GHG Emissions Assessment Report

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Contents

Report Summary

This report presents the crucial GHG emissions accounting results for SWMAS Ltd. These results were obtained for the Cradle-to-Gate boundary, encompassing Scope 1, 2, and upstream activities in Scope 3.

The total emissions are near 90 t CO2e, with Scope 3 accounting for around 96%. The company emissions under Scope 1 come from gas consumption, the amount of which is insignificant compared to other categories. The primary source of emissions in Scope 2 and 3 is the electricity consumption at SEIC and WH. While emissions in Scope 2 are relatively low, the Fuel and Energy activities category in Scope 3 remains a significant contributor. Purchasing services and business travel also contribute to high emissions. SWMAS reduces its emissions in compared to the previous period. However, the company is not resting on its success. It has proposed ambitious targets and actions, demonstrating its strong commitment to reducing emissions and moving towards net zero.

The report highlights emissions in energy consumption, business travel, and employee commuting. The report also underlines areas where the uncertainty of results could improve.

Company Overview

SWMAS is helping businesses achieve profitable and sustainable growth. Through the utilisation of the Business Compass tool, in conjunction with team's broad experience and expertise, SWMAS will work with clients to fully understand the status of their business, enabling them to determine both immediate and longer-term priorities and pinpoint the support that they need right now and in the future.

Basic company information

Company number	4332659
Nature of Business	Services of head offices; management consulting services
SIC Code	70229

Number of employees	13
Turnover (£)	£1,003,635
Office space (m^2)	175 The space is 8% of SEIC area (2,146 m^2).
Production space (m^2)	-

Drivers for Net Zero

Identifying market opportunities where customers are environmentally aware. Meet customer expectations regarding social responsibility and undertake moral and social responsibility and enhance reputation.

Scope of Reporting: Who, What, and How

This report serves as a guide for the company in its carbon reduction efforts and Net Zero journey. The report describes the company's carbon intense areas and suggests initiatives for carbon reduction. Additionally, the report can be used to track the performance of the company.

The result of the report is not intended to be used in comparative assertions intended to be disclosed to the public.

The report intended users: This report intended for internal stakeholders, including the company's managing director, the hub team and advisers.

Dissemination: This report is disseminated to managing director to support intended users in assessing the company's progress toward Net Zero goals. The

report is published for an annual basis. Periodic updates may be provided as needed.

Standards: This is a voluntary Greenhouse Gas (GHG) emissions assessment report following below standards for carbon accounting and reporting.

- GHG Protocol - Corporate value chain (Scope 3) accounting and reporting standard.
- ISO 14064 – Greenhouse gas: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals.

Scope and Boundary:

The report covers GHGs required by the GHG Protocol and ISO standards, including, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), Sulphur hexafluoride (SF_6), and nitrogen trifluoride (NF_3).

All emissions from CO2 and non-CO2 gases are converted into units of carbon dioxide equivalent (CO2e). Global Warming Potential (GWP) is used based on a 100-year time horizon from AR6 values of IPCC.

The reporting period: 01/04/2024 – 31/03/2025

Baseline period: 01/04/2019 – 31/03/2020 for scope 1 and 2

Data collection period: The same as the reporting period.

The company consolidated its facility level GHG emissions and removals by operational approach.

Company's facilities/sites under the scope: All facilities under operational control including Somerset Energy Innovation Centre (SEIC) and Woodland house (WH).

Company's products/services under the scope: All services including office management and consultancy services.

Boundary of emissions: Cradle-to-Gate which contains:

- Scope 1 (Direct emissions).
- Scope 2 (Indirect emissions from energy purchased).
- Scope 3 (Indirect emissions from upstream activities or from all activities).

Exclusions in GHG sources: SWMAS has started calculating Scope 3 emissions into environmental impact assessment in 2024. Due to the complexity of Scope 3, emissions of upstream activities (cradle to gate) are considered, and downstream categories are excluded.

Any changes from the baseline: In the previous year, the company used an internal production-based EEIOA model for "Purchased Goods and Services" category. But this year, consumption-based EEIOA model[1], published by DEFRA, has been used.

