

Medway Council's Carbon Emissions 2020/21

(Own Estate and Operations)

Historically we have only recorded carbon emission data for the energy supply to our buildings and streetlighting. Since 2018/19, we have used a new carbon accounting tool to report on emissions from other sources, such as fleet mileage, which will allow us to track future carbon savings more accurately.

We are improving how we calculate our emissions so that we can monitor progress against the [Climate Change Action Plan](#).

What improvements have we made in this period?

We have collated and calculated our carbon emissions independently for the first time. Improvements have largely focused on establishing processes and methodologies for data collection and verification. We have also achieved more accurate designation of data relating to gas and electricity usage. We have recorded fleet vehicle usage data in litres (instead of miles) for the first time where this information is available. This has increased the accuracy of our emissions reporting.

What is our carbon reduction target?

In 2020, we commissioned [Local Partnerships](#) to undertake a technical study to understand the Council's carbon footprint and to inform our approach to reducing our emissions. The study identified a series of interventions to put the Council on a path to **reducing its emissions by 95% by 2050 against a baseline year of 2018/19**. The study uses the science-based target approach to reducing emissions at a rate that is in line with keeping global temperature rises below 1.5°C. This means halving emissions every ten years as opposed to reducing emissions by a fixed amount every year. **It sets the first carbon budget for 2020-27 as 57,631 tonnes of carbon dioxide emission equivalent (tCO₂e).**

What is included in our emissions reporting?

Our carbon footprint includes:

Direct Emissions (Scope 1 & 2)

- Energy to heat Council owned buildings;
- Fugitive emissions - this term refers to leaks or unintended releases of pollutants from a contained source, such as an air conditioning unit, into the surrounding atmosphere;
- Emissions from small fleet vehicles and Refuse Collection Vehicles owned or leased by the Council;
- Electricity for Council owned buildings and street lighting.

It does not include Council owned housing except for energy supplied to communal areas and sheltered housing.

Indirect emissions (Scope 3)

Staff business travel

Water (including waste water treatment)

Transmission and distribution losses – this term is used to describe the proportion of electricity purchased by the Council that is lost between the power station and the point of use (e.g., buildings

or street lighting). It is directly proportional to the amount of electricity used so if less electricity is used the losses will be less.

We have not included areas of indirect control for example emissions from Local Authority Schools, staff commuting and contracted out services, such as school transport and waste disposal.

What are the main sources of emissions across our estate and operations?

Source	Scope (1, 2 or 3)	Tonnes CO2e 2018/19	Tonnes CO2e 2019/20	Tonnes CO2e 2020/21 (% difference from previous year in brackets)	% of overall emissions (2019/20 data in brackets)
Building (Electricity)	Scope 2	3,453.80	2,617.52	2,367.17 ↓ (-9.6%)	28.5% (24.9%)
Heating (Gas and other heating fuel)	Scope 1	3,576.02	3,438.45	2,252.37 ↓ (-34.5%)	27.1% (32.7%)
Street Lighting (Electricity)	Scope 2	2,762.29	2,442.13	1,741.10 ↓ (-28.7%)	21.0% (23.2%)
Fleet (Diesel and Petrol)	Scope 1	1,320.45	1,120.51	1,332.86 ↑ (+19.0%)	16.1% (10.7%)
Transmission and Distribution Losses	Scope 3	529.83	429.56	353.31 ↓ (-17.8%)	4.3% (4.1%)
Water	Scope 3	143.20	150.73	133.38 ↓ (-11.5%)	1.6% (1.4%)
Staff Travel	Scope 3	319.52	305.39	118.96 ↓ (-61.0%)	1.4% (2.9%)
Fugitive Emissions	Scope 1	0	5.88	4.16 ↓ (-29.2%)	0.1% (0.1%)
Total		12,105.11	10,510.17	8,303.31 ↓ (-21%)	100%

Table 1 – Emissions summary 2020/21

How does this compare with the previous period/year?

The total emissions for 2020/21 are 2,206.86 tCO₂e less than the previous year; an annual reduction of 21%.

Carbon emission reductions have been achieved across all sources except for fleet. This is primarily because improved data collection processes mean that a number of additional vehicles were identified during this reporting period that weren't included in the 2019/20 reporting period.

A 34.5% reduction in carbon emissions from heating council buildings has been seen compared to the previous year. This is primarily as a result of the Coronavirus (COVID-19) pandemic, lockdowns and subsequent closure and reduced occupancy of some buildings. At the same time, some buildings have been operational beyond their “normal” terms of use, and this has led to an additional demand for resources. Overall, the energy use and emissions have reduced.

Scope 2 emissions are still the biggest overall contributor to our total emissions at 49.5% (building and street lighting electricity) which is similar to the previous year at 48.1%. As with the emissions from heating council buildings, the overall reduction in electricity across our buildings is as a result of the Coronavirus (COVID-19) pandemic and lockdowns and subsequent closure and reduced occupancy of some buildings.

Our LED street lighting programme was underway in 2020/21 and is likely to have contributed to the reduction of emissions from street lighting by 28% on the previous year. This demonstrates the success of the programme and associated energy and emission reductions.

The reduction in transmissions and distribution related emissions reflect the reduction in electricity consumption from the LED street lighting programme and energy reductions in buildings.

Water continues to contribute a stable 1.6% of overall emissions.

Emissions from staff travel have reduced considerably (61% on the previous year) likely as a result of increased home working.

How does this compare to energy usage?

Our energy consumption in kWhrs reduced by 22% on the previous year.

What is the energy consumption by sector?

This is shown in the table below:

Source	Consumption (kWh) (2019/20 data in brackets)
Heating - Natural Gas	12,074,194 (18,254,211)
Building Use – Electricity	10,153,429 (10,240,707)
Street Lighting Electricity	7,468,034 (9,554,483)
Total	29,695,657 (38,049,401)

Table 2 – Energy consumption by sector

What rate of reduction have we achieved against the baseline year?

In 2020/21, the Council’s carbon emissions fell by 31.4% against the baseline year (2018/19).

How are we performing against the First Carbon Budget?

We have kept within the projected carbon budget for Year 1 (2020/21) of the First Carbon Budget.

Year	2020/21	2021/22	2022/23	2023/24	2024/25	2025/26	2026/27	2027/28	Cumulative
First Carbon Budget (tCO ₂ e)	9,930	8,994	8,146	7,378	6,683	6,053	5,482	4,965	57,631
Actual Emissions (tCO ₂ e)	8,303	-	-	-	-	-	-	-	-
Surplus (Staying Within Budget)/Deficit (Going Over Budget)	1,627	-	-	-	-	-	-	-	-

Table 3 – Projected First Carbon Budget

How have we achieved carbon reductions?

We did not anticipate any significant savings before 2022 against the 2020-2027 budget due to project set up and delivery timescales. The reduction reported in our footprint has been achieved through a combination of factors including:

- decarbonisation of the UK electricity grid
- operational changes and a reduction of energy use within our buildings as a result of the Coronavirus (COVID-19) pandemic
- carbon reduction initiatives during this period; primarily the LED street lighting programme

Next Steps

The rate of decarbonisation is forecast to slow, which is likely to reduce future carbon savings across our estate. There will however, be a renewed focus on carbon reduction through the delivery of the Climate Change Action Plan. We intend to work more robustly to analyse our emissions; further improving data accuracy and including additional sources of Scope 3 emissions.