Knowsley Council Greenhouse Gas Report 2024/25

Summary at a Glance

Knowsley Council's Greenhouse Gas Emissions have reduced by 74% since 2009/2010.

74% CO_2 CO_2 CO_2 CO_2 CO_2 CO_2 CO_2 CO_2 CO_2 CO_2

Knowsley Council has reduced its greenhouse gas emissions by

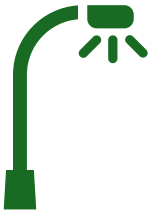
5%

from 2023/24 to 2024/25.

Emissions from **Staff Travel** have decreased by

12%

compared to 2023/24 levels. There has been a 70% reduction in carbon emissions from staff travel compared to 2009/10 levels.

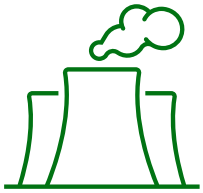


Emissions from **streetlighting** have reduced by **32%** from 2023/24 to 2024/25 and by **85%** compared to baseline emissions.

Emissions from **fleet vehicles** increased by

4%

from 2023/24 and have decreased by **36%** compared to baseline emissions.



Emissions from **gas usage** have increased by **6%** compared to 2023/24.

Emissions from **electricity usage** have **decreased** since 2023/24 by

27%

And have reduced by 86% compared to baseline levels.

Foreword and Executive Summary

In October 2018, the Intergovernmental Panel on Climate Change (IPCC) published 'A Special Report on Global warming of 1.5 °C' which described the catastrophic harm to the planet that a 2 °C average rise in global temperature would cause compared to a 1.5°C increase. The report also confirmed that limiting global warming to 1.5°C may still be possible with ambitious and immediate action from all levels of society.

In May 2019, the UK Government declared a 'Climate Emergency' to bring climate change to the front of the political agenda and set a target of net zero emissions by 2050 to play its part in limiting global warming to 1.5°C.

Although the main greenhouse gas commonly referred to is carbon dioxide (CO2), there are in fact six main greenhouse gases covered by the Kyoto Protocol:

- Carbon dioxide (CO2)
- Methane (CH4)
- Hydrofluorocarbons (HFCs)
- Nitrous oxide (N2O)
- Perfluorocarbons (PFCs)
- Sulphur hexafluoride (SF6)

For example, the burning of fossil fuel will release CO2, CH4 and N2O into the atmosphere. The data presented in this report takes these additional greenhouse gas releases into account and quotes emissions in terms of carbon dioxide equivalent (CO2e). The calculation of CO2e takes into account that each of the above gases has a different potential to cause global warming and applies a weighting so that the emissions for each greenhouse gas are expressed in terms of the global warming potential for CO2. This allows for the emissions for all the 6 greenhouse gases above to be reported as a single figure, referred to as CO2e.

Each of the sources are carbon emissions detailed in the below section is calculated by taking raw data such as kilowatt hours of energy, litres of fuel or miles travelled and multiplying this by a 'conversion factor' to produce a CO2e factor.

The conversation factor used in these calculations is a standardised figure from the government which is subject to change year on year due to external factors. For example, a higher make up of renewable energy in the national grid will lower the conversion factor for electricity due to their being lower emissions from energy produced by low-carbon alternatives. It is therefore possible to reduce emissions annual solely based on a lower conversion factor, where this is applicable to the Council a note has been made in the relevant section.

Introduction and Background

At a council meeting in January 2020, Knowsley Council declared a Climate Emergency and made a commitment to develop an action plan with the aim of achieving net zero carbon emissions from the Council's estate and services by 2040 alongside reducing carbon emissions in the wider borough.

Several action plans have been developed since the Climate Emergency declaration including the Climate Emergency Action Plan and the Net Zero Delivery Plan 2022-2025 with a new Climate Delivery Plan covering 2026-2030 in development.

Previous actions include a Carbon Management Plan under the Carbon Trusts Local Authority Carbon Management Programme in 2010/11 which calculated baseline carbon emissions and set reduction targets. The targets identified and set through the Carbon Management Plan have now been replaced by the Net Zero Carbon 2040 Target for the Council's estate and services.

Beyond managing its own carbon emissions, the Council has made an additional commitment to work with partnership organisations to reduce boroughwide emissions. A Place Climate Delivery Plan outlines actions key partners are taking to work towards reducing their emissions, alongside meeting with Knowsley Better Together Partners to maintain this action plan.

To monitor emissions in line with the Government's Department of Energy and Climate Change guidelines, Knowsley Council has produced an annual Greenhouse Gas Report from 2009/10 to 2015/16 following the standard methodology and format.

The Greenhouse Gas Report is now produced voluntary to illustrate the Council commitment to Net Carbon Zero 2040 and providing transparency about the emissions from its own estates and service.

Introduction and Background

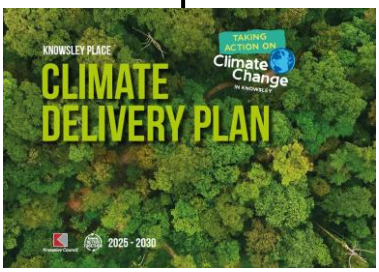
Policy and Strategies

The Council's commitment to Net Zero is embedded in several key plans and strategies to ensure the correct action is taken to achieve Net Carbon Zero by 2040:

Knowsley Council recognise the need to demonstrate accountability and be transparent as an organisation but considering the carbon emissions that arise form its own assets and operation. Therefore, the Greenhouse Gas Report will present Knowsley Councils own carbon emissions for the financial year 2023/24.

Knowsley Council Plan 2025-2030
One of the key objectives for this plan is to response to the climate emergency and achieve net zero to meet the Net Zero 2040 target.

Knowsley 2030 Strategy
'A place with welcoming, vibrant, well-connected neighbourhoods and town centres'-, ensuring that current and future generations can live their lives in a clean, healthy, and sustainable environment



Place Climate Delivery Plan 2030
Outlines actions partners are making towards reaching borough-wide net zero.

Net Zero Delivery Plan 2022-2025
This plan sets out short-term priorities that the council intends to complete by 2025

Reporting Methods and Scope

Reporting Period – this report covers the financial period 1st April 2024 to 31st March 2025.

Approach – This report has been prepared in accordance with UK Government guidance following the sustainability reporting guidance and the globally recognised Greenhouse Gas Protocol framework for measuring emissions from public sector operations.