Breakdown of the company's activity data

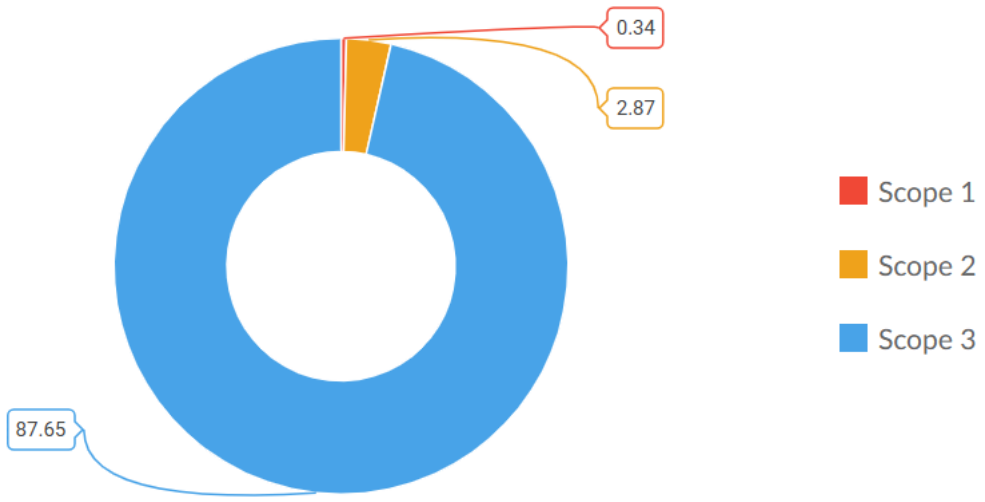
Scope	Emission Source	Quantification method	Data for 2023-24	Data for 2024-25	Data source
1	Gas consumption	Emission factor	2,196 kWh (8% of total 27,449 kWh in SEIC)	1,880 kWh (8% of total 23,494 kWh in SEIC)	Bills
2	Electricity consumption	Supplier report	24,302 kWh (8% of total 303,771 kWh in SEIC)	21,063 kWh (8% of total 263,291 kWh in SEIC)	Bills
3	Purchasing goods and services	Industry-based estimation	14 suppliers cover around 90% (£417 k) of total costs.	15 suppliers cover over 90% (£190 k) of total costs	Spend report
	Water consumption	Emission factor	381 m^3 in WH 1,276 m^3 in SEIC	440 m^3 in WH 1,500 m^3 in SEIC	Bills
	Purchasing goods and services	Supplier report	Dell Laptops – 25 leased laptops	Dell Laptops – 16 bought laptops	Asset report
	Gas	Emission factor	25,253 kWh in SEIC (92% of total 27,449 kWh)	21,614 kWh (92% of total 23,494 kWh in SEIC)	Bills
	Electricity	Supplier report	279,469 kWh in SEIC (92% of total 303,771 kWh)	242,228 kWh in SEIC (92% of total 263,291 kWh)	Bills
	Electricity	Supplier report	63,999 kWh in WH	53,440 kWh in WH	Bills
	Solar Electricity	Supplier report	14,630 kWh solar in WH	17,934 kWh solar in WH	Bills

[1] UK and England's carbon footprint to 2022 - GOV.UK

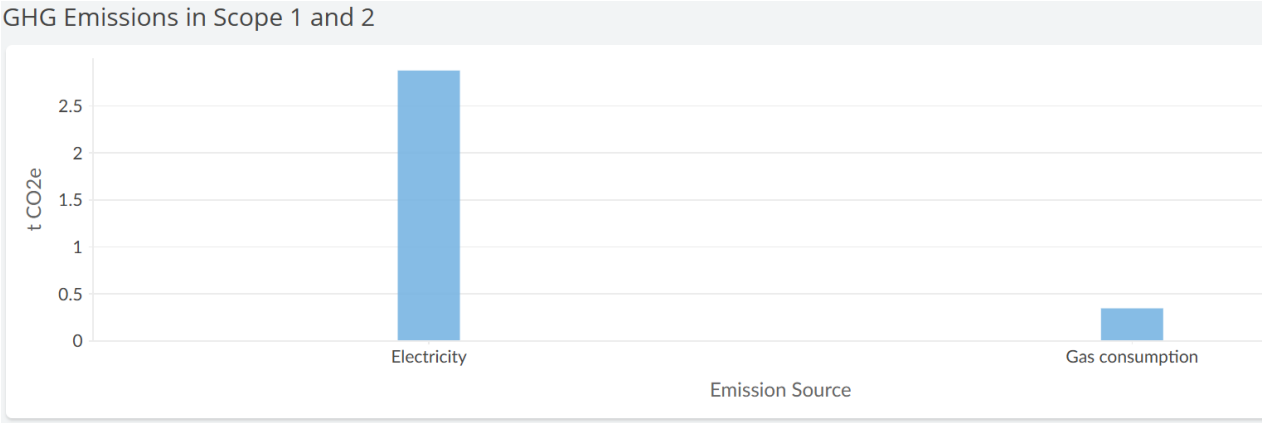
Scope	Emission Source	Quantification method	Data for 2023-24	Data for 2024-25	Data source
	T&D Electricity	Emission factor	382,400 kWh in SEIC and WH	313,602 kWh in SEIC and WH	Bills
	WTT Electricity	Emission factor	72,083 kWh as 19.6% of total purchased electricity is from non-renewable sources (https://www.edfenergy.com/fuel-mix).	70,960 kWh as 24% of total purchased electricity is from non-renewable sources	Bills
	WTT Gas	Emission factor	27,449 kWh in SEIC	23,494 kWh in SEIC	Bills
	Waste	Emission factor	~ 1.6 t average commercial waste	~ 1.6 t average commercial waste	Waste report
	Business Travel	Supplier report	72,818.3 miles travel with car ~ 11,433 kg CO_2e	69,334.5 miles travel with car ~ 8,109 kg CO_2e	Staff mileage report
	Business Travel	Industry-based estimation	6 suppliers cover £3.2 k of costs for accommodation and travel.	4 suppliers cover £4.7 k of costs for accommodation and travel.	Spend report
	Staff Commuting - Travel to office	Emission factor	1- 4 day week, 15 miles per day 2 - 5 day week, 15 miles per day 3 - 3 day week, 35 miles per day	1 - 4 day week, 15 miles per day 2 - 5 day week, 15 miles per day 3 - 3 day week, 35 miles per day	Survey
	Staff Commuting - Homeworking	Emission factor	No. of staff in the fiscal year: 18 30 hrs homeworking per week per person	No. of staff in the fiscal year: 13 30 hrs homeworking per week per person	Staff report

