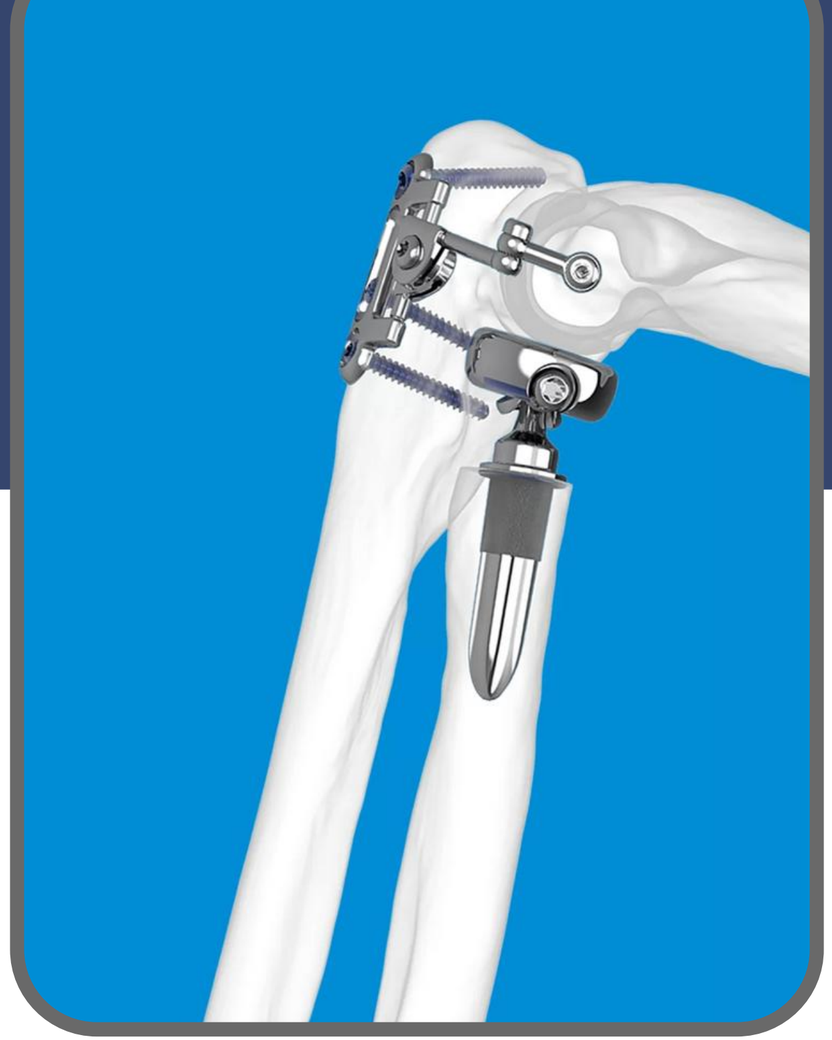
LEDA Orthopaedics

Carbon Footprint Report 2024



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Introduction

Established in 2013 by David Plane and Jonathan Bloy, LEDA Orthopaedics is a distinguished medical device distributor based in the UK. Our core expertise lies in providing innovative and niche trauma implants, hand surgery prostheses, and unique value-added solutions for orthopaedic procedures. Operating from our office and warehouse in Cambridgeshire, we are supported by a dedicated sales and marketing team of 20 professionals spread across the country. We take immense pride in delivering exceptional service to both the NHS and the independent sector, nurturing excellent relationships with clinicians in various orthopaedic specialities nationwide.

In the competitive marketplace of corporate entities and device distributors, LEDA Orthopaedics stands out through our commitment to personalised service and our deep understanding of our customers' needs. As a family-owned business, we prioritise building genuine relationships and providing bespoke solutions. Our "Speed Dial Service" motto epitomises our approach: surgeons can swiftly contact their local representatives, who then coordinate with our warehouse team to ensure immediate dispatch of the required equipment. Our clinical support team is always on hand to assist, ensuring seamless operations for specialist procedures.

Moreover, we are committed to advancing medical education. We offer professional medical educational courses both within the UK and internationally, ensuring that surgeons are thoroughly trained in the use of our products. This commitment not only enhances the practice of orthopaedic surgery but also solidifies our role as a trusted partner in the medical community.

