



2023 Greenhouse Gas Report for Zenergi Group Limited

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1.0 Introduction

1.1 Overview

In 2023, Zenergi's emissions increased 15% across scopes 1, 2 and 3 against the previous year (Figure 1). This is due to increases in spend on goods and services; however, emission reductions have been achieved in many areas. Scopes 1 and 2 have reduced and all other scope 3 categories have either remained similar or reduced (Figure 2).

This increase in emissions is a result of scope 3 purchased goods and services, which alone contributed to an increase of 121% (181 tCO₂e). This increase is correlated to an increase in spend across key areas, as a spend-based approach is currently utilised in emission calculations for this category.

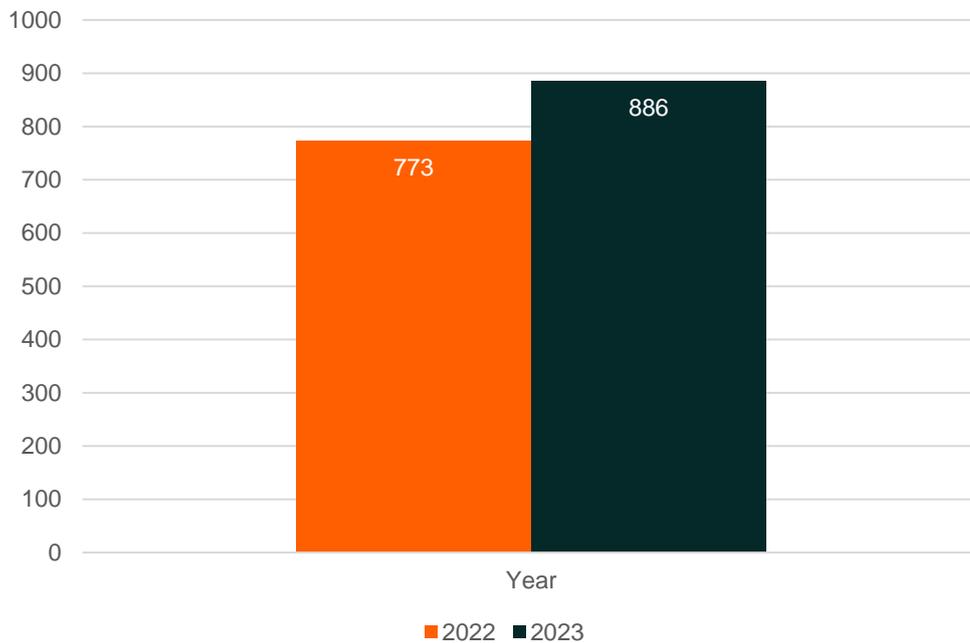


Figure 1. Greenhouse gas emissions in 2022 and 2023, across all relevant scopes and categories using a market-based approach for scope 2

Despite the increase in emissions associated with purchased goods and services, Zenergi have achieved emission reductions across scope 1 (-56% or -5 tCO₂e), scope 2 market-based (-16% or -6 tCO₂e), scope 3 capital goods (-29% or -16 tCO₂e), fuel- and energy-related activities (-13% or -3 tCO₂e) and employee commuting (-17% or -40 tCO₂e).

The largest sources of emissions this year are the scope 3 categories (Figure 3); purchased goods and services (37%, 331 tCO₂e), business travel (30%, 262 tCO₂e) and employee commuting, which includes homeworking (22%, 196 tCO₂e). Scope 1 and 2 (market-based) emissions total 4% (37 tCO₂e) this year.

