



Sustainability Report - 2024 H2

M600-30-50-009a

REVISION HISTORY

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1. EXECUTIVE SUMMARY

Wood Thilsted assesses its carbon emissions in line with the three scopes within the UN GHG protocols. There are nine relevant material areas of emissions for the company as outlined in Figure 1:

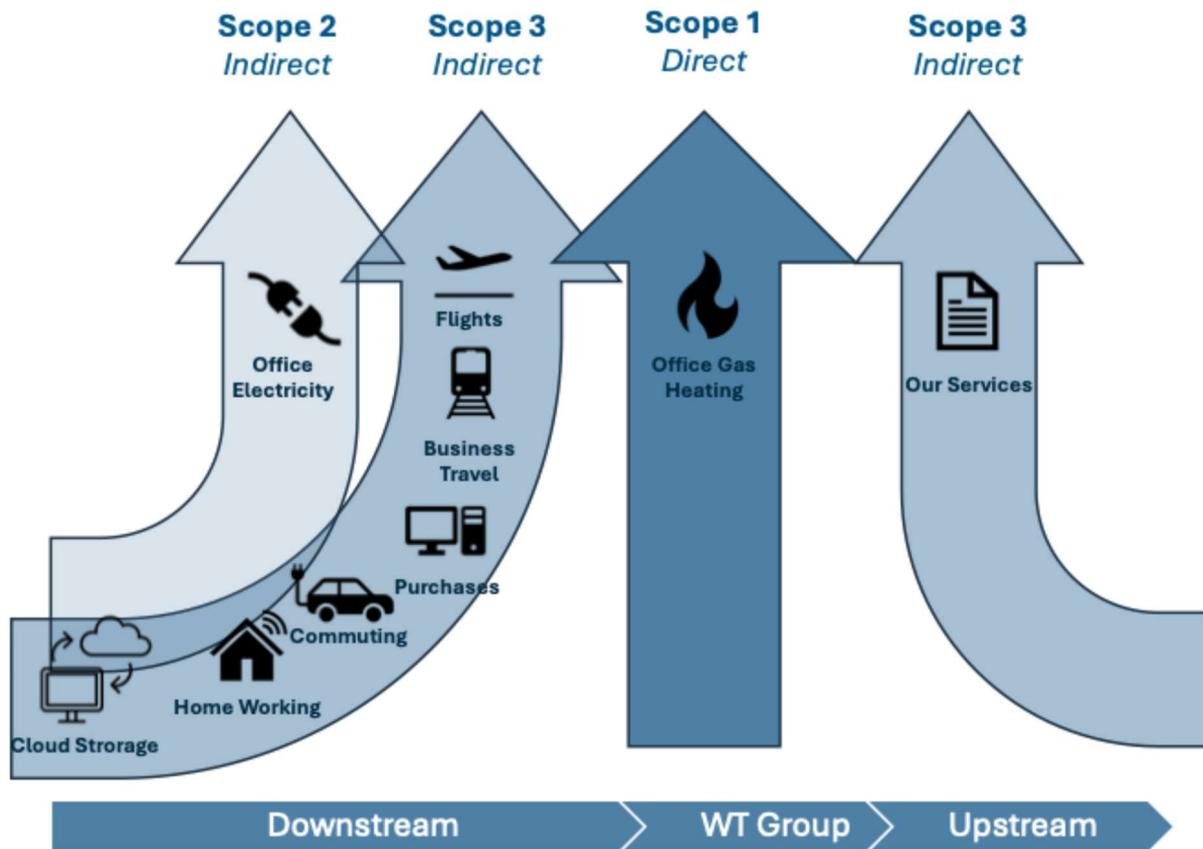


Figure 1 - Wood Thilsted's emission areas

The breakdown of emissions for the company for the year are compared against previous periods since 2022 in Table 1.1:

Table 1.1: Emissions data by reporting period

Scope	Category	CO ₂ e emissions by period [tCO ₂ e]					
		H2 2024	H1 2024	H2 2023	H1 2023	H2 2022	H1 2022
Scope 1	Office gas consumption	2.09	8.26	3.07	6.41	11.00	6.09
Scope 2	Office electricity consumption	4.46	5.68	4.52	4.90	14.87	6.09
	Office district heat consumption	0.79	1.84	0.79	0.73	-	-
	Sub-total Scope 2	5.25	7.51	5.31	5.63	14.87	6.09
Scope 3	Business travel	9.41					
	Business travel - Domestic Flights	8.08					
	Business travel - Short Haul Flights	48.78					
	Business Travel - Long Haul Flights	70.51					
	Business Travel	136.78	177.14	212.28	137.77	111.01	27.67
	Purchased assets	4.80	35.69	27.86	33.10	36.38	24.00
	Remote data storage	0.00	1.31	1.31	1.28	-	-
	Employee commuting	12.40	12.40	18.82	17.61	-	-
	Sub-total Scope 3	153.98	226.54	260.27	189.76	147.39	51.67
	TOTAL	161.32	242.31	268.65	201.80	173.26	63.85
	Number of Employees	189	194	194	181	156	152
Total CO₂e per employee	0.85	1.25	1.38	1.11	1.11	0.42	

2. INTRODUCTION

WT is committed towards the UN's Sustainable Development Goals (SDGs). As defined by the UN, "The 17 SDGs offer the most practical and effective pathway to tackle the causes of climate change and environmental degradation" [13]. This report comprises part of our contribution towards SDG 13 - Climate action: by measuring and reporting our GHG emissions we are well placed to begin meaningful efforts to remove and reduce emissions within our company.

