

# Natural Environment, Climate and Ecology

Progress Report – Autumn/Winter 2023

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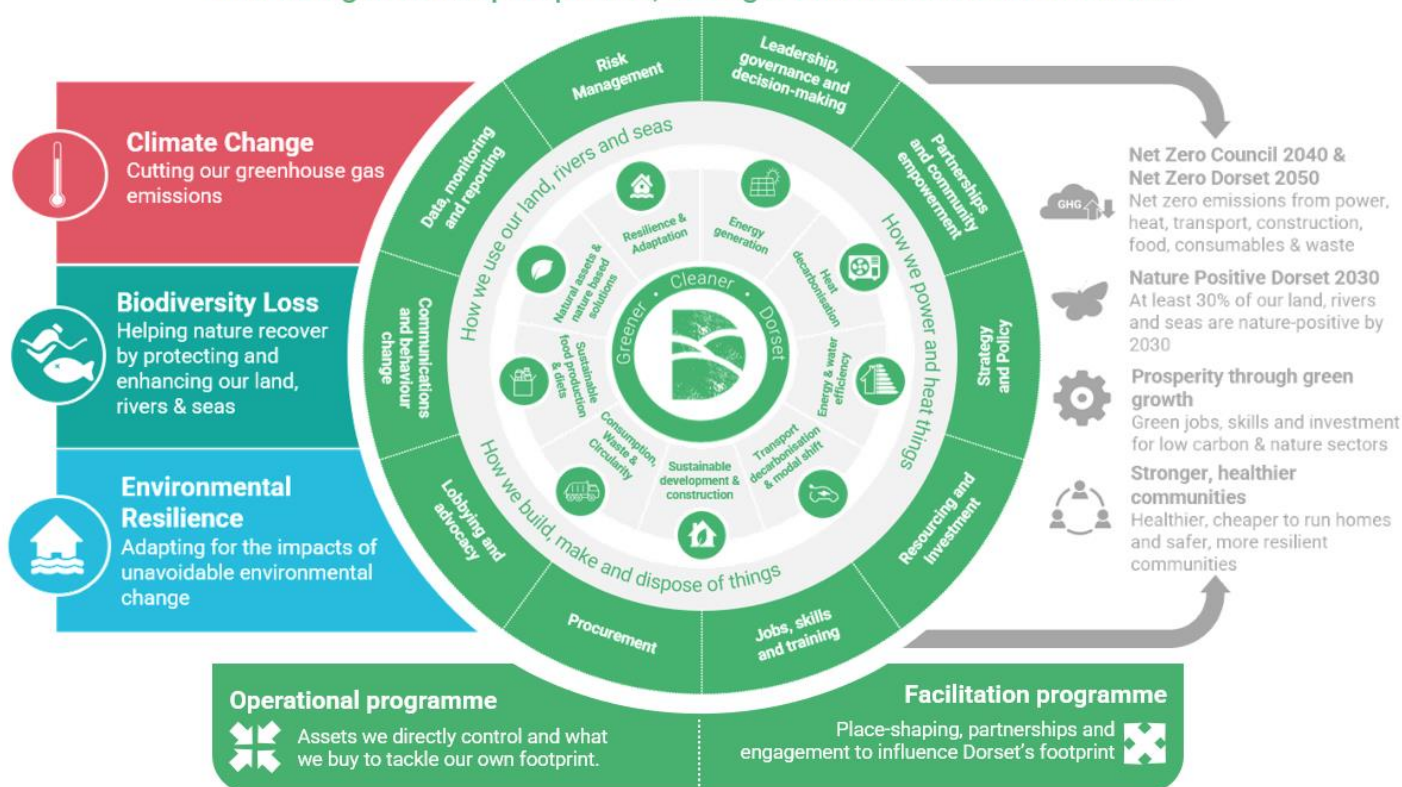
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# Introduction

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. As part of the Dorset Council Plan, the council also made 'Protecting our natural environment, climate and ecology' as one of our five council priorities. In March this year we also refreshed our strategy and action plan for Phase 2 of our programme, tweaking our vision for a net zero, nature positive and resilient council and county.<sup>1</sup>

**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 reporting<sup>2</sup> 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 2023.<sup>2</sup>

<sup>1</sup> <https://www.dorsetcouncil.gov.uk/our-plan>

<sup>2</sup> <https://www.dorsetcouncil.gov.uk/progress-so-far>



## About the data

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.

The county emissions data is provided by the Department for Energy Security and Net Zero (DESNZ)<sup>3</sup>. This data is two years in arrears, therefore the latest available for this report is 2021. Last year government added emissions from the agricultural and waste management activities, which have now been backdated to 2005 – which does accordingly show that emissions for previous years may now be higher than previously reported, due to those factors being previously unaccounted for in the national dataset.

The Dorset Council data is collated from across the organisation. Work is ongoing to improve the accuracy of data and increase the scope of our monitoring to give a more accurate picture of emissions. While some data has improved, we are still working on getting a more robust method of monitoring fuel use by the school transport provided by Dorset Travel and staff commuting.

Our current baseline data, against which we are measuring progress, does not take full account of external emissions from things such as staff working at home or all of our goods and services that are commissioned. These figures have not been included in our baseline data as they are already captured in the Dorset wide figures, are outside of the council's direct control and would skew our monitoring and reporting through double counting. However, working at home emissions have been broadly estimated as 1,964 tonnes CO<sub>2</sub>e using approximate staff working patterns and a methodology provided by the Homeworking emission Whitepaper produced by EcoAct in partnership with Lloyds Banking Group and NatWest Group. This is based on typical home energy use while at home. Our wider emissions from procurement and commissioning will be analysed in the coming months using an AI modelling tool.

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<sup>3</sup> All County wide emission data is from 2021 UK Greenhouse Gas Emissions, Final Figures, DESNZ, [2023 UK local authority and regional carbon dioxide emissions national statistics: 2005-2021](#)



## National Context

### Greenhouse Gas Emissions

The Climate Change Act commits the UK to net zero territorial emissions by 2050 and requires policies to meet interim five-year carbon budgets. The most recent carbon budget of June 2021 set a further statutory target for cutting emissions by 78 per cent by 2035. The government's new Net Zero Strategy sets out a pathway for the next three budgets to 2037.

In 2021, emissions in the UK of the basket of seven greenhouse gases covered by the Kyoto Protocol were estimated to be 426.5 million tonnes carbon dioxide equivalent (MtCO<sub>2</sub>e), an increase of 5.0% compared to the 2020 figure of 406.3 million tonnes. This is both the largest proportional rise and the largest rise in absolute terms in UK greenhouse gas emissions in a single year since the start of the data series in 1990. However, greenhouse gas emissions in 2021 are still 5.3% lower than in 2019 and are estimated to be 47.6% lower than they were in 1990.<sup>4</sup>

In 2021, the coronavirus (COVID-19) pandemic and continuing restrictions implemented across the UK had a major impact on various aspects of UK society and the economy. As a result, COVID-19 will have had a significant impact on greenhouse gas emissions in the UK, particularly from transport and businesses, although less so compared to 2020 as restrictions were gradually eased throughout the year. However, 2021 figures are still down from 2019, in part reflecting continued impact of the COVID-19 pandemic. It is not possible to identify the exact size of this effect as other factors will have also played a part in the changes seen during 2021.

In 2021, 26% of net greenhouse gas emissions in the UK were estimated to be from the transport sector, 20% from energy supply, 18% from business, 16% from the residential sector and 11% from agriculture. The other 9% was attributable to the remaining sectors: waste management, industrial processes, the public sector and the land use, land use change and forestry (LULUCF) sector. The LULUCF sector includes both sinks and sources of emissions.

