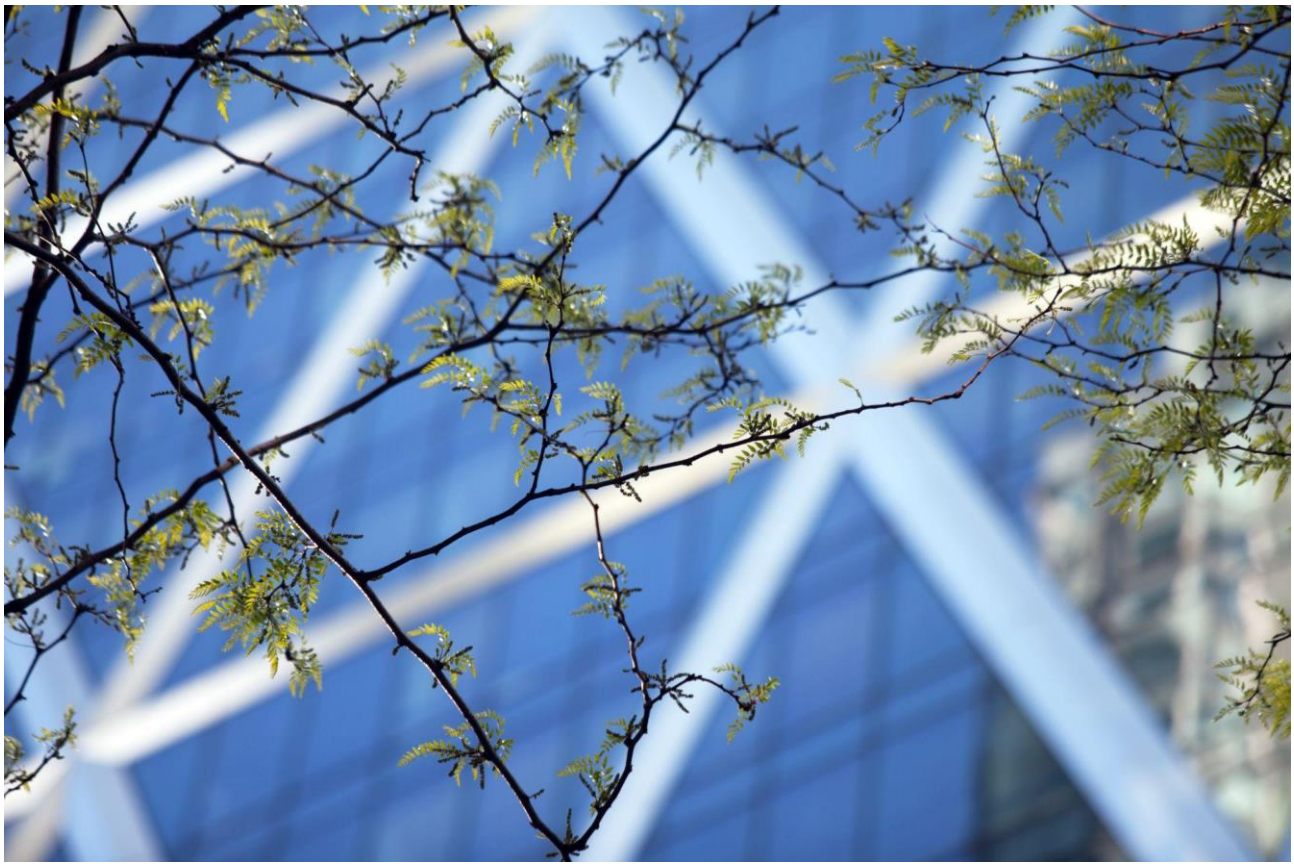
SCHELDEBOUW

CO_2 PERFORMANCE LADDER

.



Sustainability at Scheldebouw ▪

CO2 Performance Ladder ▪

Final Report FY24

Revision 00

01-10-2024

Report name	:	CO2 Performance Ladder, Final Report FY24
Project name	:	Sustainability at Scheldebouw
Revision	:	00
Date	:	01-10-2024
Status	:	For External Publication
Author	:	J. Verkerk-Evers
Checked by	:	R. Riemens
Approved by	:	S. Josefsson
Authorised by	:	J. Mönnikes

Scheldebouw B.V.