LEDA Orthopaedics prides itself on a corporate culture that emphasises teamwork, dedication, passion, and enjoyment. We believe in fostering an environment where individual flair is appreciated and success is achieved through collaborative effort. Our nimble and proactive approach allows us to swiftly capitalise on emerging opportunities, ensuring we remain at the forefront of the medical device industry.

Our ethos is built on understanding what our customers want from a medical device partner and delivering on those expectations. This customer-centric approach, combined with our extensive industry knowledge and innovative product offerings, enables us to add significant value to the orthopaedic practices we serve.

About This Report

This report contains the carbon footprint of LEDA Orthopaedics Limited for the reporting period Y-2024: 2024-01-01 to 2024-12-31.

The purpose of this report is to disseminate the inventory of greenhouse gas (GHG) emissions with great attention to the accounting principles of relevance, accuracy, consistency, completeness and transparency.

This report is intended for all stakeholders interested in the GHG emissions inventory and the associated reporting structure and explanations.

This report:

- Covers the footprint of the entire organisation: LEDA Orthopaedics Limited.
- Has been prepared in accordance with the requirements of the Greenhouse Gas Protocol reporting standards (Corporate Accounting and Reporting Standard, 2004; Corporate Value Chain Accounting and Reporting Standard, 2011).
- Endeavours to use primary data wherever possible but especially surrounding all major emissions sources. Where primary data is not available, a consistent and conservative approach to calculation is applied.
- Excludes specific targets or forecasts as well as reports on GHG removals and offsets.

The reporting period covered in this document is 2024-01-01 to 2024-12-31. The period of the next iteration of this footprint is expected to be of the same length, starting from the first day following this reporting period. Any deviation from this will be mentioned in communication at the time of publication.

Methodology

This assessment of GHG emissions is compliant with the Greenhouse Gas Protocol, a globally recognised standard jointly developed by the World Resources Institute and the World Business Council for Sustainable Development. The Greenhouse Gas Protocol provides comprehensive, standardised frameworks for quantifying and managing GHG emissions across private and public sector operations, value chains, and mitigation efforts.

Five key accounting principles are central to the Greenhouse Gas Protocol methodology:

01 Relevance

Ensure that the GHG data collection accurately records and presents all relevant emissions from the organisation.

02 Completeness

The calculation captures all emitted GHGs. If any emission sources are omitted, clear and detailed justifications are given.

03 Consistency

The calculations are based on uniform methods. Any changes in data sources, calculation boundaries, or emission factors are always reported.

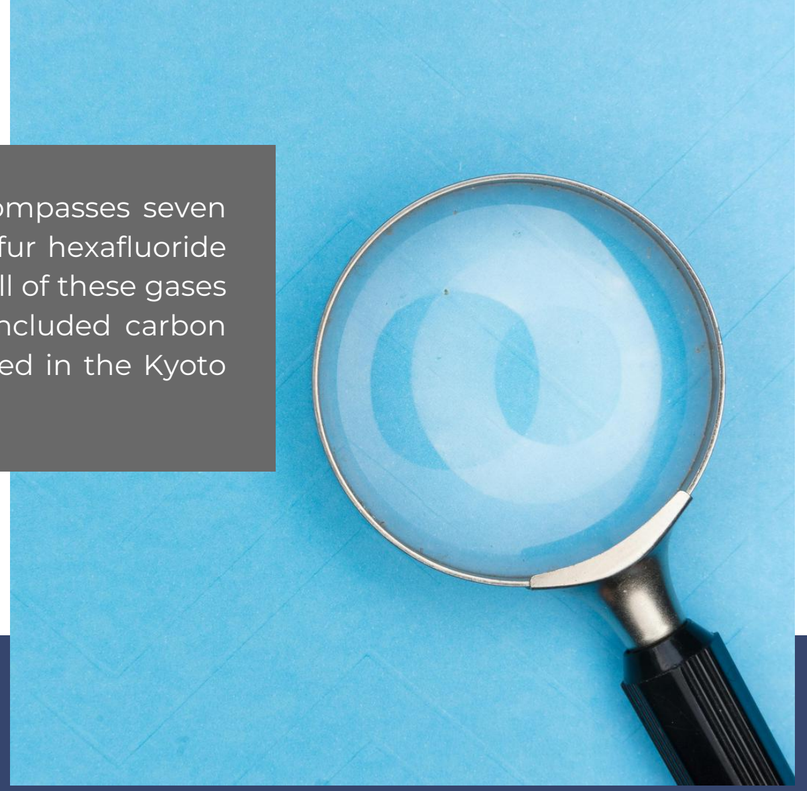
04 Transparency

All collected data is clearly and coherently reported, preferably through an accurate audit scheme. All assumptions on methods, approximations and emission factors are well documented.

