

Carbon Reduction Plan

**Bournemouth
& Poole College**

Version: 1.0

Next Review date: May 2026

Commitment to achieving Net Zero

Bournemouth and Poole College is committed to achieving Net Zero in both Scope 1 and 2 emissions by 2050 in line with the Climate Change Act 2008. We have achieved significant drops in Scope 1 and 2 Greenhouse gas (GHG) emissions to date and will continue to review this target going forward. The College will also seek to improve data collection and efficiency with the assistance of globally recognised carbon efficient institutions, particularly with Scope 3 emissions.

Context

In 2008, the United Kingdom (UK) enacted The Climate Change Act in response to the Intergovernmental Panel for Climate Change (IPCC) reports on the climate crisis and predictions of increases in global temperatures by 1.5°C as a result of unsustainable GHG emissions. The Climate Change Act is the first of its kind in the world, it is a legally binding target of reaching carbon net zero – a balance between output and input of carbon emitted into the atmosphere, setting 2050 as the UK's national goal to reach carbon net zero. This target has been further supported by 196 more countries signing the internationally recognised treaty known as The Paris Agreement Act (2015), however, few have signed their own country's legal obligation to reach carbon net zero by 2050.

Bournemouth, Christchurch and Poole (BCP) Council, our local authority, declared a Climate and Ecological Crisis in July 2019 as an extension of their Paris Pledge of Action. As a result, BCP council have committed to reach carbon neutral by 2030. Bournemouth and Poole College has worked with BCP council in Public Sector Decarbonisation Strategies on a regional level (BCP) and have extended further strategies across Dorset. It is estimated that 2% of the UK's total emissions come from public sector buildings, for an approximate total of 8.54 million tonnes of carbon dioxide equivalent (CO₂e).

The Bournemouth and Poole College Board is in agreement of utilising the Environmental Association of Universities and College (EAUC)'s Further Education (FE) Climate Action Roadmap to guide them in their sustainability strategy. We established a Sustainability Steering Group to develop and implement sustainability strategy, formulate policies and guidelines, increase awareness and understanding of sustainability issues among student staff and the wider community and monitor progress and evaluate the impact of sustainability initiatives.

Definitions

GHG: Greenhouse gases such as carbon dioxide (CO₂), carbon monoxide (CO), methane (CH₄) and nitrogen oxide (NO). This version of the Carbon Reduction Plan will only refer to CO₂e in all of its carbon-based emission measurements. An unbalanced input and output of GHGs has resulted in the Greenhouse Effect (specifically positive outputs) which places us dangerously close to tipping points of irreversible damage.

tCO₂e Tonnes of carbon dioxide (CO₂) equivalent – note that this won't include carbon monoxide (CO), methane (CH₄), and nitrogen oxide (NO), all of which are vital GHGs that should also be reduced. tCO₂e is used to refer specifically to carbon dioxide equivalent sources.

Scope 1: Direct GHG emissions caused by an institution that are associated with fuel combustion, such as gas-based building heating or company-owned vehicle fuel combustion.

Scope 2: Scope 2 emissions refer to indirect greenhouse emissions that result from the generation of purchased electricity, steam, heating and cooling consumed by an organisation. For the purposes of this CRP, scope 2 emissions will directly refer to purchased electricity. This may change in the future to include purchased renewable energy.

Scope 3: Scope 3 emissions refer to all indirect emissions associated with an organisation but are not directly controlled by the organisation. Examples of scope 3 emissions that we currently include in our report are: business mileage completed by employees and external contractors where appropriate. Bournemouth and Poole College also report on the treatment of our water supply and the treatment of sewerage carbon emissions, both of which is subject to how much staff/students/members of the public use when visiting our facilities as well being subject to climate change in terms of stormwater maintenance. Bournemouth and Poole College intend to report in future on many more scope 3 emissions such as waste and procurement and recognise that scope 3 make up approximately 75% of total emissions.

Conversion Factor: Conversion Factor refers to how much GHG (CO₂ in this case) is produced per source (such as fuel consumption, electricity purchases, etc).