Our reporting takes two forms:

1. An annual report where overall achievement of sustainability objectives are considered
2. Six monthly data reports

This publication is part of the six monthly data reports. These reports seek to:

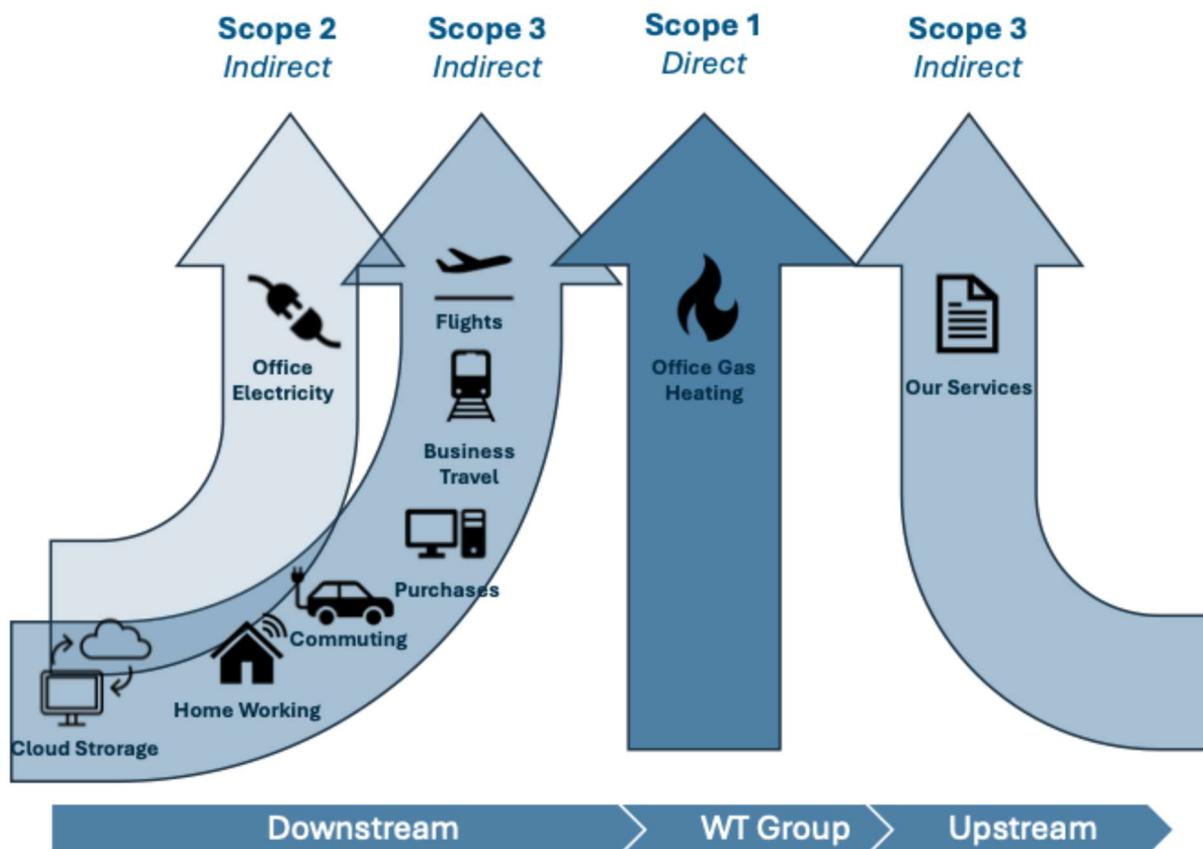
1. Provide analyses of the current carbon impact of the activities undertaken by Wood Thilsted
2. Provide commentary on the data collection process, and limitations and/or assumptions in arriving at our impact
3. Provide action plans for where our understanding of our impact can be improved



3. SCOPE 1 EMISSIONS

3.1. Office Gas Heating

Scope 1 greenhouse gas (GHG) emissions refer to direct emissions that are released from sources that are owned or controlled by an organization. These are emissions that occur directly from an entity's activities, often involving the combustion of fossil fuels or chemical processes. As Wood Thilsted has no manufacturing facilities or company fleet, our emissions are limited to those offices which are heated by gas boilers.



3.2. Office Gas heating - Methodology

Wood Thilsted leases its offices around the world. Many of these offices are serviced, and not separately metered (and therefore arguably form Scope 3 emissions – however to maintain suitable focus they are treated as direct Scope 1).

Therefore three approaches are made in order of preference:

1. Direct usage can be obtained through meter readings direct for WT
2. Where overall meter readings for a site can be made, then WT's floorspace as a % of available let floor space is used
3. Where no meter readings are made available, then an estimate of the consumption per FTE is made (where FTE is deemed a suitable and relevant proxy to square meterage) using the following values:

Table 3.1: Assumed electricity and gas consumption per employee for non-reporting offices.

4.

	Electricity consumption/FTE	Gas consumption/FTE	District Heat consumption/FTE
Summer	119kWh	229kWh	252kWh
Winter	104kWh	507kWh	595kWh

The "CO₂e intensity" (or "carbon intensity") value of an energy source represents the quantity of CO₂e produced per unit energy consumed.

The CO₂e intensity of Natural Gas is assumed to be 0.180 and consistent around the world.

The CO₂e intensity of natural gas is determined from conversion factors published by the UK Department for Energy Security and Net Zero (DESNZ) [3]. This source is also used in Section 4 for determining CO₂e emissions from business travel. We have assumed that natural gas has the same carbon intensity across all offices.

