

Tunbridge Wells Borough Council

# Emissions Report: 2023/2024

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# 1. Summary

Tunbridge Wells Borough Council (TWBC) conducts an annual emissions report to detail the total amount of carbon dioxide equivalent<sup>1</sup> (tCO<sub>2</sub>e) emitted from its operations in the previous financial year. These reports gather data on consumption levels for each activity and applies the relevant emissions factors. It allows for consistent monitoring of emissions over time, showcasing TWBC's progress towards its goal of achieving net zero emissions by 2030.

All TWBC emissions reports are prepared in accordance with the Greenhouse Gas Protocol's Corporate Accounting and Reporting Standard and use official greenhouse gas conversion factors set by the Department of Energy Security and Net Zero (DESNZ).

In the 2023/24 financial year, TWBC's emissions were **5,055.1 tCO<sub>2</sub>e**.

## 2. Scope emissions

The following section provides an overview of TWBCs emissions scopes:

**Scope 1 (Direct):** Gas consumption, stationary combustion fuels, and TWBC vehicle fleet.

**Scope 2 (Indirect):** Electricity consumption.

**Scope 3 (Indirect):** Transmission and distribution losses, water supply, water treatment, business travel, staff commuting, well to tank, leisure centre contract, refuse and street cleaning contract and grounds maintenance contract.

## 3. Emissions overview (tCO<sub>2</sub>e)

Emissions Year	2018/19	2019/20	2020/21	2021/22	2022/23	2023/24
Scope 1	909.7	886.0	726.6	911.0	730.6	715.8
Scope 2	2,308.5	1,704.7	871.1	1,252.2	1,072.7	1,157.4
Scope 3	3,414.5	3,235.5	2,109.3	3,000.4	3,344.9	3,181.9
<b>Total Net Emissions</b>	<b>6,632.7</b>	<b>5,826.2</b>	<b>3,706.9</b>	<b>5,163.6</b>	<b>5,148.2</b>	<b>5,055.1</b>

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<sup>1</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

Operation	Scope	Emissions Category	tCO <sub>2</sub> e
TWBC Own Operations	Scope 1	Gas	705.2
TWBC Own Operations	Scope 1	Biomass	0.2
TWBC Own Operations	Scope 1	Biodiesel	1.0
TWBC Own Operations	Scope 1	Propane	0.4
TWBC Own Operations	Scope 1	Vehicle Fleet Fuel	9.0
TWBC Own Operations	Scope 2	Electricity Consumption	1,157.4
TWBC Own Operations	Scope 3	Transmission & Distribution Losses	100.2
TWBC Own Operations	Scope 3	Water Supply	25.4
TWBC Own Operations	Scope 3	Water Treatment	27.5
TWBC Own Operations	Scope 3	Grey Fleet Mileage	34.9
TWBC Own Operations	Scope 3	Commuting	62.5
TWBC Own Operations	Scope 3	Well To Tank - Gas	116.5
TWBC Own Operations	Scope 3	Well To Tank - Electricity	278.7
TWBC Own Operations	Scope 3	Well To Tank - Biomass	0.7
TWBC Own Operations	Scope 3	Well To Tank - Biodiesel	7.9
TWBC Own Operations	Scope 3	Well To Tank - Fuel	2.4

Operation	Scope	Emissions Category	tCO <sub>2</sub> e
TWBC Own Operations	Scope 3	Well To Tank - Grey Fleet	9.1
TWBC Own Operations	Scope 3	Well To Tank - Commuting	16.9
TWBC Own Operations	Scope 3	Waste Disposal	1.3
TWBC Contract	Scope 3	Waste Collection & Street Cleaning	1,211.8
TWBC Contract	Scope 3	Grounds Maintenance	126.7
TWBC Contract	Scope 3	Leisure Centre	1,159.5
<b>Total Gross Emissions</b>	<b>N/A</b>	<b>N/A</b>	<b>5,055.1</b>

Operation	Scope	Emissions Category	tCO <sub>2</sub> e
TWBC Own Operations	Out of Scope	Biomass	6.7
TWBC Own Operations	Out of Scope	Biodiesel	68.7
TWBC Own Operations	Out of Scope	Vehicle Fleet	0.8
TWBC Own Operations	Out of Scope	Electricity	643.1
TWBC Contract	Out of Scope	Contractor Fuel Use	54.3
TWBC Contract	Out of Scope	Contractor Fuel Use	3.7
TWBC Contract	Out of Scope	Electricity	141.6
<b>Total Gross Emissions</b>	<b>N/A</b>	<b>N/A</b>	<b>918.9</b>

## 5. Company information

The Tunbridge Wells 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 **715.8 tCO<sub>2</sub>e** in 2023/2024.

