

January – December 2022

Wall Street Docs Ltd

2022 Carbon Footprint Report



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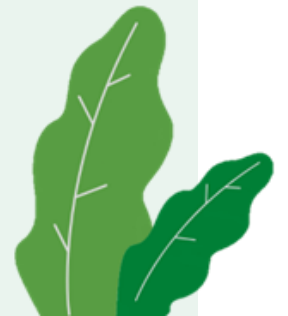
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Section 1: Introduction



A Carbon Footprint: The Basics

A carbon footprint is the total quantity of greenhouse gases produced by an organisation, project or place over a given time.

In accordance with the **GHG Protocol**, the golden standard for carbon accounting, the footprint will be presented as below:

Unit of Measurement

The carbon footprint is expressed in **CO₂e**, or tonnes of carbon dioxide equivalents – a standard unit for measuring carbon footprints.

CO₂e expresses the carbon footprint as a single number, based on the global warming potentials of each of the seven Kyoto Protocol greenhouse gases.

Emission Categories

The carbon footprint is categorised into 3 'Scopes':

- **Scope 1:** Direct emissions from owned or controlled sources (e.g., building gas usage).
- **Scope 2:** Indirect emissions from generation of purchased electricity, heat or steam.
- **Scope 3:** All indirect emissions that occur in the company value chain

Dual Reporting

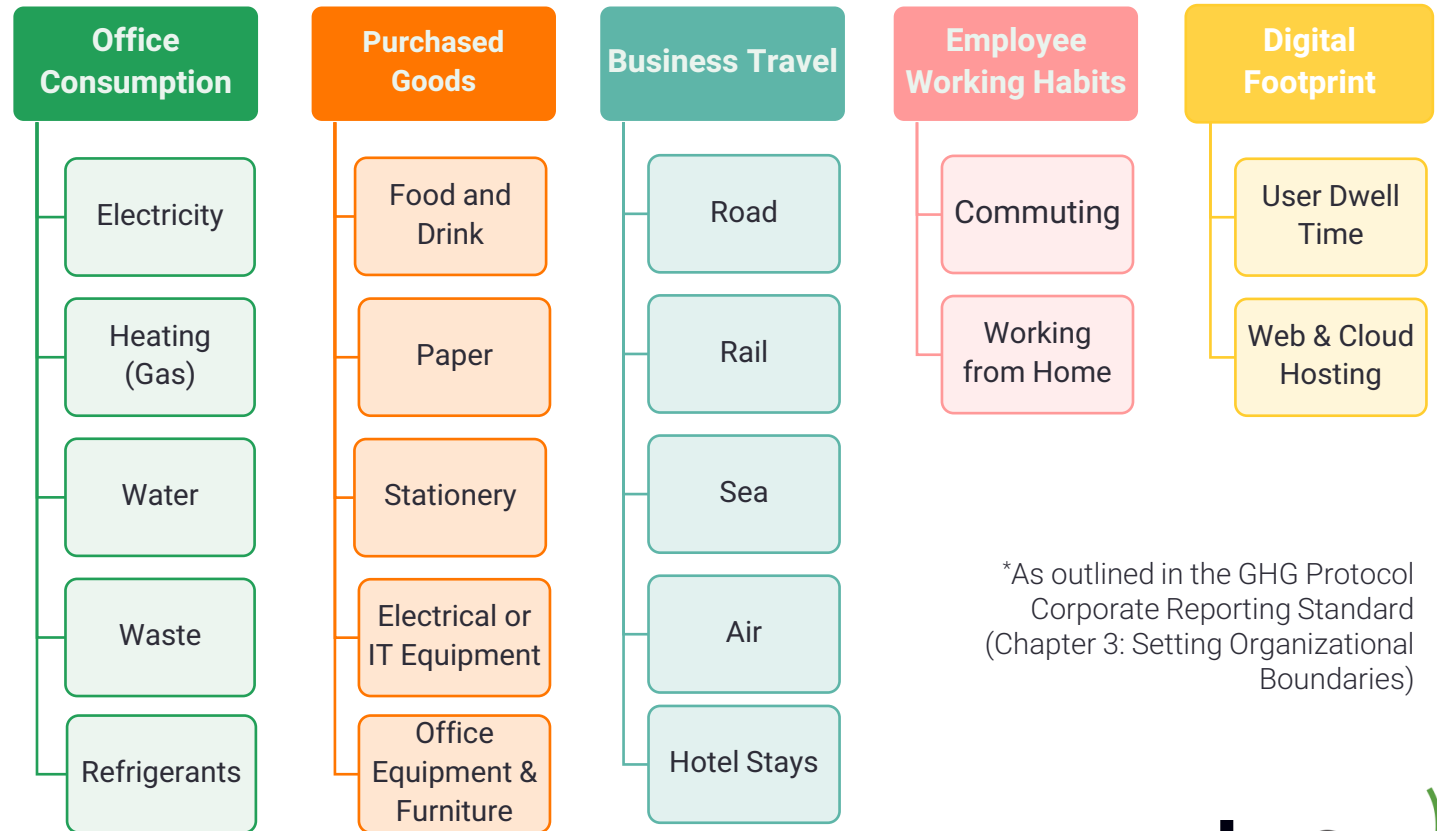
The emissions associated with electricity consumption have been calculated and reported in two ways:

- **Location-Based:** uses the average fuel mix of the region e.g., the UK National Grid
- **Market-Based:** uses the actual fuel mix of the specific tariff purchased e.g., 100% renewable tariff from an energy supplier

Boundary of Footprints



- This footprint report covers 1st January to 31st December 2022.
- The footprint covers three entities: WSD, Solvians and Edgar. Note that Solvians and Edgar were only acquired in 2023, but have been included nonetheless for completeness.
- The chosen organisational boundary was **operational control***, consisting of the following data points across Scopes 1, 2, and 3:



*As outlined in the GHG Protocol Corporate Reporting Standard (Chapter 3: Setting Organizational Boundaries)

Data Quality Analysis

Key	
	Data provided as desired
	Data provided and inputted as spend
	Data missing - estimated using other WSD data
	Excluded due to lack of data
	Not applicable to WSD

Data Point		WSD				Solvians			Edgar	Comment
		London	Brazil	Hong Kong	Indonesia	Frankfurt	Gottingen	Hong Kong	Bangladesh	
Office Consumption	Electricity									Gaps estimated using average kWh/m ² from sites with data.
	Fuel Mix									Residual fuel mix assumed where fuel mix was not provided.
	Gas									Gaps estimated using average kWh/m ² from sites with data.
	Water									Gaps estimated using average kWh/FTE from sites with data.
	Waste									Gaps estimated using average kWh/FTE from sites with data.
	Refrigerant									
Employee Working Habits	Commuting									The survey garnered a 73.5% response rate. The responses were extrapolated to account for 100% of the employees.
	Working from Home									
Procurement	Food and Drink									Itemised list of purchases provided with descriptions and costs. Where possible, these were converted to quantities and weights. If this was not possible, the purchases were inputted as spend.
	IT & Electrical Equipment									
	Paper & Stationery									
	Office Equipment & Furniture									
Digital Footprint	Cloud/Web Hosting									No data provided for WSD and Edgar. Solvians emissions is market-based only.
	3rd-Party Data Centres									WSD partially estimated.
	Website Dwell Time									Unable to provide data.
Business Travel	Air									Data provided in ideal format.
	Rail									Data provided in ideal format.
	Road - Employee-Owned									Vehicle size, fuel type and spend provided.
	Road - Other									E-scooter excluded as there is no way to convert to emissions, and spend was minimal.
	Hotel Stays									Data provided in ideal format.

Table 1. Data quality analysis for 2022.

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Section 2: **Results Overview**



2022 Carbon Footprint

Market-Based, Split by Activity and Scope

Activity	GHG Emissions (tCO ₂ e)				% of Total
	Scope 1	Scope 2	Scope 3	Total	
Procurement	-	-	131.61	131.61	33.1%
Electricity	-	84.21	23.75	107.96	27.2%
Commuting	-	-	64.79	64.79	16.3%
Business Travel	-	-	49.41	49.41	12.4%
Gas	19.31	-	0.58	19.88	5.0%
Working from Home	-	-	19.65	19.65	4.9%
Digital Network	-	-	2.79	2.79	0.7%
Water	-	-	0.79	0.79	0.2%
Waste	-	-	0.59	0.59	0.1%
Refrigerants	0.13	-	-	0.13	0.0%
Total	19.44	84.21	293.96	397.61	-

Table 2. Market-based GHG emissions in 2022, split by activity and scope.

Market-based methodology calculates electricity emissions using **supplier-specific fuel mix**.

Market-based totals will be used for the remainder of this report, unless stated otherwise.

2022 Carbon Footprint

Market-Based, Split by Activity and Scope

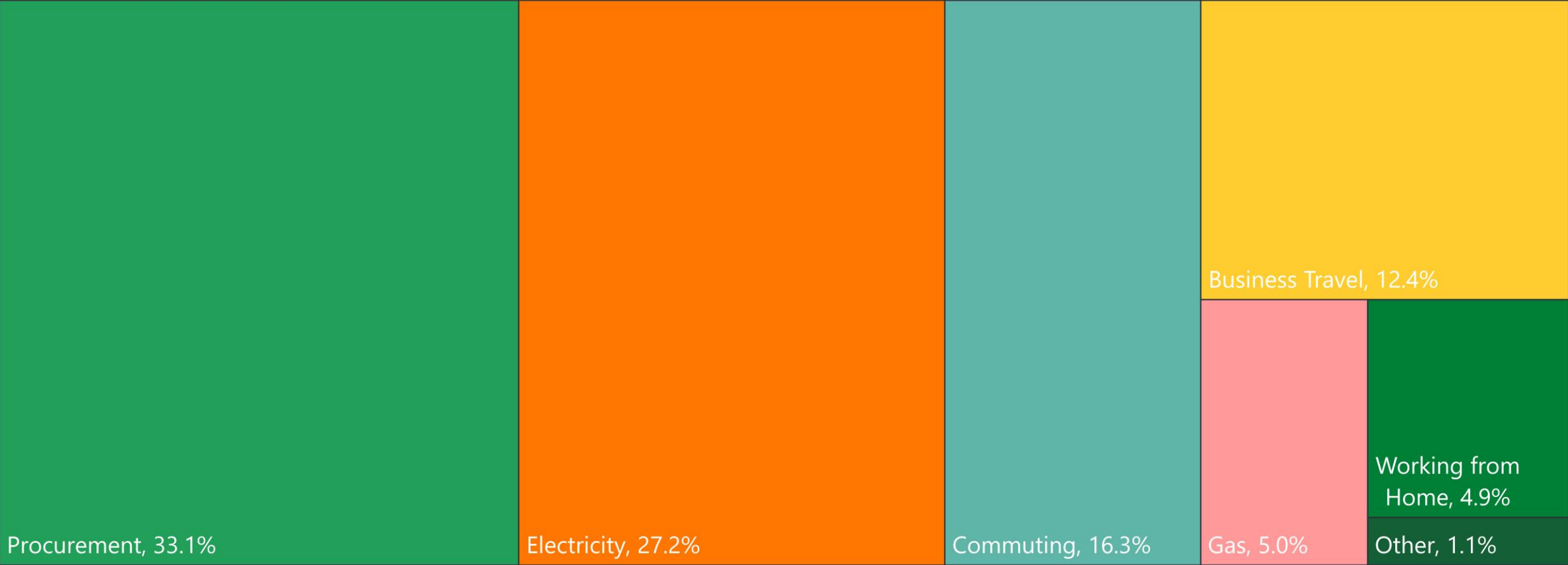


Figure 1. Market-based GHG emissions in 2022, split by activity and presented as a tree-map.

