

Corporate Carbon Footprint

Collingwood Lighting Ltd has worked with ClimatePartner to calculate several of their company's carbon footprints: Corporate Carbon Footprints (CCFs).

The CCF is the sum of the CO₂ emissions released by the company within the defined system boundaries over a specified period of time. In this report, the different CCFs are grouped together as Collingwood, Indigo and Nobile Lighting (2022) and include the following individual calculations: 2022 Footprint - Collingwood (UK), 2022 Footprint - Indigo (Belgium) and 2022 Footprint - Nobile (Italy).

The calculations were based on the guidelines of the Greenhouse Gas Protocol Corporate Accounting and Reporting Standard (GHG Protocol).

CCF - the basis for climate action

Calculate, reduce, offset - these are the crucial steps to tackling climate change in accordance with the Paris Agreement.

The foundation for any climate action starts with calculation: A company that knows their carbon footprint also knows which parts of their business cause emissions and how high the emissions are.

At the same time, a carbon footprint helps companies to understand which areas have the greatest potential for avoidance and reduction, to set reduction targets, and to develop and implement appropriate reduction measures. Annual CCF reports allow companies to check their progress against reduction targets and to identify areas where emissions can be further reduced.

If the generated emissions are offset, a company can credibly claim carbon neutrality.

Overall results

This is the result of the calculation for the group's business activities **Collingwood, Indigo and Nobile Lighting (2022)**.

CO₂ emissions

Result

Overall results

51,645,324.19 kg CO₂

By comparison



The emissions correspond to the carbon footprint of 5,946 Europeans. One person in Europe emits an average of 8.7 t of $\rm CO_2$ per year 1

¹⁾ Source: EEA 2019, European Environment Agency: EEA greenhouse gas - data viewer, EU-27 value for total emissions with international transport (CO_2e), https://www.eea.europa.eu/data-and-maps/data/data-viewers/greenhouse-gases-viewer (retrieved 01/31/2022.)

Our calculation approach

Principles

In preparing the corporate carbon footprint and this report, five basic principles were observed in accordance with the GHG Protocol:

Relevance: The calculation should account for all greenhouse gas (GHG) emissions that appropriately reflect the company's carbon footprint. This report is designed to support internal and external decision-making.

Completeness: The report must include all GHG emissions within the selected system boundaries. Any significant exclusions of data must be clearly documented, disclosed, and justified.

Consistency: Consistent methodologies are used so that the company's emissions can be can be compared over time.

Transparency: All important aspects of a company are recorded objectively, and any assumptions, data gaps and resulting extrapolations or data exclusions are presented clearly and openly in this report.

Accuracy: The calculations of GHG emissions are designed to ensure that they are neither overnor undervalued. The report aims to be as accurate as possible and to minimise uncertainties, so that the company can make appropriate decisions.

Data collection and calculation

CO₂ emissions were calculated using the company's consumption data and emission factors researched by ClimatePartner. Wherever possible, primary data were used. If no primary data were available, secondary data from highly credible sources were used. Emission factors were taken from scientifically recognized databases such as ecoinvent and DEFRA.

CO₂ equivalents

The corporate carbon footprint calculates all emissions as CO_2 equivalents (CO_2 e), which this report also refers to as " CO_2 ".

This means that all relevant greenhouse gases, as stated in the IPCC Assessment Report, were taken into account in the calculations. These include carbon dioxide (CO_2), methane (N_2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulfur hexafluoride (SF6), and nitrogen trifluoride (NF3). Each gas has a different ability to warm the earth's atmosphere, and each remains in the atmosphere for different lengths of time. To make their effect comparable, they are converted to CO_2 equivalents (CO_2 e) as a basic unit and multiplied by their global warming potential (GWP). The GWP describes how strong a gas can warm the atmosphere compared to CO_2 over a period of time, usually 100 years.

For example, methane has a global warming potential of 28, so the warming effect of methane is $28 \text{ times greater than } CO_2 \text{ over } 100 \text{ years.}^2$

Electricity: market-based and location-based approaches

Emissions for electricity were calculated using both the market-based method and the location-based method. This dual reporting approach is recommended by the GHG Protocol.