05 Accuracy

The quantification of GHG emissions is without systematic overestimation or underestimation, it is tried to reduce uncertainties as much as possible wherever possible.

Following the guidelines of the Greenhouse Gas Protocol, the emissions inventory encompasses seven primary (groups of) GHGs: carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), sulfur hexafluoride (SF_6), nitrogen trifluoride (NF_3), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). All of these gases are considered in-scope. Additionally, emissions out-of-scope are also considered, this included carbon dioxide from biogenic origin ($bioCO_2$) and other greenhouse gases which are not included in the Kyoto Protocol, but still have a well-established global warming effect.



The Greenhouse Gas Protocol classifies emissions into 3 scopes and 21 categories:

Scope 1

Direct GHG emissions originate from sources owned or controlled by the organisation.

Scope 2

Indirect GHG emissions result from purchased electricity and other energy carriers.

Scope 3

Other indirect GHG emissions beyond those covered by Scope 2 that happen elsewhere in the value chain, both upstream and downstream.

These scopes are further subdivided into distinct activity categories. Scope 1 encompassed 4 categories, Scope 2 encompasses 2 categories, and Scope 3 emissions are split into 15 categories, across upstream and downstream. See Figure 1 for a visual summary of this classification across the value chain.

To assess the global warming impact of emissions, the GHGs are evaluated using the Global Warming Potential (GWP) over a 100-year timeframe.

In the subsequent sections, activity categories may be customised in terms of naming, order, and further subdivision to enhance transparency and comparability within the organisation; in accordance with the Greenhouse Gas Protocol accounting principles. However, to ensure standardisation and analysis across industries, each activity category remains directly linked to one of the standard Greenhouse Gas Protocol activity category types. Detailed descriptions of each activity category and their corresponding Greenhouse Gas Protocol references can be found in Section 4.

