

# CARBON FOOTPRINT

Report 2024




## GENERAL INFORMATION

MNB Precision is a leading provider of world-class precision engineering services with over 40 years of experience. Founded as a family business, the company has grown into a medium-sized enterprise, specialising in CNC precision machining, predominantly serving industries such as oil and gas, power generation, and rail. Headquartered in Coventry, UK, MNB Precision operates out of a 52,000-square-foot facility equipped with state-of-the-art machinery. The company offers a broad range of in-house capabilities including CNC turning, milling, jig boring, wire and spark erosion, shot peening, and CMM inspection.

At the core of MNB's business is a commitment to quality, innovation, and customer satisfaction. We pride ourselves on tackling the most challenging projects, working with a variety of materials such as Inconel, Beryllium, and non-magnetic stainless steels, while delivering high-precision components with tight tolerances. This 'can-do' culture is what sets us apart, as we continuously explore new technologies and methods to meet the evolving needs of our clients.





In recent years, MNB Precision has invested heavily in expanding its capabilities and machinery, including the addition of advanced 5-axis CNC machining and inspection tools. This investment has allowed us to offer an all-encompassing project management service, handling everything from material sourcing to allied treatments in-house. Our ongoing growth and dedication to excellence have been recognised through numerous awards, including **The Queens Award for International Trade, The Sunday Times Fast Track 100 and SME of the Year.**

As we continue to expand, we remain committed to sustainable growth and innovation, aiming to further reduce our carbon footprint while maintaining our reputation as a trusted engineering partner

The purpose of this report is to disseminate the inventory of greenhouse gas emission with respect to consistency, comparability and completeness in the accounting procedures.

This report is intended for all stakeholders interested in the greenhouse gas emissions inventory and the associated reporting structure and explanations. All recipients are considered intended users.

This report:

- Covers the footprint of the entire organisation: MNB PRECISION LTD .
- 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 as well as reports on greenhouse gas removals.
- The reporting period covered in this document is **01/03/2024 to 28/02/2025**. 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.
- Additional details on the activities of can be found on the company website.



# ORGANISATIONAL BOUNDARIES

The organisational boundaries were drawn using the consolidation based on operational control approach. This approach considers all emissions that the organisation has operational control over, but not necessarily financial control.

The MNB Precision LTD operate from 4 sites in the UK. This report contains the footprint of the entire organisation.

The chosen consolidation approach applies to all units and subunits.

No allocation percentage is used in the calculation of the emissions share of each subunit.



# REPORTING BOUNDARIES

In this report 13 different sources of carbon emissions are considered, grouped in 4 blocks:



**Direct** - *Direct emissions from operations that are owned or controlled by the reporting company*

- 1. Stationary Combustion - Emissions resulting from combustion of fuels in stationary sources*
- 2. Mobile Combustion - Emissions resulting from the combustion of fuels in company owned/controlled mobile combustion sources*



**Electricity** - *Indirect emissions from the generation of purchased electricity, steam, heating, or cooling consumed by the reporting company*

- 3. Electricity - Emissions resulting from the generation of electricity, purchased by the company*



**Upstream** - *Indirect emissions that occur in the value chain related to purchased goods & services*

- 4. Goods & Services - Embedded emissions in purchased goods and services*
- 5. Raw Material - Embedded emissions in purchased Raw Material.*
- 6. Capital Goods - Embedded emissions in capital goods like buildings, cars, ICT and machinery*
- 7. Energy Supply - Embedded emissions in the purchase of fuels and energy in other activity categories*
- 8. Transport Upstream - Emissions related to the transport of goods upstream of the production process or any transport purchased by the company*
- 9. Waste - Emissions related to the disposal and processing of waste generated in operations*
- 10. Business Travel - Emissions related to transportation of employees for business-related activities*
- 11. Commuting - Emissions related to commutes of employees in vehicles not under control of the company*



**Downstream** - *Indirect emissions that occur in the value chain related to sold goods & services*

- 12. Transport Downstream - Emissions related to the transport of goods downstream of the production process not paid for by the company*
- 13. End-of-life of Product - Emissions related to the disposal of the sold product at the end of its planned lifetime*

# THIS INCLUDES

all relevant sources of greenhouse gas emissions. These were selected based on their relevance to the organisations operations and/or their relative size in the total footprint.