GHG Emissions

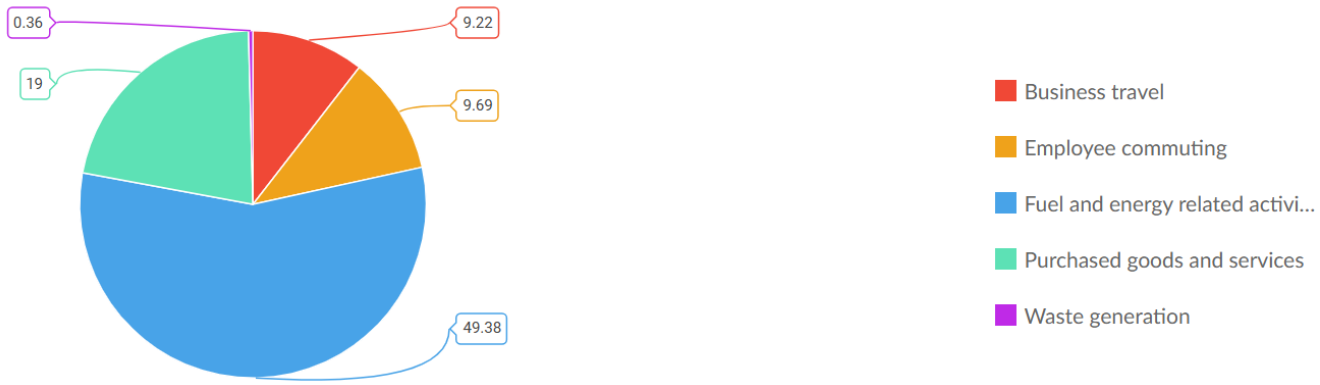
The total GHG emission in the reporting period is 90.85 t CO2e with the following breakdown per emission scope.



