



# Basingstoke and Deane carbon footprint 2021/22



This document aims to provide a brief snapshot of Basingstoke and Deane Borough Council's carbon footprint and that of the wider borough. This is to clearly present progress against the aims set out in the council's 2019 climate emergency declaration, notably:

- Becoming a carbon neutral council by 2025
- Working towards a net zero carbon borough by 2030.

Further detail on our approach can be found in the council's [Climate Change and Air Quality Strategy](#), with a more detailed breakdown of our actions undertaken available in the action plan on the same page.

Regular updates on progress are provided to the council's [Community, Environment and Partnerships Committee](#) throughout the year, including a full annual update every autumn.

<https://democracy.basingstoke.gov.uk/documents/s29835/Report.pdf>

## Glossary

Term	Definition
Carbon dioxide equivalent (CO <sub>2e</sub> )	This takes into account the impact of all the different greenhouse gases, displaying it as the amount of carbon dioxide that would have the same impact. This allows the impact of all the greenhouse gases to be expressed as single number for simplicity. Most people often use the phrase 'carbon emissions' as a catchall term.
Greenhouse gas (GHG)	These gases trap heat in the Earth's atmosphere and prevent it escaping into space. This effect causes climate change. The main greenhouse gas is carbon dioxide (CO <sub>2</sub> ) but there are other greenhouse gases such as methane (CH <sub>4</sub> ), nitrous oxide (N <sub>2</sub> O) and 'F gases'. Although these gases are less prevalent than CO <sub>2</sub> , by volume, they have a greater greenhouse effect.

## Council operational emissions

As set out in the Climate Change and Air Quality Strategy, 2018/19 is the baseline year against which we measure our emissions as data from this year was used in development of the strategy. Since then, significant progress has been made to reduce the council's operational footprint. Table 1 below sets out council carbon emissions since this baseline year and figure 1 displays this graphically.

Gross emissions figures for 2018/19 have been adjusted to improve accuracy and ensure the carbon footprint more accurately reflects council operations. This results in a slightly lower initial footprint of 4,227 tonnes of carbon dioxide equivalent (tCO<sub>2e</sub>), compared to the previous figure of 4,442 tCO<sub>2e</sub> used in the strategy. Using the updated figure ensures reductions are not over-emphasised.

The council has significant green spaces and landholdings, all of which contribute to absorbing (or sequestering) carbon. The impact of this is accounted for in calculating the net emissions.

In October 2020 the council began procuring renewable electricity and part-green gas for our energy supplies. Our leisure facility contractor, Serco, also procures renewable energy. As such, the council has decided to follow best practice and dual-report emissions using 'location-based' and 'market-based' emissions:

**Location-based emissions** reflects emissions based on the average carbon intensity of the national electricity grid. This means emissions are directly correlated to energy consumption. In the UK, energy comes from a variety of different sources, such as renewables, nuclear and natural gas.

**Market-based emissions** reflects emissions from electricity that companies have purposefully chosen through contractual instruments. For the council, this is 100% renewable energy, with zero associated emissions.

