



East Cambridgeshire
District Council

Carbon Audit

2024 to 2025



- Climate Change and Natural Environment

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Introduction

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A 'carbon footprint' is a measure of the greenhouse gases, such as carbon dioxide, emitted into the atmosphere from a specified area (such as Cambridgeshire) or by an organisation (such as East Cambridgeshire District Council) or by an individual. A carbon footprint calculation can provide pointers to where action could be best taken to reduce your impact on the environment.

Whilst not an exact science, you can have a go at calculating your own (or your family's) carbon footprint using an online tool such as footprint.wwf.org.uk ([opens in new window](#)).

In the next three sections we report on the carbon footprints of:

- Cambridgeshire, as a geographical area
- East Cambridgeshire, as a geographical area
- East Cambridgeshire District Council (ECDC), as an organisation

For the first two sections, the data is compiled by central government, and usually published with at least a two year lag. Thus, the latest data available at the time of writing was released in August 2025, for the period to 2023. The [full dataset for all local authority areas is available on the gov.uk website](#) ([opens in new window](#)).

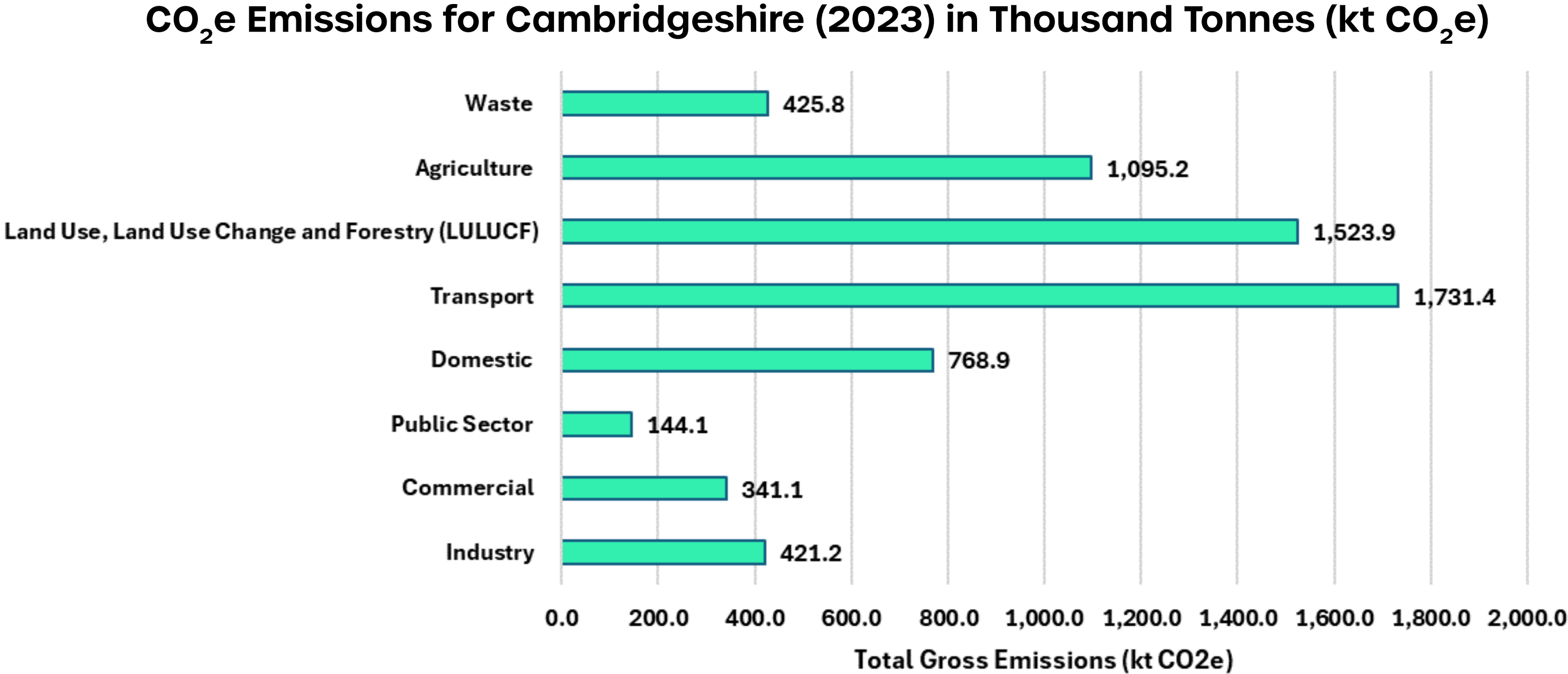


Cambridgeshire Carbon Footprint

The latest government data shows the carbon footprint for Cambridgeshire was around 6.4 million tonnes CO₂e in 2023 (out of 356MtCO₂e for the UK as a whole). Whilst still an enormous amount, the Cambridgeshire total is on a steady falling trajectory, down from 8.9 MtCO₂e in 2005. The 2023 figure identifies a 0% change in emissions due to an increase in waste, agriculture and Land Use, Land-Use Change, and Forestry (LULUCF), but a decrease in other sectors such as transport, domestic, public sector, commercial and industry from the previous year (2022).