When broken down by gas, UK emissions are dominated by carbon dioxide, which is estimated to have accounted for about 80% of greenhouse gas emissions in the UK in 2021. Weighted by global warming potential, methane accounted for about 13% and nitrous oxide for about 4% of UK emissions in 2021. Fluorinated gases accounted for the remainder, around 3%.

Carbon dioxide has always been the dominant greenhouse gas emitted in the UK. Emissions of CO<sub>2</sub> have reduced by 43.8% since 1990 to 339.5 MtCO<sub>2</sub> in 2021, mainly due to decreases in emissions from power stations. Emissions of methane have seen a larger proportional fall (62.1% since 1990) than those of CO<sub>2</sub>, and so have emissions of nitrous oxide (56.9% since 1990). Fluorinated gas (F gas) emissions are estimated to be 26.2% lower now than they were in 1990, with hydrofluorocarbons (HFCs) being the dominant F gas.

In 2021, 77.3% of greenhouse gas emissions in the UK came from the use of fossil fuels. Emissions from fossil fuels increased by 6.7% compared to 2020 but were still 4.9% down compared to 2019 and 43.7% lower than in 1990. Fossil fuel emissions in 2021 predominantly came from the use of gaseous fuels and petroleum, which accounted for 41.6% and 31.7% of all UK emissions respectively. Gaseous fuel use in the UK is dominated by the use of natural gas for heating buildings and for electricity generation, while most petroleum use is in road vehicles.

Use of coal accounted for 2.6% of emissions in the UK in 2021. Emissions from the use of coal have fallen by 95.0% since 1990, at which point they were responsible for 27.2% of UK emissions as it was the main fuel used for electricity generation.



## Biodiversity

Biodiversity is rapidly declining, with over a million species at threat globally. Biodiversity loss is now thousands of times the normal rate of extinction<sup>5</sup>, and is estimated to be between 1,000 and 10,000 times higher than the background extinction rate (the rate that is expected would occur without us). Globally wildlife has declined by about 70 per cent in the last 50 years alone –the relative abundance of monitored populations of mammals, birds, amphibians, reptiles and fish has dropped by an average of 69% between 1970 and 2018 (range: -63% to -75%).<sup>6</sup>

The UK is one of the most nature-depleted countries in the world, as measured by the Biodiversity Intactness Index, which tracks the state of biodiversity across regions, countries, and habitats. The UK has half of its natural biodiversity remaining (compared to a global average of 75 per cent), putting it bottom of the G7 and in the bottom 10% globally.<sup>7</sup>

According to this year's UK State of Nature report, amongst a fifth of UK species declined by an average of 19% since 1970, and almost one in six are now threatened with extinction – with 151 species having already known to have gone extinct.<sup>8</sup>

November 2021 saw The Environment Act become law, setting a new framework for environmental protection – the major legislative implementation of its ambition to leave the environment in a better state than we found it. Amongst other things the Act strengthens public body duties to conserve and enhance biodiversity and requires the preparation of Local Nature Recovery Strategies.

In January 2023, the government refreshed its 25 Year Environment Plan<sup>9</sup> to halt the decline in biodiversity and to protect 30% of land and sea through the Nature Recovery Network and enhanced marine protections. Amongst other things, it committed to launch a Species Survival Fund; to increase, restore and extend 70 areas for wildlife; to transform management of 70% of the countryside through nature-friendly farming; and to publish a new Green Finance Strategy.

## Resilience

Climate change is a global issue, with global impacts which differ across the world. The UK has a temperate maritime climate. In general, that means that we have a cool and mild climate, with changeable weather. So, how will climate change impact this? The MET Office predicts that across the UK, we expect to see<sup>10</sup>:

- warmer and wetter winters
- hotter and drier summers
- more frequent and intense weather extremes

Climate change will make these conditions more likely. The UK's weather will continue to be variable, but we will see more of this type of weather, and it is predicted that the intensity of

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<sup>4</sup> 2021 UK Greenhouse Gas Emissions, Final Figures, DESNZ, 7th February 2023

<sup>5</sup> IPBES (2019): Summary for policymakers of the global assessment report on biodiversity and ecosystem services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services.

<sup>6</sup> WWF (2022) *Living Planet Report 2022*.

<sup>7</sup> <https://www.nhm.ac.uk/discover/news/2020/september/uk-has-led-the-world-in-destroying-the-natural-environment.html>

<sup>8</sup> <https://stateofnature.org.uk/>

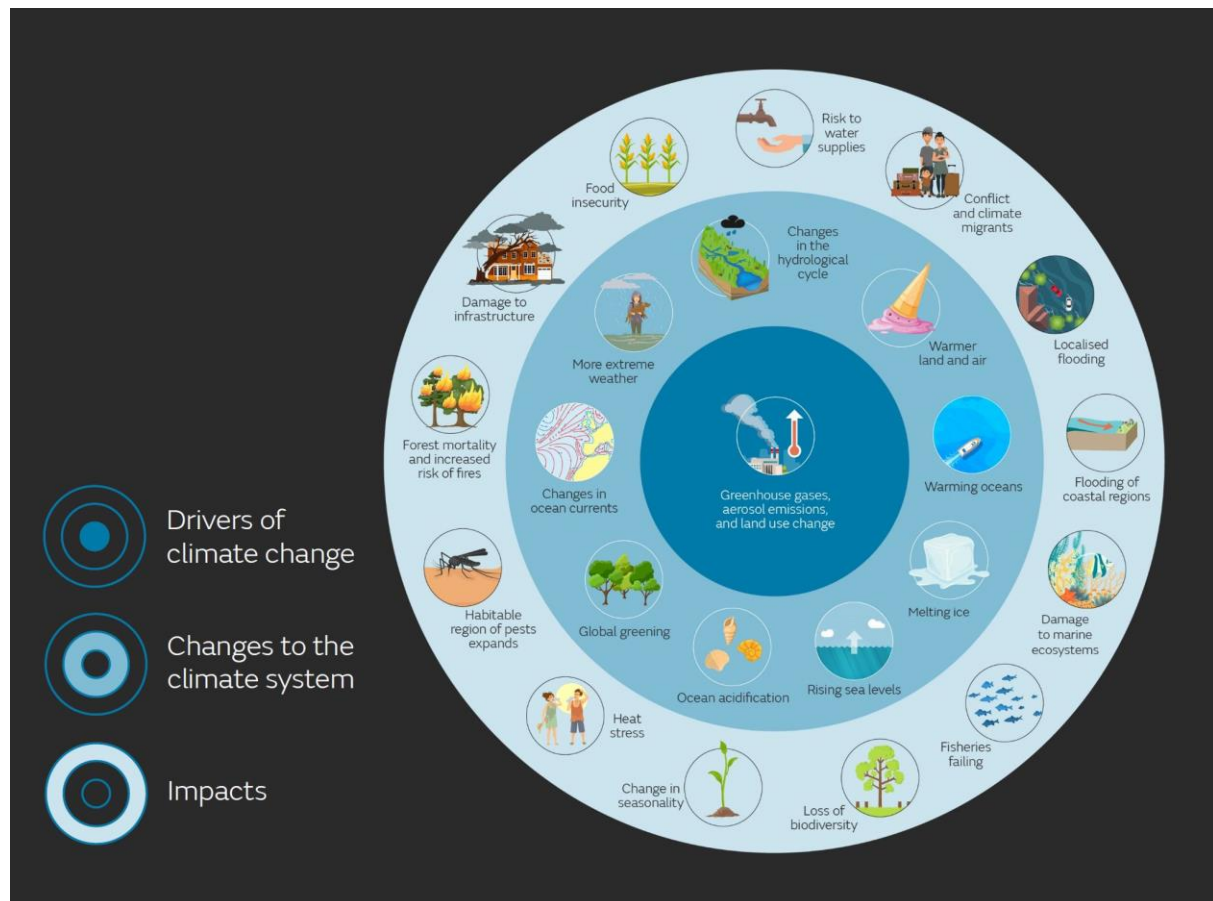
<sup>9</sup> <https://www.gov.uk/government/publications/environmental-improvement-plan>

<sup>10</sup> <https://www.metoffice.gov.uk/weather/climate-change/climate-change-in-the-uk>

these conditions will increase, creating even hotter summer weather, resulting in heatwaves and droughts, more intense downpours, increasing the potential for flooding, and high winds with the potential to damage infrastructure.