Scopes:

The report covers all Knowsley Council owned and operated buildings over which it exercises direct control, including schools and street lighting. Academy schools and social housing are excluded.

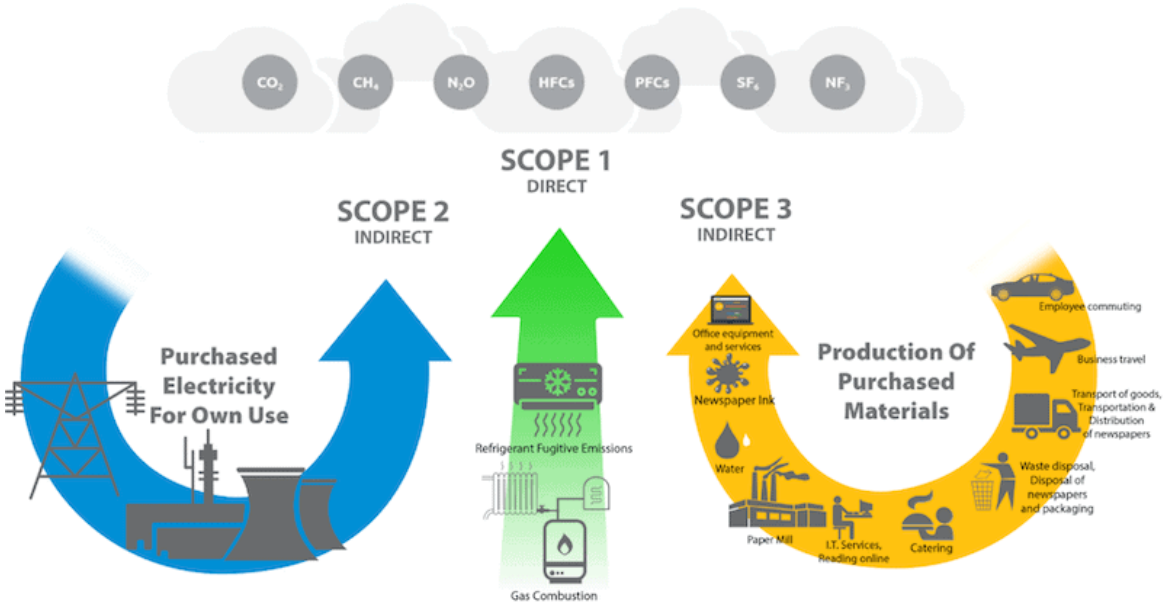
Fleet transport is included, as is business travel based on personal milage. Business travel by other means (bus, train, aircraft etc.) is also included.

The GHG Protocol explains that emissions releasing activities are categorised into three groups known as Scopes. The three scopes are defined as follows:

Scope 1: Direct GHG Emissions - These occur from sources owned or controlled by the organisation

Scope 2: Energy indirect emissions - As a result of electricity consumed which is supplied by another party, for example, electricity supply in buildings or outstations. Government has advised that this should also include other purchased indirect emission sources such as heat, steam and cooling

Scope 3: Other indirect GHG emissions - All other emissions which occur as a consequence of activity, but which are not owned or controlled by the accounting entity. The Council does not record scope three emissions.



Reporting Methods and Scope

The below table outlines emissions measured by the Council in each scope.

Table 1: Outlines each scope and what emissions they cover.

Scope 1 – Direct Emissions	Natural gas emissions from council buildings and schools
	Petrol used in fleet vehicles
Scope 2 – Energy Indirect Emissions	Electricity emissions from council buildings, schools and streetlighting
	Staff travel on Council business
Scope 3 – Other indirect GHG emissions	The Council does not report scope 3 emissions

Data

The carbon emissions data presented in this report is expressed in tonnes of carbon dioxide equivalent. The carbon emission data was calculated using the carbon conversion factors published by the Department for Energy Security and Net Zero in 2025. A baseline of 2009/10 was used.

Conversion Factors

The conversion factors are annually set by the Government and are subject to change due to several external factors. The Council has no involvement in setting conversion factors.

Carbon emissions are calculated by multiplying raw data (either kWh usage, millage or fuel litres) by the conversion factor for that activity and therefore any decrease in conversion factor will result in a reduction in emissions, even if there is no decrease in kWh or millage