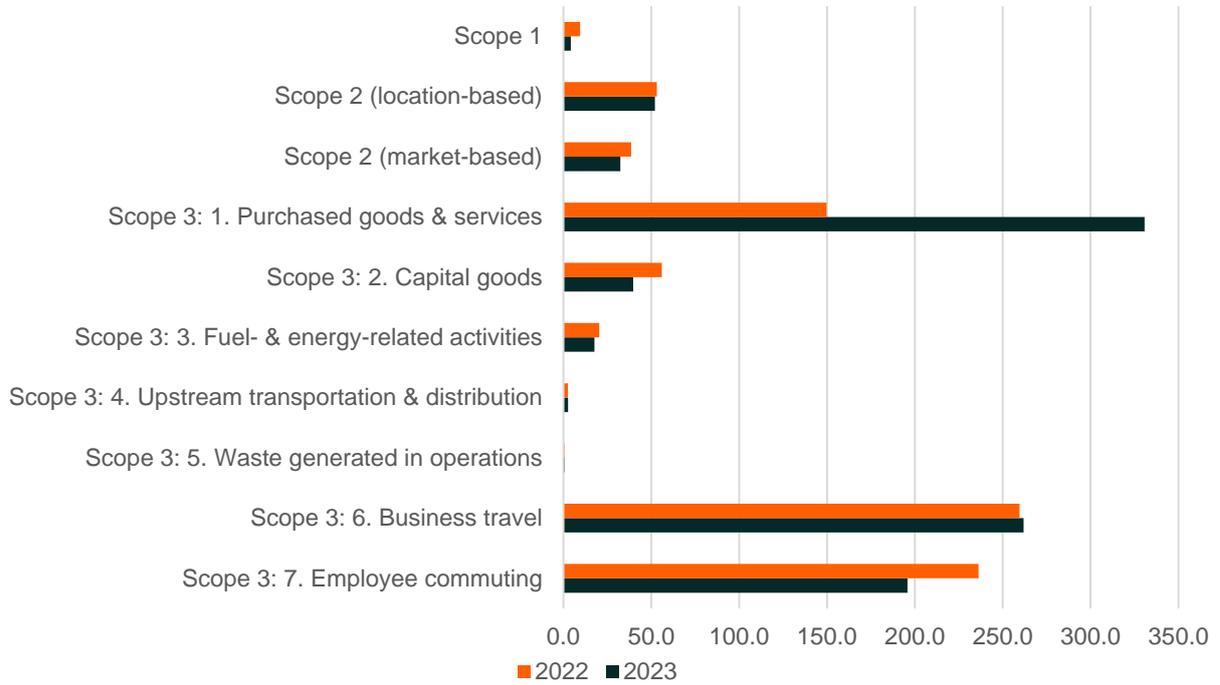


Figure 2. Comparison of greenhouse gas emissions by scope and category in 2022 and 2023