As shown in figure 1 (below), scope 1 continues to be the smallest annual contributor to TWBC's emissions, contributing 14% in 2023/24.

Scope 1 emissions decreased by 21% from the 2018/19 base year, with the largest impact coming from a reduction in diesel use (-99%) and vehicle fleet fuel usage (-58%). However, despite this overall reduction, vehicle fleet diesel usage saw a 201% increase from 2022/23 to 2023/24. 1,953.1 litres of diesel were consumed in 2023/24 compared to 637.3 the previous year.

Gas consumption continues to contribute most scope 1 emissions, emitting 705.2 tCO<sub>2</sub>e in 2023/24 (98.5%). Gas consumption decreased by 2% from 2022/23, along with its associated emissions. Gas consumption is still the fourth largest contributor to TWBC emissions, contributing 14.0% in 2023/24 (see section 7.6 for TWBC's largest emitting sources).

### 7.2. Scope 2

Scope 2 emissions totalled **1,157.4 tCO<sub>2</sub>e** in 2023/24, an 8% increase from 2022/23.

These emissions come from only one source: electricity, and is the third largest contributor to TWBC's emissions, contributing 22.9%. Despite the annual increase, electricity emissions are down 50% from the 2018/19 baseline and electricity consumption is down by 29%.

## 7.3. Scope 3

Scope 3 emissions totalled **3,181.9 tCO<sub>2</sub>e** in 2023/24. This equates to a 7% decrease from the 2018/19 base year and a 5% reduction from 2022/23.

TWBC's two largest emitters fall under scope 3 and contribute a combined 74.5% of scope 3 and 46.9% of TWBC's entire emissions portfolio. The largest source is the waste collection and street cleaning contract, emitting 1,211.8 tCO<sub>2</sub>e in 2023/24, followed by the leisure centre contract, emitting 1,159.5 tCO<sub>2</sub>e.

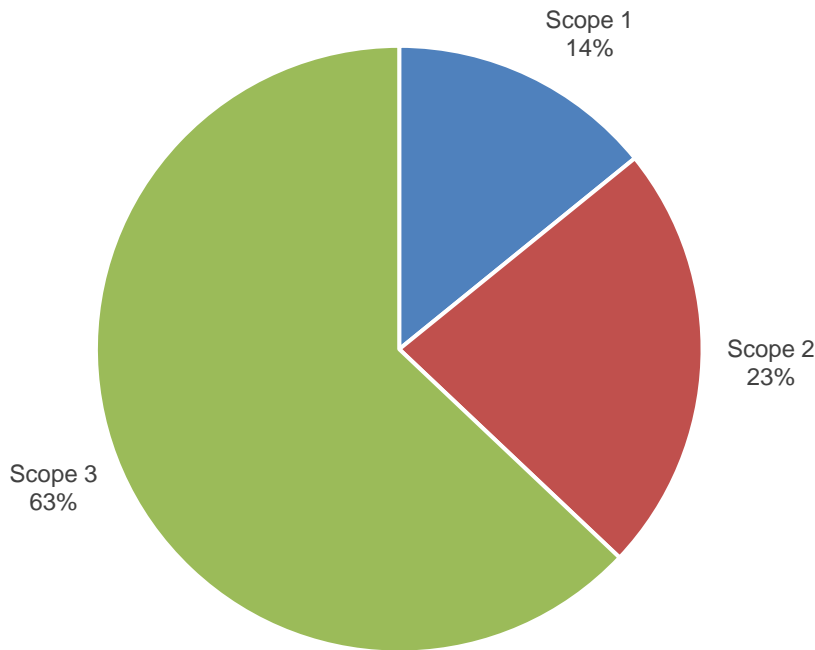
Both contracts have observed minor changes to emissions from the previous year. The waste contract increased by 0.4%, resulting from a 2% increase in diesel consumption. Whilst emissions per litre of diesel consumed decreased in 2023/24, their well to tank emissions have increased, resulting in the slight increasing trend being observed. The leisure centre contract emissions increased by 0.7%, which can be attributed to the higher electricity emissions factor in 2023/24 and an increase in water consumption (65%).

