



Sustainability at Scheldebouw ■

CO₂ Performance Ladder ■

Final Report FY25

Revision 00

01-08-2025

Report name : CO2 Performance Ladder, Final Report FY25
Project name : Sustainability at Scheldebouw
Revision : 00
Date : 01-08-2025
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

	page
01 INTRODUCTION	4
01.1 CO ₂ PERFORMANCE LADDER.....	4
01.2 CO ₂ REDUCTION TARGETS	4
01.3 CO ₂ REDUCTION APPROACH	5
02 CO₂ PERFORMANCE OF SCHELDEBOUW	6
02.1 DATA IMPROVEMENT AND CORRECTIONS DURING FY25	7
02.1.1 <i>Inflation correction</i>	7
02.1.2 <i>Other corrections and improvements</i>	7
02.2 OVERALL PERFORMANCE EVALUATION	8
02.2.1 <i>Absolute results</i>	8
02.2.2 <i>Results related to operating income</i>	9
02.3 ENERGY USE OF FACTORY AND OFFICES.....	10
02.4 EMBODIED CARBON OF OUR PRODUCTS.....	11
02.5 SUSTAINABLE COMPANY CULTURE	14
03 CONCLUSION.....	15

Revisions

Rev. #.	Chapter:	Revisions:
00		First issue

Proprietary Note

The copyright of this report shall remain vested with Scheldebouw B.V. and only those parties who have received in writing an irrevocable, royalty-free, non-exclusive license from Scheldebouw B.V. shall have the right to reproduce this report and the contents of the same for any purpose relating to the contract works for which it was prepared.

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 2025, which runs from 1st April 2024 to 31st March 2025.

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 Absolute Contraction Approach with a 1.5°C pathway. The base year is FY22 and the target year is FY31.

Scheldebouw commits to the following set of targets:

	Base year (FY22)	Target year (FY31)	% Reduction
Scope 1	431 tCO ₂ e	250 tCO ₂ e	-42.0%
Scope 2	739 tCO ₂ e	429 tCO ₂ e	-42.0%
Scope 3	25,578 tCO ₂ e	14,835 tCO ₂ e	-42.0%
Total	26,747 tCO ₂ e	15,514 tCO ₂ e	-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

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.

01.3 CO₂ reduction approach

Scheldebouw's carbon reduction strategy focusses on:

- Scope 1 & 2: CO₂ 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)

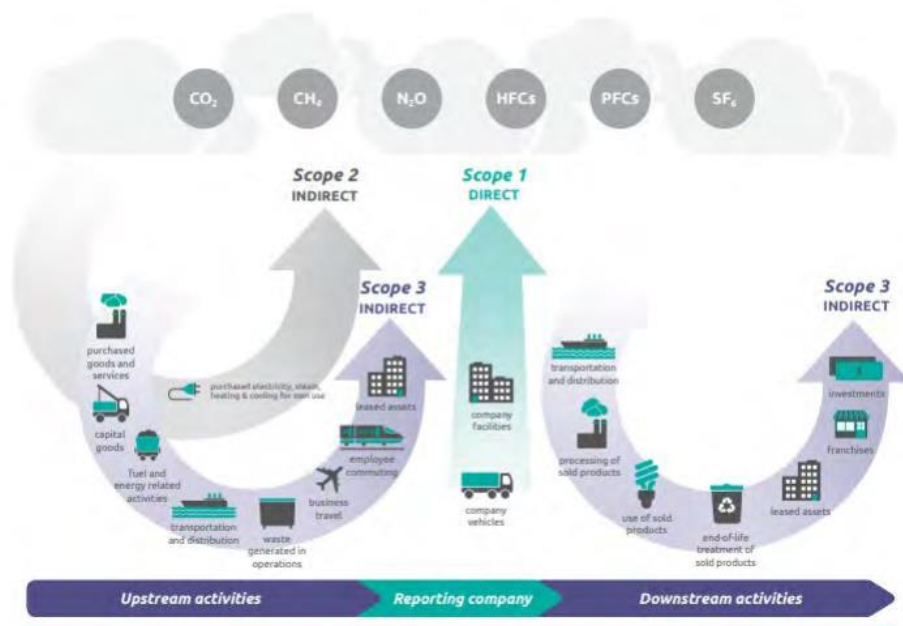
Using the LCA (Life Cycle Analysis) method, we went through the entire life cycle of our façades and mapped out the environmental impact per phase. Our expectation was confirmed that currently the choice of our suppliers and the further agreements with them in particular determine the CO₂ footprint of 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.