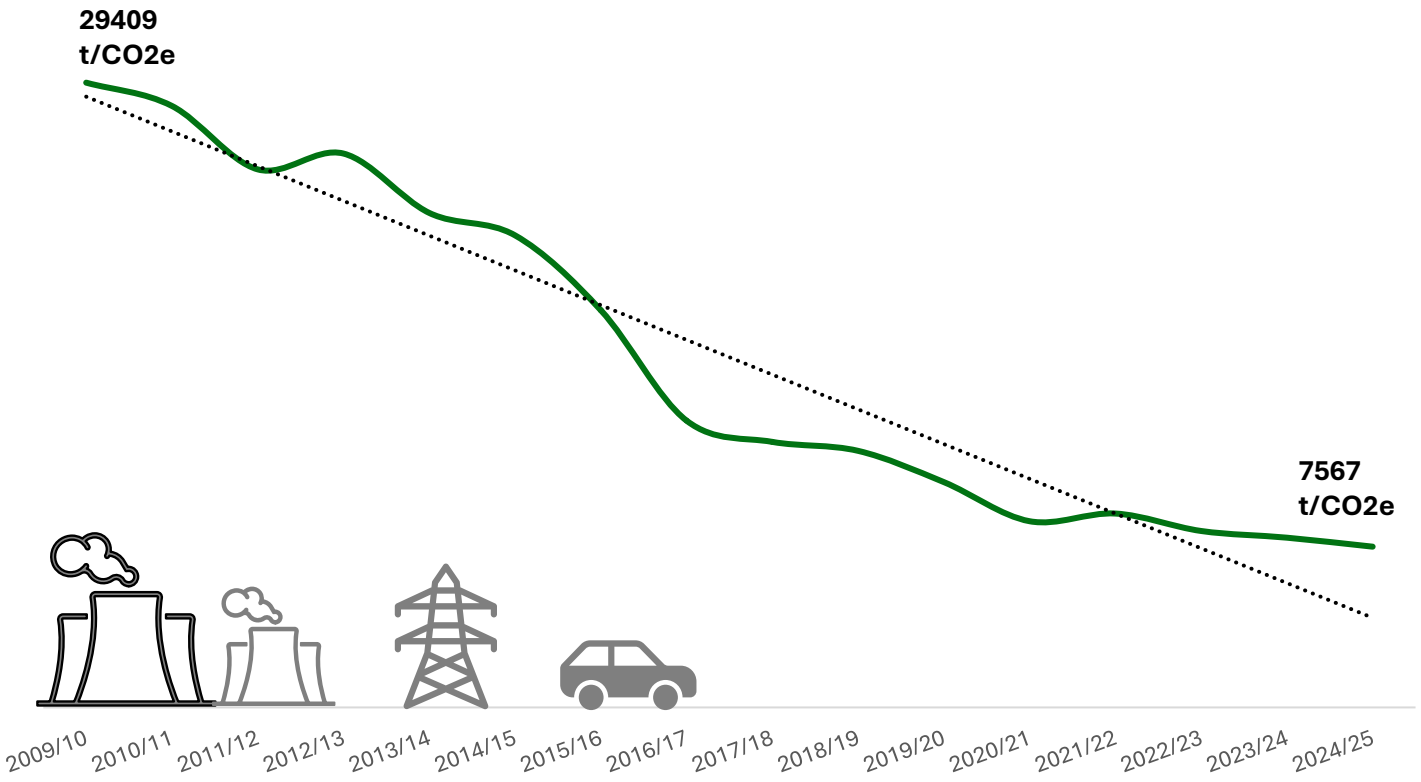
Emissions Trend

Knowsley Council has been compiling the Greenhouse Gas Report since 2009/10 and previously presented data on a scope-by-scope basis. As a Net Carbon Zero target has been declared, the data will now be presented in a simplified table and graph. A trend has been added to the graph to illustrate how on-target the Council is with its Net Cabron Zero 2040 target.

The Council has acknowledged that due to the services it provides it is unlikely to meet its Net Carbon 2040 target without offsetting but is primarily focusing on reduction emissions as close to absolute zero and will offset the residue emissions when and where appropriate.

Is it also noted that the Council will depend on the decarbonisation of the national grid to deliver some carbon emission savings from sources such as street lighting, electricity in Council buildings and from charging electric vehicles as these become more available.

The Council currently does not offset any emissions however, any future offsets purchased will be detailed in future Greenhouse Gas Reports. These offsets will be reflected in the trend graph.



Graph 1: Line graph displaying Knowsley Councils carbon emissions from 2009/10 to 2024/25 with a trend line.

Emissions Trend – 2024/25

The total carbon emission figure for Knowsley Council's estate and operations for the financial year of 2024/25 was 7567 tonnes CO2e.

The below table details the breakdown of emissions under each scope, comparing 2024/25 emissions to baseline data. The Council have reduced its greenhouse gas emissions by 74% in 2024/25 compared to baseline levels and by 5% compared to 2023/24. Table 2 shows the percentage changes for each scope for 2024/25 compared to baseline levels. There have been significant reductions in emissions under each scope, the highest reduction coming from electricity usage from Council owned buildings and schools (86%).

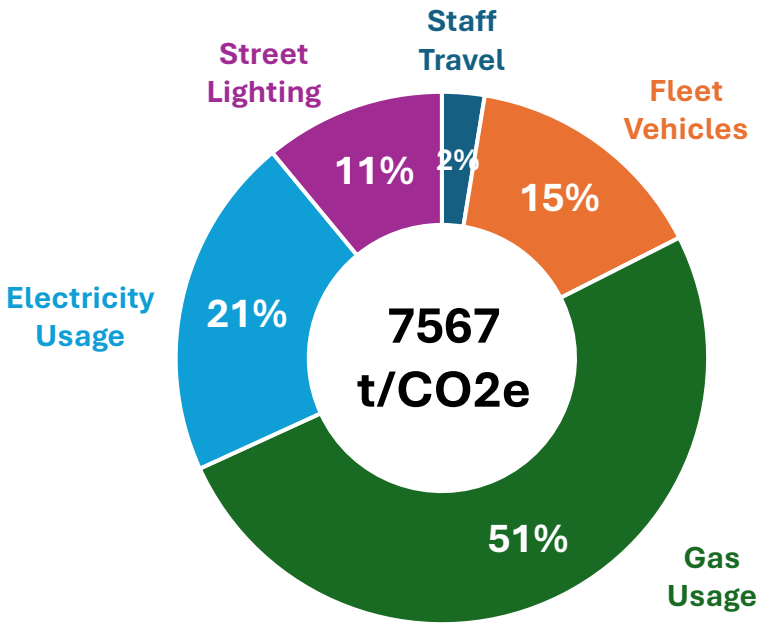
Table 2: Breakdown of emissions by scope.

	2009/10 (Baseline)	**2024/25**	
Scope 1	**CO2 Emissions (tonnes)**	**CO2 Emissions (tonnes)**	**% Changes**
Gas from Council owned buildings and schools	9753	3832	**-61%**
Fleet Vehicle fuel consumptions	1785	1132	**-36%**
Scope 2			
Electricity consumption from Council owned buildings and schools	11707	1577	**-86%**
Electricity from street lighting	5523	831	**-85%**
Staff Travel	642	195	**-68%**
Total	**29409**	**7567**	**-74%**

The accompanying charts shown below detail the breakdown of emissions for each scope, by building type and source. Analyses of this data will allow the Council to understand its highest emitting assets so action can be taken to make future reductions.

