

Worcestershire County Council Annual Greenhouse Gas (GHG) Emissions Report 2009/10 to 2024/25

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Worcestershire County Council
Wildwood, Wildwood Drive, Worcester, WR5 2QT

Executive Summary

This report provides an update on Worcestershire County Council's (WCC) Greenhouse Gas (GHG) emissions. It supersedes previous GHG reports published by WCC and includes minor data amendments from previous years where more accurate data has become available. This reflects WCC's aims for continual improvement in this area.

The Council measures both **absolute** and **net** GHG emissions. Absolute emissions are the total aggregate of all WCC GHG emissions currently accounted for. Net emissions are the balance between the amount of GHGs produced and the amount of GHG's that have been removed from the atmosphere or offset by other WCC activities.

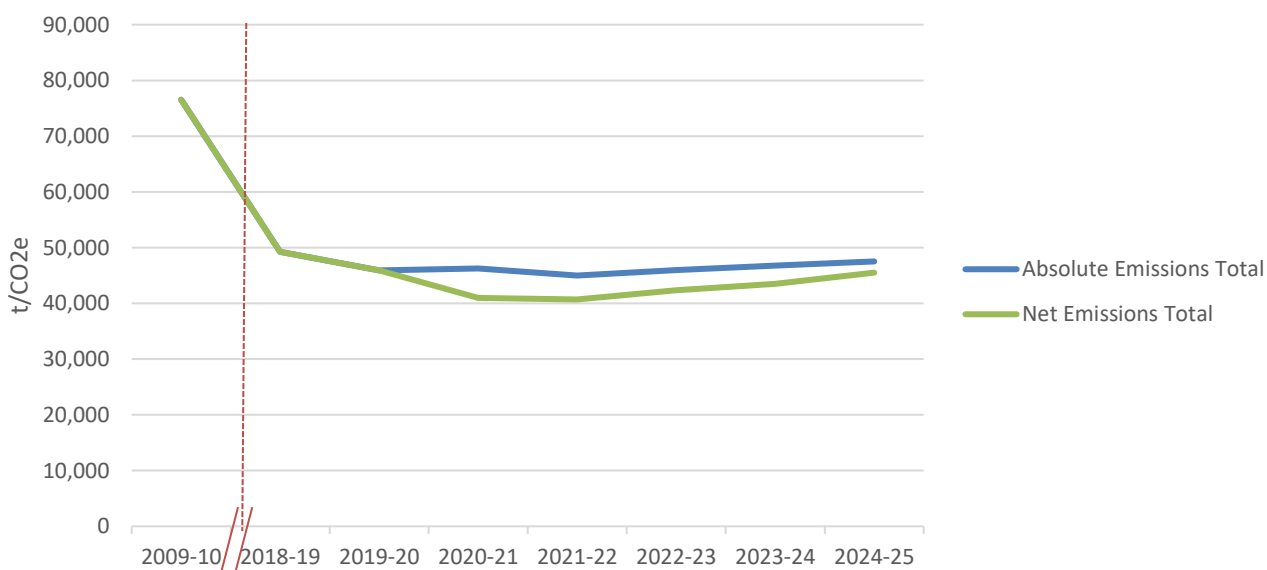


Fig 1: WCC GHG emissions reductions from baseline year¹

WCC's absolute annual emissions have decreased by **38%** when compared with the baseline year of 2009/10, reducing from 76,535 tCO₂e to 47,508 tCO₂e.

WCC's net emissions have decreased by **41%** from 76,535 tCO₂e to 45,485 tCO₂e.

For the period 2024/25, emissions from scope 1 & 2 account for just **11%** of total emissions. For these emissions, the Council has achieved a net emissions reduction of **85%** since 2009/10.

¹ For the period from 2010 to 2018 it is not possible to accurately extract gas and electricity data for schools from corporate property data; for this reason, the years 2010 to 2018 have been omitted from this report (as delineated in red in Figure 1.).

Introduction

This report for Worcestershire County Council covers April 2009 to March 2025 inclusive. This report is published annually. This report addresses the emissions that relate to the organisations operations and services in this reporting period. It does not report on the emissions relating to the county of Worcestershire as a whole.