For the market-based method, the company provided specific emission factors for the electricity they purchased, if available. If these specific factors were not available, factors for the residual mix in the country of operation were used, or, if this was unavailable, the average grid mix of the country was used.

The report also states the location-based method. In this method, the average electricity grid mix for the country is calculated. This enables a direct comparison of the company's values with the country-specific average.

Operational System Boundaries

Operational System Boundaries indicate which of the company's activities are taken into account for the individual carbon footprints of **Collingwood, Indigo and Nobile Lighting (2022)**. The various emission sources have been divided into three scopes in accordance with the GHG Protocol:

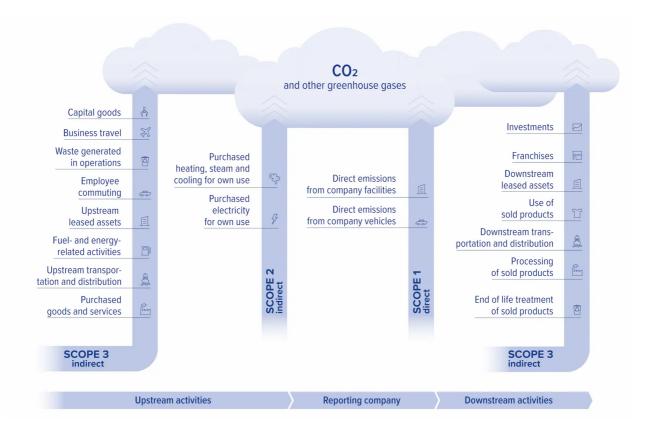
Scope 1 includes all emissions generated directly by **Collingwood Lighting Ltd**, for example by company-owned equipment or vehicle fleets.

Scope 2 lists emissions generated by purchased energy, for example electricity and district heating.

Scope 3 includes all other emissions that are not under direct corporate control, such as employee travel or product disposal.

Figure

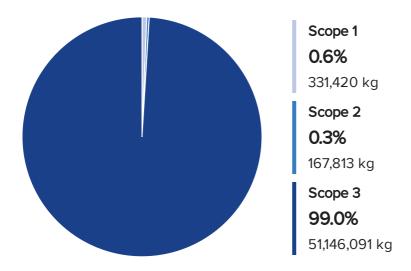
Activities divided by scope



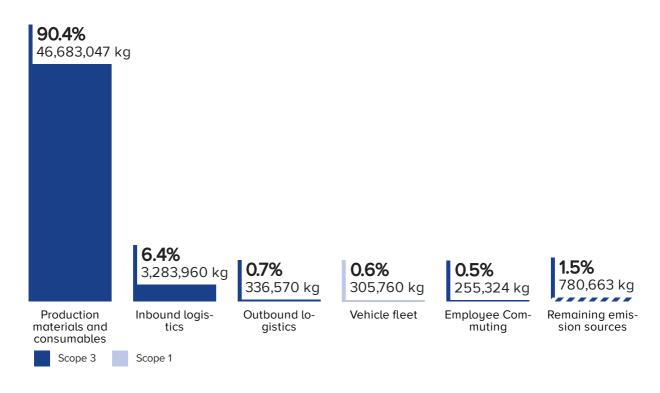
Largest emission sources - greatest potential for reduction

The CCF identifies the largest sources of emissions of the group **Collingwood, Indigo and Nobile Lighting (2022)**. This is important in driving climate action as it highlights which areas should be prioritised in relation to emission reduction and avoidance.

Figure CO_2 emissions categorised by scope 1, 2, and 3



FigureThe largest CO₂ emission sources



Total results for the group Collingwood, Indigo and Nobile Lighting (2022)