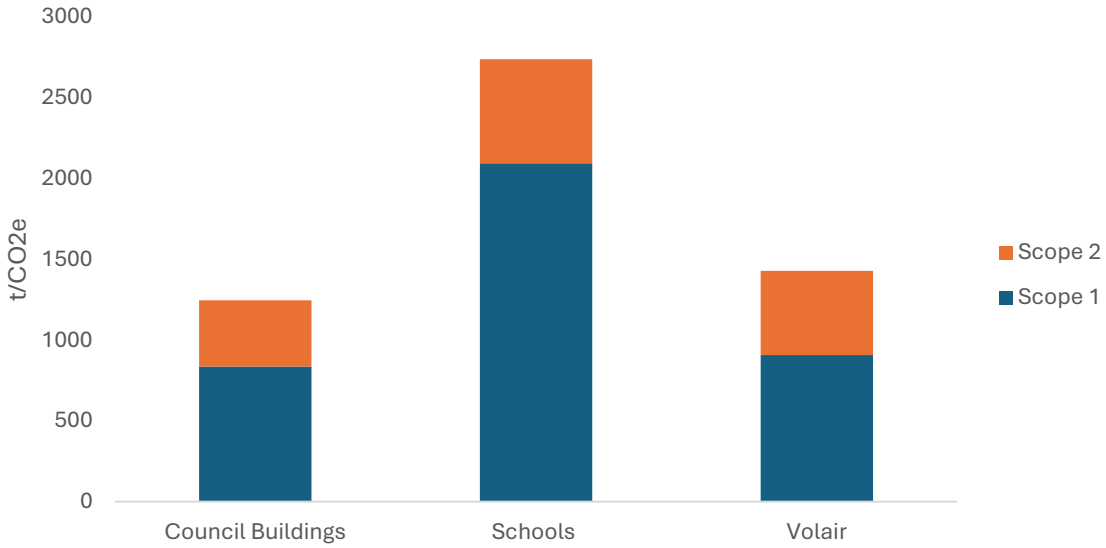
Emissions Trend – 2024/25

In 2024/25, gas usage was the biggest contributor to greenhouse gas emissions emitted by Knowsley Council, contributing 51%, followed by electricity usage (21%), fleet vehicles (15%), street lighting (11%) and staff travel (2%).



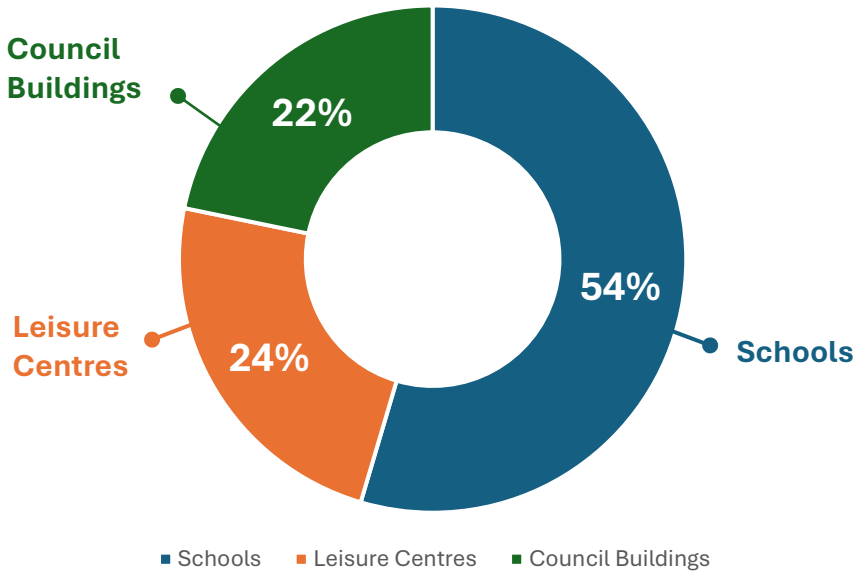
Graph 2: Breakdown of Knowsley Councils 2024/25 carbon emissions by category.

The below charts outline scope 1 and scope 2 emissions from different types of council buildings including, Volair (all leisure centres), schools and any other council owned buildings.



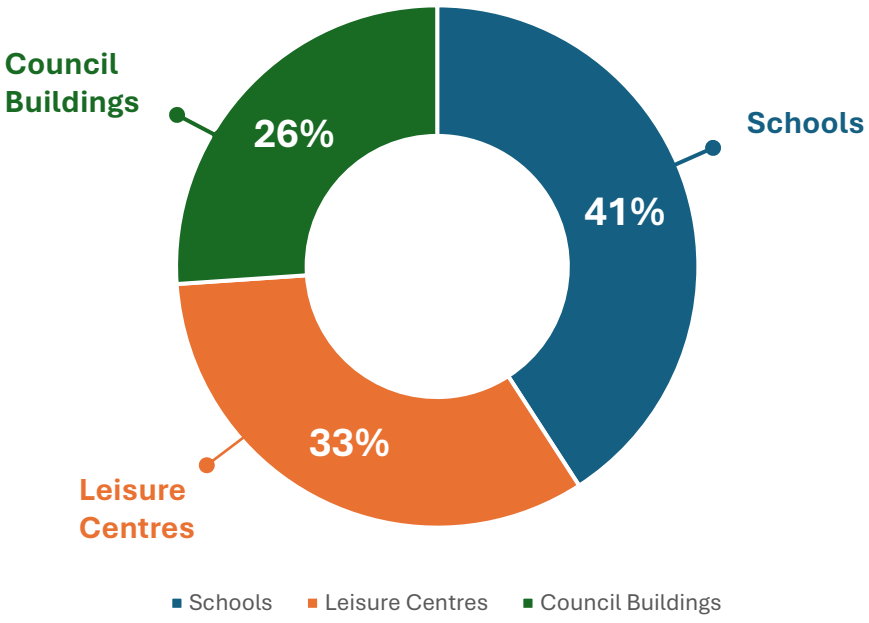
Graph 3: Bar chart displaying scope 1 and scope 2 emissions by building type.

In 2024/25 schools emitted the most scope one carbon emissions, contributing 54% to scope one emissions from buildings. This is due to high gas usage at schools and Knowsley having 54 primary schools and 12 secondary schools, contributing to scope 1 emissions.



Graph 4: Scope 1 emissions by building type

In 2024/25 schools emitted the most scope two emissions, contributing 41% to scope two emissions from buildings. This is due to high electricity usage from schools and Knowsley having 54 primary schools and 12 secondary schools, contributing to scope 2 emissions.



