

Inspire Education Group

STREAMLINED ENERGY AND CARBON REPORT

2021-2022



Inspire
Education Group

*Peterborough and Stamford,
Thriving Together*

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INTRODUCTION

Inspire Education Group (IEG) recognises the importance of the UK Government’s ambitions to streamline and reduce energy emissions. IEG is committed to making the most efficient and effective use of all energy sources, along with minimising the adverse environmental impacts of its activities through continuous improvement in environmental performance. It is in the interests of both the group and the environment, we will continuously look at means of reducing our carbon footprint by close monitoring of all major utility usage and energy efficient replacement to the fabric of the buildings as part of an on-going estates replacement and planned maintenance programme.

The UCP building has been added to this year’s report, this is a 2,800 sqm building on the Peterborough site, used for University level teaching and its associated support staff. The electricity supplied is 100% zero carbon therefore generates no CO2 emissions within the report.

A new 901 sqm, £3.3m construction teaching block at Stamford was opened in July 2022. This was designed to BREEAM very good standard and will be used for teaching students’ modern methods of construction. The heating and hot water are provided through air source heat pumps. There are 56 photovoltaic panels installed on this building to offset the energy usage.

The reporting period covers 1st August 2021 – 31st July 2022, this is the second as the merged Inspire Education Group. As with previous reports both colleges are reporting separately and then combined to show changes from the baseline year (2019-20). For the first time University Centre Peterborough (UCP), a wholly owned subsidiary of IEG is included in the Peterborough data for this report. Subsidiaries, due to their size, are not obliged to report separately.

During 2021/22 IEG was awarded over £0.9M in condition funding by the Department for Education, matched with internal funds the group plan to spend £3M on improvements to the condition of the buildings over two years, improving structural integrity and energy efficiency. The award in June 2022 should start to impact energy use in 2022/23 onwards, being focused on roof replacements, window replacements, changing lighting to low energy LED, water pipework and boiler replacements. It may take more than one year to assess the impact on overall energy consumption, due the ventilation requirements in 2021/22 and the expanding of the Group Estate.

2021/22 DEVELOPMENTS

During 2021/22 the group returned to normal operations, with no restrictions to student numbers on sites. At the start of the academic year Covid testing was undertaken and extra ventilation throughout the winter months was in place as per Government guidelines. Air Purifiers and Co2 monitors were also installed in various rooms across the estate to monitor and improve learning and working environments.

2021/22 OVERALL PERFORMANCE

The impact of the Covid pandemic during the years ending in 2020 and 2021 had a significant effect on the group's energy usage. This skewed energy consumption and travel due to lock downs that affected both 2019/20 and 2020/21 reports. This makes the comparison between the baseline year (which had a twelve-week lockdown) and performance in 2021/22 difficult to compare.

This report covers scopes 1, 2 and 3 emissions, with overall performance summarised as follows:

Total gross emissions for 2021/22 are 1,298.55, a marginal increase of 0.028% from 20219/20.

This is a good overall performance against a baseline year that included a twelve-week lockdown. 2021/22 Covid guidelines required maximum ventilation throughout the colleges. While it is impossible to assess the detrimental impact of this policy it is clear to see that other improvements to the estate made in 2020/21 (a £2M refurbishment plan) must have had a positive impact.

Scope 1 727.27 Tonnes CO2e (increase of 2.7% against 2019/20 baseline)

Scope 1 emissions for gas consumption has increased at Peterborough College due to more ventilation from Covid measures during the winter of 2021/22. Stamford College has seen a reduction in gas-based emissions, possibly due to the main gas heating boiler being off line from May 22 until the end of the year.

Scope 2 523.92 Tonnes CO2e (decrease of 4% against 2019/20 baseline)

Scope 2 emissions for electricity consumption at Peterborough College have decreased, this is possibly due to improvement measures to the buildings such as new windows, LED lighting and scheduling computer shut downs. Stamford College has shown an increase possibly due to the switch to electric based heating systems, offsetting the reduction in gas.

Scope 3 17.36 Tonnes CO2e (increase of 52.4% against 2019/20 baseline)

The scope 3 emissions in particular are most significantly impacted by the Covid lockdown in the baseline year. Additionally, the baseline year is made up of the data from two separate organisations pre-merger. Whereas travel between sites takes place where services have been located on one site only. For instance, for print services.

Intensity Ratio 1.58 (increase of 13.6%)

The increase in this metric is directly due to the reduced staff numbers in 2021/22, rather than the very marginal increase in overall emissions.

