CO_2 Performance Ladder Management Report 2024

FCC Construcción S.A. (NL)

Contents

1. Preface

FCC Construcción Policy

FCC Construcción integrates the Environmental issues directly in its business strategy as part of its policy. Its environmental policy is the demonstration of its commitment towards compliancy, preventing and mitigating environmental impacts. With the implementation of its environmental management system, FCC Construcción aims preventing unnecessary burdening of the environment.

Where FCC Construcción sees that the work may have adverse effects on the environment, every effort is made to minimize these effects, or prevent them where possible (prevention).

FCC Construcción not only complies with the requirements of the applicable laws and regulations but goes a step forward always working on being a driver changing through implementation of good practices in its works. Together with the client, FCC Construcción tries to find solutions that are even better for the environment. Good practices as ensuring the separate collection and processing of waste, efficient use of water and energy wherever possible, stimulating the environmental awareness and motivation of our employees and those working on behalf of FCC Construcción, etc., are developed in all the projects and fixed locations of the company.

FCC Construcción, as part of its Sustainability Strategy, put efforts on engaging with sector associations to encourage knowledge exchange on ESG matters. The company follows developments and sustainability tendencies, in order to always be able to apply the most up-to-date technology in materials, techniques and processes. By applying these developments itself, FCC Construcción has gained a lot of experience in building with materials, techniques and processes that combine sustainability, construction speed and cost savings. With regard to sustainability, making the right choice in application of materials and working methods is of great importance. FCC Construcción applies good environmental practices where possible on all its projects.

Through constant monitoring and meticulous follow-up of environmental indicators, they are identifying areas of opportunity to optimise their processes and maximise their positive impact.

The activities of the company have a direct impact on the environment; we are aware of our responsibility for nature and the environment. FCC Construcción carries out research into making the chain more sustainable, whether or not together with suppliers, knowledge institutes and sector organisations. We strive to continuously improve our environmental performance, which is reflected in our Sustainability Report 2023-2024 and the Environmental Communication 2023.

GHG emissions and Climate Change

FCC Construcción commitment towards climate change has encourage the company to annually publish its Greenhouse Gases Report where the annual quantification of the CO2 emissions of every country where FCC Construcción operates its included. This is quantified and verified based on the ISO 14064-1 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals and ISO14064-3 Specification with guidance for the validation and verification of greenhouse gas assertions.

FCC Construcción allocates climate change as one of the greatest challenges to face, not only as a company, but also as part of the current society, and requires the involvement of all sectors to implement specific measures to reduce greenhouse gas (GHG) emissions. Aware of the urgency of the matter, FCC Construcción has developed its Climate Change Strategy, as part of the Environmental Dimension of the 2050 Sustainability Strategy, to deal with the strategic line of Climate Action. In this document, strategic lines of action covering actions and defined objectives have been designed. The strategic lines of action are the following:

- Mitigation: Moving towards climate neutrality
- Adaptation: Solutions for climate resilience in construction
- Improving climate change governance

CO2 Performance Ladder

One of the focal points of the environmental management policy and Sustainability Strategy, is the reduction of CO2 emissions and mitigation of climate change.

Reduction measures are sought within the activities of FCC Construcción, always striving for the most efficient ones in terms of viability and impact.

Besides, working together with stakeholders ensures that optimization is not limited to the individual company. Thus, integrating them in the company's management and activities increases their commitment and transparency, essential aspects to ensure the company's growth. By means of research and initiatives, FCC Construcción makes knowledge available to the sector and thus takes its social responsibility.

In terms of the implementation of the **CO2 Performance Ladder**, FCC Construcción will communicate its Energy Policy, Emission Inventory and Quantitative Reduction Objectives internally and externally every six months. The communication channels are further elaborated in document *"CO2 Communication Plan"*. The level at which FCC Construcción with Emissions Inventory deals with CO2 reduction, meets the requirements of the CO2 Performance Ladder for **level 5**.

Amsterdam, 24-04-2025

Rafael Huerga Fernández - Project Director

2. FCC Construcción (NL) commitment towards sustainability and climate change

2.1. FCC Construcción Policies

FCC Construction's sustainability policy *(FCC Construcción Policies)* are designed to integrate environmental, social, and governance (ESG) principles into their construction activities, ensuring responsible and sustainable practices.

Regarding FCC Construcción NL, all sustainability plans of its CO_2 and Energy Management System are aligned with the *Sustainability Strategy 2026-2050* of FCC Construcción S.A.