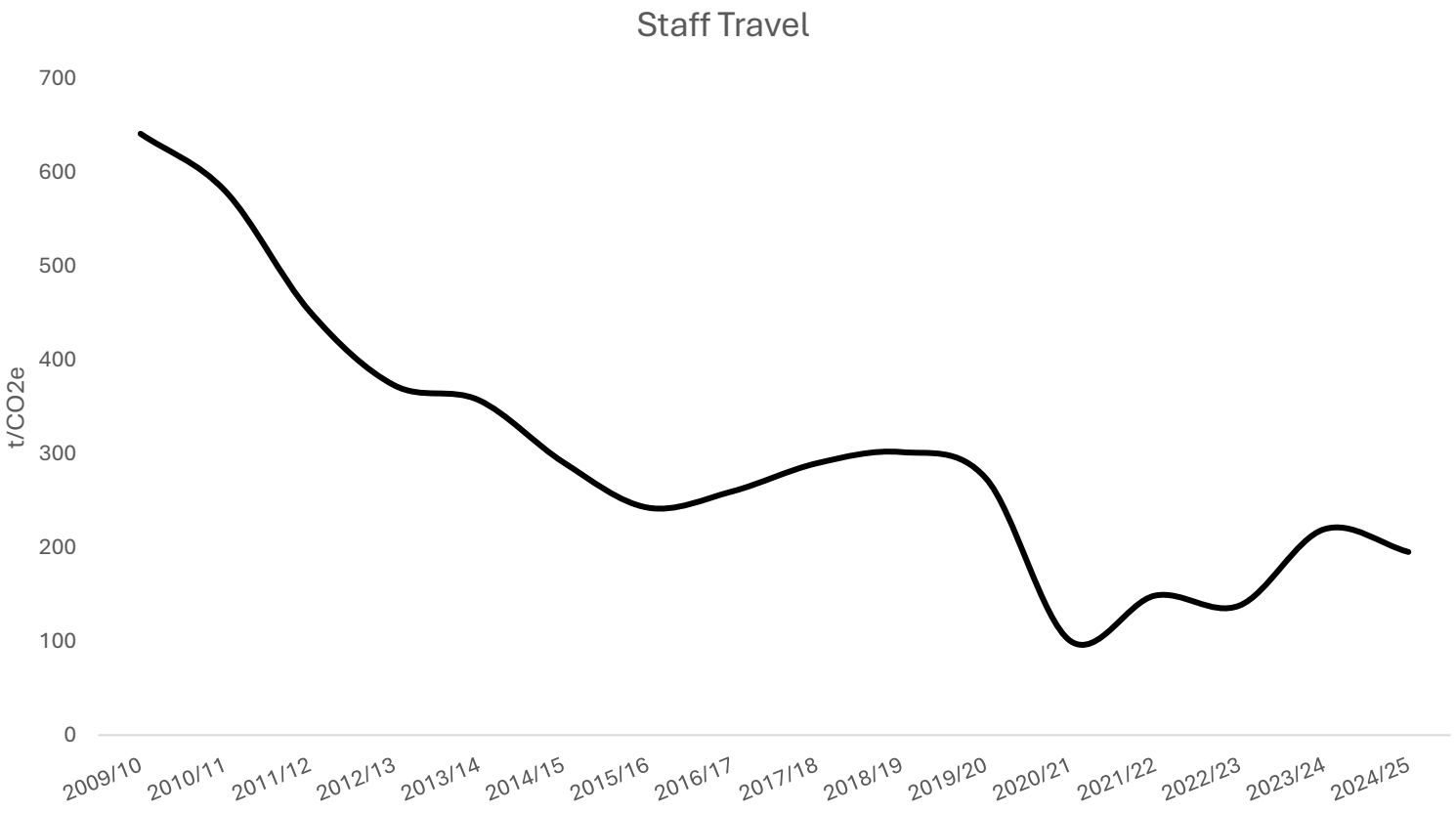
Graph 5: Scope 2 emissions by building type

Staff Travel

Staff travel has decreased by 12% compared to 2023/24 data. Due to the restrictions and home working introduced during the COVID-19 pandemic, extreme reductions in 2020/2021 and 2021/22 were observed. Following the lifting of these restrictions and the 'back to normal' approach, an increase in emissions was observed and expected in the following years.

Sustained reductions are now being seen which would be expected had the pandemic not occurred and can be attributed to several factors such as the introduction of hybrid working and the Council's Staff Travel Plan for staff.

When comparing the current reporting period of 2024/25 to pre-covid reporting period of 2019/20, there has been a reduction in 29%. Compared baseline levels, there has been a 70% reduction to carbon emissions from staff travel.



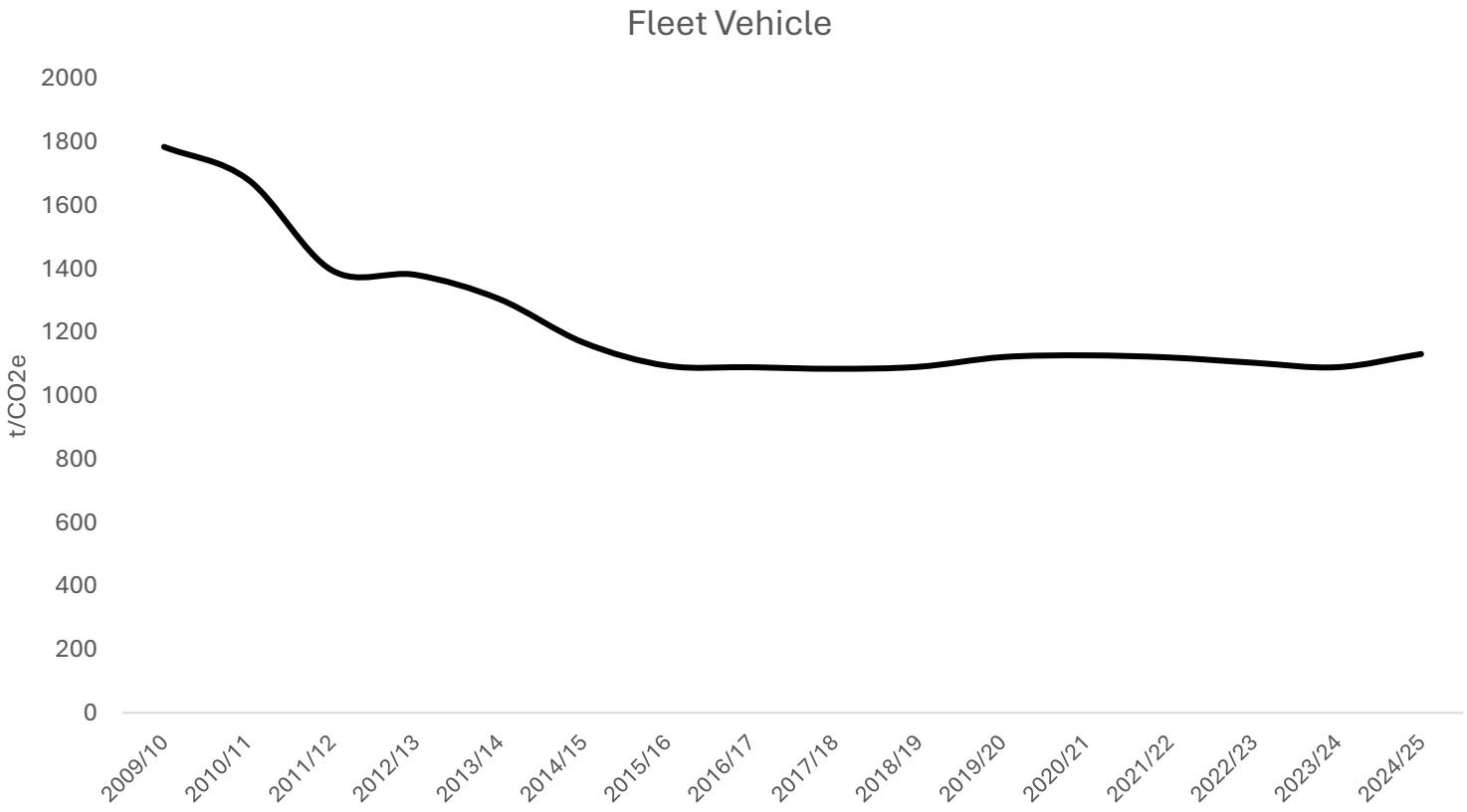
Graph 6: Emissions from staff travel from 2009/10 to 2024/25.