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Section 3: Hotspots and Recommendations



Wall Street Docs' 2022 Carbon Hotspots



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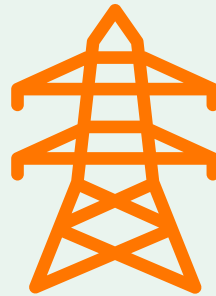
Procurement



33.1%

②

Electricity



27.2%

③

Employee Working Habits



21.2%

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Section 3a: Procurement



Hotspot Deep-Dive: Procurement

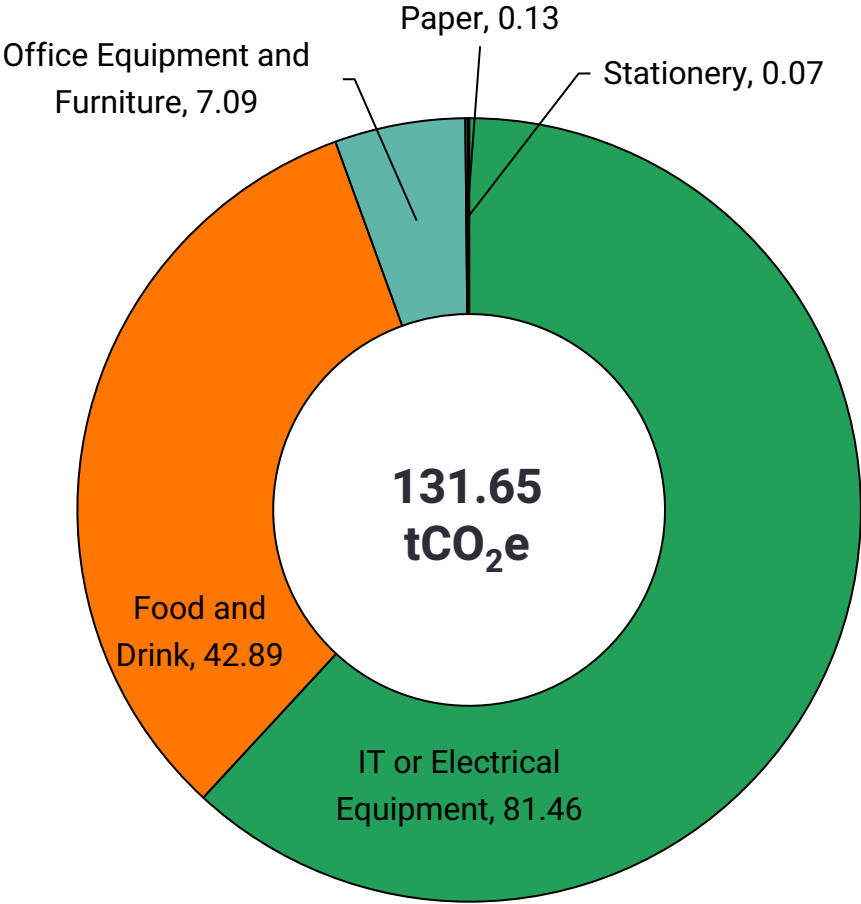


Figure 2. GHG emissions from procurement, split by category.

In 2022, GHG emissions from **Procurement** were **33.1% of Wall Street Doc's total footprint**, with 131.65 tCO₂e.

- **IT Equipment** purchases made up 61.9% of these Procurement emissions.
- **Food and Drink** made up the next largest source at 32.6%.

Procurement data was only available for WSD and Solvians.

GHG emissions from procurement were **1.57 times higher at WSD than Solvians**, as highlighted in Figure 3. This was primarily due to more carbon intensive IT equipment purchases at WSD.

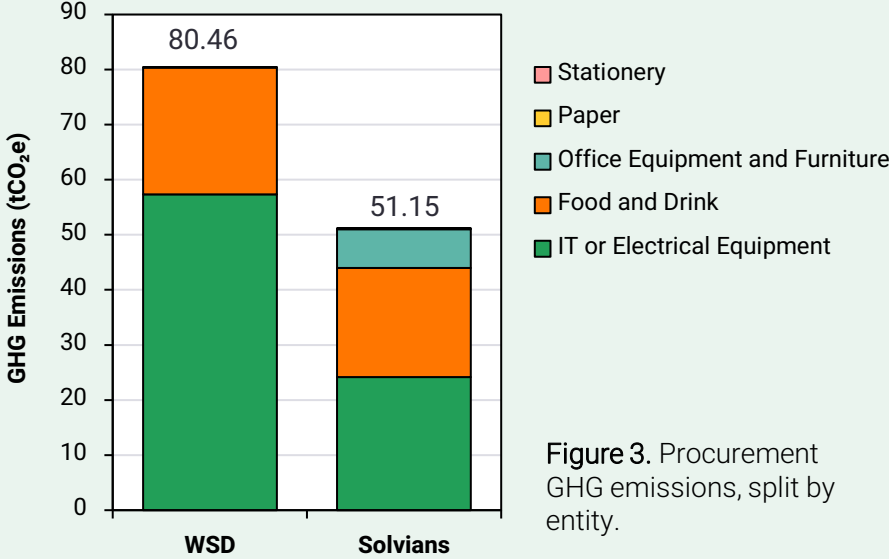


Figure 3. Procurement GHG emissions, split by entity.

Hotspot Deep-Dive: IT Equipment

In 2022, IT equipment purchases were responsible for 20.5% of Wall Street Docs' total footprint.

As shown in Figure 4, most of these IT Equipment GHG emissions came from the purchase of 102 **monitors and 37 laptops** by WSD. When combined with the purchase of 34 monitors and 20 laptops by Solvians, these purchases amounted to **76.45 tCO₂e**.

New IT equipment is very carbon intensive due to the raw materials required and energy intensive manufacturing processes.

Refurbished IT equipment is significantly less carbon intensive than new– if all these monitors and laptops had been **refurbished instead of new**, GHG emissions from IT equipment procurement would have **fallen by 75.1%** or 61.16 tCO₂e. This would have resulted in a 15.4% reduction on the overall footprint.

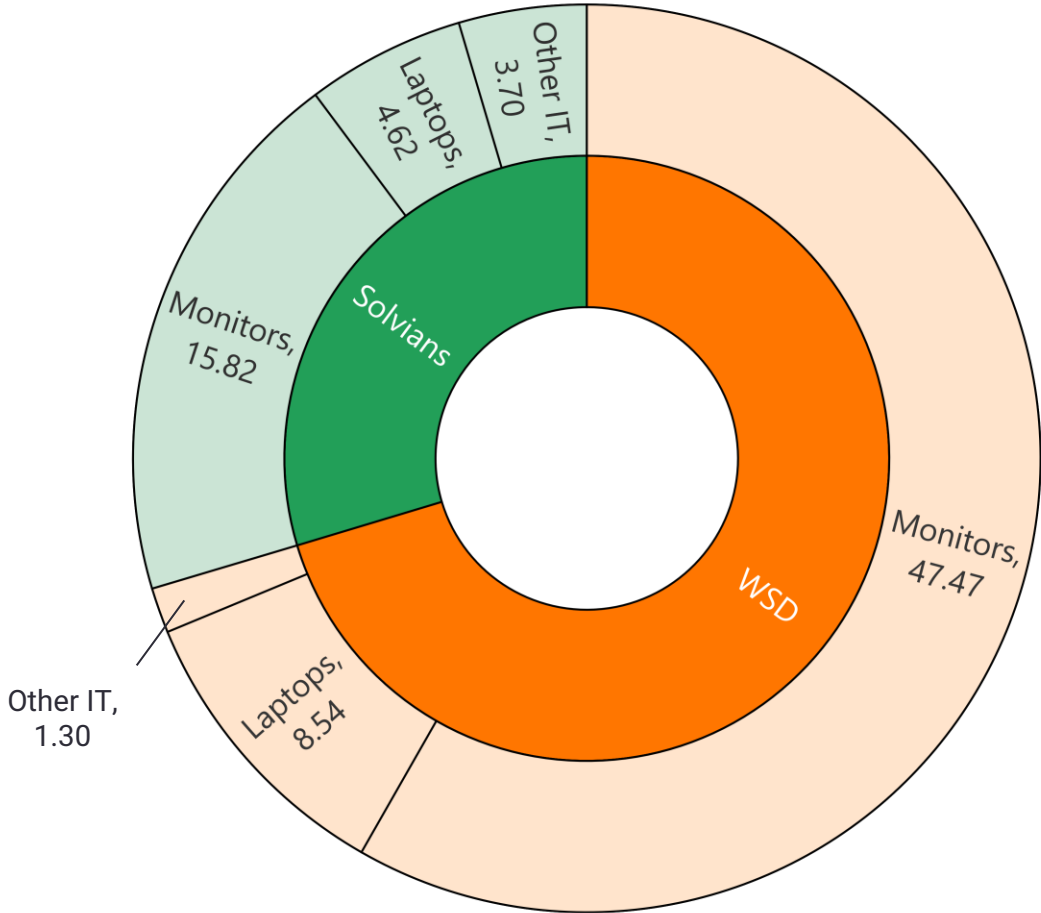


Figure 4. GHG emissions from electrical and IT equipment, split by entity and type.



Reduction Recommendations: IT Equipment



Buy Refurbished:

- Refurbished IT equipment can lead to **emissions savings** of up to 80% as well as **cost savings** of 30-50%.
- Wall Street Docs should focus on purchasing refurbished IT equipment from suppliers such as [Reconome](#).
- Regular maintenance should be carried out on IT equipment to maximize its life span.



Improve Data Coverage:

- Nearly all IT equipment purchases were provided with enough detail to calculate emissions based on quantities and weights.
- In future years, Wall Street Docs should continue this good data recording and ensure that all procurement is captured at every site.



Implement Sustainable Procurement Policy:

- Implement a companywide policy to ensure IT equipment is purchased from refurbished suppliers.
- Wall Street Docs could revise any company wide renewal programmes, extending the number of years between renewals.

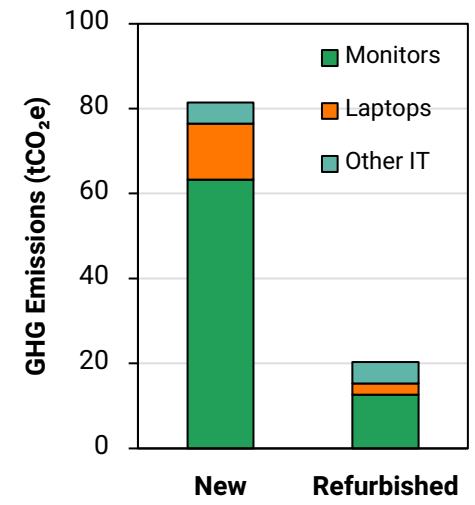


Figure 5. Carbon intensity of refurbished IT equipment vs new.