Key initiatives include the transition to renewable energy sources, significantly reducing Scope 2 emissions from electricity consumption. Additionally, FCC Construcción has set ambitious targets in its Climate Change Strategy to reduce greenhouse gas emissions to achieve climate neutrality in 2050. The company also focuses on energy efficiency improvements, such as optimizing construction processes and materials to lower energy consumption and emissions. These measures are part of a broader strategy to ensure sustainable and resilient infrastructure development, contributing to global efforts to combat climate change.

In FCC Construcción NL, an Energy Management Operative Plan has been drawn up in accordance with the ISO 50001. The goal is to provide the company and its projects a supporting document for setting up systems and processes to achieve energy efficiency and CO_2 emissions reduction.

Additionally, the report of energy consumption and quantification of GHG emissions is done under the ISO 14064:2018. Annually, the emissions are disseminated internally and externally.

2.2. Climate Change Commitments

FCC Construcción has set reduction GHG emissions goals, which are all described in the Climate Change Strategy 2023-2026. This strategy outlines ambitious goals, including achieving climate neutrality by 2050. As an intermediate target, the company aims to reduce greenhouse gas (GHG) emissions by 35% in Scope 1 and 2 by 2030. Their approach includes adopting renewable energy sources, enhancing energy efficiency, and implementing innovative construction practices to minimize environmental impact. Additionally, FCC Construcción focuses on adaptation measures to increase the resilience of their infrastructure against climate change. Through continuous monitoring and governance improvements, they ensure that their actions align with evolving climate policies and contribute to global sustainability efforts.

At FCC Construcción NL and in its A9 BaHo project, the practical implementation can be demonstrated.

The company is leveraging the benefits of the CO2 Performance Ladder to achieve significant environmental benefits. The project aims to minimize CO2 emissions through various strategies involving implementing measures in all emissions categories. The total reduction is facilitated by transitioning to more sustainable sources of energy, optimizing energy efficiency in construction processes, and addressing emissions related to the most impactful materials.

These measures not only enhance the project's sustainability but also set a benchmark for future infrastructure developments.

2.3. Governance and Stakeholder Engagement in CO2 Reduction Initiatives in the A9 BaHo project

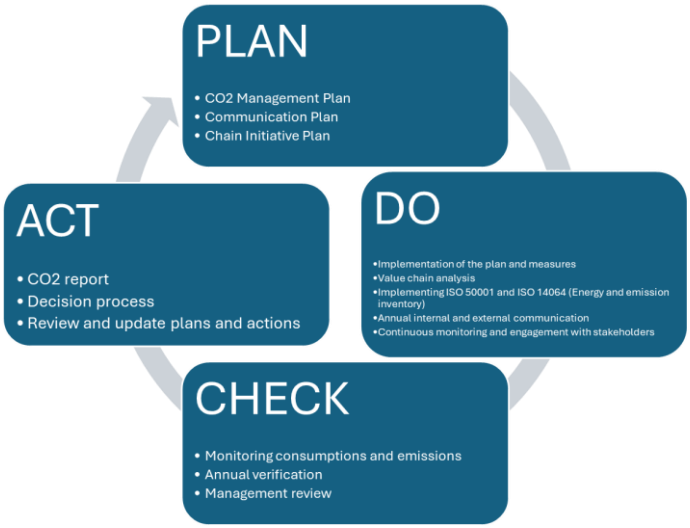
FCC Construcción NL is actively collaborating with various stakeholders to achieve significant CO2 emissions reductions in the A9 BaHo project in the Netherlands. This collaboration involves engaging with local authorities and with suppliers in order to ensure that the project meets stringent GHG reduction standards. FCC Construcción NL is implementing in its project measures such as transitioning to renewable energy sources, optimizing construction processes, and reducing emissions from key materials like steel, concrete, ground, and asphalt. Through continuous dialogue and cooperation with stakeholders, FCC Construcción NL ensures that their CO2 reduction initiatives are effective and aligned with broader environmental goals.

3. Implementation of the CO2 Management System

This report helps FCC Construcción NL's to report its emissions in an exercise of transparency and striving for continuous improvement.

The aim is also to detail all planned actions that come from the CO2 Management System that it's implemented in the company in compliance with the level 5 of the CO2 Performance Ladder certificate, which is the highest possible level.