WCC has been reporting its own emissions since 2010 for transparency and to acknowledge the work being done to reduce our GHG emissions. Adjustments have been made to reflect the availability of more accurate data, and this report therefore supersedes previous GHG reports.

Carbon emissions are sometimes referred to as a carbon footprint, which incorporates several gases that have a negative impact on our climate; collectively they are referred to as greenhouse gases. Carbon dioxide (CO₂) is the most abundant GHG but there are others including methane (CH₄), and Nitrous Oxide (N₂O). Tonnes of carbon dioxide equivalent (tCO₂e) is the universal unit to signify the amount of CO₂ that would have the equivalent global warming potential. Emissions for the reporting year are given as tCO₂e.²

WCC measures both **absolute** and **net** GHG emissions. Absolute emissions are the total aggregate of all WCC GHG emissions currently accounted for. Net emissions are the balance between the amount of GHG's produced and the amount of GHG's that have been removed from the atmosphere or offset by other WCC activities. This is a dual GHG report to include absolute emissions reduction, and also net emissions reduction.

Baseline Year

The baseline year for the Council's GHG reporting is from 1st April 2009 to 31st March 2010

Reporting Period

This report includes GHG data for 2009/10 baseline year to 2024/25 (financial year from 1st April to 31st March).

Target

The Council's target is to achieve net zero GHG emissions by 2050 from 2009/10 baseline year in line with the Government's net zero target as per the Climate Change Act.

Conversion factors

WCC uses the UK Government's conversion factors for the relevant years from: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

² All figures have been rounded up accordingly

Organisational Boundary

This report includes GHG emissions from the following sources:

Category	Sphere of Influence	Emissions Source
Scope 1	Direct emissions <i>WCC are directly responsible for burning the fossil fuels that give rise to these emissions</i>	- Natural gas use in WCC buildings* - Fuel use in WCC vehicle fleet - Residual fuel use (e.g., burning oil, LPG etc.) consumed at WCC sites
Scope 2	Indirect emissions <i>WCC have responsibility for where we buy electricity from and how much we buy</i>	- Electricity use in WCC buildings* and street lighting (grid generation)
Scope 3	Indirect emissions <i>WCC can influence these emissions in how we procure and manage our services.</i>	- WCC staff business mileage and air travel - Electricity/gas use in buildings operated by Council's main outsourced contractors for waste management and highways - Fleet/staff mileage undertaken by main outsourced contractors for waste management and highways - Contracted fleet vehicle fuel use - Emissions from county-wide household waste disposal - Electricity (grid transmission and distribution)

Table 1: Scope of emissions and data included in this report

* Data is for WCC corporate sites only and does not include outputs from school buildings due to issues in recording accurate data from these sites

WCC Percentage of Absolute GHG Emissions by Scope

Year	SCOPE 1	SCOPE 2	SCOPE 3
2009/10 (Baseline)	6%	22%	72%
2024/25	4%	7%	89%

Table 2: Percentage of annual absolute emissions by scope

- Scope 1 emissions are under WCC direct control and can be controlled by reducing the use of fossil fuels to heat WCC building stock or to power WCC fleet vehicles.
- Scope 2 emissions arise indirectly from purchased grid electricity. This can be controlled by reducing demand for grid electricity and the percentage of these have shown a significant reduction from the baseline year.

- Scope 3 emissions are not directly under WCC control, but WCC do have an influence, for example through purchasing decisions.

Absolute GHG emissions data from baseline to 2024/25

The data table below highlights the absolute GHG emissions data for WCC in tonnes of CO₂e, broken down by year and scope³. Figures have been rounded up accordingly.

In 2024/25 the Council was responsible for absolute emissions of 47,508 tonnes/CO₂e.

WCC realised a 38% reduction in absolute GHG emissions since 2009/10.

