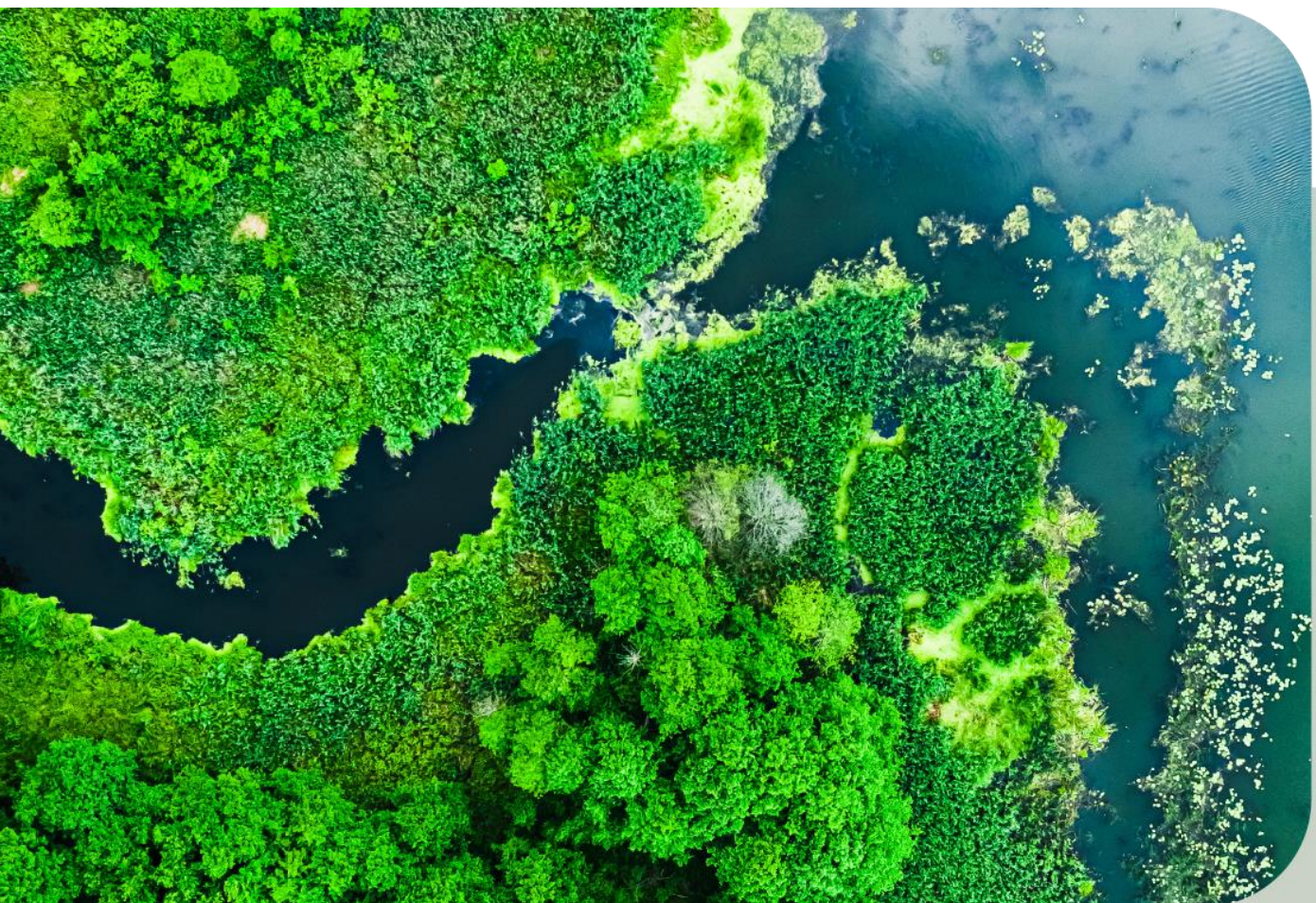


Corporate Emissions Report (2023/24)

Welwyn Hatfield Council

22 August 2024, version 1.2



1 Document Control

Paper copies are valid only on the day they are printed. Contact the author if you are in any doubt about the accuracy of this document.

