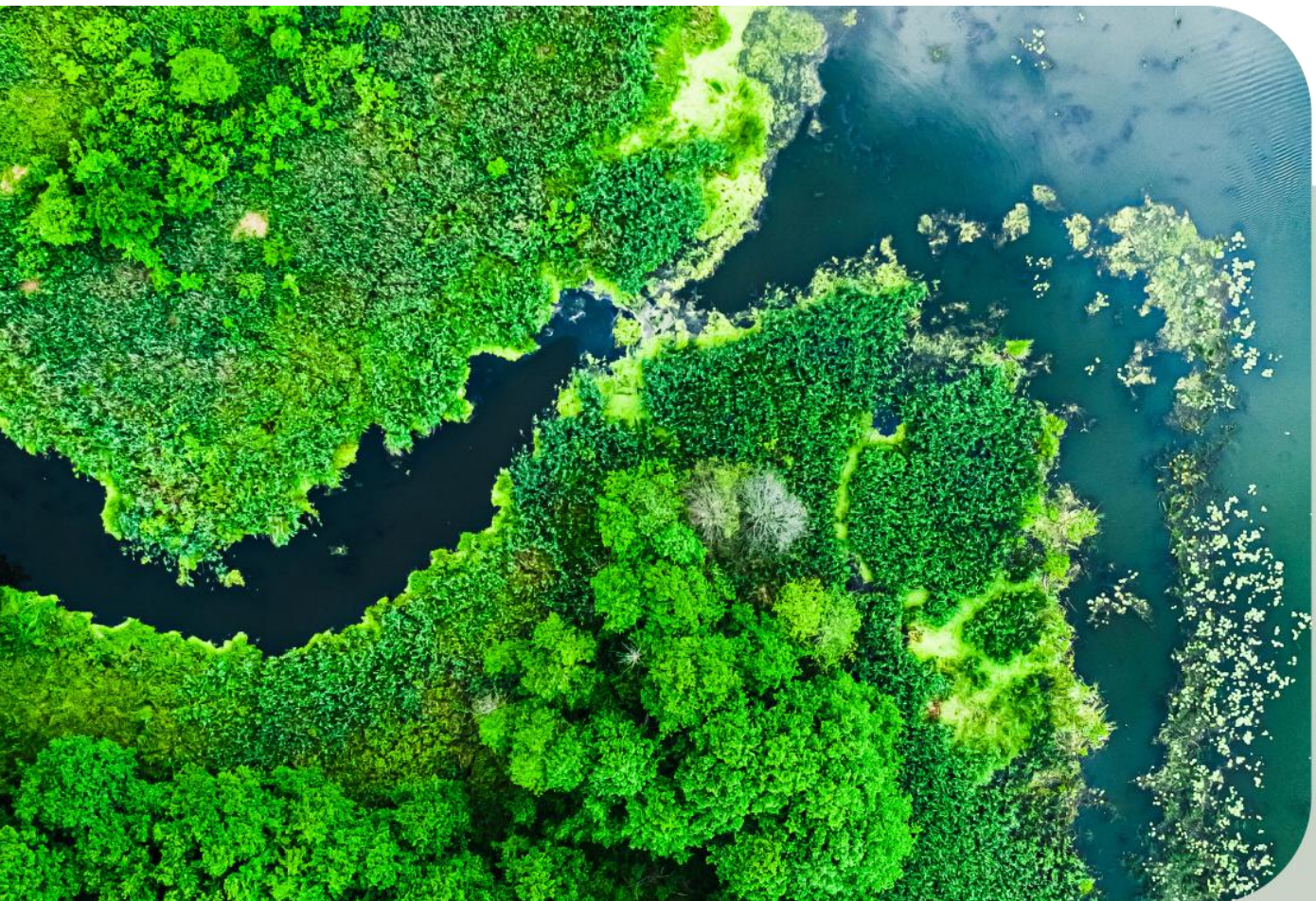


Community Emissions Report (2024)