3.3. Office Gas heating – Results

COUNTRY	OFFICE	Co2e intensity	kwh Consumption per FTE for period	FTE	KWH	CO2e
UK	London	0.00	Assumed 6,236	52.4	6,236	-
	Bristol	0.18	Proportion	30.7	636	0.11
	Edinburgh	0.18	229	7.7	1,763	0.32
	Godalming	0.18	229	3	687	0.12
	Trowbridge	0.18	229	1.8	412	0.07
	Pontypool	0.18	229	1	229	0.04
DENMARK	Copenhagen	0.18	0	48.2	-	-
	Aarhus	0.18	0	5.8	-	-
	Vejle	0.18	0	4	-	-
USA	Boston	0.18	229	6	1,374	0.25
South Korea	Seuol	0.18	229	4	916	0.16
Poland	Warsaw	0.18	229	7	1,603	0.29
Japan	Tokyo	0.18	229	2.6	595	0.11
Taiwan	Taipei	0.18	229	8	1,832	0.33
Other		0.18	229	6.8	1,557	0.28
TOTAL				189.00	11,605	2.09

3.4. Office Gas heating - Analysis

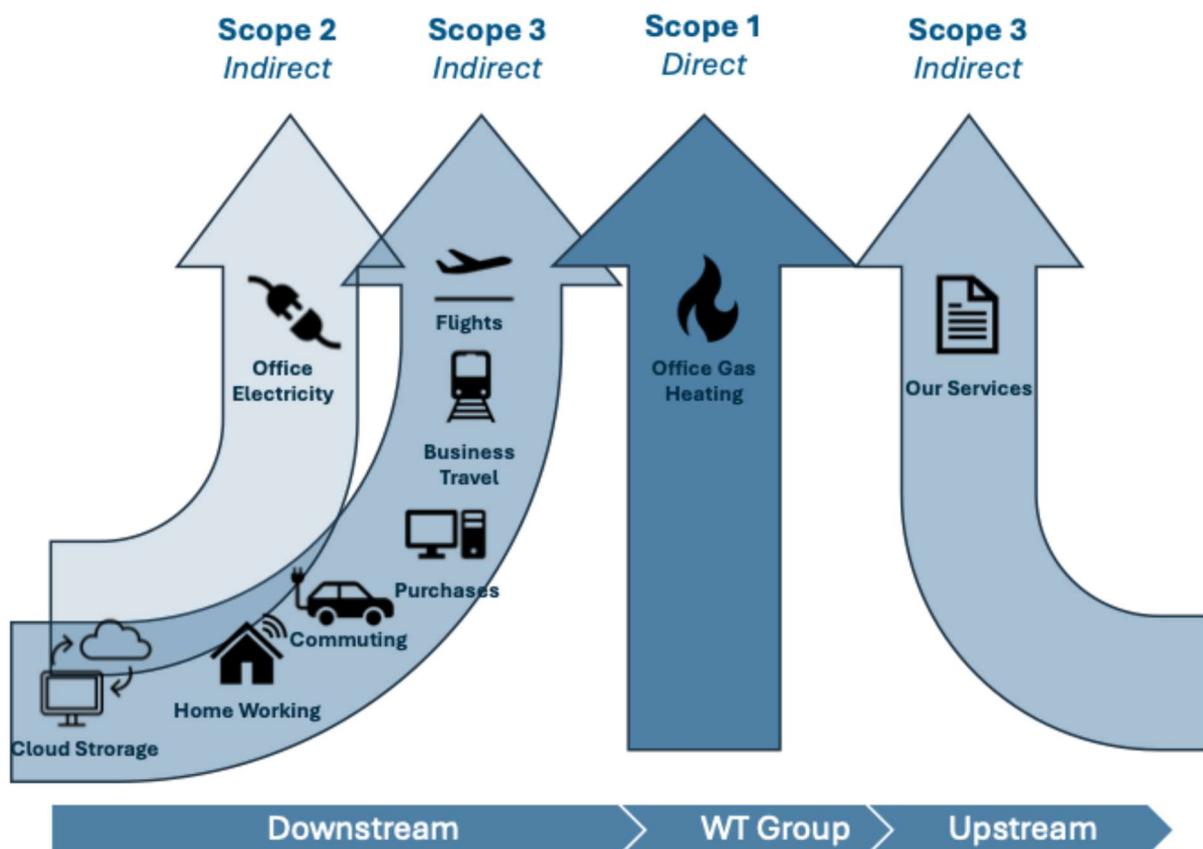
Gas consumption in H2 reflects the summer period requiring less heating. This results in an overall usage of 2.09CO₂e(t).

For H2 only Bristol returned actual meter readings, with a reduction on the same period in the prior year (H2 2023). The relatively low usage per FTE in Bristol suggests a likely overestimate in other offices where a carbon/fte figure is used. The immateriality on summer heating however results in an impact unlikely to be material to WT.

4. SCOPE 2 EMISSIONS

4.1. Office Electricity

Scope 2 greenhouse gas (GHG) emissions refer emissions from electricity production at a power plant, used by an organization for lighting, heating, or operating equipment. For Wood Thilsted this will therefore be the electricity required within our offices.



4.2. Office Electricity - Methodology

Wood Thilsted leases its offices around the world. Many of these offices are serviced, and not separately metered (and therefore arguably form Scope 3 emissions – however to maintain suitable focus they are treated as direct Scope 2).

Therefore three approaches are made in order of preference:

1. Direct usage can be obtained through meter readings direct for WT
2. Where overall meter readings for a site can be made, then WT's floorspace as a % of available let floor space is used

- Where no meter readings are made available, then an estimate of the consumption per FTE is made (where FTE is deemed a suitable and relevant proxy to square meterage) using the following values:

Table 3.1: Assumed electricity and gas consumption per employee for non-reporting offices.

1.

	Electricity consumption/FTE	District Heat consumption/FTE
Summer	119kWh	595kWh
Winter	104kWh	595kWh

The "CO₂e intensity" (or "carbon intensity") value of an energy source represents the quantity of CO₂e produced per unit energy consumed. For all offices except for London we have assumed the carbon intensity of electricity is the average for the country in which the office is located. The London office uses a 100% renewable electricity supplier so the carbon intensity of London's energy consumption is considered zero.

The Danish energy agency published its most recent figures on the CO₂e intensity of district heating in 2021 [2]. We have assumed that the CO₂e intensity has not changed significantly since.

The CO₂e intensity of a country is determined by the relative proportions of electricity generation in the country - countries with a larger share of renewables will have a lower electricity CO₂e intensity. These values, along with the CO₂e intensities of natural gas and district heating, are given in Table 3.2, below.