1.1 Revision History

Date	Version	Description	Author
14/08/2024	1.0	Final Report	Ben Fisher
15/08/2024	1.1	Final Report (Year on year bar graph added)	Ben Fisher
22/08/2024	1.2	Final Report (T & D emissions update)	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	22/08/2024
Proofread by:	Sabrina Trofa	Energy Services Administrator	22/08/2024
Checked by:	Tom McLeish BSc	Energy Consultant	22/08/2024

DISCLAIMER

Whilst reasonable steps have been taken to ensure that the information contained within this report are correct, you should be aware that the information contained within it may be incomplete, inaccurate or may have become out of date. Accordingly, TEAM (Energy Auditing Agency Ltd.) makes no warranties or representations of any kind as to the content of this report or its accuracy and, to the maximum extent permitted by law, accept no liability whatsoever for the same including, without limit, for direct, indirect, or consequential loss, business interruption, loss of profits, production, contracts, goodwill, or anticipated savings. Any person making use of this report does so at their own risk [and it is recommended that they seek professional advice from their own adviser whenever appropriate].

Estimates of costs and savings are based on site observations, published case studies, technical references, and professional experience. They should be regarded with caution, and recommendations are subject to detailed feasibility studies. Nothing in this report is intended to be or should be interpreted as an endorsement of, or recommendation for, any supplier, service, or product.



Table of Contents

- 1 Document Control2
 - 1.1 Revision History2
 - 1.2 Contact Information2
 - 1.3 Quality Control2
- 2 Executive Summary4
- 3 Corporate Emissions Report Scope.....5
- 4 Methodology6
- 5 Results.....7
- 6 Appendix.....10
 - 6.1 Backing Data.....10

2 Executive Summary

Local Authorities are required to monitor annual energy consumption and other sources of greenhouse gas emissions. Welwyn Hatfield Council (WHC) reports Scope 1, 2, and limited Scope 3 carbon emissions equivalent (CO₂e), using a period matching its financial year (1st April – 31st March) This report documents the 2023 - 2024 financial year's emissions performance.

Emissions have been calculated using activity data from multiple sources and applying appropriate emissions conversion factors published by DESNZ.

Total emissions, recorded in tonnes of CO₂e, are displayed in Table 1 below. Emissions have increased by 3% this financial year compared to the previous, this is also reflected within the normalising factor comparisons. There has been a 15% reduction in total emissions since the baseline year.

	19/20	20/21	21/22	22/23	23/24
Total Emissions (tCO₂e)	2,507	2,000	1,405	2,072	2,126
Emissions per Household (tCO ₂ e/house)	0.0578	0.0461	0.0304	0.0450	0.0443
Emissions per Turnover (tCO ₂ e/£m)	17.9	14.3	10.2	13.6	16.3
Emissions per FTE (tCO ₂ e/ FTE)	-	-	4.04	5.84	5.81