2023/24 is the second year that staff commuting data has been collected, over which the methodology has improved to increase the accuracy of our reporting. Direct staff commuting emissions totalled at 62.5 tCO<sub>2</sub>e in 2023/24, reducing by 71% from 2022/23 (a reduction of 154.9 tCO<sub>2</sub>e). Thus, direct staff commuting emissions only contributes 1.2% of TWBC emissions, compared to 4.2% the previous year. Well to tank emissions from commuting also reduced by 71%, contributing just 0.3% of total emissions.

Well to tank emissions fall under scope 3 as they are emissions associated with fuel extraction, refinement, and delivery. Well to tank emissions come from vehicle fuel use, heating fuel (gas) and national electricity generation fuel use (oil and gas). Electricity and gas well to tank emitted 278.7 tCO<sub>2</sub>e and 116.5 tCO<sub>2</sub>e respectively.

As can be seen in figure 1, scope 3 contributes the largest percentage of TWBC emissions, sitting at 63% and has been the largest contributor since reporting began in 2018/19. It is not uncommon for scope 3 to be the largest contributor, due to it being the largest and most complex emissions scope, considering wider activities such as contracts, purchases, well to tank and staff travel. It is for this reason that scope 3 emissions are the most complex to calculate and difficult to reduce.

Figure 1: TWBC Emissions Scope Contribution  
2023/24



## 7.4. Out of scope

TWBC is now highlighting its out of scope emissions, given the use of biofuel across the estate. This is now included to ensure that we align with best practise reporting, as detailed by the Greenhouse Gas Protocol. The Department for Energy Security and Net Zero (DESNZ) define out of scope emissions as:

*“Outside of scopes includes biogenic CO<sub>2</sub> factors that should be used to account for the direct carbon dioxide (CO<sub>2</sub>) impact of burning biomass and biofuels, including when reporting emissions from electricity consumption. Biogenic CO<sub>2</sub> emissions are one of several activities labelled ‘outside of scopes’ by the GHG Protocol Corporate Accounting and Reporting Standard because the Scope 1 impact of these fuels has been determined to be a net ‘0’ (since the fuel source itself absorbs an equivalent amount of CO<sub>2</sub> during the growth phase as the amount of CO<sub>2</sub> released through combustion).”*

Out of scope emissions totalled at **918.9 tCO<sub>2</sub>e** in 2023/24. This is a reduction of 123.7 tCO<sub>2</sub>e (12%).



## 7.5. Renewable energy

TWBC generated **115,891.4 kWh** of renewable electricity across its solar PV arrays in 2023/24.

## 7.6. Significant emissions & consumption changes

Emissions in 2023/24 decreased by 93.2 tCO<sub>2</sub>e from the previous year. This equates to a 2% reduction.

Emissions have now decreased by 1,577.7 tCO<sub>2</sub>e from the 2018/19 base year. This equates to a 24% reduction.

As highlighted in section 7.3, staff commuting emissions have reduced by 71% from 2022/23 (a reduction of 154.9 tCO<sub>2</sub>e). This significant reduction can be attributed to the corporate decision to rationalise TWBC's town hall footprint, moving to a hot desking, and dedicated 'team day' arrangement. As such, desks need to be booked, limiting the number of staff travelling into the office at any one time. Consequently, commuting well to tank emissions also observed a 71% reduction (40.5 tCO<sub>2</sub>e).

Biofuel use decreased in 2023/24, resulting in a 52% reduction in associated emissions. Whilst this decrease is welcome, the total contribution to emissions is only 2%. Consequently, the impact on total TWBC emissions has been very limited. We would expect biofuel use to increase over the coming years as TWBC investigates alternative fuels to reduce emissions from diesel. Similarly, waste emissions observed a 24% decrease in 2023/24, however, only contribute a further 2% to total TWBC emissions.