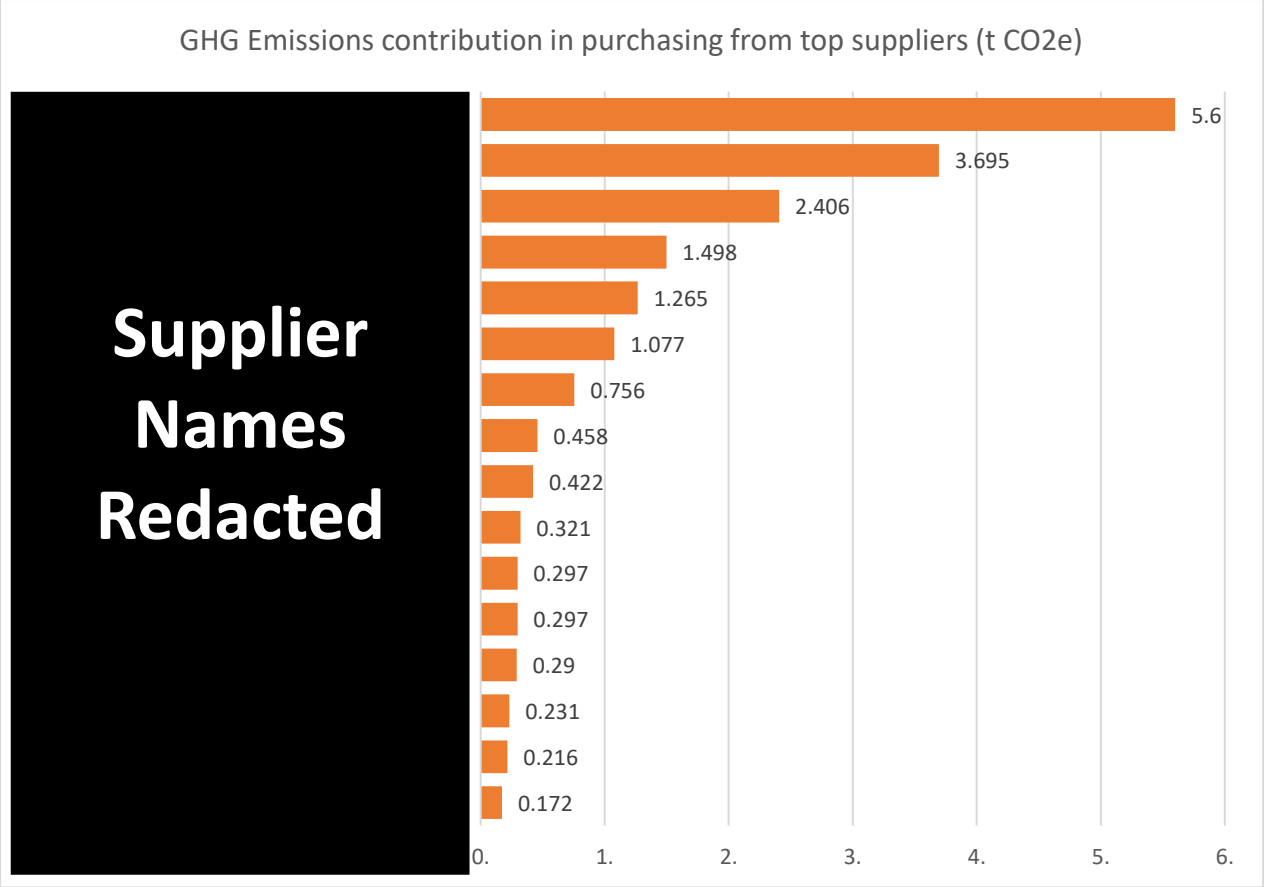
For Scopes 1 and 2, the electricity consumption is the main cause of GHG emissions.



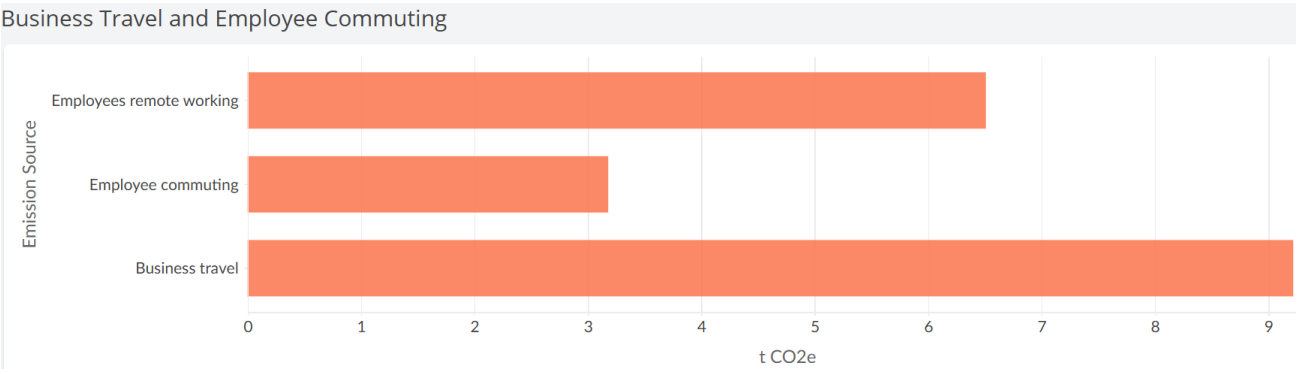
The breakdown of Scope 3 emissions can be seen in the following chart. The lead category is “Fuel and Energy related activities” due to the energy consumption in SEIC and WH.



In the following, the carbon emissions per supplier is presented.



