



Tonbridge and Malling Borough Council
Carbon Audit:
2020/2021

Table of Contents

1. Summary.....	3
2. Scope emissions	3
3. Emissions overview	3
4. Emissions breakdown.....	4
5. Company Information	6
6. Reporting period	6
7. Emissions overview	6
8. Measuring and reporting	7
9. Scope Explanation	7
10. Organisational boundary	8
11. Geographical breakdown.....	8
12. Base year	9
13. Base year recalculation policy	9
14. Emissions target	9
15. Intensity measurement.....	9
16. External assurance statement	9
17. Carbon offsetting.....	9
18. Renewable / green tariffs	9
19. Background documents	9
20. References	9
21. Annex 1: Detailed emissions statement.....	10
22. Version control	14

1. Summary

Annually, Tonbridge and Malling Borough Council (TMBC) produce a carbon audit. This audit details the carbon dioxide equivalent emissions (CO₂e) from TMBCs operations for the previous fiscal year. This allows for consistent monitoring of emissions over time, highlighting how TMBC is progressing towards meeting its 2030 net zero target.

Carbon audits prepared by TMBC are developed 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 are calculated using official greenhouse gas conversion factors, set by BEIS.

In 2020/2021 TMBC emitted **2,378.3** tonnes of carbon dioxide equivalent¹ (tCO₂e). Due to the COVID-19 pandemic, the emissions from the 2020-21 reporting year are not representative of typical activities or energy use.

2. Scope emissions

The following section provides an overview of TMBCs emissions scopes:

Scope 1: Gas consumption, oil 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 centres, grounds maintenance.

3. Emissions overview

Emissions Year	TMBC Emissions (tCO ₂ e)	
	2019/2020 (baseline)	2020/2021
Scope 1	139.0	148.7
Scope 2	198.0	145.6
Scope 3	3,042.4	2,084.0
Total Gross Emissions	3,379.4	2,378.3
Carbon Offsets or Renewable Tariffs	0.0	0.0
Total Net Emissions	3,379.4	2,378.3

¹ Carbon Dioxide Equivalent (CO₂e) = 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>
Scope 1	Activity	Unit	t CO₂e
Gas Consumption	704,182.0	<i>kWh</i>	129.5
LPG Consumption	0.0	<i>tonnes</i>	0.0
Oil Consumption	0.0	<i>litres</i>	0.0
Council Vehicle Fleet	-	-	-
Petrol Vehicle	3,416.8	<i>litres</i>	7.4
Diesel Vehicle	4,656.3	<i>litres</i>	11.9
Gas Oil	0.0	<i>litres</i>	0.0
Total Scope 1	-	-	148.7

Scope 2	Activity Data	Unit	t CO₂e
Electricity Consumption	624,330.0	<i>kWh</i>	145.6
Total Scope 2	-	-	145.6

Scope 3	Activity Data	Unit	t CO₂e
Transmission & Distribution Losses	624,330.0	<i>kWh</i>	12.5
Water Supply	988.0	<i>m³</i>	0.3
Water Treatment	938.6	<i>m³</i>	0.7
Business Travel	-	-	-
Car (average)	149,704.0	<i>miles</i>	39.8
Bus	0.0	<i>passenger km</i>	0.0
Taxi	0.0	<i>passenger km</i>	0.0
Rail	0.0	<i>passenger km</i>	0.0
Ferry	0.0	<i>passenger km</i>	0.0
Plane	0.0	<i>passenger km</i>	0.0
Staff Commuting	-	-	-
Diesel Car	267,000.0	<i>miles</i>	72.4
Petrol Car	228,000.0	<i>miles</i>	64.0
Hybrid Car	1,800.0	<i>miles</i>	0.3
Electric Car	2,400.0	<i>miles</i>	0.2
Motorbike	3,600.0	<i>miles</i>	0.7
Other	0.0	<i>Passenger km</i>	0.0
Contractor Travel	-	-	-
Refuse Collection Vehicles	198,769.6	<i>litres</i>	506.1
Leisure Centres	-	-	-
Electricity	2,109,994.0	<i>kWh</i>	491.9
Gas	4,342,176.0	<i>kWh</i>	798.4
Kerosene	13,928.0	<i>litres</i>	35.4
Diesel	5,509.0	<i>litres</i>	14.0
Water Supply	15,482.0	<i>m³</i>	5.3
Water Treatment	14,707.9	<i>m³</i>	10.4
Grey Fleet	1,292.0	<i>miles</i>	0.4
Waste DMR	<i>No data</i>	<i>tonnes</i>	0.0
Waste Municipal	<i>No data</i>	<i>tonnes</i>	0.0

