

Tunbridge Wells Borough Council

Emissions Report: 2019/2020

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1. Summary

Tunbridge Wells Borough Council (TWBC) produces an annual emissions report that outlines the total carbon dioxide equivalent (tCO_{2e})¹ generated from its operations during the previous financial year. These reports compile consumption data from various activities and apply appropriate emissions factors. This process enables the council to consistently track its emissions over time and assess its progress towards reaching its 2030 net zero target.

All TWBC emissions reports are gathered following the Greenhouse Gas Protocol's Corporate Accounting and Reporting Standard, utilising the official greenhouse gas conversion factors provided by the Department of Energy Security and Net Zero (DESNZ).

In the 2019/20 financial year, TWBC's emissions were **5,826.2 tCO_{2e}**.

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 tank², leisure centre contract, refuse and street cleaning contract and grounds maintenance contract.

3. Emissions overview (tCO_{2e})

Emissions year	2018/19	2019/20
Scope 1	909.7	886.0
Scope 2	2,308.5	1704.7
Scope 3	3,414.5	3235.5
Total net emissions	6,632.7	5,826.2

¹ **Carbon Dioxide Equivalent (CO_{2e})** = Carbon Dioxide, Methane and Nitrous Oxide represented as one equivalent unit, to measure the climate change impact of multiple gasses under one metric.

² **Well to tank (WTT)** = The extraction, refinement and transportation of raw materials.

4. Emissions breakdown

Operation	Scope	Emissions Category	tCO ₂ e
TWBC Own Operations	Scope 1	Gas	787.4
TWBC Own Operations	Scope 1	Biomass	0.9
TWBC Own Operations	Scope 1	Biodiesel	0.0
TWBC Own Operations	Scope 1	Propane	0.0
TWBC Own Operations	Scope 1	Vehicle Fleet Fuel	25.9
TWBC Own Operations	Scope 2	Electricity Consumption	1,704.7
TWBC Own Operations	Scope 3	Transmission & Distribution Losses	144.7
TWBC Own Operations	Scope 3	Water Supply	12.1
TWBC Own Operations	Scope 3	Water Treatment	22.9
TWBC Own Operations	Scope 3	Grey Fleet Mileage	80.2
TWBC Own Operations	Scope 3	Commuting	-
TWBC Own Operations	Scope 3	Well To Tank - Gas	102.4
TWBC Own Operations	Scope 3	Well To Tank - Electricity	258.0
TWBC Own Operations	Scope 3	Well To Tank - Biomass	0.6
TWBC Own Operations	Scope 3	Well To Tank - Biodiesel	0.0
TWBC Own Operations	Scope 3	Well To Tank - Fuel	6.4

Operation	Scope	Emissions Category	tCO ₂ e
TWBC Own Operations	Scope 3	Well To Tank - Grey Fleet	20.7
TWBC Own Operations	Scope 3	Well To Tank - Commuting	0.0
TWBC Own Operations	Scope 3	Waste Disposal	2.0
TWBC Contract	Scope 3	Waste Collection & Street Cleaning	1,191.3
TWBC Contract	Scope 3	Grounds Maintenance	189.8
TWBC Contract	Scope 3	Leisure Centre	1,187.4
Total Gross Emissions	N/A	N/A	5,826.2

Operation	Scope	Emissions Category	tCO ₂ e
TWBC Own Operations	Out of Scope	Biomass	5.8
TWBC Own Operations	Out of Scope	Biodiesel	0.0
TWBC Own Operations	Out of Scope	Vehicle Fleet	0.9
TWBC Own Operations	Out of Scope	Electricity	-
TWBC Contract	Out of Scope	Contractor Fuel Use – Petrol (average biofuel blend)	32.3
TWBC Contract	Out of Scope	Contractor Fuel Use – Diesel (average biofuel blend)	5.0
TWBC Contract	Out of Scope	Electricity	-
Total Emissions	N/A	N/A	46.5

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 01/04/2019 to 31/03/2020.

7. Emissions overview

7.1. Scope 1

Scope 1 emissions totalled **886.0 tCO₂e** in 2023/2024.