GOALS AND PROGRESS TO DATE

GOALS

- To increase awareness of our energy usage and costs.
- Use data to inform adoption of energy efficiency measures to reduce the impact on climate change.
- To reduce usage year on year, become more efficient, and reduce associated costs.
- Implementation of online technologies for meetings to reduce the requirement for travel between sites or to other organisations.
- To upgrade systems when capital projects are implemented.
- Reduce electricity consumption through the implementation of energy efficient lighting, systems and equipment.
- Review and identify sources of heat loss for each building to inform future refurbishment projects.
- BMS system has been upgraded giving more finite control of three buildings on the Peterborough campus.
- Installed timing mechanisms for all standalone heaters and external lighting.
- Single glazed windows replaced in a number of areas of the estates.
- Investment in conferencing facilities to support online meetings reducing the need to travel between sites or other organisations.
- Implementation of automatic computer shutdowns at the end of the teaching day and have digital displays on timers.
- A new 901 sqm construction teaching block was opened in mid 2022. This was designed to BREEAM very good standard with heating and hot water delivered through air source heat pumps, and 56 photovoltaic panels installed to minimise energy usage.

PROGRESS IN A YEAR

- LED lighting – internal replacements – 65% completed at Peterborough and 40% at Stamford.
- LED lighting – external replacements – 100% completed at Peterborough and 25% at Stamford.
- UCP Atrium and Lecture Theatre lights changed to LED.
- Insulation added to roofing – 5 roofs at Peterborough and 3 roofs at Stamford.
- Plant room upgrades across all sites.
- Replaced 2 inefficient washing machines and 2 tumble dryers with more economically models.
- New walk-in refrigeration unit installed to replace unit that was beyond repair in the Stamford training kitchen.
- 2 inefficient boilers replaced with energy saving boilers in the Fisher building.
- Engaged with curriculum to embed environmental and sustainability qualifications on all courses.

ENERGY EFFICIENCY PLAN

The group is committed to:

- Reducing the environmental impact and increase efficiency and this plan covers Electric, Gas and Transport.
- Reducing the environmental impact of journeys made by staff and students. This is detailed in the Travel Action Plan and the Green Travel Policy.

The group is continually looking for ways to improve the efficiency of our operations and buildings, this includes:

- Inspiring sustainability group set up involving staff from across the group looking to develop and implement IEG's green plan, 'Inspiring Sustainability'.
- Energy-efficient replacement lighting to continue across the estate.
- Installation of electric vehicle charging points.
- Ongoing assessment to reduce heating emissions.
- Investigating installing more photovoltaic panels across the group.
- Regular reviews of opportunities to reduce heat-loss, water consumption and to improve recycling.
- Offset some of our carbon emissions and increasing bio-diversity by tree planting, limited grass mowing, and installing bird and insect homes.
- Monitoring our operational hours to condense and reduce late openings and early starts.
- Development of a new 2,330 sqm net zero building at our Peterborough campus to deliver Green Technologies curriculum, with a planned opening date of September 2024.

Other areas IEG has invested in are:


- Increased recycling and waste reduction – not progressed in 2021/22 due to high levels of Covid testing on-site and the need for single use products in catering and across the wider group.
- Promotion of plant-based food options – more vegan meals are on offer and meat free Monday is in place.
- Eco-friendly packaging in food outlets – phasing out of plastic single use containers expected to complete in 2022/23.
- Reduced usage of paper and printing – IEG have invested in software to track printing and paper usage across our systems. For 2021/22 IEG produced:
 - Total Colour Pages = 706,898
 - Total Black and White Pages = 2,138,116
 - Grand Total Pages = 2,845,014
 - This is equivalent to Trees Consumed – 226.73
 - CO2 Produced – 23,995.1KG (included in the main metrics)




GREENHOUSE GAS EMISSIONS AND ENERGY USE DATA

Greenhouse Gas Emissions and Energy Use Data 1 August 2021 to 31 July 2022 – UK			Inspire Education Group	
Energy Consumption Used to Calculate Emissions (kWh)	2019-20 Baseline	2021-22 Figure		
Energy Consumption Break Down (kWh) (Optional):				
Gas	3,880,985.76	4,073,880.50		
Electrical	2,336,616	2,886,249.5		
Transport Fuel	113,297.09	99,714.29		
Scope 1 Emissions in Metric Tonnes CO2e				
Gas Consumption	713.60	733.30		
Owned Transport	23.44	23.97		
Total Scope 1	737.04	757.27		
Scope 2 Emissions in Metric Tonnes CO2e				
Purchased electricity	544.76	523.92*		
Scope 3 Emissions in Metric Tonnes CO2e				
Business travel in employee owned vehicles	11.39	17.36		
Total Gross Emissions in Metric Tonnes CO2e	1,298.18	1,298.55		
Intensity Ratio				
Tonnes CO2e per member of staff	1.39	1.58		

*Electrical usage has increased, emissions decreased as UCP building is on a zero emissions tariff