Grounds Maintenance	-	-	-
Electricity	11,897.0	<i>kWh</i>	2.8
Diesel	8,086.2	<i>litres</i>	20.6
Red Diesel	1,200.0	<i>litres</i>	3.3
Petrol	1,274.1	<i>litres</i>	2.8
Water Supply	737.2	<i>m³</i>	0.3
Water Treatment	700.4	<i>m³</i>	0.5
Waste Composting / Anaerobic Digestion	34.0	<i>tonnes</i>	0.3
Municipal Waste / Combustion	34.9	<i>tonnes</i>	0.7
Total Scope 3	-	-	2,084.0

TMBC Gross Emissions Total	-	-	2,378.3
-----------------------------------	---	---	----------------

Carbon Offsets / Renewable Tariffs	Activity Data	Unit	t CO₂e
Renewable Electricity Tariff	0.0	<i>kWh</i>	0.0
Total	-	-	-

TMBC Net Emissions Total	-	-	2,378.3
---------------------------------	---	---	----------------

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 01/04/2020 to 31/03/2021.

7. Emissions overview

7.1. Scope 1

Scope 1 emissions totalled 148.7 tCO₂e in 2020/2021, an increase of 7% over baseline 2019/2020 emissions figures.

Scope 1 remained a relatively small source of emissions, contributing 6% to TMBC's total gross emissions for 2020/2021.

7.2. Scope 2

Scope 2 emissions totalled at 145.6 tCO₂e in 2020/2021, a decrease of 26% over 2019/2020 emissions figures. See section 7.4 for a detailed discussion of significant emissions changes.

Scope 2 contributed 6% of TMBCs total gross emissions, making it the smallest contributor. However, these emissions only come from one source: electricity.

7.3. Scope 3

Scope 3 emissions totalled at 2,084.0 tCO₂e in 2020/2021, a decrease of 32% over 2019/2020 emissions figures. See section 7.4 for a detailed discussion of significant emissions changes.

Leisure centres accounted for the majority (65%) of scope 3 emissions in 2020-21, emitting 1,355.8 tCO₂e. However, this constitutes a fall in Leisure centre emissions of 25% compared to the baseline, largely driven by lockdown measures.

Refuse collection vehicles were the second largest contributor, at 506.1 tCO₂e.

As would be expected due to Covid-19 restrictions, staff commuting by car accounted for only 7% of scope 3 emissions in 2020-21, or 136.8 tCO₂e. In contrast, staff commuting by car accounted for over a fifth of scope 3 emissions in the baseline.

Business travel accounted for 39.8 tCO₂e, followed by grounds maintenance which emitted 31.3 tCO₂e. Transmission and distribution losses produced a further 10 tCO₂e. Finally, water treatment and water supply contributed 0.7 tCO₂e and 0.3 tCO₂e, respectively.

Scope 3 remained the largest contributor to TMBC gross emissions, contributing 88% of gross emissions in 2020/2021.

7.4. Significant emissions and consumption changes

There have been several significant changes in activity, consumption and emissions between the 2019/2020 baseline and 2020/2021, in large part due to the various measures and restrictions introduced in response to the Covid-19 pandemic.

Scope 1 was the only area where TMBC emissions increased, due in part to the shift in duties on the Council in support of residents during the pandemic. For example, increased activity by TMBC-owned vehicles accounts for almost half of the increase in Scope 1 emissions. Even though there was some switching away from diesel to petrol vehicles, which have lower CO₂ emissions for the same mileage, Council-owned parking vehicles were used to deliver food boxes to the clinically vulnerable, increasing overall mileage. This constituted atypical activity during the pandemic, increasing Scope 1 emissions over the baseline in the 2020-21 reporting year.