Emission sources	kg CO₂	%
Scope 1	331,420.22	0.6
Direct emissions from company vehicles	305,759.74	0.6
Vehicle fleet	305,759.74	0.6
Direct emissions from company facilities	25,660.48	0.0
Refrigerant leakage	14,626.64	0.0
Heat (self-generated)	11,033.84	0.0
Scope 2	167,812.92	0.3
Purchased electricity for own use ³	127,544.75	0.2
Electricity (stationary)	124,196.18	0.2
Electricity (vehicle fleet)	3,348.57	0.0
Purchased heating, steam, and cooling for own use	40,268.18	0.1
Heat (purchased)	40,268.18	0.1
Scope 3	51,146,091.05	99.0
Purchased goods and services	46,927,646.32	90.9
Production materials and consumables	46,683,047.43	90.4
Packaging materials	191,045.51	0.4
Electronic devices	27,131.02	0.1
Print products	24,878.40	0.0
Office paper	1,280.31	0.0
Water	263.65	0.0
Upstream transportation and distribution	3,283,959.63	6.4
Inbound logistics	3,283,959.63	6.4
Downstream transportation and distribution	336,570.43	0.7
Outbound logistics	336,570.43	0.7
Employee commuting	260,754.73	0.5
Employee Commuting	255,323.55	0.5
Home office	5,431.18	0.0
Fuel- and energy-related activities	221,702.51	0.4
Upstream emissions vehicle fleet	191,122.04	0.4
Upstream emissions electricity	22,108.25	0.0
Upstream emissions heat	8,472.23	0.0

³⁾ Calculated using the market-based method. Emissions calculated using the location-based method are 109,904.81 kg $\rm CO_2$.

Total results for the group Collingwood, Indigo and Nobile Lighting (2022)

Business travel	31,034.09	0.1
Flights Hotel nights	27,597.22 3,129.04	0.1 0.0
Rail Waste generated in operations	307.83 22,311.02	0.0 0.0
Operational waste Transport to disposal facility	21,767.41 543.60	0.0 0.0
Overall results	51,645,324.19	100.0

For comparison, the total emissions of all individual calculations

Collingwood, Indigo and Nobile Lighting (2022)	kg CO₂	%	
2022 Footprint - Collingwood (UK)	32,103,406.40	62.2	_
2022 Footprint - Indigo (Belgium)	10,836,085.07	21.0	_
2022 Footprint - Nobile (Italy)	8,705,832.71	16.9	

Results of the individual calculation 2022 Footprint - Collingwood (UK)

Emission sources	kg CO ₂	%
Scope 1	155,437.54	0.5
Direct emissions from company vehicles	149,479.64	0.5
Vehicle fleet	149,479.64	0.5
Direct emissions from company facilities	5,957.90	0.0
Refrigerant leakage	5,957.90	0.0
Scope 2	96,240.46	0.3
Purchased electricity for own use 4	76,557.62	0.2
Electricity (stationary)	76,557.62	0.2
Electricity (vehicle fleet)	0.00	0.0
Purchased heating, steam, and cooling for own use	19,682.84	0.1
Heat (purchased)	19,682.84	0.1
Scope 3	31,851,728.40	99.2
Purchased goods and services	29,605,895.41	92.2
Production materials and consumables	29,449,884.43	91.7
Packaging materials	120,911.39	0.4
Print products	24,878.40	0.1
Electronic devices	8,677.24	0.0
Office paper	1,280.31	0.0
Water	263.65	0.0
Upstream transportation and distribution	1,836,322.58	5.7
Inbound logistics	1,836,322.58	5.7
Employee commuting	121,701.53	0.4
Employee Commuting	116,993.36	0.4
Home office	4,708.18	0.0
Downstream transportation and distribution	117,197.96	0.4
Outbound logistics	117,197.96	0.4
Fuel- and energy-related activities	102,408.61	0.3
Upstream emissions vehicle fleet	91,460.74	0.3
Upstream emissions electricity	7,697.37	0.0
Upstream emissions heat	3,250.51	0.0

⁴⁾ Calculated using the market-based method. Emissions calculated using the location-based method are $49,845.25 \text{ kg CO}_2$.