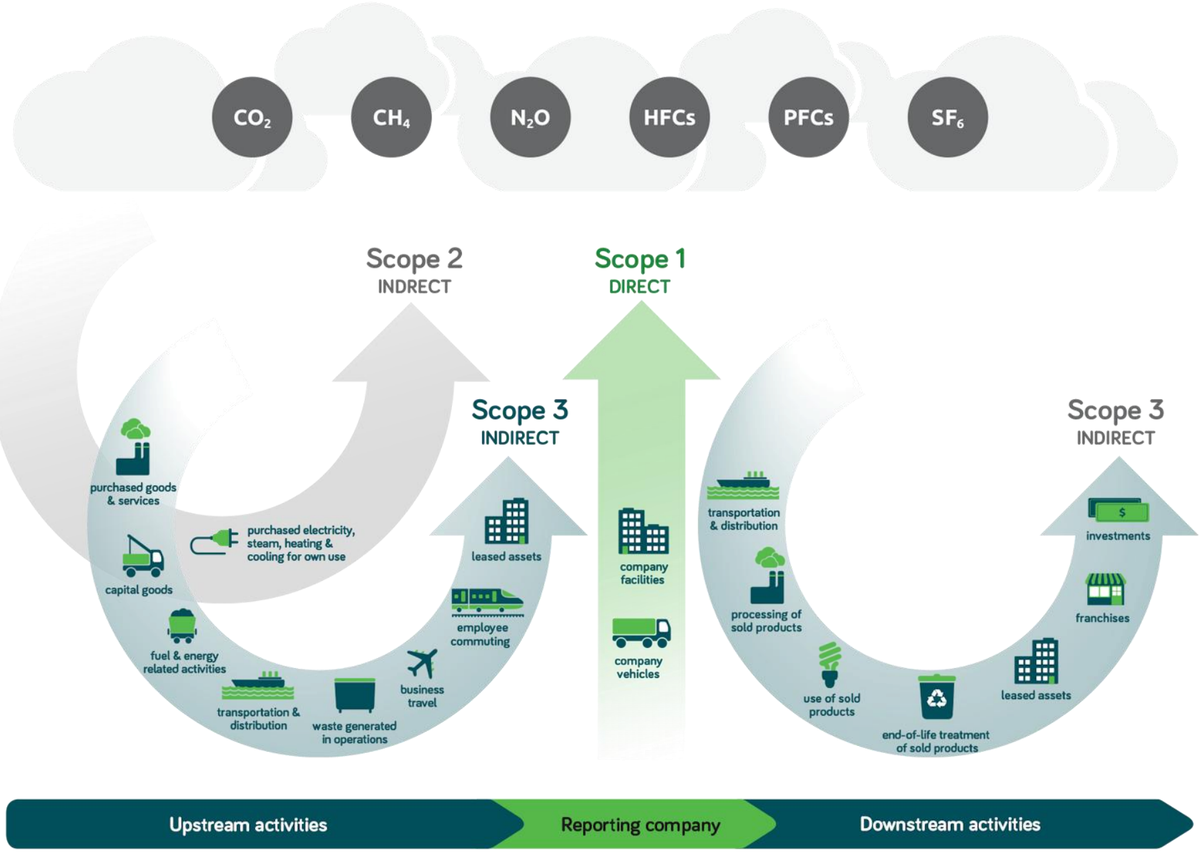
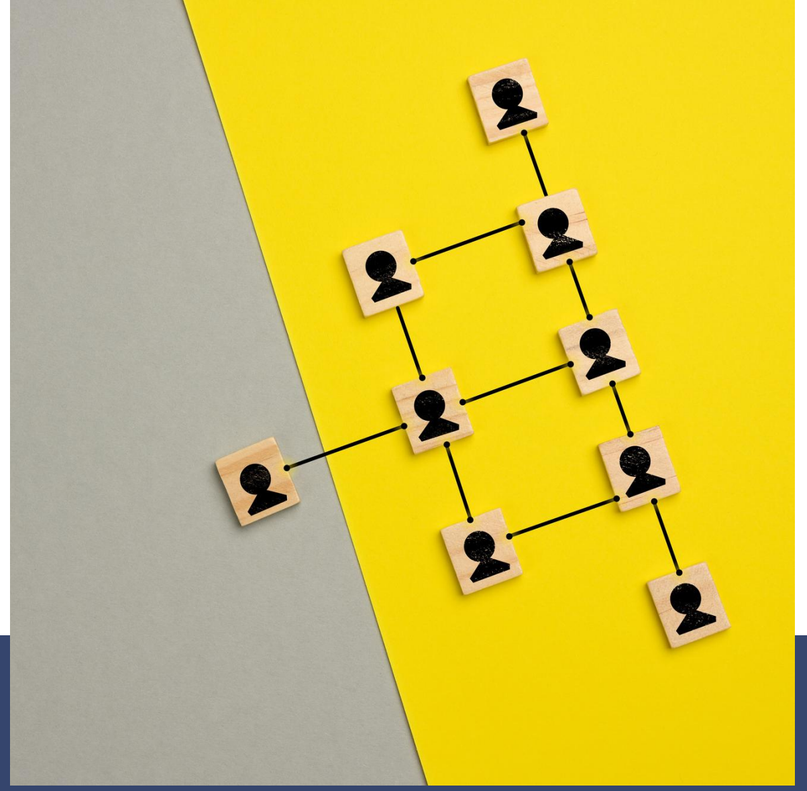


Figure 1: Overview of Greenhouse Gas Protocol scopes and activity categories across the value chain. Adapted from the Greenhouse Gas Protocol Corporate Value Chain Accounting and Reporting Standard.

Organisational Boundaries



The organisational boundaries for this report were set using the operational control approach for consolidation. Under this approach, the organisation accounts for 100% of the GHG emissions from operations and the value chain over which it has operational control. Operational control applies when the organisation or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation.
This consolidation approach applies to all units and subunits.

Operational Boundaries

Details on the description of the activity categories, as well as their rationale to include and their respective Greenhouse Gas Protocol references, can be found in the tables below.