Herculesweg 17 | 4338 PL Middelburg
Smedestraat 2 | 6411 CR Heerlen
P.O. Box 8042 | 4330 EA Middelburg
The Netherlands

Tel. +31 (0) 118 679 900
Tel. +31 (0) 455 437 437
scheldebouw.permasteelisagroup.com

Table of contents

Revisions

Rev. #.	Chapter:	Revisions:
00		First issue

Proprietary Note

01 Introduction

The construction industry has realised that we have to act now and start improving the human impact on the environment, if we want future generations to enjoy our planet the same way as previous generations did. Sustainability has finally become a key performance criterion in facade design, which allows us to create solutions and make decisions which were not viable before.

Our mission
Scheldebouw strives to be a front runner in the facade industry with our sustainability approach

To achieve this, we need to:

- Understand our environmental impact
- Develop knowledge and tools
- Deliver what we promise on the projects
- Show it to the world

01.1 CO2 Performance Ladder

The CO2 Performance Ladder is a Dutch initiative for companies in the construction sector that want to be pro-active and set ambitious targets to reduce their carbon footprint as a company. The initiative is chosen by Scheldebouw, because it provides a structured framework to manage our sustainability developments. It is aligned with current and expected European legislation and helps us to stay ahead of what is strictly mandatory.

On 19th October 2023 the initial audit took place and Scheldebouw has been awarded the level 4 certification on the CO2 Performance Ladder. In this report we present Scheldebouw's CO2 Performance, Targets and Reduction Plan of Fiscal Year 2024, which runs from 1st April 2023 to 31st March 2024.

01.2 CO2 Reduction targets

In line with Paris agreements we need to reduce our CO2 emissions and waste to zero before the year 2050. Because this is a worldwide target, the general consensus is that developed countries need to reach this goal well before 2050 (around 2040) to compensate for developing countries. Before 2030 we already need to be halfway our reduction target to make sure that we don't exceed the total "carbon budget".

The Science Based Targets initiative (SBTi) is the most established initiative that encourages organisations to set targets to reduce their Green House Gas (GHG) emissions. Their set of standards and guidelines helps target setting on different levels and with different scopes. Scheldebouw sets their short term targets based on the following assumptions:

- Absolute Contraction Approach
- 1.5°C pathway
- Base year FY22
- Target year FY31

Note: by incorporating the corrections and improvements described in paragraph 02.1, also the values of the base year FY22 and target year FY31 have been updated.

Scheldebouw commits to the following targets:

	Base year (FY22)	Target year (FY31)	% Reduction
Scope 1	431 tCO2e	241 tCO2e	-44.0%
Scope 2	739 tCO2e	429 tCO2e	-42.0%
Scope 3	26,870 tCO2e	15,585 tCO2e	-42.0%
Total	28,040 tCO2e	16,254 tCO2e	-42.0%

Hereby Scheldebouw states that it is committed to achieve the above Carbon Reduction Targets, as part of the CO2 Performance Ladder certification. In the Townhall Meetings on the 28th and 29th of September these targets were introduced and explained to the organisation. To achieve these targets carbon reduction measures have been proposed, which are described in our Carbon Reduction plan and are also summarised in this document. The information will be shared with our employees. We implement these measures to achieve our targets, in collaboration with all our employees.

Jens Mönnikes
General Manager

Janneke Verkerk-Evers
Sustainability Leader

Remco Riemens
HSE Officer

01.3 CO2 reduction approach

Scheldebouw's carbon reduction strategy focusses on:

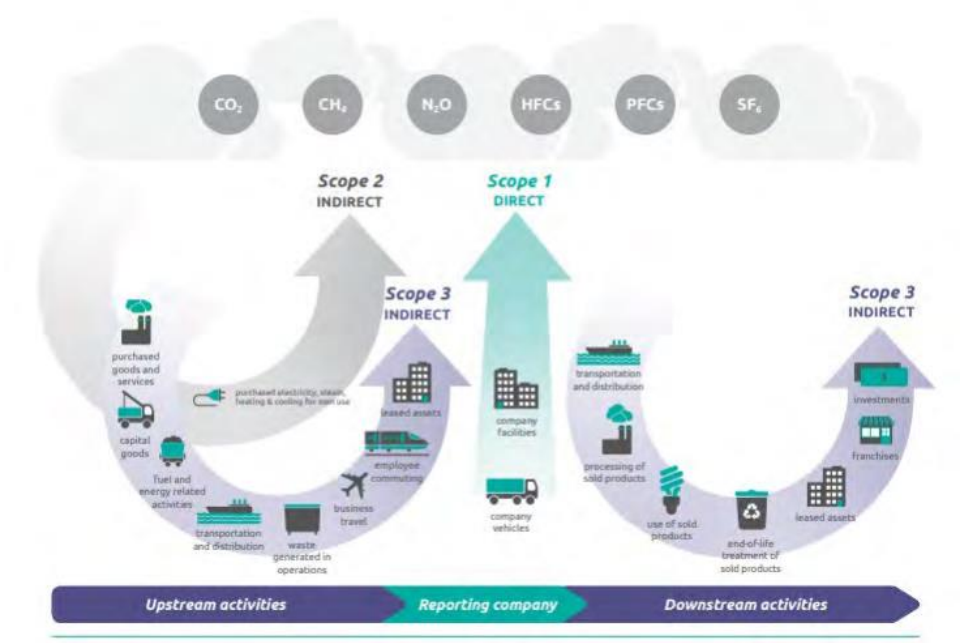
- Scope 1 & 2: CO_2 emissions that are directly influenced by the company (its own energy use)
- Scope 3: embodied carbon emissions during the production of our façades (value chain emissions)

Using the LCA (Life Cycle Analysis) method, we went through the entire life cycle of our facades and mapped out the environmental impact per phase. Our expectation was confirmed that currently the choice of our suppliers and the further agreements with them in particular determine the CO_2 footprint of our product. Transportation, waste and the activities in our own assembly facilities and on the building site have a much lower impact. Still they cannot be neglected, if only because they are important for the visibility and awareness of our CO2 reduction policy, both internally and externally.

The sustainability developments at Scheldebouw therefore focus on providing better insight for the project related design, engineering and purchasing decisions we have to make together with our clients. By comparing the environmental impact of different design and material related alternatives, we are able to make better informed decisions. We provide embodied carbon calculations from the early design stages on, update those regularly during the project execution phase and finalise the process by going through a full third party verification to obtain official Environmental Product Declarations (EPDs) for the specific design of that project. All of this in close collaboration with our client's project team to make sure that we meet their expectations, requirements and architectural design intent. With this approach we try to reduce the embodied carbon of our products in a holistic way instead of focussing on specific solutions.

02 CO2 Performance of Scheldebouw

The CO2 emission inventory for the CO2 Performance Ladder is drawn up in accordance with ISO 14064-1 §9.3.1. Depending on the level on the CO2 Performance Ladder, the CO2 emission inventory comprises direct and indirect emissions as a result of the organisation's activities, subdivided in scope 1, 2 and 3 emissions. Indirect scope 3 emissions can originate upstream as well as downstream. As of CO2 Performance Ladder level 3, the organisation has to map out the CO2 emission (scope 1 & 2 emissions and business travel (in scope 3)) of the organisation. As of level 4, an organisation must also report about its scope 3 emissions.



Scope diagram of the GHG Protocol Scope 3 Standard

02.1 Data improvement and corrections

Since Scheldebouw's certification for level 4 of the CO2 Performance Ladder the following improvements on data collection and accuracy have been achieved:

- Data collection is centralised in one Google Drive folder with clear task division and fixed format
- Data split from yearly totals to quarterly values for better performance monitoring
- Google spreadsheet dashboard for performance monitoring, including forecast

The following corrections were already incorporated in the intermediate report during FY24 and lead to minor changes of the values previously reported:

- By refining the data to quarterly values, also the correct carbon factors are now applied to each month. Previously the carbon factor for calendar year 2021 was applied to fiscal year 2022 (1 April 2021 – 31 March 2022) etc.
- Leased cars (petrol) FY22 value for tanked litres corrected
- Flights (intercontinental and Europe) FY22 distances corrected
- Employee commuting by car FY22 and FY23 values corrected to actual compensated kilometres
- Monetary values FY22 and FY23 for "other services" corrected

