

Carbon Balance Sheet 2024

Produced for Stelrad Group PLC

By Inspired ESG

April 2025



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Introduction

This report contains Stelrad Group PLC (Stelrad)'s Carbon Balance Sheet of Scope 1, 2 and 3 emissions for 2024 (1st January 2024 – 31st December 2024). This is Stelrad's Year 3 Carbon Balance Sheet and as such, contains a comparison between Stelrad's 2023 and 2024 emissions.

Until recently, most companies have focused on measuring emissions from their own operations and electricity consumption (Scope 1 and 2), whereas Scope 3 accounts for the greenhouse gas (GHG) emissions associated with a company's entire value chain. This Carbon Balance Sheet reports Stelrad's full Scope 1, 2 and 3 GHG emissions footprint and:

- 1. Enables Stelrad to identify the material emissions sources in its overall value chain and where it can make the most significant impact on global emission reductions.
- 2. Provides a Scope 1, 2 and 3 GHG inventory which is compliant with the Science Based Targets initiative (SBTi) near-term criteria and net-zero standard
- 3. Covers the five Scope 3 emissions categories required in the UK Government's Procurement Policy Note 06/21: Taking account of Carbon Reduction Plans.
- 4. Provides a consistent way to report and measure progress year on year.

Key Findings

Stelrad's total greenhouse gas emissions (Scopes 1, 2 and 3) (Location-based) were 390,504 tCO₂e.

Stelrad's total greenhouse gas emissions (Scopes 1, 2 and 3) (Market-based) were 381,036 tCO₂e.

Stelrad's total greenhouse gas emissions (Location-based) decreased by 16.5% between 2023 and 2024.

Scope 1 and 2 emissions (Location-based) represent 5.6% of total emissions.

Scope 1 emissions increased by 1.7% and Scope 2 (Location-based) emissions decreased by 2.1%.

Scope 3 emissions represent 94.4% of total emissions.

The decrease in Scope 3 emissions was mainly driven by a decrease in Scope 3 Category 1 (Purchased Goods and Services) and Category 7 (Employee Commuting), which decreased by 18.3% and 47.4%, respectively.

The most significant Scope 3 emissions source is from the use of products that Stelrad sells. This Scope 3 category accounted for 87.7% of the company's total carbon footprint.

Emissions embedded in purchased goods and services, and from upstream transportation and distribution, are also significant contributors to Scope 3 emissions.

Scope 1 and 2 emissions are within your direct control, and a mix of energy efficiency measures, on-site generation and green energy procurement will enable the company to reduce these emissions over time.

Scope 3 emissions will be addressed through engagement with suppliers and customers.

Improved data was collected and used for Scope 3 – Categories 1, 4, 7 and 9 calculations.

Emissions Footprint Summary

This Carbon Balance Sheet contains Stelrad's full greenhouse gas (GHG) emissions inventory for 1st January 2024 - 31st December 2024.