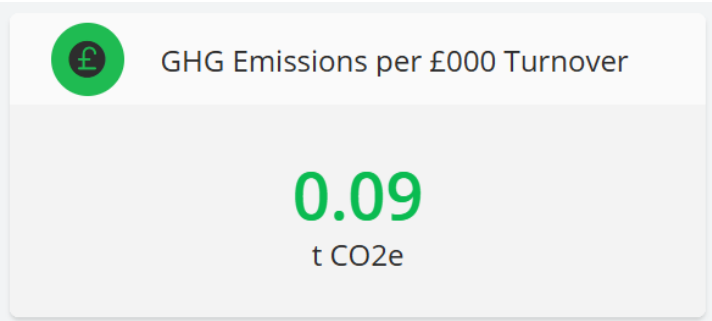
For business travel and employees commuting, we have:

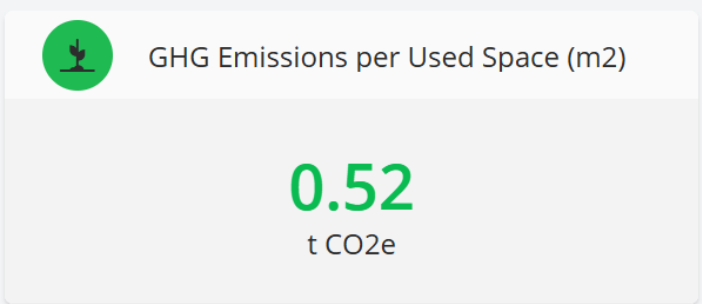


Carbon removals and Offset:

During the reporting period there is no GHG removals and purchased offset.

Carbon intensity:





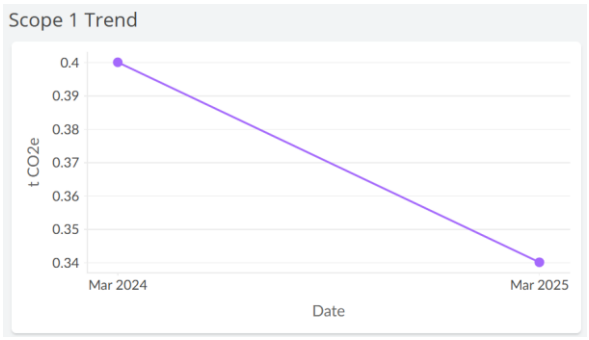
Comparison with the Average Emissions in “Services of head offices and management consulting services” Sector: -23% ●

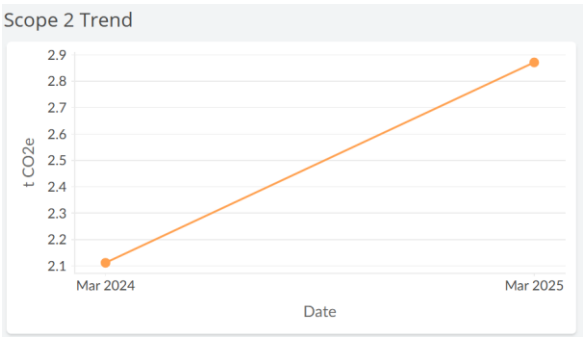
Key: ●Lower than average ●Around average ●Above average

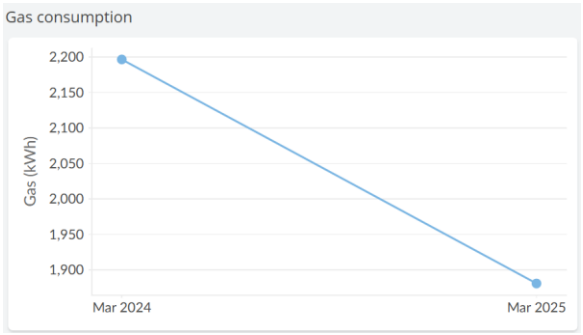
The above is a result of comparing the company's CO2e per £ revenue with that of the sector on average. The factors that influence this result are the company's revenue, reducing supply chain costs and its reliance on low-emission energy.

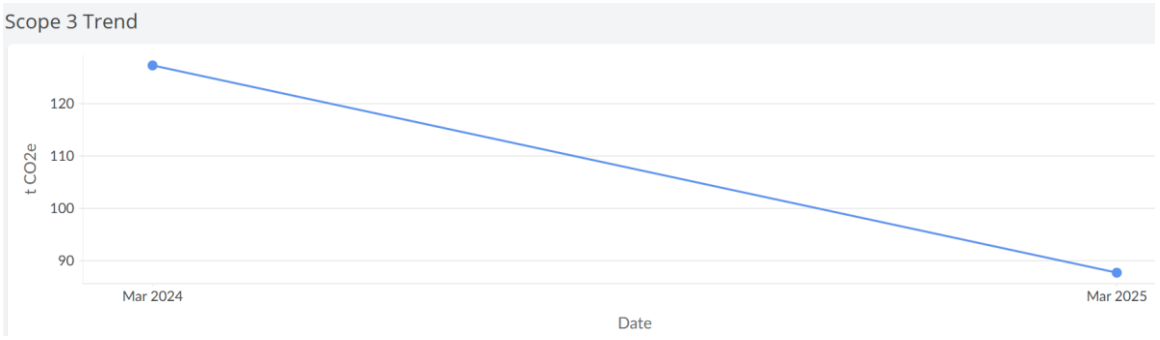
Carbon footprint progression

The progress of carbon footprint is presented in the following charts.









