



Transition Chesterfield Analysis of Chesterfield’s carbon dioxide emissions September 2024

Total emissions

Table 1 shows that in 2022 (latest figures available) the borough of Chesterfield emitted a total of 0.5 million tonnes of carbon dioxide¹, equivalent to 4.8 tonnes/capita.

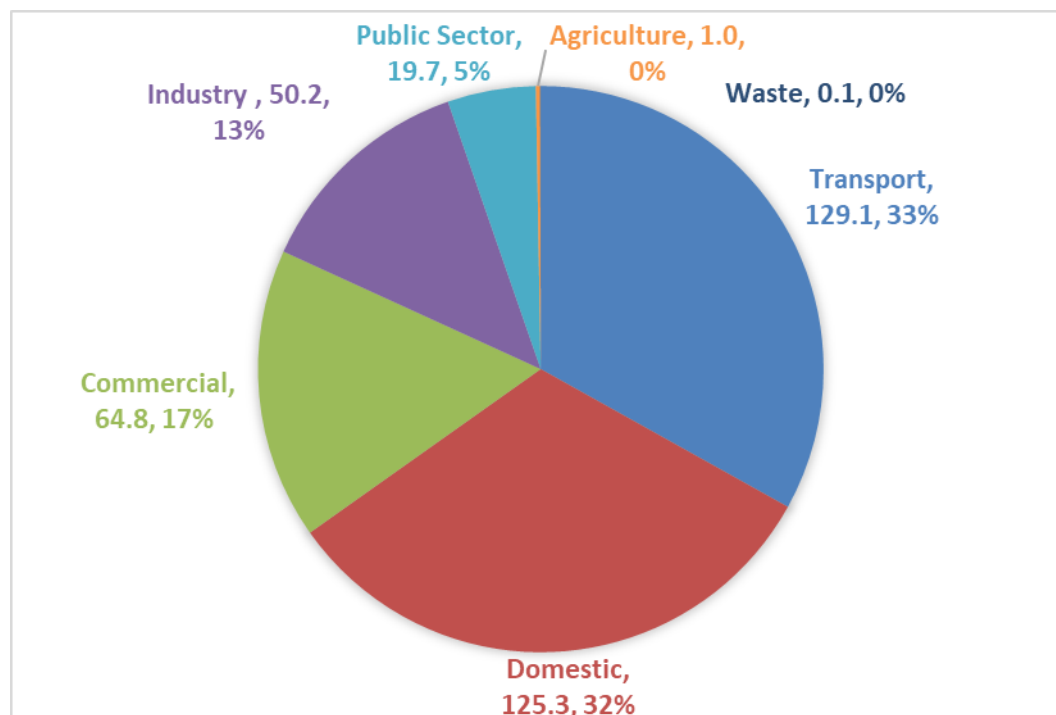
Table 1 also shows the emissions within the scope of influence of local authorities² which are effectively more relevant for local authority action. These figures show that in 2022 Chesterfield emitted a total of 0.39 million tonnes of carbon dioxide, equivalent to 3.75 tonnes/capita.

Table 1: Emissions of carbon dioxide in 2022 in the Chesterfield Borough Council area

Emission category	CO ₂ emissions (million tonnes/year)	CO ₂ emissions per capita (tonnes/capita)
Total emissions in 2022	0.50	4.8
Emissions within the scope of influence of local authorities in 2022	0.39	3.75

Taking the emissions within the scope of influence of Chesterfield borough council and Derbyshire County Council, Figure 1 below shows that the main sources of emissions are transport (mainly road transport), domestic (gas heating and electricity), commercial and industry.

Figure 1: Emissions of CO₂ within the scope of influence of local authorities in Chesterfield in 2022 by sector (kt CO₂ and %)



¹ Department for Energy and Net Zero (2024) [UK local authority and regional greenhouse gas emissions statistics: 2005-2022](#) Table 1.1 shows total CO₂ emissions by local authority. Table 2.1 shows CO₂ emissions within the scope of influence of local authorities.

² This excludes major industries of national significance (e.g. power station and cement plants) and traffic on motorways and A roads managed by Highways England.

