

Medway Area Greenhouse Gas Emissions Estimates 2024

1. Introduction

Greenhouse gas emissions estimates for all UK local authority areas are published annually by the Department for Energy Security and Net Zero (DESNZ). The [latest dataset](#), published in June 2026, provides estimates for the 2024 calendar year (January to December). The estimates are produced using a nationally consistent methodology and represent the best available measure of area-wide greenhouse gas emissions for Medway.

Whilst changes in Medway's emissions cannot be attributed solely to actions taken by Medway Council, the dataset enables the council to track long-term emissions trends and assess progress towards Medway Council's net zero target for Medway "The Place".

Emissions data are available from 2005 onwards. Each year, historic emissions estimates may be revised by DESNZ to reflect improvements in methodology and data quality, ensuring a consistent time series for trend analysis.

2018 is used as the baseline year, for monitoring purposes in this report, as it was the last full year prior to Medway Council declaring a Climate Change Emergency in 2019. Comparisons to 2005 data are included to identify long term trends.

2. 2024 Emissions Summary

2.1 Medway Headlines for 2024

- Medway's greenhouse gas emissions decreased by 0.7% to 797.9 kt CO₂e.
- Emissions were 30.6% lower than the 2018 baseline year and 49.5% below 2005 levels.
- Reductions in waste and industrial emissions were largely offset by increases in domestic, transport, commercial and public sector emissions.
- Domestic and transport emissions account for over 70% of Medway's emissions and remain the principal challenge to achieving net zero.
- The overall reduction continues the long-term downward trend but is slower than in recent years.

2.2 National and Regional Context

- UK greenhouse gas emissions decreased by 2% in 2024, largely due to reduced emissions from electricity supply (electricity is becoming cleaner in the UK), the UK importing more electricity from other countries, greater renewable electricity generation and the closure of the UK's last coal-fired power station.
- Domestic and public sector emissions increased due to higher gas use, likely driven by an easing of energy cost pressures.
- Emissions across Kent decreased by 0.27%.

3. Medway's Total Greenhouse Gas Emissions 2024

3.1 Emissions by Sector

Table 1 – Medway Greenhouse Gas Emissions by Sector (2024)

Sector	2024 emissions (kt CO2e)	2023 emissions (kt CO2e)	Change from 2023 (kt CO2e)	Change from 2023 (%)	Change from 2018 (kt CO2e / %)	Change from 2005 (kt CO2e / %)
Domestic	285.9	281.1	4.7	1.7%	-78.9 kt CO2e -21.6%	-306.9 kt CO2e -51.8%
Transport	276.3	270.4	5.9	2.2%	-49.2 kt CO2e -15.1%	-91.5 kt CO2e -24.9%
Industry	92.6	105.6	-13.0	-12.3%	-18.7 kt CO2e -16.8%	-68.3 kt CO2e -42.4%
Commercial	57.2	50.9	6.3	12.5%	-23.0 kt CO2e -28.7%	-138.5 kt CO2e -70.8%
Waste	38.5	59.2	-20.7	-34.9%	-176.3 kt CO2e -82.1%	-124.2 kt CO2e -76.3%
Public Sector	33.2	23.3	9.9	42.6%	-5.6 kt CO2e -14.3%	-48.1 kt CO2e -59.1%
Agriculture	17.4	16.4	1.0	5.9%	-1.1 kt CO2e -6.0%	-3.1 kt CO2e -15.0%
Land Use, Land Use Change and Forestry (LULUCF) Net Carbon Removal	-3.2	-3.3	0.1	n/a	0.5 kt CO2e n/a	-2.2 kt CO2e n/a
Total	798	804	-5.8	-0.7%	-352.3 kt CO2e -30.6%	-782.7 kt CO2e -49.5%

Table 1 shows that Medway's total greenhouse gas emissions decreased by 0.7% between 2023 and 2024 continuing the long term downward trend. Total emissions are now 30.6% lower than the 2018 baseline year and 49.5% lower than 2005 levels.

The overall reduction was driven by lower emissions from the waste and industry sectors. However, these reductions were partially offset by increases in emissions from the domestic, transport, commercial, public sector and agricultural sectors, limiting the overall fall in emissions during the year.