A key aspect in the above described approach is that we have a clear understanding of the developments in our supply chain. To advise our clients on the design and material choices that have to be made, we have to be able to present a complete picture of all the technical, visual, commercial and planning related impacts of a certain (low-carbon) option. One of our focus points is to improve and maintain this level of knowledge.

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

The CO2 emission inventory of Scheldebouw B.V. is composed of the following activities:

Scope 1

- Stationary combustion: gas for heating factory and office
- Mobile combustion: fuels for company and leased cars

Scope 2

- Purchased electricity for factory and office

Scope 3

- 3.1 Purchased goods and services:
 - Curtain wall materials
 - Production and packaging materials
 - Other (not product related) purchased goods and services
- 3.2 Capital goods:
 - Depreciation of owned and leased assets

- 3.4 Upstream transport:
 - From supplier to production facility
 - From production facility to site
 - Other
- 3.5 Waste in operations:
 - Production waste
 - Office waste
 - Site waste
- 3.6 Business travel:
 - Flights
 - Train
 - Employee owned cars, rental cars and taxis
- 3.7 Employee commuting:
 - Employee owned cars

02.1 Data improvement and corrections during FY25

02.1.1 Inflation correction

In the previous reports the financial carbon factors were kept constant over the years. Since the publication of Scheldebouw's FY24 report we have implemented an inflation correction on the financial carbon factors. Using the Eurostat yearly inflation rates, the correction is as follows:

	2021	2022	2023	2024	2025
Inflation correction relative to previous year	-	9.2 %	6.4 %	2.6 %	0 %*

* Correction over 2025 will be applied as soon as information is available

The correction has a significant impact on the results, because we are still assessing a significant portion of the emissions with the spent-based method. This is another reason to keep improving our input data and work towards more actual quantities. For a fair comparison also the expected and targeted operating income in FY31 has been updated to 120 mln. (was 100 mln.).

02.1.2 Other corrections and improvements

The following correction was already included in the intermediate report of FY25:

- Aluminium extrusion billets of the project 334 Oxford Street taken into account with the correct carbon factor: 3.06 kgCO₂e / kg aluminium. This is a reduction of 7.17 – 3.06 = 4.11 kgCO₂e / kg aluminium compared to the standard material.

Since the intermediate report of FY25 the following additional corrections and improvements have been implemented:

- Corrected value of FY24-Q4 travel expenses
- Included 2025 values of www.co2emissiefactoren.nl

- The following additional materials are now also included based on actual purchased kilograms instead of monetary value: aluminium and steel sheetwork, steel brackets and gaskets, which leads to a more accurate assessment of the corresponding CO₂ emissions. This improvement has been implemented for all years starting in FY22.