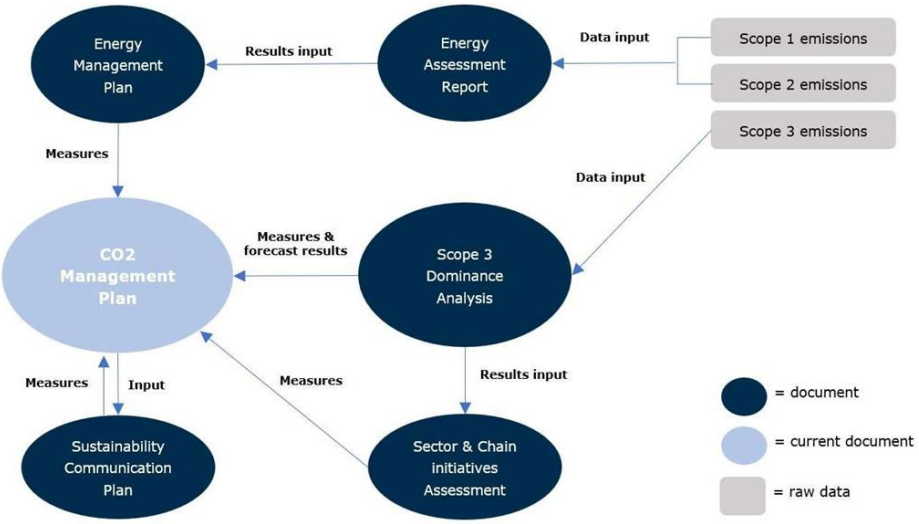
The CO2 Management System of FCC Construcción NL is implemented in accordance with the Plan-Do-Check-Act (PDCA) cycle, ensuring a systematic approach to managing and improving CO2 reduction initiatives.



The relationship between documents and actions is caused by the PDCA-dependence of the CO2 Performance Ladder by which the requirements must be fulfilled, allocating the different deliverables to one, or multiple, stage of the PDCA Deming cycle.

All document mentioned in the Table are either 1) a plan, 2) a procedure, 3) Inventory or analyse, 4) Report. All actions to first implement the CO2PL into the company are extracted from all operative plans and bundled into chapter 5 Implementation Plan.

The internal process to achieve the fulfilment of the CO2PL requirements its done by defining the actions and continuously monitoring the results and the progress of implementation towards the final goal. All documentation and reports done to implement the CO2 Performance Ladder system at FCC Construcción NL are the following:



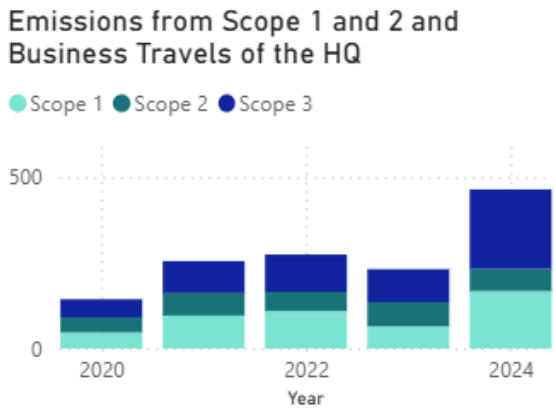
3.1. Organisational boundary

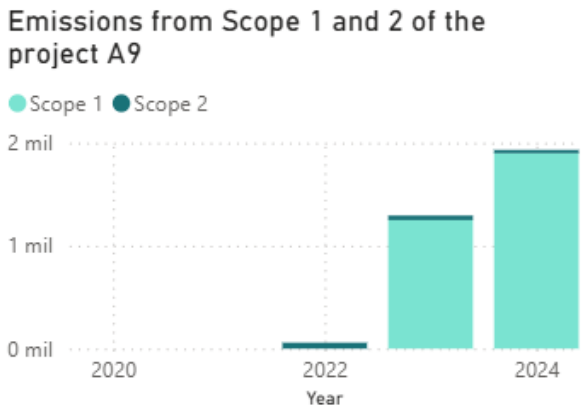
The organisational boundary is determined based on the contractual relationship of FCC Construcción S.A (NL). The applicability of the CO2 PL is for the VeenIX A9 BaHo project. FCC Construcción S.A. (NL), has a EPCM contract with Veenix BaHo B.V. and Veenix BaHo B.V. has a DBFM contract with RWS. By means of the EPCM contract all Engineering, Design, Construction and Maintenance requirements of the DBFM contract are transferred to FCC Construcción S.A. (NL).

3.2. Size of the organization

The CO2 Performance Ladder distinguishes between organisation sizes. It distinguishes organisations as small, medium or large based on their annually CO2 emissions.

According to the GHG Emissions of FCC Construcción NL showed in the following pictures, FCC Construcción (NL) does not exceed the limit emissions from scope 1 and 2 and the business travels of 500 tons of CO_2 in its offices, neither the 2.000 tons of CO_2 in the site project. Thus, the size of the organisation is SMALL





3.3. CO2 MS Implementation in the company

In 2022, a plan was devised to implement the CO2 Performance Ladder within FCC Construcción S.A (NL). The implementation proved successful, and the next objective is to uphold the certification. This requires the CO2 Management team to undertake various tasks, including research, calculations, and the definition, planning, monitoring, analysis, and reporting of CO2 reduction measures.