Hotspot Deep-Dive: Food and Drink

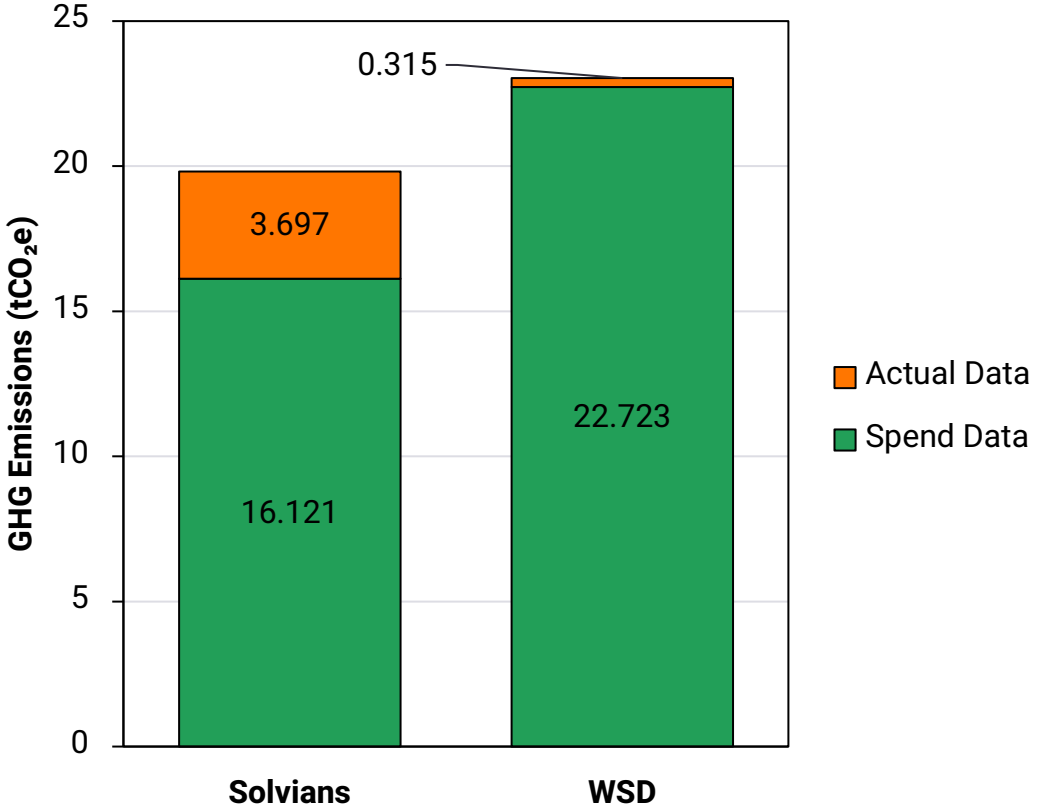


Figure 6. GHG emissions from Food and Drink, split by entity.

The second largest source of procurement GHG emissions, **Food and Drink**, made up 10.8% of Wall Street Docs' total footprint with **42.86 tCO₂e**.

Between both Solvians and WSD, most GHG emissions from food and drink purchases were **based on spend data**. This spend data results in **overestimated GHG emissions**.

From WSD, 86.8% of food and drink data couldn't be converted to quantities, weights, and food types in order to make more accurate emissions calculations.

This was the same for 53.2% of Solvians' food and drink data.



Reduction Recommendations: Food and Drink



Improve Data Quality:

- Data was only available for WSD and Solvians, so any purchases by Edgar were not captured in this report, including food and drink.
- As WSD, Solvians, and Edgar were three separate entities in 2022, data quality will likely improve as Wall Street Docs will have better access to data for all three entities.
- In addition to this, a large majority of food and drink data was spend data only, which overestimates GHG emissions.
- Wall Street Docs should work to improve data coverage and recording, which in turn would increase the accuracy of the analysis.



Implement Sustainable Procurement Policy:

- Implement a companywide policy to ensure food and drink is sourced sustainably (e.g. vegetarian meals only).



Choose Plant-Based:

- As shown in Figure 7, meat-based dishes are 2.8 times **more carbon intensive** than vegetarian ones.
- As data quality improves, these plant-based choices will have a lower impact on GHG emissions than meat-based.

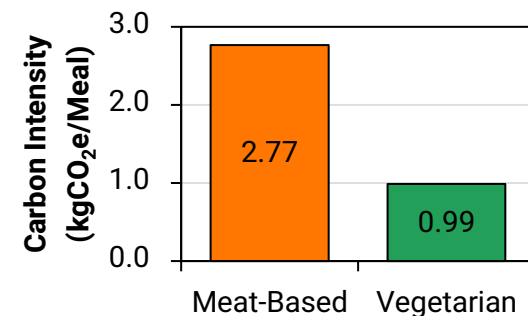


Figure 7. Carbon intensity of meat-based vs. vegetarian meals.

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Section 3b:
Electricity
Consumption



Hotspot Deep-Dive: Electricity Consumption

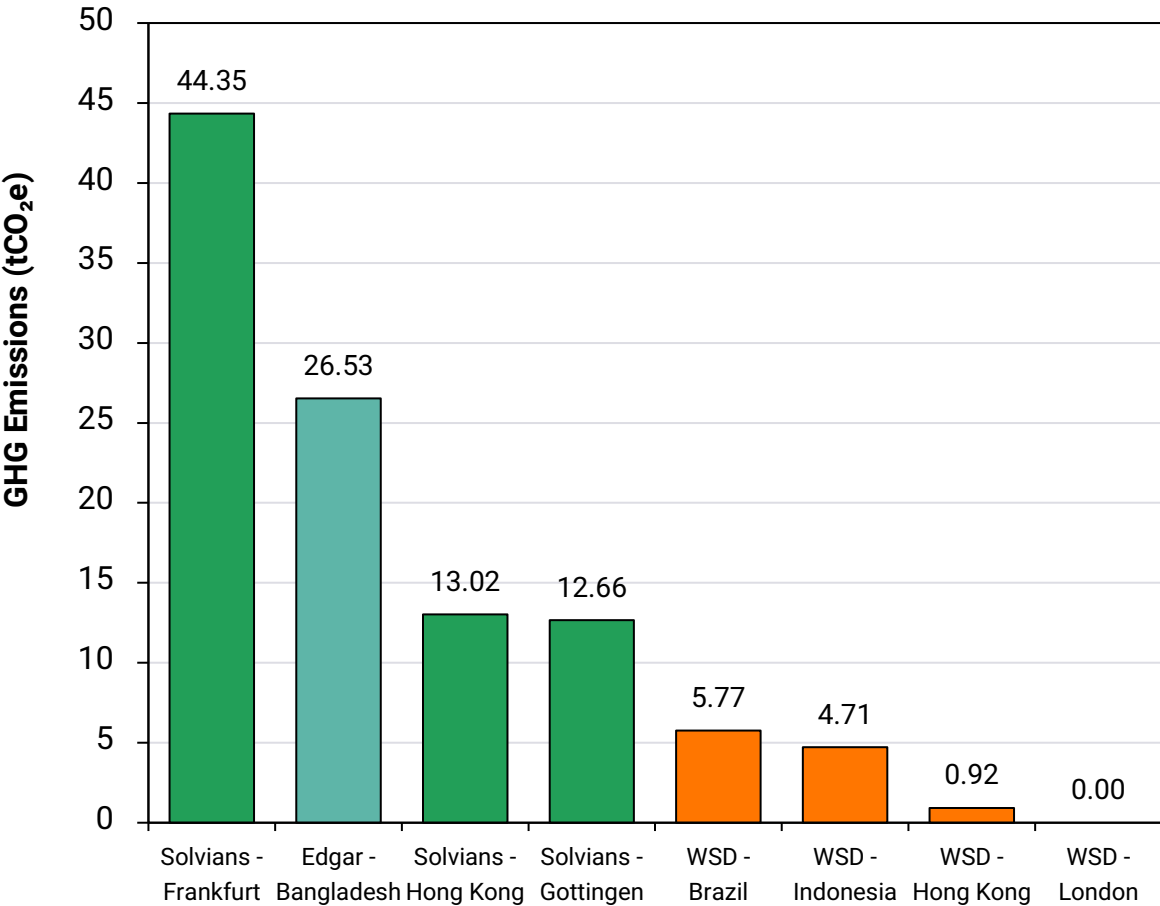


Figure 9. GHG emissions from electricity consumption, split by site.

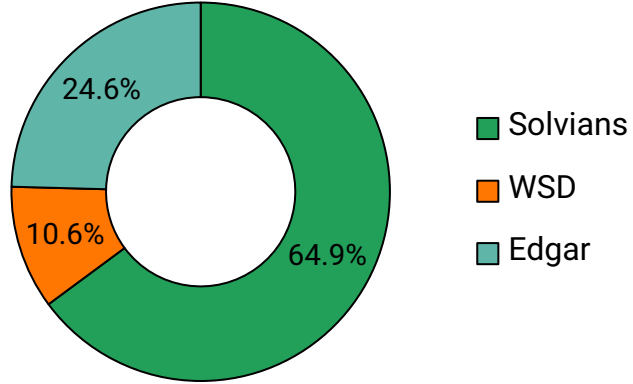


Figure 8. Breakdown of GHG emissions from Electricity by entity.

In 2022, **Electricity Consumption** resulted in **107.96 tCO₂e**, accounting for **27.2%** of the total footprint.

Across the three entities, Solvians’ electricity consumption made up the majority of GHG emissions, as shown in Figure 8.

WSD’s London office produced **nearly zero GHG emissions**, due to its 100% renewable tariff.

Solvians’ Frankfurt office had the highest absolute emissions with 44.35 tCO₂e due to high consumption and its fuel mix.

Hotspot Deep-Dive: Electricity Consumption

Electricity consumption data was **missing for half** of the offices and had to be estimated based on consumption data from WSD London and Solvians Frankfurt, Gottingen, and Hong Kong.

Of the sites where data was available, Figure 10 highlights the consumption and carbon intensities per site.

When normalised by floorspace, **London** had the highest consumption per square metre, 148.25 kWh/m² but had the lowest GHG emissions per square metre, owing to its renewable tariff. This highlights the **carbon saving potential of these tariffs**.

Solvians Hong Kong had the third highest consumption per square metre but had the **highest GHG emissions intensity**. This was due to the very **carbon intensive electricity grid** in Hong Kong, 50% coal and 50% natural gas.