The impacts of these changes are summarised in **Figure 1** below

**Figure 1: Impacts of Climate Change**



These effects are already being felt, and are predicated to increase, therefore action must be taken to increase our resilience in order to minimise their impact on our natural environment, infrastructure, health and economy.

The government publishes its Climate Change Risk Assessment<sup>11</sup> every five years. The latest identifies 61 risks, including eight urgent ones: natural habitats, soil health, natural carbon stores, agriculture, supply chains, the power system, heat impacts on health and productivity, and overseas impacts. Eight risks could see annual damage over £1billion each in a 2°C scenario, and £10m for another 36. In response, Government has recently launched the third National Adaptation Programme (NAP3).<sup>12</sup>

<sup>11</sup> <https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2022>

<sup>12</sup> <https://www.gov.uk/government/publications/third-national-adaptation-programme-nap3>



# Dorset Area

## Dorset Area Greenhouse Gas Emissions<sup>13,14</sup>

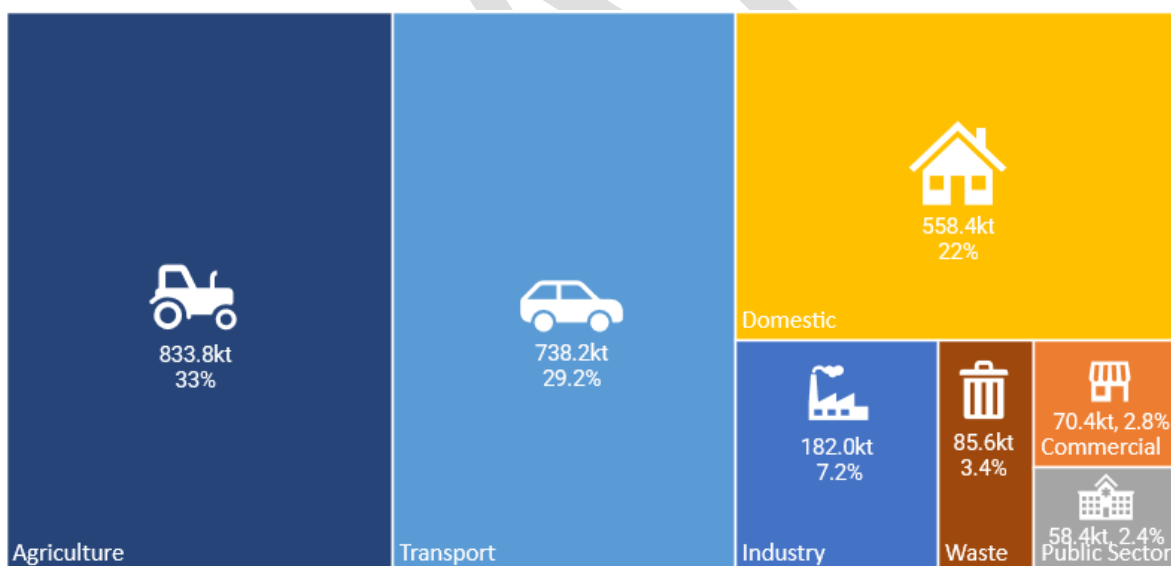
Compared to our reported baseline emissions (2017 data) Dorset (county) emissions reduced by around 10% by 2021, from 2.6 to 2.3 million tonnes CO<sub>2</sub>e per year

Dorset mirrors the national data in showing a reduction of 10%.

### Where do Dorset's emissions come from?

In 2021, Dorset's net emissions are about 2,349kt CO<sub>2</sub>e according to Government's latest figures<sup>15</sup>. This includes all types of greenhouse gases, not just carbon dioxide. The three most significant sources of greenhouse gas emissions in Dorset were transport (29%), agriculture (33%) and domestic sources (22%).<sup>16</sup> These proportions are similar to those seen in other rural areas.

Figure 2: Dorset's Greenhouse gas emissions 2021



+ we sequester about 8% of the gross footprint

Source: Department for Energy Security and Net Zero and Department for Business, Energy & Industrial Strategy

<sup>13</sup> UK local authority and regional carbon dioxide emissions national statistics: 2005-2021

<sup>14</sup> The county data is higher than noted in previous years due to the inclusion of agriculture and waste, which was omitted from government data in previous years.

<sup>15</sup> Data is published two years in arrears, therefore the latest data is from 2021. This net value incorporates estimates of the emissions which Dorset sequesters.

<sup>16</sup> These stated proportions are of Dorset's gross total emissions.





## How have Dorset's emissions changed?

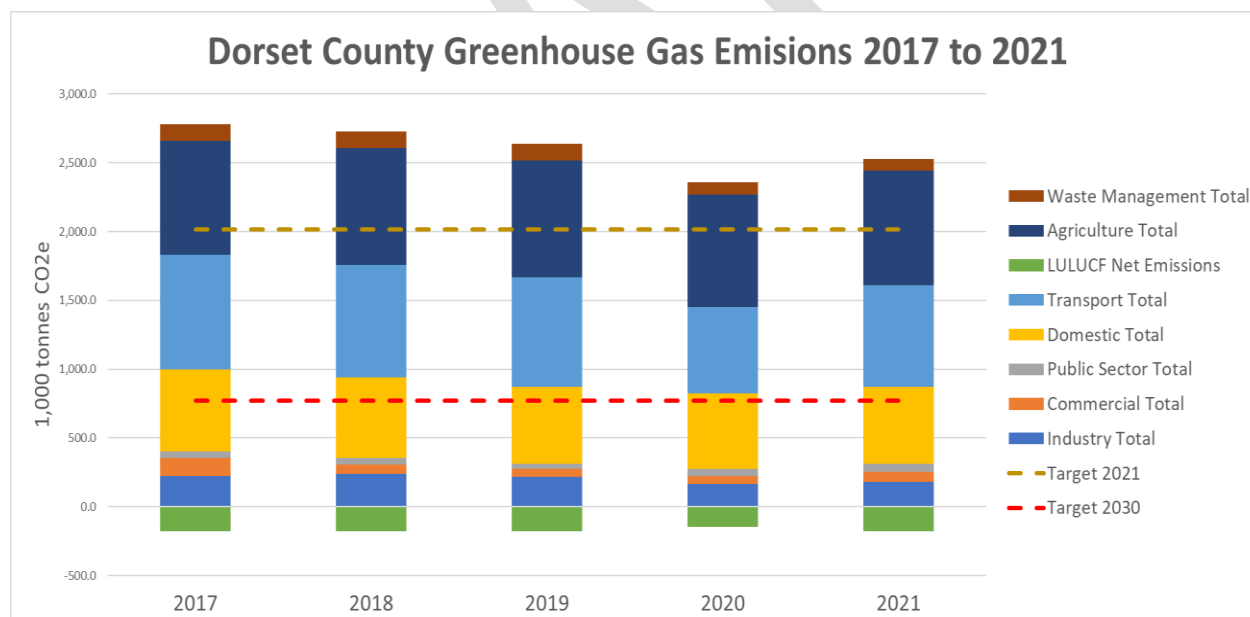
As noted earlier, there has been a 10% reduction in Dorset's emissions since 2017. In terms of scale, the largest reduction has been the 46% reduction in commercial emissions, with the second largest reduction being the 29% reduction in emissions from waste management. Other reductions are 18% in industry, 11% in transport and 7% in domestic energy. Conversely, the public sector has seen an increase in emission of 22%, and agriculture of 1%.