Fleet Vehicles

Emissions from fleet vehicles are made up from fuel usage in the Council's fleet and fuel used in hire vehicles for Council business. The borough has seen significant growth in the last few years with new housing estates increase the demand for the Streetscene service including the addition of three new refuge collection vehicles.

Emissions from fleet vehicle usage has plateaued in the last three years, however there was a slight increase in emissions in 2024/25 by 4% compared to 2023/24 which was expected due to the expansion of the service. However, there has still been a significant decrease in emissions by 36% compared to baseline emissions.

The Council is continually assessing the options to decarbonise the fleet and has created a fleet replacement programme that looks at non-combustion engine alternatives.



Graph 7: Emissions from fleet vehicles from 2009/10 to 2024/25.

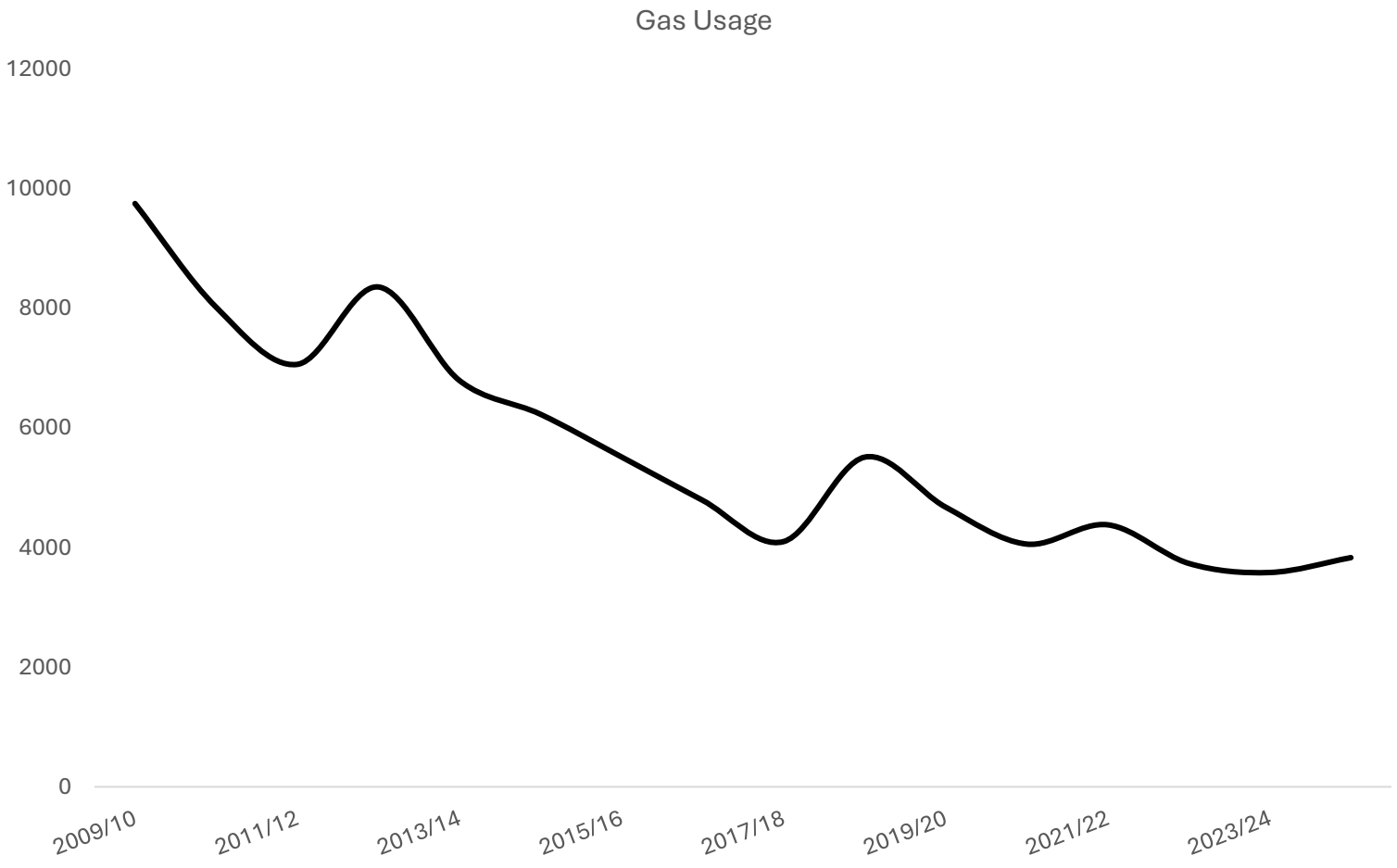
Gas Usage

Emissions from gas have increased by 6% compared to 2023/24 emissions but have decreased by 61% compared to baseline emissions. This increase can be attributed to a colder winter compared to 2023/24, increasing gas consumption to heat buildings.