The following improvements have been incorporated since we published the intermediate report:

- Energy consumption of Brightlands location for calendar year 2023 received only recently, which also includes an update of the values in Q4-FY23.
- Aluminium extrusions and glazing quantities in kilograms and no longer in monetary values

The following actions are in progress or planned:

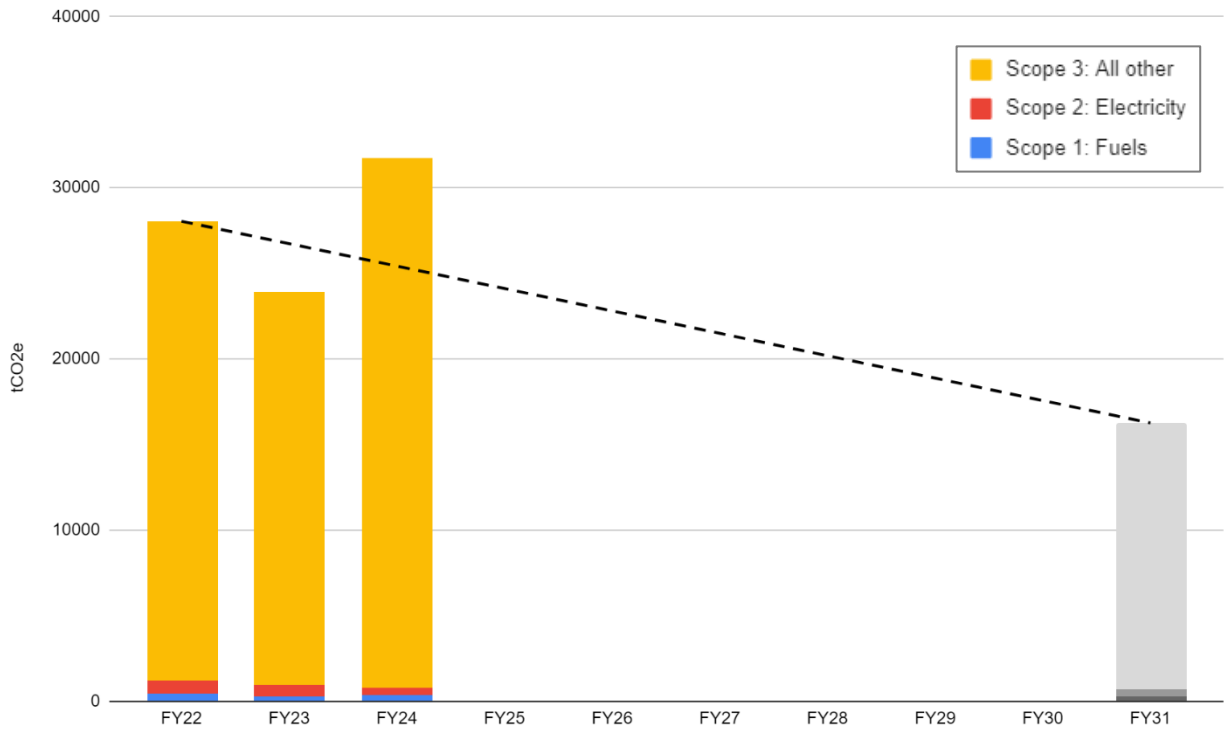
- Sub-metering of energy consumption between office and factory in Middelburg (completed 1 April 2024, so results not included in this report)
- Survey of site energy consumption (started April 2024, waiting for results)

The corrections lead to the following set of updated targets:

	Base year (FY22)	Target year (FY31)	% Reduction
Scope 1	431 tCO2e	241 tCO2e	-44.0%
Scope 2	739 tCO2e	429 tCO2e	-42.0%
Scope 3	26,870 tCO2e	15,585 tCO2e	-42.0%
Total	28,040 tCO2e	16,254 tCO2e	-42.0%

02.2 Overall results

In the following figure the results are shown of the CO2 emission inventory for the financial years FY22, FY23 and FY24 in absolute values.