However, since last year's reporting, total emissions are up by 6%, which mirrors the 6% increase in national emissions. Almost all sectors showed an increase, with the exception of Waste Management, which was down by 7% (nationally only down 2%). The biggest increase has been in the commercial sector (up 22%, nationally 18%), followed by transport (up 17%, nationally only 9%), then industry (up 11%, nationally only up 5%) and public sector (up 10%, nationally up 13%). This would seem to align with the economic post covid recovery.

**Figure 3: Dorset Greenhouse Gas Emissions 2017-2021** shows the emissions by source in Dorset. The green area below the zero value is due to CO<sub>2</sub>e removals by land.

This figure shows that emissions in total are higher than target for this time (top dotted line) and the emissions reduction required by 2030 (the bottom dotted line).

**Figure 3: Dorset Greenhouse Gas Emissions 2017-2021**



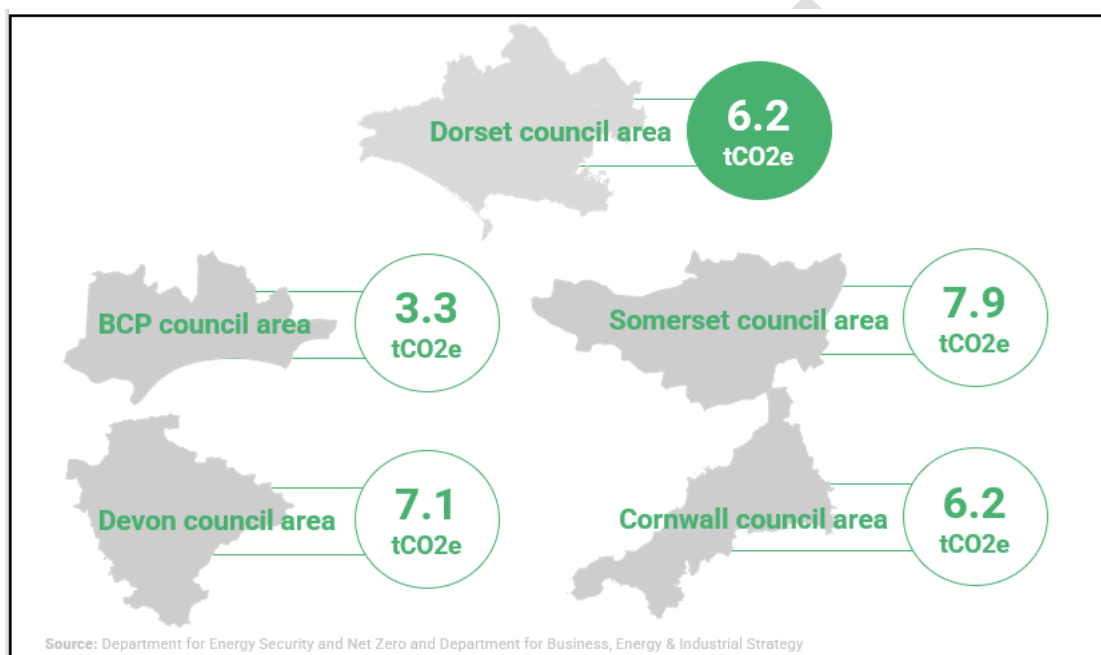
Government figures include an estimation of land use, land use change and forestry (LULUCF) which consists of emissions and removals from forest land, cropland, grassland, settlements, and harvested wood products. In Dorset the LULUCF sector is estimated to have resulted in net removals of 178.1 ktCO<sub>2</sub>e, an increase of 20% from 2020, whereas the national picture showed a decrease in carbon uptake by 8%.



## Per Capita Emissions

Local authorities all come in different shapes and sizes, some are more rural, some more urban and others are a mix. This can impact on the per capita emissions (emissions per person). **Figure 4**, shows the per capita emissions for the local authorities in the Southwest. As you can see, Dorset's are the same as Cornwall's, and a bit lower than Devon and Somerset's. BCP shows the lowest per capita emissions largely due to it being more urban, with better public transport provision (reducing the number of sole occupancy car journeys) and with less agriculture.

**Figure 4: Per Capital Emissions for South West Councils 2021**



## Is Dorset still on track?

Based on a global carbon budget of 420 (i.e. billion) tonnes<sup>17</sup> and scaling this by the population of Dorset gives us a budget of 21,000,000 tCO<sub>2</sub>e, which means that Dorset should not emit any more than that in the years from 2017 in order to maintain a decent chance of preventing more than a 1.5-degree temperature rise. In 2017, Dorset emitted a total of 1,745,000 tCO<sub>2</sub>e. Therefore, if Dorset continued to emit at the 2017 rate, we will have used our carbon budget up by 2030.

Since the inclusion of the emissions from agriculture & waste, Dorset has even more emissions to reduce, making the task of remaining within our budget more difficult. Including an additional >900,000 tCO<sub>2</sub>e means that the rate of reduction needs to be faster than previously thought.

Dorset showed a steady reduction in emissions year on year since 2017 (despite the inclusion of the additional emissions from agriculture and waste). However, 2020 to 2021 saw an increase of 6% which reflects the “bounce back” after covid but shows a worrying departure

<sup>17</sup> The remaining carbon budget for a 50 % likelihood to limit global warming to 1.5°C, according to the Global Carbon Budget 2021: <https://essd.copernicus.org/articles/14/1917/2022/>

from the target reductions based on our total carbon budget. This post-Covid uptick is not unique to Dorset, with a similar rebound seen across all other south west local authority areas.

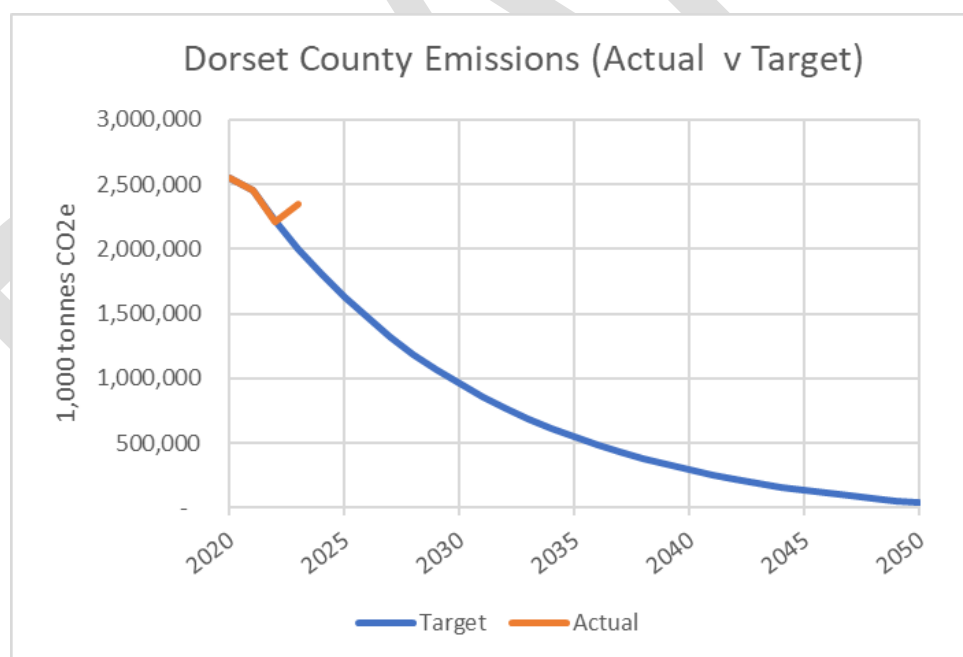
Dorset Council has set challenging targets for reduction to achieve net zero greenhouse gas emissions by 2050, as shown in **Table 1: Dorset County Interim Greenhouse Gas Targets**<sup>18</sup>.