Scope	Absolute Emissions t/CO ₂ e							
	2009/10 BASELINE	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
1	4,598	2,669	2,467	2,480	2,300	2,008	2,248	2,100
2	16,672	7,304	6,459	5,273	4,286	3,619	3,305	3,130
3	55,267	39,256	37,017	38,497	38,405	40,357	41,252	42,278
Absolute Emissions Total t/CO₂e	76,536	49,228	45,943	46,250	44,992	45,984	46,805	47,508
Scope	Percentage change from Baseline Year							
1	-	-42	-46	-46	-50	-56	-51	-54
2	-	-56	-61	-68	-74	-78	-80	-81
3	-	-29	-33	-30	-31	-27	-25	-24
Percentage change from baseline	-	-36	-40	-40	-41	-40	-39	-38

Table 3: Absolute annual GHG emissions by scope including percentage movement from baseline year

WCC is working to improve data quality and availability across all scopes, and in particular looking to progress and widen Scope 3 emissions reporting where possible.

³ Please note the data includes preliminary calculations on GHG emissions from household waste disposal in 2024/25 which are yet to be verified by the Environment Agency. For this reason, these figures may be subject to change. If there is an amendment the GHG report will be updated and re-issued.

WCC Absolute GHG Emissions by Source 2024/25

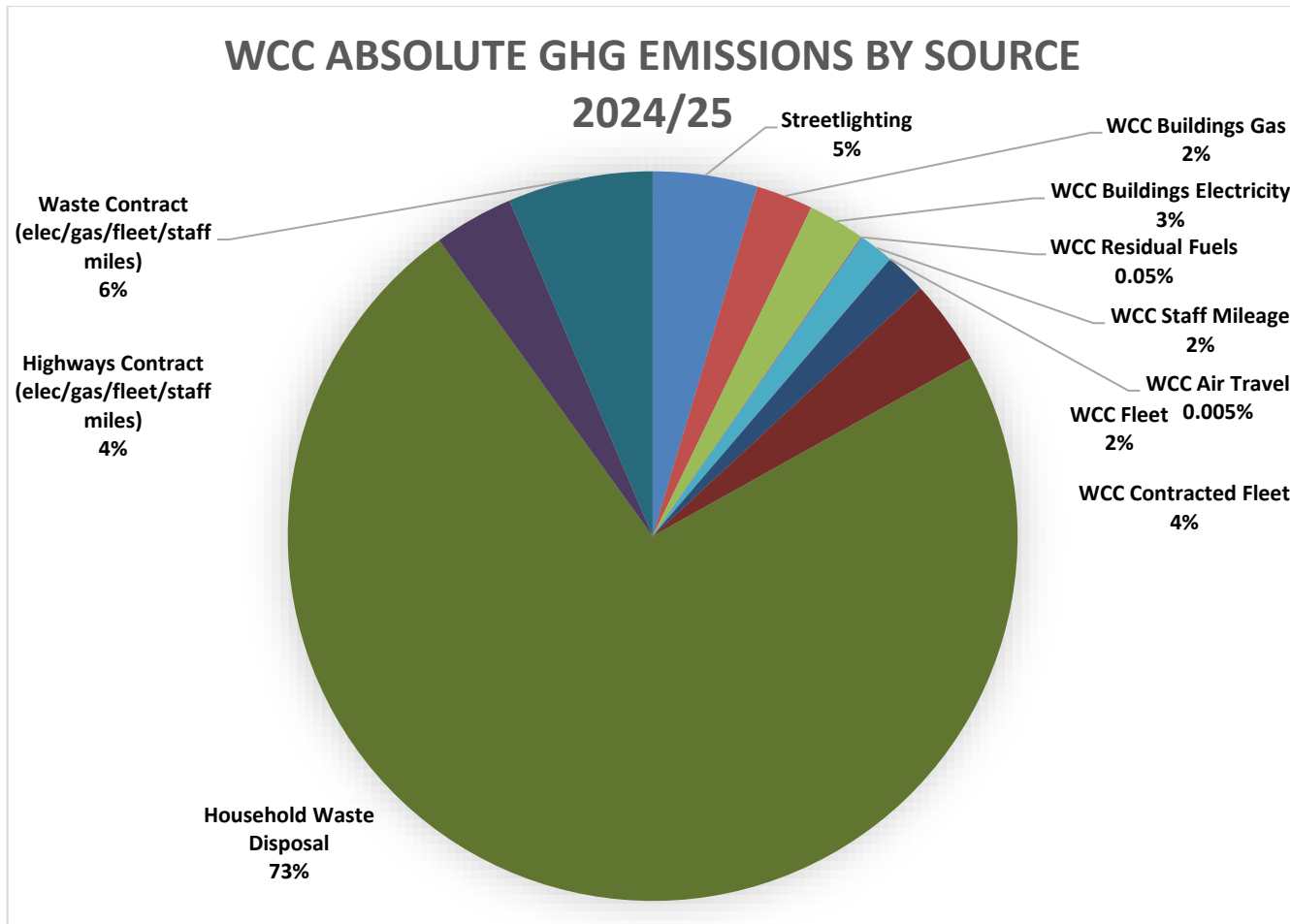


Figure 2: WCC percentage breakdown of absolute emissions by source

Emissions from the management and disposal of household waste are included in the Council's GHG footprint as WCC is responsible for disposal of this. Figure 3 highlights WCC's GHG footprint with waste disposal excluded, to provide more insight into the areas of the Council's footprint which it can more easily influence and reduce:

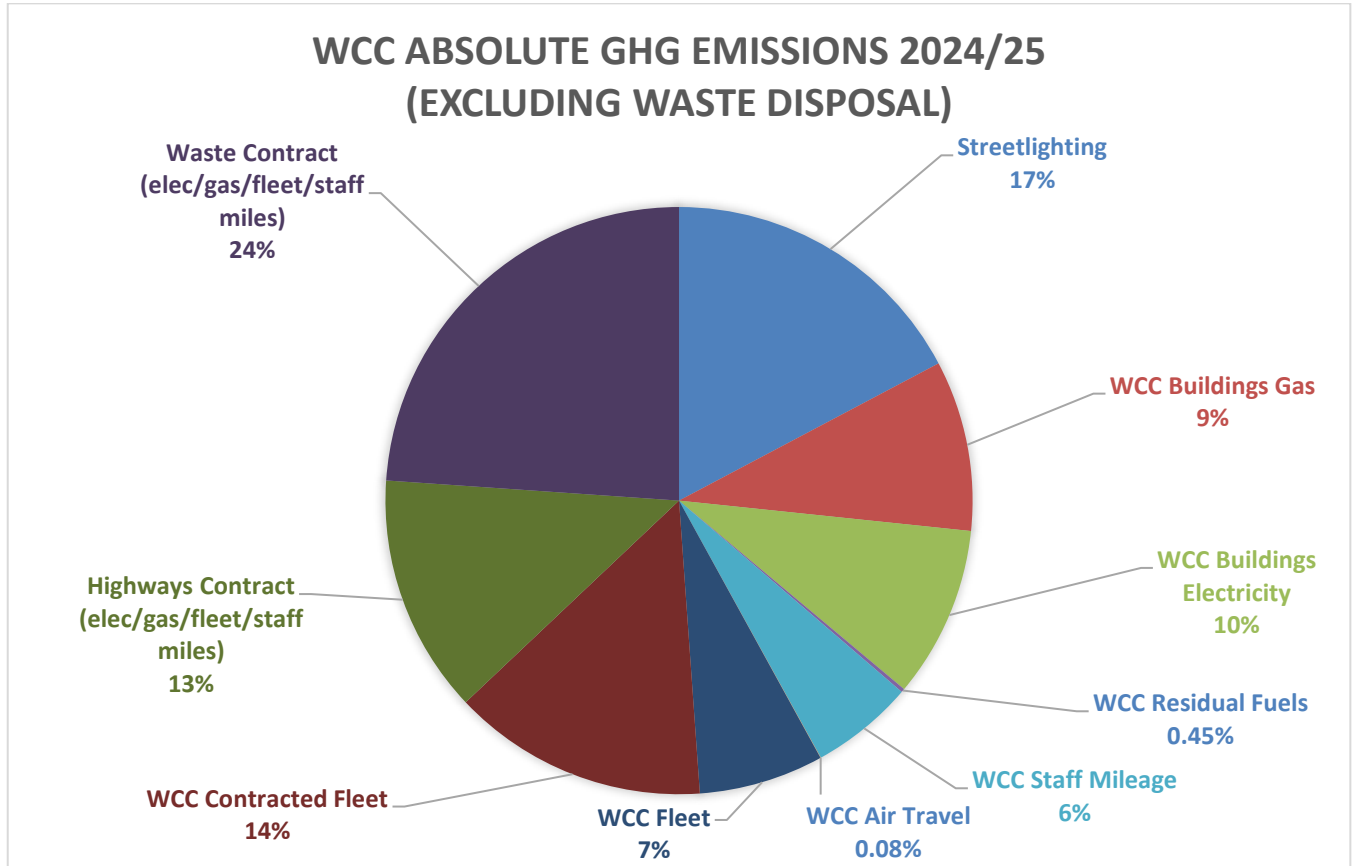


Figure 3: WCC percentage breakdown of absolute emissions by source (excluding household waste disposal)