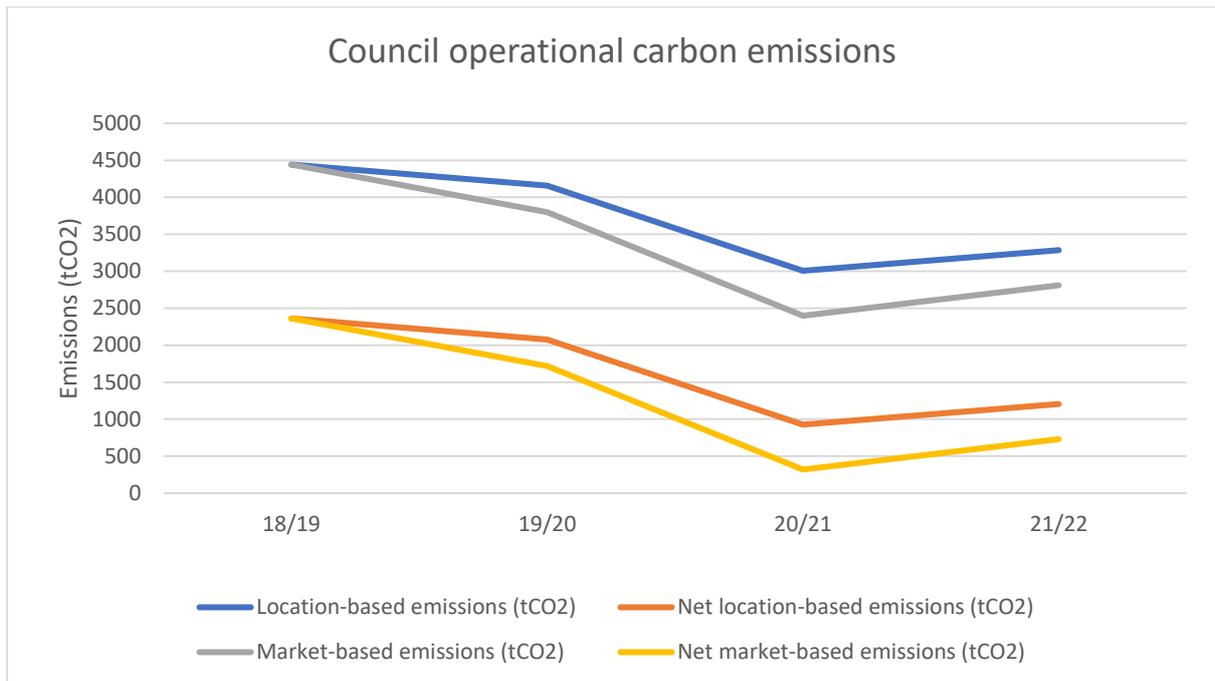
For Basingstoke and Deane Borough Council this means, for the latter half of 20/21 and 21/22, following commencement of our new energy contract our electricity consumption has no carbon emissions in market-based reporting.

Year	2018/19	2019/20	2020/21	2021/22
Total gross location-based emissions (tonnes)	4,277.49	3,998.54	2,911.65	3,285.64
Total gross market-based emissions (tonnes)	4,277.49	3,998.54	2,396.50	2,810.62
Carbon absorption from council-owned green spaces <sup>1</sup> (tonnes CO <sub>2</sub> )	-2,080	-2,080	-2,080	-2,080
Net location-based emissions (tonnes)	2,197.49	1,918.54	831.65	1,205.64
Net market-based emissions (tonnes)	2,197.49	1,918.54	316.5	730.62

**Table 1 – Council operational carbon emissions: 2018/19 to 2021/22**

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<sup>1</sup> This figure is based on high-level analysis undertaken for the baseline year of 2018/19 by consultants WSP. Work is underway to update this work and provide additional granularity, as well as shape future decision-making. However, given there have not been significant changes to council green spaces since the initial estimate work, this figure has been used again.



**Figure 1 – Council operational carbon emissions, 2018/19 to 2021/22**

The reduction in the council’s net emissions from 2,197 tonnes CO<sub>2e</sub> in 2018/19 to 731 tonnes CO<sub>2e</sub> in 2021/22 represents a two-thirds reduction (66.8%) in net emissions since 2019 when the council declared a climate emergency for the borough.

As expected, emissions for 2021/22 are higher than those for 2020/21. This is predominantly as a result of increased building energy use in 2021/22, and in particular by council leisure facilities, as buildings were reoccupied following the relaxation of COVID-19 restrictions. Although emissions increased from 2020/21 to 2021/22, emissions for 2021/22 are still markedly lower than pre-COVID levels.

Figure 2 below sets out the sources of council emissions. The largest contributors to its operational emissions are its contracted services: waste and recycling collections and the management of its leisure facilities.