Direct		
Stationary Combustion	Description Rationale to Include	Emissions resulting from combustion of fuels in stationary sources Directly related to the organisation's operations
	GHG Protocol Reference	1.1 Stationary combustion
Mobile Combustion	Description	Emissions resulting from the combustion of fuels in company owned/controlled mobile combustion sources
	Rationale to Include	Directly related to the organisation's operations
	GHG Protocol Reference	1.2 Mobile combustion
Electricity		
Electricity	Description	Emissions resulting from the generation of electricity, purchased by the company
	Rationale to Include	Major source of indirect emissions
	GHG Protocol Reference	2.1 Purchased electricity

Upstream		
Goods & Services	Description	Embedded emissions in purchased goods and services
	Rationale to Include	Important overview of major indirect emissions sources in the supply chain
	GHG Protocol Reference	3.1 Purchased goods and services
Energy Supply	Description	Embedded emissions in the purchase of fuels and energy in other activity categories
	Rationale to Include	Reflects important upstream emissions coupled with the organisations fuel and energy use
	GHG Protocol Reference	3.3 Fuel- and energy-related activities
Transport Upstream	Description	Emissions related to the transport of goods upstream of the production process or any transport purchased by the company
	Rationale to Include	Reflects the indirect carbon footprint of logistics in the value chain
	GHG Protocol Reference	3.4 Upstream transportation and distribution
Waste	Description	Emissions related to the disposal and processing of waste generated in operations
	Rationale to Include	Important indicator for impact of waste streams
	GHG Protocol Reference	3.5 Waste generated in operations
Business Travel	Description	Emissions related to transportation of employees for business-related activities
	Rationale to Include	Important for understanding and managing travel-related emissions
	GHG Protocol Reference	3.6 Business travel
Commuting	Description	Emissions related to commutes of employees in vehicles not under control of the company
	Rationale to Include	Important for understanding and managing employee commuting emissions
	GHG Protocol Reference	3.7 Employee commuting

Downstream		
Transport Downstream	Description	Emissions related to the transport of goods downstream of the production process not paid for by the company
	Rationale to Include	Reflects the indirect carbon footprint of logistics happening downstream in the value chain
	GHG Protocol Reference	3.9 Downstream transportation and distribution

In the tables below you can find details on the activity categories that were excluded from this report; the description of each of these, the rationale to exclude and their respective Greenhouse Gas Protocol references.

Excluded Activities		
Fugitive Emissions	Description	Emissions resulting from the leakage of refrigerants or the direct release of greenhouse gasses
	Rationale to Exclude	Emissions category not applicable
	GHG Protocol Reference	1.4 Fugitive emissions
Process Emissions	Description	Emissions resulting from the release of greenhouse gasses in production processes
	Rationale to Exclude	Emissions category not applicable
	GHG Protocol Reference	1.3 Process emissions
Steam, Heat, Cooling	Description	Emissions resulting from the generation of steam, heating or cooling, purchased by the company
	Rationale to Exclude	Emissions category not applicable
	GHG Protocol Reference	2.2 Purchased steam, heat, cooling
Capital Goods	Description	Embedded emissions in capital goods like buildings, cars, ICT and machinery
	Rationale to Exclude	Emissions are estimated to be insignificant and available data is of poor quality
	GHG Protocol Reference	3.2 Capital goods
Leased Assets as Lessee	Description	Emissions related to the operation of assets leased by the reporting company
	Rationale to Exclude	Not relevant for in the applied consolidation approach
	GHG Protocol Reference	3.8 Upstream leased assets (as lessee)
Investments	Description	Emissions related to the operation of investments
	Rationale to Exclude	Emissions are estimated to be insignificant and available data is of poor quality
	GHG Protocol Reference	3.15 Investments

End-of-life of Product	Description	Emissions related to the disposal of the sold product at the end of its planned lifetime
	Rationale to Exclude	The organisation’s influence on the emission source is too limited
	GHG Protocol Reference	3.12 End-of-life treatment of sold products
Processing of Product	Description Rationale to Exclude	Emissions related to further processing of the sold product The organisation’s influence on the emission source is too limited
	GHG Protocol Reference	3.10 Processing of sold products
Use of Product	Description	Emissions related to energy use of the product during its planned lifetime
	Rationale to Exclude	The organisation’s influence on the emission source is too limited
	GHG Protocol Reference	3.11 Use of sold products
Leased Assets as Lessor	Description	Emissions related to the operation of assets owned by the reporting company
	Rationale to Exclude	Emissions category not applicable
	GHG Protocol Reference	3.13 Downstream leased assets (as lessor)
Franchises	Description Rationale to Exclude	Emissions related to the operation of franchises Emissions category not applicable
	GHG Protocol Reference	3.14 Franchises

LEDA Orthopaedics focuses on sourcing and distributing products for the health sector. These products are medically prescribed after extensive development, limiting the company’s influence over product material. Therefore, emissions from the primary products are not reported. Instead, LEDA Orthopaedics concentrates on collecting and reporting information regarding all other purchased goods and services within this category. The company is committed to working with suppliers to enhance their environmental performance and integrating environmental considerations into the evaluation of new suppliers.

