

Natural Environment, Climate and Ecology

Progress Report – Autumn/Winter 2024



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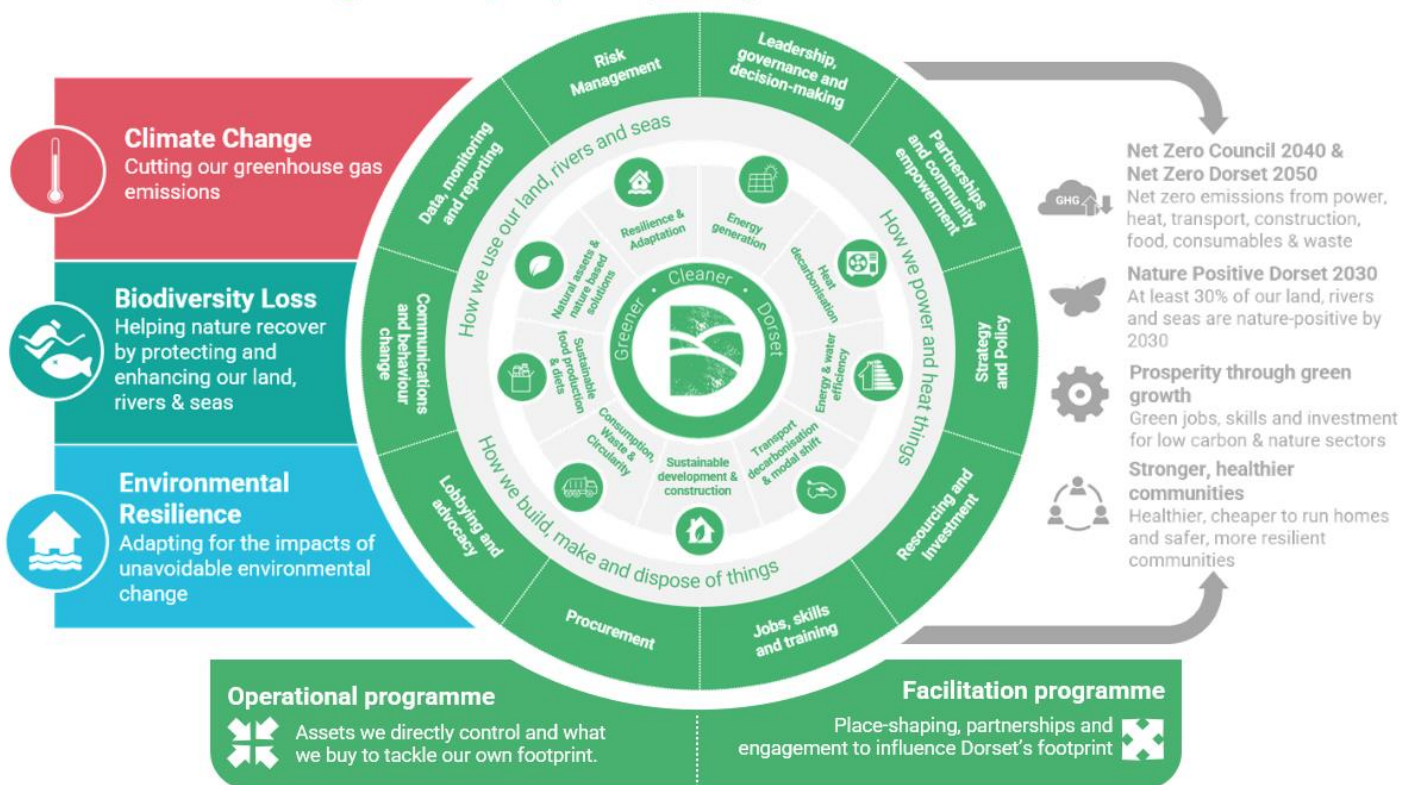


1. Introduction

1.1. Dorset Council’s first climate and ecology strategy and action plan were adopted by Full Council on 15 July 2021, setting clear targets towards a carbon neutral council by 2040 and a carbon neutral county by 2050. In March 2023 we refreshed the strategy and action plan for Phase 2 of our programme, tweaking our vision for a net zero, nature positive and resilient council and county.

Figure 1: *Natural Environment, Climate and Ecology Strategy 2023-25 diagram*

Our vision is for a **carbon neutral, nature positive and resilient Dorset** achieved through a **clean, green and fair transition** and that generates prosperous, stronger and healthier communities.



1.2. Upon the adoption of the first strategy in 2021, it was agreed that we would produce biannual progress reports. This progress reporting¹ takes two forms:

- Spring/Summer reporting: qualitative narrative on delivery within our operational and facilitation programmes – i.e. on our interventions we undertake.
- Autumn/Winter reporting: quantitative reporting on the consequent changes to our council and county emissions trajectory – i.e. on the outcomes.

1.3. This report provides an update on our emissions trajectory using the latest data. As such, it does not provide a comprehensive or detailed narrative of programme delivery, which was the subject of our earlier qualitative report on programme delivery released in July 2024.²

¹ <https://www.dorsetcouncil.gov.uk/progress-so-far>



2. Dorset Council emissions

2.1. About this data

- 2.1.1. Due to the difficulty and complexity of collecting carbon emission data, the data included in this report is as accurate as possible, but in some areas is estimated. It aims to give an indication of scale, as well as provide a picture of our performance year on year.
- 2.1.2. Each year, the Department for Energy Security and Net Zero releases a set of conversion factors for calculating an organisation's emissions.² These conversion factors are multiplied by the council's consumption data to give a figure for Carbon Dioxide Equivalents (CO₂e) emitted. Emissions in this report are given in measurements of tonnes of Carbon Dioxide Equivalents (tCO₂e).
- 2.1.3. Net zero calculations should balance CO₂e emitted against CO₂e removed and offset by measures such as renewable energy exported back to the grid and carbon sequestration through nature-based solutions. The council does not currently have a robust method of measuring carbon offsetting or removal. Because of this, this progress report does not include offsetting data, but the council will be investigating this in time for next year's data.
- 2.1.4. Our baseline data, for which this progress report is measured against, does not take full account for external emissions such as procurement and homeworking. These figures are already captured in the Dorset-wide figures and are outside of the council's direct control. Their inclusion would skew our monitoring and reporting through double counting. In last year's progress report, an indicative estimate for Working from Home emissions was given as 1,964 tonnes of CO₂e. This was calculated using a method based on the Homeworking Emission Whitepaper by EcoAct in partnership with Lloyds Banking Group and NatWest Group. Since that report, the Department for Energy Security and Net Zero have now included a conversion factor for Homeworking. This conversion factor is based on a refined version of the methodology from the Homeworking Emission Whitepaper. Based on approximate staff working patterns for 2023/24, this conversion factor gives an indicative estimate for emissions from Working from Home to be 1,334.65 tonnes of CO₂e.

² [Greenhouse gas reporting: conversion factors 2023 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2023)



2.2. Changes from previous years

- 2.2.1. The council continuously works towards making its data as accurate and robust as possible. As such, the method of collection for some data may change from year to year as more accurate methods are used.
- 2.2.2. Streetlighting and Overall Baseline Data: During measurement of the council's streetlighting consumption, it was raised that a portion of Dorset Council's streetlighting data contains streetlighting in Christchurch, an area that is part of Bournemouth, Christchurch and Poole Council. This would have been carried over from the previous agreement before Local Government Reorganisation in 2019. This Christchurch share of Dorset Council's assets is assessed to be 14.73% of the whole streetlighting service. This share has now been removed from Dorset Council's streetlighting figures and has been backdated to the baseline year to give an accurate point of comparison throughout this report. As such, baseline data in this report will be different from that shared in previous reports.
- 2.2.3. Fleet Fuel Usage: In previous years, fuel usage data for the council's bunkered sites was estimated through comparing the average price per litre of fuel per month to the annual spend on fuel. For this report, fuel data has been able to be collected in litres of fuel from these sites to give a more accurate figure on emissions from the council's fleet.
- 2.2.4. Dorset Travel: In previous years, reporting was based on assumptions using the data available at the time. The information provided used estimated annual mileage and assumed users had travelled on all days throughout the period, which in some instances was not the case. This year's data should provide a more accurate reflection of usage across all areas of Dorset Travel. This has been backdated where possible for the years 2021/22 and 2022/23.



2.3. Council-wide carbon emissions

Compared to the baseline year (2019/20), Dorset Council emissions have reduced by approximately 27% to 23,841 tonnes of CO₂e.