Welwyn Hatfield Council

28 July 2026, version 1.0



1 Document Control

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1.1 Revision History

Date	Version	Description	Author
28/07/2026	1.0	Final Report	Ben Fisher
23/07/2026	0.1	Initial Report	Ben Fisher

1.2 Contact Information

	Client	TEAM
Organisation	Welwyn Hatfield Council	TEAM (Energy Auditing Agency Ltd.)
Address	Welwyn Hatfield Borough Council, Accounts Payable Team, Council Offices, East Campus, Welwyn Garden City AL8 6AE	Energy Services Department, 3 Radian Court, Knowlhill, Milton Keynes MK5 8PJ
Telephone	01707 357269	01908 950020
Email	k.murphy2@welhat.gov.uk	bfisher@teamenergy.com
Key Contacts	Kelly Murphy	Ben Fisher

1.3 Quality Control

	Name	Role	Date
Prepared by:	Ben Fisher	Energy Services Analyst	28/07/2026
Proofread by:	William Langdon	Energy Services Analyst	28/07/2026
Checked by:	Tom McLeish	Energy Consultant	23/07/2026

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2 Executive Summary

This emissions report has been created to analyse the total carbon dioxide equivalent (CO₂e) emissions produced by the Welwyn Hatfield district during the calendar year 2024. This report will provide a yearly breakdown of CO₂e emission figures with backing data and commentary.

The government department, DESNZ (Department for Energy, Security and Net Zero), releases annual carbon emissions data broken down by local authorities. Due to the complexity of the data, the most recent information is always 18 months old. Welwyn Hatfield Council's 2024 CO₂e data has now been released, with annual total emissions measured in kilotonnes of CO₂e (ktCO₂e) displayed in Table 1.

In the most recently published local emissions dataset historical data has been updated. As the most recently published dataset has been used to produce this report, annual totals and comparisons to previous years may differ slightly to those contained within previous years publications of this report.

	Net Carbon Emissions (ktCO ₂ e)	% Change to Previous Year	% Change to Baseline (2005)
2024	510.3	-4.2%	-46.7%
2023	532.7	-7.2%	-44.4%
2022	573.9	-5.1%	-40.1%
2021	604.6	6.5%	-36.9%
2020	567.9	-9.7%	-40.7%
2019	628.7	-4.7%	-34.3%
2018	659.4	-0.4%	-31.1%

Table 1 Welwyn Hatfield Council's annual emissions and percentage change to the previous year

2.1 Key Observations

In 2024, the Welwyn Hatfield district reported net emissions of 510.3 ktCO₂e, representing a 4.2% decrease from the previous calendar year. This was 46.7% lower than the 2005 baseline figure. Figure 4 shows Welwyn Hatfield districts annual net CO₂e emissions from 2005 to 2024.

As shown in Figures 1 and 2, the percentage split across the different categories was very similar both in 2023 and 2024. As in previous years, transport, commercial, and domestic activity continue to be the greatest sources of Welwyn Hatfield Council's emissions. Figures 1 and 2 exclude LULUCF (Land use, land-use change and forestry) as this offsetting category decreases emissions rather than produces them. Figure 3 shows that the trend in 2024 was a positive one with a decrease in carbon emissions in every sector apart from waste management and the domestic sector, which recorded a slight increase. The biggest shift at a categorical level was in the commercial sector, where reported carbon emissions dropped by 20.3 ktCO₂e. Other notable changes were a drop of 2.5 ktCO₂e in emissions produced within the public sector and a decrease of 1.5 ktCO₂e in the transport sector emissions during this reporting period.

A more detailed breakdown of the individual sources can be found in the backing data section of the report.