As shown in figure 1 (below), scope 1 continues to be the smallest annual contributor to TWBC's emissions, contributing 15% in 2019/20.

Emissions reduced by 2.6% from the previous year (2018/2019), predominantly due to the fall in gas consumption (5.2%). Emissions from both stationary combustion fuels (specifically diesel) and the vehicle fleet (specifically petrol) saw an increase which brought the overall figures up overall by 29.8% and 18.8%, respectively.

7.2. Scope 2

Scope 2 emissions totalled **1,704.7 tCO₂e** in 2019/20, a 26.2% decrease from the previous year.

These emissions come from a single source: electricity. Electricity is the largest individual contributor to TWBC's emissions, contributing 29.3% to overall figures. Despite having the highest emissions on its own, scope 2 is the second highest emitting scope, releasing 52.7% less CO₂e than scope 3.

7.3. Scope 3

Scope 3 emissions totalled **3,235.5 tCO₂e** in 2019/20. This is a 5.2% decrease from 2018/19.

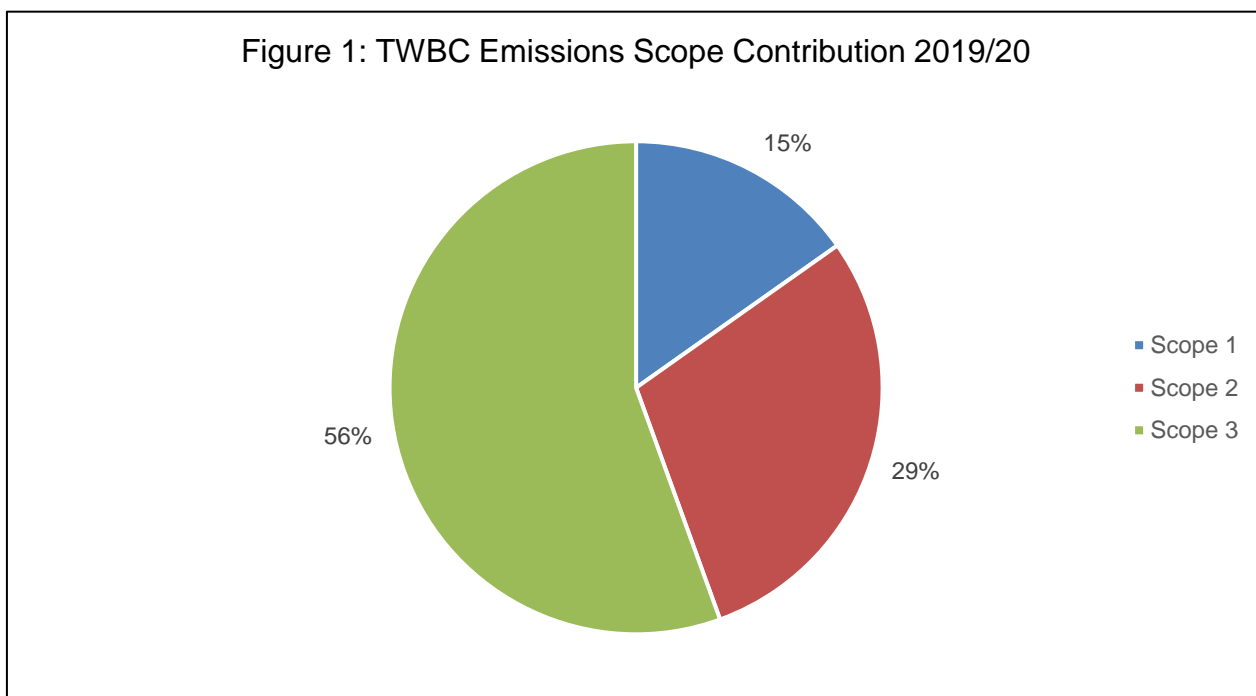
The second and third largest individual emissions sources are both found in scope 3, these being the waste collection & street cleaning and leisure centre contracts. They both contribute 20.4% to the total emissions portfolio, whereas exclusively within scope 3, these sources account for 36.8% and 36.7%, respectively.