Results of the individual calculation 2022 Footprint - Collingwood (UK)

Emission sources	kg CO₂	%
End-of-life treatment of sold products	39,310.46	0.1
Product disposal	38,078.85	0.1
Product waste transport to disposal facility	1,231.61	0.0
Waste generated in operations	15,745.20	0.0
Operational waste	15,439.33	0.0
Transport to disposal facility	305.87	0.0
Business travel	13,146.65	0.0
Flights	10,240.12	0.0
Hotel nights	2,598.70	0.0
Rail	307.83	0.0
Overall results	32,103,406.40	100.0

Results of the individual calculation 2022 Footprint - Indigo (Belgium)

Emission sources	kg CO₂	%
Scope 1	157,151.93	1.5
Direct emissions from company vehicles	151,652.79	1.4
Vehicle fleet	151,652.79	1.4
Direct emissions from company facilities	5,499.14	0.1
Refrigerant leakage	5,499.14	0.1
Scope 2	20,585.34	0.2
Purchased heating, steam, and cooling for own use	20,585.34	0.2
Heat (purchased)	20,585.34	0.2
Purchased electricity for own use ⁵	0.00	0.0
Electricity (vehicle fleet)	0.00	0.0
Electricity (stationary)	0.00	0.0
Scope 3	10,658,347.81	98.4
Purchased goods and services	9,786,774.99	90.3
Production materials and consumables	9,747,107.00	90.0
Packaging materials	39,667.99	0.4
Upstream transportation and distribution	595,965.42	5.5
Inbound logistics	595,965.42	5.5
Fuel- and energy-related activities	103,616.04	1.0
Upstream emissions vehicle fleet	97,020.52	0.9
Upstream emissions heat	3,399.55	0.0
Upstream emissions electricity	3,195.97	0.0
Employee commuting	81,477.70	8.0
Employee Commuting	81,477.70	0.8
Downstream transportation and distribution	73,903.24	0.7
Outbound logistics	73,903.24	0.7
End-of-life treatment of sold products	12,896.78	0.1
Product disposal	12,492.72	0.1
Product waste transport to disposal facility	404.06	0.0
Waste generated in operations	3,713.64	0.0
Operational waste	3,579.18	0.0
Transport to disposal facility	134.46	0.0
Overall results	10,836,085.07	100.0

⁵⁾ Calculated using the market-based method. Emissions calculated using the location-based method are $30,779.66\ kg\ CO_2$.

Results of the individual calculation 2022 Footprint - Nobile (Italy)

Emission sources	kg CO ₂	%
Scope 1	18,830.75	0.2
Direct emissions from company facilities	14,203.44	0.2
Heat (self-generated)	11,033.84	0.1
Refrigerant leakage	3,169.60	0.0
Direct emissions from company vehicles	4,627.31	0.1
Vehicle fleet	4,627.31	0.1
Scope 2	50,987.13	0.6
Purchased electricity for own use ⁶	50,987.13	0.6
Electricity (stationary)	47,638.56	0.5
Electricity (vehicle fleet)	3,348.57	0.0
Scope 3	8,636,014.84	99.2
Purchased goods and services	7,534,975.91	86.6
Production materials and consumables	7,486,056.00	86.0
Packaging materials	30,466.14	0.3
Electronic devices	18,453.78	0.2
Upstream transportation and distribution	851,671.63	9.8
Inbound logistics	851,671.63	9.8
Downstream transportation and distribution	145,469.23	1.7
Outbound logistics	145,469.23	1.7
Employee commuting	57,575.49	0.7
Employee Commuting	56,852.49	0.7
Home office	723.00	0.0
Business travel	17,887.44	0.2
Flights	17,357.10	0.2
Hotel nights	530.35	0.0
Fuel- and energy-related activities	15,677.87	0.2
Upstream emissions electricity	11,214.91	0.1
Upstream emissions vehicle fleet	2,640.78	0.0
Upstream emissions heat	1,822.17	0.0
End-of-life treatment of sold products	9,905.09	0.1
Product disposal	9,594.76	0.1
Product waste transport to disposal facility	310.33	0.0

⁶⁾ Calculated using the market-based method. Emissions calculated using the location-based method are $29,279.90 \text{ kg CO}_2$.

Results of the individual calculation 2022 Footprint - Nobile (Italy)

Emission sources	kg CO ₂	%
Waste generated in operations	2,852.18	0.0
Operational waste	2,748.91	0.0
Transport to disposal facility	103.27	0.0
Overall results	8,705,832.71	100.0

Next steps

Collingwood Lighting Ltd should use these findings to drive meaningful climate action. This includes finding ways to continuously reduce emissions as well as offsetting any emissions that cannot immediately be reduced. Climate neutrality is achieved through offsetting, and the label may be used accordingly.