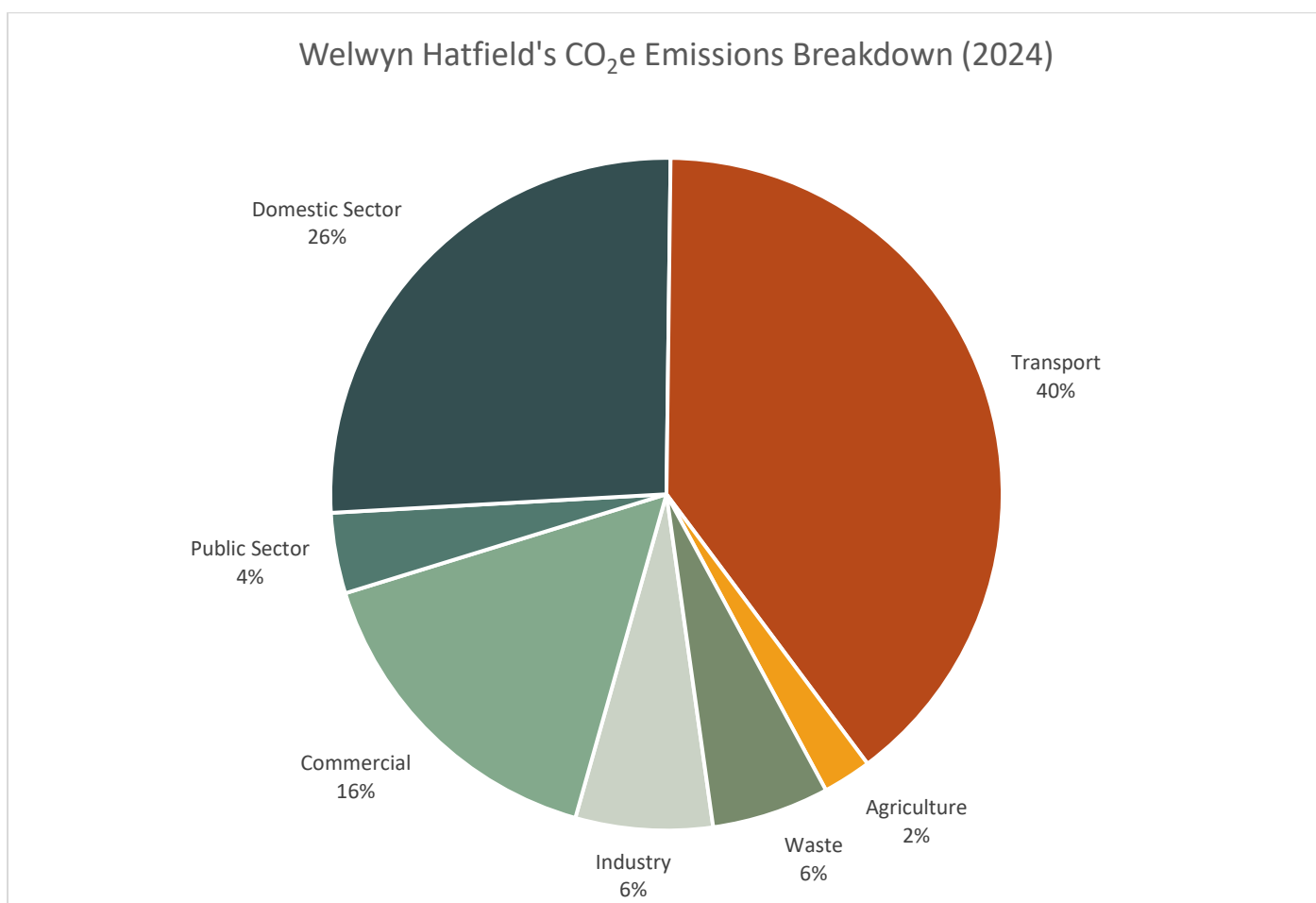


Figure 1 Welwyn Hatfield district's carbon emissions broken down by source (2024)