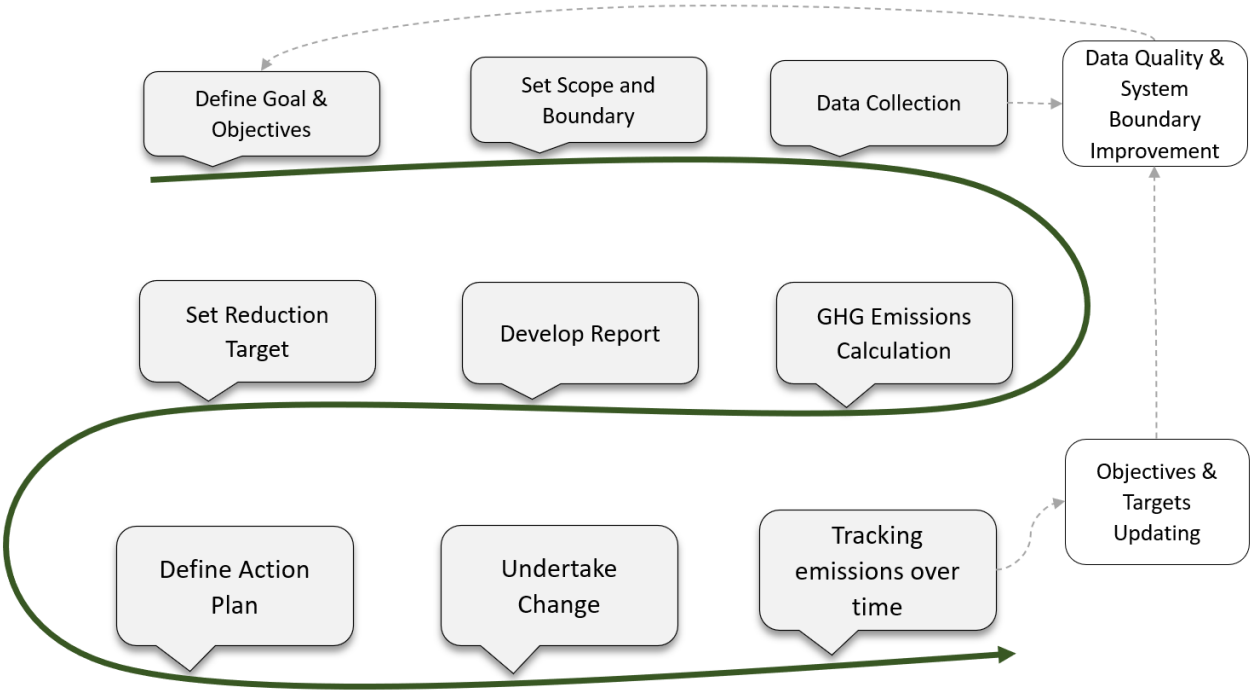
It's clear that the carbon emissions and energy consumption are reduced. However, the scope 2 emissions are increased. The reason is that the energy supplier, EDF, reported the g CO2e/kWh as 136 while this figure for the last year was 87.

The following table shows that all carbon intensities are reduced.

Carbon intensity	**2023-24**	**2024-25**	**Carbon reduction**
GHG Emissions per £000 Turnover	0.11	0.09	18%
GHG Emissions per Employee	7.21	6.99	3%
GHG Emissions per Used Space (m2)	0.74	0.52	30%