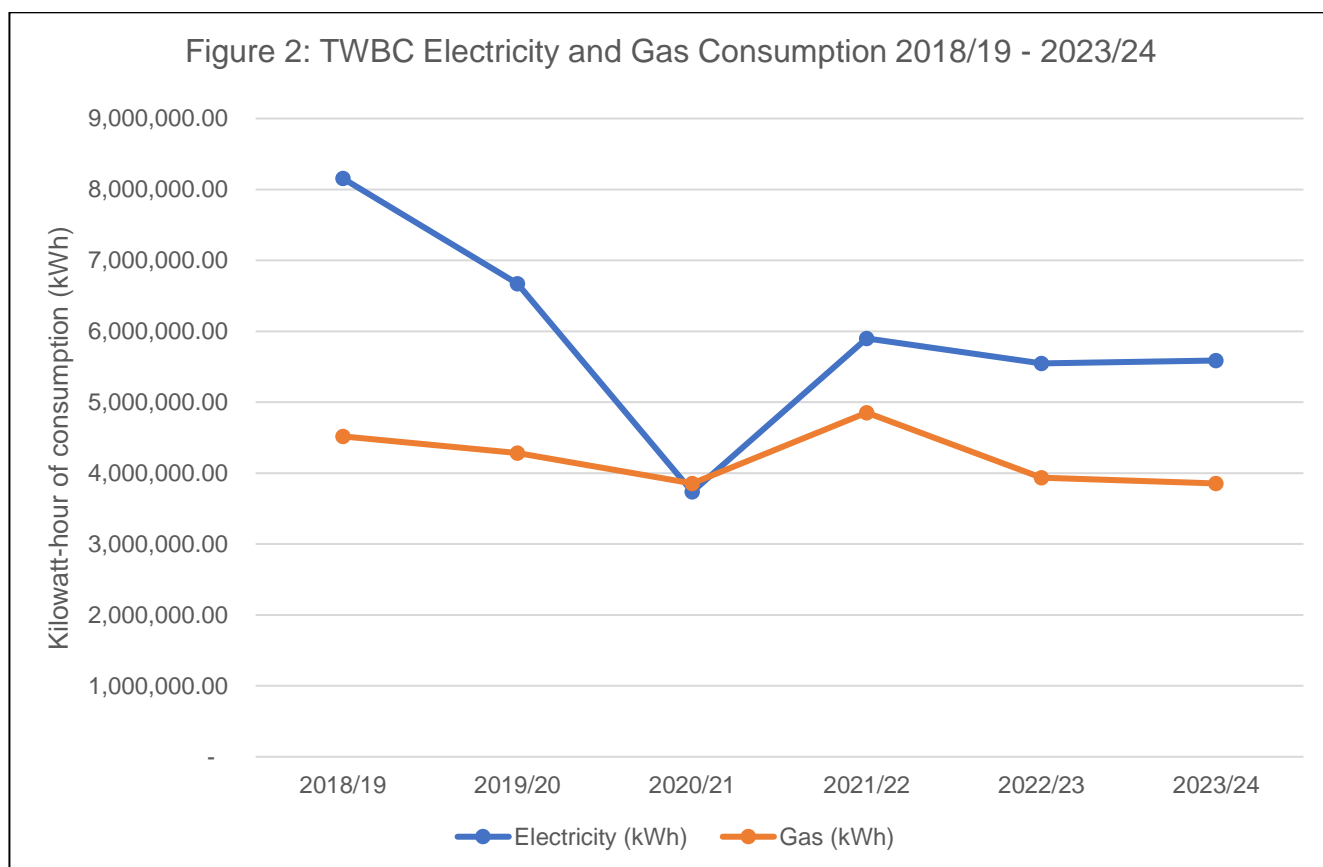
Grey fleet (business travel) mileage has also observed a modest reduction of 10% since 2022/23 and a 58% reduction since 2018/19. This can in part be attributed to a change in working practises (hybrid and remote working) following the COVID-19 pandemic. However, well to tank emissions associated with the grey fleet have increased by 197% from 2022/23. This is due to an increase in the well to tank emissions factors.

Section 7.2 identified a slight increase in emissions associated with electricity consumption, increasing by 1% from the previous year. This contradicts the electricity consumption trend observed by TWBC in 2023/24, as consumption reduced by 6% (338,478.6 kWh). Figure 2 highlights this reduction trend, as well as how gas consumption has changed over time.

Whilst a reduction in the electricity emissions factor has driven significant reductions in electricity emissions in previous years, the UK electricity emissions factor increased in 2023/24. As such, the emissions intensity of one kilowatt hour (kWh) in 2023/24 was 0.2071 as opposed to 0.1934 the previous year. This change is a result of increases in national gas consumption for electricity generation and a decrease in the share of renewables in the national grid, compared to a record breaking 2022, where renewable generation was at an all-time high.