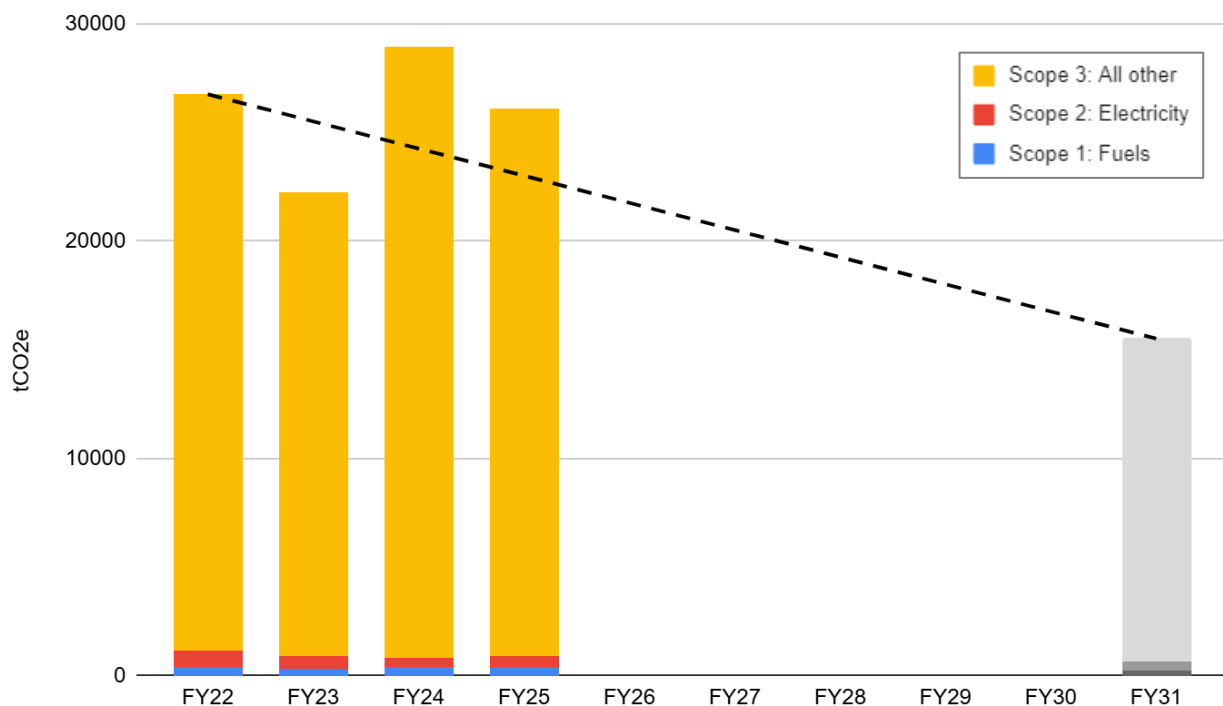
The following actions are in progress or planned:

- Sub-metering of energy consumption between office and factory in Middelburg. Implemented on 1 April 2024, but still working on a proper set up, so results not yet included in this report.
- Survey of site energy consumption. Started April 2024 and first results available, but not sufficient to draw conclusions yet.
- On Permasteelisa Group level the software package Gravity has been purchased for the reporting of carbon footprint and other sustainability topics. This is currently being set up with the plan to transition fully to that software in the course of the next financial year.

02.2 Overall performance evaluation

02.2.1 Absolute results

In the following figure the results are shown of the CO₂ emission inventory for the financial years FY22 to FY25 in absolute values.



Performance evaluation of FY25

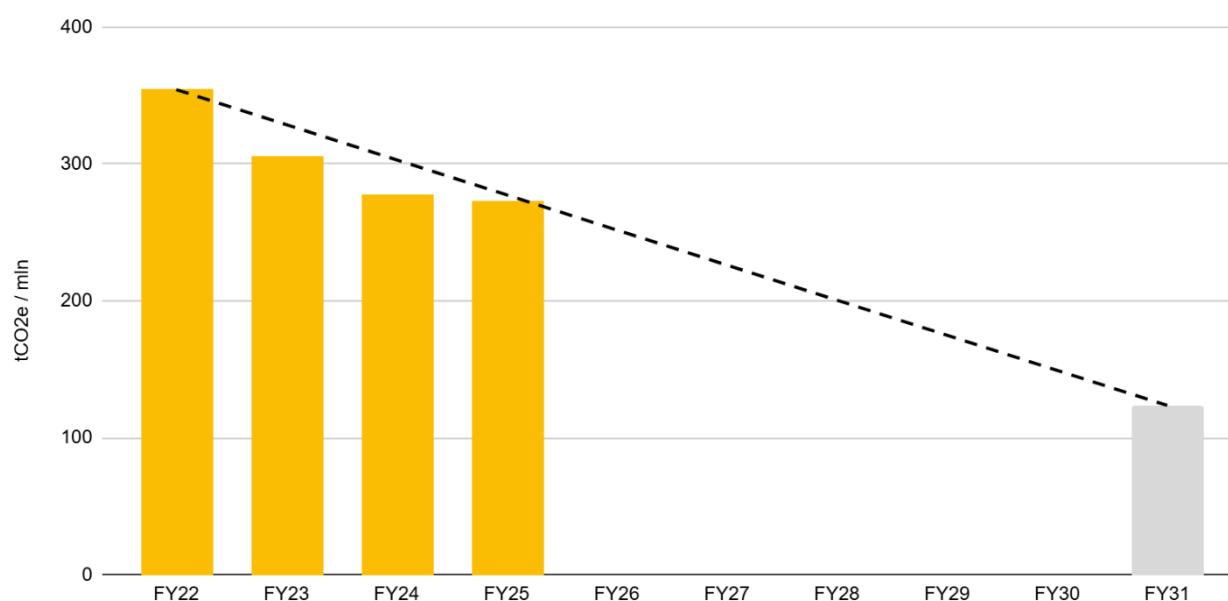
The results of FY25 show a slight increase of our Scope 1 and 2 emissions compared to the previous year FY24. Our earlier reductions were sufficient so that we still achieve our target for Scope 2 over this year, but for Scope 1 that's not the case. Scope 1 and 2 emissions are analysed in more detail in Chapter 02.3. FY25's Scope 3 emissions show a reduction compared to the previous year FY24, but not sufficient to achieve our

