



# **Tonbridge and Malling Borough Council**

## **Carbon Audit:**

### **2023/ 2024**

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## 1. Summary

Annually, Tonbridge and Malling Borough Council (TMBC) produce a carbon audit. This audit details the carbon dioxide equivalent emissions (CO<sub>2</sub>e) from TMBC's owned estate and operations for the previous fiscal year. This allows for consistent monitoring of emissions over time, highlighting how TMBC is progressing towards meeting its 2030 carbon neutral aspiration.

Carbon audits are developed by TMBC in accordance with the Greenhouse Gas Protocol 'Corporate Accounting and Reporting Standard' and the 'Environmental Reporting Guidelines' developed by the Department of Business, Energy, and Industrial Strategy (BEIS). All emissions were calculated using official greenhouse gas conversion factors published by the Department for Energy Security and Net Zero, and Defra<sup>1</sup>.

In 2023/ 2024 TMBC emitted **3,249.1** tonnes of carbon dioxide equivalent<sup>2</sup> (tCO<sub>2</sub>e).

## 2. Scope emissions

The following section provides an overview of TMBC's emissions scopes:

**Scope 1:** Gas consumption, TMBC vehicle fleet.

**Scope 2:** Electricity consumption.

**Scope 3:** Transmission and distribution losses, water supply, water treatment, TMBC business travel, TMBC commuting, contractor travel (refuse), leisure facilities, grounds maintenance.

**Renewable generation:** Renewable Energy Guarantee of Origin (REGO) electricity tariff.

## 3. Emissions overview

<i>TMBC Emissions (tCO<sub>2</sub>e)</i>					
Emissions Year	2019/20	2020/21	2021/22	2022/23	2023/24
Scope 1	139.0	148.7	143.6	127.8	111.6
Scope 2	198.0	145.6	131.0	99.9	78.1
Scope 3	3,266.7	2,592.3	3,049.0	3,170.6	3,137.5
Total Gross Emissions	3,603.7	2,886.6	3,323.6	3,398.3	3,327.2
Renewable Generation	0.0	0.0	133.5	100.9	78.1
Total Net Emissions	<b>3,603.7</b>	<b>2,886.6</b>	<b>3,190.1</b>	<b>3,297.4</b>	<b>3,249.1</b>

<sup>1</sup> [Government conversion factors for company reporting of greenhouse gas emissions - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/conversion-factors-for-company-reporting-of-greenhouse-gas-emissions)

<sup>2</sup> Carbon Dioxide Equivalent (CO<sub>2</sub>e) = Carbon Dioxide, Methane and Nitrous Oxide represented as one equivalent unit, to measure the climate change impact of multiple gasses under one metric.

#### 4. Emissions breakdown

<i>Emissions Sources</i>	<i>Consumption</i>		<i>Emissions Data</i>
<b>Scope 1</b>	<b>Activity</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>
Gas Consumption	563,036	<i>kWh</i>	103.0
LPG Consumption		<i>tonnes</i>	
Oil Consumption		<i>litres</i>	
<b>Council Vehicle Fleet</b>			
Diesel Vehicle	2,010	<i>litres</i>	5.1
Petrol Vehicle	1,688	<i>litres</i>	3.5
Gas Oil		<i>litres</i>	
<b>Total Scope 1</b>			<b>111.6</b>

<b>Scope 2</b>	<b>Activity Data</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>
Electricity Consumption	377,028	<i>kWh</i>	78.1
<b>Total Scope 2</b>			<b>78.1</b>

<b>Scope 3</b>	<b>Activity Data</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>
Transmission & Distribution Losses	377,028	<i>kWh</i>	6.8
Water Supply	5,941	<i>m<sup>3</sup></i>	1.0
Water Treatment	5,644	<i>m<sup>3</sup></i>	1.1
<b>Business Travel</b>			
Small car	20,713	<i>miles</i>	4.7
Medium car	58,984	<i>miles</i>	16.4
Large car	1,206	<i>miles</i>	0.4
Electric car	2,207	<i>miles</i>	0.2
Rail		<i>passenger km</i>	
<b>Commuting</b>			
Diesel Car	92,673	<i>miles</i>	26.7
Petrol Car	302,437	<i>miles</i>	79.2
Hybrid Car	36,942	<i>miles</i>	7.2
Electric Car	20,586	<i>miles</i>	1.8
Motorbike	3,948	<i>miles</i>	0.7
Bus	1,588	<i>passenger km</i>	0.2
<b>Contractor Travel</b>			
Refuse Collection Vehicle fuel	427,975	<i>litres</i>	1,075.0
<b>Leisure Centres</b>			
Electricity	3,050,707	<i>kWh</i>	631.7
Gas	6,378,855	<i>kWh</i>	1,166.9
Kerosene	14,732	<i>litres</i>	46.8
Diesel	7,657	<i>litres</i>	19.2
Water Supply	57,417	<i>m<sup>3</sup></i>	10.1
Water Treatment	54,546	<i>m<sup>3</sup></i>	11.0
Grey Fleet		<i>miles</i>	
Waste DMR	No data	<i>tonnes</i>	
Waste Municipal	No data	<i>tonnes</i>	