Table 3.2: CO₂e intensity of electricity by country, natural gas, and district heating.

Country	CO ₂ e intensity
[-]	[kg/kWh]
Denmark	0.181
United Kingdom	0.124
Taiwan	0.561
United States	0.367
Poland	0.635
Japan	0.483
South Korea	0.436
Natural gas (gross calorific value)	0.180
District heating - Denmark	0.054

In 2024, the UK's electricity sector reached its cleanest state, with a CO₂ intensity of about 124 g CO₂/kWh (prior reports used 257g CO₂/kWh). This improvement was driven by the closure of the last coal power station and an increase in renewable energy sources.

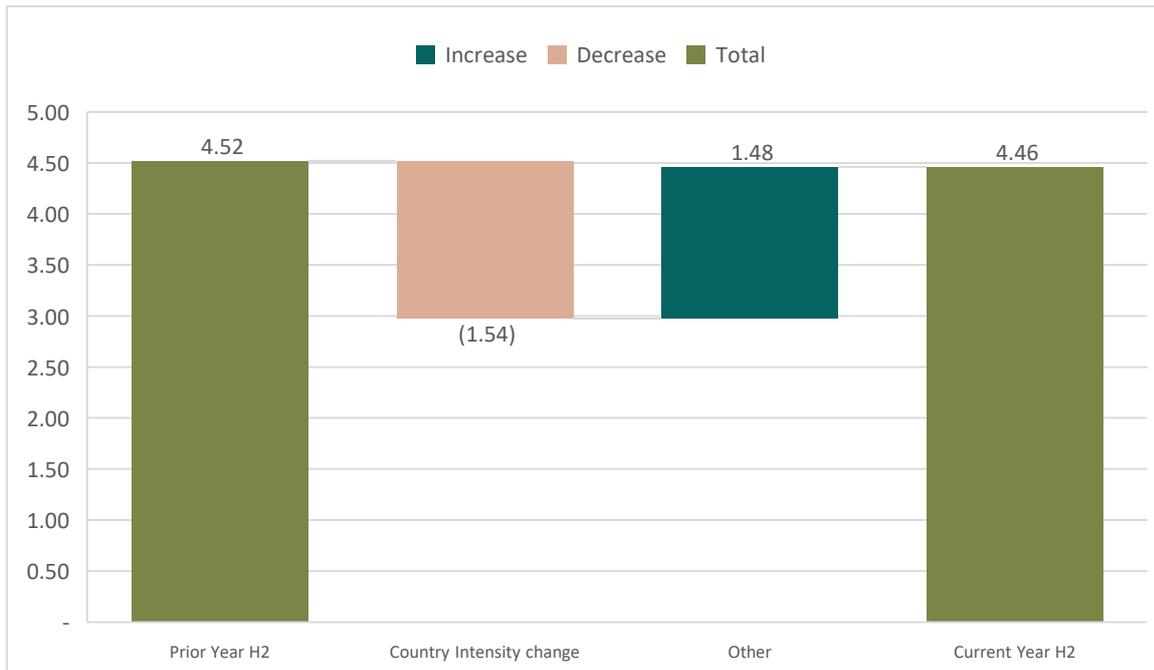
4.3. Office Electricity - Results

COUNTRY	OFFICE	Co2e intensity	kwh Consumption per FTE for period	FTE	KWH	CO2e
UK	London	0.124	119	52.4	6,236	0.77
	Bristol	0.124	Proportion	30.7	3,653	0.45
	Edinburgh	0.124	119	7.7	916	0.11
	Godalming	0.124	119	3	357	0.04
	Trowbridge	0.124	119	1.8	214	0.03
	Pontypool	0.124	119	1	119	0.01
DENMARK	Copenhagen	0.181	119	48.2	5,736	1.04
	Aarhus	0.181	119	5.8	690	0.12
	Vejle	0.181	119	4	476	0.09
USA	Boston	0.367	119	6	714	0.26
South Korea	Seuol	0.436	119	4	476	0.21
Poland	Warsaw	0.635	119	7	833	0.53
Japan	Tokyo	0.483	119	2.6	309	0.15
Taiwan	Taipei	0.561	119	8	952	0.53
Other		0.124	119	6.8	809	0.10
TOTAL				189.00	22,491.00	4.46

4.4. Office Electricity - Analysis

The same period prior year CO₂e was 4.52CO₂e therefore the outturn of 4.46 reflects a reduction of 1.3%. Only Bristol had actual meter readings with all offices using the per FTE calculation method (the least preferred option).

The reduction in carbon intensity for the UK results in a decrease from what would have been 2.95Co₂e(t) to 1.41 Co₂e(t). This reduction is then offset by FTE numbers in APAC and Poland where relatively higher carbon intensities are present.



4.5. Office District Heating - Results

COUNTRY	OFFICE	Co2e intensity	kwh Consumption per FTE for period	FTE	KWH	CO2e
DENMARK	Copenhagen	0.054	252	48.2	12,158	0.66
	Aarhus	0.054	252	5.8	1,463	0.08
	Vejle	0.054	252	4	1,009	0.05
TOTAL				58	14,630	0.79