A further increase has been observed from TWBC water consumption, which increased by 55% from the previous year. However, there has been significant meter reading and data issues from our water supplier. As such, we have much lower confidence in the accuracy of

our water data. TWBC will be transitioning to a new water supplier, which will help improve the accuracy of this data for future reporting years.



## 7.7. Largest emitting sources

Emissions Category	Emissions Scope	tCO <sub>2</sub> e	Total Contribution	Change from 2022/23
Waste Collection & Street Cleaning Contract	Scope 3	1,211.8	24.0%	0.4%
Leisure Centre Contract	Scope 3	1,159.5	22.9%	0.7%
Electricity Consumption	Scope 2	1,157.4	22.9%	8%
Gas Consumption	Scope 1	705.2	13.9%	- 2%
Electricity Well to Tank	Scope 3	278.8	5.5%	- 0.5%

TWBC emissions from the above top 5 direct sources contributed 89.7% to all total emissions in 2023/24.

## 7.8. Top ten sites by emissions of carbon dioxide equivalent (tCO<sub>2</sub>e)

Building	Electricity Consumption (kWh)	Gas Consumption (kWh)	tCO <sub>2</sub> e	Change from 2021/22
Royal Victoria Place	3,543,760.0	613,050.0	1,136.6	8%
Tunbridge Wells Sports Centre	840,590.4	2,643,575.1	798.5	- 4%
Tunbridge Wells Town Hall	170,866.0	1,399,636.0	345.3	5%
The Weald Sports Centre	291,014.3	1,035,744.4	307.0	23%
Kent & Sussex Crematorium	111,958.0	1,011,710.0	246.4	- 0.1%
The Amelia Scott	318,452.0	492,515.0	192.6	8%
Assembly Hall	212,841.0	-	58.5	- 21%
Putlands Sports & Leisure Centre	98,975.0	124,373.2	53.9	- 15%
Tunbridge Wells Streetlighting	192,493.0	-	52.9	- 6%
North Farm Lane Depot	165,233.0	33,838.0	52.6	22%
<b>Total</b>	<b>5,946,182.7</b>	<b>7,354,441.7</b>	<b>3,244.4</b>	<b>4%</b>

TWBC emissions from the above top ten buildings contributed 64.2% to all total emissions in 2023/24.

## 7.9. Top ten sites by electricity consumption (kWh)

Building	Electricity Consumption (kWh)	tCO <sub>2</sub> e (including transmission and distribution and WTT)	Change from 2021/22
Royal Victoria Place	3,543,760.0	974.0	7%
Tunbridge Wells Sports Centre	840,590.4	231.0	9%
The Amelia Scott	318,452.0	87.5	17%
The Weald Sports Centre	291,014.3	80.0	8%
Assembly Hall	212,841.0	58.5	- 8%
Tunbridge Wells Streetlighting	192,493.0	52.9	- 6%
Tunbridge Wells Town Hall	170,866.0	47.0	- 8%
North Farm Lane Depot	165,233.0	45.4	5%
Crescent Road Car Park Lighting	154,757.0	42.5	19%
Kent & Sussex Crematorium	111,958.0	30.8	- 5%
<b>Total</b>	<b>6,001,964.7</b>	<b>1,649.7</b>	<b>6%</b>

Electricity consumption emissions (including transmission and distribution losses and well to tank) from our top ten buildings contributed 32.6% of all TWBC emissions in 2023/24.

## 7.10. Top ten sites by gas consumption (kWh)

Building	Gas Consumption (kWh)	tCO <sub>2</sub> e (Including WTT)	Change from 2021/22
Tunbridge Wells Sports Centre	2,643,575.1	563.4	- 9%
Tunbridge Wells Town Hall	1,399,636.0	298.3	8%
The Weald Sports Centre	1,035,744.4	220.8	1%
Kent & Sussex Crematorium	1,011,710.0	215.6	28%
Royal Victoria Place	613,050.0	130.7	32%
The Amelia Scott	492,515.0	105.0	2%

The Camden Centre	125,330.0	26.7	- 40%
Putlands Sports & Leisure Centre	124,373.2	26.5	- 21%
TN2 Community Centre	77,008.0	16.4	- 41%
North Farm Lane Depot	33,838.0	7.2	- 63%
<b>Total</b>	<b>7,556,779.7</b>	<b>1,610.6</b>	<b>0.04%</b>

Gas consumption emissions (including well to tank) from our top ten buildings contributed 31.9% of all TWBC emissions in 2023/24.

