their Estates Strategy which includes a more detailed approach to energy and sustainability.

The estates team are responsible for utilities and energy management and the Procurement Manager has top-level oversight to ensure they are monitored throughout the year to identify any areas of significant usage. Local site Facilities Managers use a range of building management systems to regulate the energy use associated with heating the different buildings across the different properties and ensure energy savings are made where possible.

Whilst new buildings within the estate implement new technologies and building methodologies whenever possible, it is noted that not all buildings are so high-tech, and in many areas, energy efficiency requires considerable improvement; from single-glazed windows and inefficient, or non-existent, insulation through to old boilers and large areas of fluorescent lighting. WCG (Warwickshire College Group) has carried out energy decarbonisation surveys across its site, the results are being used to feed into a prioritisation list for work to be completed subject to available capital funding streams.

During this reporting period, WCG (Warwickshire College Group) continued to upgrade old fluorescent lighting with LED lighting panels. Further pipe lagging has been carried out. It has also installed a new more efficient water heating to the main plant room at Leamington. PIR sensors have been installed on some external lighting at Leamington. At Moreton Morrell College it has upgraded several external high-energy lights to LED light fittings and changed time clocks in buildings that are not needed at night.

At Pershore College, WCG (Warwickshire College Group) has carried out the following improvements:

- LED lighting upgrade in Landscape classrooms x 2
- 2 x Landscape windows upgraded to double glazing
- LED lighting upgrade in Motor Workshop classrooms x 3
- Pipe Lagging installed in Boiler houses Marriott, Avonbank, SU/Bar
- External lighting (Street lighting) control changed to timer and dusk till dawn sensors
- New river water irrigation system installed.

At Evesham College, WCG (Warwickshire College Group) has carried out the following improvements:

- LED lighting upgrade in B-Block motor vehicle workshops x 2
- LED lighting upgrade in the Plumbing workshop
- LED lighting upgrade in C-Block (Corridor, Toilets & Reception)
- LED lighting upgrade in the new car park
- LED lighting upgrade B-Block external

WCG (Warwickshire College Group) has reduced the number of college transport routes. This removed a 17-seater minibus route travelling approximately 150 miles per day, 36 weeks of the year.