2.3.1. The council collects the consumption data of its workstreams across the council, such as the usage of fuel for its fleet vehicles and the electricity to power its buildings and assets. This consumption data is then converted into CO₂e using the Department for Energy Security and Net Zero conversion factors. In 2023/24, the key sources of greenhouse gas emissions and their percentage of the council's total emissions were:

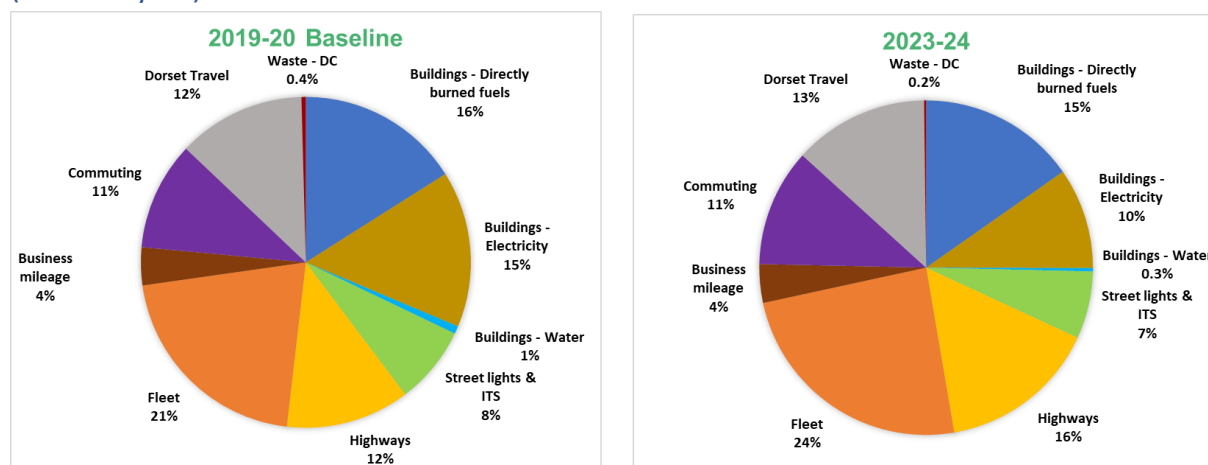
Table 1: Dorset Council Greenhouse Gas Emission Sources

Workstream	Percentage of Council's Total Emissions
Buildings – Directly burned fuels	15%
Buildings – Electricity	10%
Buildings – Water	0.3%
Streetlighting and Intelligent Transport Systems	7%
Highways Materials	16%
Fleet Fuel	24%
Business Mileage	4%
Commuting	11%
Dorset Travel	13%
Waste – DC Buildings	0.2%

2.3.2. When comparing this makeup to the baseline year, some areas have reduced their emissions at a faster pace than others, shown as a reduction in their percentage of the council's total emissions. *Figure 2* shows breakdowns of 2019/20 and 2023/24:



Figure 2: Pie charts of Dorset Council Greenhouse Gas Emissions sources for 2019-20 (Baseline year) and 2023-24



2.3.3. In 2023/24, all workstreams across Dorset Council showed a reduction in their emissions compared to the baseline year of 2019/20. Table 2 shows the percentage change in emissions for each workstream in 2023/24 compared to the baseline year of 2019/20.

Table 2: Percentage change in emissions for each workstream in 2023/24 compared to baseline year (2019/20)

Workstream	Percentage Change compared to 2019/20
Buildings – Directly burned fuels	-30.4%
Buildings – Electricity	-53.4%
Buildings – Water	-69.3%
Streetlighting and Intelligent Transport Systems	-37.6%
Highways Materials	-7.1%
Fleet Fuel	-15.2%
Business Mileage	-26.3%
Commuting	-21.6%
Dorset Travel	-23.6%
Waste – DC Buildings	-66.6%
Total	-27.0%

2.3.4. Water (-69.3%) and Waste (-66.6%) from council buildings have seen the sharpest decreases in emissions. Both areas have seen some improvements and efficiencies introduced, but have largely been helped by significant drops in the national conversion factors.

2.3.5. Electricity-based emissions, such as for buildings (-53.4%) and streetlighting (-37.6%), have seen the next biggest decreases, due to retrofitting assets to



be more energy-efficient and installing solar photovoltaic (PV) panels to reduce the council’s demand for electricity from the grid. The council has also worked to replace directly burned fuels in buildings with electricity where possible, showing a -30.4% change in emissions.

2.3.6. Vehicle-based emissions have all decreased, with Business Mileage (-26.3%), Dorset Travel (-23.6%) and Commuting (-21.6%) all reducing by a similar percentage. Fuel for the council’s fleet (-15.2%) has not reduced at quite the same rate as other vehicle-based emissions, which has led to it taking up a larger portion of the council’s overall emissions, from 21% in 2019/20 to 24% in 2023/24.

2.3.7. The smallest saving in emissions is seen in Highways (-7.1%), which has seen an increase on the previous year due to increased activity over this year.

2.4. How has each workstream performed?

Every workstream has reduced its emissions compared to the baseline year, but four areas show an increase compared to the year prior (2022/23). These are streetlighting (3.0%), Highways Materials (23.6%), Business Mileage (7.1%), and Commuting (19.9%). This has led to an overall 0.35% decrease in emissions compared to the year prior.

Table 3: Breakdown of Council emissions by tCO₂e and percentage change compared to the baseline year (2019/20) and the previous year (2022/23)

Workstream	2019-20 Baseline (tCO ₂ e)	2023-24 (tCO ₂ e)	% Change from Baseline	% Change from 2022/23
Buildings – Fuels	5,235	3,644.6	-30.4%	-5.8%
Buildings – Electricity	4,990	2,326.1	-53.4%	-11.7%
Buildings – Water	246	75.6	-69.3%	-26.6%
Streetlighting and ITS	2,491	1,553.9	-37.6%	3.0%
Highways Materials	3,960	3,677.9	-7.1%	23.6%
Fleet Fuel	6,829	5,794.1	-15.2%	-9.7%
Business Mileage	1,209	891	-26.3%	7.1%
Commuting	3,457	2,710	-21.6%	19.9%
Dorset Travel	4,082	3,121	-23.6%	-1.8%
Waste – DC Buildings	141	47.2	-66.6%	-12.4%
Total	32,641	23,841	-27.0%	-0.35%



2.4.1. Buildings and Assets

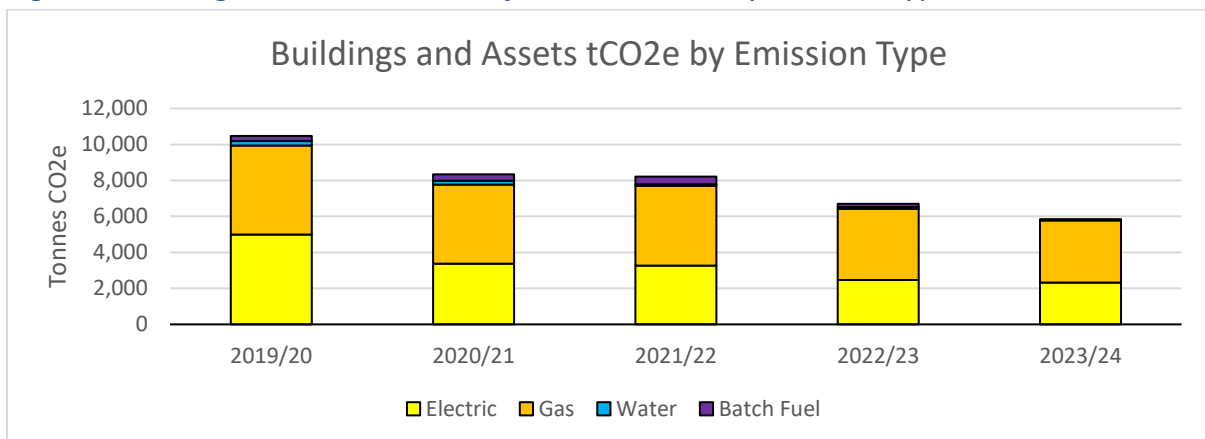
Compared to the baseline year (2019/20), Dorset Council's electricity, fuel and water emissions for its **buildings and assets** have **reduced by approximately 42.3% to 6,046 tonnes of CO₂e**.

2.4.1.1. The council's buildings and assets have seen the largest decrease in emissions for all workstreams in terms of tonnage. The combined total of electricity, directly burned fuels, and water supply and treatment has decreased by 4,425 tonnes of CO₂e compared to the baseline year.