GHG Emissions Inventory

In the reporting period Y-2024 the total emissions for the reporting organisation add up to 137 tCO2e. With a per-activity breakdown as follows:

Activity Category	Emissions	Certainty	Share of
	(tCO_2e)	(95% Confidence)	Total Emissions
Direct	5	–20% to +24%	4%
Stationary Combustion	-	-	-
Mobile Combustion	5	–20% to +24%	4%
Electricity	7	–20% to +24%	5%
Electricity	7	–20% to +24%	5%
Upstream	122	–12% to +14%	89%
Goods & Services	37	–26% to +35%	27%
Energy Supply	4	–13% to +14%	3%
Transport Upstream	18	–22% to +29%	13%
Waste	1	–35% to +54%	1%
Business Travel	54	–17% to +20%	39%
Commuting	8	–17% to +20%	6%
Downstream	3	–48% to +91%	2%
Transport Downstream	3	–48% to +91%	2%
Total GHG emissions	137	–11% to +12%	100%

Total emissions in this table include electricity emissions using the market-based method.

Uncertainty Assessment

LEDA Orthopaedics remains committed to transparent and accurate greenhouse gas (GHG) reporting. As part of this commitment, the uncertainty associated with the 2024 emissions inventory has been assessed using the Greenhouse Gas Protocol's Quantitative Uncertainty Guidance.

This year's analysis demonstrates meaningful progress in data quality, supplier engagement, and methodological consistency. As a result, the overall uncertainty range for total emissions has improved significantly, reducing from -18% to +22% last year to -11% to +12% in 2024.

This enhancement reflects LEDA Orthopaedics' efforts to improve the precision of activity data and emission factor selections across major emissions categories.

Key Findings

Activity Group	2023 Uncertainty	2024 Uncertainty	Comment
Mobile Combustion	-20% to +24%	-20% to +24%	Consistent; same data sources used
Electricity	-12% to +14%	-20% to +24%	Slightly wider due to grid factor variability
Goods & Services	-43% to +74%	-26% to +35%	Marked improvement from more granular supplier data
Energy Supply	-9% to +10%	-13% to +14%	Slight increase; broader range of fuels captured
Transport Upstream	-29% to +41%	-22% to +29%	Improved tracking and logistics data
Waste	-35% to +54%	-35% to +54%	Unchanged; still dependent on waste handling assumptions
Business Travel	-28% to +39%	-17% to +20%	Substantial improvement from detailed travel logs
Commuting	-21% to +27%	-17% to +20%	Higher staff survey participation improved confidence
Transport Downstream	-30% to +42%	-48% to +91%	Widened due to limited downstream traceability
Total GHG Emissions	-18% to +22%	-11% to +12%	Overall improvement in data certainty

Commentary

- Goods & Services, the largest share of emissions, saw a major reduction in uncertainty due to better engagement with suppliers and categorisation of purchases.

- Business Travel and Commuting both benefitted from improved internal recordkeeping, enabling tighter confidence intervals in reported data.

- Electricity emissions uncertainty slightly widened due to market fluctuations and variation in the applied grid factors.

- Transport Downstream remains the category with the highest relative uncertainty, reflecting limited visibility into end-of-chain logistics processes.

Conclusion

This year's uncertainty assessment indicates strong improvements in the credibility and precision of LEDA Orthopaedics' carbon reporting. As the company continues to enhance its sustainability practices, future reporting cycles will further benefit from improved data quality, particularly in downstream and waste-related emissions.

By prioritising accurate emissions accounting, LEDA Orthopaedics is strengthening its environmental governance and supporting more effective emissions reduction strategies.

Methodological Details

The GHG emissions inventory reflects the consolidation of emissions data according to the Greenhouse Gas Protocol reporting standards. These being the Corporate Accounting and Reporting Standard (2004), the Corporate Value Chain Accounting and Reporting Standard (2011), and all associated guidance documents.