<b>Grounds Maintenance</b>			
Electricity	No data	<i>kWh</i>	
Diesel	10,571	<i>litres</i>	26.6
Petrol	1,167	<i>litres</i>	2.4
Gas Oil		<i>litres</i>	
Water Supply	No data	<i>m<sup>3</sup></i>	
Water Treatment	No data	<i>m<sup>3</sup></i>	
Waste Composting / Anaerobic Digestion	127	<i>tonnes</i>	1.13
Municipal Waste / Combustion	11	<i>tonnes</i>	0.23
<b>Total Scope 3</b>			<b>3,137.5</b>

<b>TMBC Gross Emissions Total</b>			<b>3,327.2</b>
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<b>Renewable generation</b>	<b>Activity Data</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>
REGO Tariff	377,028	<i>kWh</i>	78.1
<b>Total</b>			

<b>TMBC Net Emissions Total</b>			<b>3,249.1</b>
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## 5. Company Information

The Tonbridge and Malling Borough Council is a local authority located in Kent, within the Southeast of England.

## 6. Reporting period

This reporting period is from 01/04/2023 to 31/03/2024.

## 7. Emissions overview

### 7.1. Scope 1

Scope 1 emissions totalled 111.6 tCO<sub>2</sub>e in 2023/24, a fall of 20% from the 2019/2020 baseline. Scope 1 was the second largest emitting scope but contributed only 3.4% to TMBCs total gross emissions for 2023/24. In other words, emissions from heat and transport (TMBC's own vehicles) were greater than emissions from electricity use.

Gas consumption accounts for the majority of scope 1 emissions, with emissions from this source 16% lower in 2022/23 compared to the baseline year. TMBC vehicles produced 8.6 tCO<sub>2</sub>e in 2023/24, a fall of 47% compared to baseline but only 8% year-on-year as there was no change in vehicle mix in 2023/24. Emissions for electricity use, including for TMBC owned vehicles that are charged at the TMBC offices, are reported in Scope 2.

### 7.2. Scope 2

Scope 2 emissions totalled at 78.1 tCO<sub>2</sub>e in 2023/24, a fall of 61% from the 2019/2020 baseline year. See section 7.5 for a discussion of significant emissions changes.

Scope 2 contributed only 2.3% of TMBCs total gross emissions, making it the smallest contributor across the three scopes. However, these emissions only come from one source: electricity.

During 2023/24 the Council's Civil Enforcement Officers made use of the Council's one electric vehicle (EV), as noted under Scope 1 (TMBC vehicles). Emissions from charging this vehicle at TMBC sites are included in the total for Scope 2. However, as TMBC is on a renewable generation electricity tariff, these emissions are accounted as zero for net emissions.

### 7.3. Scope 3

Scope 3 emissions totalled 3,137.5 tCO<sub>2</sub>e in 2023/24, which is 4% below the 2019/2020 baseline. Scope 3 was the largest contributor to TMBC emissions, accounting for 94.3% of gross emissions in 2023/24.

Leisure facilities remain the most significant contributor to Scope 3 emissions, emitting 1,885.7 tCO<sub>2</sub>e, or 60% of Scope 3 emissions. Refuse collection vehicles were the second largest source of Scope 3 emissions at 1,075.0 tCO<sub>2</sub>e, or 34% of Scope 3 emissions.

Other sources in Scope 3 accounted for much smaller proportions. Staff commuting by car or van was the third largest Scope 3 source of emissions, producing 113.1 tCO<sub>2</sub>e, or 4% of scope 3 emissions.