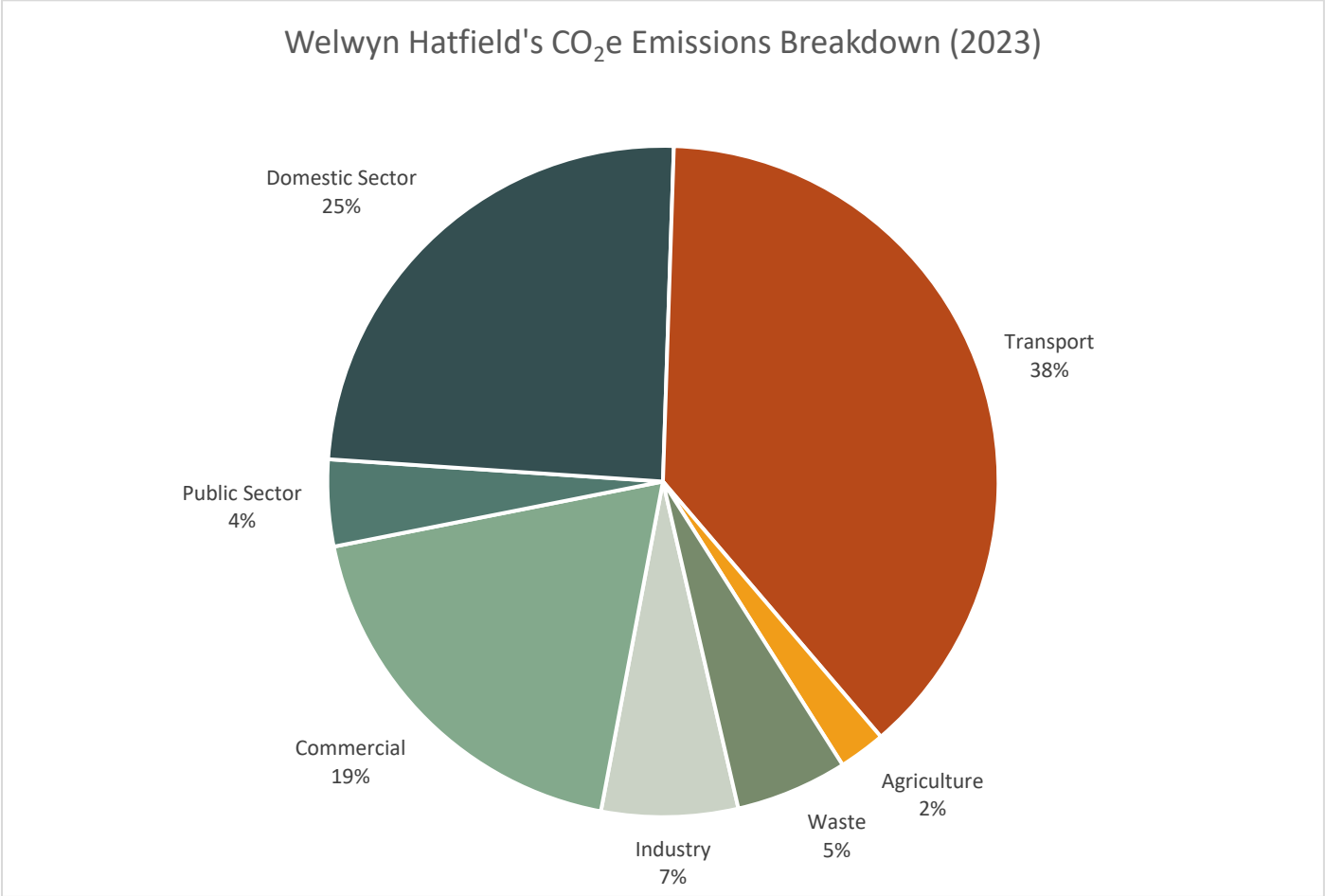


Figure 2 Welwyn Hatfield district's carbon emissions broken down by source (2023)

