

CHELTENHAM BOROUGH COUNCIL

HOUSING

ANNUAL REPORT ON GREENHOUSE GAS EMISSIONS: FINANCIAL YEAR 2024/25

EXECUTIVE SUMMARY

This is a report on the carbon emissions that Cheltenham Borough Council Housing is responsible for in the financial year 2024/2025.

There will be some reference made to Cheltenham Borough Homes (CBH) within this report, as part of the reporting year can be attributed to when CBH existed as an Arms-Length Management Organisation (ALMO), a wholly-owned but separate limited company.

The emissions are broken down into scopes, which categorise emissions into 3 areas:

- Scope 1: Direct emissions from sources owned/controlled by CBC Housing
- Scope 2: Indirect emissions from purchased electricity
- Scope 3: Indirect emissions from sources not owned or controlled by CBC Housing

Scope 1 Emissions

- Have reduced by 7.89% on the 2019/20 baseline, which is a reduction of 32.78 tCO₂e.
- Have increased based on the previous year (24/25: 415.47 tCO₂e vs. 23/24: 394.71tCO₂e).
- Notable changes within scope 1 emissions compared to the previous year's report are reductions in the gas usage in communal heating systems and less diesel used within our fleet.
- As the emissions we report on within scope 1 are under our direct control, reduction in this area reflects a small amount of work that has been put into areas such as introducing more HVO vehicles, replacing diesel usage.

Scope 2 Emissions

- Appear to have reduced by 40.86% on the baseline, however there is a set of large data that has been copied from the previous reporting year, rather than actual data. This is because, following the transition from CBH Limited into CBC, we no longer have access to the landlord supply electricity data which consist of 258 individual electricity supplies.
- Have decreased on the previous year (24/25: 147.2 tCO₂e vs. 23/24: 160.06 tCO₂e).
- The most notable changes within the reported scope 2 emissions are that we have not included CBC office spaces, as these are no longer shared between two organisations and are reported as a significant increase in the CBC carbon accounts.
- The emissions reported on in scope 2 are directly controlled by us, and whilst there has been a rise this year compared to last year, we have reduced well on the baseline. Continued reduction in this area will rely on the greening of the electricity grid, but also internal behavioural changes will see less power usage.

Scope 3 Emissions

- Have increased by 23.03% on the 2019/20 baseline, which is an increase of 2034.83 tCO₂e.
- Have decreased on the previous year (24/25: 11588.68 tCO₂e vs 23/24:12,184.97 tCO₂e).
- Notable changes within scope 3 emissions compared to the previous year's report are the reduction in supply chain emissions, and a very slight increase in the housing stock emissions.
- Introduction of supply chain emissions since the baseline is one reason for increased emissions compared to the baseline. They have fallen compared to last years figure of 4578.56, a decrease of 2.97%. The calculation of these emissions is based heavily on economic spend, with a decrease being intricately linked to less money having been spent on capital works.
- The emissions produced by the housing stock increased by 99.8 tCO₂e compared to 2023/24's figure, an increase of 1.4%. However, we now have more accurate EPC data, following the ongoing stock condition survey that started just after the previous reporting year. As well as this, there were more colder days than the previous year meaning more energy would have been required.
- Scope 3 emissions are out of our direct control and are therefore the hardest to reduce. Actions such as employee travel surveys will help to better understand commuting behaviours, but ultimately it will be very hard to have a large influence on these emissions.

INTRODUCTION:

Table 1: Definition of Scope 1,2 and 3 emissions

Category	Description	Source
Scope 1	Direct emissions as a result of burning fossil fuels from activities owned or controlled by the organisation.	<ul style="list-style-type: none"> • Property schemes managed by CBC that have a communal supply of gas - metered gas use • CBC Housing fleet vehicle fuel use
Scope 2	Indirect emissions from purchased energy (electricity) consumed by CBH operations.	<ul style="list-style-type: none"> • Metered electricity use for communal areas of properties managed by CBC Housing organisational office spaces • Office space used by Housing that is separate from CBC
Scope 3	All other quantifiable indirect emissions from sources not owned or controlled by CBH.	<ul style="list-style-type: none"> • Business travel • All housing stock including that is managed by CBC Housing • Transmission and Distribution losses from all purchased electricity in Scope 2 • Un-official offsets from communal solar PV arrays • Procurement emissions from the supply chain

The following elements have not been reported by CBH in this year's report: waste, water use,

ORGANISATIONAL BOUNDARY:

The council's housing stock emissions come from the generation of the energy used within these properties. Energy use in residential properties is usually separated into regulated and unregulated energy.¹ Only regulated energy use is used in CBH GHG emissions calculations.

Some data presented in these carbon figures is based on assumptions, with figures based on estimates rather than actual figures.