The following table splits Cambridgeshire's emissions of 6.5 million tonnes CO₂e (2023) into various main sectors.

Cambridgeshire's largest source of emissions therefore came from transport (27%), followed closely by LULUCF (24%). In fact, Cambridgeshire is the worst performing county in the UK by far under the LULUCF category, emitting twice as much as the next worst county (Norfolk). In fact, many counties have a minus LULUCF score, meaning their land absorbs more carbon (such as through trees growing) than it emits, which helps them offset some of their emissions from



other sectors. The reason for Cambridgeshire's very high LULUCF emissions is simple, high intensive farming, the subsequent drying of our peat lands, combined with very low levels of tree cover. To reduce our LULUCF emissions will require significant changes in the way we manage and farm our land, and it is unlikely we could ever eliminate emissions arising from this source in Cambridgeshire.

● Figure 1 (above) displays the Carbon footprint by sector for Cambridgeshire.

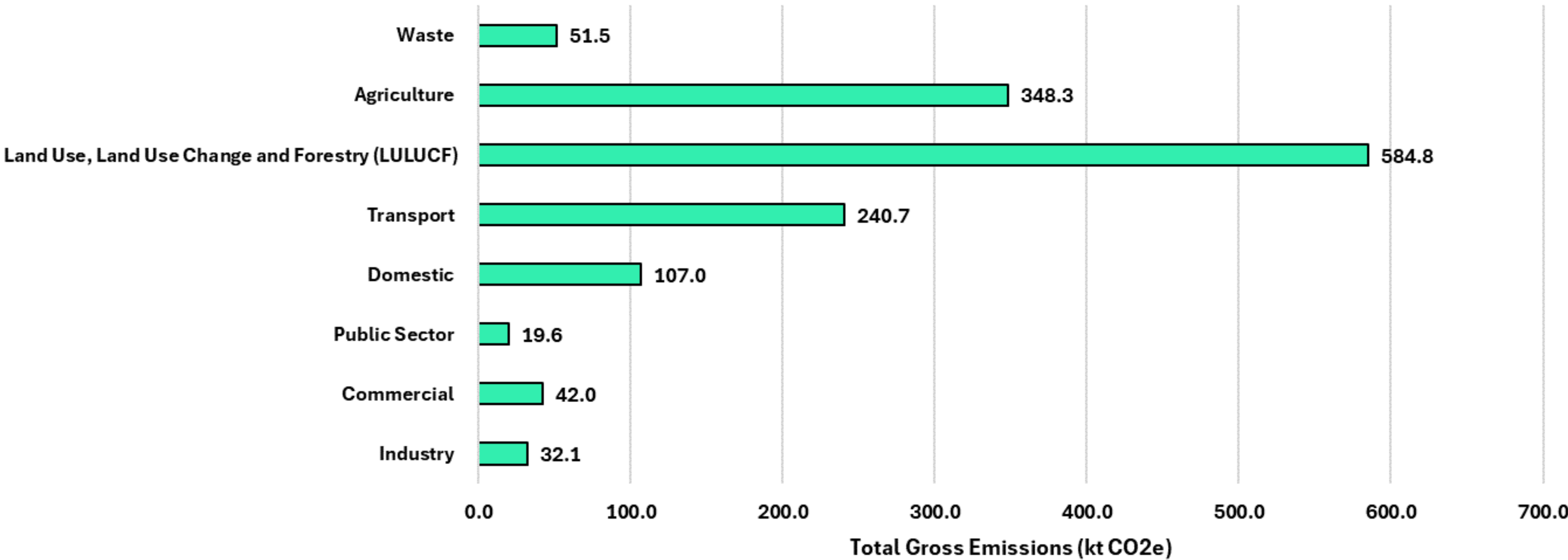
East Cambridgeshire Carbon Footprint

This section reports on the ‘carbon footprint’ of East Cambridgeshire as a geographical area.

The latest government data shows the carbon footprint for East Cambridgeshire was around 1.4 million tonnes CO₂e in 2023 (out of 376MtCO₂e for the UK as a whole). The following table splits East Cambridgeshire’s emissions of 1.4 million tonnes CO₂e (2022) into various main sectors.

The East Cambridgeshire total is on a very steady falling trajectory, down from 1.6 MtCO₂e in 2005 to 1.4 MtCO₂e in 2023. The 2023 figure identifies a 5% increase in emissions from the year before (2022). Like Cambridgeshire, LULUCF (41%) once again dominates our district’s emissions. Excluding LULUCF, our total emissions (that is, from all other sectors combined) are calculated as being 0.8 MtCO₂e.