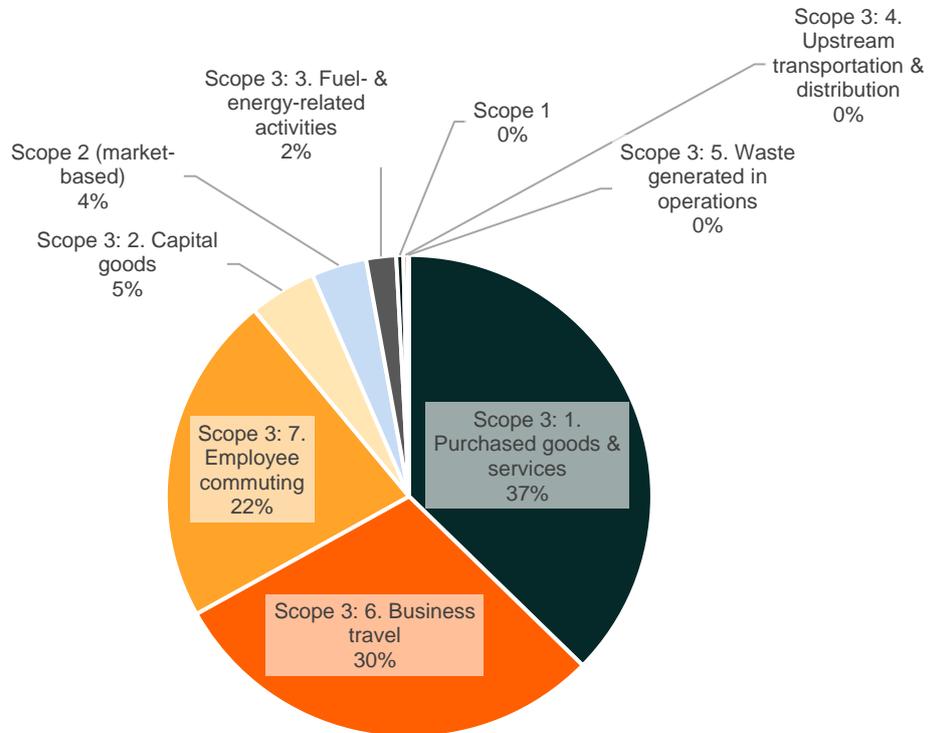


Figure 3. Percentage split of emission sources by scope and category in 2023

1.2 Scope 1 & 2 target progress

Despite the increase in emissions associated with purchased goods and services, we have continued to make progress towards the scope 1 and 2 (market-based) net zero target by 2025 with a reduction in total scope 1 and 2 emissions of 24% (-37 tCO_{2e}), from 48.1 in 2022 to 36.6 tCO_{2e} in 2023. This reduction is a result of reduced energy usage (electricity reduced by 23,961 kWh and natural gas by 21,594 kWh) caused by a combination of closures to the Colchester and Chorley offices during the year as well as reduced office occupancy levels (Figure 4).

Looking into 2024, scope 2 market-based emissions are set to reduce further with all remaining offices signed up to a 100% renewable energy contract. Further work is needed to decarbonise the heating systems at two offices (Linlithgow and Gloucester), of which options are currently being explored.

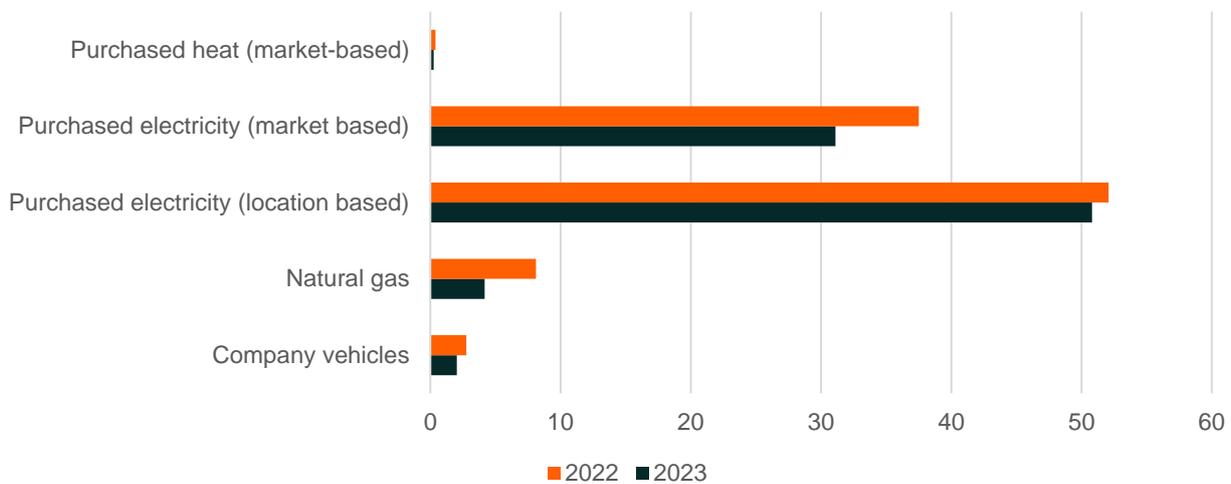


Figure 4. Comparison of emissions sources reported within scopes 1 and 2 (location- and market-based)

1.3 Scope 3 progress

1.3.1 Scope 3, Purchased goods & services

The observed 121% increase in purchased goods and services is correlated to an increase in spend across key areas during a business restructuring. While spend is anticipated to reduce over the next year, we will nevertheless be working to decouple the correlation between spend and emissions through improved supplier engagement and supplier-specific data.

1.3.2 Scope 3, Business travel

For business travel, emissions have remained very similar over the last 2 years, with just a 2 tCO_{2e} increase this year. Employee owned vehicles are the largest source of emissions within this category (51% this year) and have reduced by 10% (-12 tCO_{2e}) compared to 2022. Unfortunately, this reduction is balanced out by a 37% (+11 tCO_{2e}) increase in emissions from flights. Flight emissions are currently quantified using a spend-based approach, therefore, we will be working to improve the accuracy of data this year to more accurately track business travel emissions.