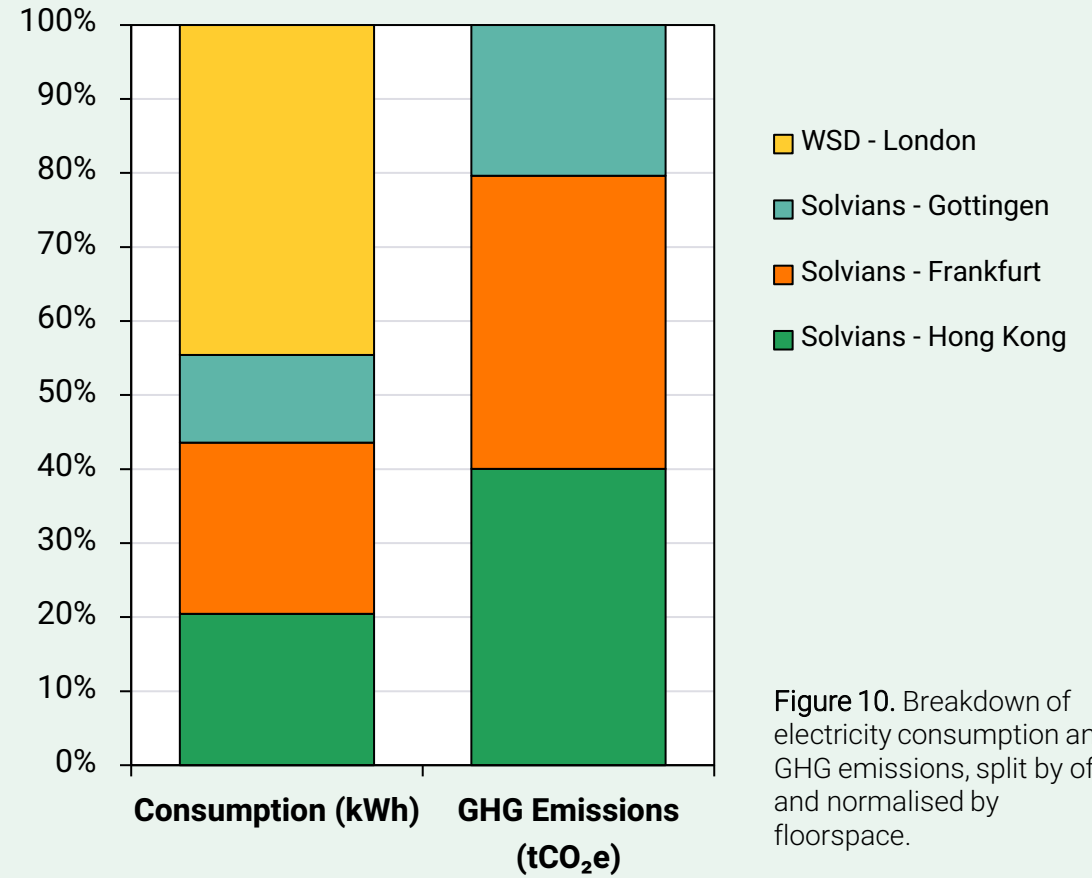


Figure 10. Breakdown of electricity consumption and GHG emissions, split by office and normalised by floorspace.



Reduction Recommendations: Electricity Consumption



Reduce Consumption:

- Reduce overall consumption by maximising natural lighting and improving energy efficiency. This could include installing:
 - LED bulbs to reduce energy use by up to 83% (depending on current bulbs)
 - Motion sensor lights, especially in low traffic areas



Renewable Energy:

- WSD London was the only site with a 100% renewable tariff.
- Wall Street Docs should aim to switch to 100% renewable tariffs when and where feasible.
- For office spaces where these tariffs are unavailable, the focus should be on improving energy efficiency to reduce electricity consumption.



Improve Data Quality:

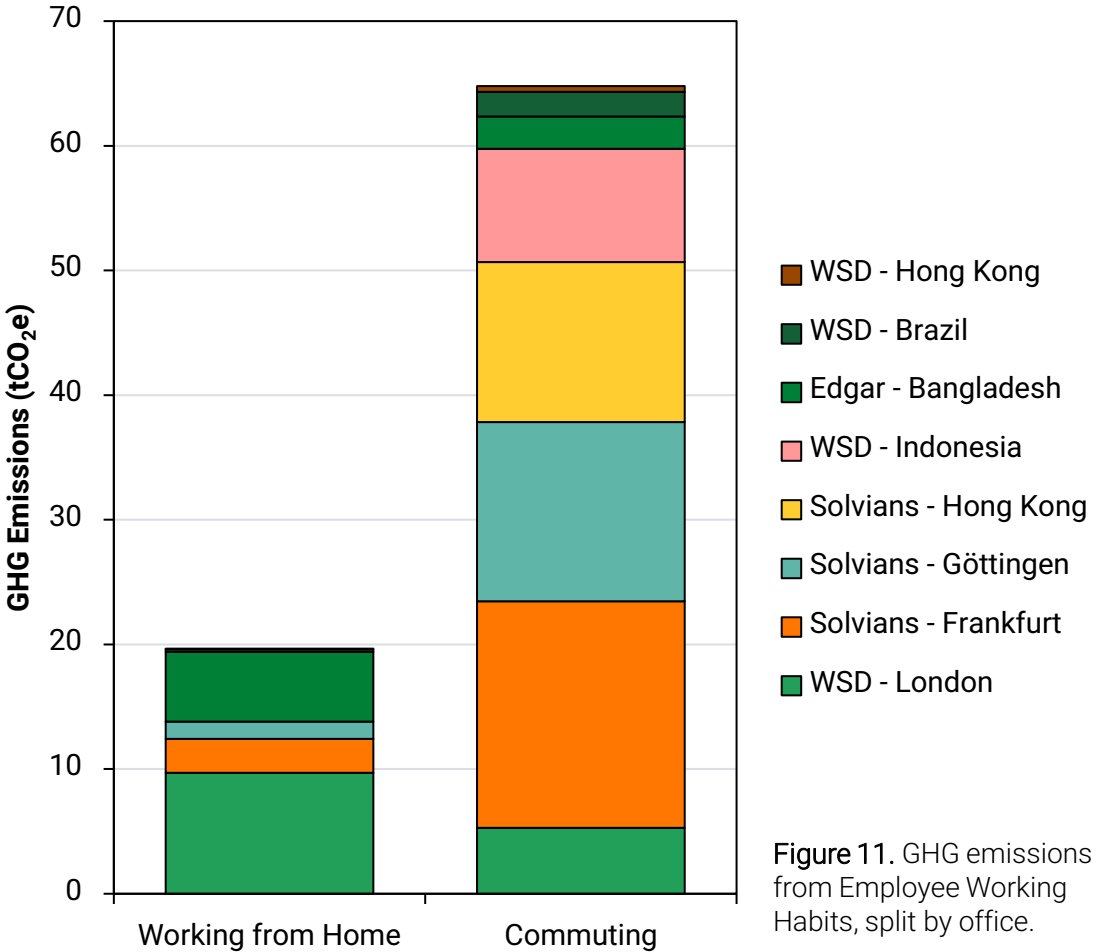
- Electricity consumption had to be estimated for WSD Brazil, Hong Kong, Indonesia and Edgar Bangladesh.
- Additionally, fuel mix was only known for 2 of 8 offices, WSD London and Solvians Hong Kong.
- Collecting actual consumption and fuel mix data for all offices will increase the accuracy of these GHG emission calculations.

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**Section 3c:
Employee
Working Habits**



Hotspot Deep-Dive: Employee Working Habits



Employee Working Habits contributed **84.45 tCO₂e** or 21.2% to the total 2022 footprint, of which:

- 64.79 tonnes from commuting
- 19.65 tonnes came from working from home

On average, employees spent 44.4% of their working days at home, and 55.6% at office.

- Those at Solvians Hong Kong and WSD Indonesia commuted in the entire year.
- Conversely, those at Edgar Bangladesh and WSD London worked from home 60+% of the time.

Days Commuted vs. Worked from Home

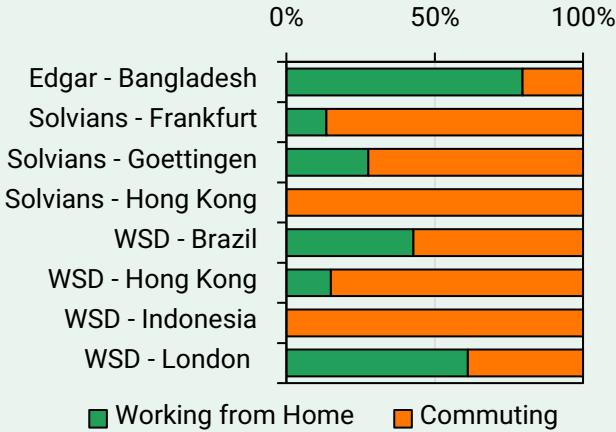


Figure 12. Total days commuted vs. worked from home in 2022.

Hotspot Deep-Dive: Commuting

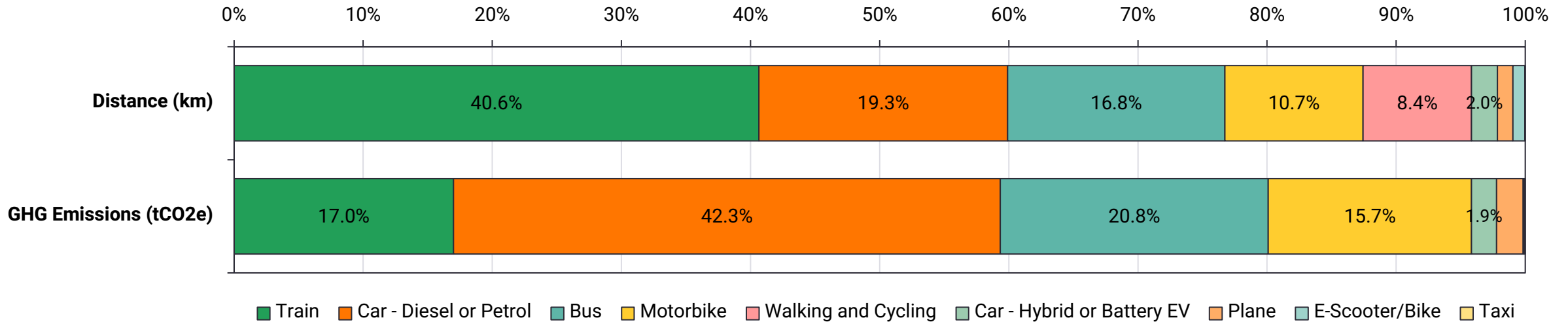


Figure 13. Breakdown of total distance commuted and commuting GHG emissions, split by mode.

Commuting was WSD's third largest source of emissions, accounting for **16.3%** of the total footprint.

Figure 13 shows the percentage breakdown of commuting split by mode, for distance and GHG emissions, respectively.

- Those who commuted by **rail** made up 40.6% of the distance covered, but only 17.0% of the emissions.
- Conversely, although **petrol and diesel cars** only covered 19.3% in distance, they were responsible for 42.3% of the emissions.