Additionally, to maintain the certification, it is necessary to provide reports to the CO2 Management Board regarding the status of CO2 management and reduction measures for decision-making purposes. We have conducted analyses to gather information on these matters, presenting the findings concisely yet accurately to inform the CO2 Management Board. Fact sheets and reports have been utilized to guide decision-making processes aimed at achieving and sustaining Level 5 of the CO2 Certificate.

A strategic consultant has shared the Sustainability Management Plan with the PMT at the start of the project in order to inform and communicate the scope of Sustainability Management Plan, Plans and procedures described within in order to involve and commit all Management areas in the goals of Sustainability Management Plan.

The Project Director sent a communication email at the beginning of the project to all organization informing on CO2 goals and the needed collaboration of all the organization in reaching this goal. Over the past year, we have further informed the organization about the progress of the goals we've achieved by conducting a comprehensive presentation for the entire organization.

3.4. Deviations and action for implementation

Missing data

Data collection is key for gaining insight into our energy consumption and CO2 emissions. This sets the foundation for CO2 targets, measures, forms the base of the strategy and serves for creating continuous improvement.

We have spent much of the past year trying to find an efficient way to retrieve data. To do this, we put out requests in the agenda of Board meetings and we contacted individuals within the organization. We found out that the quickest way to request data is to put the request through the CO2 Management Board.

This process of collecting, monitoring and reporting on this data is discussed during CO2 Management Board meetings. The members of the CO2 Management Board are therefore carrying the responsibility to implementing this process into the FCC Construcción S.A. (NL) organisation. The ESG team is responsible for putting information requests in the CO2 Management Board meeting agenda's.

Deviations

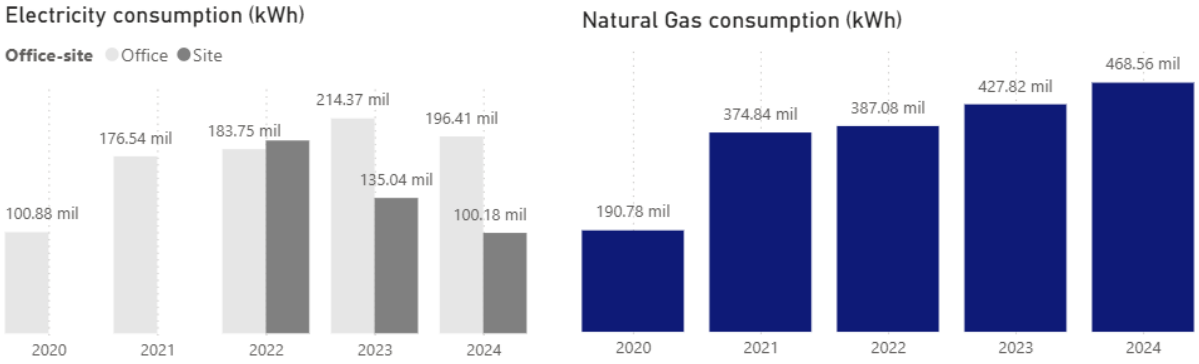
All deviations are allocated and addressed systematically to ensure continuous improvement and maintain operational integrity. The process typically involves several key steps: identification, analysis, corrective action, and monitoring.

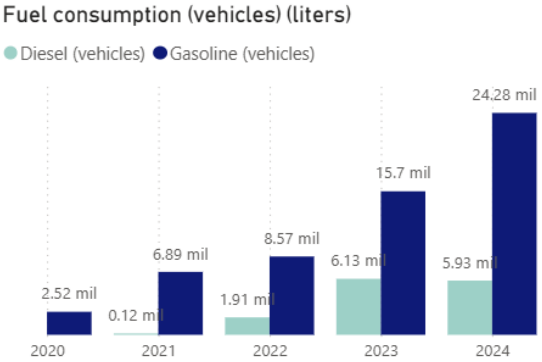
4. Insight on the energy performance

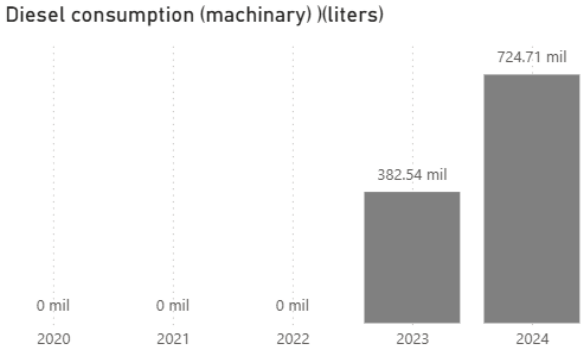
As part of the implementation of the CO2PL System, the energy consumption is meticulously monitored and analysed throughout the project's construction phase. This report presents the comprehensive results of our energy consumption analysis.