1.3.3 Scope 3, Employee commuting & homeworking

For commuting and homeworking, a 17% reduction (-40 tCO_{2e}) has been achieved this year (Figure 5). Employees are surveyed annually and asked about the distance, mode and frequency of travel in a typical week. Based on number of responses, results show that petrol and diesel usage has reduced from 88% in 2022 to 68% in 2023. Battery electric vehicle usage has increased from 2% to 9% and bus and rail usage

has increased from 6% to 13% this year (Figure 6). These are positive changes reflecting how employees are beginning to move away from internal combustion engine vehicles as a primary commuter mode of travel. We will work with employees to continue to facilitate and encourage this transition.

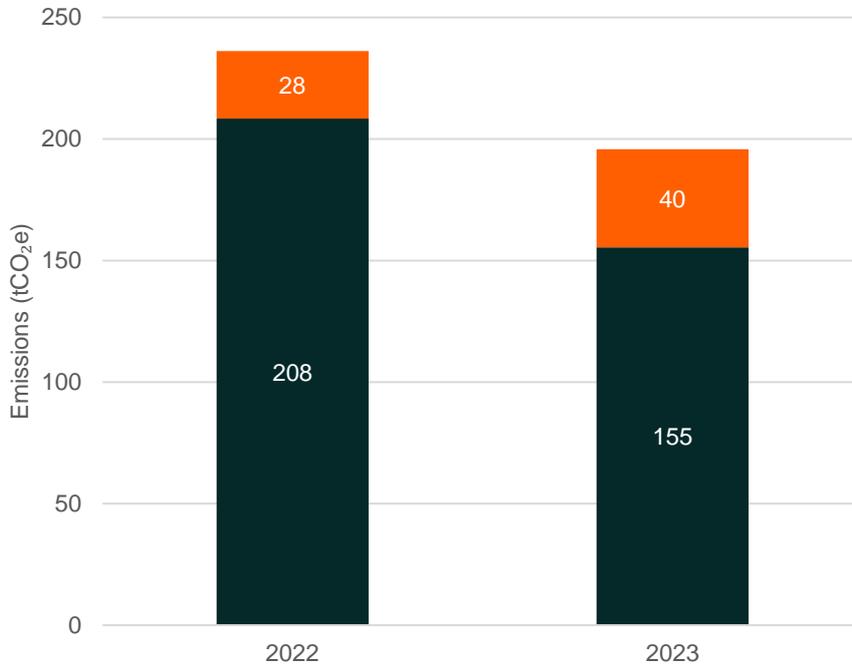


Figure 5. The split between employee commuting and homeworking emissions (scope 3 category 7) compared in 2022 and 2023

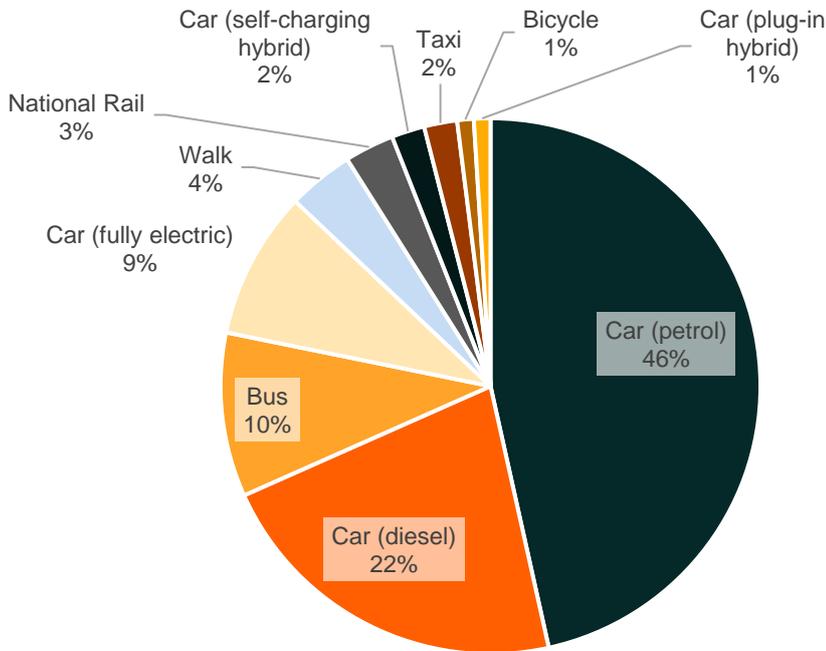


Figure 6. Employee commuter emissions in 2023 measured by number of responses

2.0 Descriptive information

The organisational and operational boundary included within or excluded from the GHG reporting is described in this section, with the key information outlined in Table 1. Further information on the activities included or excluded, with justifications, are presented in Table 6.