01 **GHG Classification Structure**

02 **Global Warming Potential**

03 **Additional Radiative Forcing Effects**

04 **Dual Reporting in Scope 2**

05 **Approach to Emission Factors**

06 **Approach to Base Year Reporting**

07 **Uncertainty Assessment**

Click to go to the detailed explanation

GHG Classification Structure

In Section 5, the reported GHG emissions are organised and aggregated into their respective activity categories and activity category groups. Each activity category is associated with a Greenhouse Gas Protocol category (1.1 to 3.15).

Carbon offsets (removals or avoided emissions) are not reported in this report nor have they been subtracted from the total.

Global Warming Potential

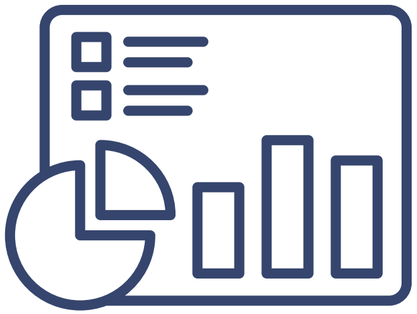
The following GHGs are included in the analysis: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), sulphur hexafluoride (SF6), nitrogen trifluoride (NF3), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).

Emissions from these GHGs are expressed in CO2-equivalent (CO2e) based on their global warming potential over a time horizon of 100 years (GWP100). The Global Warming Potential values are based on the Intergovernmental Panel on Climate Change (IPCC) Fourth, Fifth or Sixth Assessment Report

(AR4, AR5 or AR6), in accordance with the methodological choices of the emission factor publishers used in this report.

Additional Radiative Forcing Effects

The emission factors for aviation were extended to include the additional effects of radiative forcing through the emission of gases and aerosols and changing cloud abundance. For this a central estimate for a multiplier to the GWP100 figure is used. This estimate tries to reflect the additional effect based on the best available scientific evidence, while being consistent with UNFCCC reporting convention.

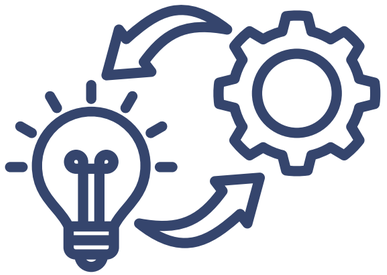


Dual Reporting in Scope 2

The total emissions in this report include electricity emissions using the market-based method. Taking into account contractual instruments and other market-based mechanisms to allocate electricity emissions to consumers. However, this report is set up with a dual reporting disclosure objective in mind, and the result of both market and location-based reporting methods can be found in the full GHG table. Do note that the total emissions in that table includes electricity emissions using the market-based method, as mentioned above.

Approach to Emission Factors

For each activity the most relevant and localised emission factor possible has been selected, at the discretion of the reporter. The key considerations in emission factor selection were locality and relevancy, as well as the availability of emission factors and consistency of methodologies throughout each emission factor source.



A full list of emission factor publications used in this report can be found in the table below:

Publisher	Publication Version	Publication Date	URL Usage	
UK.gov GHG Reporting Factors	v2024 1.1	2024-10-30	link	51.3%
Exiobase	3.8.2	2021-10-21	link	23.1%
Association of Issuing Bodies	v2023	2024-05-30	link	15.4%
ADEME Base Carbone	2022 v22.0	2022-06-24	link	7.7%
Caresyntax UK Limited		-	-	2.6%

Each emission factor used in the calculation has an assigned validity period overlapping or partially overlapping with the application period of the reported activity. The validity period of emission factors is determined by its publication document[1].

Approach to Base Year Reporting

The reporting period Y-2023 is the first GHG reporting period for LEDA Orthopaedics Limited, and counts as the base year for the current and future reporting cycles.

There are no changes in methodology in the reporting between the base year and this report.

There is no change to the base year calculation in this reporting period.

Uncertainty Assessment

To assess the uncertainty involved with the emissions calculations in this report, we applied the Greenhouse Gas Protocol's Quantitative Uncertainty Guidance to the inventory data. Using a system with discrete levels of uncertainty, a point estimate for each data point was obtained, which then was propagated across the entire inventory to result in a general quantified uncertainty estimation.