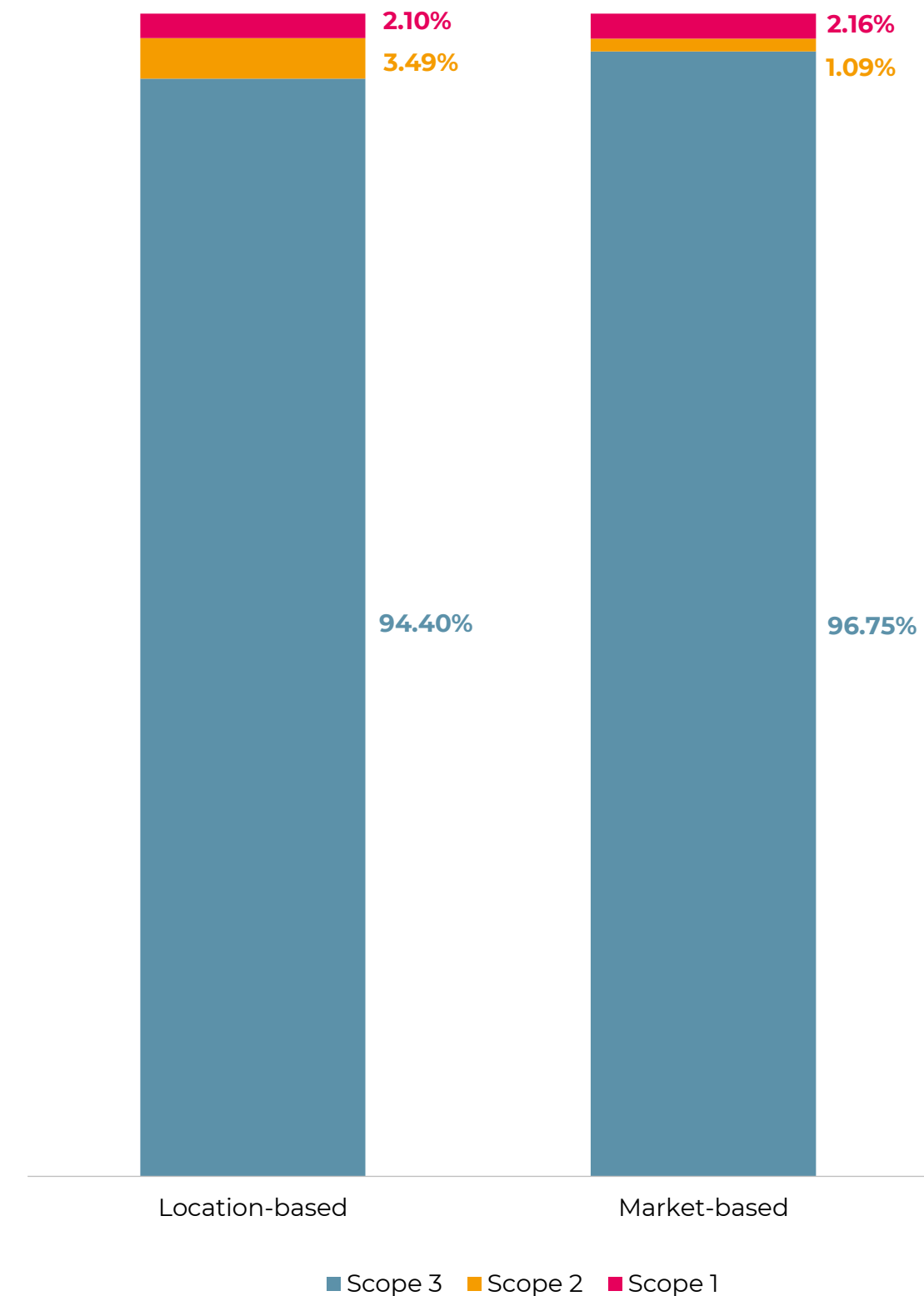
Stelrad's emissions are reported on a consolidation, operational control approach, as defined by the GHG Protocol. All emissions have been calculated following the GHG Protocol's Corporate Accounting and Reporting Standard. All seven greenhouse gases defined by the Kyoto Protocol have been accounted for and reported on a tonnes of carbon dioxide equivalent (tCO₂e) basis.

Table 1: Emissions summary.

Emissions Scope	2024 GHG Emissions tCO ₂ e	2023 GHG emissions tCO ₂ e
Scope 1	8,213	8,073
Scope 2 (Location-based)	13,637	13,928
Scope 2 (Market-based)	4,169	4,049
Scope 3	368,654	445,516*
Total GHG emissions (Location-based)	390,504	467,517
Total GHG emissions (Market-based)	381,036	457,638

*2023 Scope 3 emissions have been restated to incorporate the additional data received.

Figure 1: 2024 Emissions breakdown by scope and Scope 2 reporting method.



Carbon Balance Sheet 2024

Table 2: Carbon balance sheet.

Emissions Scope & Scope 3 Category	Greenhouse Gas Emissions Inventory	
	2024 GHG Emissions tCO ₂ e	%
Scope 1	8,213	2.10%
Natural Gas	7,627	1.95%
Transport	514	0.13%
Other Fuels	72	0.02%
Scope 2 (Location-based)	13,637	3.49%
Scope 2 (Market-based)	4,169	1.07%
Scope 3	368,654	94.40%
1. Purchased Goods & Services	347,297	88.94%
2. Capital Goods	2,262	0.58%
3. Fuel- and Energy-related Activities	7,145	1.83%
4. Upstream Transportation and Distribution	8,023	2.05%
5. Waste Generated in Operations	99	0.03%
6. Business Travel	267	0.07%
7. Employee Commuting	808	0.21%
8. Upstream Leased Assets	N/A	N/A
9. Downstream Transportation and Distribution	276	0.07%
10. Processing of Sold Products	N/A	N/A
11. Use of Sold Products	37,935,746	-
12. End-of-life Treatment of Sold Products	2,478	0.63%
13. Downstream Leased Assets	N/A	N/A
14. Franchises	N/A	N/A
15. Investments	N/A	N/A
Total emissions (Location-based)	390,504	100%
Total Emissions (Market-based)	381,036	97.58%
All tCO₂e (Location-based) per Revenue (£m)	1.3	

Operational Analysis
Operational Emissions tCO ₂ e
8,213
7,627
514
72
13,637
4,169
23,296
4,692
2,262
7,145
8,023
99
267
808
45,145
35,678
0.2

Product Analysis
Product related Emissions tCO ₂ e
8,213
7,627
514
72
13,637
4,169
353,480
342,605
8,023
99
276
2,478
375,330
365,862
1.3

Comparison
2023 GHG Emissions tCO ₂ e
8,073
7,390
613
70
13,928
4,049
445,516*
425,113
1,858
4,344
8,728
163
205*
1,536
512
35,017,277
3,056
467,517
457,638
1.5

GHG Inventory

This follows the GHG protocol guidance and accounts for all operational and value chain associated with a company. The Scope 3 inventory is divided into the 15 categories established by the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting & Reporting Standard). Not all categories are applicable to every business. All applicable categories have been quantified.