CO₂e Emissions for East Cambridgeshire (2023) in Thousand Tonnes (kt CO₂e)



● Figure 2 (above) displays the Carbon footprint by sector for East Cambridgeshire.

ECDC Carbon Footprint

This next section of the report is to assess and quantify greenhouse gas emissions, such as carbon dioxide, from East Cambridgeshire District Council, classifying them into three categories. These categories are scope 1 (direct), scope 2 (indirect), and scope 3 (indirect). This carbon emissions report for ECDC will identify emission hotspots, providing accurate data for potential targeted reduction strategies.

The baseline carbon footprint (using data for the financial year 1 April 2018 to 31 March 2019), as set out in detail in our Environment Plan 2020, resulted in a baseline carbon footprint for the council being established as **1,317 tonnes of CO₂e** (comprising 839 tCO₂e scope 1; 165 tCO₂e scope 2; and 313 tCO₂e scope 3).

Each year since, the council has reported an update on its annual emissions. For our seventh set of annual data, for the financial year 2024 to 2025, our total gross emissions were **3182.4 tonnes of CO₂e**. Whilst this is a significant increase in our overall emissions compared with our baseline year, this increase is a direct result of the expansion of data we have collected for scope 3 emissions. On a like-for-like basis, our scope 1 and 2 emissions have significantly dropped compared with the baseline year. Please see the appendix for further details of this year's data collection methods.



Scope 1

We achieved in excess of a 50% reduction in baseline emissions through the replacement of diesel with Hydrotreated Vegetable Oil (HVO) fuel in most of our fleet vehicles. This reduction is expected to increase further in 2025 to 2026 as the entire fleet transitions to HVO.

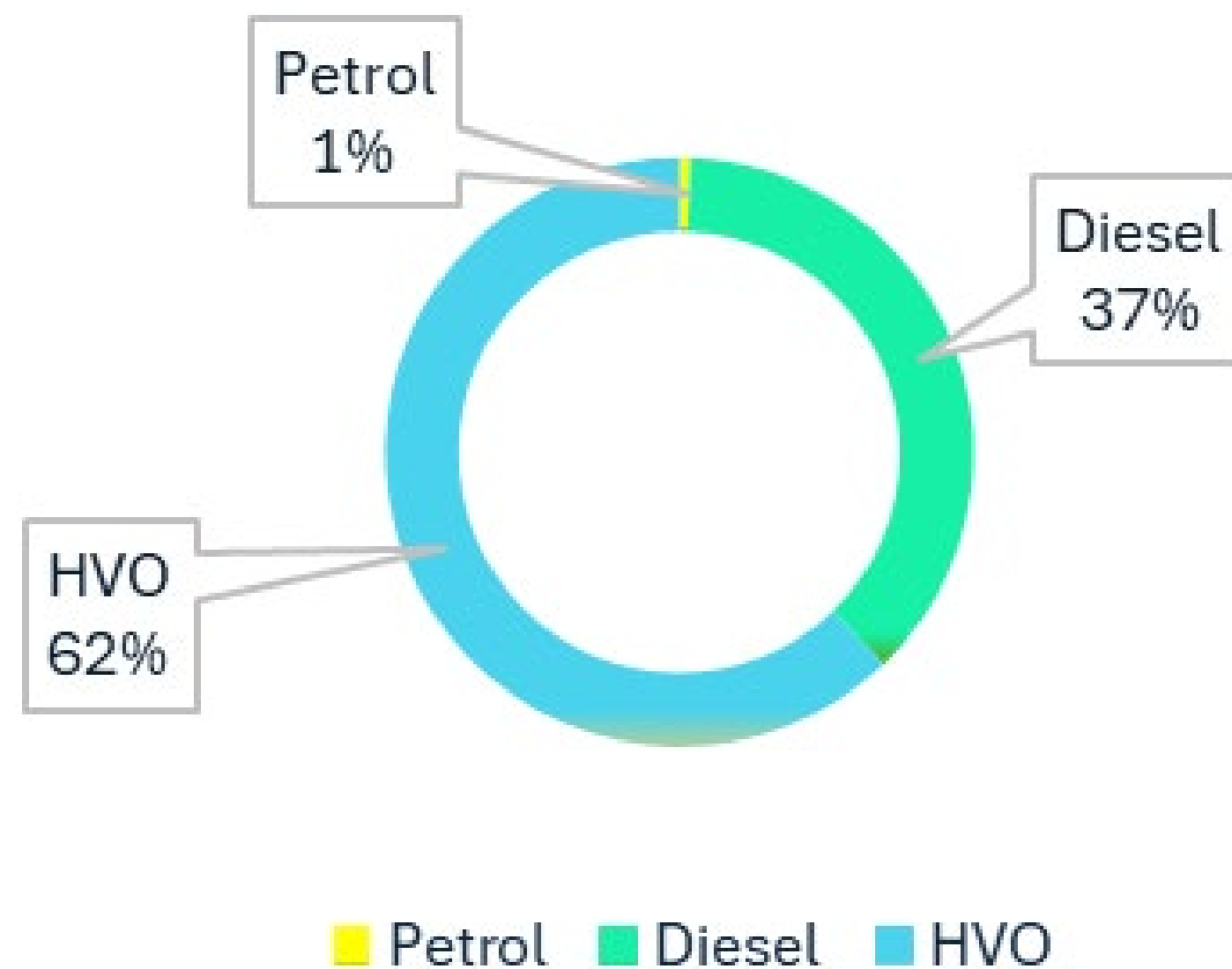
Regular maintenance of our air conditioning units confirmed zero leaks, allowing us to report no fugitive emissions.