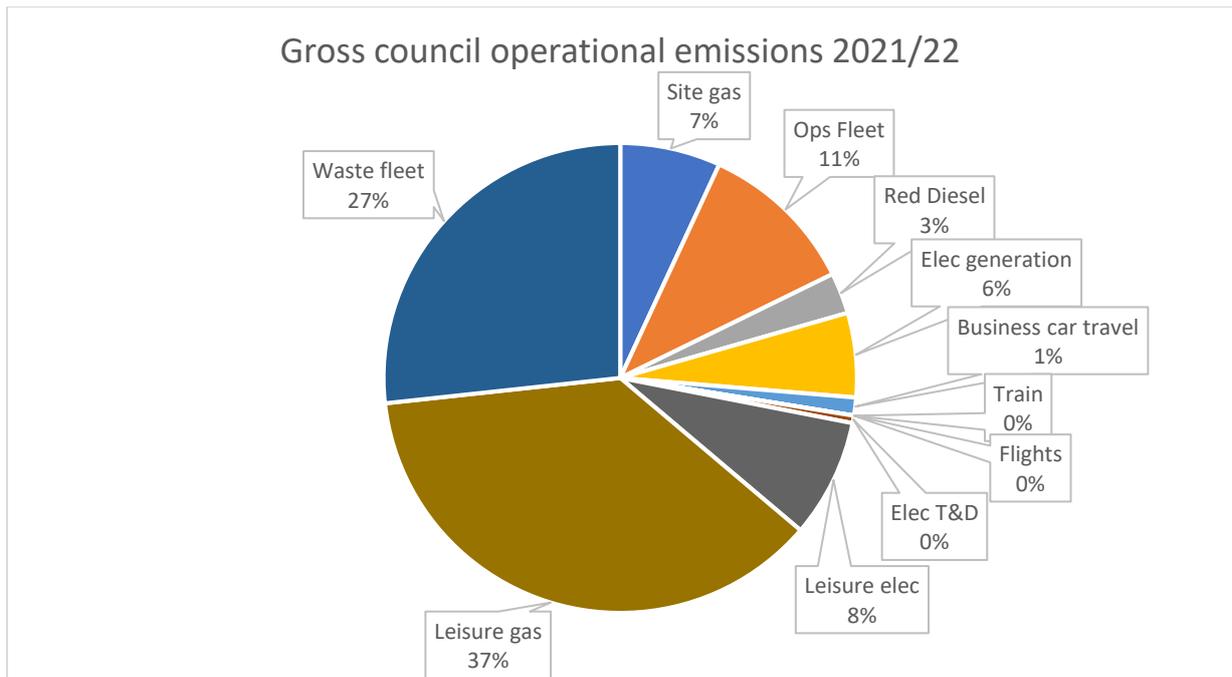


Figure 2 – sources of gross council operational emissions

## Borough-wide emissions

Borough-wide emissions are based on government data which generally has a 1.5 to two-year time delay in its publication, with the latest available data covering up to 2020.<sup>2</sup> Clearly 2020 was significantly affected by COVID-19 restrictions and the impact of this is evident in emissions data, especially emissions from transport.

The UK Government publishes data by local authority area for overall greenhouse gas emissions and for specific gases, including carbon dioxide, which represents around 80% of greenhouse gas emissions.

The Government also provides data estimates of emissions that can be controlled or influenced by local authorities. Shown in the table below as 'subset emissions', these emissions exclude those from some activities where local authorities have no influence, such as national highways including the M3. These figures, therefore, reflect the emissions that local authorities (including Hampshire County Council) can have an impact on, guiding and focusing the efforts of the council and its partners.