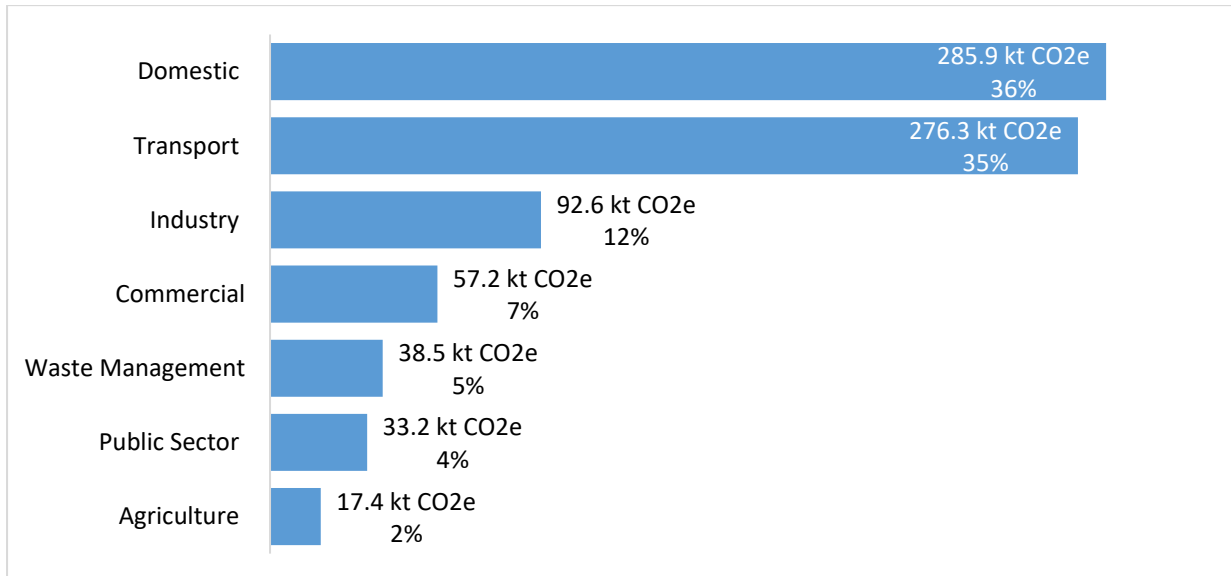
Domestic and transport emissions remain the largest sources of greenhouse gas emissions in Medway, accounting for over 70% of total emissions.

Land Use, Land Use Change and Forestry (LULUCF) represents carbon absorbed by woodland, trees, grassland and soils. In 2024, these natural carbon sinks removed an estimated 3.2 ktCO2e from the atmosphere, equivalent to 0.4% of Medway's total emissions.

A more detailed sector analysis is provided under item 4.1 in this report.

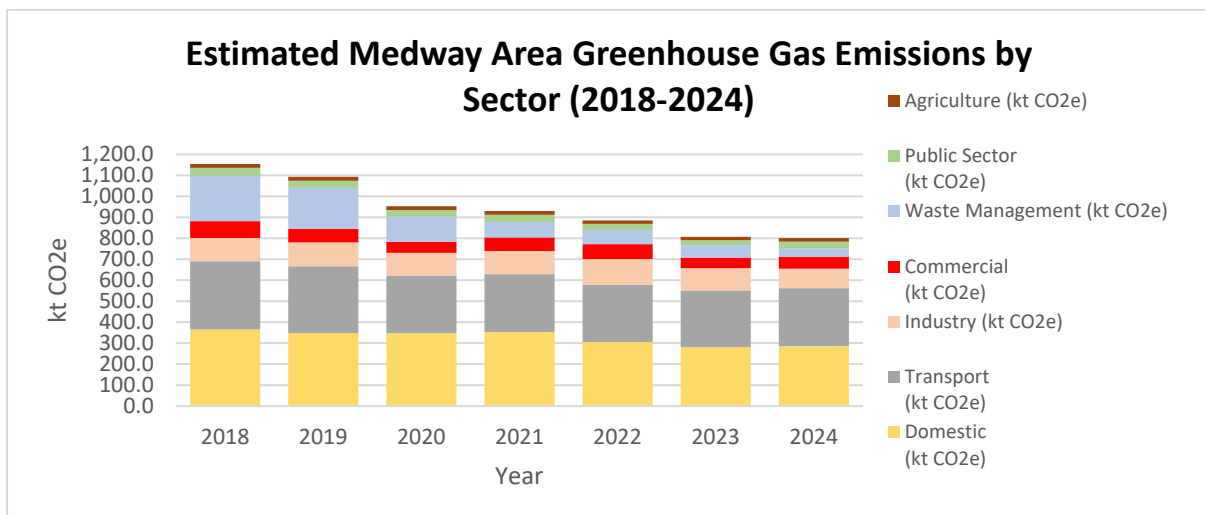
Figure 1 illustrates the relative contribution of each sector to Medway's greenhouse gas emissions in 2024.

Figure 1 – Share of Medway Greenhouse Gas Emissions by Sector (2024)



3.2 Medway Emissions Trends Since the 2018 Baseline Year

Figure 2 – Estimated Medway Area Greenhouse Gas Emissions by Sector (2018-2024)



Since the 2018 baseline year, Medway's greenhouse gas emissions have reduced by 352.3 ktCO₂e (30.6%), supporting an overall downward trend across most sectors. The largest reductions have been achieved in the waste sector, followed by the domestic, transport and commercial sectors.