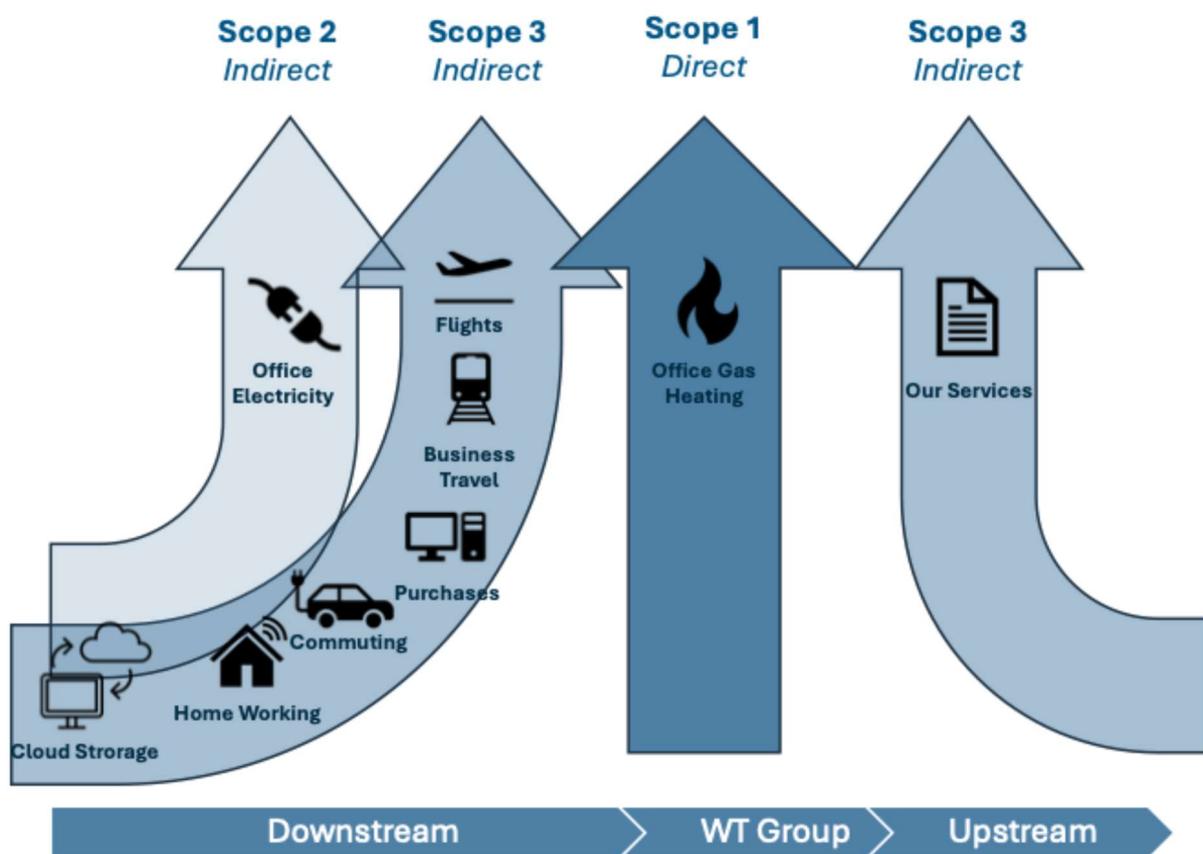
4.6. Office District Heating - Analysis

District heating CO2e remains constant year on year. Danish offices are not sub metered therefore a per FTE calculation continues to be made.

5. SCOPE 3 EMISSIONS

5.1. Downstream Emissions

Scope 3 downstream greenhouse gas (GHG) emissions refer to emissions incidental to the provision of goods or services, such as those from purchased assets and materials, and those produced by our employees in business travel, commuting and home working.



5.2. Our Performance

Scope 3 emissions are not reported / have targets under the SBTi, consequently there is no assessment under SBTi of whether overall emissions are on forecast for 2030 as there is in Scope 1 and 2. However Wood Thilsted remains committed to reducing where possible its footprint on the environment. Our Sustainability Charter, agreed in 2023, states that WT has the following objective:

- For WT to reach Net Zero for carbon emissions by 2033*

This is for “Scope 1 and 2 emissions and selected scope 3 (computer hardware, business travel, cloud computing)”. This commitment goes beyond the requirements of SBTi, and so it is with this in mind that we seek to reduce our emissions towards zero.

5.2.1. Flights

Flight incurred by employees are registered in the WT Expense system, PLEO. Currently PLEO does not require the details needed to assess carbon, recording instead the purpose of the trip and its total cost.

Therefore to establish travel details 100% of expenses are reviewed in the period and for each the Start and End destinations are recorded, together with the class of flight. As few expense receipts currently record the actual carbon for that flight, a set of standard carbon impacts are used from: https://co2.myclimate.org/en/calculate_emissions

For 2024 H2 flights are further classed as Domestic (within a country), Short Haul (within a continent) and Long Haul (intercontinental).

	DOMESTIC		SHORT HAUL		LONG HAUL		Total CO ₂ e emissions
	Count	CO ₂ e emissions	Count	CO ₂ e emissions	Count	CO ₂ e emissions	
	[-]	[t]	[-]	[t]	[-]	[t]	[t]
H2 2024	44	8.08	179	48.79	28	70.51	127.38
H1 2024			167	82.10	27	89.03	171.13
H2 2023			169	95.02	25	48.29	143.31