Table 4: Breakdown of emissions for Buildings and Assets by Emission type

Emission Type	2019/20 (tCO ₂ e)	2023/24 (tCO ₂ e)	Difference (tCO ₂ e)
Directly burned fuels	5,235.2	3,644.6	1590.6
Electricity	4,990.0	2,326.1	2,663.9
Water	246.3	75.6	170.7
Total	10,472.6	6,046.4	4,425.2

Figure 3: Buildings and Assets tonnes of CO₂e emissions by Emission Type, 2019-2024



2.4.1.2. The council has worked to replace fuel-burning heating systems with heat pumps across a number of sites, which use electricity instead, reducing the demand for directly burned fuels. Despite this, the council has more than halved its emissions from electricity since the baseline year through improvements in building energy efficiency, such as retrofitting buildings with LEDs and upgraded building management systems. The council has also increased the amount of electricity it generates on-site through renewable sources such as solar PV panels (from 1MW to 5MW), reducing the need to import grid electricity.

2.4.1.3. Since the baseline year, the national conversion factor for grid electricity has reduced as it has drawn more from renewable sources such as wind farms and



nuclear, and reduced fossil-fuel sourced electricity generation. However, the conversion factor for electricity in 2023/24 saw an increase on the previous year, due to an increase in natural gas usage in centralised electricity generation across the UK. Despite the increased national conversion factor and transferring of fuel-based emissions to electricity within the council’s estate, the council saw a 5.8% year-on-year decrease in electricity emissions, due to its continued work towards on-site generation and energy efficiency.

2.4.2. Waste from Dorset Council sites

Compared to the baseline year (2019/20), emissions from **Waste** from Dorset Council sites have **reduced by approximately 66.6% to 47 tonnes of CO₂e**.

- 2.4.2.1. Waste emissions from Dorset Council sites have decreased from 141 tonnes of CO₂e in 2019/20, to 47 tonnes in 2023/24. This is a reduction of 7 tonnes from the 54 tonnes in 2022/23. This is despite the recycling rate for 2023-24 being almost identical to the year prior, at 26.67%.
- 2.4.2.2. However, the Mechanical Biological Treatment (MBT) plant where Dorset Council’s rubbish is sent, saw an improvement, with 0% of the processed waste in 2023/24 going to landfill, compared to 1.3% in 2022/23. This has resulted in more waste in 2023/24 being treated through thermal combustion, which has a lower carbon factor than landfill.
- 2.4.2.3. Dorset’s reduction in waste emissions since the baseline year has also been helped by the improvement of national carbon factors for waste since 2019, and the reduction in the number of Dorset Council sites, due to academisation of several schools and the closure of council sites. Compared to 2022/23, 19 sites are no longer counted towards the council’s waste collection, whilst only 2 have been added.
- 2.4.2.4. Emission improvements since 2019/20 may also be affected by the council’s improvements in measuring its waste. Improvements added over the past five years, such as weighing equipment on vehicles taking waste from sites, mean that Dorset Council can more accurately measure, rather than estimate, its waste. These estimations in the baseline year may have overstated the tonnage of waste, which has now been corrected by more accurate measuring.

Table 5: *Breakdown of Waste from Dorset Council sites by Emission type*

Emission Type	2019/20 (tCO ₂ e)	2023/24 (tCO ₂ e)	% Change from Baseline
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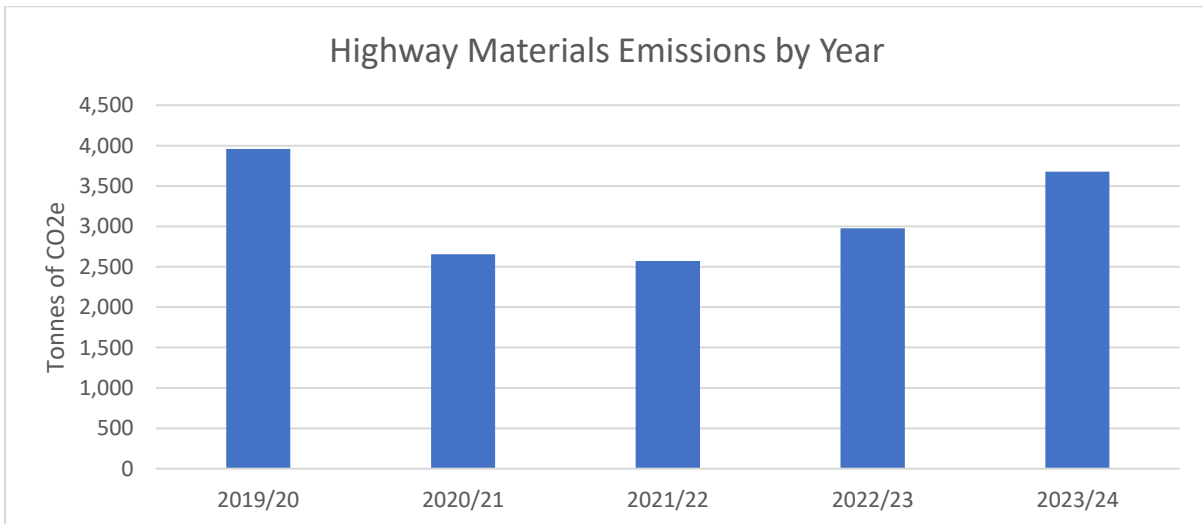
Recycling	4.8	5.4	13%
Food Waste	1.6	1.2	-25%
Glass Waste	0.4	0.5	20%
MBT Treatment - Biological	0.8	0.6	-30%
MBT Treatment - Thermal	19.7	20.5	4%
MBT Treatment Landfill & Process Loss	114.2	19.1	-83%
Total	141.4	47.2	-67%

2.4.3. Highways Materials

Compared to the baseline year (2019/20), emissions from **Highways materials** have **reduced by approximately 7.1% to 3,677 tonnes of CO₂e.**

2.4.3.1. Emissions from Highways materials saw an increase in 2023/24 compared to 2022/23; however, they are still lower than the 2019/20 baseline measurement. This is calculated from the amount and type of material used for highways repairs and improvements. Emissions had dropped sharply in 2020/21 but have been steadily increasing, reflecting the increase in the quantity of highways work that has been carried out. This unfortunately masks the innovative approaches the council has been developing to reduce carbon emissions in this area, such as recycling more of the on-site material, reducing raw materials during highway maintenance, and the use of low temperature materials and lower embodied energy. Better measures are being investigated to highlight these carbon efficiency initiatives.

Figure 4: Highway Materials Emissions by Year, 2019-2024



2.4.4. Streetlighting

Compared to the baseline year (2019/20), emissions from **Streetlighting** have **reduced by approximately 37.6% to 1,554 tonnes of CO₂e.**

- 2.4.4.1. Streetlighting has seen a decrease in its consumption of electricity due to the continued programme of LED replacement. Despite this, the increase in the national conversion factor for electricity in 2023/24 has caused an increase in tonnes of CO₂e emitted compared to the year prior. Had the conversion factor stayed the same as 2022/23, there would have been a further decrease of emissions down to 1,458 tCO₂e, a 96-tonne difference.
- 2.4.4.2. As detailed in the introduction, the share of streetlighting belonging to Christchurch (14.73%) has now been removed from our figures. This has been backdated to all years including our baseline year to give a more accurate point of comparison. This share will be reported on by Bournemouth, Christchurch and Poole Council.

2.4.5. Fleet

Compared to the baseline year (2019/20), emissions from the council's **Fleet** have **reduced by approximately 15.2% to 5,794.1 tonnes of CO₂e.**

- 2.4.5.1. In 2023/24, the council was able to measure the fuel usage for its fleet more accurately than previous years, by measuring the litres of bunkered fuel rather than using an estimation based on the average price. Emission data for the fleet is made up of the bunkered fuel at Dorset Council sites, fuel purchased from filling stations, and electricity used to charge electric vehicles (EV). Overall fleet emissions decreased in 2023/24 compared to both the baseline year (2019/20) and the year prior (2022/23), from 6,829 tCO₂e in 2019/20 to 5,794 tCO₂e in 2023/24.
- 2.4.5.2. This year saw an increase in emissions from charging EVs, due to the expansion of the EV pool fleet. As more vehicles are switched over to ultra-low emission vehicle alternatives, such as EVs, we would expect an increase in EV-related emissions, but a continued decrease in the overall emissions. In 2023/24, the EV pool fleet travelled 72,199 miles, saving 6.2 tCO₂e compared to the same mileage in diesel alternatives.