**Table 1: Dorset County Interim Greenhouse Gas Targets**

Year	Co2e (kt)	% reduction
2017	2,603,178	Baseline yr
2025	1,666,034	36%
2030	1,067,303	59%
2040	312,381	88%
2050	-	100%

**Figure 5** shows the actual emissions from Dorset against the re-profiled carbon reduction trajectory required. Unfortunately, due to the increase in emissions, Dorset failed to stay on target in 2021.

**Figure 5: Dorset County Emissions (performance versus target)**



## Dorset Area Ecology

To help halt biodiversity loss, at least 30 per cent of Dorset’s land, rivers and seas need to be nature-positive by 2030.

<sup>18</sup> This updated table now includes emissions from agriculture and waste

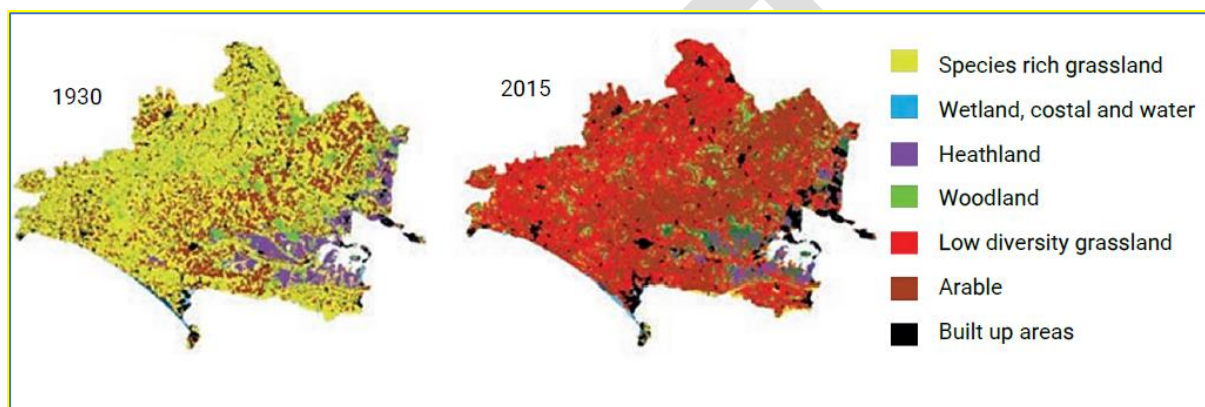


Dorset is recognised for its rich biodiversity and natural beauty. From chalk grasslands to ancient woodland, extensive heathland, and the coast and cliff habitats of the Jurassic Coast – the county’s natural assets are protected by many designations and worth up to £2.5billion a year to our economy. But just because it’s in a designation doesn’t mean that it’s in good condition. Protecting, restoring and enhancing it is vital for biodiversity, carbon, flood resilience, food, and more.

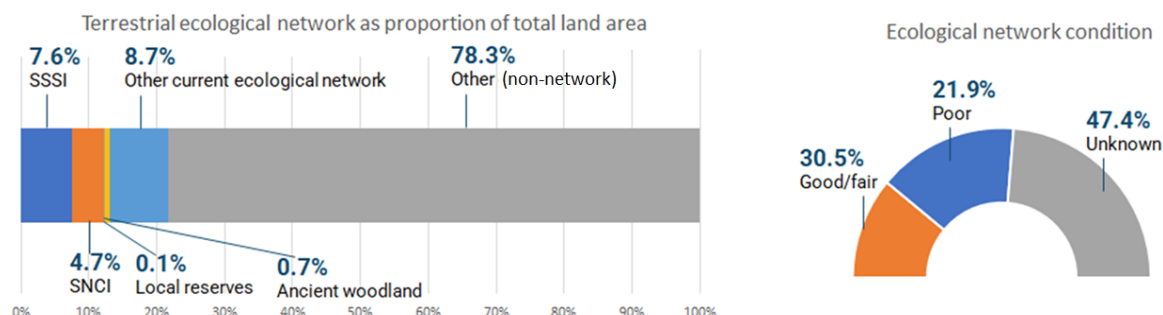
Over the last century, there has been a major loss and degradation in our natural assets. There are now 2,930 terrestrial and freshwater species and 157 marine species that are of conservation concern locally.

**Figure 6** shows how land use has changed in Dorset over the last century.

**Figure 6: Land Cover Change (1930 -2015)**



**Figure 7: Dorset Council area terrestrial ecological network, extent and condition 2020**



Only 12% of land in Dorset is in a protected designation<sup>19</sup> across Dorset county (figure 7), but these are slowly recovering. **Table 2** shows 44 per cent of Sites of Specific Scientific Interest (SSSIs) are in favourable condition and 42 per cent are recovering.

<sup>19</sup> A Site of Special Scientific Interest or Site of Nature Conservation Interest.



**Table 2: Protected Terrestrial Site Condition, Dorset (2014-2020)<sup>20</sup>**

	2014	2015	2016	2017	2018	2019	2020
<b>Sites of Special Scientific Interest</b>							
Favourable	39%	39%	39%	40%	40%	40%	44%
Unfavourable recovering	48%	49%	49%	48%	47%	47%	42%
Unfavourable no change or declining/destroyed	13%	12%	11%	12%	8%	13%	14%
<b>Sites of Nature Conservation Interest</b>							
Good maintained/improving	43%	41%	42%	41%	45%	45%	45%
Fair maintained/improving	14%	16%	19%	21%	32%	32%	32%
Poor or declining	15%	16%	16%	16%	2%	2%	2%
Unknown	28%	26%	23%	22%	21%	21%	21%

Major progress has been made on nutrient and heathland mitigation, including wetland creation, farmer-led approaches, rewilding and partnership projects. Progress is also being made on minimising light pollution, a specific objective of the council’s streetlighting policy, with Dorset now ranked the 13th darkest county and Cranborne Chase AONB designated a Dark-Sky Reserve.

At sea Dorset also welcomed a further six new designations in 2019, so that 25 per cent is now in a Marine Conservation Zone and 31 per cent of the county’s inshore area is protected from mobile fishing gear.

Although Dorset is moving in the right direction, we need to up the pace if at least 30% of its land, rivers and seas are to be nature-positive by 2030. Doing so will not only be good for biodiversity, but will also support us to capture and store carbon, tackle flooding and pollution, and support our health and wellbeing. Everyone has a role to play – and new policy on things like biodiversity net gain and agri-environment funding present a big opportunity.