All other sources accounted for less than 1% of scope 3 emissions, including Grounds maintenance which produced 30.4 tCO<sub>2</sub>e, followed by business travel, which produced 21.7 tCO<sub>2</sub>e. Transmission

and distribution losses, water supply and water treatment emitted, and commuting by non-car modes together totalled 9.7 tCO<sub>2</sub>e.

#### **7.4. Renewable generation**

TMBC continued its renewable electricity tariff. Therefore, emissions associated from electricity consumption (scope 2) are 0 tCO<sub>2</sub>e for reporting purposes.

However, for clarity, and to highlight the emissions impact of energy consumption, we report on gross emissions (without the renewable tariff) and net emissions, which considers the tariff. This approach is highlighted in the emissions breakdown section on page 4.

TMBC's net emissions are reported as the final net emissions figure for the corresponding fiscal year. Therefore, for 2023/24, TMBC's emissions are reported as **3,249.1** tCO<sub>2</sub>e.

#### **7.5. Significant emissions and consumption changes**

Relative to the baseline there have been significant reductions in energy consumption and emissions in scopes 1 and 2. Gross emissions from scopes 1 and 2 were 44% below baseline in 2023/24, while net emissions from these scopes were 67% lower than the baseline.

In terms of consumption, electricity use fell by 51% relative to the baseline, highlighting that emissions reductions are due to energy efficiency measures over and above reductions in the carbon intensity of electricity from the National Grid. While an increase in working from home, relative to the pre-pandemic baseline, will contribute towards lower energy use at TMBC sites, some of this will be offset by energy use in homes. Emissions from home-working in 2023/24 have not been calculated.

In scope 3 there have been significant reductions in emissions from commuting by car and business travel, of 67% and 46% respectively, relative to the baseline. However, for business travel, these gains from have already been 'locked in' due to changing working patterns since the pandemic, with only a 2% reduction in emissions from business travel since 2022/23. Emissions from staff commuting, by contrast, continue to fall even though home-working rates are similar in 2022/23 and 2023/24. Staff commuting by car emissions fell 30% from 2022/23 to 2023/24 representing continuing changes in travel patterns, such as increased car pooling, and an increase in staff switching to electric vehicles.

Emissions from the largest emitting sources, leisure facilities and Refuse Collection Vehicles, remain high with little change from baseline, or year-on-year.

#### **7.6. Largest emitting sources**

1. Leisure facilities Gas Consumption (1,166.9 tCO<sub>2</sub>e).
2. Refuse Collection Vehicles (1,075.0tCO<sub>2</sub>e).
3. Leisure facilities Electricity Consumption (631.7tCO<sub>2</sub>e).
4. Commuting by car (113.1tCO<sub>2</sub>e).
5. TMBC Gas Consumption (103.0tCO<sub>2</sub>e).

## **8. Measuring and reporting**

Reporting on TMBC emissions will take place annually, following the greenhouse gas protocol and BEIS reporting guidelines.

This carbon audit will be reported to management team, and consequently taken through any relevant scrutiny process.

## 9. Scope Explanation

<i>Scope</i>	<i>Activity</i>	<i>Description</i>	<i>Data Source</i>
Scope 1	Gas Consumption	Used to heat our buildings.	Data obtained from council utility bills.
Scope 1	Oil Consumption	Used to heat our buildings.	Data obtained from council utility bills.
Scope 1	Vehicle Fleet	The council's vehicle fleet.	Data obtained from council fuel invoices.
Scope 2	Purchased electricity	Electricity purchased from the national grid to power the council's buildings.	Data obtained from council utility bills.
Scope 3	Transmission and Distribution Losses	Indirect emissions from the transmission and distribution of our purchased electricity.	Data obtained from council utility bills.
Scope 3	Water Supply	The supply of water to our buildings.	Data obtained from council utility bills.
Scope 3	Water Treatment	The water we return to the system (90% return to sewer rate).	Data obtained from council utility bills.
Scope 3	Business Travel	Staff and member travel in their own vehicles on business grounds.	Obtained using employee mileage claims.
Scope 3	Commuting	Staff travel to and from work premises.	Obtained using staff surveys.
Scope 3	Contractor Travel	Travel by contractors to conduct work commissioned by the council, e.g., waste collection.	Obtained through contractor fuel records.
Scope 3	Leisure Centres	Emissions from leisure centre use of electricity, gas, fuel, water, vehicles, and disposal of waste.	Data obtained from council bills, and mileage claims.
Scope 3	Grounds Maintenance	Emissions from Grounds Maintenance use of electricity, gas, fuel, water, vehicles, and disposal of waste.	Data obtained from council bills, and mileage claims.