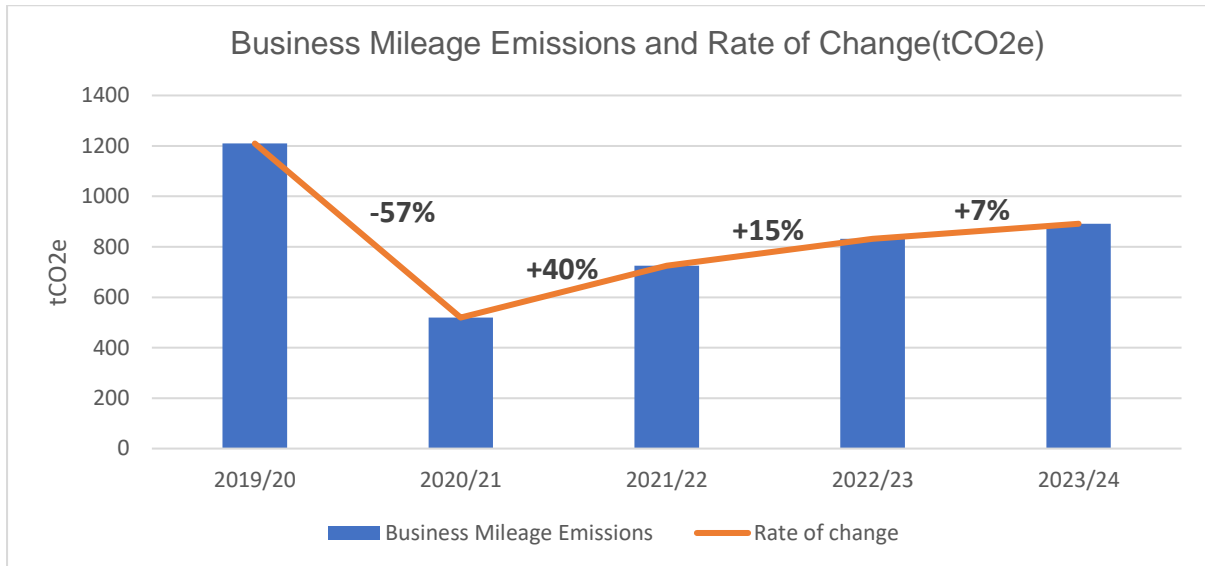
2.4.6. Business Mileage

Compared to the baseline year (2019/20), emissions from the council's **Business mileage** have **reduced by approximately 26.3% to 891 tonnes of CO₂e.**



2.4.6.1. Emissions from business mileage have continued to grow since the increase in travel after COVID; however, this year has seen a slight slowing in the pace of increase, from 40% between 2020/21 and 2021/22, to 15% between 2021/22 and 2022/23, to now 7% between 2022/23 and 2023/24. Emissions from business travel now sit at 891 tCO₂e, compared to 1,209 tCO₂e in the baseline year.

Figure 5: Business Mileage Emissions and Rate of Change, 2019-2024



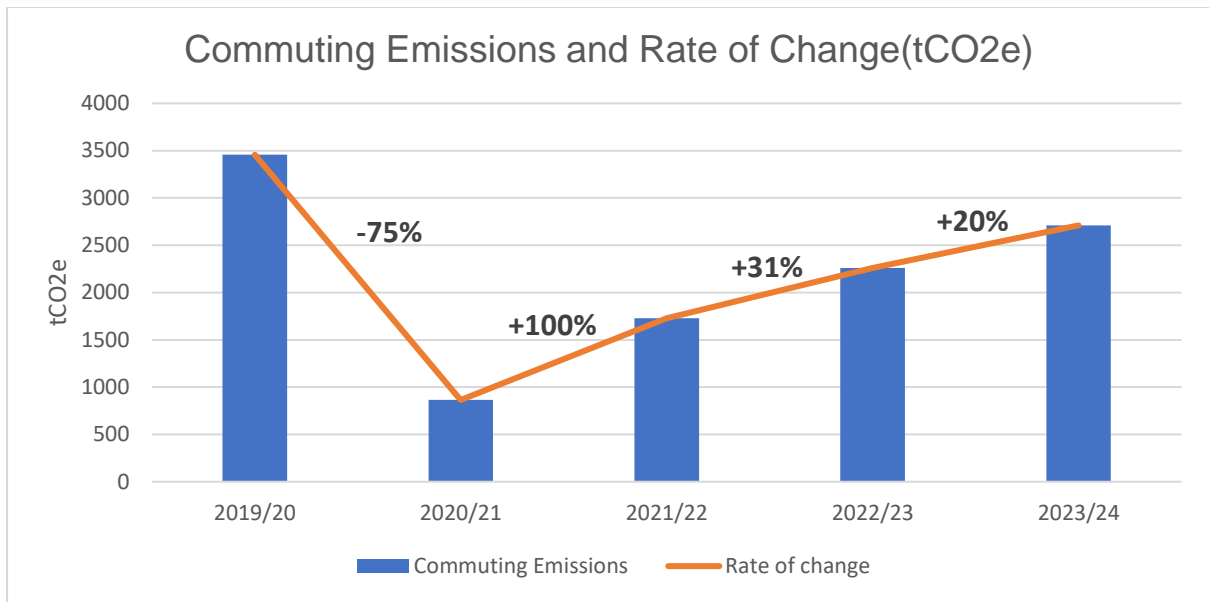
2.4.7. Commuting

Compared to the baseline year (2019/20), emissions from **Commuting** have reduced by approximately 21.6% to 2,710 tonnes of CO₂e.

2.4.7.1. Similar to business mileage, commuting emissions have increased since the return of post-COVID office working. Commuting emissions are still 21.6% lower their pre-COVID levels during the baseline year of 2019/20, now sitting at 2,710 tCO₂e. The rate of change has also slowed for commuting, from a 100% increase between 2020/21 and 2021/22, to 31% between 2021/22 and 2022/23, to now 20% between 2022/23 and 2023/24.

Figure 6: Commuting Emissions and Rate of Change, 2019-2024





2.4.8. Dorset Travel

Compared to the baseline year (2019/20), emissions from the **Dorset Travel** have **reduced by approximately 23.6% to 3,121 tonnes of CO₂e.**

- 2.4.8.1. The Autumn/Winter 2023 Progress report raised that the council would work towards a more robust method of monitoring fuel use by the school transport under Dorset Travel.³ Previous years' data used estimated annual mileage and assumed users had travelled on all days throughout the period, which in some instances was not the case. This year's data should provide a more accurate reflection of usage across all areas of Dorset Travel, with figures backdated where possible for 2021/22 and 2022/23. Overall, Dorset Travel has seen a very small decrease in mileage across the service but an increase in the number of vehicles being used.
- 2.4.8.2. The figures presented for the current year should now reflect normal service, with the effect of COVID now negligible. In the future, the council will be able to look in depth at each area of the service to consider how efficiency savings can be made whilst balancing the needs of individuals and their complex needs.

³ [Natural Environment Climate and Ecology Progress Report, Autumn/Winter 2023 \(dorsetcouncil.gov.uk\)](https://www.dorsetcouncil.gov.uk/reports-and-accounts/2023/autumn-winter-2023-progress-report)