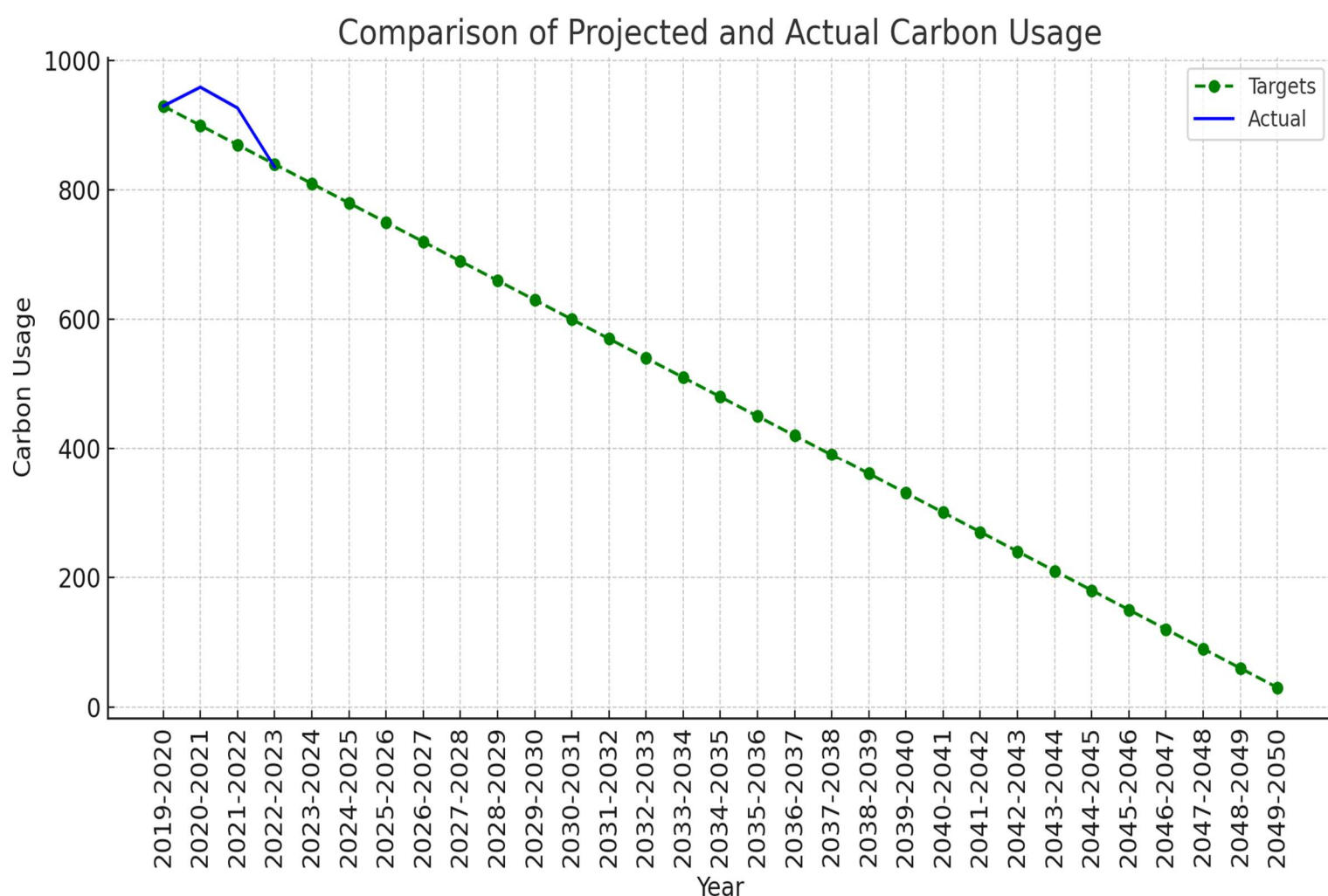
Intensity Ratio: Is a ratio that compares number of people to amount of tCO₂

Salix: A government funding scheme to support public sector organisations in decarbonisation operations.

Net zero: Net zero refers to a target where global greenhouse gas emissions from human activity are in balance with emissions reductions.

Progress towards achieving carbon net zero

Graph 1: Bournemouth and Poole College's progress towards carbon net zero in tonnes of carbon dioxide equivalent (tCO₂e) against academic years through from 2019-2020 to 2049-2050, in line with The Climate Change Act 2008. Bournemouth and Poole College's targets are featured on the green dotted line where as the College's actual emissions is displayed as the blue line graph.



While changes between our baseline and our reporting year indicate a decrease of 2.97 tCO₂e, our next year's report indicates a drop of c8% (178,301 k/Wh) and c4% (97,612 k/Wh) in electric and gas respectively, when compared to our baseline year consumptions. Overall, this would show a decline of c3% of emissions (in domestic gas and electric use) per reported year on average.

Further reductions in our emissions will be influenced by the guidance of the Environmental Association of Universities and Colleges' FE Climate Action Roadmap. Integration of the FE Climate Action Roadmap into our core Strategy will allow for a comprehensible plan that will be acted upon by the College through the oversight of a Sustainability Committee.