absolute targets. We see a similar effect as in the previous year, where the increased operating income compared to the base year is related to an increase of purchased materials and thus an increase of our emissions.

	Base year FY22	Target FY25		Achieved FY25	
Scope 1	431 tCO ₂ e	370 tCO ₂ e	-14.0%	384 tCO ₂ e	-10.9%
Scope 2	739 tCO ₂ e	636 tCO ₂ e	-14.0%	489 tCO ₂ e	-33.8%
Scope 3 total	25,578 tCO ₂ e	21,997 tCO ₂ e	-14.0%	25,208 tCO ₂ e	-1.4%
Scope 1, 2 & 3 total	26,747 tCO ₂ e	23,003 tCO ₂ e	-14.0%	26,081 tCO ₂ e	-2.5%

02.2.2 Results related to operating income

In the following figure the CO₂ emissions relative to the operating income are shown for the financial years FY22 to FY25 and for the target year FY31. The relative CO₂ emissions show a decreasing trend, although the curve is flattening. For FY25 we stay just below the target line.



	FY22	FY23	FY24	FY25	Target FY31
Scope 3 emissions total [tCO ₂ e]	25,578	21,320	28,121	25,208	14,835
Operating income [€]	72 mln.	70 mln.	101 mln.	92 mln.	120 mln.
Emissions relative to turnover [tCO ₂ e / mln. €]	354	306	278	273	124
Reduction from base year FY22 [%]	-	-13.7	-21.7	-23.0	-65.1

Note:

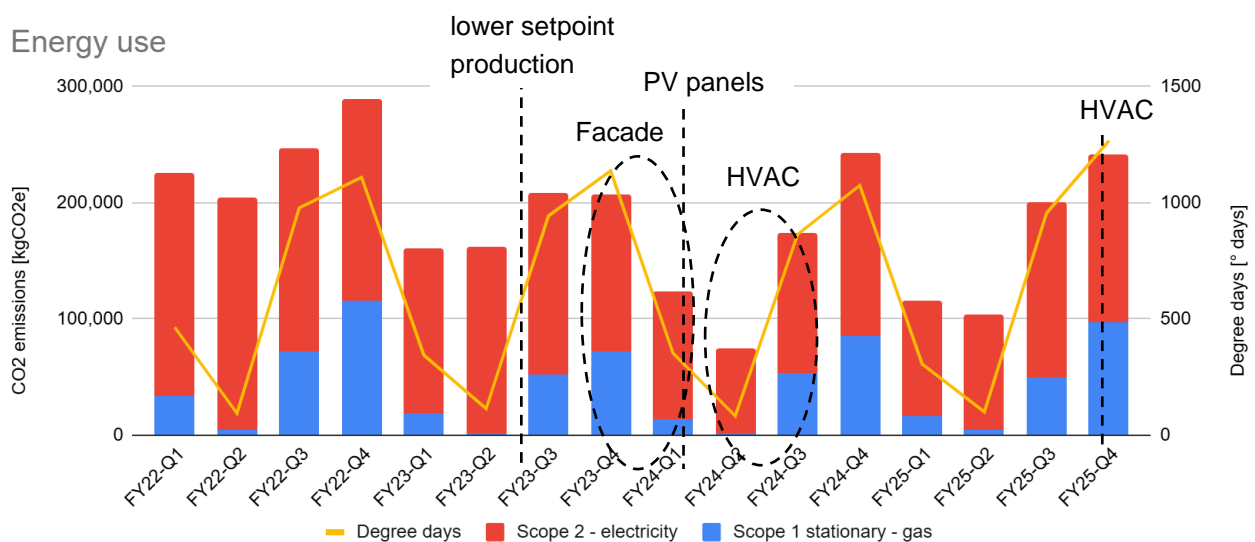
Using the official SBTi target setting tool with the Economic intensity method, only a reduction of -51.6% in the target year FY31 would be required. This translates in 172 tCO₂e / mln. € turnover and a target of 20,580 tCO₂e absolute emissions for a turnover of 120 mln. €. It is currently under discussion if we will fully adopt this approach.