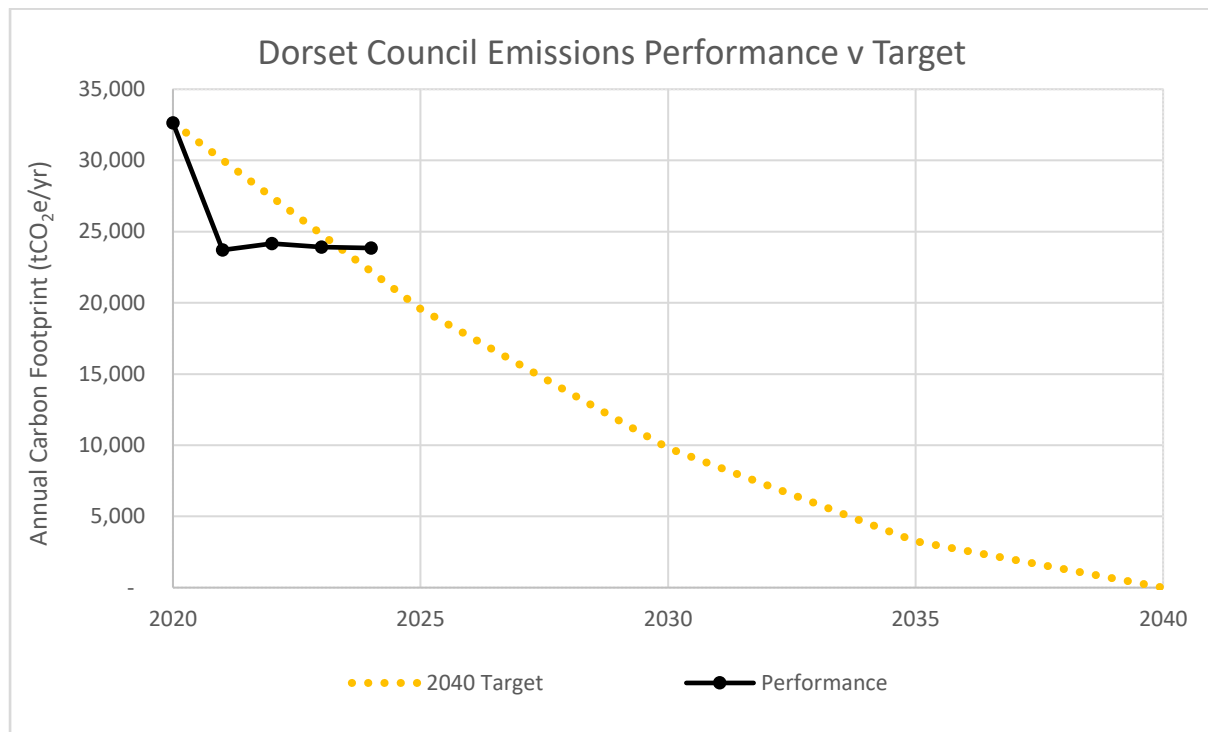


2.5. Are we on target?

Compared to the baseline year (2019/20), Dorset Council emissions have reduced by approximately 27% to 23,841 tonnes of CO₂e.

2.5.1. Dorset Council has committed to achieving a carbon neutral council by 2040, with intermittent goals for 2025, 2030, and 2035. The trajectory for this goal gives a guideline target for each year. This year, the guideline target was 22,196 tCO₂e (32% lower than baseline emissions); Dorset Council's operational emissions were 23,841 tCO₂e (27% of baseline emissions). The first intermittent goal will be next year in 2025, when the council is aiming to cut emissions by 40% of its baseline emissions, to 19,585 tCO₂e.

Figure 7: Dorset Council Emissions, Performance compared to Target



2.5.2. This year, the council was aiming for a 32% saving in emissions. Three workstreams have achieved decreasing their emissions by at least 32% compared to the baseline year: Buildings and Assets, Streetlighting, and Waste from Dorset Council sites. Buildings and Waste have also already achieved a 40% saving ahead of 2025, and Streetlighting would have achieved a 40% saving if the national emission factor for electricity had stayed the same from the year prior.

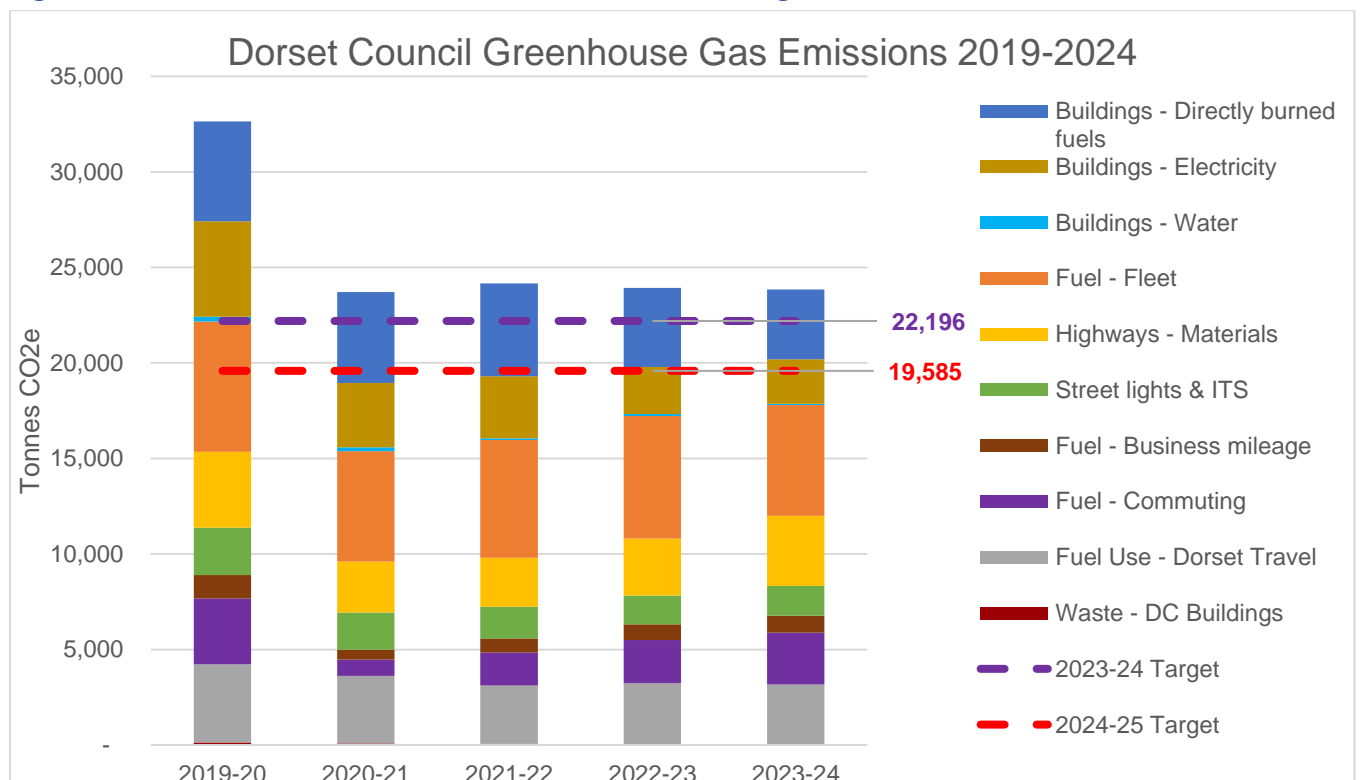
Table 6: Council emissions by percentage change compared to the baseline year (2019/20)



Workstream	% Change from Baseline
Buildings and Assets – Total	-42.3%
Streetlighting and ITS	-37.6%
Highways Materials	-7.1%
Fleet Fuel	-15.2%
Business Mileage	-26.3%
Commuting	-21.6%
Dorset Travel	-23.6%
Waste – DC Buildings	-66.6%
Total	-27.0%

2.5.3. The council has managed to decrease emissions across all workstreams, but not at a fast enough rate to achieve its 32% aim for this year. This is exasperated by areas where the council has less influence over activity due to external factors, such as its statutory duties for highway maintenance and SEND travel provision.

Figure 8: Dorset Council Greenhouse Gas Emissions with targets, 2019 to 2024



3. Dorset's area-wide greenhouse gas emissions

3.1. About this data:

3.1.1. This section presents the latest local (Dorset Council administrative) area-wide greenhouse gas emissions for 2005-2022 for carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O).⁴ The data comes from government's annual local area emissions statistics, which provide a consistent and comparable set of local estimates across the UK. There is a two-year lag in the reporting year due to data analysis timelines.

3.1.2. The emissions reported are mostly those which are emitted locally – except those arising from energy supplies and waste, which are instead allocated to where the energy is *used* or where the waste *arises* (rather than to the location of power stations, refineries or waste treatment sites where emissions occur).⁵

3.2. National context:

3.2.1. National emissions decreased by 5.1% in the year to 2022, whilst per capita emissions reduced by 5.9%. This was despite a continuing post-lockdown increases in transport emissions, and mostly owed to warmer temperatures in 2022 reducing energy use for heating buildings (as well as, potentially, energy price inflation inducing reductions in energy use near the end of 2022). Despite the post-lockdown rebound seen in 2021 (as reported last year), emissions in 2022 were below the levels seen during lockdown.

3.2.2. There are large variations in the total amount of local area emissions owing to differences in local geographies, populations and economies.⁶ But emissions decreased in all regions and in almost all local areas in the year to 2022. Nationally, around a third of emissions are now from transport, a fifth from industry, and around a tenth from agriculture or commerce each. But there are very large local variations in their relative contribution: such that transport is the biggest source for over half of

⁴ In line with global protocols, emissions from different gases are weighted by their global warming potential (using IPCC AR5 values) to enable comparability – and are therefore expressed in units of carbon dioxide equivalent (CO₂e).

⁵ Some gases and emissions sources which are captured in the UK national inventory are *not* allocated to localities for want of a suitable distribution method – such as F-gases or emissions from International Aviation and Shipping.