Hotspot Deep-Dive: Commuting

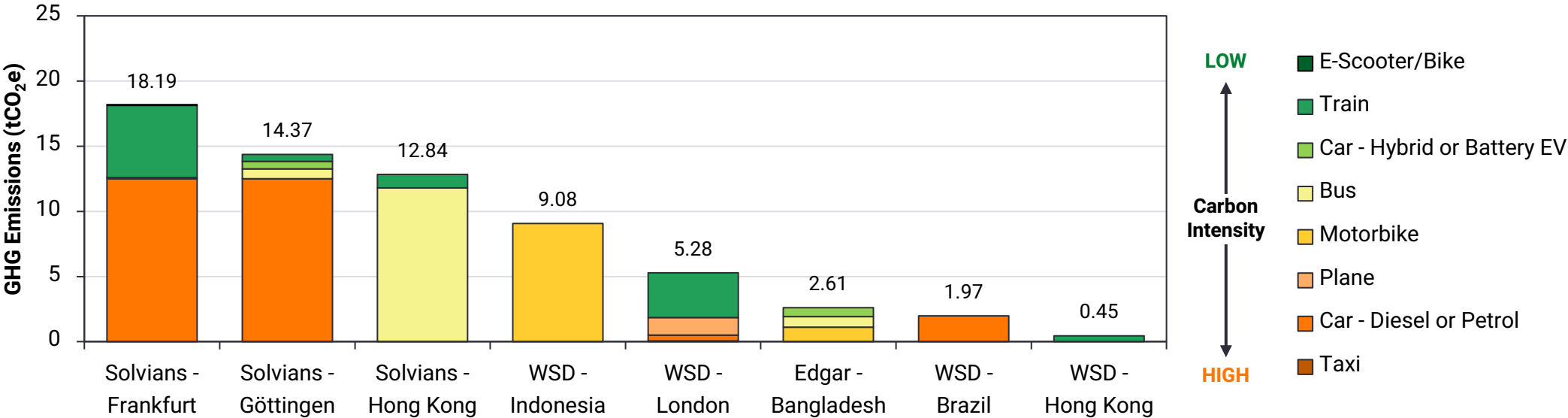


Figure 14. GHG emissions from Commuting, split by office and mode.

When broken down by site, the two Solvians offices in Germany (Frankfurt and Göttingen) emitted the most GHG emissions.

- This is despite Edgar Bangladesh and WSD London offices having more FTEs.

This can be explained by the fact that both German offices are dominated by petrol and diesel cars, which are high in carbon intensity.

- Conversely, majority of distance at the London office was covered by rail.



Reduction Recommendations: Commuting



Prioritise Public Transport:

- Encourage the use of public transport where feasible.
- Rail in particular is over four times less carbon intensive than commuting by car.



Switch to Electric Vehicles:

- Petrol and diesel are both carbon intensive fuels for vehicles.
- Encourage uptake of hybrid or battery electric cars.
- This can be achieved by setting up a salary sacrifice scheme, which allows employees to save on tax.



Encourage Walking and Cycling:

- Walking and cycling emits zero emissions!
- They also have additional benefits such as:
 - Seamlessly fitting exercise into your day-to-day life
 - Improving mental wellbeing
 - Saving transport-related costs
- Facilitate cycling by providing lockers and showers.

Hotspot Deep-Dive: Working from Home

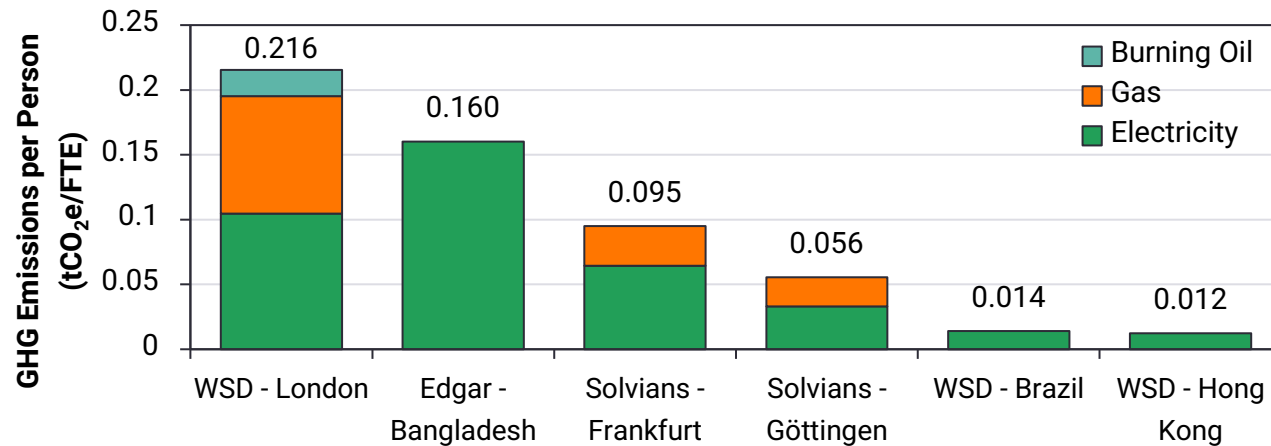


Figure 15. GHG emissions from working from home, split by office and source, normalised by FTE.

WSD London had the highest emissions, both in absolute and intensity (per FTE) terms.

- This is largely owing to the use of heating during the colder months. The same can be said for the gas use in the two German Solvians offices.

Edgar Bangladesh also had high carbon emissions per person, despite electricity being the only energy source used.

- None of the respondents were on a renewable tariff.

Recommendations:

For electricity, only 14.3% said they were on **100% renewable tariffs**.

- WFH emissions would **fall by 23%**, if all London employees were on renewables.

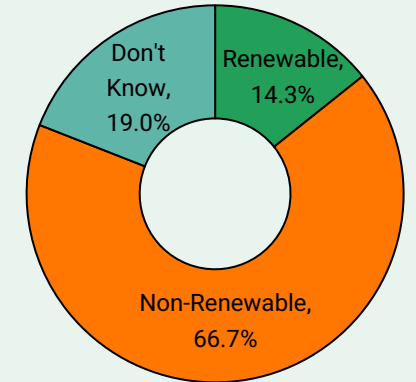


Figure 16. % breakdown of electricity tariffs among employees.

Encourage energy (and cost) saving actions, such as:

- Switching to **LEDs**, which are 83% less energy intensive than traditional light bulbs (already done by 64.2% of respondents).
- Installing **smart meters** to control your energy use.
- Reducing heating by improving insulation and draught proofing.



Reduction Recommendations: Employee Engagement

Communicating the carbon footprint results with all staff will help them understand the impact certain activities have.

Employee engagement and participation is particularly pertinent, as commuting and homeworking are activities Wall Street Docs is unable to directly control.



Engage with Staff and Improve Carbon Literacy, by:

- Presenting the carbon footprint results to the wider company through a knowledge sharing platform (e.g. lunch and learn)
 - This can serve as an opportunity to:
 - Field any questions and feedback
 - Educate on actions that can be taken at home
 - Encourage further uptake of survey in the future
- Incentivising sustainable actions through competitions and rewards (e.g. cycling tallies)
- Signing up to employee pledge programmes (e.g. [DoNation](#))

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Section 4: Target Mapping



Science Based Targets for Wall Street Docs

There are two ways in which Wall Street Docs could set science-based targets:

1. Set SBTs **in line** with the SBTi criteria (this is the less rigorous approach and means that you have set SBTs in accordance with the SBTi corporate target setting guidance).
2. Set SBTs that are **officially validated** by the SBTi. This would mean that you can claim your targets are officially validated, and you will be listed on the SBTi website as a company committed to limiting global warming and taking action.

There are two types of SBTs:

Overview of Wall Street Docs' minimum coverage and reduction requirements are summarised below.

	Near-Term	Long-Term Net-Zero
Target Year	2030	2050 (or sooner)
Scopes 1 and 2	Coverage: 95% of total emissions Reduction Required: 42% absolute reduction	Coverage: 95% of total emissions Reduction Required: 90% absolute reduction
Scope 3 *	Coverage: 67% of total emissions Reduction Required: 25-42% absolute reduction OR 51.6% physical intensity reduction	Coverage: 90% coverage of total emissions Reduction Required: 90% absolute reduction OR 97% physical intensity reduction, AND neutralisation of final 10% of emissions by permanent, physical carbon removals

Table 3. Overview of what Science-Based Targets look like for Wall Street Docs

* Currently, the SBTi does not have an official system for validating Scope 3 near-term targets for SMEs. Instead, an SME must commit to measure and reduce their Scope 3 emissions.

Near-Term Targets

Scope 1, Absolute Contraction Approach

Scope	GHG Emissions (tCO ₂ e)		% Reduction by 2030
	Base Year: 2022	Target Year: 2030	
Scope 1	19.44	11.27	42.0%
Scope 2	84.21	48.84	42.0%
Scopes 1 + 2	103.65	60.12	42.0%

Table 4. Scopes 1 and 2 near-term Science Based Target.

Scope 1 near-term target reduction trajectory for the year 2030 has been mapped out in Figure 17, with a 42% reduction by 2030.

In 2022, Wall Street Docs’ scope 1 emissions included gas consumption at all WSD, Solvians, and Edgar offices, barring Solvians Hong Kong. It also included refrigerant leaks at Solvians Hong Kong.

To reduce these emissions, Wall Street Docs can focus on **reducing gas consumption** in the short term and consider **moving to gas-free office spaces** in the long term. Additionally, as most offices were missing consumption data, Wall Street Docs should strive to collect actual gas consumption data for all office spaces.

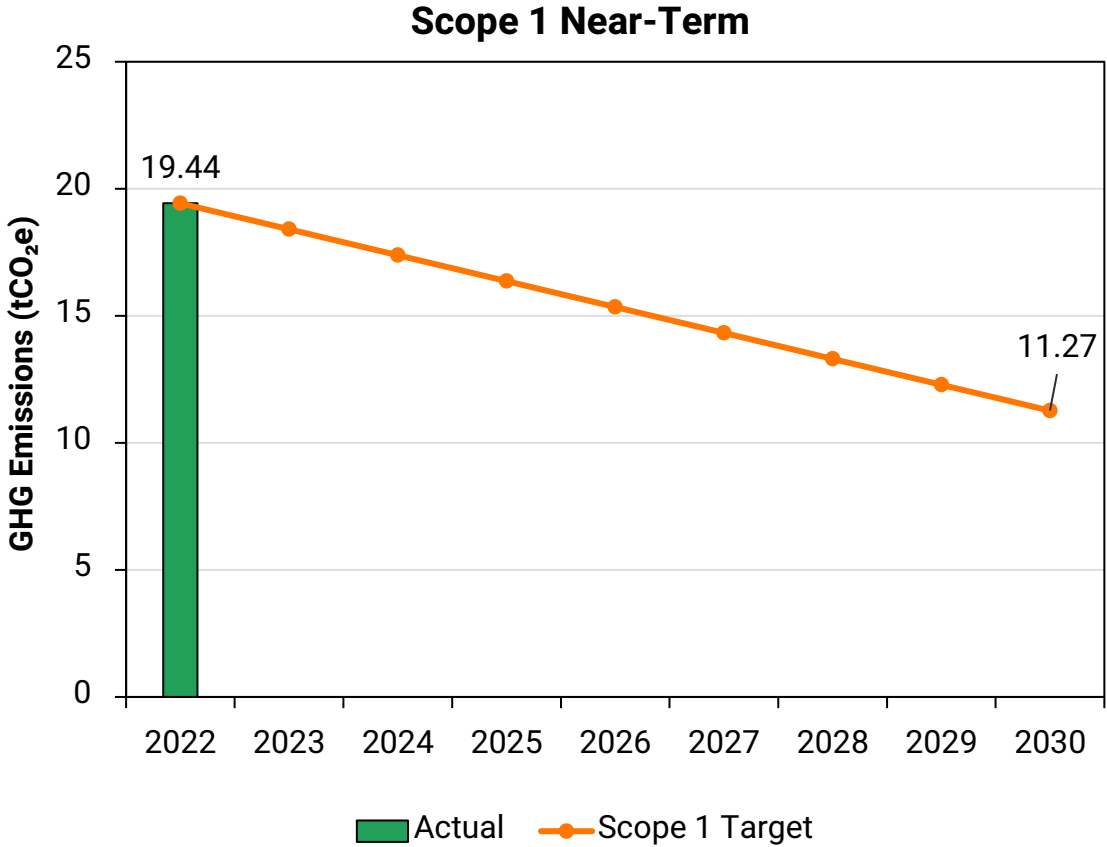


Figure 17. Scope 1 near-term Science Based Target.