The excluded emission categories are listed below.

All of these sources are identified as not applicable or not significant for the current reporting objectives.

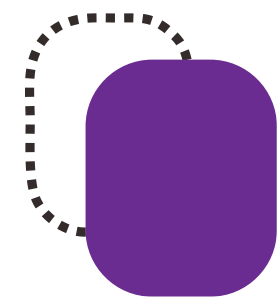
- Upstream Leased Assets
- Processing Of Sold Products
- Use Of Sold Products
- Downstream Leased Assets
- Franchises
- Investments



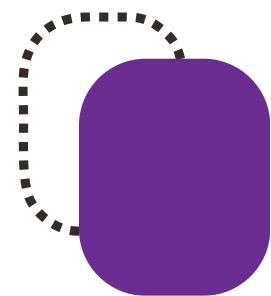
# METHODOLOGIES FOR THE COLLECTION AND QUANTIFICATION OF DATA

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

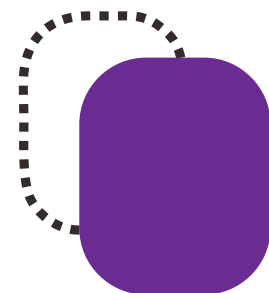
Five key accounting principles are central to the Greenhouse Gas Protocol methodology:



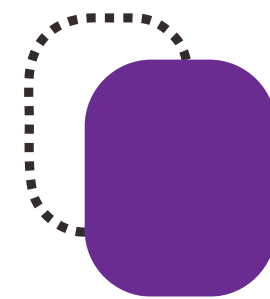
**Relevance** : Ensure that the GHG data collection accurately records and presents all relevant emissions from the organization.



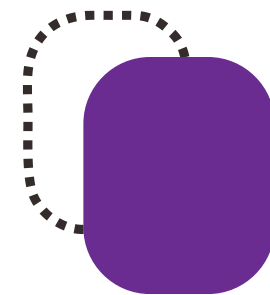
**Completeness** : The calculation captures all emitted GHGs. If any emission sources are omitted, clear and detailed justifications are given.



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



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



**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.



Following the guidelines of the Greenhouse Gas Protocol, the emissions inventory encompasses seven primary (groups of) GHGs: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), nitrogen trifluoride (NF<sub>3</sub>), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs). All of these gases are considered in-scope. Additionally, emissions out-of-scope are also considered, this included 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 organization.

**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. For more detailed information on the methodology, please see Methodology Details (Appendix I).

In the subsequent sections, activity categories may be customized in terms of naming, order, and further subdivision to enhance transparency and comparability within the organization; in accordance with the Greenhouse Gas Protocol accounting principles. However, to ensure standardization 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. A consolidated inventory within the standard reporting framework is available in Appendix IV.