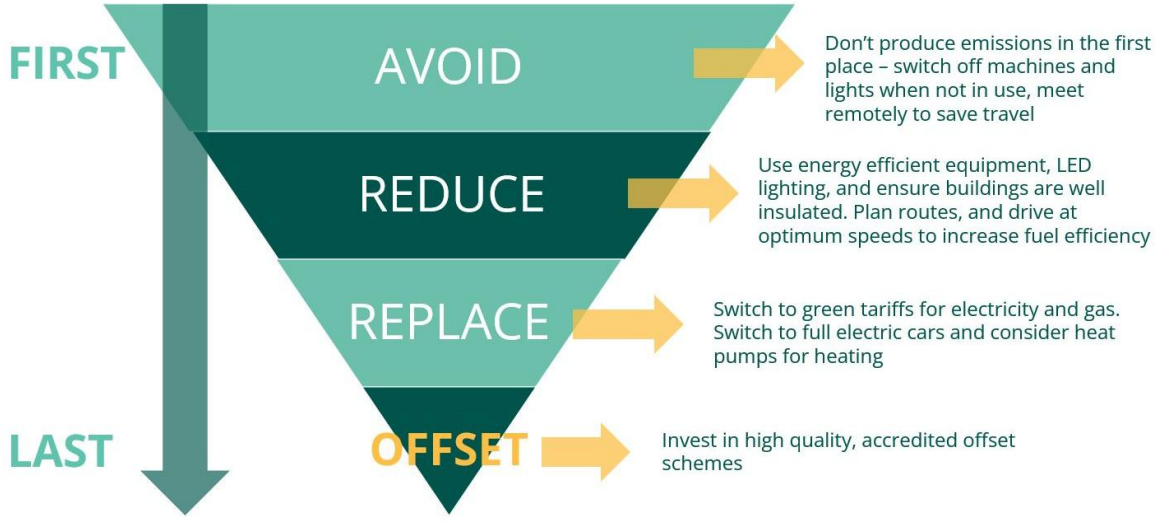
Roadmap to Net Zero

The required steps to achieve Net Zero is outlined in the following.



The Carbon Hierarchy – Culture Change

The basis of any carbon reduction plan is ensuring that culture and behavioural change can be achieved. When thinking about reducing emissions the following hierarchy should be deployed:



The business could reach **Net Zero** within its reported **Scope 1**, **2** and **3** emissions by defining action plans and offsetting the 'residual' carbon. However, everyone in the company should be aware of this approach and challenge themselves to avoid creating emissions in the first place and reduce them if this is not possible...**offsetting any residual or 'unavoidable' carbon should be the last resort**.

Target

The company's target is to halve Scope 1 and 2 emissions by 50% by 2030. The company has also committed to reduce scope 3 emissions by 50% by 2035.

Suggested Actions for Carbon Reduction

This section suggests some actions for GHG emissions reduction. The actions are based purely on carbon reduction and therefore need to be assessed in terms of the additional costs or level of investment needed to achieve them.

- The highest emissions come from electricity consumption in the facilities managed by SWMAS. In the reporting period, EDF carbon footprint per kWh is increased compared with the previous year. More investment in solar/wind electricity could also help to reduce carbon emissions in this area.
- Obtaining more reliable data from suppliers regarding their carbon footprint is necessary to increase data reliability in the purchasing goods and services category.
- By using more efficient vehicles, public transport or EV salary sacrifice scheme, we can significantly reduce our business travel emissions.
- Emissions from homeworking are estimated based on the number of staff and working hours; however, a simple survey on remote working hours will result in more reliable data.

Appendix A – Data Quality and Uncertainty report

This section provides a description of the data quality for the emissions data to uphold transparency and prevent misinterpretation of data. The data used to generate this report has been collected from various sources (including energy bills, 3rd Party data etc.) and converted to CO2e using the current UK Government Greenhouse Gas Conversion factors in 2024 that it is a true and fair reflection of the both the units of consumption and the resultant GHG emissions of the reporting firm.

The data quality scores in Scope 1 and 2 are high. However, improving the data quality in Purchasing Goods and Services is necessary as GHG calculations for that category is based on spend based data. This requires involving the suppliers in the carbon accounting process and capturing primary data.

Uncertainty

The uncertainty arising from parameter uncertainty including, the UK government emission factors and values of global warming potential (GWP).

There is an uncertainty associated with estimations of activity data in different categories, including vehicles mileage for business travel and staff commuting, waste generation value, and remote working hours.

Moreover, emissions in the purchasing goods category are estimated based on the average sector derived from environmentally extended input-output analysis (EEIOA) model, published by DEFRA, which associated with uncertainty of sectors' emissions.

Appendix B – Methodology

Scope 3 emission

This report categorises GHG Emissions as Scope 1, 2 or 3 as referred to in the GHG Protocol as a result of collaboration of World Business Council for Sustainable Development (WBCSD) and World Resources Institute (WRI). The GHG Protocol established emission Scopes to assess risks associated with potential carbon pricing regulations. Scope 1 encompasses direct emissions from a company's operations, while Scope 2 accounts for indirect emissions from purchased energy. Scope 3 captures all other indirect emissions, including those generated throughout upstream and downstream supply chain activities. Scope 3 requires an investigation into 15 different categories as detailed below.

Upstream Scope 3 emissions:

- Category 1 – Purchased goods and services,
- Category 2 – Capital goods,
- Category 3 – Fuel and energy related activities (not included in scope 1 or 2),
- Category 4 – Upstream transportation and distribution,
- Category 5 – Waste generated in operations,
- Category 6 – Business travel,
- Category 7 – Employee commuting,
- Category 8 – Upstream leased assets,

Downstream Scope 3 emissions:

- Category 9 - Downstream transportation and distribution,
- Category 10 – Processing of sold products,
- Category 11 – Use of sold products,
- Category 12 – End-of-life treatment of sold products,
- Category 13 – Downstream leased assets,
- Category 14 – Franchises,
- Category 15 – Investments.