We project that carbon emissions will decrease over the next five years to 751 tCO₂e by 2029 under a BAU scenario. This is a reduction of 19.23%

Year on Year Comparison

Quantification and Reporting Methodology: We have followed ESFA Streamlined Energy and Carbon Reporting (SECR) Guidance. We have also used the GHG Reporting Protocol - Corporate Standard and have used the 2021 UK Governments Conversion Factors for Company Reporting.

Table 1: TCO₂e year on year comparison from baseline year (2019/2020) through to our reporting year 2022/2023 with intensity ratio added in.

Year	Carbon tonne equivalent (tCO ₂ e)	Intensity Ratio	Commentary
2019/20	929.85	1.28 (FTE=725)	This was our 1st and comparative baseline year. COVID lockdown restrictions began in February 2020, as a result access to facilities were limited, and transport, business mileage and utility consumption were reduced. The Intensity ratio is lower than subsequent years due to the highest number of FTE staff at 725.
2020/21	959.00 	1.57 (FTE=650) 	During this academic year staff and students spent a significant amount of time in lockdown until March 2021, when the 3 rd national lockdown was lifted. Transport, mileage and utility consumption reduced however the intensity ratio increased as the staff FTE dropped from 725 to 650 – resulting in a higher overall tCO ₂ e.
2021/22	926.85 	1.43 (FTE=650) 	Both Intensity ratio and tCO ₂ e reduced from previous year due to reduced transport and business mileage while the College return to normal operations following COVID, and Gas consumption was less. The Staff FTE was static @ 650.
2022/23	835.43 	1.50 (FTE=558) 	<u>Significant reduction of 9.86% in overall tCO₂e from previous year 2020/21</u> , mostly due to the cost saving initiatives put in place to mitigate the industry wide utility price hikes. Scope 2, Electricity, decreased by 81.03 (18%) tCO ₂ e, compared to the previous year 2021/22. Staff FTE dropped from 650 to 558, resulting in a slightly larger intensity ratio. This 2022/23 report has included for the 1 st time tCO ₂ e consumption from water supply and sewerage, adding to our reported Scope 3 emissions.

Baseline Year Emissions Footprint (BY)

1st August 2019 – 31st July 2020

Baseline (BY) emissions are a record of the greenhouse gases that have been produced in the past and were produced prior to the introduction of any strategies to reduce emissions. Baseline emissions are the reference point against which emissions reduction can be measured.

Table 1: Streamline Emission Carbon Report style table detailing emissions emitted by Bournemouth and Poole College between 1st of August 2019 and 31st of July 2020 across Scope 1, 2 and 3. Reported emissions are gas consumption and owned transport in Scope 1, purchased electricity in Scope 2 and business travel in Scope 3 emissions. Carbon dioxide was measured in metric tonnes of CO₂e, totalling 929.82 tCO₂e at the end of the academic year, resulting in an intensity ratio of 1.28. This means that per 1 FTE individual, 1.28 tonnes of carbon dioxide equivalent were emitted.

Greenhouse gas emissions and energy use data for the period 01.08.2019 to 31.07.2020

Energy consumption used to calculate emissions (kWh)

Gas	2,141,623
Electricity	2,072,400
Transport Fuel	91,900
	4,305,923

Scope 1 emissions in metric tonnes CO₂e

Gas Consumption	393
Owned Transport	22.97
	415.97

Scope 2 emissions in metric tonnes CO₂e

Purchased electricity	483
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Scope 3 emissions in metric tonnes CO₂e

Business Travel	30.85
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Total gross emissions in metric tonnes CO₂e	929.82
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Intensity Ratio

Tonnes CO ₂ e per member of staff (725)	1.28
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Table 2: Baseline Year data sources (2019/2020).

Scope	Definition	Unit	Source Information	Total	GHG Factor 2020	TCO2e
1	Purchased gas	kWh	Verified invoices	2,141,623 kWh	0.18387	393
1	Diesel	Consumed litres	Monthly fuel receipts	9,024 L	2.5603	22.97
2	Purchased electricity	kWh	Verified invoices	2,072,400 kWh	0.23314 Gen	483
					0.02005 T&D	
3	Business mileage	Miles	Financial travel claims	110,000 miles	0.28052 P	30.85
				Total tonnes of CO2e		929.82

Our emission reports are calculated for the period between 1st of August, through to 31st of July of the following year to fit the period of activity for our FE College.