## 10. Organisational boundary

Our organisation boundary is (as defined by BEIS) activities in which the organisation has financial and operational control. Therefore, the boundary covers everything that TMBC has the above control over. This follows guidance from the previous National Indicator 185:

*"The indicator is to include all CO<sub>2</sub> emissions from the delivery of local authority functions. In terms of the meaning of the word in legislation "function" covers both the duties and powers of an authority. It covers all an authority's own operations and outsourced services" (DEFRA, 2008, p.3).*



## 11. Geographical breakdown

All TMBC activities occur within the Tonbridge and Malling District, except for some staff and member business travel and commuting activities.

## 12. Base year

TMBCs base year is: 01/04/2019 to 31/03/2020.

## 13. Base year recalculation policy

This base year will be recalculated following any significant structural or methodological changes. If lack of data prevents the base year from being recalculated, then the following year will be recalculated instead.

As of September 2022, the base year was recalculated to include commuting emissions data. A further quality assurance exercise in 2023 led to adjustments in commuting emissions and refuse collection vehicle data.

Base year emissions are 3,603.7 tCO<sub>2</sub>e

## 14. Emissions target

TMBC has a 2030 net-zero emissions target.

## 15. Intensity measurement

No intensity measurement has been conducted.

## 16. External assurance statement

No external assurance has been conducted. However, the initial base year calculation was produced externally and then recalculated internally.

## 17. Carbon offsetting

No carbon offsetting has been conducted for 2023/ 24.

## 18. Renewable / green tariffs

TMBC has been on a renewable tariff (Renewable Electricity Guarantee of Origin) since 2021/22.

## 19. Background documents

- Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard.
- HM Government: Environmental Reporting Guidelines.

## 20. References

- Department for Business Energy and Industrial Strategy (BEIS)., 2021. *UK Government GHG Conversion Factors for Company Reporting*. Available at: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2021>. Last accessed 08/09/2022.

- Department for Environment, Food and Rural Affairs (DEFRA)., 2008. *Guidance to local authorities and Government Offices on National Indicator 185*. London, UK: DEFRA. pp. 3.

## **21. Annex 1: Detailed emissions statement**

Please see pages 10 - 12 for our complete emissions statement. This details the following gasses, in addition to carbon dioxide equivalent (CO<sub>2</sub>e): carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O).

## TMBC Detailed Emissions Statement 2023 /24

<i>Emissions Sources</i>	<i>Consumption</i>		<i>Emissions (tonnes)</i>			
<b>Scope 1</b>	<b>Activity Data</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>	<b>t CO<sub>2</sub></b>	<b>t CH<sub>4</sub></b>	<b>t N<sub>2</sub>O</b>
Gas Consumption	563,036	<i>kWh</i>	103.0	102.8	0.2	0.1
LPG Consumption		<i>tonnes</i>				
Oil Consumption		<i>litres</i>				
<b>Council Vehicle Fleet</b>						
Diesel Vehicle	2,010	<i>litres</i>	5.1	5.0	0.0	0.1
Petrol Vehicle	1,688	<i>litres</i>	3.5	3.5	0.0	0.0
Gas Oil		<i>litres</i>				
<b>Total Scope 1</b>			<b>111.6</b>	<b>111.3</b>	<b>0.2</b>	<b>0.1</b>

<b>Scope 2</b>	<b>Activity Data</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>	<b>t CO<sub>2</sub></b>	<b>t CH<sub>4</sub></b>	<b>t N<sub>2</sub>O</b>
Electricity Consumption	377,028	<i>kWh</i>	78.1	77.3	0.3	0.5
<b>Total Scope 2</b>			<b>78.1</b>	<b>77.3</b>	<b>0.3</b>	<b>0.5</b>