Greenhouse Gas Emissions and Energy Use Data 1 August 2021 to 31 July 2022 – UK		
		Peterborough College
Energy Consumption Used to Calculate Emissions (kWh)	2019-20 Baseline	2021-22 Figure
Energy Consumption Break Down (kWh) (Optional):		
Gas	2,622,265.76	2,805,879.79
Electrical	1,318,838.00	1,591,706.00
Transport Fuel	60,081.20	40,148.83
Scope 1 Emissions in Metric Tonnes CO2e		
Gas Consumption	482.16	505.06
Owned Transport	15.02	9.8
Total Scope 1	497.18	514.86
Scope 2 Emissions in Metric Tonnes CO2e		
Purchased electricity	307.47	273.59*
Scope 3 Emissions in Metric Tonnes CO2e		
Business travel in employee owned vehicles	10.73	7.12
Total Gross Emissions in Metric Tonnes CO2e	815.39	795.57
Intensity Ratio		
Tonnes CO2e per member of staff	1.24	1.61

*Electrical usage has increased, emissions decreased as UCP building is on a zero emissions tariff

Greenhouse Gas Emissions and Energy Use Data 1 August 2021 to 31 July 2022 – UK		
		Stamford College
Energy Consumption Used to Calculate Emissions (kWh)	2019-20 Baseline	2021-22 Figure
Energy Consumption Break Down (kWh) (Optional):		
Gas	1,258,720.00	1,268,000.71
Electrical	1,017,778.00	1,294,543.50
Transport Fuel	53,215.89	59,565.56
Scope 1 Emissions in Metric Tonnes CO2e		
Gas Consumption	231.44	228.24*
Owned Transport	13.41	14.17
Total Scope 1	244.85	242.41
Scope 2 Emissions in Metric Tonnes CO2e		
Purchased electricity	237.28	250.34
Scope 3 Emissions in Metric Tonnes CO2e		
Business travel in employee owned vehicles	0.66	10.15
Total Gross Emissions in Metric Tonnes CO2e	482.79	502.9
Intensity Ratio		
Tonnes CO2e per member of staff	1.77	1.52

*reduced carbon factor

HOW WE CALCULATE OUR ENERGY USE FOR THE GROUP

Energy Source	Consumption (kWh)	Emissions Calculation Conversion Factor		tCO2e
Gas – total used for the year, taken from gas bills for each site.	4,073,880.5	0.18316	2021 fuels, natural gas conversion factor gross CV to tCO2e.	733.30
Electricity – total used for the year, taken from the electricity bills for each site. UCP is zero carbon.	2,886,249.5	0.21233	2021 UK electricity conversion factor to tCO2e.	523.92
Transport (Owned) – Mini-buses and vans: 53,552.5 miles in the year.	62,820.04	Minibuses and vans 0.17513	2022 managed assets vehicles, vans class 2 – used in lieu of passenger vehicles conversion for Minibuses and vans, Small Car Petrol and Diesel for the cars.	23.97
Cars (Petrol): 28,424.3 miles in the year.	28,051.31	Petrol cars 0.14652		
Cars (Diesel): 10,056 miles in the year.	8,842.94	Diesel cars 0.13989		
Transport – total mileage for petrol reimbursed from staff claims (56,984.91 miles).	63,479.77	0.17067	2022 managed assets vehicles, average car conversion factor to tCO2e, unknown fuel.	17.36
Total				1,298.55
Intensity ratio - Emissions data (tCO2e) compared with an appropriate business activity (staff numbers)				1.58
Number of staff				824 (494:330)

QUANTIFICATION AND REPORTING METHODOLOGY

We have followed the 2019 HM Government Environmental Reporting Guidelines. We have also used the GHG Reporting Protocol – Corporate Standard and have used the 2022 UK Government’s Conversion Factors for Company Reporting.

INTENSITY MEASUREMENT

The chosen intensity measurement ratio is total gross emissions in metric tonnes CO2e per staff member, the recommended ratio for the sector.



MEASURING OUR PERFORMANCE

Inspire Education Group has produced these reports in line with the Guidance for Streamlined Energy and Carbon reporting, they are calculated on the UK Government GHG factors for company reporting. The group has used the Corporate Standard and the 2022 UK Government's Conversion Factors for Company Reporting.

Emissions have been calculated and reported in accordance with their individual scope and classification, which supports the infrastructure of the delivery of the group's core activities of teaching and learning. Data has been obtained through invoices and internally kept records of vehicle energy usage.

DEFINITION OF EMISSION SCOPES

Scope 1

Emissions from activities owned or controlled by the corporation that release omissions into the atmosphere. Examples include emissions from combustion in owned or controlled boilers, vehicles, must as minimum cover emissions from gas, and transport fuel combustion.



Scope 2

Emissions from own consumption of purchased electricity, heat, steam and cooling. These are a consequence of the corporation's activities but are from sources not owned/controlled and as minimum cover emissions from purchased electricity.



Scope 3

Emissions because of the corporation's actions where the source is not owned or controlled. For example, business travel in private cars and as a minimum cover energy use and related emissions from business travel in hire or employee owned vehicles where staff purchase the fuel.



The intensity ratio figure has been calculated using the staff total from payroll data for the period in question.

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the next

generation





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