

1. Introduction

Climate change has profound and diverse impacts on people living in cities. Heatwaves and extreme temperatures increase the risk of heat-related illnesses and mortality. Extreme weather events, such as storms and hurricanes, can disrupt infrastructure, endangering the safety and well-being of urban populations. Climate change also exacerbates air pollution, leading to respiratory problems and other health issues. Addressing climate change is crucial to safeguarding the health, safety, and overall quality of life for city residents.

Coventry City Council, like other local authorities worldwide, has embraced its crucial role in addressing the greatest threat to life on our planet. Recognizing the significance of this issue early on, the council became a founding signatory of the Global Covenant of Mayors in 2008, committing to achieve carbon neutrality by 2050. Recognising the detrimental effects of human-induced atmospheric pollution on public health and weather stability, the Council acknowledges its responsibility to serve as an influencer, leading by example and mobilising the entire city's residents and workforce to embrace the challenges of climate change and strive towards a sustainable future.

The Climate Change Strategy, published in 2012, set a target to reduce carbon dioxide emissions by 27.5% by the year 2020 when compared to 2005 levels. This target was reached five years early in 2015 and Coventry has continued to further reduce its carbon emissions. As an interim target, while the Climate Change Strategy was being updated, Coventry signed up to the Euro Cities target to achieve a 55% reduction of 1990 levels by 2030. The new Climate Change Strategy (draft released in 2023) has adopted the government target of Net Zero by 2050, and also acknowledges the importance of trying to reach it earlier, as prescribed by the West Midlands target of Net Zero by 2014.

This report provides an annual overview of GHG emissions from Coventry City Council's estate and operations. GHG emissions have been calculated following guidance and conversion factors provided by BEIS (Department for Business, Energy and Industrial Strategy). This report presents GHG emissions (in CO₂e) starting from 2008/09 (base year), to 2022/23. The structure of this report follows Government guidance.

2.0 Results

The following defines what is meant by Scopes 1, 2 & 3:

1. *All direct emissions from the activities of an organisation or under their control, e.g., fuel consumption on site such as natural gas and fleet fuel.*

2. Indirect emissions from electricity purchased and used by the organisation.

3. All other indirect emissions from activities of the organisation, occurring from sources that they do not own or control.

Table 1: GHG emissions reported as tonnes of CO₂e

	2022/23	2021/22	2020/21	2019/20 (2020 methodology)	2018/19	2008/09 (Base year)
Scope 1	4357	4,558	4,849*	4,098	4,717	8,343
Transport Fuel	2,948	3,042	3,200*	2,424	2,554	4,050
Gas Oil	0	8	8*	48	543	573
Natural Gas	1,319	1,459	1,596	1,587	1,589	3,720
LPG	58	15	22	5	33	0
Kerosene	31	34	22	34	N/A	N/A
Scope 2	3,916	4,451	4,469	5,805	5,995	17,452
Heating (property)	122	328	304	397	152	N/A
Electricity (property)	1,675	2022	1,789	2,441	2,613	6,937
Electricity (street lighting)	2,118	2101	2,375	2,967	3,230	10,516
Scope 3	4305	5,916**	7,173	10,737	936	2,395
Electrical transmission and distribution	346	365	358	459	498	1,340
District Heat Losses	23	23	-	-	15	-
Business travel	304	320	174	425	423	1,055
Schools and Other Council Owned Buildings	3,654	5,208**	6,640	9,871	-	-
Total gross emissions	12,579	14,925**	16,492*	20,640	11,648	28,190
Carbon offsets	-			-	-	-
Total annual net emissions	12,579	14,925**	16,492*	20,640	11,648	28,190
Intensity measurement (tonnes of CO ₂ e per FTE)	2.00	2.22	2.29*	2.50	2.80	4.51

*Scope 1 emissions of 2020/21 have been revised upon review.

****Scope 3 building emissions of 2021/22 have been revised upon review.**

Figure 1: A graph showing changes in emissions from the 2008/9 baseline to 2021/22