## 8. Measuring and reporting

Reporting on TWBC emissions take place annually, following the [Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard](#).

This emissions report will be reported to Management Board, and subsequently taken through any appropriate Advisory Panel, Cabinet Advisory Board and Cabinet.

## 9. Scope explanation

Scope	Activity	Description	Data Source
Scope 1	Gas Consumption	Utilised to heat TWBC buildings.	TWBC utility bills.
Scope 1	Stationary Combustion Fuels	Used as a form of energy, such as wood pellets or diesel for electricity generators.	TWBC invoices.
Scope 1	Vehicle Fleet Fuel	Vehicle fleet owned and operated by TWBC.	TWBC fuel invoices.
Scope 2	Electricity Consumption	Procured from the national grid to power TWBC buildings and assets	TWBC utility bills.
Scope 3	Transmission & Distribution Losses	Loss of electricity from the national grid to TWBC sites and assets.	TWBC utility bills.

Scope	Activity	Description	Data Source
Scope 3	Water Supply	Water consumed by TWBC.	TWBC utility bills.
Scope 3	Water Treatment	TWBC sewerage.	TWBC utility bills.
Scope 3	Grey Fleet Mileage	Mileage driven by TWBC employees using their own vehicles for work purposes.	TWBC employee mileage claims.
Scope 3	Commuting	Mileage from employees travelling to and from TWBC offices.	Staff commuting data from surveys.
Scope 3	Well To Tank (WTT)	Emissions and energy associated with the extraction, processing, and transportation fuel.	TWBC utility bills.
Scope 3	Waste	Generation of food, plastic, and recyclable waste by TWBC.	TWBC invoices.
Scope 3	Waste Collection & Street Cleaning Contract	Fuel consumption from TWBC's contract to provide public waste collection & street cleaning services.	Contract management.
Scope 3	Grounds Maintenance Contract	Fuel use and waste disposal from TWBC's contract to maintaining green spaces across the borough.	Contract management.
Scope 3	Leisure Centre Contract	Energy use during the operation of all TWBC owned, but independently managed leisure facilities.	Contract management.

## 10. Organisational boundary

TWBC's organisational boundary covers activities in which the organisation has financial and operational control, covering the duties and powers of the local authority. As such, the organisational boundary covers all operations and outsources activities.

# 11. Geographical breakdown

All TWBC activities occur within the Tunbridge Wells District, excluding some staff and member business travel and commuting activities.

# 12. Base year

TWBC's base year is 01/04/2018 – 31/03/2019.

# 13. Base year recalculation policy

The 2018/19 base year is recalculated when significant structural changes to the council's operations occur. Furthermore, where emissions increase due to such changes, recalculation will occur if these emissions meet or exceed 10% of TWBC's base year emissions.

If a lack of data is a limiting factor when recalculating the 2018/19 base year, then the next most appropriate year will be chosen.