Table 1. Summary of key information

Reporting Company Name	Zenergi Group Limited
Consolidation approach	Operational control
Latest reporting period	1 st January 2023 to 31 st December 2023
Base year period	1 st January 2022 to 31 st December 2022
Base year type	Fixed base year
Base year recalculation threshold	5%
Methodology	GHG Protocol for scopes 1, 2 and 3;
Emission factor sources	DESNZ UK emission factors for 2023 and 2024; Contractual specific emission factors

2.1 Company information

Zenergi Group Ltd is a company incorporated in England and Wales (company number 08329123) whose registered office is at 3 Benham Road, Benham Campus, Southampton Science Park, Chilworth, Southampton, Hampshire, SO16 7QJ. The company includes 11 entities, of which the following are the main sources of emissions during the base year and current reporting period:

- Zenergi Limited
- Briar Consulting Engineers Limited
- DB Group (Europe) Limited
- Power Direct Limited
- Apollo Energy Limited
- Energy Management Limited
- Powerful Allies Limited

2.2 Organisational boundary

An operational control approach is applied to define the GHG emission across the Group. This includes 100% of all subsidiaries.

The operational boundary defines the scope of direct and indirect emissions for operations that fall within the organisational boundary of the organisation. To delineate direct and indirect emission sources, three “scopes” are defined for GHG accounting and reporting purposes as follows:

- Scope 1 emissions are direct emissions that occur from sources that are owned or controlled by the company. For example, emissions from combustion in owned or controlled boilers, furnaces, vehicles and emissions from chemical production in owned or controlled process equipment.

- Scope 2 emissions are indirect emissions from the generation of purchased or acquired electricity, steam, heat or cooling consumed by the reporting company. Scope 2 emissions are calculated in two ways: location-based and market-based methods:
 - Location-based refers to a method to quantify scope 2 GHG emissions based on average energy generation emission factors for defined locations, including local, subnational, or national boundaries.
 - Market-based refers to a method to quantify scope 2 GHG emissions based on GHG emissions emitted by the generators from which the reporter contractually purchases electricity bundled with instruments, or unbundled instruments on their own.
- Scope 3 emissions are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions. There are 15 categories within scope 3.

2.3 Reporting period

The energy and carbon emissions are reported for the period 1st January to 31st December 2023, which is aligned with the financial reporting.

2.4 Base year

The fixed base year has changed from 2021 to 2022 in order to reflect a typical post-COVID operating period for the Company. Our base year recalculation policy states that the base year emissions will be retroactively recalculated in the event of significant changes to the company, such as structural changes, changes in methodology or improvements in the accuracy of data. Our base year recalculation policy defines the significant threshold as 5% of base year emissions.

In accordance with this policy, the base year has been adjusted to include the full-year emissions of the acquisitions DB Group (Europe) Limited (joined February 2022) and Powerful Allies (joined June 2022). Furthermore, amendments have been made to the base year owing to improvements in the accuracy of data and discovery of errors. As a result, changes have been made to the reported base year energy usage, carbon emissions, and intensity ratios.

3.0 Greenhouse gas emissions

The greenhouse gas emissions calculated are summarised by scope in table 2 along with calculated intensity ratios. A further breakdown of emissions is presented in table 3, providing the emissions per source type (scopes 1 and 2) and per category for scope 3. Key environmental metrics from the data used to calculate GHG emissions are presented in Table 4.

Of the emissions calculated, scope 1 makes up less than 1%, scope 2 (market-based) 4% and scope 3 96% of gross emissions. Within the scope 3 emissions calculated, the largest source of emissions is associated with category 1, which is for purchased goods and services (331 tCO₂e). This category contributes 37% of gross market-based emissions.