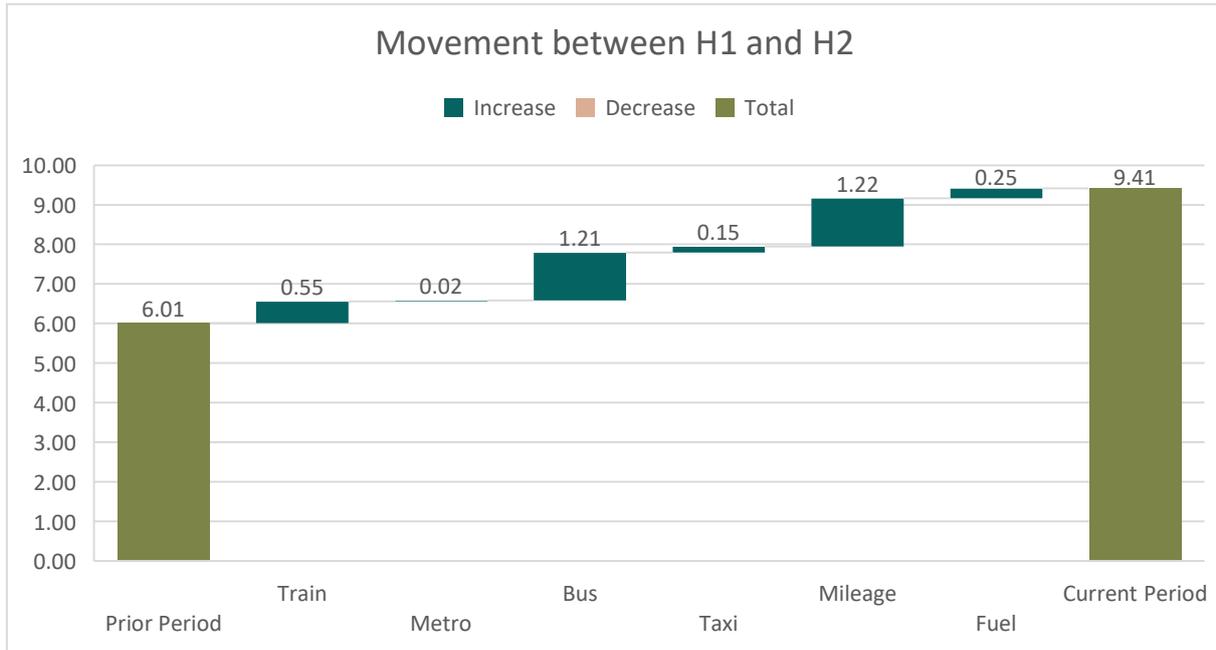
5.2.2. Business Travel

Wood Thilsted expense system currently records Financial Value, purpose, date, who travelled and how. Compared to flights, business travel contributes a relatively small proportion of overall emissions. Therefore, emissions are calculated with reference to considering the number of km the average £ purchases for a given transport mode, multiplied by a standard CO₂ per km for that mode. This method therefore will misstate individual journeys which are purchased in advance, or discounted off peak travel but equally potentially overstate those inefficiently booked, or travel at peak time.

	Train	Metro	Bus	Taxi	Mileage	Fuel
km per GBP	6.67	2.09	1.85	0.47	2.22	0.59
CO ₂ per km	0.03	0.03	0.10	0.17	0.17	2.10
CO ₂ per GBP	0.12	0.06	0.19	0.08	0.38	1.23

Mode of transport	CO _{2e} per unit cost	Recorded trips	CO _{2e} emissions
[-]	[kg/£]	[-]	[t]
Train	0.12	549	3.94
Metro	0.06	293	0.16
Bus	0.19	81	1.35
Taxi	0.08	450	1.04
Car	0.38	99	2.40
Total		1,938	9.41

9.4tCo_{2e} represent a 56% increase on H1 2024. The uplift a direct result of increased travel across all modes of transport:



The material impacts therefore can be seen through an increase in Bus journeys from 57 to 81, and an increase in mileage claims from 46 to 99.

5.2.3. Purchases

Assets are defined as any non-consumable items purchased by WT during the period. For example, company phones, laptops, electronic components and office furniture all fall under the definition of assets.

Purchases such as paper towels, office refreshments and cleaning supplies do not fall under this definition as their useful life typically is less than a year, and volume deemed immaterial for measurement.

WT’s asset purchases are reported in an expense log and then capitalised within the company fixed asset register. Every fixed asset was categorised and a relevant per item impact identified and applied.

In the period, WT has changed its procurement in order to reduce per item impact. For example, the switch from Dell XPS 13 to HP Dragonfly reduced the embodied carbon per item from 340kg to 304kg CO₂e. And the continued move towards Fairphone has a significant carbon saving per item against the average iPhone.

Results

Table 5.1 below summarises the number of assets purchased in each category and the resultant CO₂e emissions.

Table 5.1: Purchased asset embodied CO_{2e} by category

Asset type	Reference Asset	CO _{2e} per item	Number purchased	Total CO _{2e}
[-]	[-]	[t]	[-]	[t]
Mobile Phones	Apple iPhone 14 128GB	0.061	0	0.000
	Fairphone	0.010	1	0.010
Laptops	Dell XPS 13	0.304	11	3.344
Monitors	Dell Ultrasharp 27"	0.650	0	0.000
Headphones	Jabra Evolve 75	0.015	0	0.000
Workstations	HP Z4 G4	0.570	0	0.000
Furniture	Estimate*	0.052	7	0.364
Other	Estimate*	0.100	1	0.100
PC Components	Estimate*	0.100	10	1.000
Total			10	4.8

*Estimated based on a few sample items within the category.

5.2.4. Commuting

Employee commutes are a contributor to Scope 3 emissions within their own sub-category, separate to business travel. Prior to the preparation of this report, an employee commuting survey was distributed to all WT employees. The previous report used a fairly conservative estimate for employee commuting, and this will be compared and contrasted with the actual data.

In total, 130 out of 194 employees responded to the survey, indicating the distance they travel to the office, how often per week they work remotely and the method of travel they use.

Modes of transport and their respective CO₂e emissions per km are given in Table 6.2 below. Data is determined from the DESNZ conversion factors [3].

Table 6.2: Modes of transport for employee commuting

Mode of	CO ₂ e per kilometr
[-]	[t/km]
Walking	0
Cycle	0
Train	0.035
Metro	0.028
Car (Petrol)	0.18
Car (Hybrid)	0.081
Car (Electric)	0.042
Bus (London)*	0.074
Bus (Not London)*	0.13

*Given that the conversion factors are produced by the UK government they are UK-centric and some of the assumptions may not perfectly apply to non-UK offices. This table assumes all London buses are hybrid and non-London buses are predominantly petrol/diesel driven. This may be true for the UK but does not necessarily apply to Copenhagen for example. Nonetheless the proportion of bus trips were relatively small.