Analysing the electricity and natural gas consumption of the project, we can see that, once the project started its full activity (after the covid pandemic in 2020), the consumption has been stable in the offices.

In the initial years, specifically 2020 and 2021, electricity consumption was predominantly in the offices, reflecting the preparatory and planning phases of the project.







Considering the consumptions from fuels as gasoline and diesel, its evidenced that, as the project progressed into active construction phases in 2022, on-site electricity consumption began to increase significantly.

This shift highlights the dynamic nature of energy usage throughout the project's lifecycle, emphasizing the growing energy demands of on-site activities as construction progresses.

5. Carbon footprint

The carbon footprint of the project is calculated based on FCC Construcción S.A. methodology, under the ISO 14064:2018 "*Greenhouse gases. Specification with guidance, at the level of organisations, for the quantification and reporting of greenhouse gas emissions and removals*" and under the sectoral reference of the European Network of Construction Companies for Research and Development (hereinafter, ENCORD).

The methodology of the calculation, as well as the organisational and operational boundaries and exclusions, is described in every GHG Emissions Reports of the company, that it's published annually.

Following the guidelines of the international standards, FCC Construcción NL has made its own materiality analysis for the VeenIX A9 BaHo project, which is updated annually, based on the criteria of FCC Construcción S.A. which are; magnitude of emissions, level of influence on sources, access to information and data accuracy level.

The materiality analysis focuses on Scope 3, and it's described on the internal document "Value Chain Analysis".

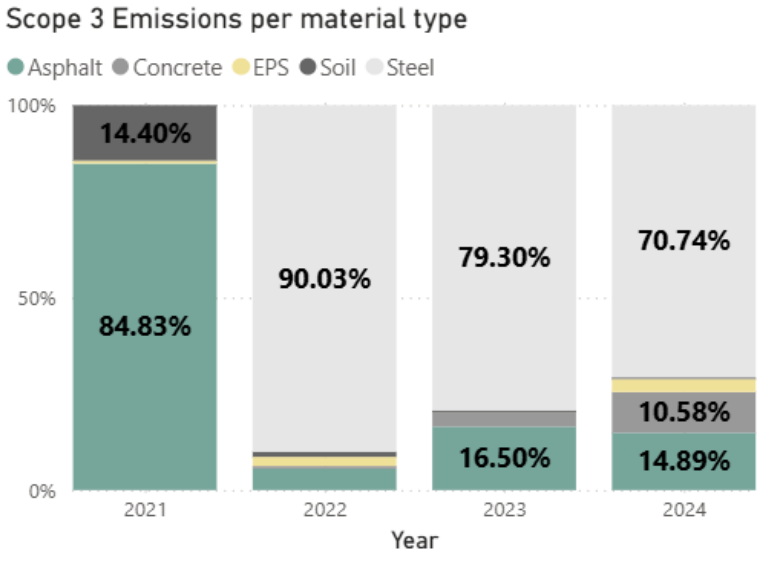
At the beginning of the project, a materiality analysis was done, concluding that the main materials of the whole project will be the following;

- Crushed rubble (site paving or as a foundation for roads and site construction)
- Geotextiles (used in combination with soil, in road construction applications)
- Asphalt
- Steel
- Concrete
- Soil

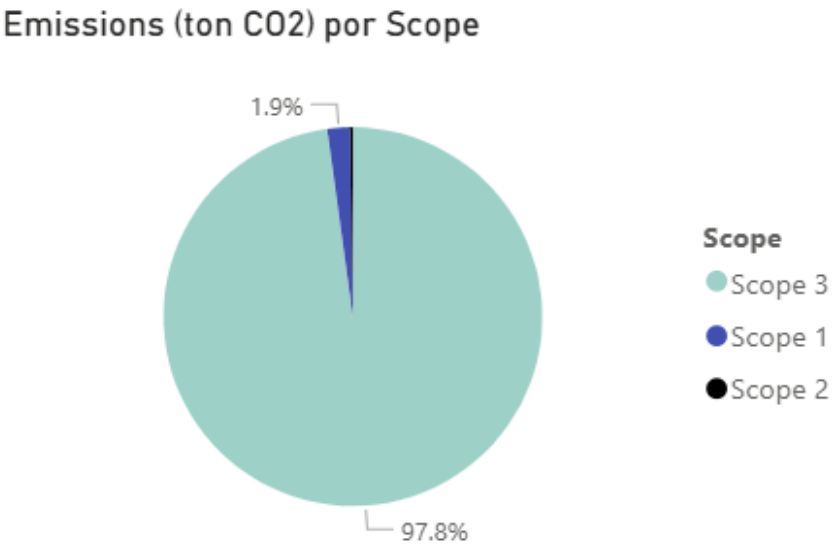
Over the four years of the VeenIX A9 BaHo construction project, the use of materials evolved significantly due to the different phases of construction. In 2021, asphalt was the dominant material used for temporary road pavements while soil was the second relevant material reflecting the primary focus on earthworks.