RESULTS:

SCOPE 1

Table 3: Breakdown of emissions by source within scope 1, compared against the 2019/20 baseline

Scope 1	2024/25 tCO ₂ e	2023/24 tCO ₂ e	2022/23 tCO ₂ e	2021/22 tCO ₂ e	2020/21 tCO ₂ e*	Baseline 2019/20 tCO ₂ e	% change on baseline
CBC properties: Communal heating (gas)	297.46	272.87	283.64	334.87	-	331.80	-10.35
CBH Offices (Gas)	5.13	21.71	19.55	24.71	-	24.67	--79.2
Vehicles (biodiesel)	0.16	0.12	0.04	0	-	0	-
Vehicles (diesel)	112.71	99.98	103.38	96.56	-	91.78	22.81
Vehicles/equipment (petrol)	0	0.03	0.15	0.57	-	0	-
Scope 1 Total	415.47	394.71	406.77	456.71	-	448.24	-7.89

The total of all the scope one emissions for 2024/25 shows a 7.89% reduction on the 2019/20 baseline. The gas purchased for heating is natural gas, and the biodiesel purchased for vehicles is hydro-treated vegetable oil. Notable changes in emissions within Scope 1 can be seen in:

- Increase in communal gas heating within CBC sheltered scheme properties. No significant changes have been made to these systems but there is now more accurate data collection with more automated meter reads improving accuracy.
- An increase in vehicle fleet emissions on the previous reporting year could be explained by comparing the amount of vans - We had 31 diesel vans in Apr'23, compared to 39 in Apr '24. Average van emissions dropped by 0.3 tCO₂e but they use more fuel due to extra mileage for more properties this year than last reporting year.
- The large decrease in scope 1 office emissions is due to less falling within the reporting scope. The majority of office spaces now fall under the CBC carbon footprint.
- Hesters Way Resource Centre (HWRC) and St Pauls Hub are the only two office spaces included in this report. Emissions from petrol usage has reduced as there are no longer any petrol vehicles and as petrol tools are replaced with battery powered ones.

SCOPE 2

Table 4: Breakdown of emissions by source within scope 2 compared against the 2019/20 baseline

Scope 2	2024/25 tCO ₂ e	2023/24 tCO ₂ e	2022/23 tCO ₂ e	2021/22 tCO ₂ e	2020/21 tCO ₂ e*	Baseline 2019/20 tCO ₂ e	% change on baseline
All housing stock (Communal usage - electricity)	146.11	146.11	107.08	163.08	-	221.15	-33.93
CBH Offices (electricity)	1.09	13.95	15.28	18.95	-	27.76	-96.08
Scope 2 Total	147.2	160.06	118.15	182.04	-	248.90	-19.14

The total of all scope 2 emissions for 2024/25 shows a reduction of 33.93% on the 2019/20 baseline. The changes in emissions within scope 2 to note are:

- Continued reduction against the baseline is partly attributed to greening of the grid over time, and production of electricity being less carbon intensive than previous years.
- Emissions from the housing stock communal usage of electricity are estimated. In previous years, energy consumption data has been taken from a portal which gathers billing information. We no longer have access to this portal because our communal electricity supply changed supplier.
- With nobody in post to manage this year's energy portfolio, there is no accessible consumption data for the reporting year. As such, the reporting figure from last year has been used as the estimate.
- Emissions from the use of electricity within CBH offices
 - This set of emissions no longer exists within the Housing footprint, and will be included in the CBC footprint as both are now one organisation.
 - The only office space for CBC Housing to report on this year under scope 2 is the HWRC office

SCOPE 3

Table 5: Breakdown of emissions by source within scope 3, compared against the 2019/20 baseline

Scope 3	2024/25 tCO ₂ e	2023/24 tCO ₂ e	2022/23 tCO ₂ e	2021/22 tCO ₂ e	2020/21 tCO ₂ e*	Baseline 2019/20 tCO ₂ e	% change on baseline
Milage (CBH business)	9.72	10.38	10.44	17.94	-	17.94	-41.81
Rail travel (CBH business)	-	0.06	0.02	1.12	-	1.12	-98.47
All housing stock (communal electricity/T&D)	2.96	13.74	9.14	14.43	-	16.81	-45.60
CBH offices (electricity/T&D)	0.02	1.21	0.93	1.68	-	2.11	-55.92
All housing stock	7146.78	7,046.98	7,359.77	9,455.63	-	9,400.74	-25.04
Solar PV off-set from communal supplies	-16.53	-20.73	-24.15	-19.21	-	-19.21	+8
Supply chain (purchased goods & services)	4446.56	4578.56			-		
Scope 3 Total	11588.7	11630.2	7356.23	9471.47	-	9419.39	23.03