Table 1 Welwyn Hatfield Council annual emissions and intensity measures

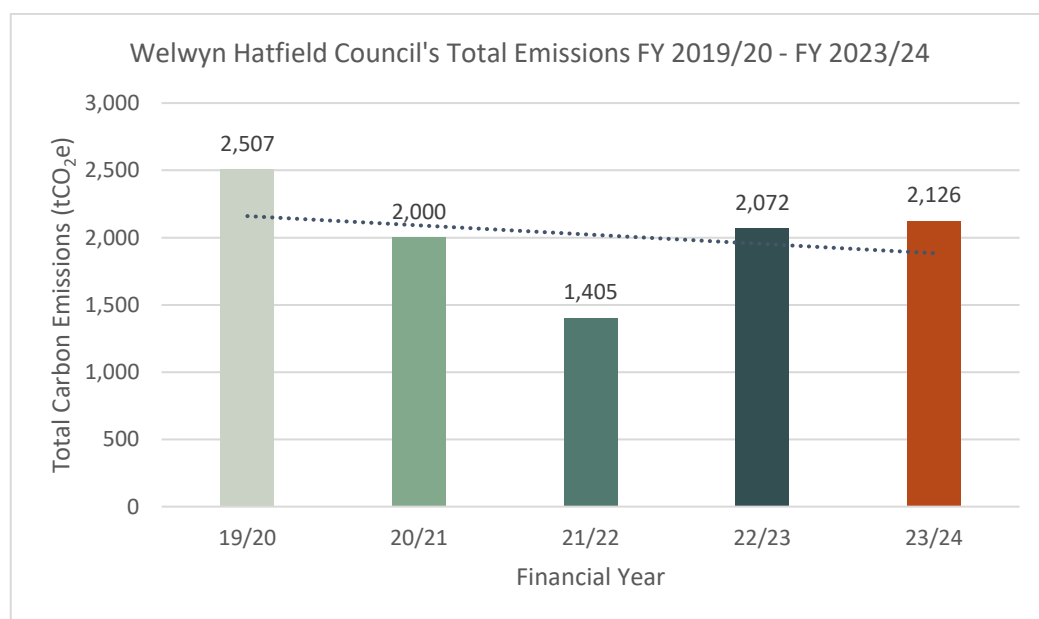


Figure 1 Welwyn Hatfield Council's Corporate Emissions FY 2019/2020 - FY 2023/24

3 Corporate Emissions Report Scope

This emissions report will cover elements of the following emission categories:

1. Scope 1 – All Direct Emissions from the activities of Welwyn Hatfield Council or under their control. Including fuel combustion on site such as gas boilers, fleet vehicles and air-conditioning leaks.
2. Scope 2 – Indirect Emissions from electricity purchased and used by Welwyn Hatfield Council. Also included are the generation or consumption of heat or steam. Emissions are created during the production of the energy and eventually used by Welwyn Hatfield Council.
3. Scope 3 – Other indirect emissions, such as the extraction and production of purchased materials and fuels, transport-related activities in vehicles not owned or controlled by the reporting entity, electricity-related activities not covered in Scope 2, outsourced activities, waste disposal, etc.

Scope 1

- WHC Managed Natural Gas
- Company Owned Vehicles

Scope 2

- WHC Managed Electricity

Scope 3

- Leased Assets: Gas Consumption (Leisure Sites)
- Leased Assets: Electricity Consumption (Leisure Sites)
- Leased Assets: Electricity Consumption (Estates Rented Properties)
- Purchased Goods: Paper Usage
- Business Travel: Non-Company Owned Vehicles
- Business Travel: Public Transport – Taxi, Train and Tube Travel
- Leased Assets: Electricity Consumption (Outsourced Activities)
- Leased Assets: Natural Gas Consumption (Outsourced Activities)

4 Methodology

TEAM were able to source data covering 01/04/2023 – 31/03/2024 from:

- Billed energy consumption data obtained from the TEAM Sigma platform – Billed cost and carbon emissions report
- Company mileage data provided by Kelly Murphy of Welwyn Hatfield Council
- Employee's mileage and expense data provided by Kelly Murphy of Welwyn Hatfield Council
- Amount of paper purchased throughout the 01/04/2023 – 31/03/2024 period provided by Kelly Murphy of Welwyn Hatfield Council
- Intensity metric figures provided by Kelly Murphy of Welwyn Hatfield Council

Using the most relevant conversion factors provided by DESNZ which can be found in the 'Conversion factors 2023 (Full set advanced users)' document, TEAM were able to convert the usable data into Tonnes of Carbon Dioxide equivalent (tonnes of CO₂e).

Please note that the Transmission & Distribution input data covering FY 2022/23 has been adjusted so that it only includes consumption within the buildings that Welwyn Hatfield has direct control over.

5 Results

TEAM have identified that between 01/04/2023 – 31/03/2024, Welwyn Hatfield Council emitted 2,126 tonnes of CO₂e.

01/04/2023 – 31/03/2024	Scope 1	Scope 2	Scope 3	Total
Tonnes of CO ₂ e	737	826	563	2,126
Percentage of total emissions	35%	39%	26%	100%

Table 2 Summary of results for the reporting year

In the previous reporting period, Welwyn Hatfield Council emitted 2,072 tonnes of CO₂e.

01/04/2022 – 31/03/2023	Scope 1	Scope 2	Scope 3	Total
Tonnes of CO ₂ e	751	763	558	2,072
Percentage of total emissions	36%	37%	27%	100%

Table 3 Summary of results for the previous year

This therefore shows that Welwyn Hatfield Council increased their emissions by 54 tonnes of CO₂e between this reporting year and the previous reporting year.

