Derbyshire County Council

Carbon Emissions Annual Report 2022-23

Introduction

This report summarises the greenhouse gas ("carbon") emissions produced from the estate and operations of Derbyshire County Council in the year 2022-23.

The Council is committed to reducing emissions in accordance with its Corporate Environment Policy. In October 2021, Cabinet members approved the Climate Change Strategy: Achieving Net Zero (2021- 2025) which details how the Council will take action to reduce emissions from its own estate and operations with a target to have net zero carbon emissions by 2032, or sooner, and also how it will work across the county to reduce Derbyshire's emissions to net zero by 2050.

What does the Council measure?

Emissions are recorded as tonnes of carbon dioxide and equivalent greenhouse gases (CO_2e). Emissions from four sources are currently included in the Council emissions data:

- Corporate Property (gas, electricity, oil and propane use) – excluding schools
- Streetlighting (electricity use)
- Core fleet (mileage)
- Grey fleet (mileage)

Emissions from school buildings are recorded separately to keep the data consistent. Including schools would lead to inconsistent results because the local authority school portfolio continues to change as more schools become academies.

The Council is currently working to quantify emissions from some 'hard to measure' sources such as waste, water and procurement.

Information and Analysis

Emissions from the Council estate and operations **have fallen by 14% between 2021-22 and 2022-23**, from 14,663 tonnes to 12,624 tonnes. This demonstrates a **71% reduction since the 2009-10 baseline year** where emissions were 42,966 tonnes.

Figure 1 presents emissions reductions since the baseline year (2009-10).

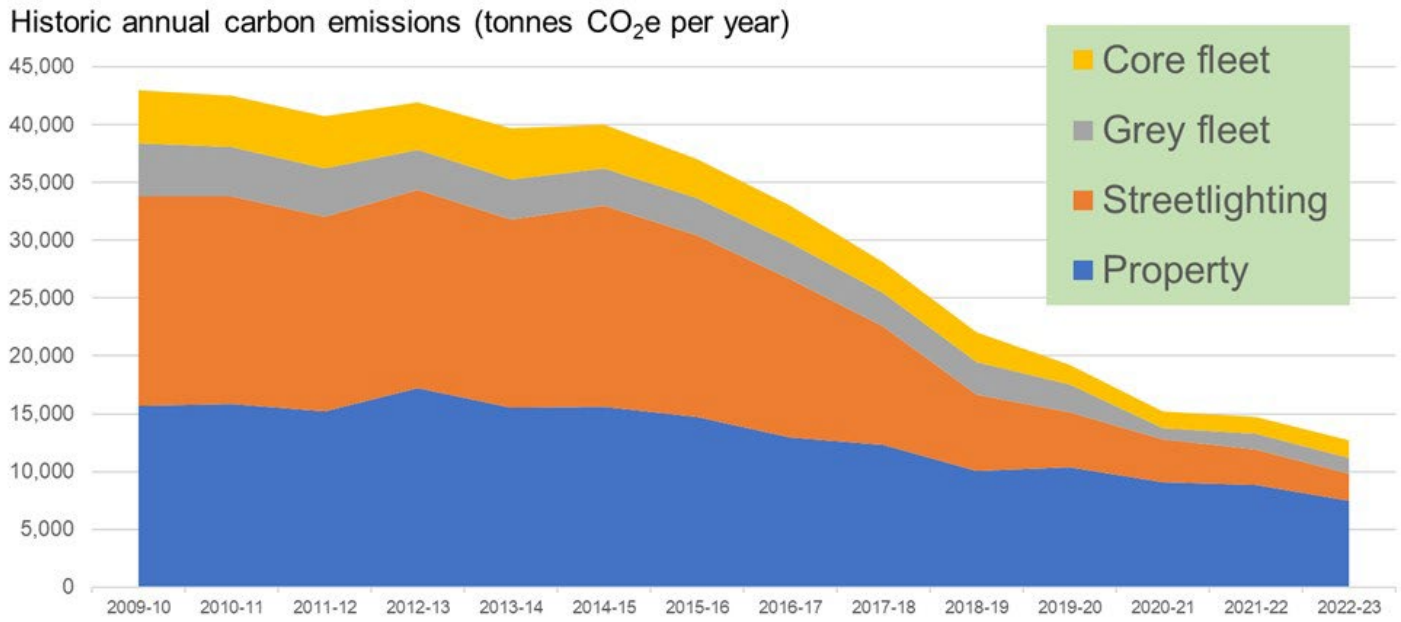

Figure 1: Council emissions reductions since 2009-10 baseline

Details of emissions from the Council's estate and operations for successive years are provided in Table 1 below.