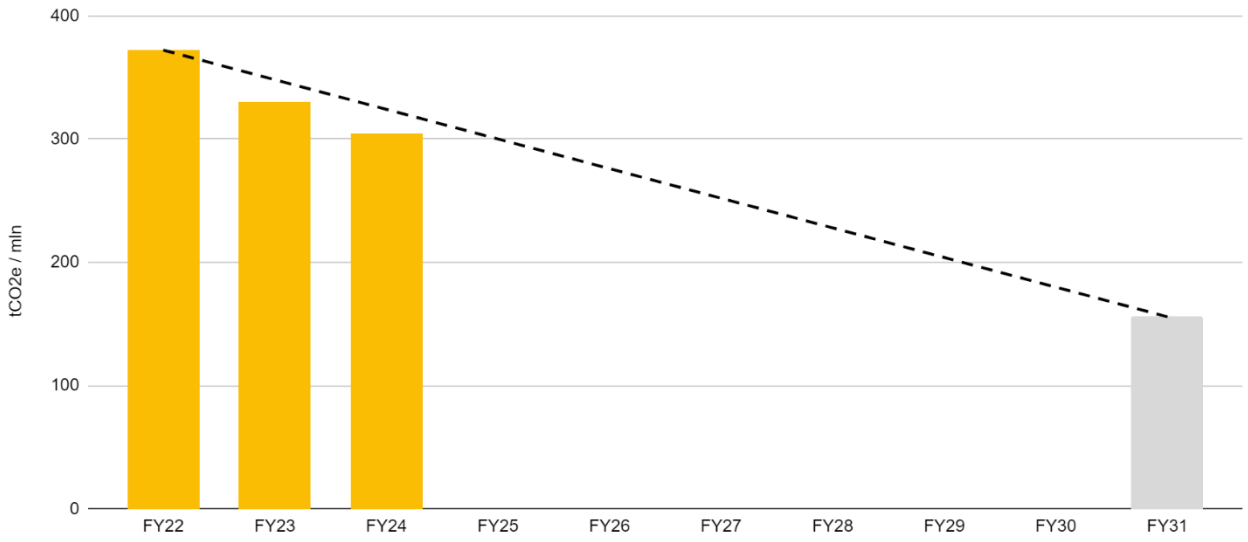


Performance evaluation of FY24

	Base year FY22	Target FY24		Achieved FY24	
Scope 1	431 tCO2e	389 tCO2e	-9.8%	356 tCO2e	-17.3%
Scope 2	739 tCO2e	670 tCO2e	-9.3%	459 tCO2e	-37.8%
Scope 3 total	26,870 tCO2e	24,363 tCO2e	-9.3%	30,884 tCO2e	+14.9%
Scope 1, 2 & 3 total	28,040 tCO2e	25,421 tCO2e	-9.3%	31,700 tCO2e	+13.1%

In FY24 a substantial reduction of Scheldebouw's Scope 1 & 2 emissions has been achieved. For Scope 3, however, an increase of the emissions occurred in FY24. The increase of CO2 emissions in our value chain is caused by an increase of purchased materials corresponding with an increased operating income, which is analysed in more detail in paragraph 02.4.

In the following figure the CO2 emissions relative to the operating income are shown for the financial years FY22, FY23, FY24 and for the target year FY31. The relative CO2 emissions show a nice decreasing trend.