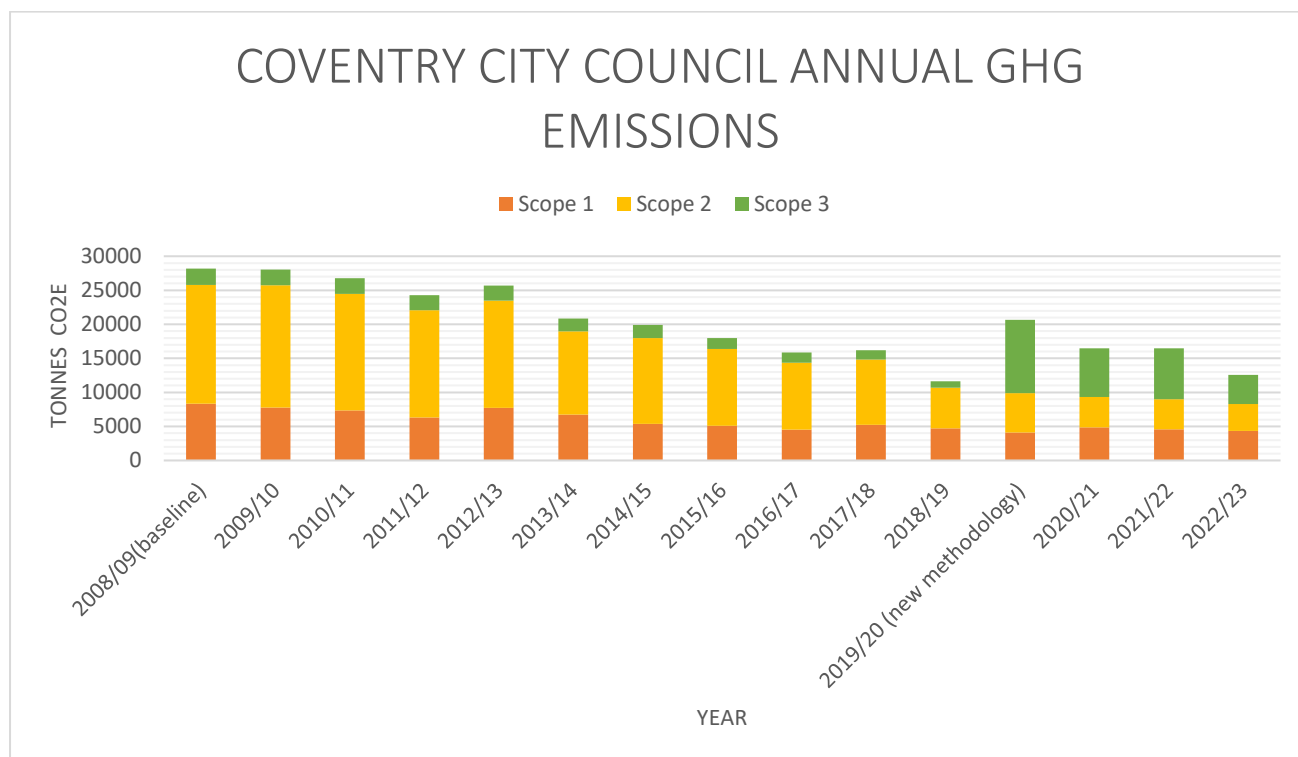
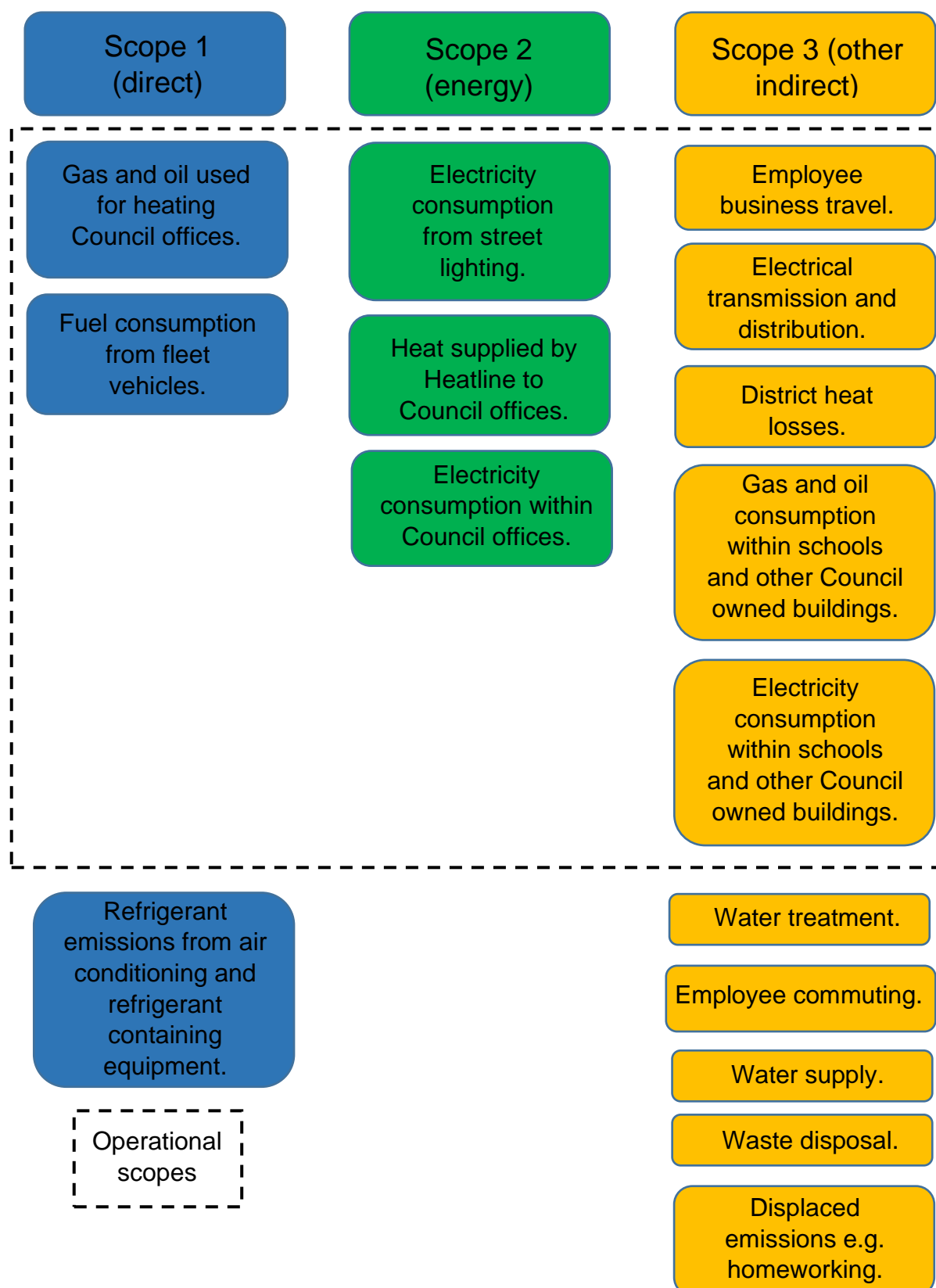