Operational analysis

This section comprises all Scope 1, 2 and 3 emissions associated with the day to day running of the business. Therefore, emissions associated with the upstream and downstream aspects of sold products are not included in this section.

Product analysis

This section contains all emissions associated with the production of products Stelrad sells. This includes upstream emissions associated with raw materials, processing / manufacturing emissions, upstream and downstream transportation, product usage and end of life treatment.

Scope 3 – Category 11

The Use of Sold Products represents the emissions related to energy consumption of radiators. 2,134,222 tCO₂e of total Category 11 emissions are from electric radiators, while the remaining 35,801,524 tCO₂e are from radiators heated by gas boilers.

*2023 Scope 3 emissions have been restated to reflect the additional Business Travel data and electric radiator sales.

Emissions per Subsidiary

Table 3: emissions per Subsidiary.

Emissions Scope and Scope 3 Category	Group Total	Stelrad Ltd (UK)	Continental	Radiators SpA	Termo Teknik	Hudevad	Caradon Polska
Scope 1	8,213	1,025	1,171	2,158	3,763	39	56
Natural Gas	7,627	887	1,054	2,106	3,570	4	6
Transport	514	100	117	52	171	35	39
Other Fuels	72	38	0	0.5	22	0	11
Scope 2 (Location-based)	13,637	1,029	1,340	2,276	8,969	4	18
Scope 2 (Market-based)	4,169	3	3	4,163	0	0	0
Scope 3	368,654	43,773	24,748	49,335	249,442	857	499
1: Purchased Goods and Services	347,297	39,620	22,132	44,987	239,857	625	75
2: Capital Goods	2,262	788	174	245	1,028	1	25
3: Fuel-related Emissions	7,145	517	637	1,086	4,871	14	19
4: Upstream Transportation and Distribution	8,023	1,722	987	2,022	2,945	59	289
5: Waste Generated in Operations	99	5	1	82	9	1	0.03
6: Business Travel	267	76	37	63	82	8	0.4
7: Employee Commuting	808	138	176	406	32	38	18
8: Upstream Leased Assets	-	-	-	-	-	-	-
9: Downstream Transportation and Distribution	276	48	42	153	6	26	0
10: Processing of Sold Products	-	-	-	-	-	-	-
11: Use of Sold Products	37,935,746	13,470,241	6,525,126	5,560,734	10,626,698	575,090	1,177,858
12: End-of-life Treatment of Sold Products	2,478	860	560	290	611	84	73
13: Downstream Leased Assets	-	-	-	-	-	-	-
14: Franchises	-	-	-	-	-	-	-
15: Investments	-	-	-	-	-	-	-
Total All Scopes (Location-based)	390,504	45,827	27,259	53,769	262,174	901	574
Total All Scopes (Market-based)	381,036	44,802	25,922	55,656	253,204	897	555
All tCO₂e (Location-based) per Revenue (£m)	1.3	0.4	0.4	1.2	2.0	0.1	-

Emissions Analysis

Stelrad's highest source of emissions is from the direct energy use of its electrical radiators that produce over 2 million tCO₂e over their 33-year lifespan. On average, this equates to 11.3 tCO₂e per radiator.

Radiators sold in the UK and Netherlands have the lowest emissions, due to the volume of units sold and the lower grid emissions in these countries. On the other hand, radiators sold in Italy have the highest emissions, driven by higher grid emissions and the number of electric radiator sales. The decarbonisation of each country's national grid will help to reduce these emissions over time.

The Scope 3 Category 1: Purchased Goods and Services includes emissions from resold products, as well as emissions embedded in all products and services purchased by Stelrad.

Table 4: Top 5 emissions categories.

Materiality Rank	GHG Emissions Scope / Category
1	Category 1. Purchased Goods and Services
2	Scope 2 (Location-based)
3	Scope 1
4	Category 4. Upstream Transportation and Distribution
5	Category 3. Fuel- and Energy-related Activities