Additionally, we can confirm that the use of heating oil was fully discontinued in 2024 to 2025.

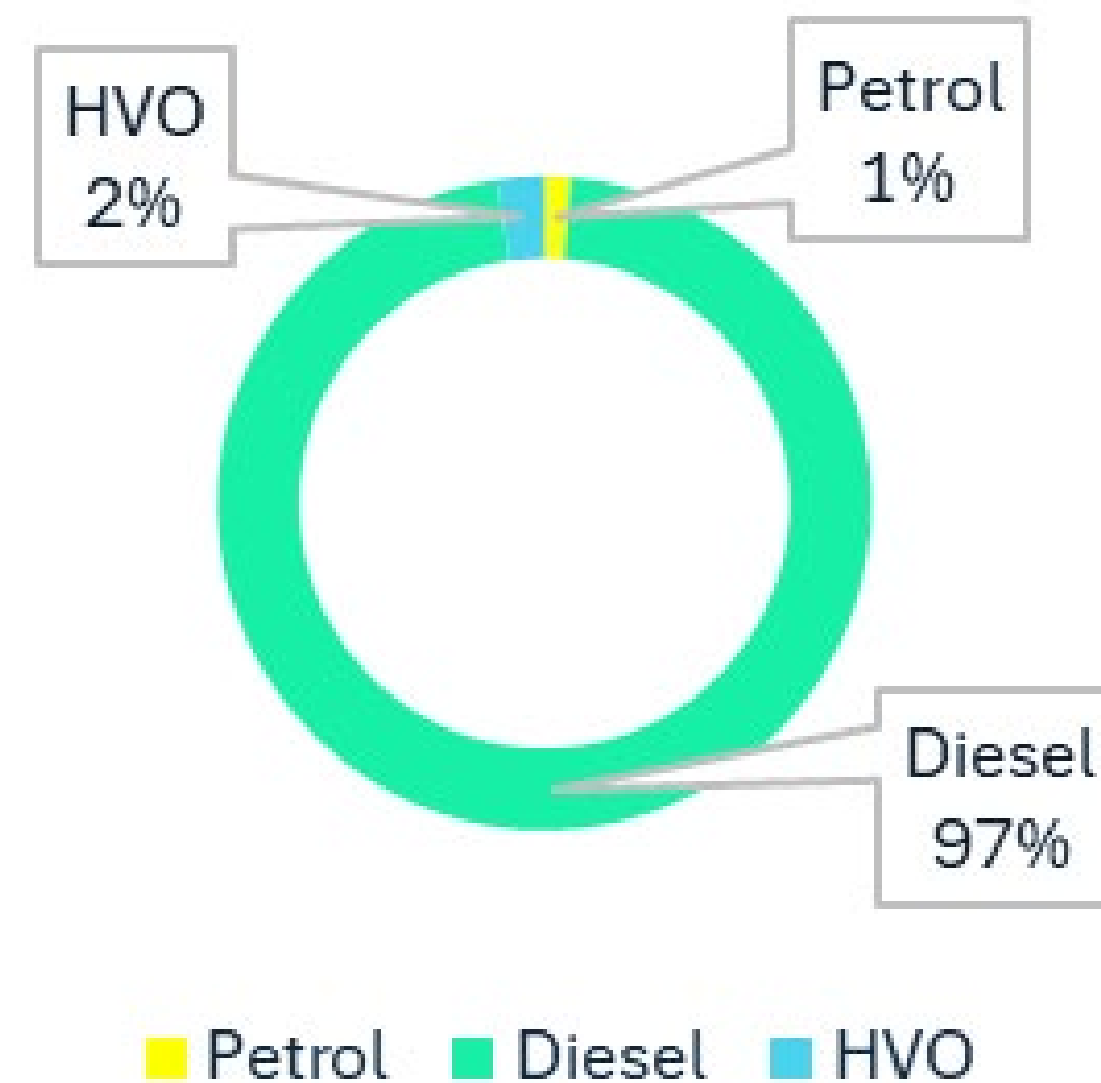
Scope 1	2018 to 2019	2019 to 2020	2020 to 2021	2021 to 2022	2022 to 2023	2023 to 2024	2024 to 2025
Gas Consumption	63.7	71.0	81.6	74.6	68.5	73.4	65.0
Heating Oil	n/a	n/a	17.8	18.4	17.7	3.8	0.0
Fugitive Emissions (Refrigerants)	9.7	n/a	n/a	n/a	6.7	2.9	0.0
Fleet Vehicles	765.4	800.1	792.5	750.2	793	815.8	285.9
Gross Emissions	838.8	871.1	891.9	843.2	885.8	895.9	350.9