Figure 2: Coventry City Council's operational scopes



3.0 Supporting Information

3.1 Organisation Information

Coventry City Council is responsible for providing a wide range of services to people who live within the city, to people who visit the city and to businesses and other organisations based in Coventry. It currently serves a population of 379,387 (Coventry City Council mid-2020 estimate) and has approximately 4,135 full time equivalent (FTE) employees.

3.2 Reporting Period

1st April 2022 to 31st March 2023.

3.3 Operational Scope

Coventry City Council has measured Scope 1 and Scope 2 emissions for all properties and vehicles that they fully own and control (Figure 2). Some Scope 3 emissions have been reported, depending on the availability of comprehensive and reliable data. The data provided in this year's reporting is outlined above (Figure 2). Prior to 2019/20, the Scope 3 methodology only included business travel and electrical transmissions and distribution

In preparation for setting a new emissions target, Coventry City Council revaluated the methodology used to calculate the carbon footprint of the Scope 3 emissions in 2020. This revision has extended Scope 3 emissions to include district heat losses, gas, oil and electricity consumption of schools and other Coventry City Council owned buildings, which is outlined in Figure 2. Coventry City Council will continue to develop a methodology to accurately record more Scope 3 data to include in following annual reports.

Despite expanding Scope 3 in 2019/20, Coventry City Council is investigating our ability to further expand Scope 3 again. However, this poses challenges as reliable and consistent data is required to accurately monitor changes in emissions on an annual basis.

4.0 Change in Emissions

4.1. Scope 1 and 2 Emissions

Emissions from Scope 1 and 2 in 2022/23 saw an 8.17% reduction compared to 2021/22 and 67.93% reduction from the 2008/09 baseline. The decrease in Scope 1 was 4.42% compared to last year, and Scope 2 was 12.02%.

Emissions from fleet fuel consumption reduced by 3.09% from 2021/22. Emissions from diesel saw a 2.67% increase whereas those from gas oil consumption fell by 94.57%. The increase can be attributed to more in-person events after COVID-19 – however, this is still a 31.38% increase compared to 2019/20 (pre-COVID). Rules around who can and cannot use gas oil changed on 1 April 2022; after the amount left in the fuel pumps were used up, gas oil can no longer be used as our fleet vehicles do not fall under any of the exemptions. This is also partly responsible for the increase in diesel consumption. Unleaded petrol has remained almost the same (only a 2% increase in litres consumed).

Scope 1 building emissions decreased by 7% between 2021/22 and 2022/23. As predicted from last year's report, there have been continuous gas reductions this year as the energy efficiency measures

taken become fully operational. The biggest contributor of this decline is the termination of gas oil in Council buildings as part of the PSDS projects. Excluding the PSDS sites, there has been a total reduction of 410,795 kWh across the remaining corporate estate. This reduction may also be attributable to the increased ventilation required last year due to the COVID restrictions.