Both contracts have seen a reduction in emissions from 2018/19, 1.1% and 7.2%, respectively. The waste contract experienced a reduction in diesel consumption (1.3). A greater decrease was seen for leisure centres, with an 11.1% drop in electricity consumption and a 7.6% fall in gas consumption being the primary causes. A reduction in the emissions factor for electricity consumption also contributed to this change.

The third TWBC contract, grounds maintenance, experienced an 81.3 tCO₂e (75%) increase in emissions from 2018/19 - 2019/20. This rise was largely brought about by an 133.6% increase in diesel usage.

2019/20 was the first year that TWBC waste was recorded as an emissions source, TWBC waste now contributes 0.06% of scope 3 emissions.

As can be seen in figure 1, scope 3 contributes the largest percentage of TWBC emissions, sitting at 56%. It is not unusual for scope 3 to be the largest contributor, due to it being the largest and most complex emissions scope, counting wider activities such as contracts, purchases, well to tank and staff travel. This does however, make scope 3 emissions the hardest to calculate and difficult to reduce.



7.4. Out of scope

TWBC is now highlighting its out of scope emissions. 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 CO₂ factors that should be used to account for the direct carbon dioxide (CO₂) impact of burning biomass and biofuels, including when reporting emissions from electricity consumption. Biogenic CO₂ 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 CO₂ during the growth phase as the amount of CO₂ released through combustion).”

Out of scope emissions totalled at **46.5 tCO₂e** in 2019/20. This is an increase of 9.1 tCO₂e (24.3%).

Since the previous financial year there was a 52.4% decrease in biomass emissions, which came from a 3.93 ton reduction in usage of wood pellets as a stationary combustion fuel.

On the other hand, there was an increase in out of scope fuel emissions from both our waste collection & street cleaning and grounds maintenance contracts, 52.3% and 129.4%, respectively. Out of scope emissions from these contracts come from the petrol and diesel consumption, which have a biofuel mix (ethanol). For our waste collection contract, the consumption did not change, but the emissions factor increased by 0.027 which contributed to the percentage rise in emissions. The grounds maintenance contract had a 24,708 litres increase in diesel fuel from base year accounting for the rise in our of scope biofuel (ethanol) emissions.

7.5. Significant emissions & consumption changes

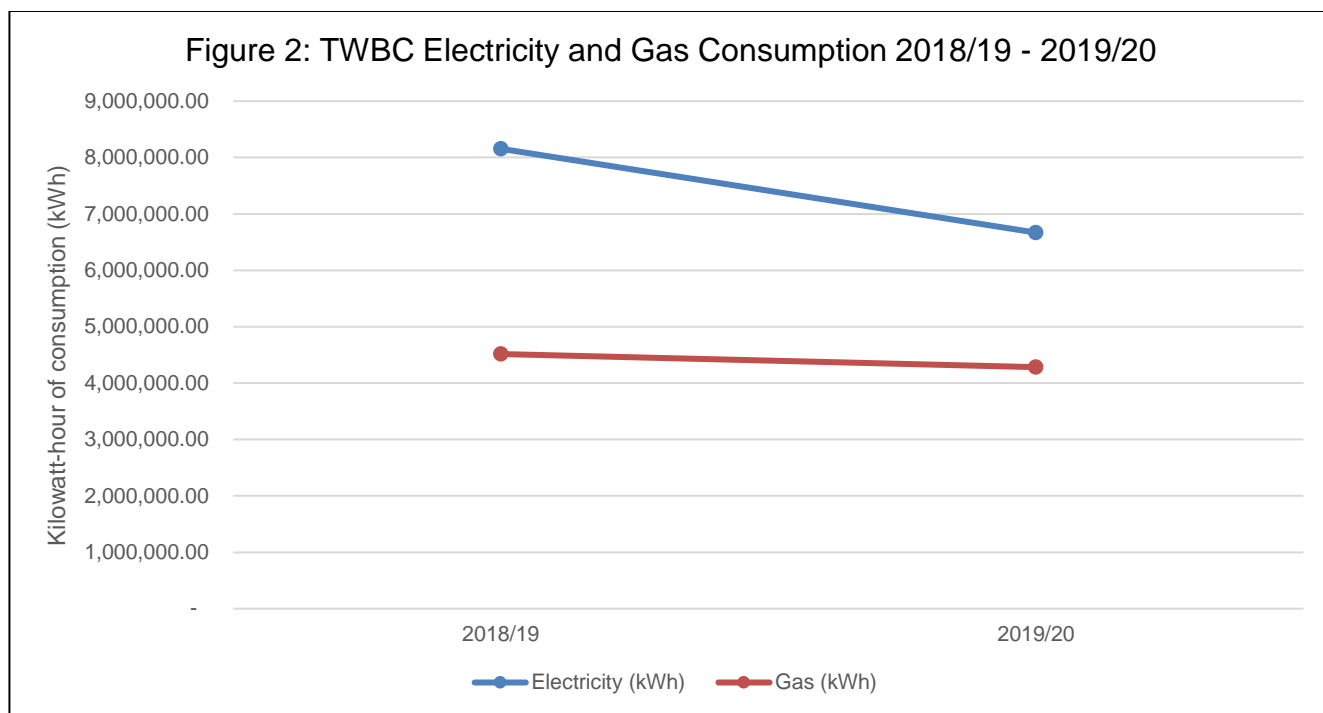
Overall emissions have reduced by 806.5 tCO₂e (12.2%) from 2018/19.