Carbon Emissions Per Scope (FY 2023/2024)

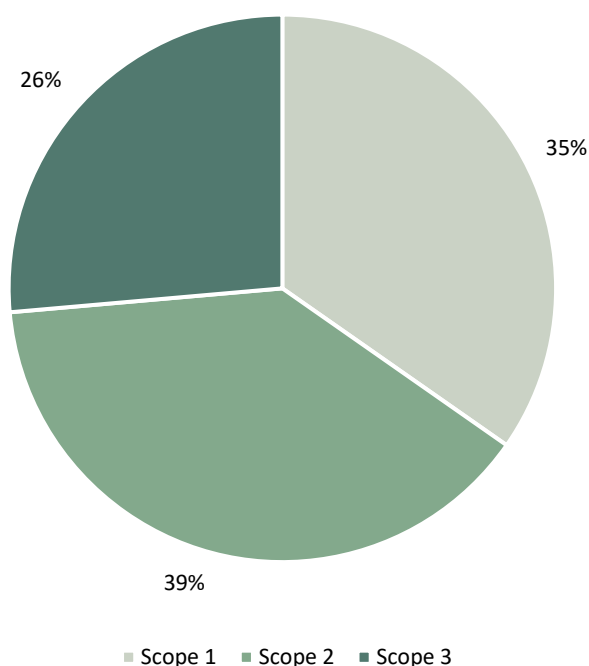


Figure 2 Carbon emissions split per scope (FY 2023/2024)