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. Due to the seasonal fluctuations of the external temperatures, also the emissions fluctuate over the year. The degree days method accounts for this effect. In the graph the degree days are plotted for reference (on a different scale). On the timeline also the interventions in our Middelburg facility are indicated.

Completed energy reduction measures in Middelburg:

- Setpoint of factory heating: the setpoint of the heating in the factory was lowered from 18 to 17 degrees Celsius in autumn 2022.
- Facade renovation: removal of the existing office façade and replacement with a better performing façade in the period January-May 2023
- PV panels: in June 2023, 738 solar panels were installed. These supply approximately 300,000 kWh of electricity per year.
- HVAC renovation, phase 1: following the installation 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.
- HVAC renovation, phase 2: replacement of remaining air conditioner in Middelburg office in January 2025.



		Q1	Q2	Q3	Q4	Total
Scope 1 stationary – gas [kgCO ₂ e]	FY22	33,958	4,025	72,428	116,282	226,694
	FY23	19,040	2,518	52,602	72,330	146,489
	FY24	14,361	1,675	54,131	84,689	154,856
	FY25	17,049	4,897	50,348	96,524	168,818
Scope 2 – electricity [kgCO ₂ e]	FY22	191,116	200,906	174,538	172,475	739,035
	FY23	142,200	159,824	156,040	134,858	592,922
	FY24	108,803	72,972	119,514	158,156	459,446
	FY25	98,246	95,970	151,207	143,952	489,376
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
	FY25	307	100	956	1,267	2,629

In the past year we see an increase of the CO₂ emissions related to the energy use of our buildings, whereas there was a significant decrease in the two years before. Looking at the timeline of the interventions, it is clear that the end of FY23 and the beginning of FY24 must be a period with a lot of abnormalities in energy consumptions due to the ongoing construction works.

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. For a more detailed analysis of our energy consumption separate meters were installed for different activities. The readings from the installed submeters are not ready for analysis yet, but we hope to have this information available, when we start to draw up the plans for the coming year.

The most important questions to answer are whether the implemented measures have been effective and which additional measures we should consider to take.

Energy reduction measures under investigation:

- Solar panels: in June 2023, 738 solar panels were installed. These generate approximately 300,000 kWh of electricity per year. Under investigation if we want to install more solar panels.
- Towards all-electric: 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

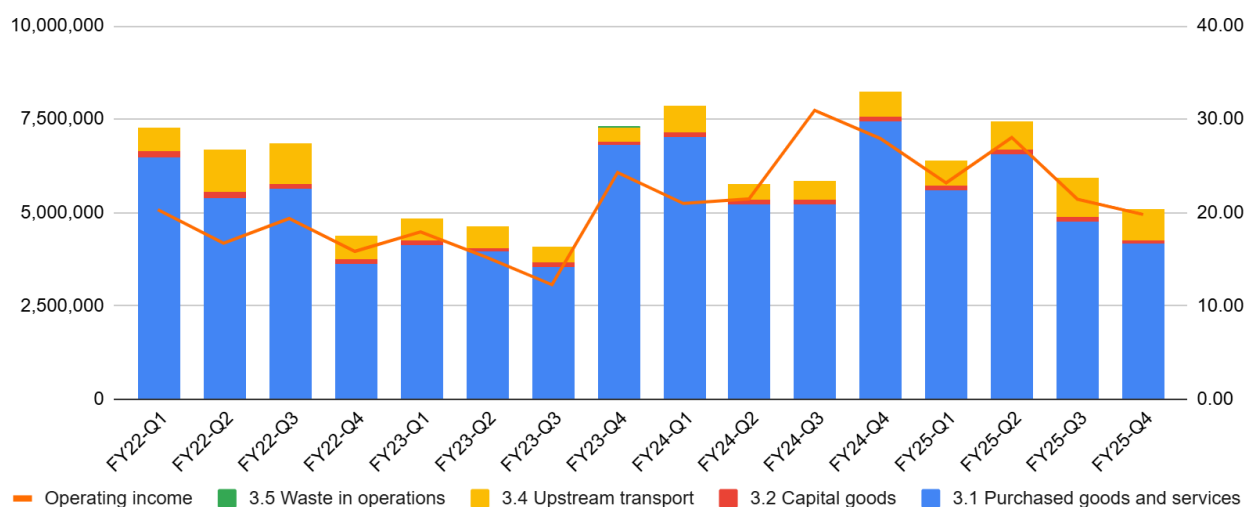
The sustainability developments at Scheldebouw focus on providing better insight to our clients about the environmental impact that different design alternatives have, so that they (and we) are able to make better informed decisions.