For Scope 2, emissions saw a significant decrease from baseline, of 26%. This fall in electricity emissions was due to two factors: the increase in proportion of renewables in the grid mix, which reduces the carbon intensity of electricity²; and a reduction in electricity use by the Council. Although changes in the grid mix (that is, the fuel used to generate electricity for the National Grid) reduce the carbon intensity of electricity each year, the fall in Scope 2 emissions is largely due to reduced use of electricity. TMBC's electricity use fell by 35% in 2020-21 compared to the baseline, accounting for the majority of the fall in emissions. The pandemic is a significant factor in this change in electricity consumption.

There was a similar reduction in Scope 3 emissions, with the majority of the reduction accounted for by restrictions that were introduced due to the pandemic, with Leisure Centre closures significantly contributing to lower scope 3 emissions during 2020-21.

The largest reduction in emissions from any source was from staff commuting by car, which fell sharply by 79% compared to the baseline year, again largely due to restrictions on movement and the increase in home working in 2020-21.

7.5. Largest emitting sources

1. Leisure Centre Gas Consumption (798.4 tCO₂e).
2. Leisure Centre Electricity Consumption (491.9 tCO₂e).
3. Refuse Collection Vehicles (506.1 tCO₂e).
4. Staff Commuting by car (136.8 tCO₂e).
5. TMBC Gas Consumption (129.5 tCO₂e).

8. Measuring and reporting

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

The 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>
--------------	-----------------	--------------------	--------------------

² Department for Business Energy and Industrial Strategy (BEIS). *UK Government GHG Conversion Factors for Company Reporting*. See information regarding electricity emissions factors <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020> .

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 tactive Leisure Trust.
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 previous guidance from the previous National Indicator 185:

"The indicator is to include all CO₂ 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 are contained to 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 has already been recalculated to include commuting emissions data. Following a data quality assurance exercise, the baseline was also updated in January 2023.

Baseline emissions are 3,379.4 tCO₂e

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 2020/2021.

18. Renewable / green tariffs

TMBC was not on a renewable tariff during the 2020-21 reporting year.

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)., 2020. *UK Government GHG Conversion Factors for Company Reporting*. Available at: <https://www.gov.uk/government/publications/greenhouse-gas-reporting-conversion-factors-2020>.
- 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 page 9 and 10 for our complete emissions statement. This details the following gasses, in addition to carbon dioxide equivalent (CO₂e): carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O).

TMBC Detailed Emissions Statement 2020/2021

<i>Emissions Sources</i>	<i>Consumption</i>		<i>Emissions (tonnes)</i>			
Scope 1	Activity Data	Unit	t CO₂e	t CO₂	t CH₄	t N₂O
Gas Consumption	704,182.0	<i>kWh</i>	129.5	129.2	0.2	0.1
LPG Consumption	0.0	<i>tonnes</i>	0.0	0.0	0.0	0.0
Oil Consumption	0.0	<i>litres</i>	0.0	0.0	0.0	0.0
Council Vehicle Fleet	-	-	-	-	-	-
Petrol Vehicle	3,416.8	<i>litres</i>	7.4	7.4	0.0	0.0
Diesel Vehicle	4,656.3	<i>litres</i>	11.9	11.7	0.0	0.2
Gas Oil	0.0	<i>litres</i>	0.0	0.0	0.0	0.0
Total Scope 1	-	-	148.7	148.3	0.2	0.3

Scope 2	Activity Data	Unit	t CO₂e	t CO₂	t CH₄	t N₂O
Electricity Consumption	624,330.0	<i>kWh</i>	145.6	144.25	0.45	0.86
Total Scope 2	-	-	145.6	144.25	0.45	0.86

Scope 3	Activity Data	Unit	t CO₂e	t CO₂	t CH₄	t N₂O
Transmission & Distribution Losses	624,330.0	<i>kWh</i>	12.5	12.4	0.0	0.1
Water Supply	988.0	<i>m³</i>	0.3	0.0	0.0	0.0
Water Treatment	938.6	<i>m³</i>	0.7	0.0	0.0	0.0
Business Travel	-	-	-	-	-	-
Small Car	66,456.0	<i>miles</i>	15.5	15.3	0.0	0.1
Medium Car	72,316.0	<i>miles</i>	20.4	20.3	0.0	0.1
Large Car	10,932.0	<i>miles</i>	3.9	3.9	0.0	0.0
Bus	0.0	<i>passenger km</i>	0.0	0.0	0.0	0.0
Taxi	0.0	<i>passenger km</i>	0.0	0.0	0.0	0.0
Rail	0.0	<i>passenger km</i>	0.0	0.0	0.0	0.0