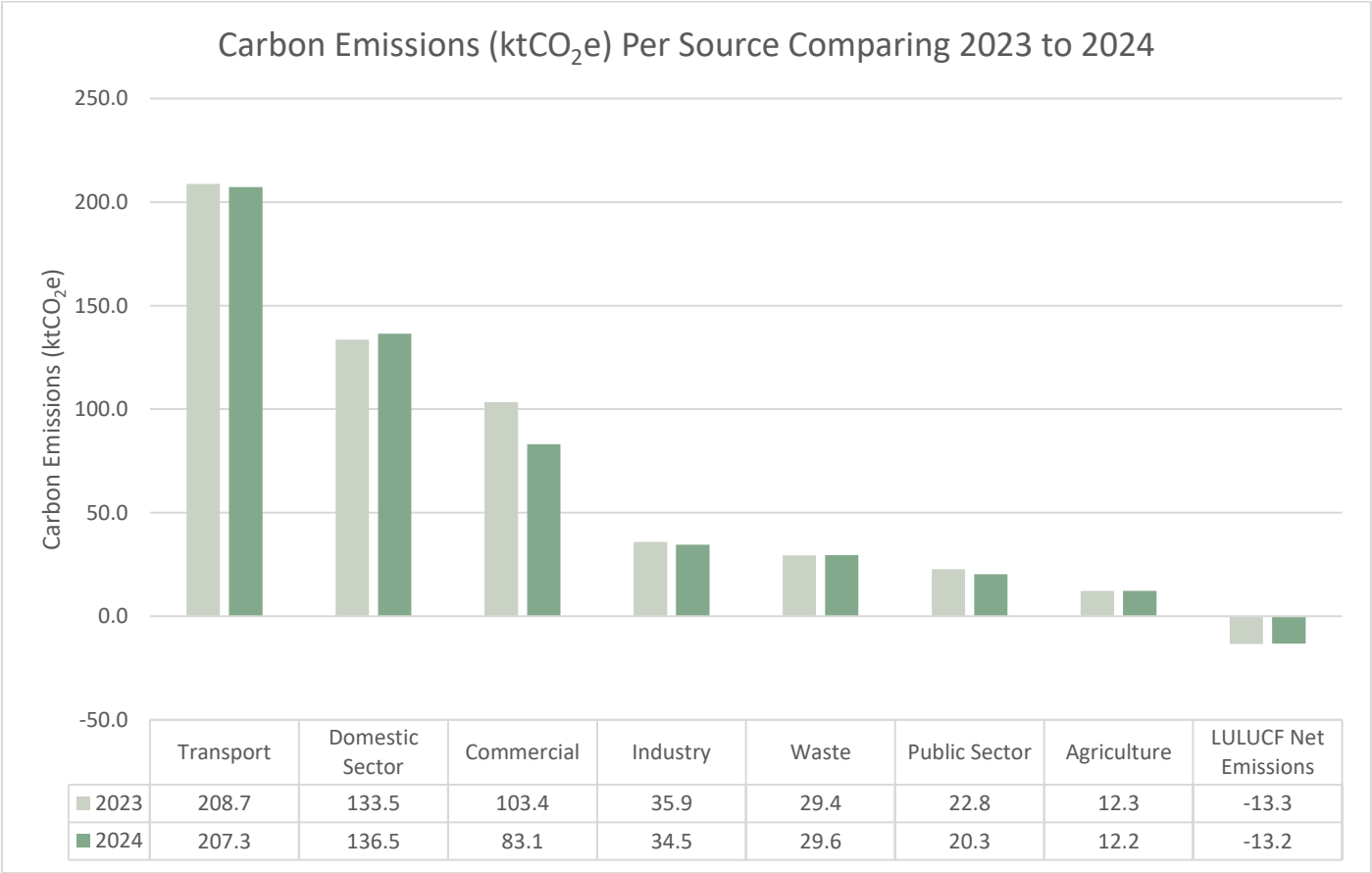


Figure 3 Welwyn Hatfield district's carbon emissions broken down by source comparing 2023 to 2024