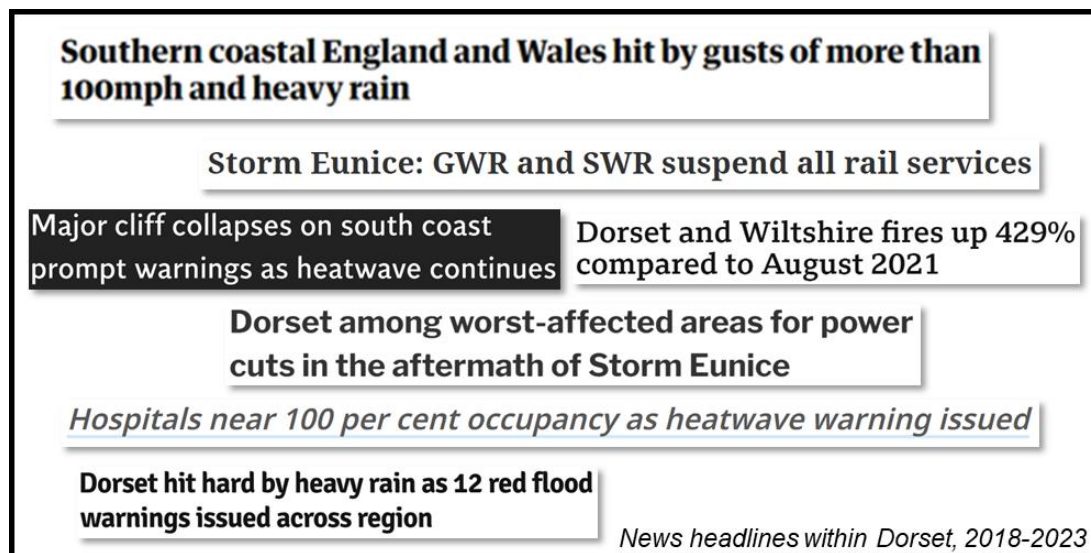
<sup>20</sup> This time series data pertains to SSSIs and SNICs across the Dorset-wide area, including BCP.



## Dorset Area Resilience

At this time, we do not have an analysis of the Dorset county wide impacts of climate change, however we do know that the effects of climate change are already being felt in Dorset. **Figure** shows some news headlines covering events in Dorset from 2018 to 2023.

**Figure 8: News Headlines in Dorset 2018-2023**



These events are expected to continue with increased frequency. Based on UK Climate Projections (UKCP) Met Office figures for South West England by 2080<sup>21</sup>:-

- summers are likely to be hotter by around 2 – 4°C
- winters are likely to be warmer by around 1 – 3°C
- summer rainfall is likely to decrease by 10 – 40%
- winter rainfall is likely to increase by 20 – 30%
- sea level rise is likely to increase by 36 – 56cm.

Impacts to residents of Dorset may include increased pests, sunstroke, damage to homes and transport infrastructure, power cuts, and water scarcity. Portland may become inaccessible by road due to sea level rise, while travel across the county may also be impacted by melting roads, flooding and obstruction due to windblown debris.

We have a small window of opportunity to take action to improve resilience to these events and protect Dorset residents.

<sup>21</sup> <https://www.metoffice.gov.uk/research/approach/collaboration/ukcp/index>



# Dorset Council

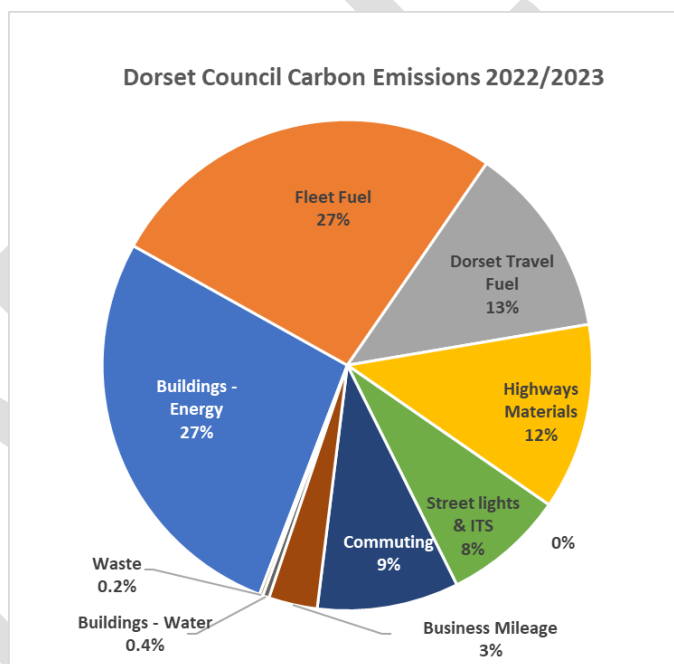
## Dorset Council Greenhouse Gas Emissions

Compared to our baseline year (2019) Dorset Council emissions have reduced by approximately 27% to 24,250 tCO<sub>2</sub>e.

### Where do Dorset Council's greenhouse gas emissions come from?

Greenhouse gas emission data is collected from across the organisation. *Figure 9: Dorset Council Greenhouse Gas Emission Sources* shows the key sources of Greenhouse gas emissions from our operations. By far the largest contributors to Dorset Council emissions are the energy use in our buildings, and fuel used for our fleet of vehicles. Fuel used through the services provided by Dorset Travel and the materials we use to maintain our road network emit similar volumes (13% and 12% respectively), streetlights (8%) and commuting (9%), with much smaller contributions from business mileage (3%), water use in our buildings (0.4%) and the waste we generate (0.2%).

Figure 9: Dorset Council Greenhouse Gas Emission Sources

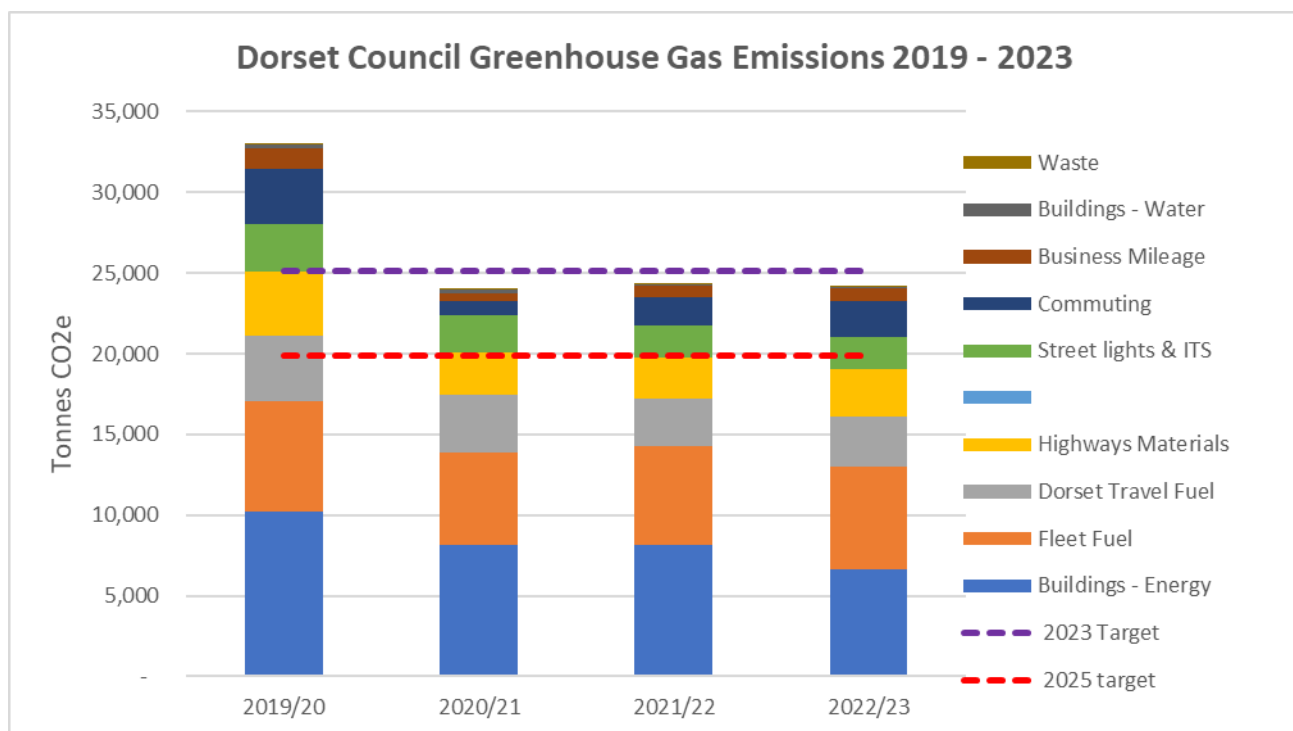


### How have Dorset Council's emissions changed since 2019?

In 2023, all Dorset Council emissions sources showed a reduction from our baseline year of 2019. The largest reduction has been seen in our waste management (-62%), closely followed by our water use (-58%). Other decreases are buildings energy and business mileage (both -36%), commuting (-35%), and street lighting and intelligent traffic systems (ITS) (-34%), highways materials (-25%) and Dorset Travel fuel (-25%). **Figure** shows how the various elements of our carbon footprint have changed since 2019.