<b>Scope 3</b>	<b>Activity Data</b>	<b>Unit</b>	<b>t CO<sub>2</sub>e</b>	<b>t CO<sub>2</sub></b>	<b>t CH<sub>4</sub></b>	<b>t N<sub>2</sub>O</b>
Transmission & Distribution Losses	377,028	<i>kWh</i>	6.8	6.7	0.0	0.0
Water Supply	5,941	<i>m<sup>3</sup></i>	1.0			
Water Treatment	5,644	<i>m<sup>3</sup></i>	1.1			
<b>Business Travel</b>						
Small Car	20,713	<i>miles</i>	4.7	4.7	0.0	0.0
Medium Car	58,984	<i>miles</i>	16.4	16.3	0.0	0.1
Large Car	1,206	<i>miles</i>	0.4	0.5	0.0	0.0
Electric car	2,207	<i>miles</i>	0.2	0.2	0.0	0.0
Taxi		<i>passenger km</i>				

Scope 3	Activity Data	Unit	t CO <sub>2</sub> e	t CO <sub>2</sub>	t CH <sub>4</sub>	t N <sub>2</sub> O
Rail		<i>passenger km</i>				
Ferry		<i>passenger km</i>				
Plane		<i>passenger km</i>				
<b>Commuting</b>						
Diesel Car	92,673	<i>miles</i>	26.7	26.4	0.0	0.2
Petrol Car	302,437	<i>miles</i>	79.2	78.9	0.2	0.2
Hybrid Car	36,942	<i>miles</i>	7.2	7.1	0.0	0.1
Electric Car	20,586	<i>miles</i>	1.8	1.8	0.0	0.0
Motorbike	3,948	<i>miles</i>	0.7	0.7	0.0	0.0
Bus	1,588	<i>passenger km</i>	0.2	0.2	0.0	0.0
<b>Contractor Travel</b>						
Refuse Collection Vehicles	427,975	<i>litres</i>	1075.0	1060.8	0.1	14.1
<b>Leisure Centres</b>						
Electricity	3,050,707	<i>kWh</i>	631.7	625.3	2.7	3.7
Gas	6,378,855	<i>kWh</i>	1,166.9	1,164.5	1.8	0.6
Kerosene	14,732	<i>litres</i>	46.8	46.6	0.1	0.1
Diesel	7,657	<i>litres</i>	19.2	19.0	0.0	0.3
Water Supply	57,417	<i>m<sup>3</sup></i>	10.1			
Water Treatment	54,546	<i>m<sup>3</sup></i>	11.0			
Grey Fleet	No data	<i>miles</i>				
Waste DMR	No data	<i>tonnes</i>				
Waste Municipal	No data	<i>tonnes</i>				
<b>Grounds Maintenance</b>						-
Electricity	No data	<i>kWh</i>				
Diesel	10,571	<i>litres</i>	26.6	26.2	0.0	0.3
Petrol	1,167	<i>litres</i>	2.4	2.4	0.0	0.0
Gas Oil	n/a	<i>litres</i>				
Water Supply	No data	<i>m<sup>3</sup></i>				
Water Treatment	No data	<i>m<sup>3</sup></i>				

Scope 3	Activity Data	Unit	t CO <sub>2</sub> e	t CO <sub>2</sub>	t CH <sub>4</sub>	t N <sub>2</sub> O
Waste Composting / Anaerobic Digestion	127	tonnes	1.13			
Municipal Waste / Combustion	11	tonnes	0.23			
<b>Total Scope 3</b>			<b>3,137.5</b>	<b>3,088.1</b>	<b>5.0</b>	<b>19.7</b>

<b>TMBC Gross Emissions Total</b>			<b>3,327.2</b>	<b>3,276.7</b>	<b>5.5</b>	<b>20.3</b>
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Renewable generation	Activity Data	Unit	t CO <sub>2</sub> e	t CO <sub>2</sub>	t CH <sub>4</sub>	t N <sub>2</sub> O
REGO tariff	377,028	kWh	78.07	77.28	0.34	0.46
<b>Total</b>						

			t CO <sub>2</sub> e	t CO <sub>2</sub>	t CH <sub>4</sub>	t N <sub>2</sub> O
<b>TMBC Net Emissions Total</b>			<b>3,249.1</b>	<b>3,199.4</b>	<b>5.2</b>	<b>19.9</b>

## 22. Version control

<b>Document name</b>	Tonbridge and Malling Borough Council Carbon Audit 2023/ 24		
<b>Document description</b>	This carbon audit details emissions from TMBC for the 2023/ 24 fiscal year.		
<b>Responsible officer</b>	Gill Fox, Policy, Scrutiny & Communities Manager		
<b>Version Number</b>	<b>Update reason</b>	<b>Author</b>	<b>Review date</b>
1	First version	Carrie Spencer, Climate Change Officer	10 June 2024