The main categories contributing to this change were electricity well to tank (-30.6%), transmission & distribution losses (-26.5%), electricity consumption (-26.2%), and gas consumption (-5.2%). The decrease in electricity well to tank scope 3 emissions was caused by a 3 million kWh reduction in consumption levels, alongside small decreases in associated emissions factors. For scope 2 electricity usage, there was a 1.5million kWh reduction in consumption from 2018/19, contributing hugely to the overall emissions change. Similarly, there was also a slight decrease in emissions factors for this source which must be accounted for.

Scope 2 emissions saw the biggest reduction, with national emissions factors for own operations decreasing from 0.2831 in 2018/19 to 0.2556 in 2019/20. This shift would have been induced by the UK-wide significant decline in the carbon intensity of the national electricity grid in 2019. This was largely due to coal being increasingly replaced by cleaner energy sources like wind, solar, and natural gas. This broader change would have contributed to lower electricity-related emissions in Tunbridge Wells.

On the other hand, there were a few sources which saw increases in their emissions; grounds maintenance diesel use (+63.5%), stationary combustion fuel; diesel (+16.4%), grounds maintenance petrol WTT (+15.22%), grounds maintenance gas oil usage (+8.4%), and combined water supply & treatment (+7.9%).

The increases in emissions across these specific sources reflect a combination of heightened grounds maintenance activity, and increased operational needs such as the use of diesel-powered generators or equipment.



7.6. Largest emitting sources

Emissions Category	Emissions Scope	tCO ₂ e	Total Contribution	Change from 2022/23
Electricity consumption	Scope 2	1,704.7	29.3%	-26.2%
Waste collection & street cleaning contract	Scope 3	1,191.3	20.5%	-1.1%
Leisure centre contract	Scope 3	1,187.4	20.4%	-7.2%
Gas consumption	Scope 1	787.4	13.5%	-5.2%
Electricity well to tank	Scope 3	258.0	4.4%	-30.6%

TWBC emissions from the above top 5 direct sources contributed 88.1% to all total emissions in 2019/20.

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 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	Activity	Description	Data Source
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.

For commuting and commuting well to tank there is no data recorded, but the council is looking to start regular collection of this data in the coming years.

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 occur within the council's operations. Additionally, if such changes result in an emissions increase of 10% or more of TWBC's base year emissions, recalculation will be triggered.