Table 2. Overall GHG emissions by scope (tCO₂e)

Emission Source	2022	2023
Scope 1	10	4
Scope 2 (location-based)	53	52
Scope 2 (market-based)	39	32
Scope 3	725	849
Total (location-based)	788	906
Total (market-based)	773	886
Intensity ratios:		
tCO ₂ e/per employee (FTE) (location-based)	3.5	4.0
tCO ₂ e/per employee (FTE) (market-based)	3.5	3.9

Table 2 includes two intensity ratios that are calculated to supply a performance ratio against gross emissions (tCO₂e). The ratio uses full-time equivalent employees and is calculated based on employee numbers of 222.4 in 2022 & 226.1 in 2023. These ratios are considered most relevant to Zenergi's energy consuming activities and broader sector, allowing comparison of performance over time and across other organisations. Overall, 2023's market-based intensity ratio has increased by 13% compared to 2022.

Table 3. Further breakdown of GHG emissions by scope, source and scope 3 category (tCO₂e)

Emission source	2022	2023
Scope 1		
Gas	8	4
Company owned vehicles	1	0
Total Scope 1	10	4
Scope 2 (dual reporting)		
Purchased electricity (location-based)	52	51
Purchased electricity (market-based)	37	31
Company vehicles	1	1
Purchased heat	0	0
Total Scope 2 (location-based)	53	52
Total Scope 2 (market-based)	39	32
Scope 3		
Category 1: Purchased goods and services	150	331
Category 2: Capital goods	56	40
Category 3: Fuel- and energy-related activities	20	18
Category 4: Upstream transportation & distribution	3	3
Category 5: Waste generated in operations	1	1
Category 6: Business travel	260	262
Category 7: Employee commuting	236	196
Category 8: Upstream leased assets	N/A	N/A
Category 9: Downstream transportation & distribution	N/A	N/A
Category 10: Processing of sold products	N/A	N/A
Category 11: Use of sold products	N/A	N/A
Category 12: End-of-life treatment of sold products	N/A	N/A
Category 13: Downstream leased assets	N/A	N/A
Category 14: Franchises	N/A	N/A
Category 15: Investments	N/A	N/A
Total Scope 3	725	849
Total gross emissions (location-based)	788	906
Total gross emissions (market-based)	773	886

Note: figures may not sum due to rounding

Table 4. Environmental data used in the emission calculations.

Environmental impact	2022	2023
Energy (kWh):		
Electricity usage	269,317	245,356
Gas usage	44,421	22,827
Company owned vehicles	9,019	4,902
Employee-owned vehicles	477,215	435,491
Purchased heat	2,120	0
Total energy consumption (kWh)	803,238	708,576
Water (m³)		
Water used	659	633
Wastewater	626	601
Waste (tonnes):		
Waste to landfill	1	1
Waste to incineration	6	6
Waste recycled	4	4
Total waste generated	11	11

4.0 Methodology

The UK Government Environmental Reporting Guidelines and the GHG Protocol Corporate Accounting and Reporting Standard (revised edition) and the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard has been followed, with reference to the GHG Protocol Scope 3 Technical Guidance. The 2023 UK Government GHG Conversion Factors for Company Reporting were used in emission calculations as these relate to the reporting period.

The emissions are divided into the direct combustion of fuels and the operation of facilities (scope 1), indirect emissions from purchased electricity (scope 2) and further indirect emissions that occur as a consequence of company activities but occur from sources not owned or controlled by the organisation (scope 3).

A summary of the greenhouse gas quantification methods for each emission source is outlined in Table 5, with information on the activities included or excluded outlined in Table 6.

Table 5. Overview of scope 3 methodologies used to calculate emissions

Emission scope and category	GHG quantification method
Scope 1	
Natural gas	Primary data (invoices)
Company owned vehicles	Primary data (mileage records)
Scope 2	
Purchased electricity	Primary data (invoices and some landlord recharge information)
Purchased heat	Primary data (landlord recharge information)
Company owned electric vehicles	Primary data (mileage records)
Scope 3	
1. Purchased goods and services	Spend-based method
2. Capital goods	Spend-based method
3. Fuel- and energy-related activities	Average-data method
4. Upstream transportation and distribution	Spend-based method
5. Waste generated in operations	Average-data method and estimations
6. Business travel	Distance-based method for employee-owned vehicles and spend-based method for other transportation modes.
7. Employee commuting	Average-data method
8. Upstream leased assets	<i>Not measured</i>
9. Downstream transportation & distribution	<i>Not measured</i>
10. Processing of sold products	<i>Not measured</i>

11. Use of sold products	<i>Not measured</i>
12. End-of-life treatment of sold products	<i>Not measured</i>
13. Downstream leased assets	<i>Not measured</i>
14. Franchises	<i>Not measured</i>
15. Investments	<i>Not measured</i>

Table 6. Summary of activities included and excluded from each emissions category, with exclusion justification where applicable.