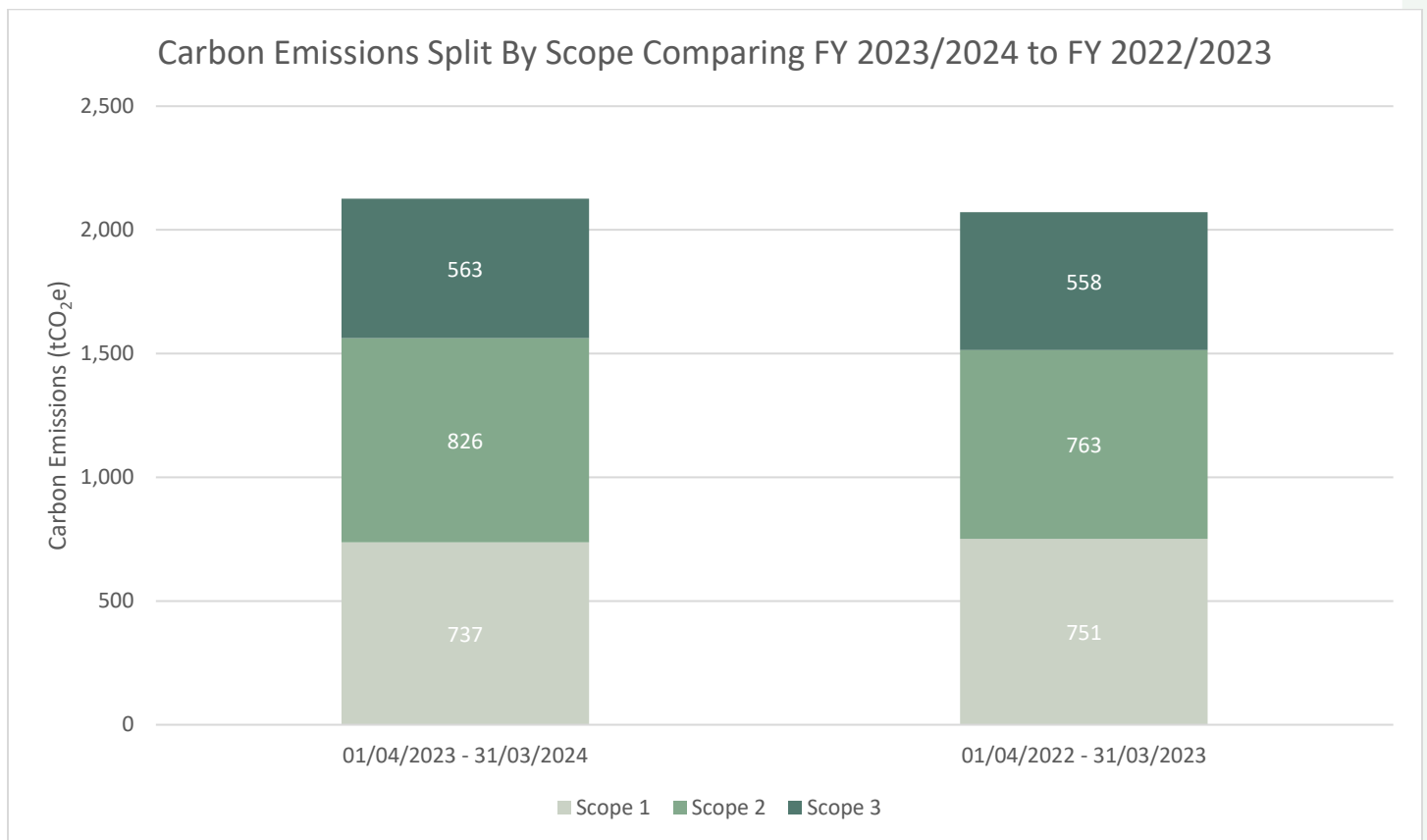


Figure 3 Carbon emissions split by scope comparing FY 2023/2024 to FY 2022/2023

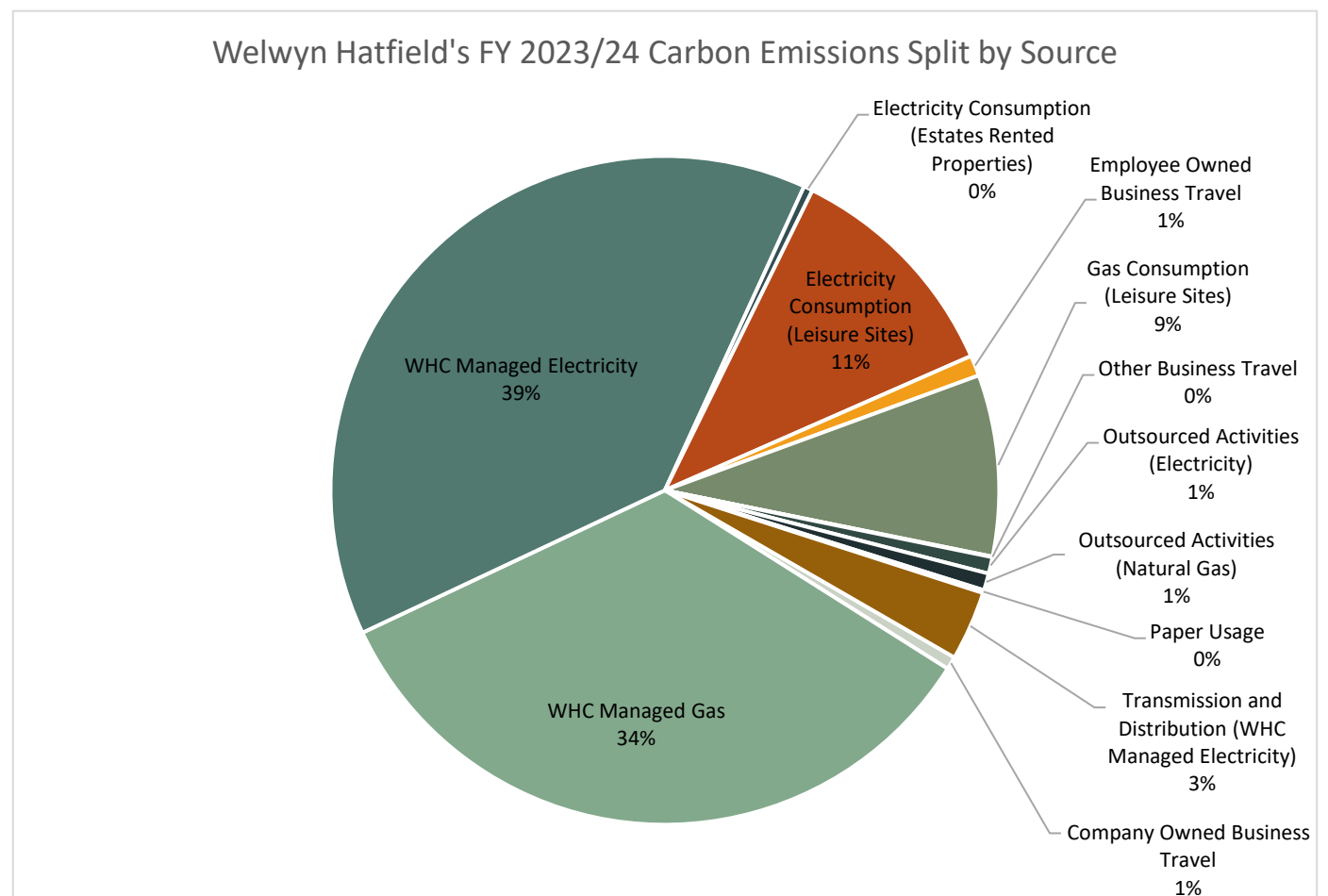


Figure 4 Welwyn Hatfield's FY 2023/24 carbon emissions split by source

Previous Reference Period Comparison (tCO ₂ e)				
	Previous Year	Previous Year %	Current Year	Difference
Scope 1	751	36%	737	-14
Scope 2	763	37%	826	63
Scope 3	558	27%	563	5
Total tCO₂e	2,072	100%	2,126	54

Table 4 Total carbon emissions comparison comparing FY 2022/2023 to FY 2023/2024

As you can see in Table 4, in this reporting year Scope 1 emissions decreased by 14 tCO₂e, Scope 2 emissions increased by 63 tCO₂e, and Scope 3 emissions have increased by 5 tCO₂e. Overall, that represents an increase of 54 tCO₂e on the previous reporting period.

Reasons for the slight increase in emissions are that electricity consumption in general is higher than the previous reporting period and the carbon conversion factor for electricity usage is still higher than we would expect due to UK generation and global supply chain issues.

Welwyn Hatfield Council's managed gas and electricity accounted for over 70% of the total emissions for the Welwyn Hatfield district being the two main sources of emissions. The next greatest source of emissions generated was by commodities used within buildings not directly controlled by Welwyn Hatfield Council, for example, the Leisure sites. The remaining 5% of Welwyn Hatfield Council's CO₂e emissions were from transmission and distribution, business travel and paper disposal.

A more detailed breakdown of the data is available in Section 6.1 of the report.

6 Appendix

6.1 Backing Data

Scope	Commodity	Description	Emission Source	Unit	Total (12 months)	kWh	kgCO ₂ e	tCO ₂ e