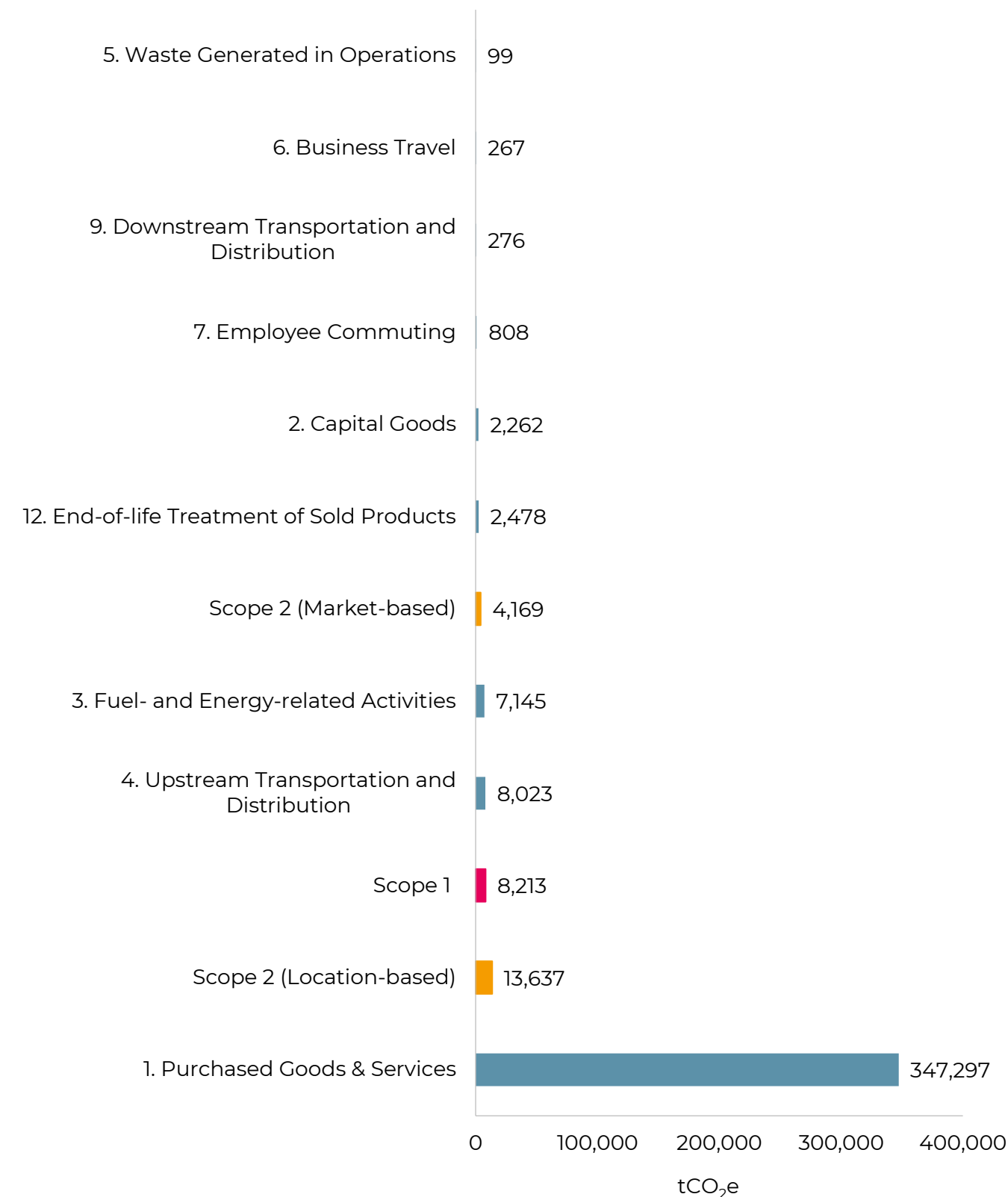
The purchase of materials for resold products, primarily steel, contributes 342,605 tCO₂e. This accounts for 87.7% of the Group's total emissions, a decrease of 18.5% compared to 2023 primarily due to updates to the DEFRA emission factors and incorporation of more supplier-specific data. Other purchased goods and services make up just 1.2% of Category 1 emissions, there has been a 3.2% increase compared to the previous year.

Scope 2 (location-based) emissions are the next largest source of emissions. As a global business, Stelrad has multiple sites across Europe requiring electricity. Therefore, electricity emissions are a notable contributor to total emissions. The continued efforts to switch to 100% renewable contracts will reduce market-based emissions.

Scope 1 emission source accounts for 2.1% of total emissions, of which the majority results from natural gas consumption.

Third-party transport and distribution, both paid for by Stelrad and paid for by others, account for 2.1% of total emissions, which is a decrease of 8.1% in Category 4 emissions. This is due to decreased spend on postal services across most subsidiaries. Engagement with logistics providers to consolidate journeys and switch to alternative fuels where available will help to reduce these emissions further.

Figure 2: Emissions by Scope and Category.



Year-on-year comparison

This is the third year Stelrad Group PLC has quantified its full Scope 1, 2 and 3 GHG inventory. Overall, Stelrad's emissions decreased by 16.5%, driven by a decrease in Scope 3 - Category 1 (Purchased Goods and Services), Category 7 (Employee Commuting) and Category 4 (Upstream Transportation and Distribution) emissions. Stelrad's Scope 1 emissions increased by 1.7% between 2023 and 2024. Scope 2 emissions (Location-based) decreased by 2.1%.

Figure 3: Stelrad's 2024 vs 2023 GHG emissions footprint.