This report reflects the amount of Scope 3 emissions that it has been technically feasible and cost effective to measure and take action against. The business should remain committed to work with its entire supply chain to ensure as much of its Scope 3 emissions are able to be accurately measured and to develop actions that target long term reductions in this emissions category.

Activity data and Emission factor

Emissions in Carbon Dioxide equivalent (CO2e) for all scopes are calculated using the latest UK Government Greenhouse Gas Conversion factors for company reporting in the relevant 12-month period over which the Carbon Footprint is calculated.

Based on the GHG Protocol and ISO 14064-1:2019, emissions from CO2 and non-CO2 gases are converted into units of carbon dioxide equivalent (CO2e). Global Warming Potential (GWP) is used based on a 100-year time horizon from IPCC assessment reports. The factors for GWP are used based on AR6 values of IPCC.

Allocation method

The allocation was avoided in the following cases.

- Reporting Scope 1 and Scope 2 emissions.
- Reporting the emissions of an activity in Scope 3 when the specific GHG emissions of the activity are known.
- Emissions relevant to waste generation.

The company encompasses the responsibility of its direct emission (Scope 1) and purchased energy (Scope 2) as well as the upstream responsibility and downstream responsibility for buying and selling, respectively. For Scope 3 emissions, the company is responsible for the carbon footprint of affiliated companies in accordance with the relationship of activities to environmental

burden. The allocation from carbon footprint of suppliers or customers have been deployed based on the flow of monetary value of transactions.

Industry-based estimation

To estimate the emissions in the value chain where the data were not available, the Environmentally Extended Input Output Analysis (EEIOA) Model was used. The EEIOA model represents the average emissions of each sector per 1 unit of monetary output. This model has been used based on the latest UK DEFRA report on consumption-based accounts for the UK. This model was also used to compare the reporting company's results with the average industry.

Verification and validation

The company is verified and is responsible for the provided data. SWMAS has reported the data quality and uncertainties in Appendix A based on criteria of the GHG Protocol and ISO 14064.

Offsets

As part of the commitment of the business to target reductions in its GHG emissions and ultimately attain net zero, the company will review and report all offsetting that it enters. All offsetting options will be considered and reported, including formally certificated schemes (e.g. Gold Standard) as well as informal schemes. Where offsetting is done against informal schemes, details of the calculation logic will be reported.

Appendix C – Terminology

Carbon footprint = Total amount of greenhouse gases (GHGs) released and removed by system over a certain timeframe. It considers both the direct emissions from the subject itself and indirect emissions throughout its lifecycle.

Carbon neutral = A state where, for a set period, the greenhouse gas emissions from system are balanced out by an equal amount of greenhouse gas removal from the atmosphere. This means there's no overall increase in global emissions.

Carbon offsetting = Mechanism for funding all or a part of the carbon footprint through the prevention of the release of, reduction in, or removal of an amount of GHG emissions in a process outside the scope under study.

CO2e = A carbon dioxide equivalent or CO2 equivalent, abbreviated as CO2e is a metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

Global warming potential (GWP) = This index is a way to compare different greenhouse gases (GHGs). It considers how much heat each gas traps in the atmosphere (radiative forcing) compared to carbon dioxide (CO2). It takes into account the gas's properties and how long it stays in the atmosphere (time horizon).

Greenhouse gas (GHG) = A gas in the air, from natural sources and human activities, that traps heat radiating from Earth, its atmosphere, and clouds. Seven gases listed in the Kyoto Protocol: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF6) and nitrogen trifluoride (NF3).

Greenhouse gas (GHG) emission = Release of a GHG into the atmosphere.

Greenhouse gas (GHG) emission factor = coefficient relating activity data with the GHG emission.

Greenhouse gas (GHG) removal = withdrawal of a GHG from the atmosphere.

Net Zero = Zero emissions across entire operation direct and indirect activities (Scope 1,2 & 3).

Scope 1 emissions = Greenhouse gas emissions originating from facilities or processes that are owned or controlled by the reporting entity, known as direct emissions.

Scope 2 emissions = Greenhouse gas emissions resulting from the production of energy used directly in the operations of the reporting entity, yet produced at facilities owned or managed by a different entity.

Scope 3 emissions = Greenhouse gas emissions that are a consequence of the activities of the reporting entity but occur at sources owned or controlled by another entity and which are not falling under Scope 2 emissions. Known as indirect or value chain emissions.

The GHG Protocol = An organisation who sets the standards for businesses and government to measure and manage emissions. Its Corporate Standard classifies an organisation's greenhouse gas (GHG) emissions into three 'Scopes'.

WTT emissions = A Well-to-Tank emissions comprise all the GHG emissions released into the environment from the production and delivery of a fuel or energy source.