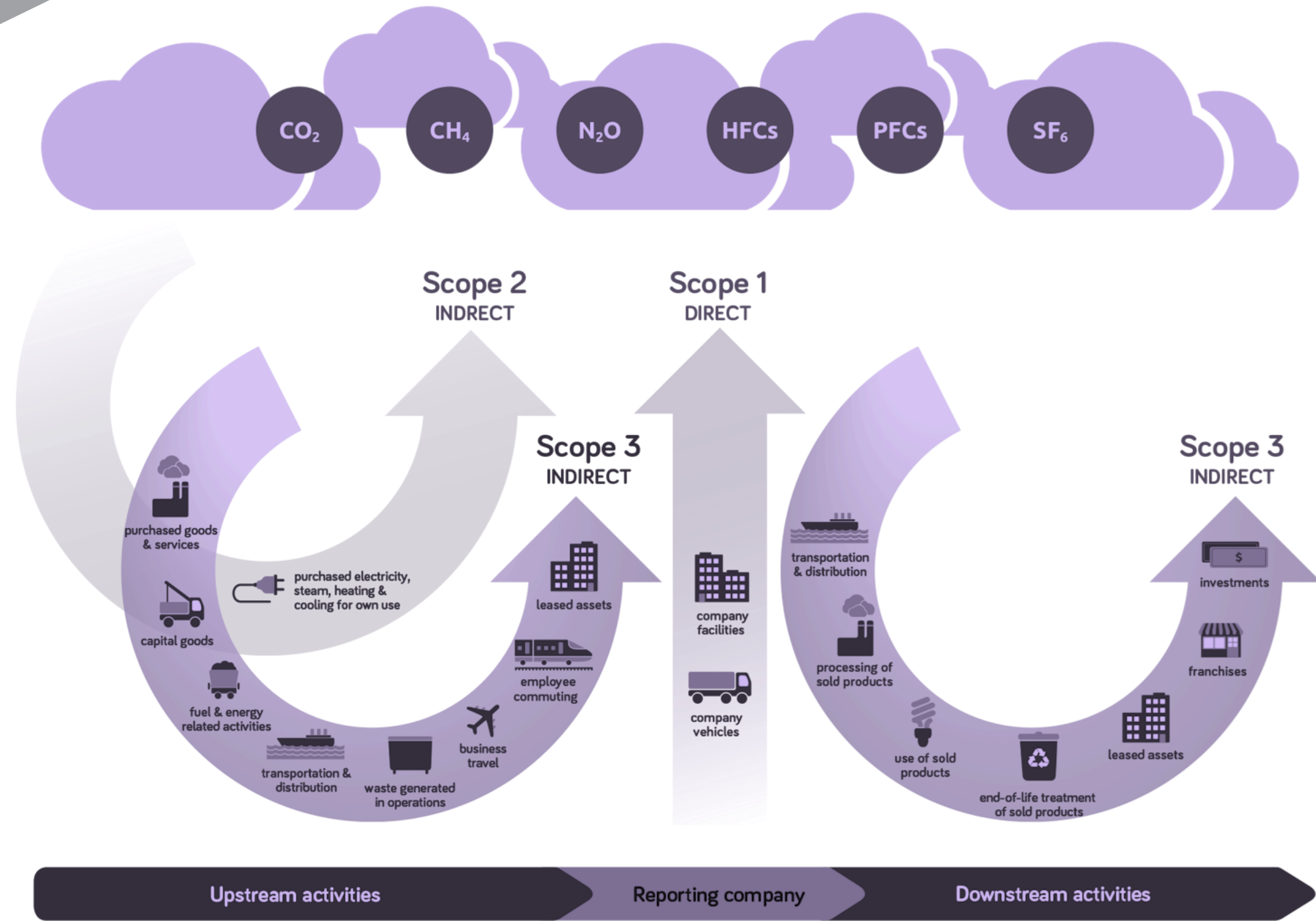


Figure 1: Overview of Greenhouse Gas Protocol scopes and activity categories across the value chain. Adapted from the Greenhouse Gas Protocol Corporate Value Chain Accounting and Reporting Standard.



# GHG CLASSIFICATION STRUCTURE

The reported GHG are aggregated into the following category groups at the organisational level

**Scope 1** - Direct Emissions from operations

**Scope 2** - Indirect emissions from the use of purchased electricity, steam, heating, and cooling  
**Scope 3** - Indirect emission in the value chain; further divided into upstream and downstream emissions

Carbon offsets are not reported in this report, nor have they been subtracted from the total.



# REPORTED GHG AND GWP

The following greenhouse gases are included in the analysis: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulphur hexafluoride (SF<sub>6</sub>), nitrogen trifluoride (NF<sub>3</sub>), hydrofluorocarbons (HFCs) and perfluorocarbons (PFCs).

Emissions from these greenhouse gases are expressed in CO<sub>2</sub>-equivalent (CO<sub>2</sub>e) based on their global warming potential over a time horizon of 100 years (GWP<sub>100</sub>). The Greenhouse Warming Potential (GWP) 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.