Scope 1	Natural Gas	WHC Managed Gas	WHC Managed Gas	kWh	3,955,346	3,955,346	723,547	723.55
Scope 1	Class I Van (up to 1.305 tonnes) - Diesel	Company Owned Class I Diesel Van	Company Owned Business Travel	miles	8,459	7,613	1,935	1.93
Scope 1	Class II Van (1.305 to 1.74 tonnes) - Diesel	Company Owned Class II Diesel Van	Company Owned Business Travel	miles	30,188	33,509	8,457	8.46
Scope 1	Diesel (average biofuel blend)	Company Owned Class III Diesel Van	Company Owned Business Travel	litres	862	9,058	2,163	2.16
Scope 1	medium car - Hybrid	Company Owned Medium Sized Hybrid Cars	Company Owned Business Travel	miles	4,463	3,201	775	0.77
Scope 2	Electricity	WHC Managed Electricity	WHC Managed Electricity	kWh	3,985,275	3,985,275	825,248	825.25
Scope 2	UK Electricity for Small Sized Battery Powered EV	Electricity Used to Charge EV Vehicles	WHC Managed Electricity	miles	5,067	N/A	361.94	0.36
Scope 3	Natural Gas	Gas Consumption (Leisure Sites)	Gas Consumption (Leisure Sites)	kWh	1,018,424	1,018,424	186,299	186.30
Scope 3	Electricity	Electricity Consumption (Leisure Sites)	Electricity Consumption (Leisure Sites)	kWh	1,144,066	1,144,066	236,907	236.91
Scope 3	Electricity	Electricity Consumption (Estates Rented Properties)	Electricity Consumption (Estates Rented Properties)	kWh	44,832	44,832	9,284	9.28
Scope 3	Paper Usage (Primary Material Production)	Material Usage: Paper (Primary Creation)	Paper Usage	tonnes	2.58	N/A	2,344	2.34
Scope 3	Paper Usage (Closed Loop Recycled)	Material Usage: Paper (Recycled Paper)	Paper Usage	Tonnes	0.93	N/A	676	0.68
Scope 3	Transmission & Distribution (UK Electricity)	Transmission and Distribution (WHC Managed Electricity)	Transmission and Distribution (WHC Managed Electricity)	kWh	3,985,275	N/A	71,416	71.42

