

### Gateshead College Streamlined Energy Carbon Reporting Results

01 August 2023 to 31 July 2024

| Energy Source  | Consumption   | Scope   | Emissions Calculations   |
|--|---|---------|--|
| Gas - Total kWh (kilowatt<br>- hours) used for the year,<br>taken from gas bills for<br>each site                            | <b>1,567,574 kWh</b><br>(gross CV calorific value)  | Scope 1 | 1,567,574 kWh * 0.18290 (2024<br>fuels, natural gas conversion<br>factor gross CV to kg CO2e )<br>= 286,709 kg CO2e<br><b>= 286.71 tCO2e</b>   |
| Electricity total kWh used<br>for the year, taken from<br>the electricity bills for<br>each site                             | <b>1,992,720 kWh</b><br>(gross CV calorific value)  | Scope 2 | 1,992,720kWh * 0.20705<br>(2024 UK Electricity conversion factor<br>to kg CO2e)<br>= 412.593 kg CO2e<br><b>= 412.59 tCO2e</b>  |
| Transport<br>New Van - 6,953 Miles<br><b>Total Miles = 6,953</b>   | 6953 miles * 1.19832<br>(2024 SECR kWh pass<br>& delivery vehicles,<br>van class 2 used in<br>lieu of passenger<br>vehicles conversion)<br><b>= 8,332 kWh</b>   | Scope 1 | 6953 miles = 11,190 km<br>11,190 km * 0.18832 (2024 managed<br>assets vehicles, vans class 2 - used in<br>lieu of passenger vehicles conversion)<br>= 2107 kg CO2 e<br><b>= 2.11 tCO2e</b> |
| Transport - total mileage<br>for petrol reimbursed<br>from staff claims<br><b>staff car mileage = 90,262</b><br><b>miles</b> | 90,262 miles * 1.14204<br>(2024 SECR kWh<br>passenger and delivery<br>vehicles, average<br>car conversion<br>factor to kWh, petrol)<br><b>= 103,083kWh</b>  | Scope 3 | 90,262 miles = 145,263 km<br>145,263 * 0.16450 (2024 managed<br>assets vehicles average car conversion<br>factor to kgCO2e, petrol)<br>= 23,895.76 kgCO2e<br><b>= 23.90 tCO2e</b>          |
| Total  | 3,671,709 kWh   |         | 725.31 tCO2e   |
| Intensity ratio - Emissions<br>data (tCO2e) compared<br>with an appropriate<br>business activity (staff<br>numbers)          | Full Time Staff = 315<br>Part Time staff = 198<br>Casual Staff = 62<br>Total College staff = 575<br>FTE Total = 422<br>Contracted staff = 16<br>Tenant staff = 43<br>FTE Total = 39<br>Total Staff = 634<br>OVERALL TOTAL FTE = 461 |         | 725.31 tCO2e / 461 members of staff<br>(FTE) <b>= 1.57 tCO2e per staff member</b>  |

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| Greenhouse gas emissions and energy use data for the period 01 August 2023 to 31 July 2024 | 2023/2024 | 2022/2023 |
|--|-----------|-----------|
| Energy consumption used to calculate emissions (kWh)                                       | 3,671,709 | 3,656,048 |
| Energy consumption break down (kWh)  |           |           |
| Gas  | 1,567,574 | 1,525,844 |
| Electricity  | 1,992,720 | 2,012,166 |
| Transport Fuel   | 111,415   | 118,038   |
| Scope 1 emissions in metric tonnes CO2e  |           |           |
| Gas Consumption  | 286.71    | 278.56    |
| Owned Transport  | 2.11      | 1.79      |
| Total Scope 1  | 288.82    | 280.35    |
| Scope 2 emissions in metric tonnes CO2e  |           |           |
| Purchased Electricity  | 412.59    | 416.67    |
| Scope 3 emissions in Metric tonnes CO2e  |           |           |
| Business travel in owned vehicles (This includes coach)                                    | 23.9      | 25.77     |
| Total gross emissions in metric tonnes CO2e  | 723.2     | 722.79    |
| Intensity ratio  |           |           |
| Tonnes CO2e per member of staff  | 1.57      | 1.61      |

#### **Quantification and Reporting Methodology**

The report follows the 2023 HM Government Environmental Reporting Guidelines. It uses the GHG Reporting Protocol - Corporate Standard and the 2024 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.

# Measures taken to improve energy efficiency

- 1. The College is proactively promoting online meetings to reduce movement between sites.
- 2. The College has a long-term agreement to utilise Gateshead Energy Company's District Energy Centre, to supply heat and power to the Baltic Campus site. The Academy for Sport building is also now linked to the District Energy Centre. A private wire network was installed in June 2022 and the heat connection took take place in February 2023. Gateshead Energy Company have installed 2 PV farms and also installed technologies to use below ground pumped mine water to pre heat systems which links to the overall system and further decarbonises the energy infrastructure.
- 3. Gateshead Energy Company is continuing to look to make further changes to decarbonise the district energy centre reducing the reliance on gas usage and this now includes looking for alternative locations to gain further benefit from below ground mine water. Testing has taken place at the International Stadium during 2023 / 24 and the outcome is to look to provide further connections to the nearby housing estates via the District Energy Centre.
- 4. BMS controllers have been upgraded and include coverage of additional areas that have been refurbished and new technologies installed.
- 5. Continued with the approach to replace all T5 lighting at the College locations and replacement with energy efficient LED lighting and controls. This includes in year replacement of the multi-storey car park lighting to new LED fittings and passive infra-red controls. During the summer of 2023 / 24 the light fittings at the Academy for Sport building were similarly replaced.
- 6. Installed new low energy pumps to heating systems at the Baltic campus. This included the CT, Shunt and main boiler pumps. In addition, new sub meters have been installed to increase usage information.
- 7. New external LED lighting and controls are planned for early 2025 within the Baltic Campus grounds
- 8. Work has commenced to install a Solar PV Array over the upper level of the Baltic Campus MSCP. This will give 96.57KWs of supply.