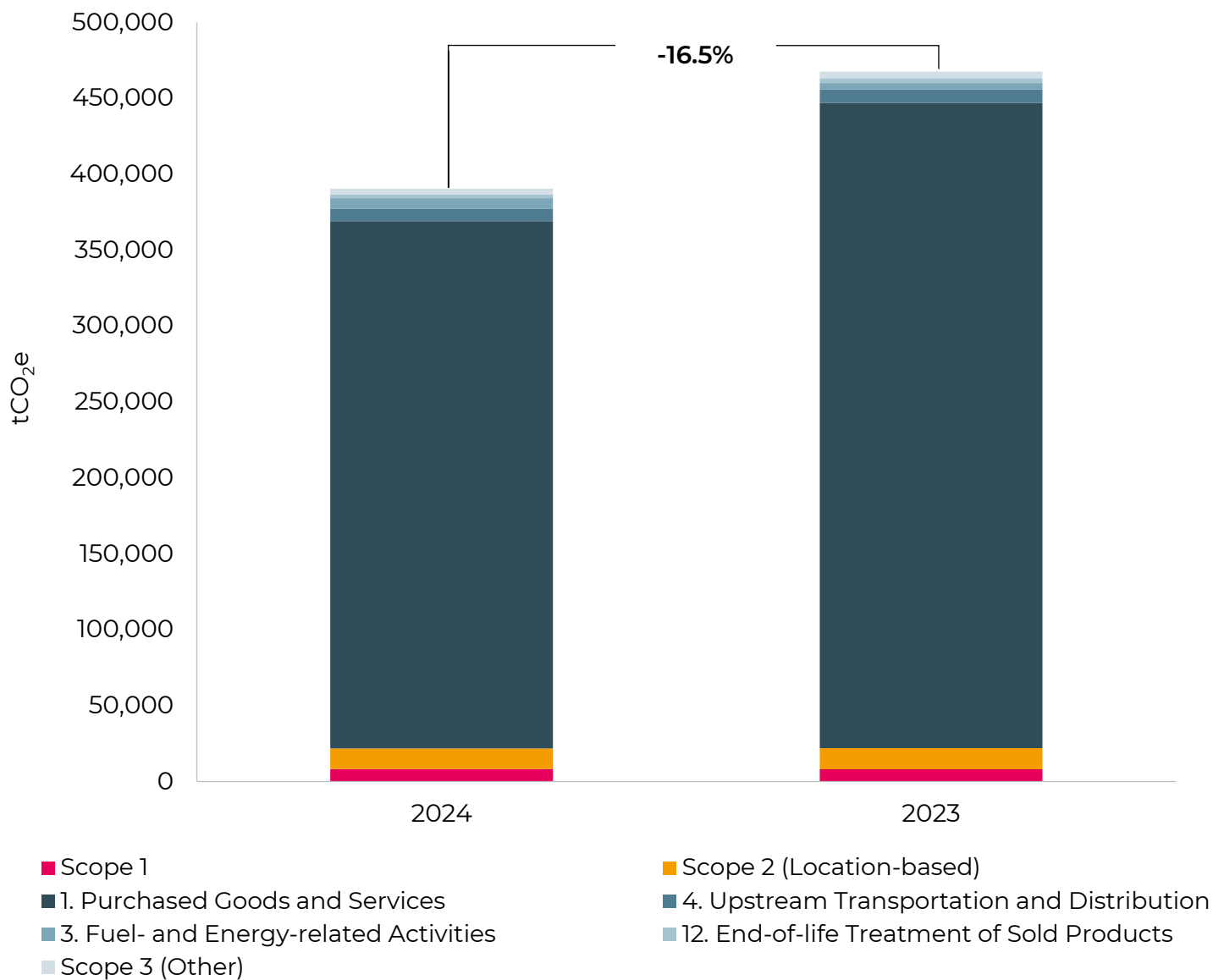


Table 5: Explanation of 2023 to 2024 changes (% and absolute).

GHG Emissions Scope / Category	% change	tCO ₂ e change	Explanation
Scope 1	+1.7%	+140	An increase in the kWh of natural gas used.
Scope 2 (Location-based)	-2.1%	-292	Although the kWh consumption has slightly increased the overall emissions decreased due to grid decarbonisation.
Scope 2 (Market-based)	+3.0%	+120	An increase in Italy's market-based emissions factor.
1. Purchased Goods and Services	-18.3%	-7,7816	Updated DEFRA emission factors and more supplier-specific emission factors.
2. Capital Goods	+21.7%	+404	Increased spending on capital goods.
3. Fuel- and Energy-related Activities	+64.5%	+2,801	Updated emissions factors.
4. Upstream Transportation and Distribution	-8.1%	-705	Decreased spend on shipping services.
5. Waste Generated in Operations	-39.4%	-64	Updated emissions factors.
6. Business Travel	+29.8%	+61	Increased spend on business travel, particularly on flights and hotel stays. In Turkey, train and car emissions saw a notable increase due to significant recruitment throughout 2024, with the number of employees growing by c.100.
7. Employee Commuting	-47.4%	-728	Improved data accuracy. Employee commuting surveys conducted by all subsidiaries in 2024.
9. Downstream Transportation and Distribution	-46.2%	-237	Improved data accuracy with more weight and distance data available for the shipments.
11. Use of Sold Products	+8.3%	+2,918,469	Sales of radiators heated by gas boilers have increased. Although sales of electrical radiators have slightly decreased, emissions have increased due to Italy 2024 electricity emission factor increasing.
12. End-of-life Treatment of Sold Products	-18.9%	-579	A decrease in weight of sold radiators.