The split of the GHG emissions inventory into the individual contributions of each GHG (group) can be found in the end of the report. Activities for which a further split in greenhouse gasses is not known, are reported under the CO<sub>2</sub>e\*-column.

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 GWP<sub>100</sub> 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. The total emissions in this report include electricity emissions using the market-based method. Travel emissions in this report include the effects of radiative forcing for aviation.

# UNCERTAINTY ASSESSMENT

For this report a qualitative assessment of uncertainty has been applied. Seen that the effectiveness of a quantitative assessment would be limited due to a general lack of accurate uncertainty data . The applicability of these quantitative assessments will be reviewed in each subsequent reporting period.

Activity Group	Emissions (tCO <sub>2</sub> e)	Uncertainty	Share of total emissions
Stationary Combustion	27	-4% to +4%	1%
Mobile Combustion	63	-5% to +5%	1%
Electricity	728	-18% to +22%	16%
Goods & Services	209	-23% to +29%	5%
Raw Material	2,840	-40% to +68%	64%
Capital Goods	-	-	-
Energy Supply	311	-14% to +16%	7%
Transport Upstream	16	-29% to +40%	<1%
Waste	4	-23% to +30%	<1%
Business Travel	20	-15% to +18%	<1%
Commuting	61	-25% to +33%	1%
Transport Downstream	172	-39% to +64%	4%
End-of-life of Product	3	-44% to +77%	<1%
<b>Total GHG emissions</b>	<b>4,453</b>	<b>-28% to +40%</b>	<b>100%</b>

# APPROACH TO EMISSION FACTORS

For each activity the most relevant and localised emission factor possible has been selected, at the discretion of the reporter. Apart from locality and relevancy, other considerations were the availability of emission factors and consistency in the selection of emission factor publications throughout the document.

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	<a href="#">link</a>	44.3%
Exiobase	3.8.2	2021-10-21	<a href="#">link</a>	34.0%
Association of Issuing Bodies	v2023	2024-05-30	<a href="#">link</a>	17.0%
ecoinvent	3.10.1	2024-11-19	<a href="#">link</a>	2.8%
ADEME Base Carbone	2022 v22.0	2022-06-24	<a href="#">link</a>	1.9%

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].

[1] In case the application period of the activity overlaps with the validity period of more than one emission factor, the median data of the activity period is used to determine which factor to use. (example if an activity stretches from August 2021 to July 2022, the median date is 29/01/2022)

based reporting methods can be found in the full GHG table in Appendix II and Appendix IV. Do note that the total emissions in that table includes electricity emissions using the market-based method, as mentioned above.

## REVIEW, INTERNAL AUDIT AND IMPROVEMENT

This emission inventory for reporting period has been compiled with highest attention for completeness and correctness.

## OVERVIEW OF OUR CARBON FOOTPRINT

Our total greenhouse gas (GHG) emissions for the reporting year amount to **4,453 tonnes of CO<sub>2</sub>e**, reflecting a **29% reduction compared to 2023–2024**. This decrease is partly due to a 20% drop in demand and also reflects improved efficiency across our operations and value chain.

### Scope 1: Direct Emissions from Operations

Our Scope 1 emissions total **90 tonnes of CO<sub>2</sub>e**, representing **2% of total emissions**—a reduction from last year's 140 tonnes. These emissions arise from:  
**Stationary Combustion (27 tonnes CO<sub>2</sub>e)**: Fixed-site energy use such as boilers, accounting for **0.6% of total emissions**.  
**Mobile Combustion (63 tonnes CO<sub>2</sub>e)**: Emissions from vehicles under our control, contributing **1.4% of the total**.

### Scope 2: Indirect Emissions from Purchased Electricity

Scope 2 emissions stand at **728 tonnes of CO<sub>2</sub>e**, or **16% of total emissions**. This is slightly higher than last year (**616 tonnes**), reflecting increased reliance on purchased electricity despite lower overall demand.