Ferry	0.0	<i>passenger km</i>	0.0	0.0	0.0	0.0
Plane	0.0	<i>passenger km</i>	0.0	0.0	0.0	0.0
Staff Commuting Travel	-	-	-	-	-	-
Diesel Car	267,000.0	<i>miles</i>	72.4	71.6	0.0	0.8
Petrol Car	228,000.0	<i>miles</i>	64.0	63.7	0.1	0.1
Hybrid Car	1,800.0	<i>miles</i>	0.3	0.3	0.0	0.0
Electric Car	2,400.0	<i>miles</i>	0.2	0.2	0.0	0.0
Motorbike	3,600.0	<i>miles</i>	0.7	0.6	0.0	0.0
Train	0.0	<i>passenger km</i>	0.0	0.0	0.0	0.0
Contractor Travel	-	-	-	-	-	-
Refuse Collection Vehicles	198,769.6	<i>litres</i>	506.1	499.1	0.0	7.0
Leisure Centres	-	-	-	-	-	-
Electricity	2,109,994.0	<i>kWh</i>	491.9	1003.2	3.1	6.0
Gas	4,342,176.0	<i>litres</i>	798.4	796.9	1.1	0.4
Kerosene	13,928.0	<i>litres</i>	35.4	35.2	0.1	0.1
Diesel	5,509.0	<i>kWh</i>	14.0	13.8	0.0	0.2
Water Supply	15,482.0	<i>m³</i>	5.3	0.0	0.0	0.0
Water Treatment	14,707.9	<i>miles</i>	10.4	0.0	0.0	0.0
Grey Fleet	1,292.0	<i>tonnes</i>	0.4	0.4	0.0	0.0
Waste DMR	No data	<i>tonnes</i>	0.0	0.0	0.0	0.0
Waste Municipal	No data	<i>tonnes</i>	0.0	0.0	0.0	0.0
Grounds Maintenance	-	-	-	-	-	-
Electricity	11,897.0	<i>m³</i>	2.8	2.7	0.0	0.0
Diesel	8,086.2	<i>litres</i>	20.6	20.3	0.0	0.3
Red Diesel	1,200.0	<i>litres</i>	3.3	3.3	0.0	0.0
Petrol	1,274.1	<i>kWh</i>	2.8	2.7	0.0	0.0
Water Supply	737.2	<i>litres</i>	0.3	0.0	0.0	0.0
Water Treatment	700.4	<i>m³</i>	0.5	0.0	0.0	0.0

Waste Composting / Anaerobic Digestion	34.0	tonnes	0.3	0.0	0.0	0.0
Municipal Waste / Combustion	34.9	tonnes	0.7	0.0	0.0	0.0
Total Scope 3	-	-	2,084.0	2,050.3	4.6	15.3

TMBC Gross Emissions Total	-	-	2,378.3	2,342.8	5.2	16.4
-----------------------------------	---	---	----------------	----------------	------------	-------------

Carbon Offsets / Renewable Tariffs	Activity Data	Unit	t CO ₂ e	t CO ₂	t CH ₄	t N ₂ O
Renewable Electricity Tariff	0.0	kWh	0.0	0.0	0.0	0.0
Total	-	-	-	-	-	-

	-	-	t CO ₂ e	t CO ₂	t CH ₄	t N ₂ O
TMBC Net Emissions Total	-	-	2,378.3	2,342.8	5.2	16.4

22. Version control

Document name	Tonbridge and Malling Borough Council Carbon Audit 2020/2021		
Document description	This carbon audit details emissions from TMBC for the 2020/2021 fiscal year.		
Responsible officer	Gill Fox, Policy, Scrutiny & Communities Manager		
Version Number	Update reason	Author	Review date
1	First version	H. Saunders, Climate Change Officer	TBC
2	Data quality assurance	C. Spencer, Climate Change Officer	February - May 2023