

Current situation: Sustainability

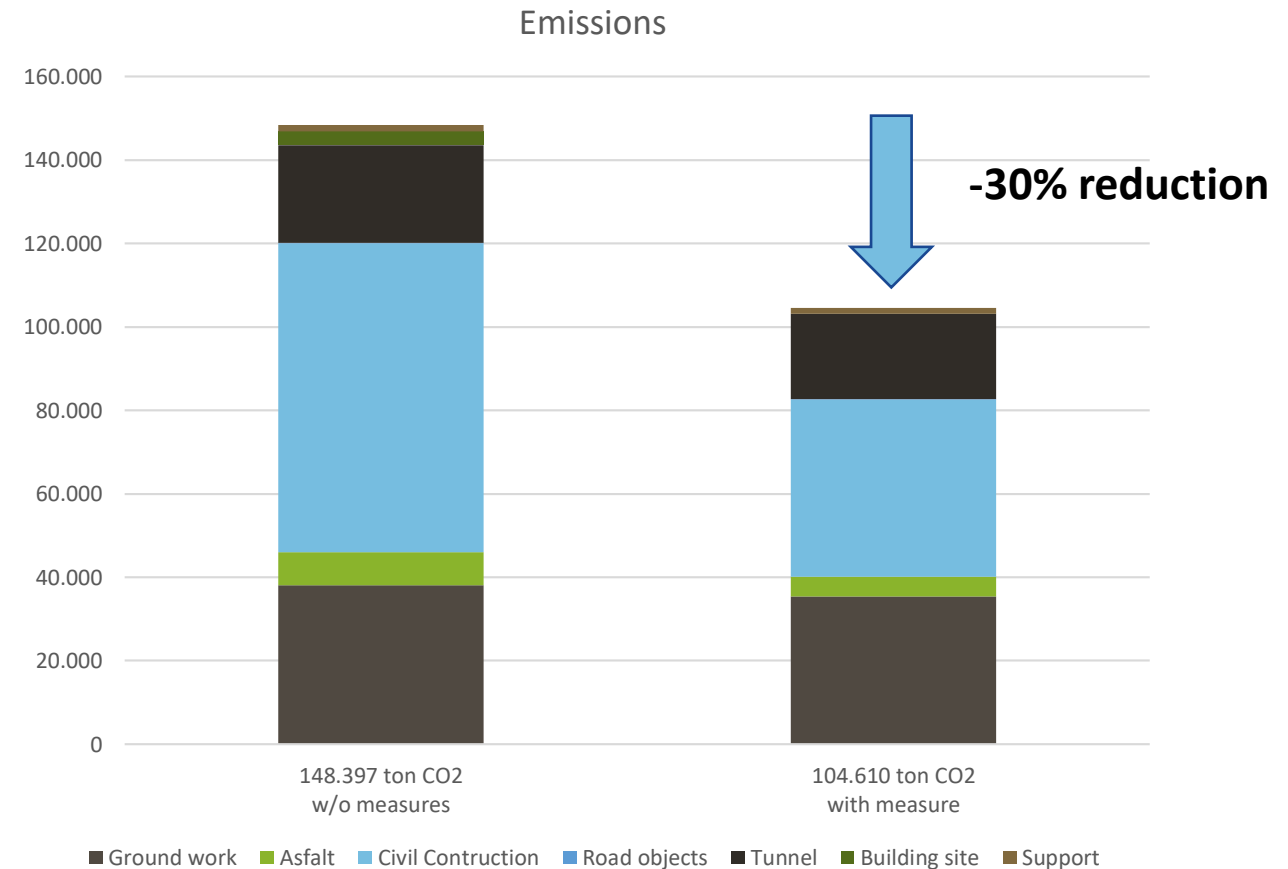
Q3 2020

CO₂ emissions

Emissions from start of work till Q3 2020

Goal: Reducing the emissions of the realisation phase with **23%***

*true emissions compared to the planning without reduction measures.