● Figure 3 (above) displays the figures that make up the council’s scope 1 emissions. All figures are in tonnes of CO2e.

Percentage of consumption from different fuel use



Percentage of emissions from different fuel use



The diagrams to the left (Figure 4) help to demonstrate the considerable difference between fuels used and the emissions arising. For example, in 2024/25 the council used 183,000 litres of HVO fuel for its refuse collection vehicles. This accounted for 62% of total fuel consumption but only 2% of the corresponding emissions.

- Figure 4 (left) display the differences in the consumption of fuels when compared to their emissions in scope 1.

Scope 2

There has been a small increase in this year's scope 2 emissions, partly due to an administrative error in previous years (we under-reported electricity use at E-Space North building by a factor of 10). There has also been a further increase in electricity consumption in three of the toilet facilities when compared to the previous year: Barton Road (+3000kWh), Soham (doubled) and Littleport toilets (more than doubled).We continue to investigate why these facilities have had such a significant jump in electricity use.

Despite this increase, there remains an overall trend of reduction in emissions for Scope 2

from the baseline year. This is largely due to the decarbonisation of the National Grid and the implementation of solar panels on E-Space North.

ECDC is on a green energy tariff, which is an electricity supply contract where the provider matches consumption with renewable generation, supporting investment in low-carbon energy. However, electricity supplied through the national grid remains a mix of sources, which is why the council reports emissions using the location-based method for accuracy and transparency.



Scope 2	2018 to 2019	2019 to 2020	2020 to 2021	2021 to 2022	2022 to 2023	2023 to 2024	2024 to 2025
Building use	152.5	118.3	86.5	72.5	81.6	74.6	86.6
Streetlighting	12.0	1.4	8.7	8.7	5.7	6.4	3.7
Gross Emissions	164.5	119.7	95.2	81.2	87.2	80.9	90.2

● Figure 5 (above) displays the figures that make up the council's scope 2 emissions. All figures are in tonnes of CO2e.

Scope 3

We have this year dramatically increased the range of items we are accounting for under our scope 3 emissions. These new items fall into three broad areas, material use (goods we buy), staff commuting and staff pensions. Whilst still not perfect, we are now far more accurately reporting the true scale of our emissions. The vast majority of district councils make little or no attempt to calculate their scope 3 emissions, therefore are probably under-reporting their true emissions by possibly 80% or more.

The procurement of 42,000 new household bins for residents of East Cambridgeshire District accounted for 512 tonnes CO₂e. This figure was calculated using data provided directly by the supplier. In figure 6, this is the certificate provided to us by the supplier to confirm these emissions.

Vehicle purchases were included for the first time, contributing an estimated 150 tonnes CO₂e.

The purchase of IT equipment was also included, accounting for 42.0 tonnes CO₂e.

Staff commuting

Staff commuting emissions were measured and included in reporting for the first time, totalling 183 tonnes of CO₂e. See appendix for the questionnaire used to gather our primary data for this section.

Pensions (financed emissions)

Both past and present staff pensions of East Cambridgeshire District Council were also included for the first time, reflecting the growing importance of financial investments within scope 3 accounting. See slide 12 for more information on pensions.



● Figure 6 (above), certificate of the carbon footprint of our bin purchase.

Scope 3	2018 to 2019	2019 to 2020	2020 to 2021	2021 to 2022	2022 to 2023	2023 to 2024	2024 to 2025
Water and Treatment	7.1	7.5	8.1	5.9	6.5	3.5	2.7
Waste Generated in Operations	0.5	0.6	0.6	0.6	0.4	0.4	0.3
Business Travel	81.9	84.7	24.0	41.8	17.0	20.4	17.2
Material Use	n/a	n/a	n/a	n/a	65.8	29.8	713.9
Transmission and Distribution Losses	14.0	10.2	10.2	7.0	8.0	7.0	7.3
Well-To-Tank	210	221.7	210.7	209.6	210.7	217.9	237.7
Staff Commuting	n/a	n/a	n/a	n/a	n/a	n/a	183.0
Staff Pensions	n/a	n/a	n/a	n/a	n/a	n/a	1578.4
Gross Emissions	313.5	324.7	253.5	265.0	308.4	278.9	2,740.5

● Figure 7 (above) displays the figures that make up the council's scope 3 emissions. All figures are in tonnes of CO₂e.