Figure 10: Dorset Council Greenhouse Gas Emissions 2019 to 2023



### How has each area performed?

As previously noted, there are several areas where data collection and analysis need to be improved. The data presented therefore only gives an indication of performance. **Table 3** shows the breakdown of Dorset Council’s operational emissions by area.

Whilst we have achieved significant reductions since 2019, many sources of our emissions increased between 2022 and 2023. Despite these increases, emissions are still lower than the previous year by 0.3%, and we are still 884 tonnes CO<sub>2</sub>e lower than the target we set for 2023 (see **Figure 71: Dorset Council Emissions Performance versus Target**)

Notable exceptions to these increases are emissions from the energy use in our buildings, the waste we generate and our street lighting.

Energy use in our buildings has seen a dramatic decrease of nearly 20% over the past year. Whilst the continual decarbonisation of the grid has contributed to this, it is due in the main to a major building retrofit programme supported by a £19 million grant through the Public Sector Decarbonisation Scheme. This enabled over 350 low carbon projects to be undertaken in over 240 buildings, to include heat pumps, insulation, solar PV, LED lighting, energy management system upgrades and additional electrical upgrades.

Emissions from our office-based waste, also reduced by 10%, despite collecting approx. 119 tonnes of additional waste. This is believed to be a result of the improved performance of our contracted waste management processes.

Street lighting/ITS saw a small reduction of 1%, due to the replacement with LED lanterns.

Emissions increased from commuting (31%) and water (24%) due to more people returning to the office.





The emissions from the highway materials used increased by 16%, due to the increased activity of the capital highways programme.

Business mileage increased by 15%, continuing the steady increase observed over the past two years from the lows seen during the covid pandemic. Overall business travel now accounts for nearly 3 million miles a year (including agency and school staff), up from approximately 1.9 million miles in 2020/2021, showing a clear increase in vehicle-based business activity since the pandemic leading to an upward trend in emissions. However, overall, this is still lower than pre pandemic levels of approximately 4.4 million miles.

While in the past year investment in electric pool cars and charging infrastructure has resulted in greater availability of EVs for business use. This low carbon mode of travel has not yet reached its full potential or become mainstreamed in our business travel ethos. Further investment is planned to grow the EV pool fleet to enable this to be the 'go-to' option for business travel.

As noted above for business travel, the miles travelled by our fleet has shown a similar trend and has also increased, with emissions increasing by 4% as we have returned service activity to near pre-covid levels.

**Table 3: Breakdown of Dorset Council Carbon Footprint**

Carbon Footprint area	tCO <sub>2</sub> e 2022/23	% of Carbon Footprint	From Baseline
Buildings - Energy	6,595	27%	-36%
Fleet fuel	6,420	27%	-6%
Dorset Travel Fuel	3,074	13%	-25%
Highways materials	2,975	12%	-25%
Streetlights & ITS	1,937	8%	-34%
Commuting	2,260	9%	-35%
Business mileage	832	3%	-31%
Buildings - Water	103	0.4%	-58%
Waste	54	0.2%	-62%
<b>Total</b>	<b>24,250</b>	<b>100%</b>	<b>-27%</b>

### Are we on track?

**Compared to our baseline year (2019) Dorset Council emissions have reduced by approximately 27% to 24,196 tCO<sub>2</sub>e.**

Dorset Council has set the ambition to be carbon neutral by 2040, by reducing carbon emissions from the council's own operations. Although Dorset Council emissions only account for around 1.5% of Dorset's wider footprint, the council has direct control over these emissions, and it is critical that Dorset Council shows leadership in this area. This has therefore been a key focus of our activities to date. We realised that action had to be taken quickly and therefore set a series of stretching targets to reach zero by 2040. These targets can be seen in **Table 4**



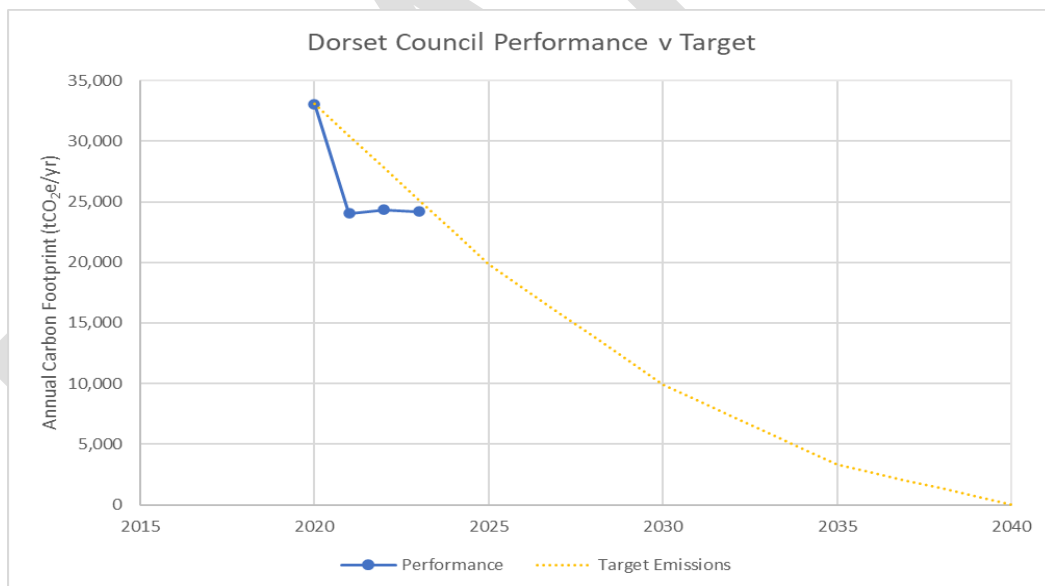
**Table 4: Dorset Council Greenhouse Gas Reduction Targets**

Year	Target	% Reduction
2025	20,298	40%
2030	9,811	71%
2035	3,383	90%
2040	-	100%

After an initial increase in emissions related to the “bounce back” after covid, we have continued to reduce our emissions, and remain within our 2023 target, as can be seen in **Figure 71: Dorset Council Emissions Performance versus Target**.

We have managed to remain with our target due to the huge investment in our buildings, resulting in reduction in emissions of 36% from our baseline year, and 19% since last year. This shows how critical it is to get a firm grasp of our travel, be it commuting, business or fleet (which collectively account for nearly 40% of our carbon footprint). Without a concerted effort to fully utilise technology to travel less and maximise availability and use of electric vehicles for fleet and business we will struggle to meet our 2025 and those beyond.

**Figure 71: Dorset Council Emissions Performance versus Target**



## Dorset Council – Ecology

Dorset Council has been very active in protecting and enhancing ecology. Our Biodiversity Appraisal Protocol provides a robust means to address development impacts on biodiversity. It is designed to meet the requirements of Natural England Protected Species Standing Advice and to address the mitigation hierarchy as set out in the National Planning Policy Framework (2021). This means development must avoid, mitigate, and compensate impacts on biodiversity, and requires development to provide biodiversity net gain. Our Dorset Biodiversity Compensation Framework secures compensation funds as a last resort, to address any residual loss of habitat from development. Funding is spent on wildlife projects all over Dorset, and steered by a group comprising ourselves, Natural England, the Local Nature Partnership and Dorset Wildlife Trust.