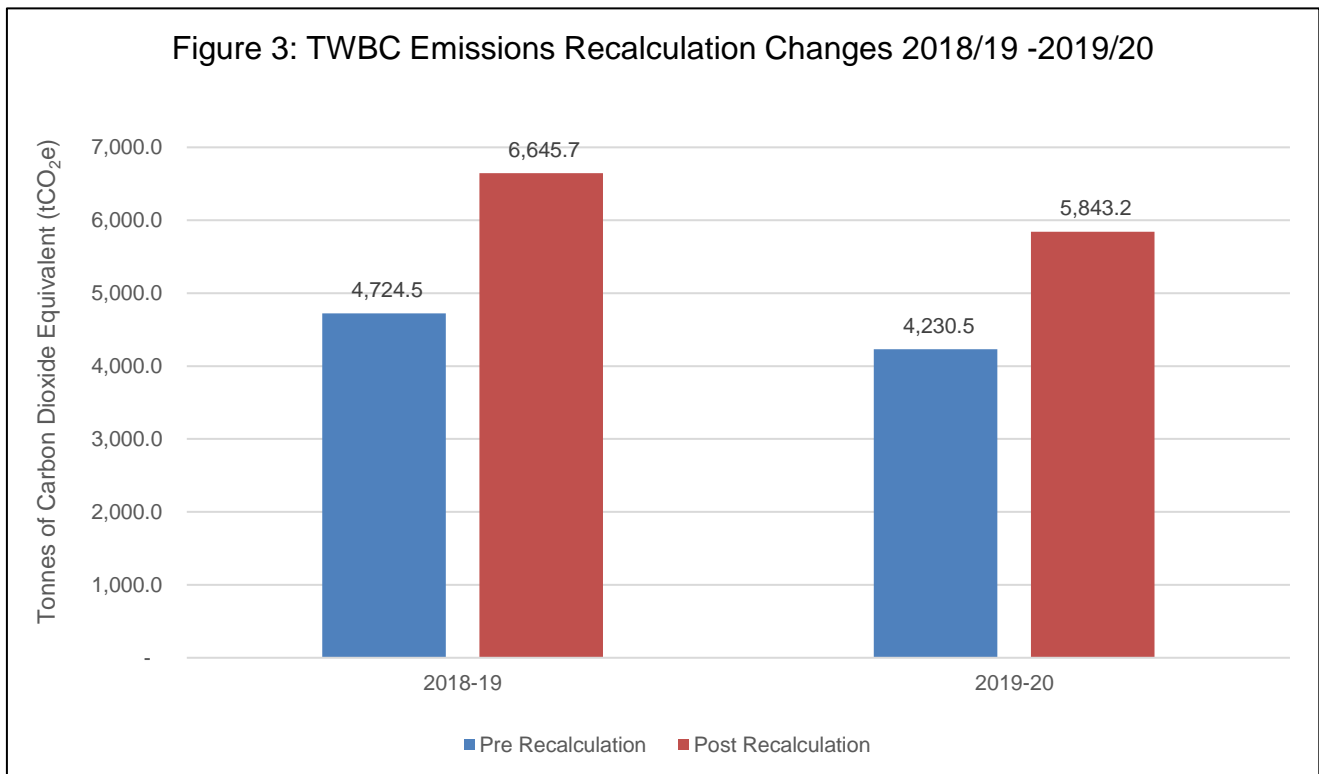
If insufficient data is available for the recalculation, the next most suitable year will be selected. Base year emissions, along with all previous emissions reports, have been recalculated following the council's acquisition of the Royal Victoria Place Shopping Centre in 2023 and the renovation and acquisition of the Amelia Scott building in 2022.

Base year emissions from 2018/19 are **6,632.7 tCO₂e**. This is an increase from the previous emissions figure of **4,724.5 tCO₂e**.

Observed increases from this recalculation are as follows:

- 2018/19 observed a 41% increase in emissions (1,921.2 tCO₂e).
- 2019/20 observed a 38% increase in emissions (1,612.6 tCO₂e).

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 **18.7 tCO₂e** 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 30.7% of their energy came from renewables in 2019/20 (as of 11/11/2024). 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.

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.