Methodology

The following table sets out the applicability of each category, data sources and an overview of the methodology followed for Scope 3 calculations. Unless stated otherwise, all conversion factors are sourced from UK Government (DESNZ) GHG Conversion Factors for Company Reporting, v1.1 2024, and include Scope 3 Well to Tank and T&D losses.

The Greenhouse Gas Protocol Value Chain methodology is followed in all cases. Well to Tank refers to the emissions associated with extracting raw materials (e.g. oil and gas), processing them into fuels and transporting them to the point of use (e.g. the fuel tank or the power station). Transmission & Distribution (T&D) losses represent the electricity consumed and lost in the network between the power generators and the consumers.

Restatement Policy

In line with the Greenhouse Gas (GHG) Protocol and Science Based Target initiative (SBTi) guidance, Stelrad will recalculate baseline and historic emissions when significant changes occur in company structure or methodology in order to maintain data integrity over time.

A $\pm 5\%$ variation in baseline target boundary emissions due to the following changes will trigger a restatement:

- Structural Changes: Ownership or control transfers of emissions-generating activities .
- Methodological Changes: Updates in calculation methods or improved accuracy of emission factors affecting base-year emissions significantly.
- Error Discovery: Significant errors, or a series of cumulative errors that are collectively significant.

Stelrad may also adjust for changes under 5%, particularly for significant structural changes. This policy will evolve with updates from the GHG Protocol and SBTi.

Table 7: Methodology, data sources, quality rating and recommendations.

Emissions Category	Data Source(s)	Method Comments	Data Quality Rating
Scope 1	Gas invoices Fuel consumption data in milage or litres	<p>Activity-based approach</p> <ul style="list-style-type: none"> The Scope 1 and 2 CO₂e emissions data has been calculated using the GHG Protocol – A Corporate Accounting and Reporting Standard (World Business Council for Sustainable Development and World Resources Institute, 2004); Greenhouse Gas Protocol – Scope 2 Guidance (World Resources Institute, 2015); ISO 14064-1 and ISO 14064-2 (ISO, 2018; ISO, 2019a); Environmental Reporting Guidelines: Including Streamlined Energy and Carbon Reporting Guidance (HM Government, 2019). DESNZ 2024 factors have been used, utilising the published kWh gross calorific value (CV) and kgCO₂e emissions factors. 	High
Scope 2 – Location-based	Electricity Invoices	<ul style="list-style-type: none"> A location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data). DESNZ 2024 factors have been used for UK consumption and Carbon Footprint factors used for international consumption, utilising the published kWh gross calorific value (CV) and kgCO₂e emissions factors. 	High
Scope 2 – Market-based	Electricity Invoices	<ul style="list-style-type: none"> A market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice). It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims. Market-based emissions are reported in tCO₂ only. Market-based emissions in this report have been calculated using the REGO-backed electricity contract and residual grid factor emissions factors. 	High

Table 7 continued

Scope 3 Category	Applicable	Data source/s	Method comments	Data quality rating
1: Purchased Goods and Services	Yes	Quantity and weight of purchased goods. Opex data	Hybrid approach using spend and activity-based methodologies. Average-data approach <ul style="list-style-type: none"> Where supplier-specific emission factors per tonne of steel were available, these were used. The weight of other purchased materials was converted into emissions using the DESNZ 2024 factors for virgin material use. Spend-based approach <ul style="list-style-type: none"> Opex. spend converted into £ value of year of conversion factors using Bank of England inflation calculator. Emissions calculated using converted spend and spend-based emissions factors from DEFRA 	Medium
2. Capital Goods	Yes	Capex. data, bucketed into categories	Spend-based approach <ul style="list-style-type: none"> Capex. spend converted into £ value of year of conversion factors using Bank of England inflation calculator. Emissions calculated using converted spend and spend-based emissions factors from DEFRA. As data was available for only 11 months of the reporting period, the total emissions calculated for these months were extrapolated to estimate emissions for the missing month. 	Low
3. Fuel- and Energy-related Activities	Yes	Electricity, gas and transport fuel consumption data from SECR	Average-data approach <ul style="list-style-type: none"> Includes Well-to-Tank and T&D losses from direct (Scope 1) and indirect (Scope 2) energy consumption. For natural gas, other fuels and transport fuel consumption, the WTT emissions factors as published by the UK Government were applied to calculate Category 3 emissions. For electricity consumption, the transmission and distribution (T&D), WTT – generation and WTT – T&D emissions factors were applied to calculate category 3 emissions. These losses from other sources are included in their respective categories. Where available, county specific factors were applied to the fuel and energy consumption. 	Medium
4. Upstream Transportation and Distribution	Yes	Estimated distance / tonnage per km data of transported goods. Spend on postage.	Hybrid approach using spend and activity-based methodologies. Distance-based approach <ul style="list-style-type: none"> Milage, km or tonnage per km data converted to tCO₂e using relevant emissions factors from the DESNZ 2024 emissions factors conversion database. It was assumed transportation took place via diesel fuelled heavy goods vehicles, container ships or freight flights. Spend-based approach <ul style="list-style-type: none"> Spend on transportation services converted into £ value of year of conversion factors using Bank of England inflation calculator. Emissions calculated using converted spend and spend-based emissions factors from DEFRA. 	Low