Pensions

This year marks the first time East Cambridgeshire District Council has investigated and reported on the financed emissions associated with our pensions. While the council does not directly manage its pension investments, it is a participant in the Cambridgeshire Pension Fund, which pools assets across multiple local authorities. As such, our influence over investment decisions is limited, but we recognise that pensions can represent a significant source of financed emissions and must be considered as part of our overall climate impact.

This council's share of the Cambridgeshire Pension Fund is an approximately 1.2% of the fund's total monetary value. Using the pension fund's own published calculations, it means

our share of the emissions arising from pension investments are estimated to be 1,578.4 tonnes of CO₂e for 2024 to 2025.

Furthermore, this figure of 1578.4 tonnes of CO₂e only accounts for scope 1 and 2 emissions as the pension fund has yet to account for their scope 3 emissions with their listed equity and corporate bonds.

For complete transparency with our own data and to inform the reader, this data only accounts for 57.5% of the total assets (consisting of listed equity and corporate bonds). Cambridgeshire pension fund does not currently account for investments in infrastructure, private equity, property and government bonds.

Therefore, it is likely that ECDC's share of emissions are much higher than the 1,578.4 tonnes of CO₂e being reported. However, as data collection methods continue to improve within the pension fund's own operations, we will have a better understanding of our own financed emissions. More information can be found about Cambridgeshire pension fund pathway to net zero in the [Analytics for Climate Transition document \(opens in new window\)](#).

Type of asset	Weighted Average Carbon Intensity (WACI) Result (tCO ₂ e/\$million)	Carbon Footprint (tCO ₂ e/\$million)	Estimated ECDC Financed Emissions (tCO ₂ e)
Listed Equities	58.6	25.6	868.9
Corporate Bonds	84.2	64.8	709.3

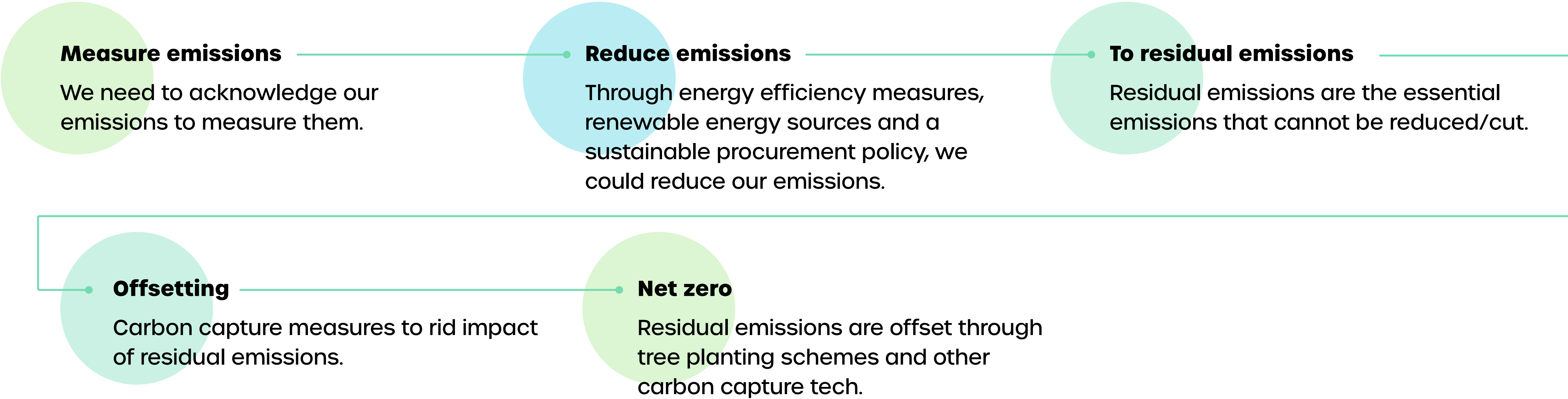
Figure 8 (above) displays the carbon intensity (WACI) of the portfolio, the estimated carbon footprint per \$ million and the estimated emissions from the council's listed equity and corporate bonds. ECDC total financed emissions (estimated), 1578.4 tCO₂e.

Conclusion

The 2024 to 2025 reporting year marks significant progress towards East Cambridgeshire District Council’s climate ambitions of better accounting for our carbon emissions. We have achieved a 50% reduction in scope 1 emissions from our 2018 to 2019 baseline, reductions driven largely by

the transition to Hydrotreated Vegetable Oil (HVO) for our refuse collection vehicles, and scope 2 improvements resulting from energy efficiency measures and cleaner electricity sourcing. This year has also seen a broader and more detailed assessment of scope 3

emissions, including expanded material use data, the introduction of staff commuting estimates, and analysis of staff pensions. By strengthening our data coverage, we are better positioned to identify priorities, target high-impact actions, and track progress with greater accuracy.