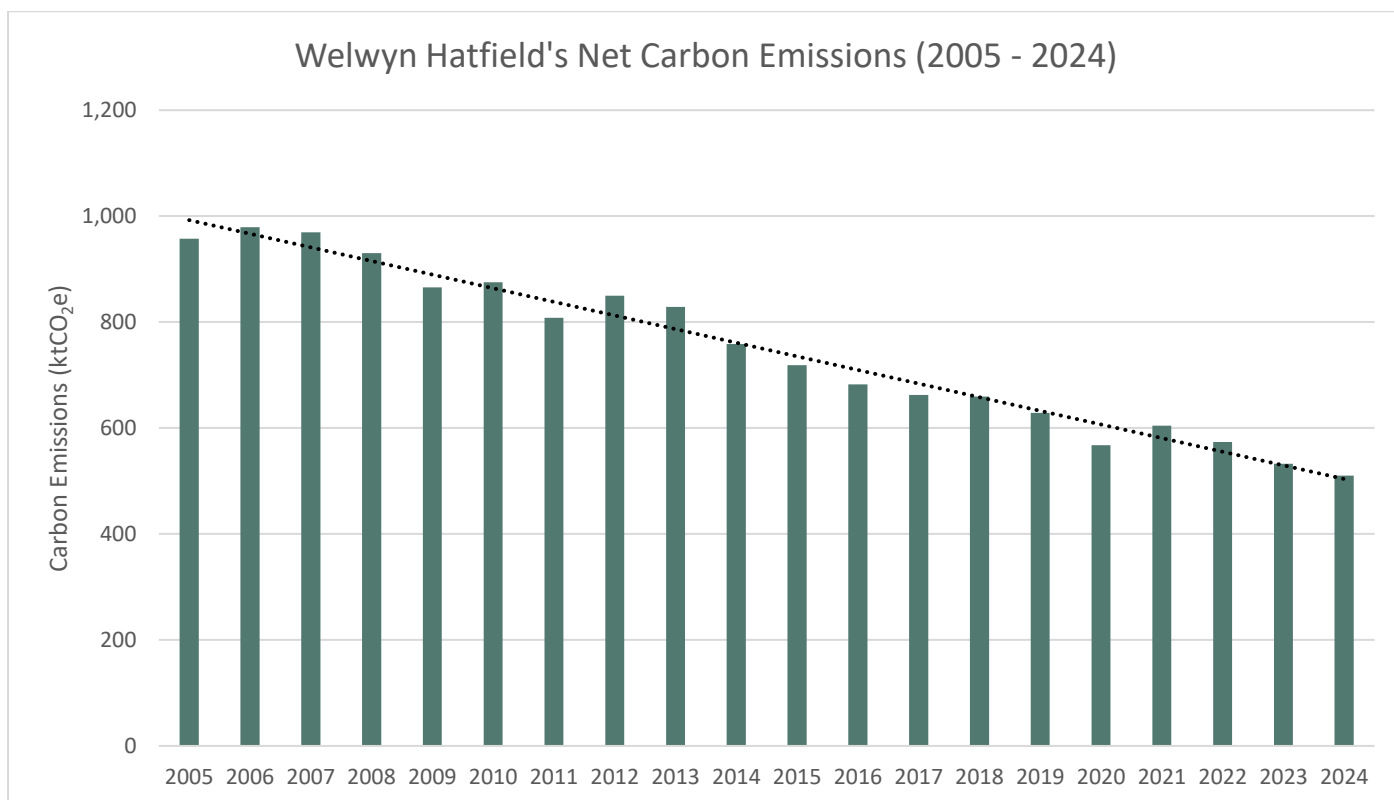


Figure 4 Welwyn Hatfield district's net carbon emissions (2005 - 2024)