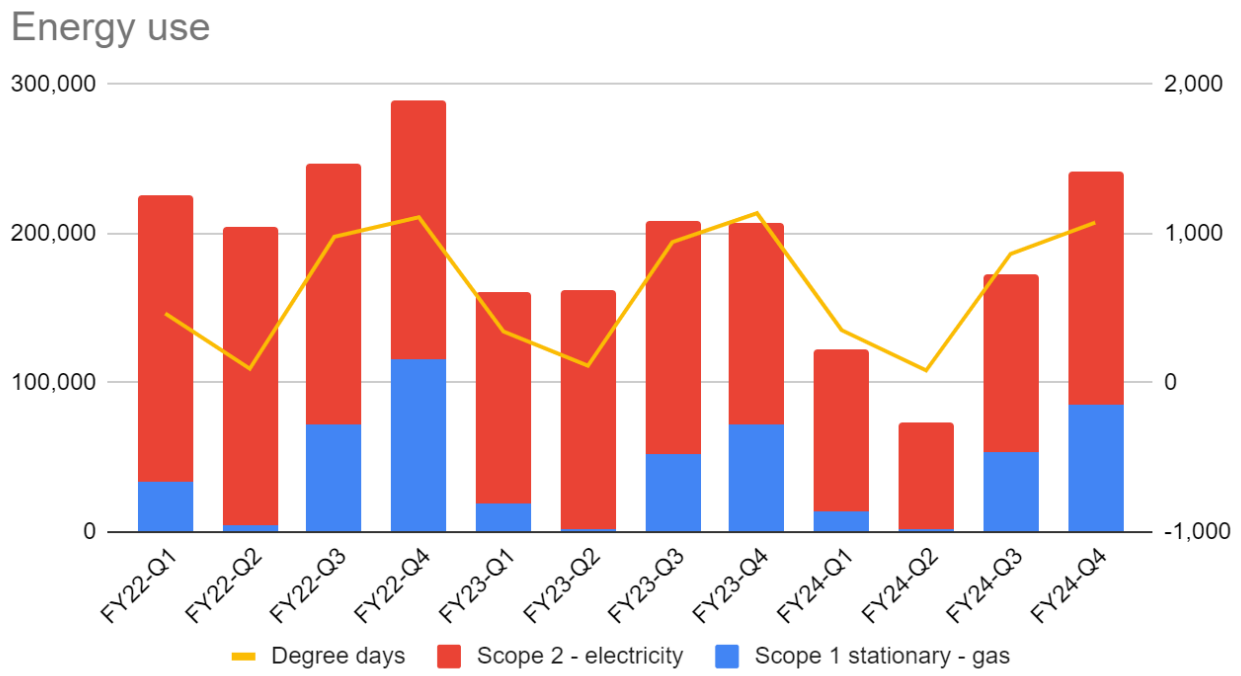


	FY22	FY23	FY24	Target FY31
Scope 3 emissions total [tCO2e]	26,870	24,363	30,884	15,585
Operating income [€]	72 mln.	70 mln.	101 mln.	100 mln.
Emissions relative to turnover [tCO2e / mln. €]	372	330	305	156
Reduction from base year FY22 [%]	-	-11.4	-18.1	-58.1

02.3 Energy use of factory and offices

In the following figure the CO2 emissions of Scope 1 Stationary and Scope 2 activities are shown per quarter. Overall the CO2 emissions related to the energy use of our buildings have decreased significantly over the past two years. Due to the seasonal fluctuations of the external temperatures, also the emissions fluctuate

over the year, though. The degree days method accounts for this effect. In the graph the degree days are plotted for reference (on a different scale).



Degree days

The basic principle is that you do not use gas during a 24-hour period in which the average outside temperature is higher than the average inside temperature. However, if the outside temperature is lower, you start heating and degree days have to be counted. Usually 18 °C is taken as the value for the average indoor temperature in the degree day calculation.

The daily average outside temperature of a colder day is subtracted from the daily average indoor temperature of 18 degrees. If it was an average of 10 degrees outside on a day, you calculate as follows: 18 - 10 = 8 degree days. If the average outside temperature over 24 hours was higher than 18 degrees, you will always end up with 0 degree days. (source: www.mindergas.nl/degree_days, translated by Google Translate)

		Q1	Q2	Q3	Q4	Total
Scope 1 stationary – gas [tCO2e]	FY22	33,958	4,025	72,428	116,282	226,694
	FY23	19,040	2,518	52,602	72,330	146,489
	FY24	15,469	1,733	52,827	84,689	154,856
Scope 2 – electricity [tCO2e]	FY22	191,116	200,906	174,538	172,475	739,035
	FY23	142,200	159,824	156,040	134,858	592,922
	FY24	107,850	72,163	118,851	157,510	480,758
Degree days [° days]	FY22	464	94	978	1,110	2,647

	FY23	345	114	944	1,138	2,540
	FY24	353	83	864	1,075	2,375

In the last quarter of FY24 the energy consumption increased significantly compared to FY23. This increase cannot be explained by looking at the degree days, because they were even lower, meaning that it was not colder outside compared to the year before. The most logical explanation is that the renovation of the façade took place in this period, leading to a lot of additional heat losses through openings in the façade.