<sup>2</sup> [UK local authority and regional greenhouse gas emissions national statistics, 2005 to 2020 - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/statistics/uk-local-authority-and-regional-greenhouse-gas-emissions-national-statistics-2005-to-2020)

	Greenhouse gas emissions (kilotonnes of CO <sub>2e</sub> )	Yearly Percentage change	Percentage change from 2018	Subset CO <sub>2</sub> emissions (kilotonnes of CO <sub>2e</sub> )	Yearly percentage change	Percentage change from 2018
<b>2018</b>	1,137.4	-	-	880.3	-	-
<b>2019</b>	1,073.2	5.7	5.7	837.1	4.9	4.9
<b>2020</b>	928.6	13.5	18.4	735.1	12.2	16.5

Table 2 – Greenhouse gas emissions and subset carbon dioxide emissions in Basingstoke and Deane borough from 2018 to 2020.

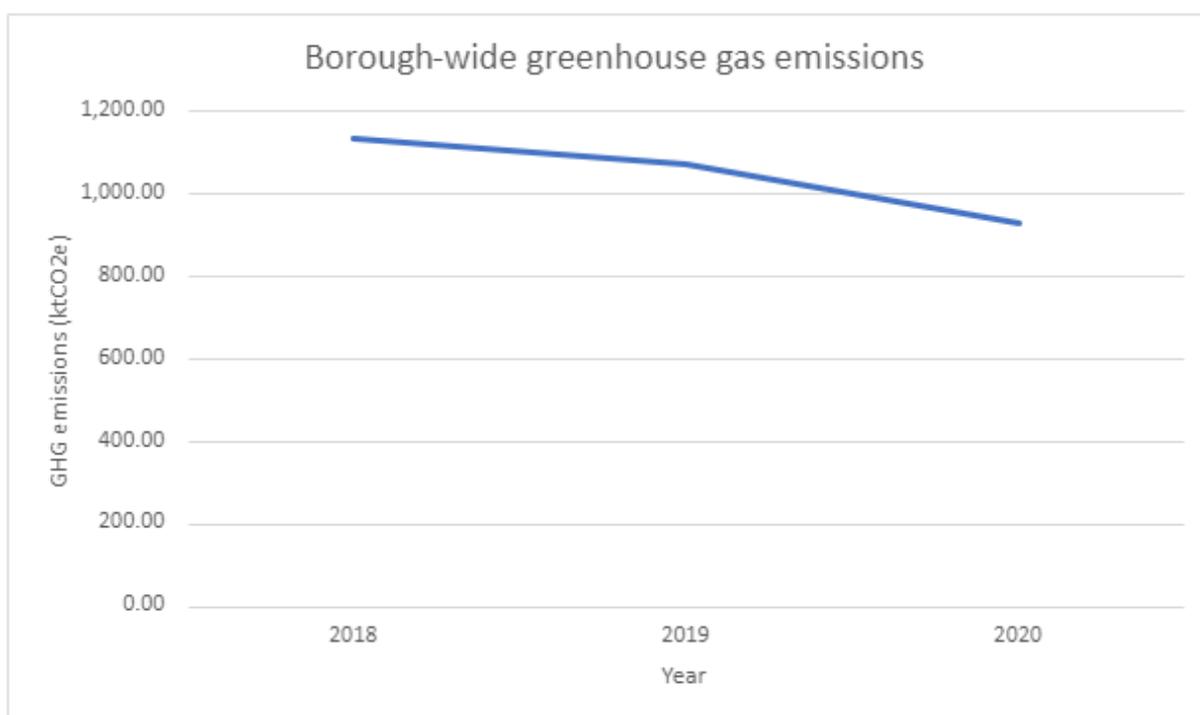
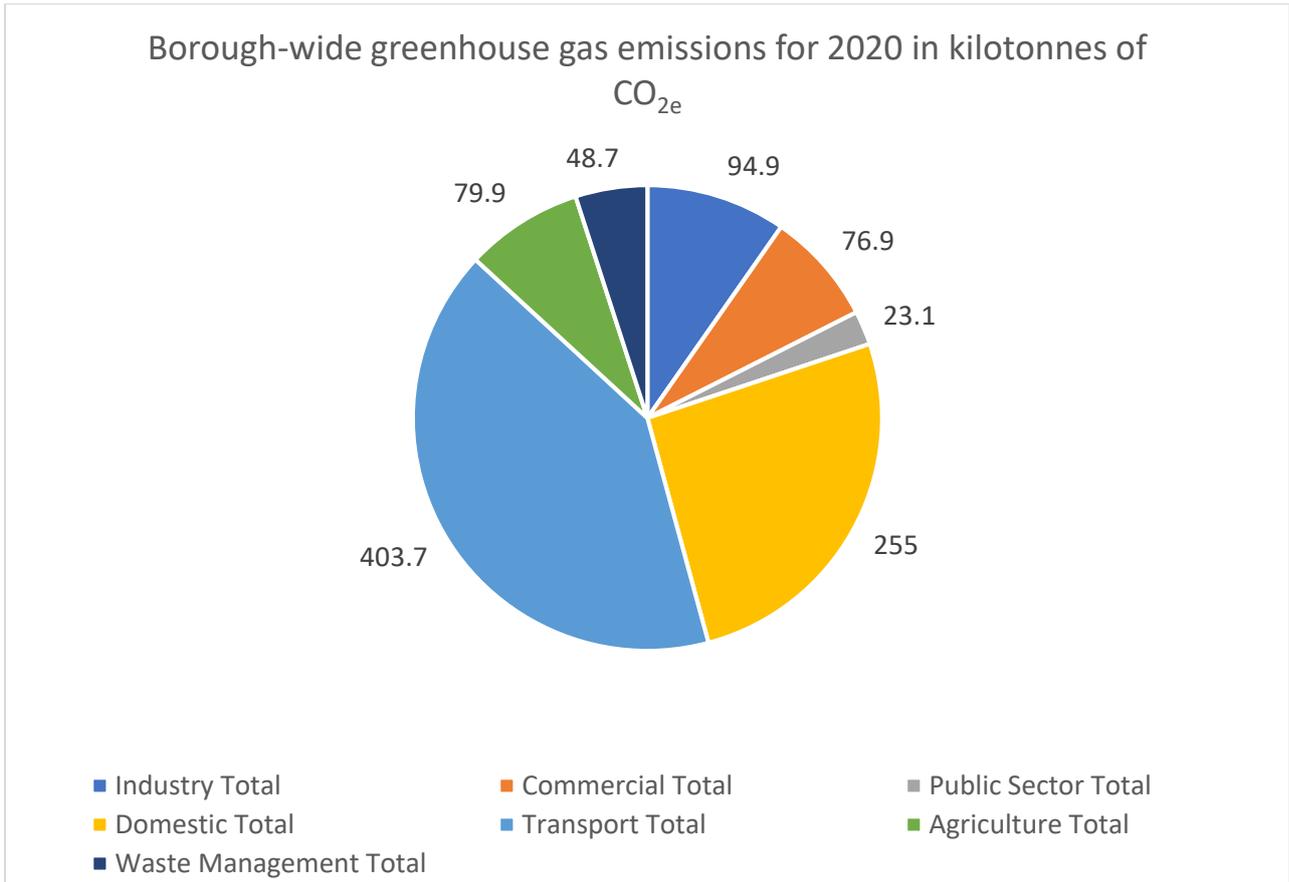


Figure 3 – Borough-wide greenhouse gas emissions in Basingstoke and Deane, 2018 to 2020

Transport emissions saw the biggest reduction from 2019 to 2020 in both datasets, however they remain the largest proportion of emissions. Following this, residential, industrial and commercial emissions are broadly equal, highlighting the need to support residents and work with partners to enable and inspire the change required to tackle these emissions.

The sources of these emissions are shown in figure 4 below.

Land use, land use change and forestry accounts for a net reduction in emissions of -53.5 kilotonnes of CO<sub>2</sub> equivalent gases, though this is not represented in the chart.



**Figure 4 – Sources of borough-wide greenhouse gas emissions in Basingstoke and Deane for 2020**