Scope	Commodity	Description	Emission Source	Unit	Total (12 months)	kWh	kgCO ₂ e	tCO ₂ e
Scope 3	Taxi Travel (Regular Taxi)	Taxi Travel	Other Business Travel	km	4	N/A	1	0.00
Scope 3	Train Travel (National Rail)	Train Travel	Other Business Travel	passenger.km	18,868	N/A	669	0.67
Scope 3	Tube Travel (London Underground)	Tube Travel	Other Business Travel	passenger.km	98	N/A	3	0.00
Scope 3	Electricity	Outsourced Activities (Electricity)	Outsourced Activities (Electricity)	kWh	82,087	82,087	16,998	17.00
Scope 3	Natural Gas	Outsourced Activities (Natural Gas)	Outsourced Activities (Natural Gas)	kWh	95,672	95,672	17,501	17.50
Scope 3	Average Car - Battery Electric Vehicle	Employee Owned Electric Cars	Employee Owned Business Travel	miles	1,405	0	0	0.00
Scope 3	Large car - Diesel	Employee Owned Large Sized Diesel Cars	Employee Owned Business Travel	miles	1,779	2,362	592	0.59
Scope 3	Large car - Petrol	Employee Owned Large Sized Petrol Cars	Employee Owned Business Travel	miles	115	216	50	0.05
Scope 3	Medium car - Diesel	Employee Owned Medium Sized Diesel Cars	Employee Owned Business Travel	miles	10,870	11,544	2,895	2.89
Scope 3	Medium car - Hybrid	Employee Owned Medium Sized Hybrid Cars	Employee Owned Business Travel	miles	702	503	122	0.12
Scope 3	Medium car - Petrol	Employee Owned Medium Sized Petrol Cars	Employee Owned Business Travel	miles	18,025	22,155	5,149	5.15
Scope 3	Small car - Diesel	Employee Owned Small Sized Diesel Cars	Employee Owned Business Travel	miles	14,437	12,752	3,237	3.24
Scope 3	Small car - Hybrid	Employee Owned Small Sized Hybrid Cars	Employee Owned Business Travel	miles	1,419	964	232	0.23
Scope 3	Small car - Petrol	Employee Owned Small Sized Petrol Cars	Employee Owned Business Travel	miles	39,019	37,859	8,842	8.84

Table 5 Welwyn Hatfield Council's input data breakdown

Scope	Emissions Source	Sum of tCO ₂ e	Percentage of Total Emissions
Scope 1	Company Owned Business Travel	13.33	0.6%
Scope 1	WHC Managed Gas	723.55	34.0%
Scope 2	WHC Managed Electricity	825.61	38.8%
Scope 3	Electricity Consumption (Estates Rented Properties)	9.28	0.4%
Scope 3	Electricity Consumption (Leisure Sites)	236.91	11.1%
Scope 3	Employee Owned Business Travel	21.12	1.0%
Scope 3	Gas Consumption (Leisure Sites)	186.30	8.8%
Scope 3	Other Business Travel	0.67	0.0%
Scope 3	Outsourced Activities (Electricity)	17.00	0.8%
Scope 3	Outsourced Activities (Natural Gas)	17.50	0.8%
Scope 3	Paper Usage	3.02	0.1%
Scope 3	Transmission and Distribution (WHC Managed Electricity)	71.42	3.4%
Total Carbon Emissions		2,126	

Table 6 Scope and percentage split breakdown

Overall Summary Covering 01/04/2023 – 31/03/2024				
	Total kWh	Total kgCO ₂ e	Total tCO ₂ e	Percentage
Scope 1	4,008,727	736,876	737	35%
Scope 2	3,985,275	825,610	826	39%
Scope 3	2,473,438	563,217	563	26%
Total	10,467,439	2,125,703	2,126	100%

Table 7 FY 2023/2024 Overall Summary



Contact us

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