Table 7 continued

Scope 3 Category	Applicable	Data source/s	Method comments	Data quality rating
5. Waste Generated in Operations	Yes	Categorised waste from waste notes	Hybrid approach using spend and activity-based methodologies. Waste-type-specific approach <ul style="list-style-type: none"> DESNZ 2024 emissions factors for specified types of disposed material and specified disposal routes (recycling, energy recovery/combustion, landfill) used to calculate emissions. 	Medium
6. Business Travel	Yes	Travel and accommodation spend	Spend-based approach <ul style="list-style-type: none"> Assumptions made on the average cost of a mile per transport mode in order to estimate the total distance travelled by each transport mode. Assumptions made on average cost of hotel stay in order to estimate number of nights of hotel usage. Distances and hotel stays converted to emissions using DESNZ 2024 emissions factors. 	Low
7. Employee Commuting	Yes	Employee commuting questionnaire results FTE number	Distance-based approach <ul style="list-style-type: none"> Employee survey used to collect distance travelled, transport type and frequency. Annual emissions calculated for each employee that responded to survey. Results extrapolated to account for full number of employees. Average emissions from the employee surveys were applied to account for all FTEs. 	Medium
8. Upstream Leased Assets	No – leased assets accounted for in Scope 1 and 2.		N/A	
9. Downstream Transportation and Distribution	Yes	Volume of products sold per customer, distance travelled and transport type	Hybrid approach using spend and activity-based methodologies. Distance-based approach <ul style="list-style-type: none"> Weight of product, distance travelled and transport mode used to calculate emissions of known journeys. It was assumed transportation took place via diesel-fuelled heavy goods vehicles or container ships. Spend-based approach <ul style="list-style-type: none"> Spend on transportation services converted into £ value of the year of conversion factors using the Bank of England inflation calculator. Emissions calculated using converted spend and spend-based emissions factors from DEFRA. 	Low

Table 7 continued

Scope 3 Category	Applicable	Data source/s	Method comments	Data quality rating
10. Processing of Sold Products	No – finished products sold		N/A	
11. Use of Sold Products	Yes	Quantity and kW item name of products sold	Average-data based approach <ul style="list-style-type: none"> For product categories that consume energy during use, i.e. electrical radiators, product lifetime kWh consumption was calculated using estimated average product wattage, estimated daily hours use per day, number of days used per year and estimated product lifespan. A 33-year lifespan was assumed, based on the information provided. Total kWh consumption was calculated by multiplying each product's lifespan kWh consumption by the number of units sold. It was assumed that radiators were used in the country they were sold, using country-specific heating patterns. 	Low
12. End-of-life Treatment of Sold Products	Yes	Quantity, weight and item name of products sold. Product packaging weight and type.	Average-data based approach <ul style="list-style-type: none"> The total mass of radiators being disposed of was used to calculate the weight of steel, plastic, paper/card and other (e.g. paint) using a 96.2%, 0.7%, 2.7% and 0.6% split, respectively. The disposal method was assumed using average recycling rates for steel, plastics and paper. 	Low
13. Downstream Leased Assets	No – no downstream leased assets		N/A	
14. Franchises	No – no franchises		N/A	
15. Investments	No – no financial investments or joint ventures		N/A	

Glossary

Adjusted Spend: Adjusting the provided spend values for the baseline year 2020 to the year of the spend-based DEFRA databases (2018/2011). This adjusted value is used to calculate the associated carbon emissions.

Carbon dioxide (CO₂): a greenhouse gas that enters the atmosphere through burning fossil fuels (coal, natural gas, and oil), solid waste, trees and other biological materials, and also as a result of certain chemical reactions (e.g., cement production).

Carbon Neutral: Carbon neutral means an organisation has purchased an equivalent number of compensatory measures, such as carbon offsets and green energy certificates, to neutralize their GHG emissions.

Carbon Offsets: Investing in voluntary carbon offsets funds low-carbon projects that replace high emitting alternatives. Carbon offsets can be used to compensate for the emissions produced by a company.