The Council recognises that the decarbonisation of public buildings is a key priority to ensure that the Net Zero 2040 target is met, especially considering that gas use in Council buildings is responsible for 51% of the Council's overall carbon emissions in 2024/25.

Several successful decarbonisation project have been delivered since the declaration of the Climate Emergency including Kirkby Leisure Centre, Court Hey Park and Huyton Library. The Council's new HQ will be constructed with the Net Zero target at the heart of the design which will significantly contribute to reducing emissions.

The Council has seen several buildings come into the Council's asset portfolio for both improvement and maintenance and therefore inclusion of emissions from those buildings will have contributed to an increase in emissions.



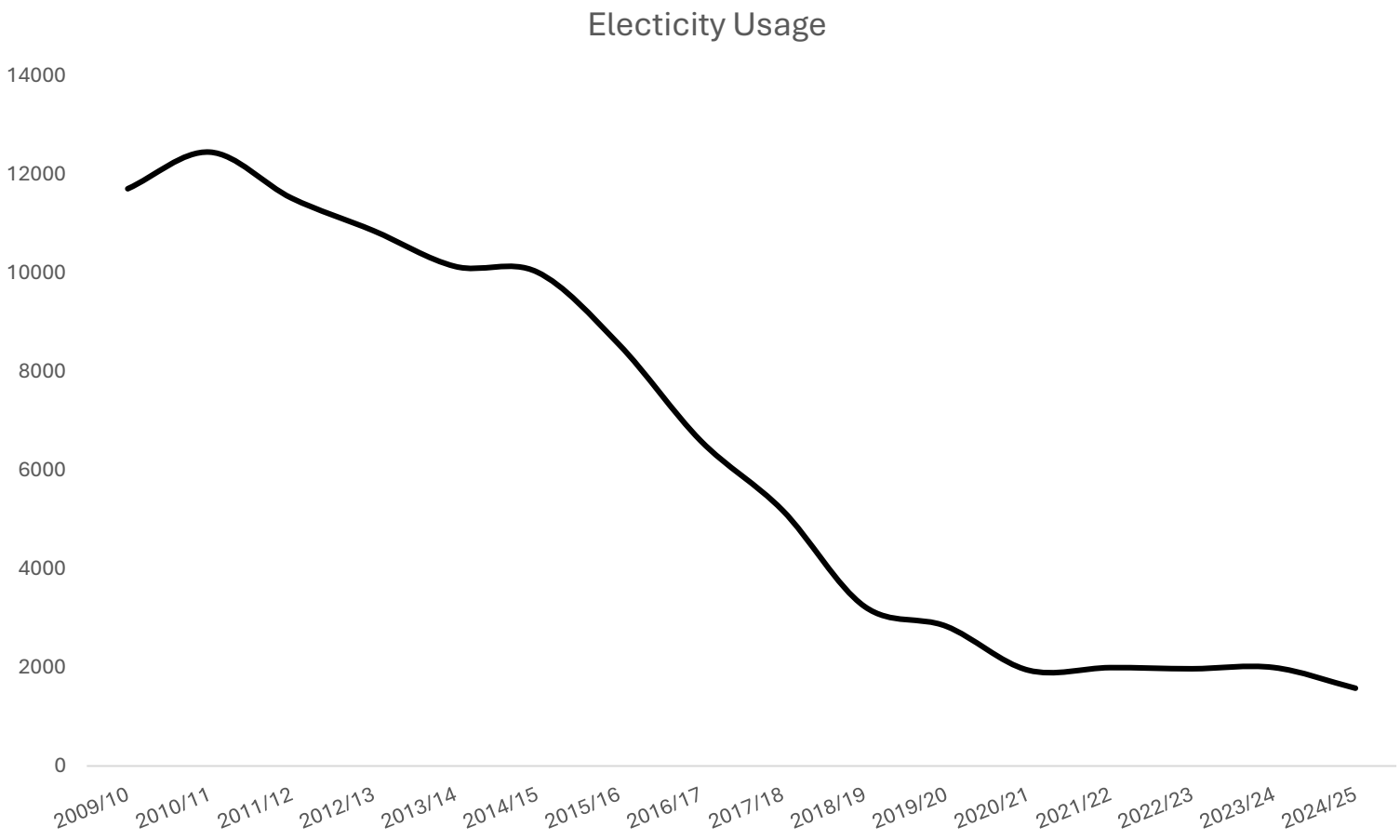
Graph 8: Emissions from gas usage from 2009/10 to 2024/25.

Electricity Usage

Emissions from electricity usage plateaued since 2020/21 however a 27% decrease was identified in 2024/25 compared to 2023/24 levels. There has been an 86% reduction in emissions from electricity usage in 2024/25 compared to baseline levels. Asset rationalisation can be attributed to this reduction in emissions from electricity usage.

There has also been a reduction in the conversion factor compared to 2023/24 with conversion factor being 0.177 in 2024/25 compared to 0.207 in 2023/24. The reduction in the conversion factor is due to the higher mix of renewable energy that supplied the National Grid and fluctuations in the relative price of coal and natural gas.

The Council have been running several energy efficiency campaigns such as 'Turn it Off', encouraging Council staff to become more conscious of their energy usage and to turn off lights and appliances when not in use.