3 Methodology

TEAM were able to source data covering 2005 – 2024 from the following source:

- CO₂e emissions data for Welwyn Hatfield was taken from the government's official local authority and regional greenhouse gas emissions 2005 - 2024 (data tables) report published on 25th June 2026. The report can be located here: https://www.data.gov.uk/dataset/723c243d-2f1a-4d27-8b61-cdb93e5b10ff/local_authority_carbon_dioxide_emissions

4 Appendix

4.1 Backing Data

The table below contains the breakdown of activity data for the Welwyn Hatfield District dating back to 2005.

Calendar Year	2005 (Baseline Year)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Industry Electricity	38.9	34.6	29.6	22.9	33.8	20.8	18.6	14.1	14.6	14.0	11.9	8.8
Industry Gas	14.8	9.8	9.9	8.6	7.7	6.3	5.4	5.8	6.0	5.0	5.9	4.9
Large Industrial Installations	0.0	0.0	0.0	0.0	0.3	0.6	0.2	0.2	0.2	0.2	0.2	0.2
Industry 'Other'	23.7	17.1	15.3	15.5	14.8	15.6	15.5	14.3	14.9	19.2	17.9	20.7
Industry Total	77.4	61.5	54.8	47.0	56.6	43.2	39.7	34.4	35.7	38.4	35.9	34.5
Commercial Electricity	157.9	140.7	120.3	98.2	74.6	91.9	85.0	73.8	85.6	85.1	70.1	55.8
Commercial Gas	37.2	24.5	24.7	25.6	24.3	30.8	28.3	29.5	33.8	28.1	22.6	22.7
Commercial 'Other'	10.9	8.1	5.0	3.7	2.7	7.0	7.2	8.7	7.5	9.6	10.7	4.5
Commercial Total	206.0	173.3	150.0	127.5	101.6	129.7	120.5	112.1	126.9	122.8	103.4	83.1
Public Sector Electricity	16.3	14.5	12.4	9.8	12.1	6.9	6.7	5.4	6.1	6.4	5.4	3.7
Public Sector Gas	27.7	18.3	18.4	16.3	19.6	18.4	17.7	17.0	19.9	17.0	13.7	14.7
Public Sector 'Other'	7.6	4.8	2.9	2.7	2.5	4.3	3.6	4.3	4.8	3.4	3.7	1.9
Public Sector Total	51.6	37.5	33.8	28.8	34.2	29.6	28.1	26.6	30.8	26.7	22.8	20.3
Domestic Electricity	109.8	80.7	69.0	56.5	48.6	44.2	39.9	38.6	39.6	36.2	31.3	26.6
Domestic Gas	147.2	112.7	119.3	121.7	118.0	120.4	117.5	118.0	121.7	102.5	96.2	104.3
Domestic 'Other'	8.1	7.6	7.6	7.6	7.6	7.7	7.5	7.3	7.0	6.8	6.0	5.6
Domestic Total	265.2	201.0	196.0	185.8	174.3	172.3	164.9	163.9	168.2	145.4	133.5	136.5
Road Transport (A roads)	54.9	52.3	51.6	53.3	51.8	50.6	48.5	38.9	40.3	40.9	40.1	39.0
Road Transport (Motorways)	105.6	100.4	101.0	103.6	102.4	99.7	96.8	85.7	90.3	87.0	79.4	78.7
Road Transport (Minor roads)	119.3	103.1	102.5	106.3	111.8	106.6	100.5	82.2	83.5	82.5	81.3	80.9
Diesel Railways	7.7	7.4	7.3	7.3	7.2	6.8	7.0	5.3	5.7	5.5	5.8	6.0
Transport 'Other'	1.8	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.9	2.0	2.2	2.6
Transport Total	289.4	264.9	264.2	272.3	274.9	265.4	254.6	213.9	221.8	217.8	208.7	207.3