⁶ Total regional emissions span from just under 15MtCO₂e in the North East to over 42MtCO₂e in the South East – with the South West emitting just over 31MtCO₂e. In percentage terms, the range spans from around 3.5% of the UK total to 11% - with the South West making up just shy of 8%. London has the lowest *per capita* emissions (just over 3t per resident), and the East Midlands the highest (around 6.5t) – with the South West having just over 5t per resident.



localities, homes are the biggest for around a fifth, and agriculture the biggest in around 14%.⁷

3.3. Dorset's current footprint and national comparators:

Dorset's area-wide net emissions footprint, 2022:

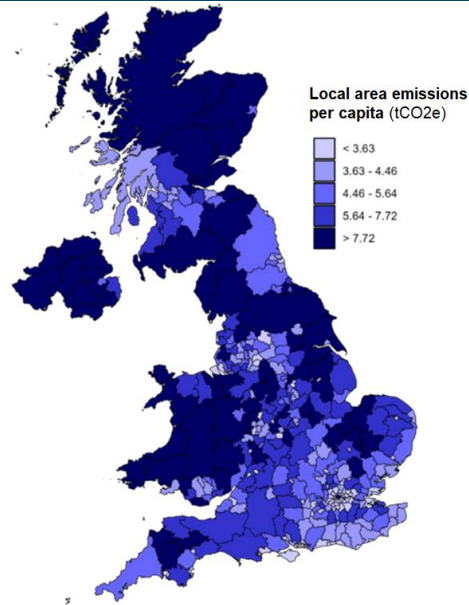
2,233.8 ktCO₂e

This is comprised of agriculture (33.3%), transport (29.2%), homes (20.4%), commercial and industrial buildings (11.7%), waste (3.5%) and public sector buildings (1.9%). Around 7.5% of our gross emissions are sequestered by nature.⁸

Dorset's per capita emissions, 2022:⁹

5.8 tCO₂e

This compares to 5.1 in England and 5.2 in the South West



⁷ Whilst the proportion of emissions coming from the public sector, waste and commercial sectors don't vary much between areas – there are large differences in the relative contribution of industry, agriculture, domestic & transport.

⁸ The stated emissions footprint is net that which is sequestered.

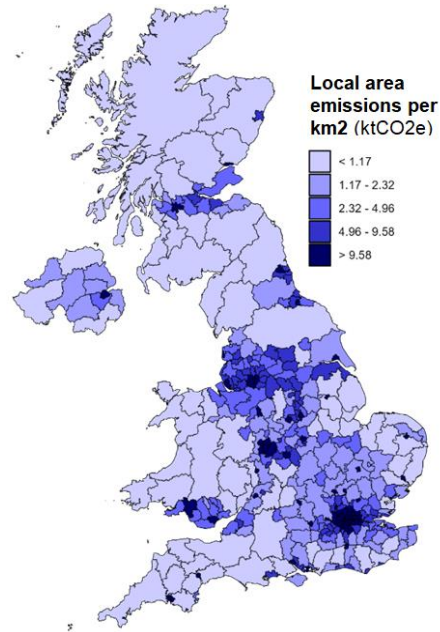
⁹ Comparing areas relative to their size (emissions per km²) or population (emissions per capita) is a rough guide; but it should be done with caution as some emission sources don't correlate well with area or population – such as the presence of a large industrial site. Typically, rural areas have higher emissions per capita owing to their population sparsity, whilst highly urban areas will have higher emissions per km² owing to their density. But there are many exceptions, such as the City of London which has the highest emissions per capita *and* per km², despite its small area and population.



Dorset's emissions per km², 2022:

0.9 ktCO₂e

This compares to 2.2 in England and 1.2 in the South West



3.4. Change over time:

Short-term (2021-2022):

In the year to 2022, Dorset's area-wide emissions reduced by 5.55% (from 2,365 to 2,233 ktCO₂e).

This compares to a 5.51% reduction in England and 4.9% in the South West.

Medium-term (2017-2022):

Compared to our 2017 baseline, Dorset's area-wide emissions reduced by 13.2% by 2022 (from 2,575 to 2,233 ktCO₂e).

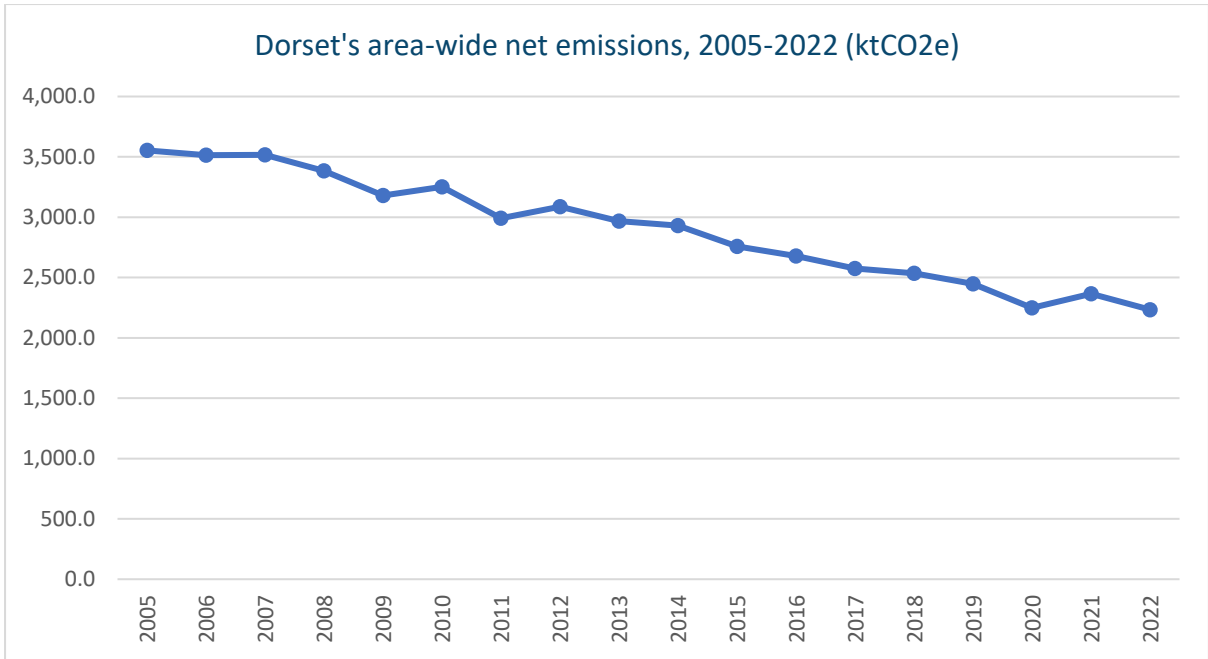
This compares to a 14.7% reduction in England and 14.4% in the South West.

Long-term (2005-2022):

Dorset's area-wide emissions reduced by 37.1% from 2005 to 2022 (from 3,553 to 2,233 ktCO₂e).

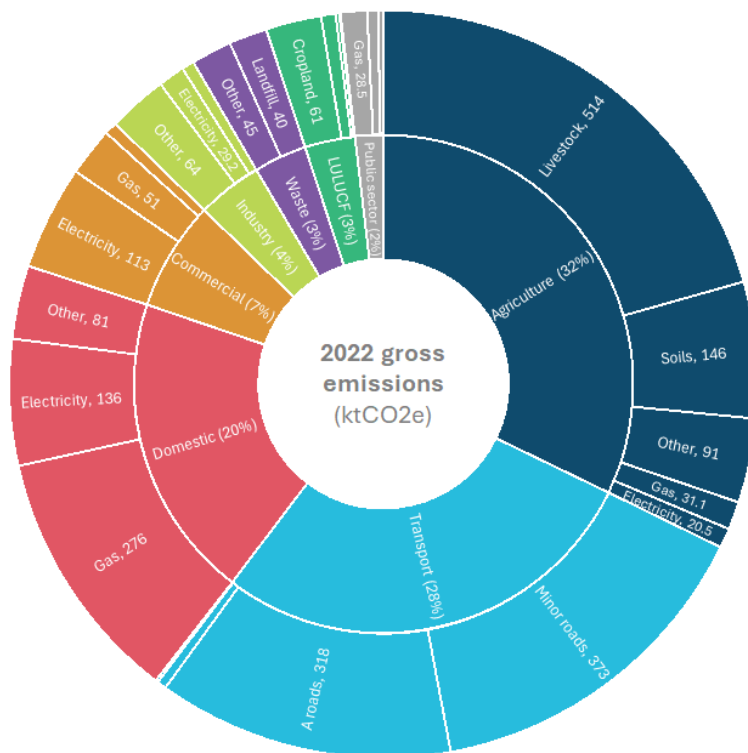
This compares to a 42.9% reduction in England and 41.2% in the South West.