Near-Term Targets

Scope 2, Absolute Contraction Approach

Scope	GHG Emissions (tCO ₂ e)		% Reduction by 2030
	Base Year: 2022	Target Year: 2030	
Scope 1	19.44	11.27	42.0%
Scope 2	84.21	48.84	42.0%
Scopes 1 + 2	103.65	60.12	42.0%

Table 4. Scopes 1 and 2 near-term Science Based Target.

Scope 2 near-term target reduction trajectory for the year 2030 has been mapped out in Figure 18, with a 42% reduction by 2030.

Wall Street Docs' scope 2 emissions were due to **electricity consumption and electricity fuel mixes** at all offices barring the WSD London office. To reduce these emissions, Wall Street Docs should aim to **switch to 100% renewable tariffs** where and when feasible. For office spaces where a 100% renewable tariff is unavailable, these offices should focus on **improving energy efficiency** to reduce electricity consumption.

Additionally, as most offices were missing fuel mix data, Wall Street Docs should strive to collect actual fuel mix data for all office spaces.



Scope 2 Near-Term

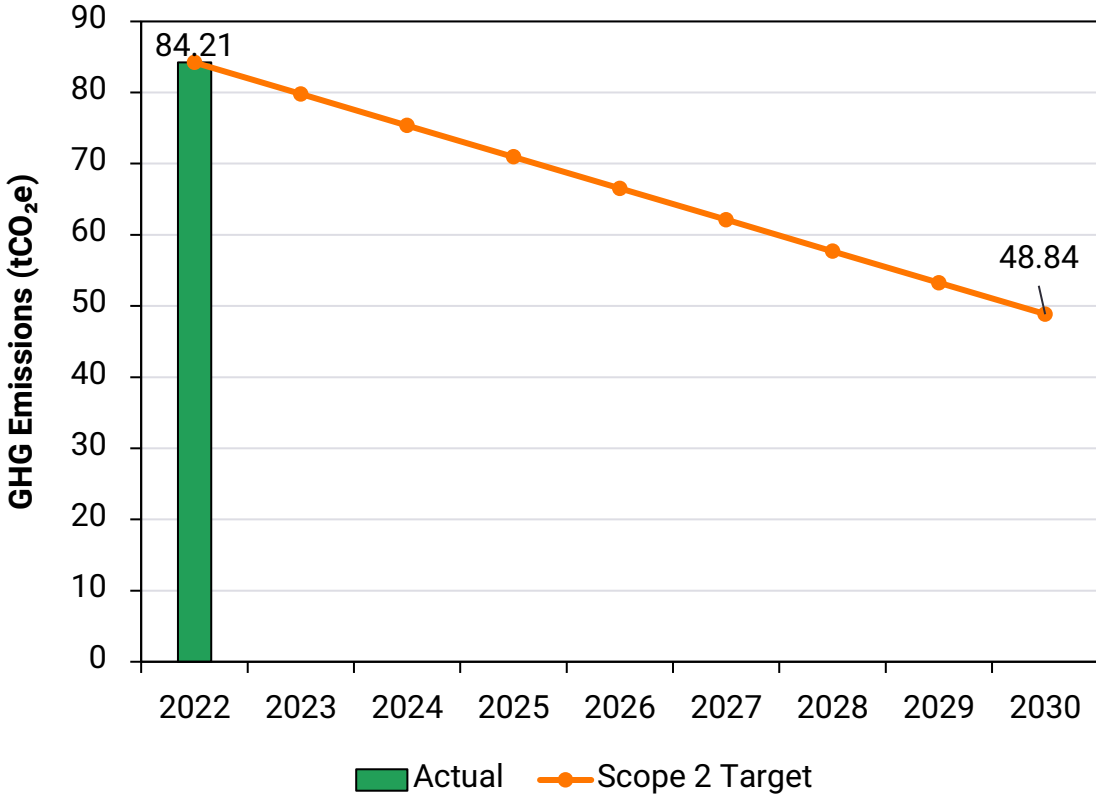


Figure 18. Scope 2 near-term Science Based Target.



Near-Term Targets

Scope 3, Absolute Contraction Approach

Scope	GHG Emissions (tCO ₂ e)		% Reduction by 2030
	Base Year: 2022	Target Year: 2030	
Scope 3 (Well Below 2C)	293.96	220.47	25.0%
Scope 3 (1.5C Aligned)	293.96	170.50	42.0%

Table 5. Scope 3 absolute near-term Science Based Target.

For its scope 3 near-term target, Wall Street Docs has a few methods it can choose from. The first would be a reduction based on its absolute scope 3 emissions, as mapped in Figure 19.

Within this absolute contraction approach, Wall Street Docs could either follow a 25% reduction trajectory, or a more ambitious 42% reduction by 2030.

In 2022, **73.9% of Wall Street Docs' GHG emissions fell under scope 3** emissions, including its 3 main hotspots. Therefore, to begin to reduce these emissions, Wall Street Docs can start with the hotspot recommendations set out within this report.

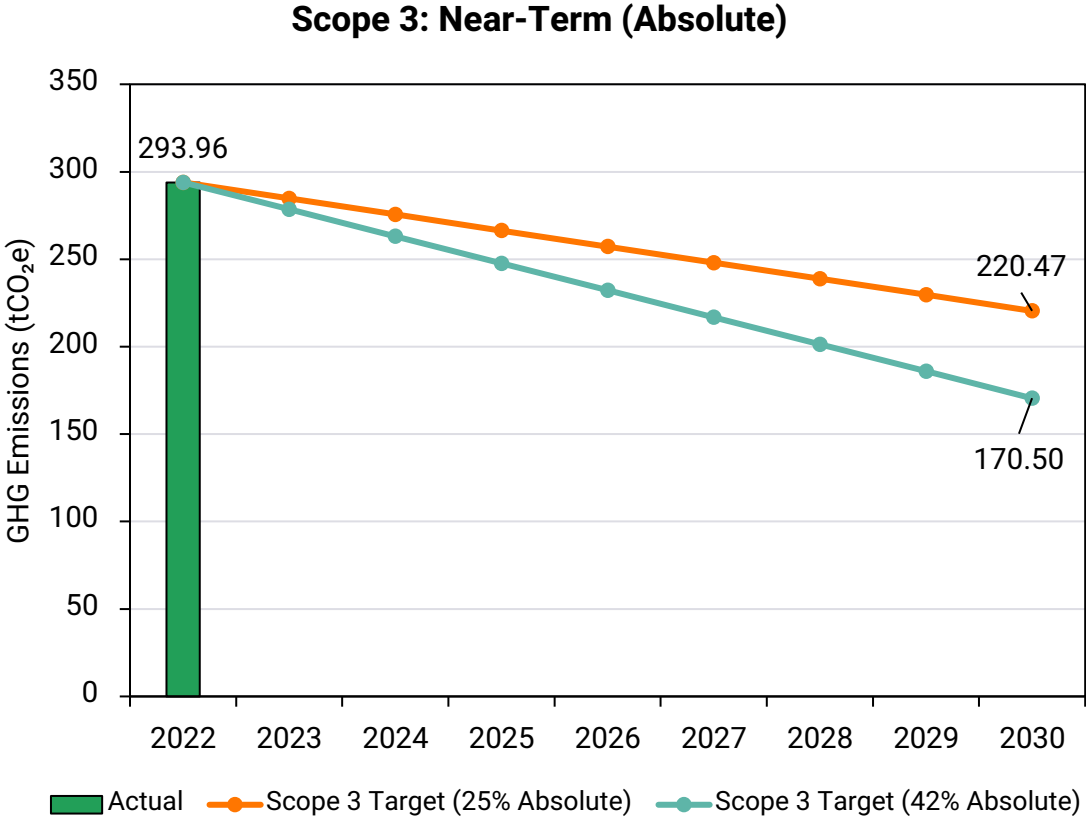


Figure 19. Scope 3 absolute near-term Science Based Target.

Near-Term Targets

Scope 3, Physical Intensity Approach

Scope	Normalised GHG Emissions (tCO ₂ e/FTE)		% Reduction by 2030
	Base Year: 2022	Target Year: 2030	
Scope 3	1.71	0.83	51.6%

Table 6. Scope 3 intensity-based near-term Science Based Target.

Wall Street Docs’ other scope 3 target method could be a reduction of normalised scope 3 emission based on either physical or economy intensity. The physical intensity method has been mapped in Figure 20.

Within this physical intensity approach, Wall Street Docs would need to **reduce its GHG emissions** per full time equivalent employee **by 51.6%** by 2030.

A similar economic target could be set based on annual turnover (tCO₂e/£m).

Please note, that as an SME, setting a scope 3 near-term target is not required by SBTi.