The total of all scope 3 emissions for 2024/25 -

- Emissions from the housing stock have risen. the figure for 24/25 is 7,147 tCO₂e which is a reduction of 25% on the 19/20 baseline but an increase of 1.4% on 23/24 housing stock emissions. This small increase could be down to the fact that we were accounting for more properties this year, as our total stock number increased from 4672, to 4681. Another possibility is that we saw an increase in heating degree days (days when heating was necessary) compared to the previous reporting year. This means that it was a colder year with the outside temperature being lower than the internal building temperature more often, leading to an increase in energy use to heat properties.
- Within scope 3 there is the offset of energy that is provided using solar PV systems supplying energy to the communal supplies. The overall solar PV offset figure has been subtracted from the overall total. The offset for 24/25 is less than it was in 23/24, this is impacted by the variability in the weather - there were fewer hours of sunshine in 2023 compared with 2024. It is worth noting that this figure has increased on the baseline, which is positive as it means a higher offset.
- The emissions produced by procurement of goods & services was a new addition to our reporting for 23/24, and we have continued to report on these emissions this year. There has been a decrease in emissions in this area, which is in large part due to the fact that less money was spent on capital works compared to the previous year. The biggest contributor to this set of emissions continues to be our capital construction works to the properties that we manage, which this year would have consisted largely of external wall insulation, roof replacements, and kitchen and bathroom replacements.
- Travel emissions for employee commuting will be included in the CBC carbon footprint report this year, as we are now reporting on this set of emissions as one organisation. As such, all previous reporting figures have been moved so they can be accurately reported as a combined figure in the overall CBC report, meaning some figures have been adjusted in this report to reflect that.

SUMMARY:

Table 6: Total emissions from 2024/25 compared to previous years, compared against the 2019/20 baseline.

	2024/25 tCO ₂ e	2023/24 tCO ₂ e	2022/23 tCO ₂ e	2021/22 tCO ₂ e	2020/21 TCO ₂ e*	Baseline 2019/20 tCO ₂ e	% change on baseline
Scope 1, 2 & 3 total emissions	12,151.37	12184.97	7885.46	10110.21	-	10116.54	20.19

- The total emissions for 2024/25 for CBC Housing show an 18.15% increase on the baseline total of 2019/20. The increase in emissions compared to the baseline is due to accounting for a new set of emissions in the supply chain (purchased goods and services) from the 23/24 reporting year, although figures have fallen by nearly 3% this year which is already showing a steady decrease in emissions.
- The bulk of the emissions within this report lies in the housing stock, which makes up 59% of overall emissions. This demonstrates the importance of directing works and resource towards improving the energy efficiency of the housing stock where possible.
- The majority of the supply chain emissions (approx. 75%) relate to building, maintaining, and improving homes.

NEXT STEPS:

Future emissions reductions can be targeted by:

- Scope 1
 - upgrading the CBC Housing vehicle fleet to use electric vehicles, this would see a reduction in emissions from diesel fuel use. However, this requires infrastructure upgrades to include charge points both at the offices and at the repairs fleets' homes.
 - reducing gas use for heating of CBH office spaces will be helped by better monitoring and sub-metering. CBC is working to progress this at CBH's biggest site usage, The Depot on Swindon Road. This will also allow better identification of office-based emissions.
 - reducing emissions from communal heating systems. A new GSHP (ground source heat pump) heating system has been installed at Cumming Court and other sites are being reviewed to consider the options. This will start by replacing communal gas boilers with more efficient heating systems, such as heat pumps - which can be done under the Warm Homes: Social Housing Fund Wave 3. This will contribute to a decrease in scope one emissions, as well as giving residents more control over their heating.
- Scope 2
 - encouraging behavioural change in the use of electricity within offices will be the driving force behind reducing energy demand therefore carbon emissions.
 - in addition, as the grid continues to become greener, and investment in green energy rather than brown energy grows, emissions across all of scope 2 will fall in future years.
- Scope 3
 - working to improve the energy efficiency of CBH managed properties, as well as installing low carbon heating, will reduce the energy demand, and hence resulting carbon emissions, of homes. We are currently in the delivery phase of the Warm Homes: Social Housing Fund wave 3, which will focus on decarbonising some of our properties that are currently using gas boilers by installing

heat pumps. As well as the low carbon heating incentive, we are targeting the improvement of 383 properties through measures such as external wall insulation and cavity wall insulation.

- engaging proactively with the supply chain and working to develop a sustainable procurement strategy.

ENDNOTES

¹ Regulated energy is energy consumption by controlled building services, such as space heating (affected by the energy performance/insulation), hot water systems and lighting. This is the energy use that is reported on in EPCs and which landlords have significant control over, i.e., via the amount of heat required within the house (due to its fabric/construction) and the way that heat is generated (via a boiler or similar). Only regulated energy use is used in CBH GHG emissions calculations, and this is based on modelling via RdSAP (not measured energy consumed).

Unregulated energy includes energy use via appliances and other equipment that is not controlled or regulated. This is energy used by residents for the equipment in their homes. Reductions can be made by using more efficient appliances or behavioural change. Unregulated energy is not included in CBH GHG emissions reporting.

*2020/21 Data not reported on due to industry being heavily affected by Covid-19 that year