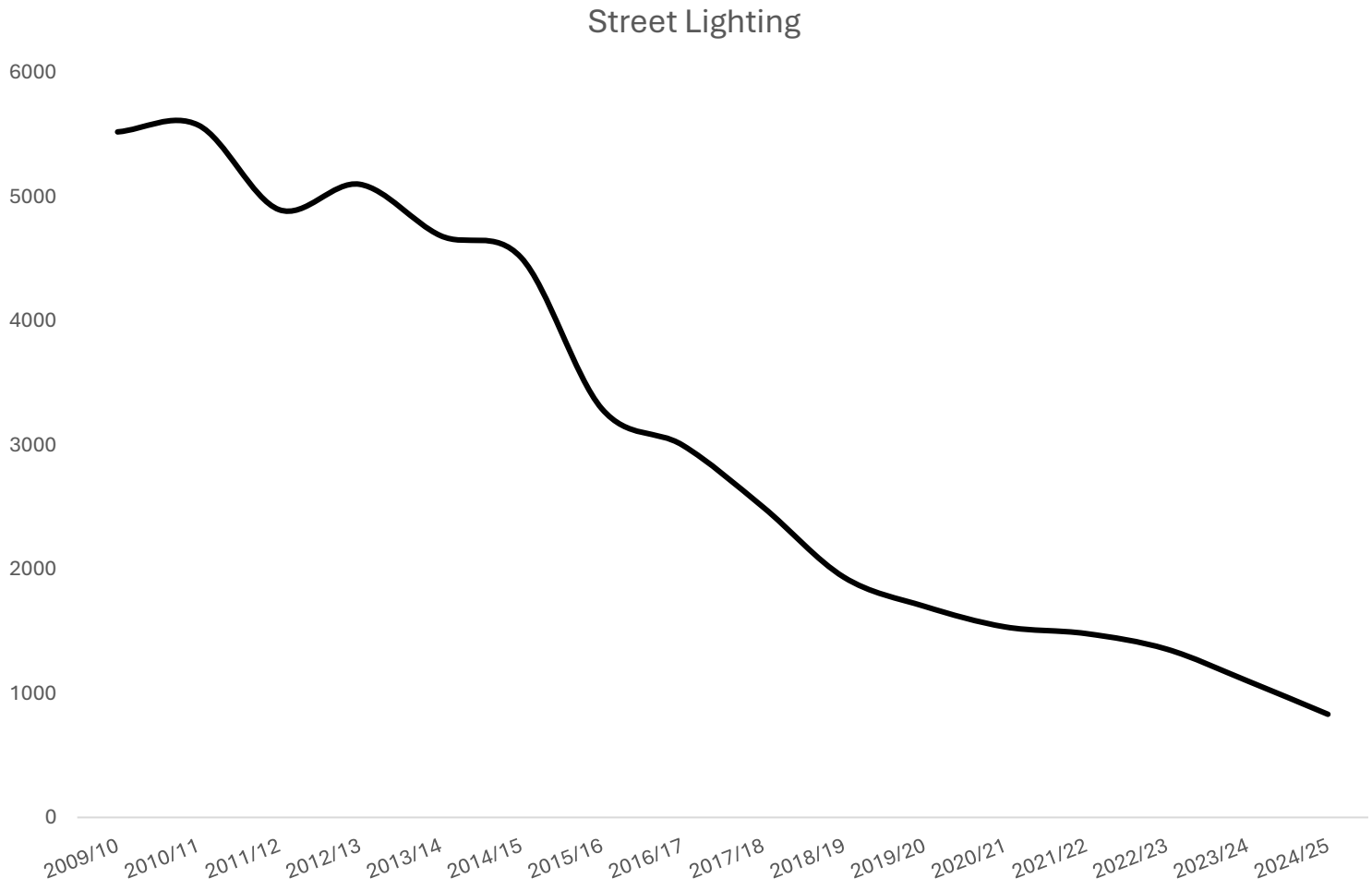


Graph 9: Emissions from electricity usage from 2009/10 to 2024/25.

Street Lighting

Emissions from street lighting continue to decrease and this is due to the reduction of the conversion factor for domestic electricity, as well as an LED replacement programme. Emissions from streetlighting in 2024/25 have reduced by 32% since 2023/24 and by 85% compared to baseline levels.

This decrease in primarily due to the Council's LEC Street Light Replacement Programme will see 20,046 bulbs replaced with more efficient LED alternatives. The programme is ahead of schedule with only 217 lanterns and 184 sign lights left to complete by September 2025.



Graph 10: Emissions from street lighting from 2009/10 to 2024/25.

Conclusion and Declaring Statements

Knowsley council has reduced its emissions by 74% compared to 2009/2010 emissions. Carbon emissions totalled 29,408 CO2e Tonnes in 2009/2010 which has now dropped to 7567 CO2e Tonnes in 2024/25.

Knowsley Council will continue to monitor greenhouse gas emissions and publicly report progress each year.

For further information regarding Knowsley Council's greenhouse gas emissions please contact: essenergy@knowsley.gov.uk

Declaration Statements

Knowsley Council is a metropolitan local authority based in Merseyside. The main address is Municipal Buildings, Archway Road, Huyton, L36 9YU.

The reporting period will cover the financial year 1st April 2024 to 31st March 2025. This report includes data on previous financial years for comparison purposes.

In producing this report, the following Government documents have been used:

UK Government Conversion Factors for Company Reporting' (Defra/DECC annually)

The data supplied in this report has been checked internally but has not been subject to an external assessment.

Appendix A

Appendix A outlines the sources of information used for calculating the Council's greenhouse gas emissions.

The organisational boundary for this report is the Council's estates and services which the Climate emergency Declaration and the Net Zero 2040 Target centralises on and which the council has some control of influence in relation to carbon emissions. Schools (excluding academies) have been included, and the council does not own any social housing.

Knowsley Council does not purchase any carbon offsets and does not purchase any energy under a green tariff.

Appendix A - Sources of Data

Energy use in corporate buildings, schools, learning centres and street lighting

Energy data was provided by the Council's Corporate Energy Team using energy bills and automatic meter readings (AMR's).

Fuel use in fleet transport

The Council has a fuelling station at the Huyton depot site, where fuel is supplied to fleet vehicles and equipment. Data on fuel use was supplied by the Fleet and Logistics Section's fuel management records.

Vehicles are also hired and on occasions are supplied with fuel, this data is included in the data.

Business miles travelled in own vehicles

An electronic system is used within the council to collate information on vehicle data and business mileage undertaken by staff. The Corporate Procurement Team provide annual reports from this system. Inaccuracies may occur where staff submit late claims or fail to make claims for the mileage undertaken.

Staff rail and air travel

The majority of business rail and air travel is booked through an external travel company. The travel company supply monthly reports to the Council and data such as passenger rail and air mileage is extracted from this.

Local travel on public transport is not included as staff purchase tickets themselves and are reimbursed via the electronic system. It is not currently feasible to extract this specific data from the electronic claims system.