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

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.

Scope 3 upstream



		Q1	Q2	Q3	Q4	Total
3.1 Purchased goods and services [tCO ₂ e]	FY22	6,464	5,394	5,651	3,610	21,119
	FY23	4,143	3,947	3,538	6,797	18,425
	FY24	7,034	5,233	5,229	7,454	24,950
	FY25	5,606	6,576	4,771	4,161	21,114
3.2 Capital goods [tCO ₂ e]	FY22	160.0	171.9	126.1	134.1	592.0
	FY23	118.6	112.5	111.5	107.3	449.9
	FY24	97.5	104.0	122.0	109.6	433.0
	FY25	117.7	123.5	111.1	109.3	461.6
3.4 Upstream transport [tCO ₂ e]	FY22	631	1,104	1,091	638	3,465
	FY23	588	569	435	391	1,983
	FY24	722	416	477	680	2,296
	FY25	655	743	1,050	815	3,263

3.5 Waste in operations [tCO ₂ e]	FY22	2.03	1.97	1.55	2.79	8.33
	FY23	4.32	13.57	10.23	5.83	33.93
	FY24	2.15	0.98	3.30	1.62	8.05
	FY25	1.94	1.89	2.20	1.60	7.63
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
	FY25	23.17	28.05	21.41	19.79	92.41

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)
- Engagement with suppliers to stay informed about developments and technical and commercial feasibility. (First overviews created and working on a more structured approach with the involvement of procurement.)
- Using aluminium extrusions in our facades from billets produced by hydro-electricity (three projects under execution). In the table below the total amount of purchased aluminium extrusions and the portion low-carbon are shown, together with the achieved emission reduction.

	FY22	FY23	FY24	FY25
Total aluminium extrusions [t]	836	785	1,549	788
Low-carbon aluminium extrusions [t]	0	1	398	363
Portion low-carbon	0.0%	0.1%	25.7%	46.0%
Emission reduction [tCO ₂ e]	0	4	1400	1202

- For the coming period the intent is to start using aluminium extrusions with higher recycled content on the first project, which leads to an even lower carbon footprint per kilogram of purchased aluminium. Also the use of glazing with a production process that has lower carbon emissions is planned for the first suitable project.

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.

A recent initiative is to investigate how we can improve car sharing of employees. There are a lot of travel movements between our facilities in Middelburg and Heerlen and often people are not aware that a colleague is travelling on the same day. We are currently setting up a platform in which we make this information available for the employees, so that they can reach out to each other and make arrangements.

03 Conclusion

The CO₂ performance ladder is a Dutch initiative for companies in the construction sector that want to be proactive 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: CO₂ 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 CO₂ 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 FY25 the measures to reduce our combined scope 1 and 2 emissions were effective. We achieved our FY25 reduction targets for scope 2 with a big margin, sufficient enough to compensate for the small short come to achieve our scope 1 target. In the next period we will analyse our results in more detail to see which measures we need to take in future to also meet our separate targets for scope 1 and 2.

FY25's Scope 3 emissions show a reduction compared to the previous year FY24, but not sufficient to achieve our absolute targets. When we express our emissions in relation to our operating income, we end up just below the target line. By purchasing an increasing portion of our aluminium extrusions from billets produced with hydro-electricity, 1400 tCO₂e emissions have been avoided during FY24 and 1200 tCO₂e in FY25.