The survey asked participants for the distance they travel by each mode of transport for a single commute trip (i.e one- way from home to the office, not there and back), as well as the number of days on average they commute into the office. For each office, the data collected from respondents was averaged and extrapolated to encompass the total headcount of the office, assuming all other employees follow this average. As such, offices with a lower response rate will have a greater degree of inaccuracy in reporting. Table 6.3 below gives a summary of the data collected.

Table 6.3: Commuting summary by office

Office	Percent of responses	CO ₂ e/commute (one-way)	Average days per week in-office	Total CO ₂ e/period
[-]	[-]	[g]	[-]	[t]
Aarhus	29%	5,020	2.5	0.82
Boston	67%	240	3.3	0.08
Bristol	82%	830	2.4	2.03
Copenhagen	60%	280	3.9	2.28
Edinburgh	44%	0	3.8	0.00
Godalming	50%	230	5.0	0.21
London	85%	1,100	2.7	5.10
Pontypool	100%	0	4.0	0.00
Remote	63%	150	2.4	0.07
Seoul	25%	80	2.0	0.03
Tokyo	100%	800	3.3	0.36
Taipei	63%	130	4.2	0.21
Vejle	20%	680	4.0	0.64
Warsaw	50%	880	2.7	0.58
Total				12.40

A likely anomaly in this data is the Aarhus office. The two responses for the office, both of which were long car drives, were extrapolated to the entire office of 7 people giving a very large carbon footprint overall. The total carbon emissions for the period are about two-thirds that of the estimate from the previous period: 12.40tCO₂e compared to 18.82tCO₂e, respectively. This is expected as a deliberately conservative estimate was used in the previous report.

Figure 6.1 below gives an indication of the primary mode of transport for each respondent by office. Note that these figures are not extrapolated, so only the actual responses are given here. The primary method of transport was defined as the mode with the greatest distance travelled on that journey. For example if a respondent drove 5km to a train station then travelled 30km by train then the primary mode of transport would be train. Note also that this simplification does not apply for the carbon calculation above, which takes into account multiple-stage trips.

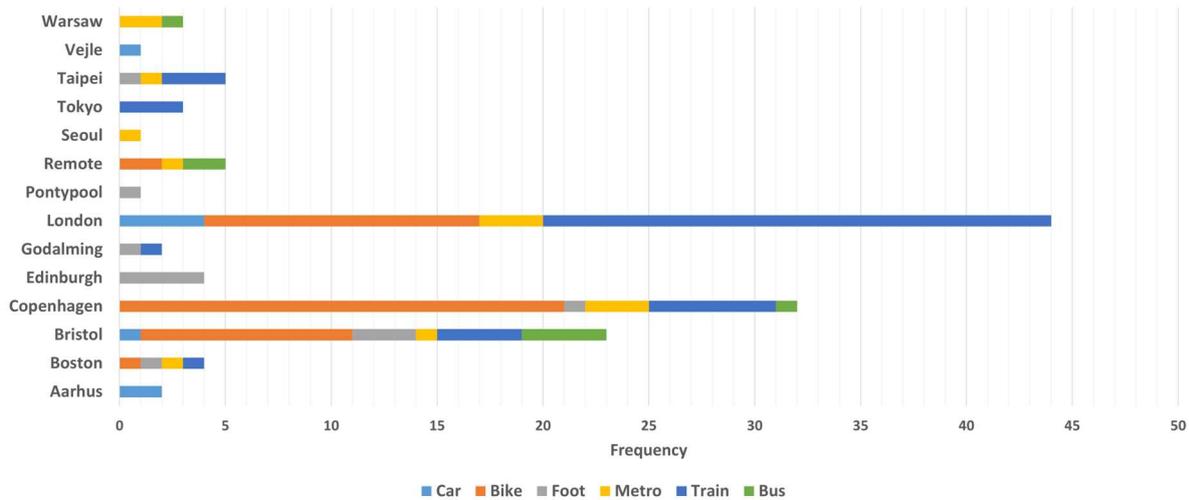


Figure 6.1: Primary commuting mode of transport by office

By and large most respondents commute to work through low- or zero-carbon modes of transport. Only 8 respondents reported their primary mode of transport as a car or private vehicle. Figure 6.2 gives a breakdown of the average distance and CO2e emissions of a one-way commute by office.