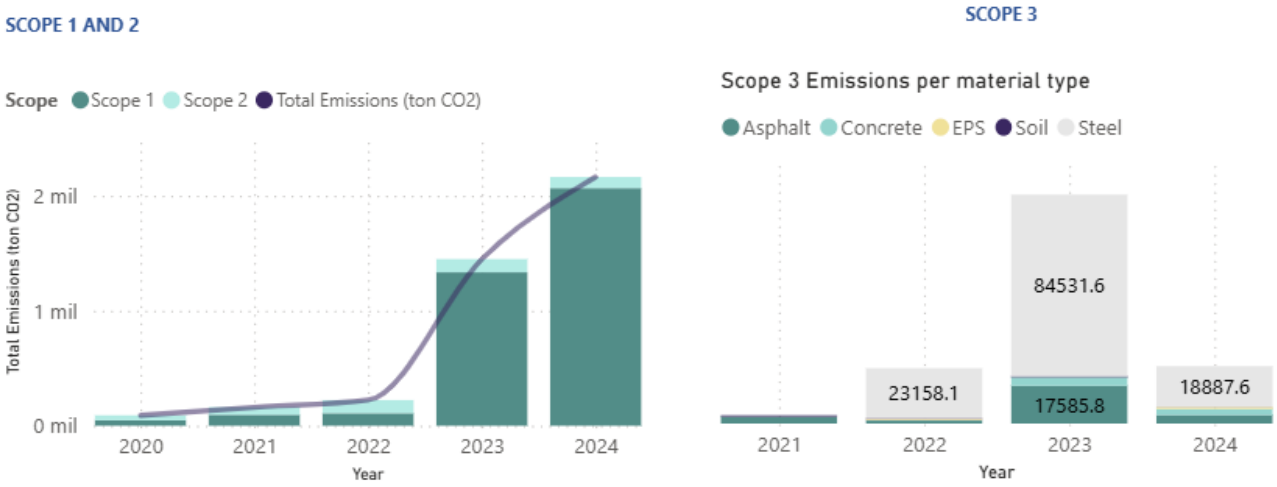
From 2022 onwards, the contribution by soil and asphalt decreased, as steel got more relevant, suggesting a shift towards other construction activities. The main activities in 2022 focused on foundation and structural elements, as most of the ground keeping activities were developed (including the use of sheetpiles and piles).

On 2024, steel has also played a relevant role, however, not because of the sheetpiles, but because the use of Gewi anchors as foundation on the deepcut of the project.
The contribution of each material can be shown in the next figure:

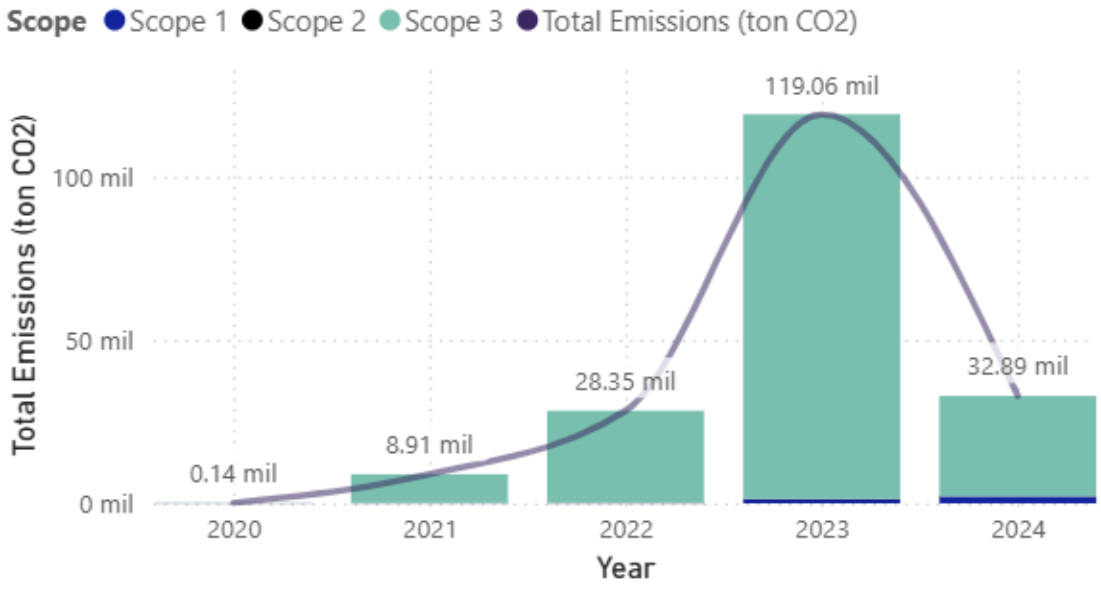


In terms of total emissions, the following graphics show the total quantification of the project;