We have also significantly changed the way we manage our verges in the last few years. To support pollinators and butterflies we have increased the amount of 'cut and collect' mowing for urban verges within the 30mph road network to North Dorset, Weymouth, Portland, Purbeck, Bridport, West Dorset and East Dorset – cutting soil fertility and growth rates to enable wildflowers to establish and thrive, and reducing cuts from 7 a year to 2 within some areas. We also now cut B and C class rural roads once instead of twice a year. Some verges have been designated as SNCIs as a result.

After the UK's first 'super' National Nature Reserve was created at Purbeck Heath in 2020, benefiting a variety of rare wildlife, including the sand lizard, the Dartford warbler and the silver-studded blue butterfly, a 13-acre site has been acquired near Blandford for a new reserve.

The council also work closely with partners through a strong network of partnerships, including our Local Nature Partnership, Dorset Coast Forum, Catchment Partnerships, and Urban Heath Partnership. Dorset Local Nature Partnership's Ecological Network Maps have been updated, showing where there are opportunities to link and increase biodiversity. Major partnership nature recovery projects have been delivered (e.g. Dorset Wild Rivers project, Purbeck Heaths Wilder Grazing Unit, and the River Asker project), and a marine project to protect the seagrass beds at Studland by installing eco-moorings is underway. Multiple projects have also demonstrated the benefit of nature-based activities for health and wellbeing, including the Natural Choices and Stepping into Nature projects, whilst the Healthy Places Programme and Dorset Local Access Forum have invested in improving access to greenspace in recognition of the value of the environment as a determinant of health.

Dorset Council is now actively preparing to implement Biodiversity Net Gain, which is now due to launch in January 2024.

## Dorset Council - Resilience

In order to understand the risk posed by climate change to Dorset Council services, a risk assessment was carried out in 2010. The understanding of climate projections and risks has progressed significantly since then, so a new assessment was developed this year, starting with an ongoing council-wide Climate Change Vulnerability Assessment (CCVA). The CCVA identified eight key climate hazards to Dorset Council services:

1. Increase in average temperature
2. Heatwaves
3. Droughts
4. Heavy rainfall and flooding
5. High winds and storms
6. Snow, ice and freezing conditions
7. Coastal erosion and landslides
8. Impacts from International Climate Change

Each council service is currently in the process of undertaking the CCVA, which will form the start of the council's current work on climate resilience.

This work will ensure services continue to be delivered to Dorset Council residents.

Dorset Council has worked hard to improve the resilience of the county to the predicted impacts of climate change, and has delivered: -

- Over 40 natural flood management structures
- A series of flood investigations and flood alleviation interventions, including a £750,000 scheme installing resilience measures for 94 homes.



- Flood alleviation schemes in Bridport & Portesham
- The reintroduction of beavers to enclosed settings, which will help create multiple channels to slow the flow and reduce downstream flooding.
- The Weymouth Harbour & Esplanade Flood and Coastal Risk Management Strategy.

In addition, our Building resilience in Communities project to engage communities in flood risk management and boost resilience is underway in Weymouth, and £2.5m funding has been secured to stabilise, protect and repair Lyme Regis Cobb from coastal erosion and flooding.

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# Looking Forward

## Greenhouse Gas Emissions

### Operational programme

An internal operational group has been established to drive forward Dorset Council's own carbon reduction programmes. This group is made up from senior officers covering the key sources of emissions - buildings, travel (fleet, business, commuting and Dorset travel) and highways materials as well as nature-based solutions to reduce emissions and opportunities for renewable energy. This group is focusing on key workstreams to deliver the council's first target of 40% reduction by 2025. A £10m capital budget is in place to support these workstreams, this includes major programmes to -

- Upgrade Dorset streetlights to LEDs
- Retrofit our buildings with low carbon technologies.
- Install further solar photovoltaic panels (PV)
- Expand the EV charging infrastructure across the council's estate and wider Dorset
- Purchase EVs for use in our service fleets and as pool cars

As part of this process, we are working with the transformation teams to strengthen the programme management of the operational group workstreams, to include improvement of data availability and routine reporting.

### Scope 3 Emissions

Carbon emissions often understood as Scopes 1, 2 or 3.

- Scope 1 – Fuel - emissions from direct use of fuel, such as gas and oil in buildings or fuel used in vehicles.
- Scope 2 – Electricity - indirect emissions caused by the generation of electricity nationally but consumed by the organisation, such as electricity used in buildings for lighting, equipment, and some heating or by street lighting.
- Scope 3 – Other - emissions caused indirectly because of the organisation's operations such as business travel and commuting, waste, use of water in our buildings, procured goods and services. We have included some of these in our operational carbon footprint where we have some level of influence.

Procured and commissioned goods and services are typically significantly larger than local authority scope 1 & 2 emissions combined. These are difficult to access and influence, largely being created (and accounted for) by our suppliers. This year we have begun a process to assess our scope 3 emissions more fully, to understand where these emissions come from and look at opportunities to influence and reduce them. Findings will be reported in future reports.

### Working with partners

A public sector decarbonisation group has been established to draw together public sector organisations such as councils, university, NHS, Police and Fire & Ambulance Services to explore opportunities for working together across the sector to reduce emissions. The group is still new and evolving a work programme and areas of collaboration but is exploring ways to work together or share best practice on emissions reporting, procurement, building retrofit and travel.



**Town and Parish councils** also have a critical role in not only reducing their own emissions but in promoting best practice and support to their communities. The council has been working closely with Dorset Association of Town and Parish Councils to provide advice and briefing and to develop ongoing support and partnership programme to town and parish councils.

**Community, public and businesses organisations** across Dorset can continue to receive free support and grants to identify the best measures to save energy and costs and to implement their low carbon projects. The Low Carbon Dorset programme has secured funding from the Shared Prosperity Fund and the Rural England Prosperity Fund to continue to April 2025 and to offer grants to cover 50% of costs up to £75k. [www.lowcarbodorset.org.uk](http://www.lowcarbodorset.org.uk)

## Ecology

**Biodiversity net gain (BNG):** This is a new way to contribute to the recovery of nature while developing land. It is making sure the habitat for wildlife is in a better state than it was before development. From January 2024 this will apply to all development in the Town and Country Planning Act 1990, unless exempt. It will apply to small sites from April 2024. Through this process the council will be responsible for approving a biodiversity net gain plan for development work before it can start. Full guidance and support tools are still emerging from central government.

**Local Nature Recovery Strategy (LNRS):** This is a new requirement for every local authority area in England to develop a strategy on how to improve nature. Dorset Council and BCP Council are working with partners to develop Dorset's first LNRS and has appointed an officer to drive forward this work. National guidance is still evolving in this area, but the initial key stages are to develop the delivery partnership and establish a nature baseline for the area.

**Working with farmers:** The Dorset AONB has been delivering the Farming in Protected Landscapes project. Climate and nature are key drivers for this project, which offers advice and grants to help Dorset's farmers improve management practices. As part of this ongoing project farms have been able to identify and improve habitat for wildlife. Several of Dorset Council's county farms have been able to undertake biodiversity audits.

## Resilience

An internal Climate Change Vulnerability Assessment (CCVA) has begun across the council to assess the risks to services from the impacts of climate change. This exercise is undertaking a broad but shallow approach across the whole council to identify the services most vulnerable. A more in-depth 'deep and narrow' assessment will be undertaken in these service areas to explore risks in more detail and develop mitigation plans.

A countywide approach to resilience is still to be developed, in partnership with a range of key organisations across the county. This work is dependent on additional resources, but it's hoped will begin in the new year.