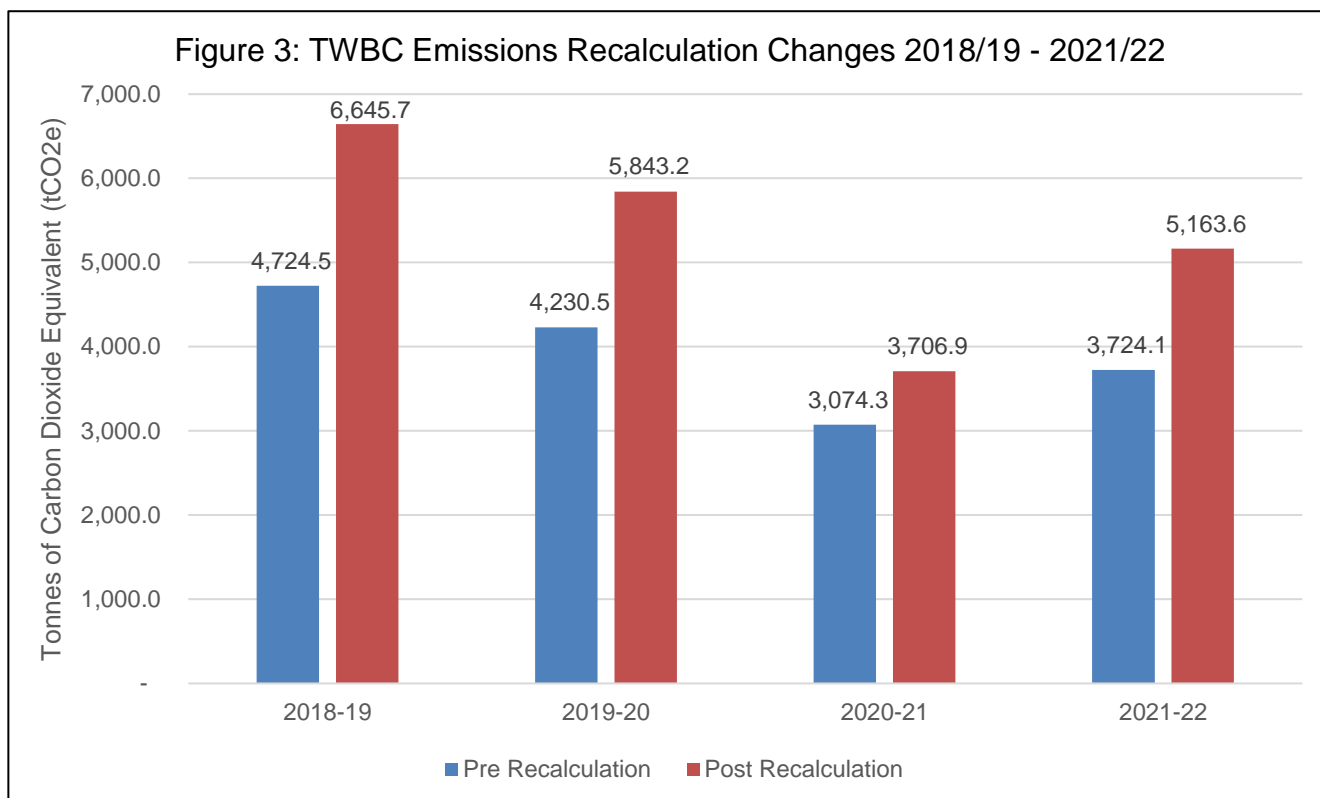
Base year emissions, alongside all previous emissions reports have been recalculated following the council's acquisition of the Royal Victoria Place Shopping Centre and the Amelia Scott building renovation and acquisition 2022.

Base year emissions from 2018/19 are **6,632.7 tCO<sub>2</sub>e**. This is an increase from the previous emissions figure of **4,724.5 tCO<sub>2</sub>e**.

Observed increases from this recalculation are as follows:

- 2018/19 observed a 41% increase in emissions (1,921.2 tCO<sub>2</sub>e).
- 2019/20 observed a 38% increase in emissions (1,612.6 tCO<sub>2</sub>e).
- 2020/21 observed a 21% increase in emissions (632.7 tCO<sub>2</sub>e).
- 2021/22 observed a 39% increase in emissions (1,439.5 tCO<sub>2</sub>e).

The above changes to emissions are highlighted in figure 3 below:



## 14. Emissions target

TWBC's net zero target for its operations is **2030**.

## 15. Intensity measurement

TWBC's intensity measurement is **15.6 tCO<sub>2</sub>e** per employee.

## 16. External assurance statement

No external assurance has been carried out.

## 17. Carbon offsetting

TWBC has not engaged in any carbon offsetting schemes, including the direct purchase of carbon credits.



## 18. Renewable tariffs

TWBC is not on a renewable energy tariff for its owned and operated assets. Energy is purchased through Npower, who disclose that 42% of their energy comes from renewables (as of 20/06/2024). However, there is no guarantee that this translates to TWBC's energy consumption. TWBC is not on a renewable energy guarantee of origin (REGO) backed tariff.

Royal Victoria Place electricity is purchased through Total Energies renewable power tariff. This is a REGO backed tariff, whereby excess REGOs are purchased to essentially 'offset' the 47% of their energy that comes from coal and gas. These REGOs aren't reflected in our emissions reporting as there is limited, concrete evidence that the purchase of REGOs results in direct emissions reductions or increases in UK renewable generation.

For the above reasons TWBC uses the location-based approach to report on emissions associated with electricity consumption. This approach uses the UK average electricity factor to determine TWBC emissions from electricity consumption. We will continue to review this approach on an annual basis and will conduct recalculations where appropriate.