The first step in this process is separating the activity data uncertainty from the emission factor uncertainty. Activity data uncertainty (or volume uncertainty) reflects the reliability, completeness, and temporal, geographical and technical representativeness of the numerical value used into the emissions calculation (e.g. the uncertainty on "1000 kg of product A"). The emission factor uncertainty on the other hand, reflects the reliability, completeness and representativeness of the numerical value of the estimated emission intensity (e.g. the uncertainty on "500 kgCO2e per kg of product A").

For both the activity data uncertainty and the emission factor uncertainty, a single parameter uncertainty value is derived. This single parameter reflects the incomplete knowledge of the exact value in a probability distribution, based on qualitative assessments of how the evaluated parameter scores on the aforementioned dimensions (e.g. reliability). The numerical link between the qualitative assessment (very good, good, fair, poor) and the probability distribution is given by a pedigree matrix, provided by the Greenhouse Gas Protocol in the Quantitative Uncertainty Guidance (link).

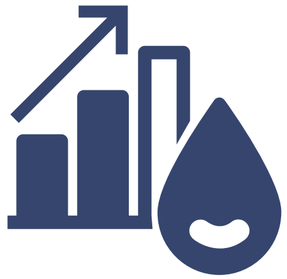
Once the single parameter uncertainty of both activity data and emission factor is established for each entry, this uncertainty is propagated across all entries in the inventory. With this, we can obtain an estimate for the full uncertainty across all measurements. This propagation happens through Taylor series expansion under lognormal distribution assumptions (conform Greenhouse Gas Protocol guidance). It is likely that this leads to a conservative estimate, in other words the total uncertainty is likely an overestimation or an upper-bound of the real uncertainty.

Finally, this propagated uncertainty is aggregated; first on activity category level, and eventually for the total emissions across the entire inventory. The uncertainty is expressed as a 95% confidence interval of the actual value, assuming a lognormal distribution. The ”-29% to +40%” uncertainty estimation for a value of 1000 tCO2e therefore indicates that with 95% certainty, the real value for this number lies between 710 tCO2e (1000 tCO2e -29%) and 1400 tCO2e (1000 tCO2e +40%).

Activity Category	All GHG	CO_2	CH_4	N_2O	SF_6	NF_3	HFCs	PFCs	CO_2e*
	(tCO_2e)	(tCO_2e)	(tCO_2e)	(tCO_2e)	(tCO_2e)	(tCO_2e)	(tCO_2e)	(tCO_2e)	(tCO_2e)
Direct	5	5	<1	<1	-	-	-	-	-
Stationary Combustion	-	-	-	-	-	-	-	-	-
Mobile Combustion	5	5	<1	<1	-	-	-	-	-
Electricity	7	7	-	-	-	-	-	-	-
Electricity	7	7	-	-	-	-	-	-	-
Upstream	122	110	7	1	<1	0	1	<1	2
Goods & Services	37	28	7	1	<1	-	1	<1	<1
Energy Supply	4	3	-	-	-	-	-	-	1
Transport Upstream	18	18	<1	<1	-	-	-	-	-
Waste	1	0	0	0	0	0	0	0	1
Business Travel	54	53	<1	<1	-	-	-	-	-
Commuting	8	8	<1	<1	-	-	-	-	-
Downstream	3	-	-	-	-	-	-	-	3
Transport Downstream	3	-	-	-	-	-	-	-	3
Total GHG emissions	137	122	7	1	<1	0	1	<1	5

GHG Emissions Review

LEDA Orthopaedics has completed its second annual greenhouse gas (GHG) emissions inventory for the reporting year 2024, following the Greenhouse Gas Protocol. This year's results offer a more detailed and refined understanding of the organisation's emissions across Scopes 1, 2, and 3.



Total Emissions

Total GHG emissions for 2024 amounted to 137 tonnes of CO_2 equivalent (tCO_2e)—an increase of 55.7% compared to the 81.84 tCO_2e recorded in 2023.

This increase closely correlates with the organisation's strong operational growth: LEDA Orthopaedics' annual turnover rose by 57%. The increase in emissions is therefore consistent with expanded service delivery, procurement volumes, staff travel, and logistics. Additionally, improved data collection methods and broader reporting coverage have further contributed to the higher total.

Emissions by Scope

Scope	2023 (tCO_2e)	2024 (tCO_2e)	Change
Scope 1	5.40	5	▼ Slight decrease
Scope 2	5.64	7	▲ +24%
Scope 3	70.32	125	▲ +78%
Total	81.84	137	▲ +55.7%

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