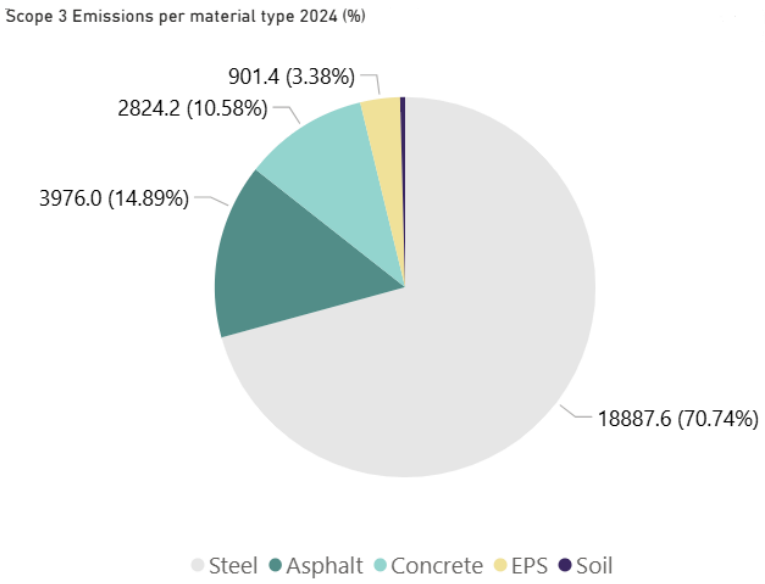




The influence of sheet piles and anchors has become more noticeable in 2023 and 2024, as reflected in the total CO_2 emissions as steel is one of the most impactful materials in terms of CO_2 emissions.

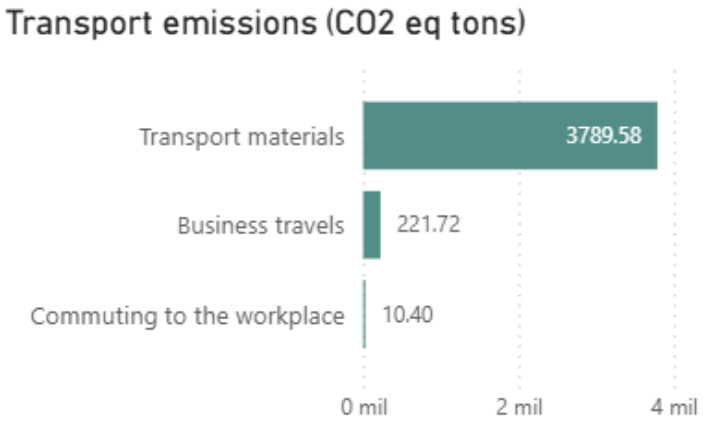


For 2024, the contribution of each material to the total of the emissions is the following;



The project also considers the transport as part of their emissions, both from the staff (divided into the emissions produced by the business travels and commuting to the workplace, and the upstream transport of materials from the origin of fabrication to the site).

The emissions of the transport of the materials are calculated based on the distances from the suppliers of the project, and, the emissions of the staff are calculated based on the information provided of the Head Quarters of FCC Construcción.



6. Commit towards CO2 Reduction Objectives

The CO_2 Performance Ladder aims to take reduction measures on the projects. At VeenIX, most of the CO_2 emissions take place on the construction site where the equipment consumes a lot of fuel.

At the moment, about half of the certified companies take measures in the production process. This ranges from equipment use to planning optimization to changes to production locations. The CO_2 Performance Ladder aims to take reduction measures on the projects.

FCC Construcción S.A. (NL) declares to be committed to pursue a reduction of approximately 3750 tons of CO_2 emission per year. The total expected reduction comprises 30.000 tons of CO_2 over the lifetime of the project (2020 till 2028).

The reduction targets for the A9 project based on the scope are the following:

Scope 1 emissions (gas consumption): 300 tons of CO_2 reduction

Scope 2 emissions (electricity & business travel): 300 tons of CO_2 reduction

Scope 3 emissions (related to materials): 29.400 tons of CO_2 reduction

The company is putting all efforts in both implementing sustainable good practices in the project and gathering all the information to know the real impact of the measures. The measures which are already implemented and with their impact quantified can be seen in the graph below. Some other in progress actions are to quantify the real impact of using asphalt with high percentages of reused material, the reuse of beams, and the reuse of the demolish concrete as mix granulite for the project.