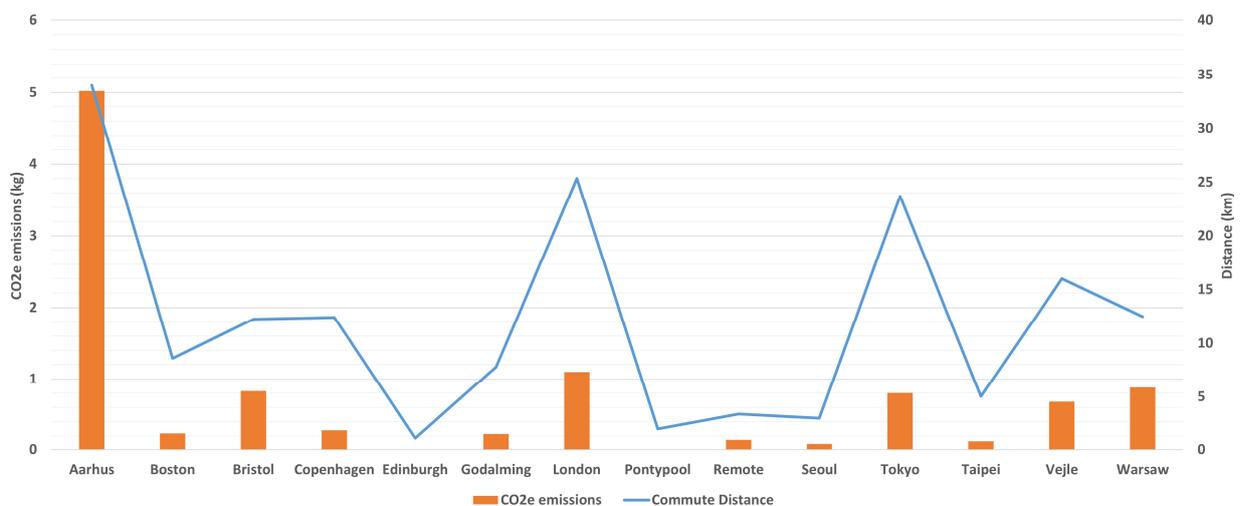
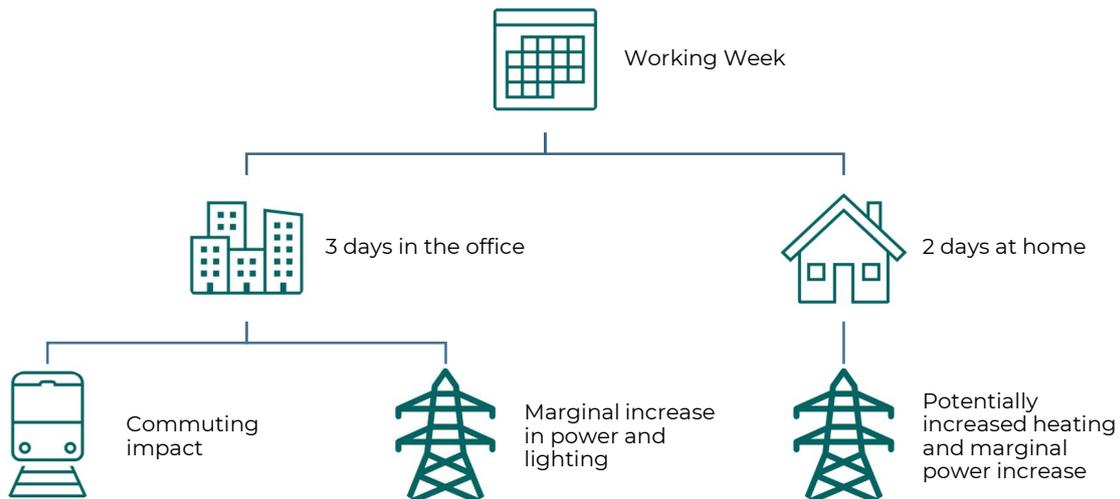


Figure 6.2: Distance and CO2e emissions of average one-way commute by office.

Here the likely anomalous results of Aarhus is clear, though does serve as a potential benchmark for likely emissions if all employees commuted via car only. That aside, the results generally trend around larger cities such as London and Tokyo having longer commuted distances and in turn higher average carbon emissions. An interesting comparison is between Bristol and Copenhagen - despite a very similar average commuting distance Copenhagen has a much lower carbon intensity. A much greater proportion of Copenhagen employees travel by bike, and no respondents in Copenhagen travelled by car.

5.2.5. Home Working

When considering indirect emissions in production of the services WT provides, consideration must be given to when and where its employees work. Each employee will typically spend a portion of time in the office, and a portion at home, with the split resulting in differing emissions resulting:



Currently WT only consider office emissions. During 2024 an assessment of home working will be performed which will look to identify:

1. Average number of days working from home
2. % renewable tariff in use at home
3. Whether additional residents are home (to identify the marginal requirement for heating)

5.2.6. Cloud Storage

The last area of Scope 3 emissions considered material to WT relates to the usage of cloud storage (Dropbox/OneDrive) to hold business information as WT's central

It is difficult to determine an exact figure for the carbon intensity for cloud storage. We have used the following assumptions in generating an estimate for the energy requirement to store 1TB of data remotely for a reporting period.

- The cloud carbon footprint project [1] gives a kWh value for storing 1 TB of data for an hour on a solid-state drive: 0.0012 kWh.
- Most cloud providers have a "replication factor" (RF) which is the level of redundant storage they use. Generally, this is around 3 - so each unit of data is stored three times.
- Data centres have a Power Usage Effectiveness (PUE) factor which is the total energy use of the centre over the energy used for IT equipment. Energy usage for non-IT factors such as lighting and cooling contribute to this. Dropbox give their data centre PUE as 1.2.
- We will add on an additional 20% to the energy consumption to account for inefficiencies and to produce a conservative estimate.

The estimated energy consumption associated with storing 1TB of data remotely for one hour is expressed in the following equation:

$$\text{Energy/TB/hour} = 0.0012 * 3 * 1.2 * 120\% = 0.0052[\text{kWh}]$$

We then multiply this value by the approximate quantity of data stored remotely by WT, and for the duration of the reporting period. For emissions we use the UK's electricity CO₂e intensity of 0.124 (prior period 0.257).

	H2 2024	H1 2024	H2 2023	H1 2023
Data Storage TB	270	224	224	224
Electricity consumed per day per TB	1.248	1.248	1.248	1.248
Reporting period (days)	183	183	183	183
Total Usage KWH	61,663	51,053	51,053	51,053
Reference CO2e intensity [kg/kWh]	0.124	0.257	0.257	0.257
Total Co2e Emissions (t)	0.76	1.31	1.31	1.31
	2.07		2.62	
% facility carbon neutral	100%			
Net emissions	0			

The total usage therefore whilst increasing from 224 to 270tb (20%) the overall emissions have fallen from 1.31 to 0.76 reflecting the overall average emission improvement in the UK energy mix.

WT utilise predominantly Dropbox storage which currently operates with 100% renewable energy, therefore arguably a marginal CO2e approaching zero for its storage. Therefore, the net impact of storage is now considered ZERO.

Environmental highlights

- Developed our Deep Sleep technology, which was critical in lowering our electricity usage by an estimated 5.1 million kilowatt hours in our data centers in 2022.¹
- Sourced 100% renewable energy for the second year in a row.^{2,3}
- Achieved carbon neutrality for Scope 1, Scope 2 (market-based), and Scope 3 business-travel emissions and work-from-home (WFH) emissions.^{4,5}

Figure 2 - Dropbox Annual Sustainability report