In reality only part of the CO2 emissions in the graph are related to degree days i.e. heating. Another part of the emissions are related to either cooling, lighting, office equipment or manufacturing activities for façade production. At the moment no separate data are available for these activities, so a more detailed analysis is not possible.

- The installation of separate energy meters for different activities was completed before the start of the new fiscal year (1 April 2024), allowing for a better assessment of which new measures will have the biggest effect. This data will be used to update the reduction plan.

Recently completed and planned energy reduction measures:

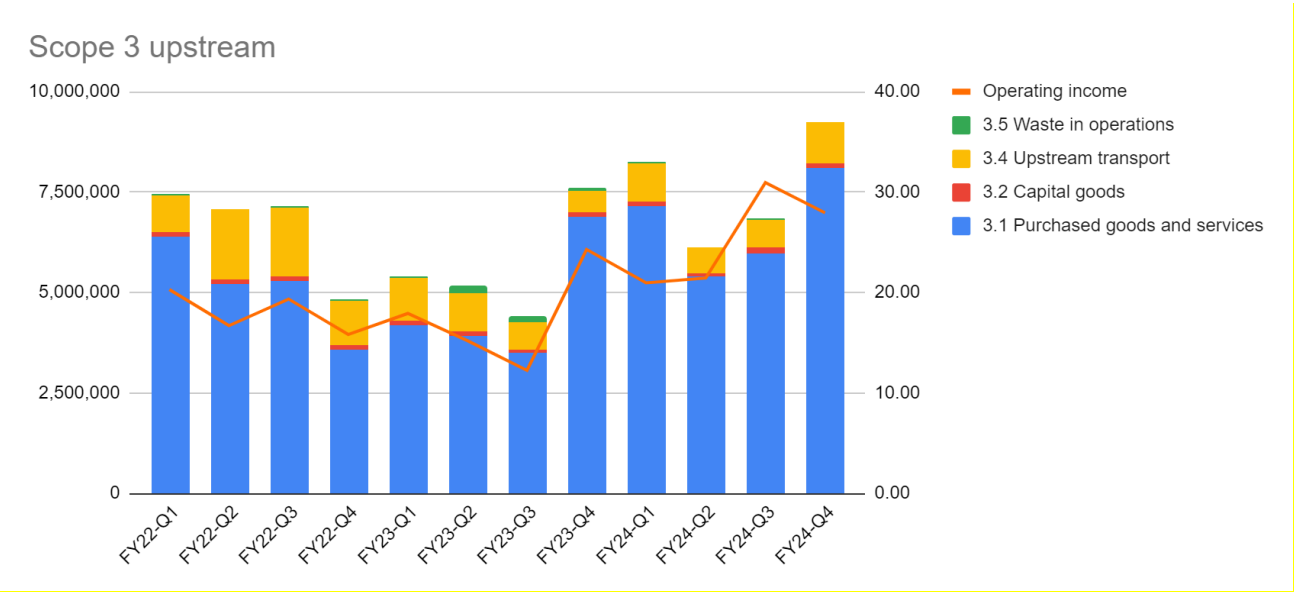
- Solar panels: in June 2023, 738 solar panels were installed. These supply approximately 300,000 kWh of electricity per year. Effects are visible in the results of FY24.
- Towards all-electric: as a result of the new office facade, the existing air conditioners were removed and replaced by a new air treatment system for heating, cooling and ventilation in autumn 2023. Replacement of the gas-fired heaters by heat pumps is being investigated for the production department. This will allow Scheldebouw to remove the gas connection.

02.4 Embodied carbon of our products

In the following figure the CO2 emissions in our value chain (Upstream Scope 3) are shown per quarter. On a different scale also the operating income is plotted in the same graph.

At the end of FY24 we have been able to evaluate Scheldebouw's CO2 performance more accurately by:

- Quantifying the CO2 emissions related to the production of aluminium extrusions and glazing with carbon factors per kilogram material and no longer in monetary values, so that the effect of purchasing aluminium extrusions with a lower embodied carbon per kilogram material is visible.
- Adding an analysis of the CO2 emissions relative to the company's operating income to the report in order to understand if we are still able to reach our targets in FY31 with an increased production.