Scope 3: Near-Term (Physical Intensity)

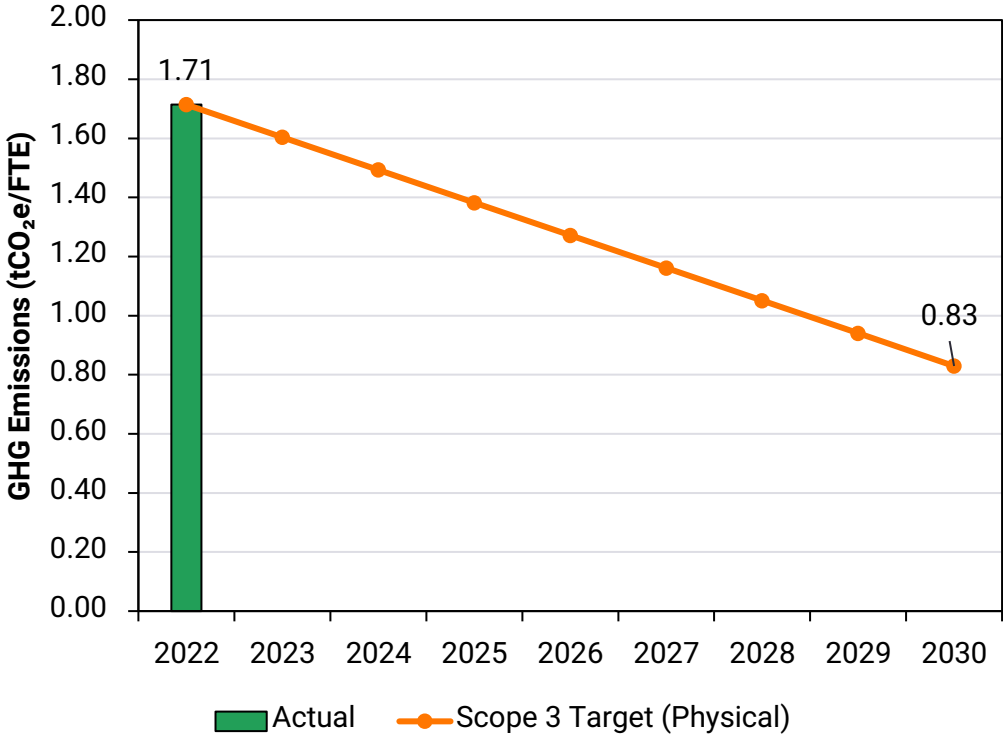


Figure 20. Scope 3 physical intensity near-term Science Based Target.

Long-Term Net-Zero Target

All 3 Scopes, Absolute Contraction Approach

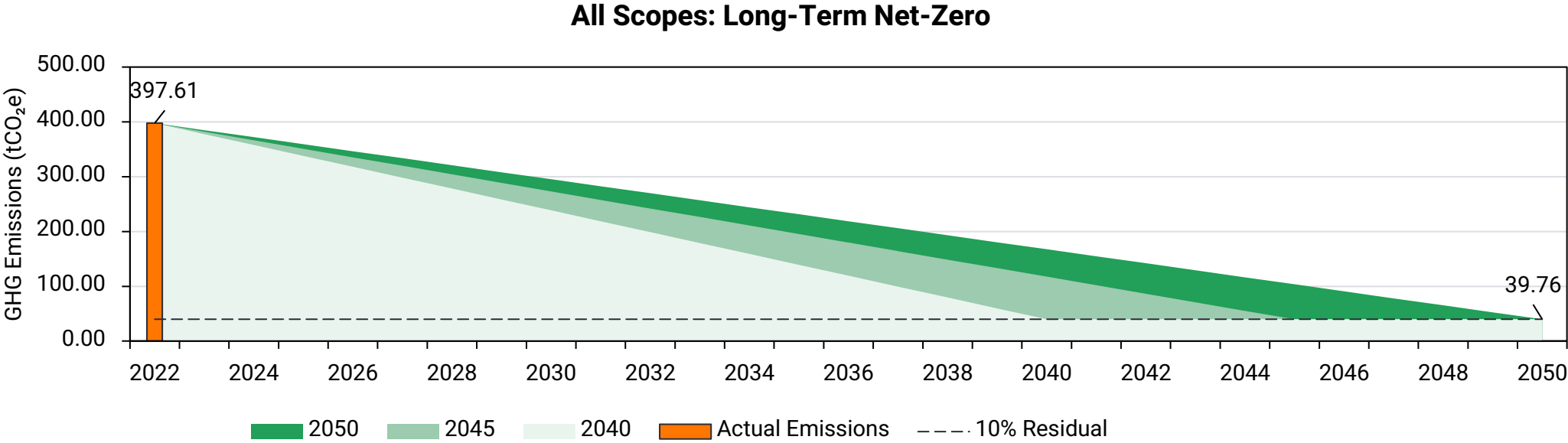


Figure 21. Net-zero target, all scopes, under three target year scenarios.

Wall Street Docs’ long-term net-zero reduction trajectory has been mapped above in Figure 21. Unlike the near-term targets previously discussed, the long-term net-zero target is a 90% reduction of scopes 1, 2, and 3 by 2050 or sooner. 2040, 2045, and 2050 pathways have been mapped as potential target dates.

The remaining 10% of emissions are referred to as “residuals,” which are to be permanently removed using nature- or technology-based solutions.

Please note that, while the net-zero target has been mapped in-line with the SBTi guidelines, should Wall Street Docs wish to validate their targets with the SBTi officially, a full **materiality assessment** must be conducted. This would ensure that at least 90% of the companywide footprint is accounted for.

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Section 5: **Summary and** **Next Steps**



Summary of Reduction Strategies



Scope	Category	Reduction Strategy	
		Near-Term	Long-Term
Scope 1	Gas	Take energy efficiency actions to reduce heating needs.	If switching office, choose one that does not rely on gas supply for heating.
	Refrigerants	Obtain access to AC maintenance checks so that top-ups can be captured in future footprints.	
Scope 2	Electricity	Engage with building managers to switch to renewable tariffs at the next feasible opportunity.	If all offices are on renewables, this would eliminate WSD's Scope 2 all together.
Scope 3	IT Equipment	Buy refurbished equipment where possible.	-
	Food and Drink	Improve data and encourage vegetarian options over meat.	-
	Procurement	Introduce a sustainable procurement policy.	Make science-based reduction targets a requirement for any supplier Wall Street Docs works with.
	Business Travel	Implement sustainable travel policy to ensure all travels taken only when deemed necessary and is low-carbon.	Eliminate / strictly minimise number of flights in the year. Ensure that any necessary flights are travelled in economy class.
	Working from Home	Engage with staff on energy and cost saving actions that can be taken at home.	Encourage staff to switch to 100% electricity tariffs and non-fossil fuel heating sources.
	Commuting	Encourage public transport and cycling and walking.	Decarbonisation of the transport industry (not directly controlled by Wall Street Docs).
All	Engagement	Engage with staff on the footprinting results, their influence on emissions, and reduction strategies through newsletters, meetings, etc.	
	Data Quality	Take actions to enhance the data capture, particularly of office consumption and exclusions, to improve footprint accuracy.	

Table 7. Summary of Wall Street Docs' reduction strategies.

Next Steps for Wall Street Docs:



- Review each area of emissions, especially **hotspots** to identify areas of improvement.
- **Collaborate** with the building manager and other tenants to shift to renewable electricity, and to adopt energy efficiency actions.
- Internally **communicate** Wall Street Docs' carbon emissions and reduction strategies, particularly on areas of emissions where employee choices have direct influence.
- **Continue to measure**, track and reduce emissions, on an annual basis.
- Set (and validate) **science-based targets**.

Thank you!

Any questions?



wsd... 

Section 6: Appendix



2022 Carbon Footprint

Location-Based, Split by Activity and Scope

Activity	GHG Emissions (tCO ₂ e)				% of Total
	Scope 1	Scope 2	Scope 3	Total	
Procurement	-	-	131.61	131.61	34.9%
Electricity	-	69.10	21.16	90.27	23.9%
Commuting	-	-	64.77	64.77	17.2%
Business Travel	-	-	49.41	49.41	13.1%
Gas	19.31	-	0.58	19.88	5.3%
Working from Home	-	-	16.91	16.91	4.5%
Digital Network	-	-	2.81	2.81	0.7%
Water	-	-	0.79	0.79	0.2%
Waste	-	-	0.59	0.59	0.2%
Refrigerants	0.13	-	-	0.13	0.0%
Total	19.44	69.10	288.63	377.17	-

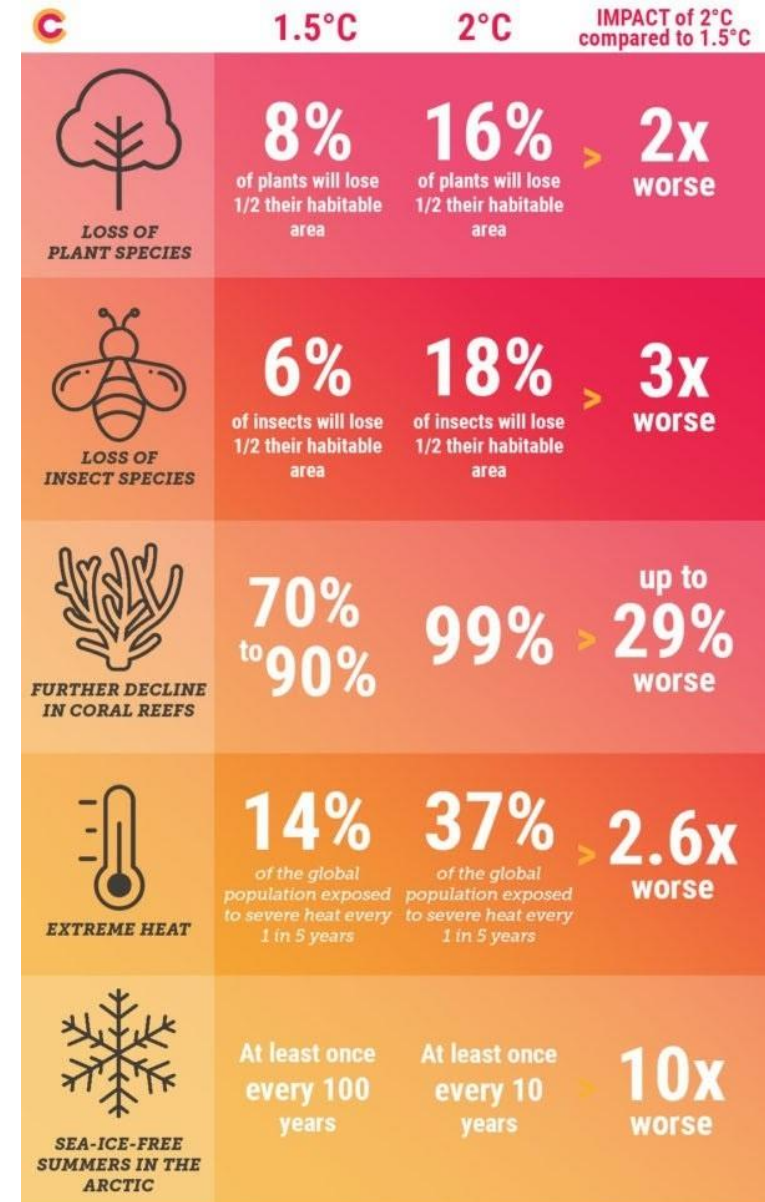
Location-based methodology calculates electricity emissions using **the average fuel mix of the region** (i.e. the UK National Grid).

Table 8. Location-based GHG emissions in 2022, split by activity and scope.

Target Setting

Why is it Fundamental?

- Climate science predicts that unless we dramatically curb temperature rise, we will see catastrophic impacts of climate change.
- The Paris Agreement in 2015 saw 200 countries pledge to keep global temperatures preferably below 1.5C. The 1.5C was defined as the cap that, if exceeded, will see such catastrophic climate impacts.
- Whilst nation states have pledged to this agreement, it's fundamental that organisations can make the same commitment.