3.5. Sectoral breakdown:

3.5.1. The following diagram shows the breakdown of Dorset’s gross footprint (i.e. prior to netting off the amount sequestered by nature) in 2022. As is shown, local emissions sources – from largest to smallest – are agriculture (32%), transport (28%), domestic (20%), commercial (7%), industry (4%), waste (3%), LULUCF i.e. land & nature (3%) and the public sector (2%).



3.5.2. The following diagram shows how those individual sectors have varied over time.¹⁰

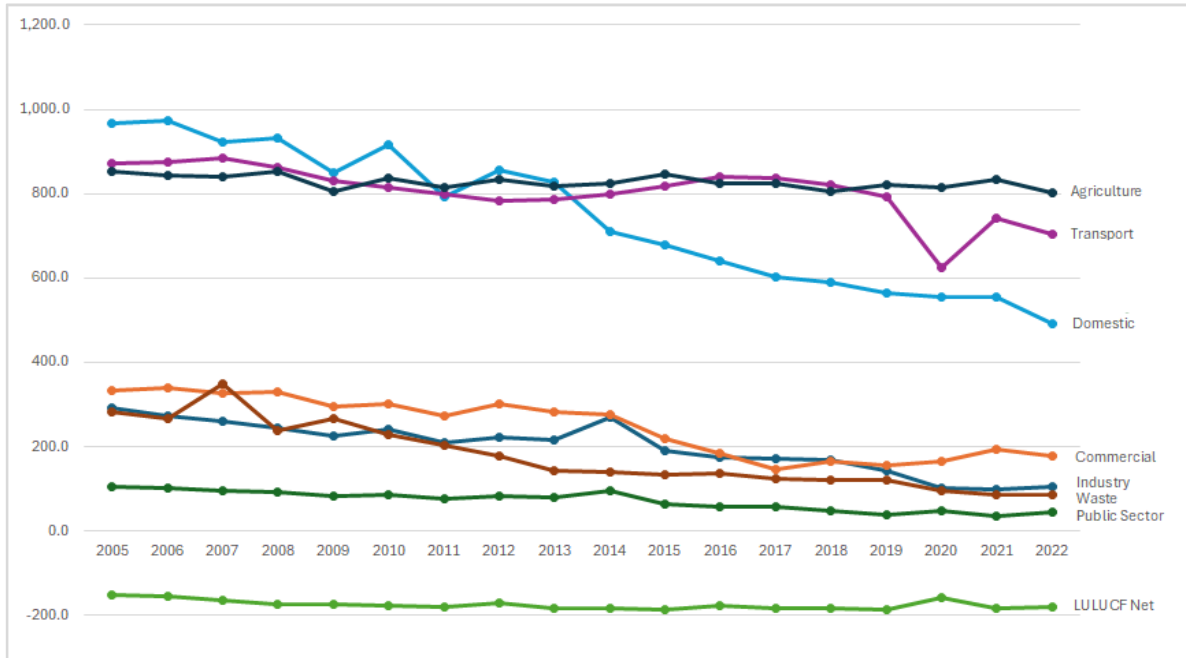
3.5.3. Most of those sectors have seen emissions reductions over the year to 2022, including commercial (-8%), domestic (-11.3%), transport (-4.9%), agriculture (-3.8%), and waste (-2.1%). Two sectors increased their emissions year on year – industry (+5.5%) and the public sector (+25.9%) – but as both are at relatively much lower levels than other sectors, the absolute increase in emissions resultant from that has done little to counteract the aggregate downward trend.

3.5.4. Around 70% of the emissions reductions seen since 2017 have come from transport and housing combined – but they are starting from a very high

¹⁰ Over the last year, both industrial and public sector emissions have grown slightly – and LULUCF emissions have sequestered slightly less. However, as their absolute values are relatively small compared to other sectors, their annual changes are likely to be more volatile.

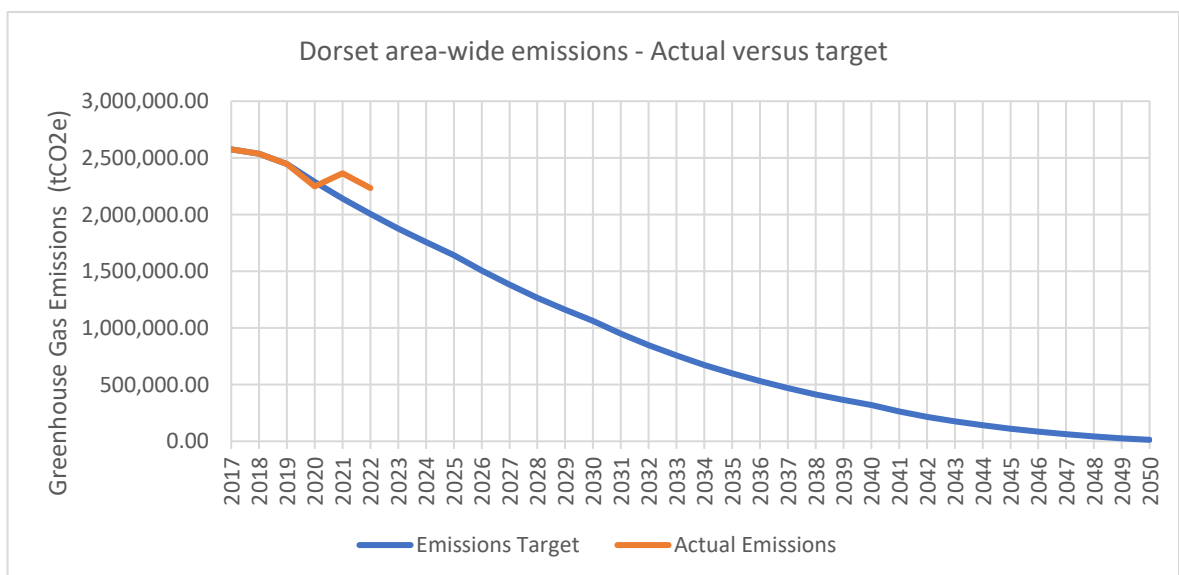


level and still have a long way to go. Other sectors have reduced their emissions by between 18% (public sector) and 38% (industry) over that same period – apart from agriculture, which has only seen reductions of 2.5%.



3.6. Performance versus targets:

3.6.1. The Dorset area-wide emissions targets set within our 2023 Strategy require a 36% reduction by 2025, 59% by 2030, 88% by 2040, and 100% by 2050. Following the post-COVID rebound in 2021, we are now off track. In 2022 the trajectory is now going in the right direction, but still needs to accelerate in order to get back on course for our 2025 target to be hit. Were the current trajectory projected outwards to 2025, emissions would reduce by a forecast 28.5% by 2025, short of our interim target.



4. What's Next?

4.1. Operational Programme

4.1.1. In 2021, the council established an operational programme to reduce carbon emissions from the assets it directly controls. An operational group, chaired by the Executive Director for Place, has been established to steer the development and delivery of work programmes to reduce council emissions, and monitor their progress.

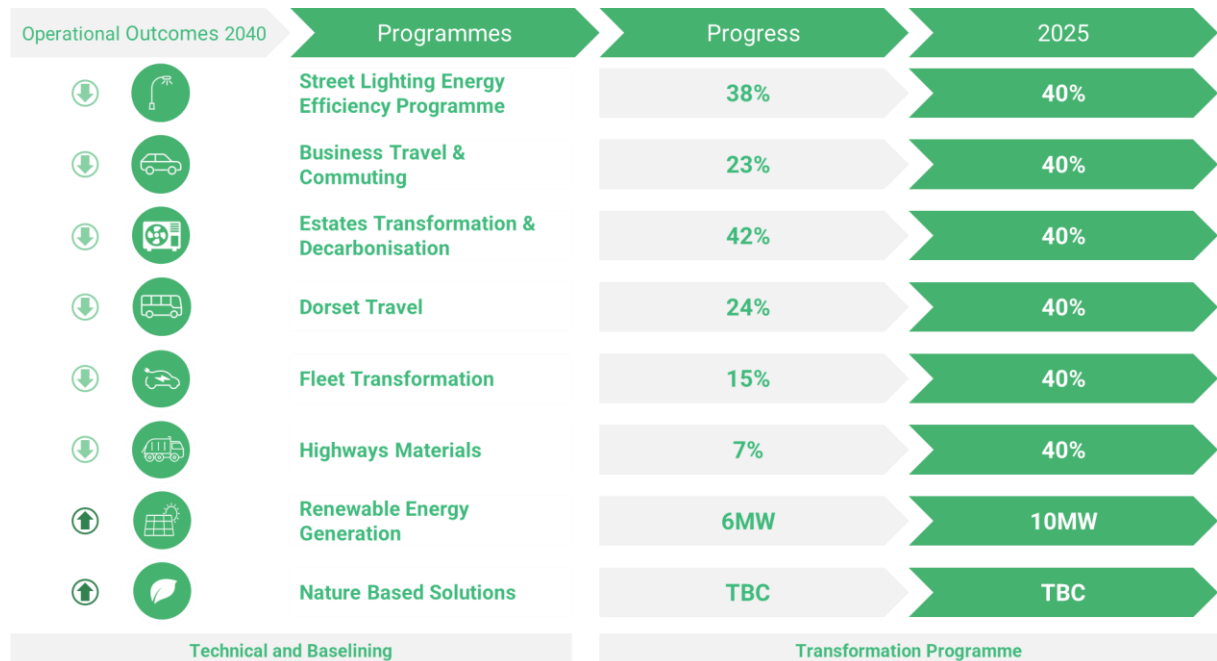
4.1.2. The operational programme contains six workstreams for decreasing emissions:

- Streetlighting Energy Efficiency Programme
- Business Travel and Commuting
- Estates Transformation and Decarbonisation
- Dorset Travel
- Fleet Transformation
- Highways Materials

4.1.3. As well as two programmes for sequestering and offsetting emissions:

- Renewable Energy Generation
- Nature Based Solution

Figure 9: Operational Programme Progress and 2025 targets



4.1.4. The Operational Programme currently aligns with the council's overall target for a 40% reduction in emissions by 2025. As the programme progresses, we



plan on tailoring these targets to each workstream in a manner that considers their specific projects and programmes. As we reduce emissions and approach net zero, some residual emissions will be inevitable and will require balancing through offsetting and removal, such as from Nature-based solutions. The targets for such balancing will depend on the residual emissions once they are estimated, therefore the target for Nature-based Solution is currently 'To be confirmed'.

4.1.5. The council supports progress across the various workstreams through a £10 million five-year capital programme, running from 2022/23 to 2026/27. This has enabled programmes such as replacing streetlighting with LEDs, retrofitting buildings to be more energy efficient and use of renewable energy technologies such as heat pumps and solar panels, and expanding the EV fleet. The programme has also supported external programmes aimed at supporting residents and organisations, such as Low Carbon Dorset and Healthy Homes Dorset.

4.1.6. So far, £3.5 million has been spent on emission reducing projects, £4 million has already been allocated for this year, and over £2.5 million is planned to be spent to support programmes by 2026/27. This has been supplemented by over £24m of external funding, such as the Shared Prosperity Fund and Public Sector Decarbonisation Scheme.

Table 7: Breakdown of Capital Spending programme

Completed	<ul style="list-style-type: none"> •Street light LED replacement Phases 1 & 2 •Building retrofit - 350 measures accross 200 sites •Inc. Installation of 5MW solar PV on our estate •Range of electric vehicles and power tools •Inc 14 fleet vehicles replaced by EVs •22 EV chargers installed at council buildings • Low Carbon grants for business, community, public sector
Underway	<ul style="list-style-type: none"> •Street light LED replacement Phase 3 •Completion of 3 large heat pump projects other retrofit projects •Design studies for Solar PV & a net-zero depot •Energy surveys of 170 buildings to identify next steps •EV Infrastructure at 7 sites •14 fleet vehicles replaced by EVs
Future 2026-27	<ul style="list-style-type: none"> •Streetlight LED replacement Phases 4 & 5 •Increased EV infrastructure at council sites •Further building retrofit measures (multiple sites) •Installation of further solar PV on council buildings



- 4.1.7. To help support the monitoring and planning of the operational programme, a climate dashboard is being developed with the council's Business Intelligence and Performance team, which will enable service areas to better track their emissions and project impacts on emissions from changes to their activity. The council aims to have this operational in early 2025.
- 4.1.8. As part of this work, the council is looking to improve the measurement and categorisation of workstreams. This will include a process of baselining the council's current renewable energy and nature-based assets, and its direct control and indirect influence over both council-owned and county-wide emissions. Greater categorisation and baselining will help to provide a more accurate measurement of the council's net emissions for future progress reports, with the aim for some of the categorisation work to be published in early 2025, and next Autumn's progress. In addition, this will allow the identification of the potential residual emissions that may need to be offset in some way.
- 4.1.9. Work is currently underway to further define work programmes to achieve the council's targets for 2025 and beyond. As part of this, we are exploring additional measures such as further expansion of our building retrofit programme, electrification of all viable small fleet vehicles, additional solar PV on our estate, and alternative fuels, such as sustainable hydrotreated vegetable oil (HVO), to replace diesel as an interim measure whilst the fleet progressively transitions towards zero and ultra-low emission vehicles (ULEVs). We are also exploring opportunities to offset residual emissions through measures such as renewable energy generation and nature-based solutions.

4.2. Facilitation Programme

- 4.2.1. The county wide emissions are provided by government and are only available two years behind, making it difficult to track progress related to activities. In broad terms, the emissions for the county of Dorset breaks down into three key areas: agriculture and land management, buildings (including business, residential and public), and transport. Dorset Council has highlighted that it has a critical facilitation role in helping to reduce carbon emissions across the county through its place shaping strategic role, delivery of programmes and projects and engagement with partners and



communities. Over the past few years, it has taken a wide range of actions which are reported annually.¹¹

- 4.2.2. Moving forward, there are some key areas of work that will need to be further developed, strengthened and accelerated to facilitate a faster emission trajectory for each of the three key emission areas -
- 4.2.3. **Agriculture** – Schemes such as the Farming in Protected Landscapes scheme run by the Dorset National Landscape team have helped to support farmers to undertake a wide range of projects beneficial to climate, nature, people and place. Such work has helped to support the development farm cluster to share experience and approaches for sustainable farming, including some of the council-owned county farms. The development of the Local Nature Recovery Strategy has strengthened engagement with farmers and landowners and will provide a key catalyst for nature recovery across the county and other environmental activities.
- 4.2.4. **Buildings** – The council has been running several schemes to deliver building retrofit measures for residents, organisations and even across its own building stock. The Low Carbon Dorset programme has provided advice and grants to over 700 organisations since 2018, helping Dorset reduce its emissions by nearly 10,000 tonnes a year. The council has run and supported schemes through its capital funding and by facilitating external funding streams, such as the Shared Prosperity Fund and Public Sector Decarbonisation Scheme. This has helped to deliver and facilitate schemes across all sectors, such as Healthy Homes Dorset, Minimum Energy Efficiency Standard for landlords and the Dorset Home Upgrade Grant.
- 4.2.5. **Transport** – The council has begun to facilitate the transition towards lower emission vehicles and modal shift within the county, whilst modelling change through the electrification of its own fleet. We have supported and delivered the continued expansion of Dorset’s EV charging infrastructure, the delivery of major active travel infrastructure upgrades in areas such as Ferndown and Dorchester, and the expansion of gigabyte technology to enable digital alternatives. Our work with local partners has helped to influence sustainable transport across the county, such as the SE Dorset Sustainable Transport Network project with BCP Council; an ever-expanding

¹¹ [What's happened so far - Dorset Council](#)



Bikeshare Scheme with Beryl, and an Enhanced Partnership with bus operators.

- 4.2.6. All of these areas of work have helped facilitate the county's journey to net zero and nature recovery, and have started to develop key partnerships and engagement, improved infrastructure and a range of best practice exemplars. As well as reduce emissions, these can act as a foundation from which to further develop and accelerate activity at all levels from strategy to community and individual action.
- 4.2.7. There are some key challenges and areas of work required for us all to be able to accelerate activity, amongst these are:
- Resourcing and securing further competitive funds or alternative finance
 - Strengthening partnership working and engagement and influence to facilitate wider change
 - Developing an approach for strategic energy planning – including grid constraints, hydrogen and the role of larger scale renewable energy
 - Developing a more strategic plan for retrofitting homes and low carbon heating
 - Defining the future of the estate retrofit and solar programme and unlocking income
 - Developing an approach for food and agriculture
 - Understanding our need and approach for natural sequestration, ensuring its quality, and maintaining a mitigation-first approach
 - Developing an approach to adaptation alongside mitigation
 - Improving corporate embedding, monitoring and training – especially for procurement
 - Embed in critical new plans/policy
- 4.2.8. The council has a critical role to ensure that our place shaping strategies fully embed the principle for climate, nature and resilience. Dorset Council is at a crucial point in the development of this strategic framework for the county with several key strategies, plans and programmes currently be defined. These include the Housing delivery plan, Local Plan, Local Transport Plan, Local Nature Recovery Strategy, Waste Strategy, Economy Strategy, and internal plans such as Council Travel Plan and Strategic Asset Management Plan.