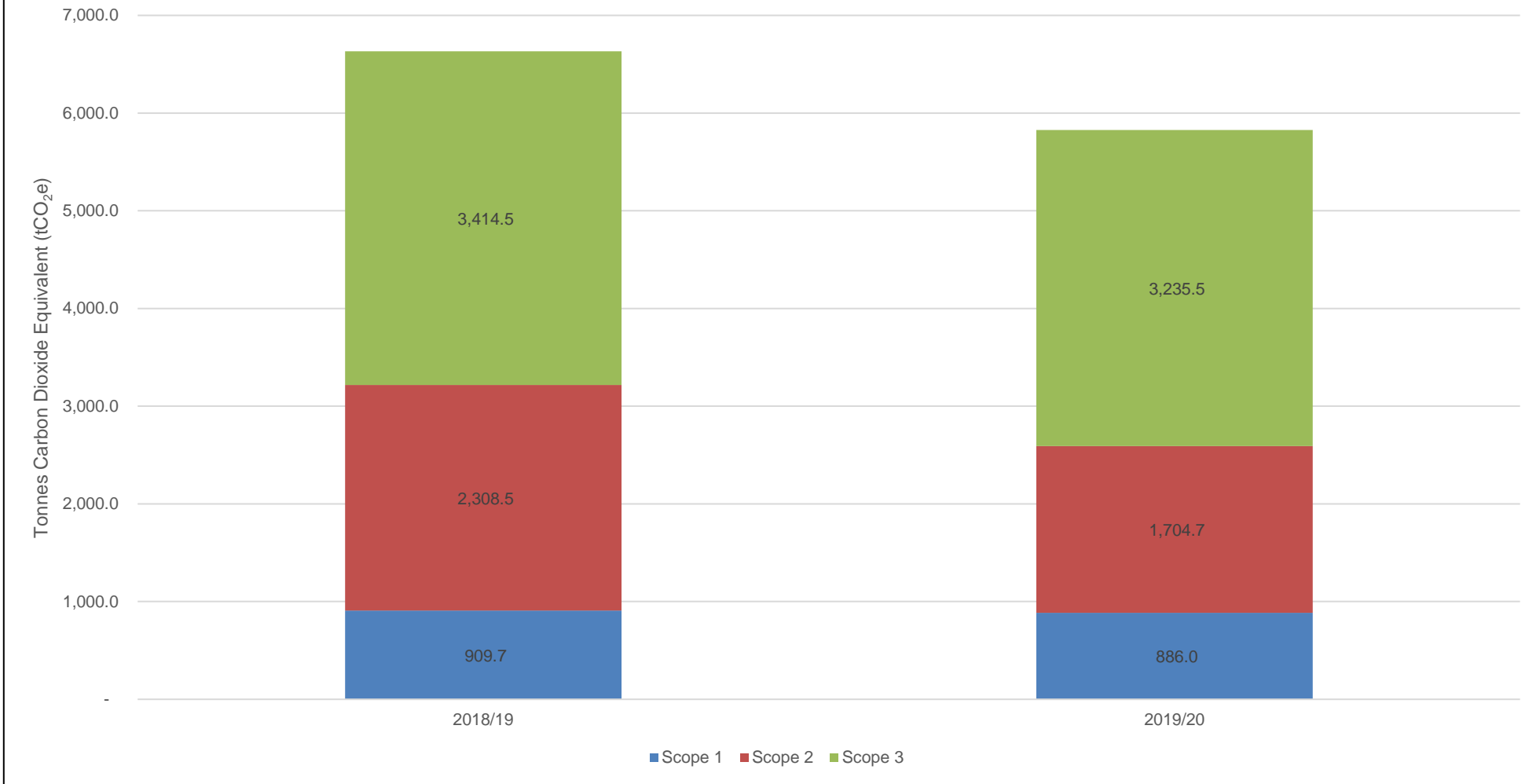
19. Background documents

- [Greenhouse Gas Protocol: Corporate Accounting and Reporting Standard](#)
- [UK Government: Greenhouse Gas Reporting Conversion Factors 2019](#)

20. Annex 1: Emissions trend from base year

Figure 4 below 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 - 2019/20



21. Annex 2: Version control

Document Name	Emissions Report: 2019/2020
Responsible Officer	Henry Saunders, Sustainability Manager

Version Number	Reason for Review	Author(s)	Date
1.0	First Version.	H. Saunders, Sustainability Manager.	25.07.2024
2.0	Recalculation.	H. Saunders, Sustainability Manager. J. Berry, Graduate Climate Change Officer.	25.11.2024