Scope	Included	Excluded	Exclusion Justification
Scope 1	Company owned vehicles	Refrigerant leakage	Currently no data availability for measurement or estimation.
Scope 2 (location-based)	Purchased electricity from both managed contracts and landlord-controlled contracts	None	Not applicable
Scope 2 (market-based)	Company owned electric vehicles	None	Not applicable
Scope 3 emissions (upstream)			
Category 1: Purchased goods and services	<ul style="list-style-type: none"> • Services to buildings and landscape • Computer programming and consultancy • Wearing apparel • Machinery and equipment • Management consulting services 	<ul style="list-style-type: none"> • Taxes • Insurance excesses, charges, premiums and prepayments • GIT payments • Rental or Hire Fees, including MHE spot hire & car hire • Charges or Fines • Internal transfers between Gregory Group undertakings 	<p>Spend on taxes, insurance excesses, etc., is not directly related to a tangible good or service that has an associated carbon footprint.</p> <p>Spend associated with the cost of hire or rental of equipment is dictated by market forces, therefore is not an accurate representation of the carbon footprint.</p>
Category 2: Capital goods	<ul style="list-style-type: none"> • Construction work • Services to buildings and landscape • Computer and electrical products • Vehicles, MHE, FLT, trailers 	Purchase of land	The price of land is dependent on external market forces, therefore, spend is not an accurate measurement of its carbon footprint.
Category 3: Fuel- and energy-related activities (not included in scope 1 or scope 2)	<ul style="list-style-type: none"> • Upstream emissions of purchased fuels • Upstream emissions of purchased electricity • Transmission & distribution losses • Generation of purchased electricity that is sold to end users 	None	Not applicable

Category 4: Upstream transportation and distribution	<ul style="list-style-type: none"> • Subcontractor spend • Ferry travel 	None	Not applicable
Category 5: Waste generated in operations	<ul style="list-style-type: none"> • Disposal in a landfill • Recovery for recycling • Incineration • Composting • Wastewater treatment 	Hazardous/Clinical waste in the Biffa waste report.	This was excluded as it was judged to be immaterial. The report shows 0kg weight & a £600 cost.
Category 6: Business travel	<ul style="list-style-type: none"> • Employee-owned vehicles • Accommodation • Air travel • Rail travel 	Cost of car hire	Spend associated with the cost of hire or rental of equipment is dictated by market forces, therefore is not an accurate representation of the carbon footprint.
Category 7: Employee commuting	<ul style="list-style-type: none"> • Cars • Motorbikes • Walking • Bicycle • Public Transport 	Teleworking	Data on the frequency which employees work remotely has not been captured. Also, as the Group report electricity emissions using the market-based methodology, this method is impractical for teleworking emissions.
Category 8: Upstream leased assets	Not applicable	Not applicable	The emissions associated with upstream leased assets are already included within scope 1 and 2.
Other	Not applicable	Not applicable	Not applicable
Scope 3 emissions (downstream)			
Category 9: Downstream transportation and distribution	Not applicable	Not applicable	This category is not deemed relevant to the organisation
Category 10: Processing of sold products	Not applicable	Not applicable	This category is not deemed relevant to the organisation.
Category 11: Use of sold products	Not applicable	Not applicable	This category is not deemed relevant to the organisation. The emissions associated with the use of data centres are included within category 1, purchased goods and services or scope 1 or 2 emissions.
Category 12: End-of-life treatment of sold products	Not applicable	Not applicable	The organisation do not manufacture any products that require end of life treatment
Category 13: Downstream leased assets	Not applicable	Not applicable	The organisation do not lease any assets out to other organisations that would not already be included within scope 1 and 2 emissions.
Category 14: Franchises	Not applicable	Not applicable	The organisation do not have any franchises.

Category 15: Investments	Not applicable	Not applicable	The organisation do not have any investments.
Other	Not applicable	Not applicable	Not applicable