The 12% decline in Scope 2 emissions is mainly attributable to a decline in emission from heating (63%). Although the kWh did not change by much, the emissions factor for this year is much smaller due to increased efficiency of Heatline. Although there was a 10% increase in kWh for streetlighting, the associated carbon emissions only increased by 0.8%. The long-term trend of electricity emissions reducing is also attributable to improvements in the production of electricity leading to electricity carbon factors falling by nearly 50% since first reporting in 2008. This is significant given that Coventry City Council relies heavily on electricity.

4.2 Scope 3 Emissions

Accurately recording emissions of a wider scope and comparing annual consumption allows strategies to be developed towards reducing areas with higher CO₂e emission rates.

While the council has made significant progress on reducing emissions through mitigation actions, the greening of the national grid and organisational changes have also had significant impacts. Recent rationalisation of Council properties means that a number of properties that have previously been included in our emissions have been outsourced. Therefore, the Council's property portfolio has reduced. Corley School became an academy in November and so its data is no longer accounted for. Moreover, the level of response from schools varies from year to year, making it difficult to ascertain a common trend.

The Wave was successfully connected to Heatline in August 2020. Heatline is a lower carbon alternative to traditional fuel heating systems, thus reducing Scope 3 building carbon emissions. Moving The Wave to Heatline saved approximately 351,212 kilograms of CO₂ equivalent emissions this period.

Scope 3 emissions decreased by 26.94% in 2022/23 compared to last year. The most significant factor for this decrease is due to reduction in fuel consumption. Gas oil was used in some backup generators for COVID test centers or for temporary heating; these are no longer in use. The removal of one of the schools from the Council's portfolio also contributed to the reduction, and so did the aforementioned change in rules for gas oil last April.

4.3 Intensity Measurement

We have taken the approach of measuring the intensity of scope 1 and 2 emissions via tonnes of CO₂e per full time equivalent (FTE) employee. Most recent figures show there are approximately 4,064 FTE employees in the core council, this is higher than in previous and is in part, responsible for the lower intensity, although the significant decrease in emissions is largely responsible.

5.0 Approach and Methodology

Coventry City Council has followed DEFRA's Guidelines on how to measure and report greenhouse gas emissions. Emissions are reported in tonnes of CO₂e. We have used the operational approach,

meaning we have identified and reported on emissions from which the Council has full operating control under Scope 1 and 2. In previous years, the Council made the decision to exclude outsourced services due to the Council not being able to fully control energy consumption and lack of reliable data. However, in preparation for developing the new Climate Change strategy in 2020, Coventry City Council have extended Scope 3 to include outsourced services.

5.1 Limitations of Assessment

It has been recognised that there are issues with the reporting of Scope 3. We are looking at the measures we can take to develop and improve accuracy going forward.

Coventry City Council operates from a wide portfolio of offices and while the main offices have been included, there are some where Coventry City Council is not the main occupier and obtaining the data has been difficult. This report includes as much reliable data provided by schools and other occupiers of Coventry City Council owned buildings. It is anticipated that Scope 3 building emissions will continue to increase for the following years, as reliable procedures are implemented to collect more Scope 3 building energy consumption.

Collection of emissions data is complex and while significant progress has been made to improve the accuracy and reliability of the council's carbon footprint, there is still further improvements to be implemented. The result reported here is based on the best information available at the time.

6.0 Geographical Boundary

All of Coventry City Council's activities and operations are carried out in the UK.

7.0 Base Year

The base year for Coventry City Council's carbon footprint is 2008/09.

8.0 Targets

We achieved our reduction target of 35% by 2020 in 2015/16. The new Climate Change Strategy has set the target for Coventry to achieve a 55% reduction in Carbon emissions by 2030 compared to 1990 levels which it signed up to last year as part of the Commitment of the Covenant of Mayors.

Coventry City Council's commitment to sustainability traces back to its signing of The Covenant of Mayors in 2008. The council's efforts towards a more sustainable future are further exemplified in the ongoing public consultation for the new Climate Change strategy. This strategy outlines a comprehensive approach to decarbonizing not only the council's emissions but also citywide emissions to combat the impacts of climate change. The council, alongside partners on the Independent Climate Change Board, is dedicated to addressing the UN's 17 Sustainable Development Goals, and to achieve this, the council has adopted the five Development Pathways outlined by the International Council of Local Environmental Initiatives.

1. Low Emissions Pathway
2. Circular Economy Pathway
3. Nature Based Pathway
4. Resilient Pathway
5. Equitable and People Centred Pathway

9.0 External Assurances

We have not sought external assurances over our reported emissions.

10.0 Carbon Offsetting and Green Tariffs

We have not purchased any carbon offsets, nor do we consume energy from green tariffs.

11.0 References:

Coventry City Council (2020) Population and Demographics [online] available from <
<https://www.coventry.gov.uk/facts-coventry/population-demographics>>

Department for Environment Food and Rural Affairs (DEFRA) (2021) Greenhouse Gas Reporting: Conversion Factors 2021 [online] available from
<<https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>>