### Scope 3: Indirect Emissions in the Value Chain

Scope 3 remains the largest contributor, at **3,635 tonnes of CO<sub>2</sub>e** or **82% of total emissions**.



### **Upstream Emissions (3,460 tonnes CO<sub>2</sub>e – 78% of total):**

- **Purchased Goods and Services (3,049 tonnes, 69% of total):**

By far the largest contributor, emphasising the importance of supplier engagement and low-carbon sourcing.

- **Fuel- and Energy-Related Activities (311 tonnes, 7% of total):** Linked to upstream energy production.

- **Transportation and Distribution (16 tonnes, 0.4% of total):** Sharply lower than last year.

- **Other Upstream Sources:** Waste (**4 tonnes**), business travel (**20 tonnes**), and commuting (**61 tonnes**). These represent smaller shares but remain areas for practical improvements such as remote work and waste reduction.

### **Downstream Emissions (175 tonnes CO<sub>2</sub>e – 4% of total):**

- **Transportation and Distribution (172 tonnes, 3.9% of total):** This figure more than doubled from last year, because more accurate way of calculating them.

- **End-of-Life Treatment of Sold Products (3 tonnes, 0.07% of total):** While a minor share, product design choices could further reduce these emissions.

# Detailed emission

Emission Category	Scope	All GHG (tCO2e)
<b>Scope 1 - Direct Emissions from operations</b>		<b>90</b>
Stationary Combustion	Scope 1	27
Mobile Combustion	Scope 1	63
<b>Scope 2 - Indirect Emissions from electricity consumption</b>		<b>728</b>
Purchased electricity - market based	Scope 2	728
Purchased electricity - location based	Scope 2	370
<b>Scope 3 - Indirect Emissions in the value chain - Upstream</b>		<b>3,460</b>
Purchased goods and services	Scope 3	3,049
Capital goods	Scope 3	-
Fuel- and energy-related activities	Scope 3	311
Upstream transportation and distribution	Scope 3	16
Waste generated in operations	Scope 3	4
Business travel	Scope 3	20
Employee commuting	Scope 3	61
<b>Scope 3 - Indirect Emissions in the value chain - Downstream</b>		<b>175</b>
Downstream transportation and distribution	Scope 3	172
End-of-life treatment of sold products	Scope 3	3
<b>Total GHG emissions</b>		<b>4,453</b>

Emission Category	CO <sub>2</sub>	CH <sub>4</sub>	N <sub>2</sub> O	SF6	NF3	HFCs	PFCs	CO <sub>2</sub> e*
	kt	kt	kt	kt	kt	kt	kt	kt
<b>Scope 1 - Direct Emissions from operations</b>	89	<1	1	-	-	-	-	<1
Stationary Combustion	27	<1	<1	-	-	-	-	<1
Mobile Combustion	62	<1	1	-	-	-	-	-
<b>Scope 2 - Indirect Emissions from electricity consumption</b>	728	-	-	-	-	-	-	-
Purchased electricity - market based	370	-	-	-	-	-	-	-
<b>Scope 3 - Indirect Emissions in the value chain - Upstream</b>	545	32	4	2	0	6	2	2,870
Purchased goods and services	157	32	4	2	0	5	2	2847
Capital goods	-	-	-	-	-	-	-	-
Fuel- and energy-related activities	291	-	-	-	-	-	-	19
Upstream transportation and distribution	16	<1	<1	-	-	-	-	-
Waste generated in operations	-	-	-	-	-	-	-	4
Business travel	20	<1	<1	-	-	-	-	-
Employee commuting	61	<1	<1	-	-	-	-	-
<b>Scope 3 - Indirect Emissions in the value chain - Downstream</b>	170	<1	1	-	-	-	-	3
Downstream transportation and distribution	170	<1	1	-	-	-	-	-
End-of-life treatment of sold products	-	-	-	-	-	-	-	3
<b>Total GHG emissions</b>	<b>1,532</b>	<b>32</b>	<b>6</b>	<b>2</b>	<b>0</b>	<b>6</b>	<b>2</b>	<b>2,873</b>

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