Calendar Year	2005 (Baseline Year)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Net Emissions: Forestry	-15.5	-16.1	-16.3	-15.9	-16.2	-16.0	-16.0	-16.3	-15.8	-15.4	-16.0	-15.8
Net Emissions: Cropland mineral soils change	2.3	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.2	2.2
Net Emissions: Grassland mineral soils change	-2.2	-2.5	-2.5	-2.5	-2.5	-2.6	-2.6	-2.7	-2.7	-2.7	-2.7	-2.8
Net Emissions: Settlements	3.6	3.1	2.9	2.9	2.9	3.0	2.9	3.0	2.9	3.0	3.0	3.0
Net Emissions: Peatland	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Emissions: Bioenergy crops	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net Emissions: Other LULUCF	0.0	0.0	-0.2	0.1	0.0	0.1	0.0	0.1	0.2	0.2	0.1	0.1
LULUCF Net Emissions	-11.8	-13.2	-13.7	-13.2	-13.6	-13.2	-13.5	-13.6	-13.1	-12.7	-13.3	-13.2
Agriculture Electricity	0.5	0.4	0.4	0.4	0.7	0.3	0.3	0.3	0.3	0.2	0.2	0.2
Agriculture Gas	0.9	0.6	0.6	0.6	0.5	0.2	0.3	0.2	0.2	0.2	0.2	0.2
Agriculture 'Other'	4.0	4.1	5.6	5.2	5.1	3.8	4.1	4.3	4.3	3.4	3.9	4.6
Agriculture Livestock	3.8	3.5	3.7	3.5	3.6	3.6	3.5	3.4	2.8	2.8	3.3	3.1
Agriculture Soils	4.7	5.1	4.8	5.2	4.5	4.4	5.4	4.4	4.4	4.3	4.7	4.1
Agriculture Total	13.8	13.7	15.0	14.9	14.4	12.3	13.5	12.5	12.0	10.9	12.3	12.2
Landfill	61.4	10.7	9.9	10.4	10.3	11.0	10.9	8.0	11.7	13.7	18.3	18.2
Waste 'Other'	4.5	9.0	9.0	9.0	9.5	9.1	10.0	9.9	10.6	11.0	11.1	11.3
Waste Total	65.9	19.7	18.9	19.4	19.8	20.1	20.9	18.0	22.3	24.7	29.4	29.6
Grand Total	957.6	758.5	718.9	682.4	662.3	659.4	628.7	567.9	604.6	573.9	532.7	510.3
% Difference from 2005 total carbon emissions	0.0%	-20.8%	-24.9%	-28.7%	-30.8%	-31.1%	-34.3%	-40.7%	-36.9%	-40.1%	-44.4%	-46.7%
% difference from the previous year	0.0%	-8.5%	-5.2%	-5.1%	-2.9%	-0.4%	-4.7%	-9.7%	6.5%	-5.1%	-7.2%	-4.2%
Population ('000s, mid-year estimate)	103.2	112.2	114.0	116.6	117.6	118.4	119.2	119.8	119.7	120.3	121.7	122.8
Per Capita Emissions (tCO ₂ e)	9.3	6.8	6.3	5.9	5.6	5.6	5.3	4.7	5.0	4.8	4.4	4.2
Occupied Area (km ²)	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5	129.5
Emissions per km ² (ktCO ₂ e)	7.4	5.9	5.5	5.3	5.1	5.1	4.9	4.4	4.7	4.4	4.1	3.9
National Total (ktCO₂e)	655,802	498,472	479,918	451,880	441,122	434,671	419,146	383,631	399,853	375,812	359,973	351,273

Table 2 Welwyn Hatfield district emissions summary



tteam

Contact us

TEAM (Energy Auditing Agency Ltd.) | 3 Radian Court, Knowlhill, Milton Keynes, MK5 8PJ
01909 690 018 | enquiries@teamenergy.com | teamenergy.com

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