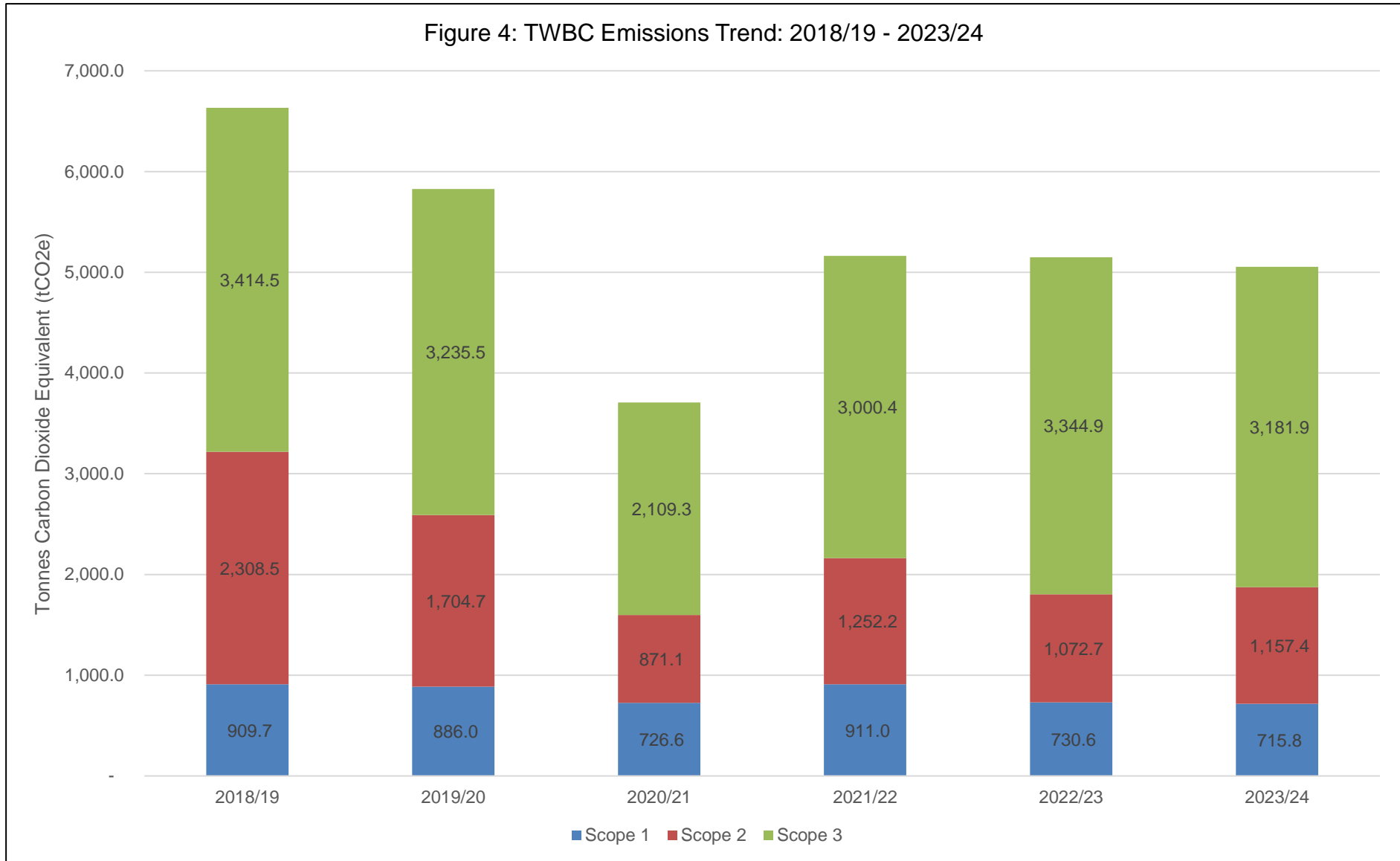
## 19. Background documents

- [Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard](#)
- [UK Government: Greenhouse Gas Reporting Conversion Factors 2023](#)

## 20. Annex 1: Emissions trend from base year

Figure 4 on page 18 provides an overview of how Tunbridge Wells Borough Council emissions have changed since the 2018/19 base year.

Figure 4: TWBC Emissions Trend: 2018/19 - 2023/24



# 21. Annex 2: Version control

<b>Document Name</b>	Tunbridge Wells Borough Council Emissions Report: 2023/2024
<b>Responsible Officer</b>	Henry Saunders, Sustainability Manager

<b>Version Number</b>	<b>Reason for Review</b>	<b>Author</b>	<b>Date</b>
1.0	First Version	H. Saunders, Sustainability Manager	25.07.24