Implementing and getting the information is a continuous process, which is still in process, with the final goal of achieving the expected CO_2 emissions reduction and contribute to building more knowledge about how the sector can implement mitigation measures in their projects and to the fight against climate change.

The Declaration statement of CO_2 reduction can be consulted in the following link.

7. CO2 Reduction Initiatives in the A9 BaHo.

Currently, the project is working on gathering all the information of all the good practices made and to be made in order to calculate their impact in terms of emissions.

After the phase of exploring opportunities for collaboration, knowledge sharing, and leveraging externally developed expertise, the A9 BaHo project have identified initiatives for CO_2 reduction that our organization can pursue. FCC must have three different types of initiatives to meet the requirements.

Regarding the development projects, FCC Construcción NL have chosen to proceed with the following initiatives: EPS recycling, Pilot Project Concrete, Reuse Beams, Reuse Guardrails, Reuse Noise barriers and application of recycled sand in structural concrete. By using the principles of the circular economy, it becomes easier for companies that join the initiative to save in CO_2 emissions in terms of the production of the parts. The projects are still in progress, but they will eventually benefit the impact of the project in terms of GHG emissions.

The chosen initiatives of FCC Construcción S.A. (NL) are:

Chain initiatives

- Energy
- E-driver

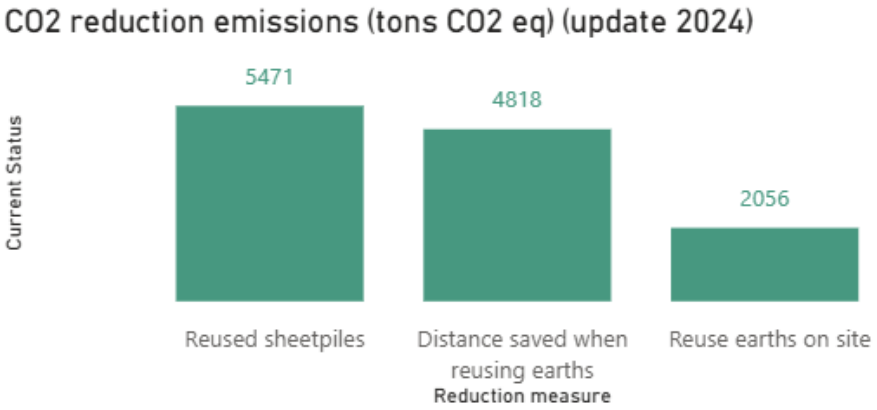
Development projects:

- Ground
  - EPS recycling
  - Application of recycled sand in structural concrete (Renewi and Heidelberg)
- Concrete
- Pilot Project Concrete (Kijlstra and Mebin)
- Re-use Noise barriers
- Re-use Beams (SBIR, RWS, province of North Holland)
- Steel
  - Re-use Guardrails (Heijmans)

Sector-wide program:

- Concrete
  - Re-use Beams (SBIR, RWS, province of North Holland)

Even though is still work in progress, the project has started to quantify the impact of the measures in terms of CO_2 emissions reductions. With the information provided by the suppliers and the information of the project, the reduction impact quantified so far is the following:



Note that this is not the total reduction implemented in the project, and that this numbers will be updated every year.

8. Transparency

Up-to-date information is important for knowledge exchange and stimulation of innovation. Sharing efficient solutions inspires others. This also ensures that each other's good ideas can be used on project components and entities.

FCC Construcción Provides transparency about its ESG information, both internally and externally, through its Sustainability Reports based on the GRI (Global Reporting Initiative). The sustainability information of the projects of the company is reported annually in FCC Construcción website. Also, the company publishes its Greenhouse Gases Emissions annually. This fact is also recognizably implemented in the CO_2 ladder system. VeenIX contributes to the company's report with the environmental information of the project.

VeenIX, in line with its commitment to transparency and sustainability, consistently publishes its CO2 emissions results and reduction plans on its website. By openly sharing these reports, VeenIX ensures that stakeholders can track its progress and verify its efforts to minimize environmental impact. This practice not only aligns with the highest standards of the CO_2 Performance Ladder but also reinforces VeenIX's dedication to reducing CO_2 emissions and promoting sustainable construction practices.

Internally, the project communicates its emissions and progress towards achieving the maximum score in the CO2PL system.

The certification of VeenIX A9 BAHO in accordance with the CO2PL has been published several times both in the website news or in the Sustainability Report of FCC Construcción.