Net GHG Emissions data from baseline to 2024/25

The data table below highlights the net GHG emissions data for WCC in tonnes of CO₂e by year and scope. Figures have been rounded up accordingly.

WCC has realised a 41% reduction in net GHG emissions since 2009/10

Between 2020 and 2024, WCC purchased Renewable Energy Guarantees of Origin (REGO) accredited green electricity for all corporate sites and street lighting. All scope 2 emissions associated with the generation of REGO accredited electricity can be classed as a net benefit, or carbon offset, for reportable purposes. WCC ceased purchasing REGO accredited electricity from 1st April 2024 for its corporate buildings but continues to purchase REGO accredited electricity for street lighting.

Scope	Net Emissions t/CO ₂ e							
	2009/10	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24	2024/25
1	4,598	2,669	2,467	2,480	2,300	2,008	2,247	2,100
2	16,672	7,304	6,459	0	0	0	0	1,107
3	55,267	39,256	37,017	38,497	38,405	40,357	41,254	42,278
Net Emissions Total t/CO₂e	76,536	49,228	45,943	40,977	40,705	42,365	43,501	45,485
Scope	Percentage change from Baseline Year							
1	-	-42	-46	-46	-50	-56	-51	-54
2	-	-56	-61	-100	-100	-100	-100	-93
3	-	-29	-33	-30	-31	-27	-25	-24
Percentage change from baseline	-	-36	-40	-46	-47	-45	-43	-41

Table 4: Net annual emissions by scope including percentage movement from baseline year

When accounting for scopes 1 and 2 alone, the Council has achieved a net emissions reduction of 85% since 2009/10.

Scope	Net GHG Emissions (tonnes/CO ₂ e) 2009/10	Reduction (tonnes/CO ₂ e) 2024/25	Reduction (tonnes/CO ₂ e)	Percentage Change (non- Degree Day corrected)
1	4,598	2,100	2,498	54
2	16,672	1,107	15,565	93
TOTAL	21,270	3,207	18,063	85

Table 5: Movement from baseline in scope 1 & 2 emissions for 2024/25

GHG Emissions Reductions

- Streetlighting has seen a decrease in absolute emissions of 7% from the previous year that is attributed to upgrades in lighting schemes. Since 2019/20, WCC has also been able to offset Scope 2 GHG emissions (associated with electricity generation) through the purchase of REGO⁴-accredited electricity for street lighting, which has significantly reduced net GHG emissions from the Council's streetlighting portfolio.
- Emissions have reduced from electricity use (2%) and gas consumption (10%) in Council buildings from the previous year due to improvements in energy efficiency measures and renewable energy installations. There has been further reduction in use of residual fuels (gas oil, burning oil and wood chips) which led to a 55% reduction in emissions from the previous year, although emissions from these fuels account for only a very small proportion of the total.
- WCC staff mileage emissions reduced by 18% from the previous year due to a reduction in staff mileage claims, and an increase in the number of miles claimed for use of electric vehicles for business travel.
- Air travel emissions decreased from the previous year by 76%, however emissions from air travel account for a very small proportion of the Council's total emissions (0.005%). As it is only in very limited cases that Council staff need to travel using this form of transport.

GHG Emissions Increases

- The Council's fleet vehicle emissions increased due to a rise in home-to-school transport provision utilising WCC's own minibus fleet.
- Significant increases in demand for school transport plus improved data capture and recording has seen an increase in emissions from contracted fleet, alongside the rollout of the Worcestershire on Demand bus service.
- Emissions from household waste disposal increased due to an increase in the amount of household waste generated in the County.