Reducing emissions

The concentration of greenhouse gases in the atmosphere is responsible for global warming so we must reduce our emissions as quickly and broadly as possible. Defining clear and measurable reduction targets are the best way to start. A reduction plan detailing specific actions and team responsibilities will help the organisation to make quick and meaningful progress.

A creative and courageous approach is needed. Reduction targets should be ambitious and reflective of current scientific and technological understanding. ClimatePartner recommends differentiating between short-, medium-, and long-term reduction targets because some measures can be implemented quickly whilst others take time, for example, making changes to processes, product design and supply chains. Creating reduction plans is a continuous, iterative process that should be an integral part of the corporate strategy.

Reduction guide

In general, any reduction measures should be relevant to the needs of the company: there are no standard solutions. The corporate carbon footprint enables you to identify reduction potentials and use this knowledge to define individual reduction measures.

In general, there are two ways to reduce emissions:

Decrease activities that emit greenhouse gases, for example, by reducing energy consumption, use of raw materials, or the number of business trips taken by employees.

Reduce the intensity of emissions by selecting services, raw materials, and energy products that have lower emission factors, for example, by switching to a green electricity tariff.

The following section lists some the options for taking climate action.⁷

Scope 1+2

- Use renewable energy sources by switching to biogas, green electricity, etc.
- Use more climate-friendly refrigerants by switching to ammonia, propane, etc.
- Increase energy efficiency through newer machines, etc
- Optimise processes and products through new procedures, improved product design, etc.

Scope 3

- **Conserve resources** through avoidance, such as making fewer business trips, using less packaging, producing less waste, etc.
- Use more climate-friendly raw materials such as plant-based, regional and recycled raw materials
- Choose more climate-friendly options in daily activities, such as taking the train over flights or choosing a company bicycle over a company car, etc.
- **Engage with your suppliers** and encourage them to take more climate action by sharing best practices, knowledge, etc.
- **Engage your employees** by offering incentives to implement climate-friendly measures, providing continual training opportunities, etc.

⁷⁾ This overview does not guarantee completeness. Each measure must be assessed for appropriateness to the specific company.

Offsetting emissions

We must act now to limit global warming to 1.5 $^{\circ}$ C. Implementing CO $_2$ reduction measures usually needs a long-term, step-by-step approach. ClimatePartner therefore recommends that **Collingwood Lighting Ltd** offsets any remaining emissions (those which cannot currently be reduced) immediately by supporting certified carbon offset projects. In doing so, companies take responsibility for the emissions they are emitting today whilst taking action to reduce their emissions over time.

Why offsets work

Greenhouse gases such as CO₂ are evenly distributed in the atmosphere, and the concentration of greenhouse gases is therefore similar everywhere on earth. Emissions that cannot yet be avoided by a company can thus be offset by carbon offset projects anywhere in the world.

More than just climate action

Offset projects function in different ways. Some remove CO_2 from the atmosphere, for example, through reforestation projects, whilst others prevent further CO_2 emissions, for example, through the expansion of renewable energies.

In addition, our high-quality carbon offset projects promote the economic, social, and sustainable development of the region. Each of our projects are certified according to international standards, thus ensuring that they improve the lives of local communities as well as the climate.

Verified emissions savings

The exact amount of CO_2 saved by each project is determined by independent organisations. The project developers can then sell these CO_2 savings in the form of certified emission reductions. The resulting income then finances the project, which would be unable to function without it. Further information is available at: https://www.climatepartner.com/en/carbon-offset-projects

Carbon neutrality

Once a company offsets their emissions, they become carbon neutral.

To ensure that all emissions generated are offset within the system boundaries, a safety margin of 0% is applied to the total footprint. This compensates for uncertainties in the underlying data that naturally arise from the use of database values, assumptions or estimates.

CO₂ Offsets

	kg CO₂
Overall results	51,645,324.19
Not yet carbon neutral	51,619,421.55
Already carbon neutral	25,902.64
CO ₂ emissions to be offset incl. 0% safety margin	51,619,421.55

Effective climate action

Our ClimatePartner team are happy to help you take further climate action!

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Imprint

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