Target Setting

Science-Based Targets



SCIENCE
BASED
TARGETS

DRIVING AMBITIOUS CORPORATE CLIMATE ACTION

What are SBTs?

Created by the *Science Based Target Initiative (SBTi)*, SBTs provide companies with a clearly-defined pathway to set targets and reduce emissions in line with the global target of limiting global warming below 1.5C.

This makes them more robust and meaningful and in line with climate science. SBTs also set you on a pathway to reach real science-based net-zero by 2050 at the latest.

What is science-based net-zero?

According to the SBTi, science-based net-zero is achieved by reducing your baseline carbon footprint by 90% by the net-zero target date across all scopes.

Residual emissions up to a maximum of 10% can be neutralised through permanent physical removals by the net-zero target date.

What type of targets are there*?

The SBTi split your targets into near-term and longer-term targets.

Your near-term SBTs set you on a pathway to reach your longer-term target.

Your longer-term target is your net-zero target date, or when you aim to reduce your baseline emissions by 90%.

**See next slide for more detail*

Science-Based Net-Zero Criteria

The SBTi defines science-based net-zero as the achievement of three key steps:

1. Short-term science-based targets

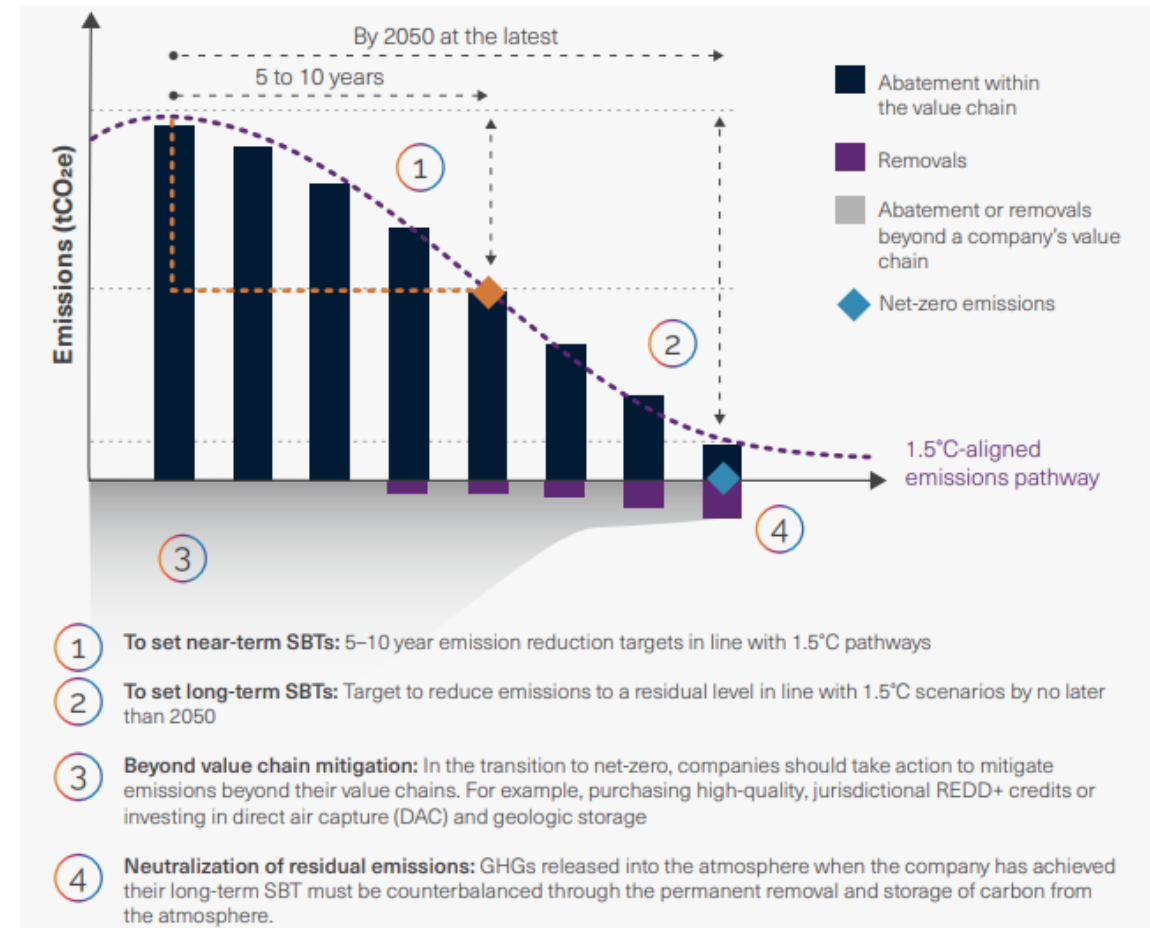
Near-term science-based targets outline what companies will do now, and over the next 5-10 years, to reduce emissions in line with what's needed to get on track for net-zero and 1.5C limit on global heating.

2. Long-term science-based targets

Long-term science-based targets indicate the degree of decarbonisation companies need to ultimately reach in order to achieve net-zero. Companies are expected to make emissions reductions of at least 90 - 95 percent to reach net-zero.

3. Company level net-zero

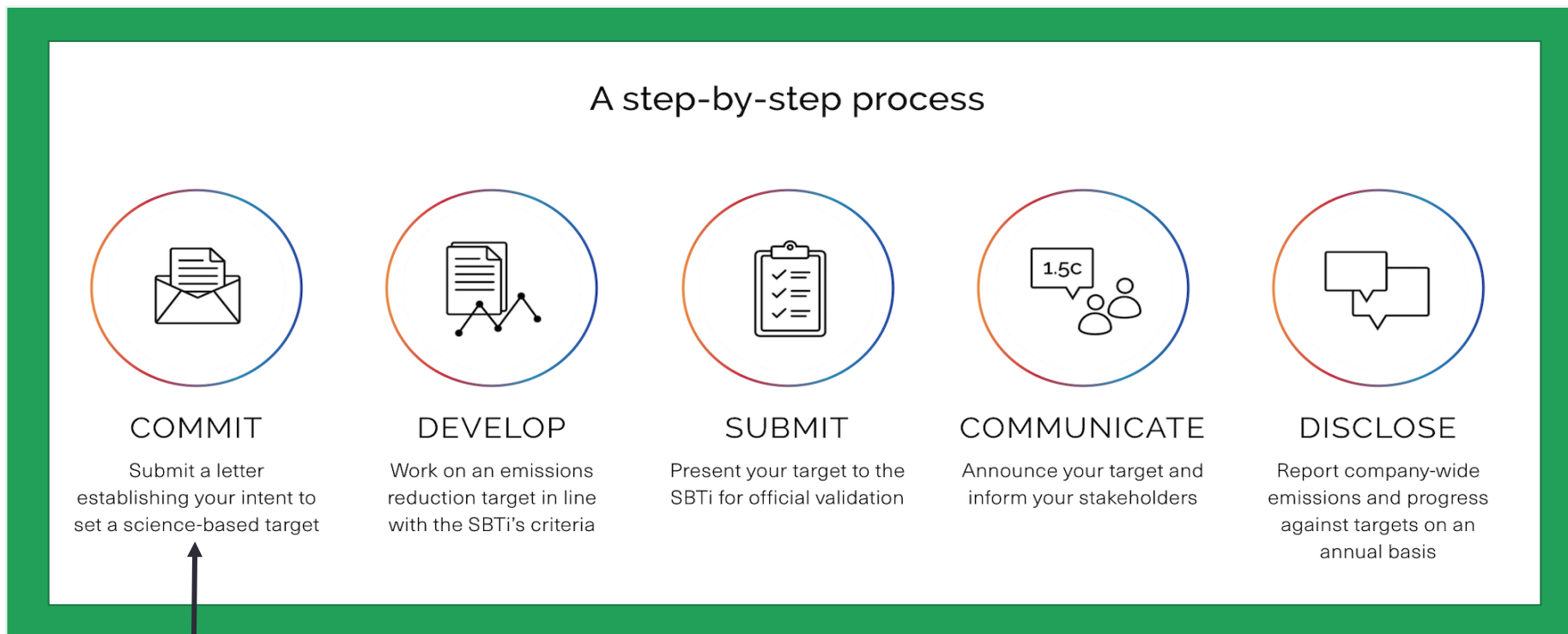
A company will be considered as reaching net-zero under the SBTi Net-Zero Standard when it has achieved its long-term science-based target. A company cannot balance its emissions with removals ahead of that and claim to be net-zero. While companies may reach a balance between emissions and removals before they reach the depth of decarbonisation required to limit warming to 1.5°C, this is only a transient state on the journey to net-zero emissions. Companies must reduce emissions to this level before claiming to have reached net-zero. In other words, a company's net-zero target date may not come before its long-term science-based target date.



SBTi Corporate Net-Zero Standard ([Net-Zero-Standard.pdf](https://sciencebasedtargets.org/Net-Zero-Standard.pdf) (sciencebasedtargets.org))

Science-Based Targets Validation Process

Below is the step-by-step process of having targets officially validated by the SBTi.



Not applicable for SMEs

Source: Guidance from the [SBTi website](#).

Methodology: General

Carbon Factors

- Carbon factors sourced from a range of governmental and environmental organisational databases (e.g., UK government, EPA, National Grid etc.) and consumption data (e.g., kWh of electricity) were used to calculate the carbon footprint.

Normalising Emissions

- It is beneficial to normalise total annual emissions by a metric or financial indicator that is appropriate to the given business.
- In this case, 2022 GHG emissions have been normalised by the number of full-time equivalent (FTE) employees in the reporting year.
- These normalised values (tCO₂e per FTE) can be used to benchmark your carbon footprint against future years.



Methodology: Carbon Factors

Core carbon factors have been sourced from the below inventories:

Carbon Factor	Source
IPCC Emissions Factor Database	https://www.ipcc-nggip.iges.or.jp/EFDB/main.php
Global Emissions Model for Integrated Systems	http://iinas.org/gemis.html
UK Government Factors	https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting
EPA US Factors	https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting
World Input Output Database – financial spend	http://www.wiod.org/home
GHG Scope 3 Evaluator	https://ghgprotocol.org/scope-3-evaluator



Further Reading & Resources

- GHG Protocol Corporate Reporting Standard: [Corporate Standard | Greenhouse Gas Protocol \(ghgprotocol.org\)](#)
- GHG Protocol Scope 3 Calculation Guidance: [Scope 3 Calculation Guidance | Greenhouse Gas Protocol \(ghgprotocol.org\)](#)
- Science Based Targets Initiative (SBTi) setting and validation process: [Set a Target - Science Based Targets](#)
- SBTi new (launched 28/10/2021) net-zero standard: [The Net-Zero Standard - Science Based Targets](#)
- Green Element Podcast: [Sustainable Business Podcast - Green Element](#)
- Green Element Guides: [Environmental and Sustainability ebooks | Green Element](#)