Appendix

Carbon Audit 2024 to 2025

Climate Change and Natural Environment



Method

In this appendix, we set out further details on the method employed and the assumptions used, together with acknowledgment of the limitations in the method. Calculating an organisation's carbon footprint is very challenging and reported data each year should be read with some caution.

The council is reporting on emissions within its operational control boundary, following the [Greenhouse Gas \(GHG\) Protocol reporting standards \(opens in new window\)](#).

The baseline is a fixed point against which a reduction target can be set and future performance monitored. Our baseline was set as emissions arising in 2018/19. To calculate CO₂e emissions arising, it is necessary to convert the 'raw' data (such as kWh of electricity used) into CO₂e emissions.

This process is relatively straightforward, using what are known as 'conversion factors'. The carbon conversion factors used for this Carbon Audit are the [UK Government published carbon conversion factors for 2025 \(opens in new window\)](#).

Material use and purchased goods

This section of scope 3 emissions has been measured differently this year, through mass (tonnes) instead of monetary value (£). This is in accordance with up-to-date government guidelines and provides a more accurate estimate of emissions arising from our purchased goods. This also better aligns us with other local councils' methods which will be beneficial after local government reorganisation.

Staff commuting

Data was collected through a self-reporting questionnaire sent via email. We had 100 responses which is 50% of the staff. We then doubled the emissions to gain a better idea of our emissions. In the future, we hope for a better response rate to improve the accuracy of the data.

Pensions

The calculations of the pension used the conversions of 25.6 tonnes CO₂e per \$million for listed equity and 64.8 tonnes CO₂e per \$million for corporate bonds, but these conversions had been calculated by the pension fund and only account for scope 1 and 2 emissions.

Data confidence

In the tables below we have evaluated and reported on our method of data collection in the three different scopes.

● Figure 10 (scope 1 table below) displays the level of confidence in emissions data collected for scope 1.

● Figure 11 (scope 2 table below) displays the level of confidence in emissions data collected for scope 2.

Scope 1	Method of data collection	Confidence in data
Fuel	BE fuelcards and logging data	High
Gas	Gas bills	High
Fugitive Emissions	Maintenance certificates	High

Scope 2	Method of data collection	Confidence in data
Electricity	Electricity bills	High

Scope 3	Method of data collection	Confidence in data
Water	Water bills	High
Staff Business Travel	Staff mileage claims	High
Staff Commuting	Self-reporting questionnaire	Medium to low
Material Use	Logging of large purchases that can be found on our website and logging of data by individual teams.	Medium
Waste	Data logs	High
T and D Losses	Calculated from electricity use	High
Well-To-Tank	Calculated from fuel use	High
Pensions	Calculated using conversions from Cambridgeshire pension fund with figures of ECDC's proportion of fund which were provided by the fun	Medium

● Figure 12 (scope 3 table above) displays the level of confidence in emissions data collected for scope 3.

Data confidence, continued

Staff commuting

This scored lower due to the response rate of 50%. If we wanted to improve the accuracy of the data, we would need a higher response rate, and we will consider how to achieve this for next year.

Material use

This scored lower due to the lack of detail in data collection despite this being in accordance with government guidelines. For example, the weight of a computer is much lower than that of a printer but with these guidelines, the printer would have a higher carbon footprint despite the computer requiring more and rarer materials.

Pensions

As discussed on slide 12, the pension fund is still improving their scope of data to include scope 3 as well as all their assets. In 2024 to 2025 they improved their data collection by reporting on their corporate bonds, increasing scope from 42% to 57%.



Raw data

Scope 1

Element	Fuel	Consumption units	Consumption	Emissions (tCO ₂ e)
BE fuel Cards	Petrol	Litres	1,812	3.8
BE fuel Cards	Diesel	Litres	29,240	73.5
Refuse Collection Vehicles	HVO	Litres	183,439.8	6.5
Refuse Collection Vehicles	Diesel	Litres	80,454	202.2
Heating	Natural gas	kWh (Gross CV)	355274.8	65.0
Heating	Heating oil	Litres	0	0
Fugitive Emissions	HFC-32	KG	0	0
Fugitive Emissions	R410A	KG	0	0
Fugitive Emissions	HCFC-22/R22	KG	0	0
Total	n/a	n/a	n/a	350.9

- Figure 13 (above) displays the different fuel consumption and associated emissions in scope 1.