		Q1	Q2	Q3	Q4	Total
3.1 Purchased goods and services [tCO2e]	FY22	6,382,321	5,213,978	5,283,716	3,582,585	20,462,600
	FY23	4,204,496	3,930,292	3,489,215	6,879,976	18,503,979
	FY24	7,167,372	5,394,973	5,985,238	8,116,818	26,664,401
3.2 Capital goods [tCO2e]	FY22	118,693	121,095	104,144	114,868	458,801
	FY23	111,779	95,038	96,777	100,715	404,310
	FY24	82,582	92,207	123,256	105,419	403,464
3.4 Upstream transport [tCO2e]	FY22	921,691	1,723,887	1,740,434	1,105,723	5,491,736
	FY23	1,039,277	946,458	682,182	534,847	3,202,764
	FY24	956,011	633,408	697,094	1,003,584	3,290,098
3.5 Waste in operations [tCO2e]	FY22	25,518	24,749	19,502	38,390	108,158
	FY23	59,391	186,540	140,609	85,230	471,770
	FY24	31,451	14,393	48,248	24,330	118,423
Operating income [mln €]	FY22	20.29	16.70	19.35	15.83	72.18
	FY23	17.92	15.21	12.26	24.28	69.67
	FY24	20.97	21.45	30.95	27.94	101.30

The sustainability developments at Scheldebouw focus on providing better insight to our clients about the environmental impact that different design alternatives have, so that they (and we) are able to make better informed decisions.

The design options focus on a combination of the following aspects to achieve the biggest impact:

- Optimising the design to reduce the quantities of a material
- Comparing different materials, e.g. aluminium sheets vs. terracotta
- Comparing different suppliers and/or production methods, e.g. low-carbon aluminium billets

Recently completed and planned actions to reduce the embodied carbon of our products:

- Embodied carbon calculation now standard part of tender bid, even without client request (implemented)
- Using aluminium extrusions in our facades from billets produced by hydro-electricity (First project currently in production, second and third project in progress). In FY24 we purchased 246 tons of aluminium with 3.14 kgCO2e emissions less per kg material than standard, leading to a total reduction of 773 tCO2e.
- Engagement with suppliers to stay informed about developments and technical and commercial feasibility (First contacts established, working on a more structured approach)

02.5 Sustainable company culture

To engage internal and external stakeholders we believe that it's not sufficient to focus on measurable quantities and numbers alone, but our actions should also be visible. For this reason we have a working group from various people of all departments throughout the company that come up with initiatives to improve our sustainable company culture and that collect ideas from other employees. They are also involved in the Sustainability Newsletter that is circulated three times per year.

03 Conclusion

The CO_2 performance ladder is a Dutch initiative for companies in the construction sector that want to be pro-active and set ambitious targets to reduce their carbon footprint as a company. The initiative is chosen by Scheldebouw, because it provides a structured framework to manage our sustainability developments. It is aligned with current and expected European legislation and helps us to stay ahead of what is strictly mandatory. On 19th October 2023 the initial audit took place and Scheldebouw has been awarded the level 4 certification on the CO2 Performance Ladder.

Scheldebouw's carbon reduction strategy focusses on:

- Scope 1 & 2: CO_2 emissions that are directly influenced by the company (its own energy use)
- Scope 3: embodied carbon emissions during the production of our façades (value chain emissions)

Currently the choice of our suppliers and the further agreements with them in particular determine the CO_2 footprint of our product. Transportation, waste and the activities in our own assembly facilities and on the building site have a much lower CO2 impact. By providing in house Life Cycle Analysis (LCA) services to optimise the design we try to reduce the embodied carbon of our facades in a holistic way instead of focussing on specific solutions. The process is finalised by obtaining project specific, fully externally verified Environmental Product Declarations (EPDs).

Based on the guidelines and standards of the Science Based Targets initiative (SBTi) carbon reduction targets have been defined so that we can check if our reduction measures are sufficiently effective. Based on our results over FY24 the measures to reduce our scope 1 and 2 emissions are very effective and we achieved our reduction targets for FY24 with a big margin. Our scope 3 emissions, however, increased because of a significant increase of production in the past year. The scope 3 emissions relative to the company's operating income still show a nice decreasing trend. By purchasing aluminium extrusions from billets produced with hydro-electricity, 773 tCO2e emissions have been avoided during FY24, which almost equals our complete Scope 1 and 2 emissions.