Our Scope 3 is currently limited to reports on business travel, and we understand that this does not represent the ideal full range of Scope 3 emissions. Currently, our reported emissions in both our baseline year and reporting year cover emissions from business travel by employee-owned vehicles, college owned vehicles, transportation fuel, and our gas and electric emissions. In the following year, we hope to input our emission equivalent from our water consumption. Data on waste emissions should be ready for input for the year of 2024-2025.

As advised by the Environmental Association for University and Colleges (EAUC); we've begun preparing ourselves for reporting the full range of Scope 3 as listed in the Standardised Carbon Emissions Framework (SCEF).

The College has three main sites, all with their own gas-fuelled boilers and electricity to purchase from the grid network. As of 2023/24 the College owned ten petrol vehicles, nine diesel-powered mini-buses and had approximately 588 FTE staff some of whom claim business mileage.

Latest Reporting Year Emissions Footprint

1st August 2022 – 31st July 2023

Reporting year emissions are crucial in understanding how successful we were in keeping on track with our net zero target. Our most up to date available greenhouse gas emissions and energy use data is for the period 1 August 2022 to 31 July 2023.

UK Greenhouse gas emissions and energy use data	2022-23	2021-22
Energy consumption used to calculate emissions (kWh)		
Gas	2,215,604	2,359,345
Electricity	1,964,208	2,170,543
Transport Fuel	177,858	34,192
Total	4,357,670	4,564,080
Scope 1 emission in metric tonnes CO2e		
Gas consumption	404.44	432.14
Owned transport	19.97	18.62
Total	424.41	450.76
Scope 2 emissions in metric tonnes CO2e		
Purchased electricity	379.84	460.87
Total	379.84	460.87
Scope 3 emissions in metric tonnes CO2e		
Business travel	24.99	15.22
Water supply (newly reported from 2022-23)	1.89	
Sewerage (newly reported from 2022-23)	4.30	
Total	31.18	15.22
Total gross emissions in metric tonnes CO2e	835.43	926.85
Intensity ratio		
FTE staff members	558	650
Metric tonnes CO2e per FTE staff member	1.50	1.43

Latest Reporting year data sources including newly added water consumption (2022-2023).

Scope	Definition	Unit	Source Information	Total	GHG Factor 2022	tCO2e
1	Purchased gas	kWh	Verified invoices	2,215,603.53 kWh	0.18254	404.44
1	Diesel (College pool vehicles includes vans & minibuses)	Consumed Litres	Fuel receipts	7807.91L	2.55784	19.97
2	Purchased electricity	kWh	Verified invoices	1,964,208.35 kWh	0.19338	379.84
3	Water supply	Cubic metres	Verified invoices	12,661m ³	0.149	1.89
3	Water treatment (sewerage)	Cubic metres	Verified invoices	15,797m ³	0.272	4.3
3	Business mileage	Miles	Verified invoices	90,883 miles	0.27492	24.99
				Total tonnes of CO2e		835.43

The College has three main sites, all with their own gas-fuelled boilers and electricity to purchase from the grid network. The College owns/leases 10 petrol vehicles, 9 diesel-powered minibuses and has approx. 558 FTE staff, some of whom claim business mileage.

Carbon Reduction Projects:

- LED lighting has been installed in our public areas, and we continue the upgrade on a rolling programme, we are 70% complete and will be 80% by end of 2024.
- We have installed 200 PV panels and plan to install more PVs after major roof replacement works are complete.
- The majority of our buildings have cladding to improve thermal energy.
- We have DfE Project investment funding for our Lansdowne Grade 2 listing building to add roof insulation and upgrade M&E plant which will be completed in 2026.
- The DfE funded new building being built at our Bournemouth Campus will replace poor condition buildings and will complete in 2026 – the new contemporary designed building should achieve net zero status.
- Our other small project works take a full fabric approach to ensure we take every opportunity to improve condition, u-values and future proof.
- We procure energy efficient IT including desktops PCs, laptops and server units
- We promote our cycle to work/college scheme and are working on a green travel plan.
- The College Estates van fleet is being reduced from 10 petrol vans to 8, 5 of which will be EV vans and the diesel minibus fleet reduced to just 6.

- The College has replaced legacy oversized gas heating systems with either energy efficient gas boilers or electric systems and those carbon reductions will be evidenced in our 2023/24 SECR.

Declaration and Sign Off

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans.

Emissions have been reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard⁴ and uses the appropriate Government emission conversion factors for greenhouse gas company reporting⁵. Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard⁶. This Carbon Reduction Plan has been reviewed and signed off by the College Executive.