4. Sector Analysis

- 4.1** While Medway's greenhouse gas emissions continued their long-term downward trend, the overall reduction in 2024 was relatively modest at 0.7%

compared with 2023. The reduction was driven primarily by significant decreases in waste management and industrial emissions, which together reduced emissions by 33.7 kt CO₂e. However, these gains were partially offset by increases in domestic, transport, commercial, public sector and agricultural emissions.

Domestic, commercial and public sector emissions all increased, largely due to higher gas use. This is consistent with the national trend, where building-related emissions from the domestic and public sector, likely driven by an easing of energy cost pressures.

Domestic and transport emissions account for more than 70% of Medway's total emissions. While progress has been made since 2018, these sectors remain the greatest challenge and the greatest opportunity for further emissions reduction.

The data also demonstrates long-term reductions from the waste sector. Waste emissions have fallen by more than 80% since the 2018 baseline year and now account for less than 5% of Medway's total emissions, compared with almost one-fifth of emissions in 2018.

Overall, the data suggests that future progress towards net zero will depend increasingly on reducing emissions from heating buildings and road transport.

4.2 Domestic Sector - 2024

- 285.9 kt CO₂e
- 36% share of total emissions, making the sector Medway's largest source of emissions. Gas consumption in homes represents one of the largest individual sources of emissions in Medway, exceeded only by transport emissions.
- 1.7% increase from 2023, largely due to increased domestic gas consumption.
- Emissions are now 21.6% below 2018 and 51.8% below 2005 levels. Despite the increase in 2024, the domestic sector has delivered the largest reduction in kt CO₂e since 2025, at 306.9 kt CO₂.

4.3 Transport Sector - 2024

- 276.3 kt CO₂e
- 35% share of total emissions, making the sector Medway's second largest source of emissions.
- 2.2% increase from 2023 (5.9 kt CO₂e). Despite this increase, transport emissions remain below pre-pandemic levels.
- Emissions are now 15.1% below 2018 and 24.9% below 2005 levels.

4.4 Industry Sector - 2024

- 92.6 kt CO₂e
- 12% share of total emissions.
- 12.3% decrease from 2023. The reduction of 13 kt CO₂e was mainly due to lower energy consumption by Medway businesses, rather than changes at large industrial sites.

- Emissions are now 16.8% below 2018 and 42.4% below 2005 levels.

4.5 Commercial Sector - 2024

- 57.2 kt CO₂e
- 7% share of total emissions.
- 12.5% increase from 2023, primarily due to higher commercial gas consumption, which offset reductions from electricity use. Commercial gas emissions in 2024 were more consistent with levels seen prior to 2023.
- Emissions are now 28.7% below 2018 and 70.8% below 2005 levels.

4.6 Waste Sector - 2024

- 38.5 kt CO₂e
- 5% share of total emissions
- 34.9% decrease from 2023 largely due to a fall in landfill related emissions. The reduction of 20.7 kt CO₂e represents the largest reduction (in kt CO₂e) of any sector between 2023 and 2024 and continues the long term decline.
- Emissions are now 82.1% below 2018 and 76.3% below 2005 levels.
- Under the DESNZ methodology, waste emissions are allocated to local authorities based on where the waste arises rather than where it is treated or disposed of.

4.7 Public Sector - 2024

- 33.2 kt CO₂e
- 4% share of total emissions
- 42.6% increase from 2023 largely due to an increase in emissions from the use of gas and other fuels. Although the increase of 9.9 kt CO₂e represents the largest increase (in kt CO₂e) of any sector between 2023 and 2024, emissions remain 14.3% lower than 2018 and 59.1% lower than 2005 levels.

4.8 Agriculture Sector - 2024

- 17.4 kt CO₂e
- 2% share of total emissions.
- 5.9% increase from 2023 largely driven by higher emissions from agricultural electricity and gas use and the "Agriculture Other" category. Livestock emissions remained broadly unchanged, while emissions from agricultural soils continued their longer-term decline.
- Emissions are now 6.0% below 2018 and 15.0% below 2005 levels.

4.9 Land Use, Land Use Change and Forestry (LULUCF) Sector - 2024

- LULUCF represents carbon absorbed by woodland, trees, grassland and soils. Natural carbon removals were estimated at 3.2 kt CO₂e in 2024 compared with 3.3 kt CO₂e in 2023, meaning slightly less carbon was removed from the atmosphere in 2024. Although relatively small in comparison with Medway's overall emissions, these natural carbon sinks continue to provide a net benefit by removing greenhouse gases from the atmosphere.

5. Future Updates

The next DESNZ local authority greenhouse gas emissions dataset, covering calendar year 2025, is expected to be published in June 2027. Future releases may include methodological revisions as DESNZ continues to improve emissions estimation and reporting practices.