Embodied Emissions: Embodied emissions are emissions associated with the cradle to gate manufacture of products, for example emissions produced through extraction of raw materials, transportation of material and manufacturing processes.

Fluorinated gases: Hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride are synthetic, powerful greenhouse gases that are emitted from a variety of household, commercial, and industrial applications and processes.

Greenhouse gas (GHG): are gases that trap heat in the atmosphere.

GHG Protocol: The Greenhouse Gas Protocol is the most widely used standards for calculating greenhouse gas (GHG) emissions.

Global warming potential: (GWP) GWP is a measure of how much energy the emissions of 1 ton of a gas will absorb over a given period of time, relative to the emissions of 1 ton of carbon dioxide (CO₂). The larger the GWP, the more that a given gas warms the Earth compared to CO₂ over that time period.

Kyoto Protocol: the Kyoto Protocol operationalises the UN Framework Convention on Climate Change by committing industrialised countries and economies in transition to limit and reduce greenhouse gases (GHG) emissions in accordance with agreed individual targets. There are seven GHGs that are required to be reported under the Kyoto Protocol: Carbon dioxide (CO₂), Methane (CH₄), Nitrous oxide (N₂O), Hydrofluorocarbons (HFCs), Perfluorocarbons (PFCs), Sulphur hexafluoride (SF₆) and Nitrogen trifluoride (NF₃).

Location-based emissions: Methodology to calculate scope 2 emissions using the average grid emissions factor of a region.

Market-based emissions: Methodology to calculate scope 2 emissions using emissions factors specific to the contractual instruments in place.

Methane (CH₄): a greenhouse gas emitted during the production and transport of coal, natural gas, and oil. Methane emissions also result from livestock and other agricultural practices, land use, and by the decay of organic waste in municipal solid waste landfills.

Net-zero: net-zero requires a concerted effort over time to eliminate GHG emissions, with compensatory measures as a final step for any emissions that can't be reduced. The SBTi net-zero standard requires a 90% reduction in emissions prior to any residual offsets, up to 10% of the baseline, being offset using carbon removal offsets.

Nitrous oxide (N₂O): a greenhouse gas emitted during agricultural, land use, and industrial activities; combustion of fossil fuels and solid waste; as well as during treatment of wastewater.

SBTi: The Science Based Targets initiative (SBTi) is the internationally recognised body for validating emissions reduction targets that are in line with the latest climate science.

Scope 1: Emissions from gas usage and transportation fuels (under the company's control).

Scope 2: Emissions associated with the consumption of purchased electricity. Are presented on both a location based (using country average electricity emission factors) and market based (taking into account any purchased renewable generated electricity) approach.

Scope 3: Company's value chain emissions, divided into 15 categories, as established by the Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting & Reporting Standard.

Sulphur hexafluoride (SF₆): a greenhouse gas that is primarily used in electrical transmission and distribution equipment.

tCO₂: Tonnes of carbon dioxide gas released into the atmosphere. This metric is often used when reporting electricity emissions factors.

tCO₂e: Greenhouse gases have different global warming potentials and are converted to a carbon dioxide equivalent for ease of comparison and reporting.



GHG Protocol – Data Types

The Greenhouse Gas Protocol is the primary, internationally accepted, method for companies to account for their operational and value chain emissions.

According to the GHG Protocol, calculating emissions requires the use of two types of data: activity data and emission factors. “Activity data” is a quantitative measure of an activity that results in GHG emissions (for example, litres of fuel consumed, or kilograms of material purchased). An “emission factor” is a factor that converts activity data into GHG emissions data (for example, kg CO₂ emitted per litre of fuel consumed, or kg CO₂ emitted per kilograms of material produced).

When considering which activity and emissions data to use, there are two types of data that can be used in Scope 3 calculations:

Primary data is data from specific activities within a company’s value chain. It includes data provided by suppliers or others that directly relate to specific activities in that company’s supply chain. For example, when calculating emissions for Scope 3, Category 5 – waste, the weight of waste collected by the disposal company, segregated by waste stream and disposal route.

Secondary data is data that is not from specific activities within a company’s value chain. This includes industry average data (for example, from published databases, government statistics, literature studies and industry associations), proxy data and other generic data that isn’t specific to your business. For example, when calculating emissions for Scope 3, Category 7 – employee commuting, if actual employee commuting patterns are unavailable, Office for National Statistics commuting data can be used instead.

There are a range of methods that can be used for calculating Scope 3 categories, the most common methods include:

- **Supplier-specific:** using supplier-specific emissions factors for goods/ services (primary data).
- **Hybrid:** using a combination of supplier-specific emissions factors (primary data) and industry average emissions factors (secondary data).
- **Average-data:** using industry average emissions factors (secondary data) based on quantities of goods/services used. For example, DESNZ annual emission factors (kgCO₂e/t).
- **Spend-based:** using industry average emissions factors (secondary data) based on spend on goods/services used. For example, DEFRA spend emissions factors (kgCO₂e/£).



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