Raw data

Well-to-tank

Emissions source	Consumption units	Year	Consumption	Conversion factor	Emissions (tCO ₂ e)
Heating	kWh (Gross CV)	2024 to 2025	355274.8	0.030	10.7
Total petrol in scope 1	Litres	2024 to 2025	1812.1	0.6	1.1
Total diesel in scope 1	Litres	2024 to 2025	109694.4	0.6	67.0
Total HVO	Litres	2024 to 2025	183439.8	0.6	102.5
Total Staff Business Travel	n/a	2024 to 2025	78,721	n/a	4.8
Total Staff Commuting	n/a	2024 to 2025	822,874	n/a	31.6
T and D Losses	kWh	2024 to 2025	435,885.0	0.1	20.0
Total	n/a	2024 to 2025	n/a	n/a	237.7

● Figure 14 (above) displays the well-to-tank emissions within scope 3.

Raw data

Material use

Emissions source	Method	Consumption units	Year	Consumption	Conversion factor	Emissions (tCO ₂ e)
Aggregates	Primary material production	Tonnes	2024 to 2025	1	930.0	0.9
Electrical items, IT	Primary material production	Tonnes	2024 to 2025	1.7	24865.5	42.1
Metals	Primary material production	Tonnes	2024 to 2025	39.3	3815.8	150.0
Paper and board, paper	Closed-loop source	Tonnes	2024 to 2025	6.1	1044.3	6.4
Plastics, average plastics	Primary material production	Tonnes	2024 to 2025	483.1	3164.8	512.9
Batteries, alkaline	Primary material production	Tonnes	2024 to 2025	0.003	4633.5	0.02
Paper and board, mixed	Primary material production	Tonnes	2024 to 2025	1.2	1282.7	1.5
Total	n/a	Tonnes	2024 to 2025	532.4	n/a	713.9

● Figure 15 (above) displays the raw data of material goods.

Raw data

Waste

Emissions source	Method	Consumption units	Year	Consumption	Conversion factor	Emissions (tCO ₂ e)
WEEE, mixed	Open-loop	Tonnes	2024 to 2025	1.3	6.4	0.01
Plastics, average plastics	Landfill	Tonnes	2024 to 2025	20.7	8.9	0.2
Paper and board, mixed	Closed-loop	Tonnes	2024 to 2025	13.3	6.4	0.1
Organic, mixed food and garden waste	Open-loop	Tonnes	2024 to 2025	10.9	0.000	0.00
Total	n/a	Tonnes	2024 to 2025	46.1	n/a	0.28

● Figure 16 (above) displays the four types of waste collection within the category of waste and their emissions.

Raw data

Staff business travel

Emissions source	Consumption units	Year	Consumption	Conversion factor	Emissions (tCO ₂ e)
Small car (diesel)	Miles	2024 to 2025	18,316	0.2	4.1
Small car (petrol)	Miles	2024 to 2025	9,057	0.2	2.1
Small car (hybrid)	Miles	2024 to 2025	21,564	0.2	5.8
Medium car (diesel)	Miles	2024 to 2025	356	0.3	0.1
Medium car (petrol)	Miles	2024 to 2025	8,241	0.3	1.5
Medium car (hybrid)	Miles	2024 to 2025	76	0.2	0.03
Large car (diesel)	Miles	2024 to 2025	8,554	0.3	2.9
Large car (petrol)	Miles	2024 to 2025	518	0.4	0.1
Large car (hybrid)	Miles	2024 to 2025	3,374	0.3	0.3
Average car (battery electric vehicle)	Miles	2024 to 2025	8,665	0.1	0.3
Total	Miles	2024 to 2025	78,721	n/a	17.2

● Figure 17 (above) displays the raw data of staff business travel.

Raw data

Staff commuting

Emissions source	Consumption units	Year	Consumption	Conversion factor	Emissions (tCO ₂ e)
Small car Petrol	Miles	2024 to 2025	157,012	0.2	36.3
Small car Diesel	Miles	2024 to 2025	94,892	0.2	21.4
Small car Hybrid	Miles	2024 to 2025	27,674	0.2	5.0
Medium car Petrol	Miles	2024 to 2025	170,522	0.3	48.6
Medium car Diesel	Miles	2024 to 2025	78,706	0.3	21.3
Average car Battery Electric Vehicle	Miles	2024 to 2025	50,214	0.1	4.2
Large car Petrol	Miles	2024 to 2025	30,822	0.4	13.3
Large car Diesel	Miles	2024 to 2025	84,816	0.3	28.3
National Rail	KM	2024 to 2025	128,216	0.04	4.6
Total	n/a	2024 to 2025	822,874	n/a	183.00

- Figure 18 (above) displays the raw data of staff commuting which we gathered from a self-reporting questionnaire by staff.

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- ## Carbon Audit 2024 to 2025

Pure Green Supply Certificates



● Figure 20 (above), ECDC pure green energy supply certificates for the financial year of 2024 to 2025.

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