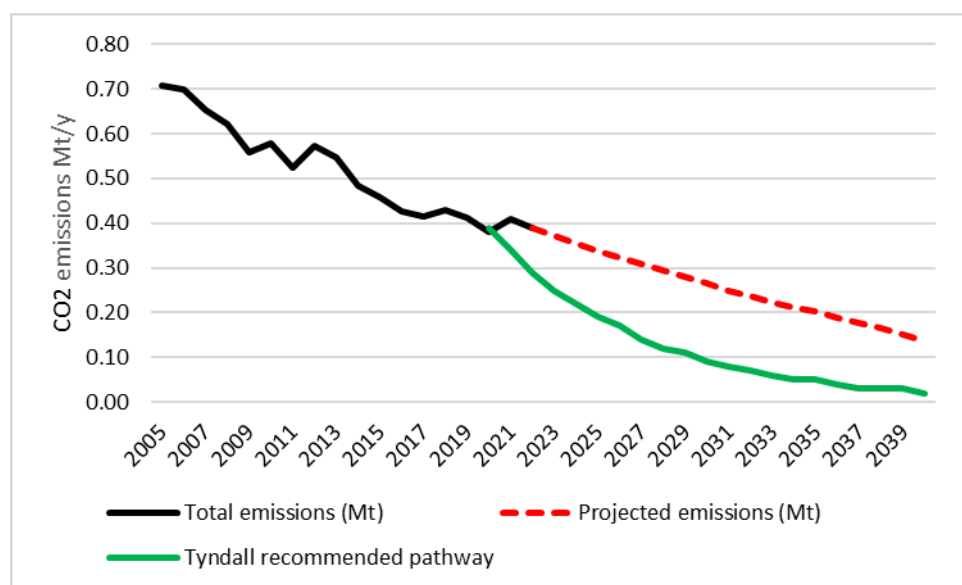
Compliance with targets

Although local authorities have no official targets the Tyndall Centre of Climate Research³ has provided recommended reduction pathways for all local authorities in order for the UK to meet its international obligations on climate change under the 2015 Paris Agreement.

This suggests that in 2022 the target emission for Chesterfield Borough should be 0.29 million tonnes, which is much lower than either of the actual emissions in Table 1.

Figure 2 below shows that emissions are not falling rapidly enough. It shows the actual emissions within the scope of influence of local authorities (2005-2022) (black line), projected emissions to 2040 based on the average rate of reduction (red dashed line), compared with the Tyndall Centre's recommended reduction pathway (green line).

Figure 2: Actual CO2 emissions in Chesterfield (2005-2022) and projected emissions (2022-2040) compared with the Tyndall Centre recommended reduction pathway.



If we take 2005 as the starting point Chesterfield's emissions (within the scope of influence of local authorities) have dropped by over two fifths (45%), but this is largely due to the decarbonisation of the electricity grid and the reduction of manufacturing, plus a greater dependence on imported goods. Transport emissions have stubbornly failed to fall (they are the same as in 2011) and will not fall sufficiently unless we radically improve public transport and safe, active transport alternatives, and plan development around these rather than increasing car dependency. Electric vehicle sales are not keeping pace with climate targets⁴ and vehicle sizes continue to increase.

What can we do?

Responsibility lies not only with Chesterfield's residents, but also with policy makers and Government to give a lead. Chesterfield is making far too little progress in reducing carbon emissions. Members of the public, business and industry leaders and elected Councillors and politicians need to be made aware of the enormity of the climate crisis. Local government needs to be taking up the issue as well as putting pressure on the UK government to do more on climate action.

³ The Tyndall Carbon Budget Tool presents climate change targets for UK local authority areas that are based on the commitments in the United Nations Paris Agreement, informed by the latest science on climate change and defined by science based carbon budget setting, based on translating the "well below 2°C and pursuing 1.5°C" global temperature target and equity principles. Tyndall Centre for Climate Change Research (2024) [Setting Climate Commitments for Chesterfield](#).

⁴ As of March 2024, less than 3% of all cars on the road were battery EVs (Department for Transport and Driver & Vehicle Licensing Agency, 2024) [Vehicle licensing statistics data tables](#).