Table 1: Emissions 2009-10 to 2022-23 (tonnes CO_2e)

	Greenhouse Gas Emissions 2009-10 to 2020-21 (tonnes CO_2e)				
Year	**Property (excl. schools)**	**Street & road lights**	**Core Fleet**	**Grey Fleet**	**Total**
2009-10	15,666	18,121	4,590	4,590	**42,966**
2010-11	15,989	17,918	4,413	4,331	**42,652**
2011-12	15,180	16,865	4,508	4,147	**40,700**
2012-13	17,215	17,162	4,090	3,466	**41,933**
2013-14	15,500	16,307	4,462	3,408	**39,678**
2014-15	15,642	17,325	3,746	3,281	**39,994**
2015-16	14,744	15,685	3,388	3,175	**36,992**
2016-17	12,942	13,687	3,172	3,166	**32,967**
2017-18	12,322	10,239	2,662	2,863	**28,087**
2018-19	10,023	6,617	2,564	2,861	**22,066**
2019-20	10,399	4,691	1,633	2,483	**19,206**
2020-21	9,126	3,667	1,385	989	**15,166**
2021-22	8,861	3,070	1,425	1,307	**14,663**
2022-23	7,475	2,388	1,394	1,367	**12,624**

Analysis

The data highlights a continuing decline in the amount of carbon emitted by Derbyshire County Council since the baseline year of 2009-10. Emissions have fallen from 42,966 tonnes of CO_2e in 2009-10, to 12,624 tonnes of CO_2e in 2022-23, a reduction of 71%.

The majority of the Council's emissions in 2022-23 were generated from Council property (59%), followed by street lighting (19%), whilst core fleet (11%), and grey fleet (11%), account for the remainder of the emissions

The most significant reduction in emissions has occurred in street lighting with an 87% reduction since 2009-10. The emissions reduction is due to

continuation of the LED replacement programme, night-dimming and part-night lighting, along with decarbonisation of the electricity grid.

There has been an increase in emissions from grey fleet between 2021-22 and 2022-23. The increase in emissions is due mainly to the increased mileage undertaken by employees from Children's Services and Adult Social Care and Health to meet additional care needs in communities and the impact of services continuing to be affected by the impacts of COVID-19. However, emissions from grey fleet remain lower than pre-COVID levels.

Emissions Projections

To quantify the gap between the Council's net zero target and current and planned activities, annual emissions projections to 2031-32 have been modelled using information on modest ongoing and planned initiatives, anticipated changes in carbon conversion factors (influenced by national factors, such as the amount of renewable energy generated) and any other influencing factors, such as the gradual increase in Electric Vehicles amongst employees.

The modelling undertaken suggests that, for the four sources measured and reported, there will be a potential shortfall in the necessary emissions reduction of 7,250 tonnes CO_2e by 2031-32. Over 50% of these residual emissions will be from the Council's Corporate Property.

This requires both:

a. a step-change in emissions reduction performance, particularly for decarbonising heat in buildings and the reduction in and electrification of travel by car and vans; and
b. the development and implementation of plans to offset some of the residual emissions through renewable energy generation on Council-owned buildings and land (e.g. solar power), and to sequester carbon through activities such as tree planting.

Supplementary work is underway to establish how this shortfall can be most effectively addressed. These projections will be further reviewed and revised on an annual basis.

Conclusion

The Council has made good progress in reducing emissions from its own estate and operations and has ambitious plans to further reduce these. However, a key challenge is to reduce emissions from buildings, many of which are of considerable heritage value and are listed and can be difficult to retrofit. Moving forwards, the Council has widened the scope of its emissions

reduction programme and is working to both measure and reduce emissions from sources it does not have direct control over.