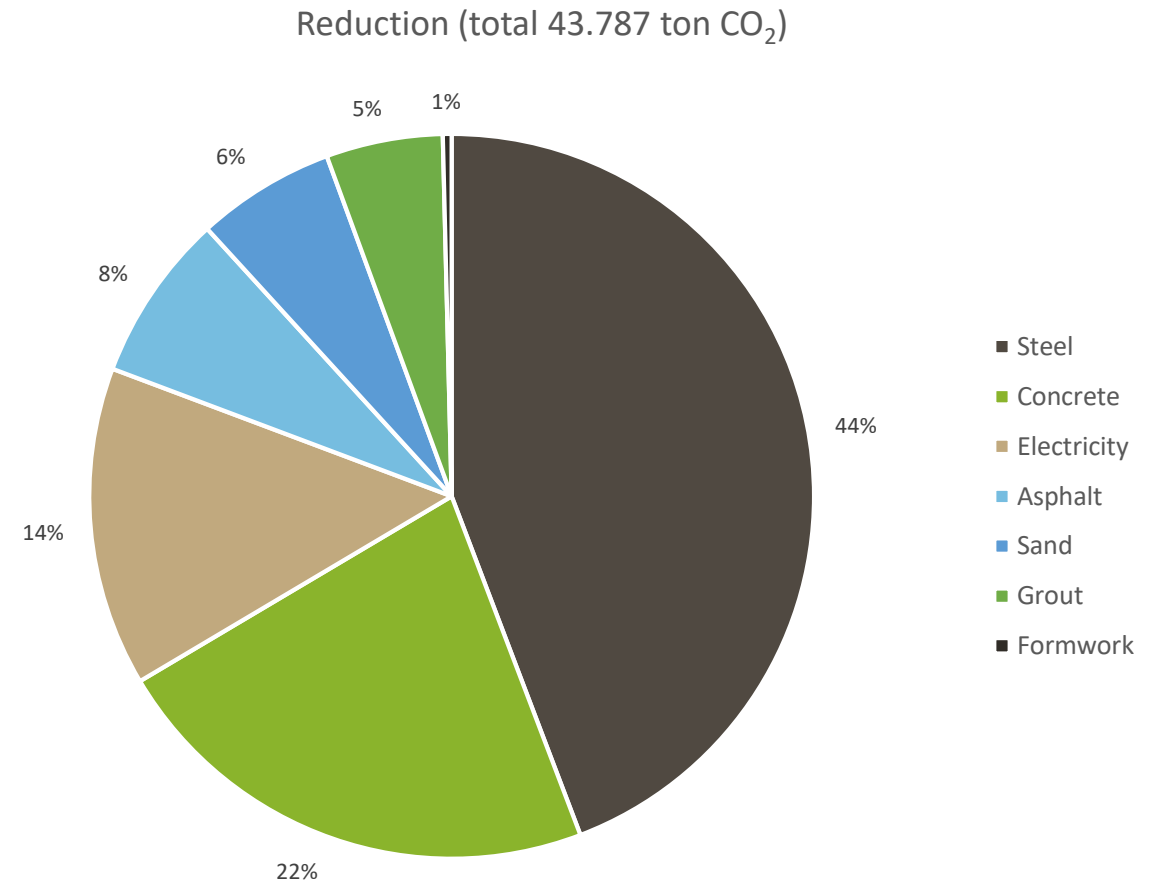


CO₂ reduction

True emissions compared to industry standard

Measures include:

- Reusing sheet piling
- Alternative fuel
- More sustainable cement (less CEMI)
- Green electricity
- Use of EURO 5/6 trucks
- More local sand
- More sustainable ingredients of grout



CO₂ goal scope 3: usage



CO₂-PRESTATIELADDER[©]

To reduce our CO₂ footprint, we have set the following goal:
Reducing the emissions of the exploitation phase with **50%***
*planned emissions including measures compared to the original planning without reduction measures.



SOLAR OPTIC FIBRE

Around 50% of the electricity use of a tunnel, comes from the entrance lighting. Using Solar Optic Fibre, almost **25%** less electricity is needed for the entire tunnel!

The RijnlandRoute is the first project in which this technique is used for a tunnel. The electricity that is still required for the tunnel will be Dutch wind energy, which makes it free of CO₂ emissions.

Let's talk about CO₂!

Do you have any questions, ideas or comments, let us know via duurzaamheid@mobilis.nl



Preparations for the future

We are preparing the tunnel for the future. We focus on sustainable maintenance and use in the next phase of the tunnel and try to anticipate future necessary adaptations. This ensures that less CO₂ is emitted due to the existence of the tunnel in the future:

- Extra solar optic fiber will be installed for future connections
- Preparations to connect the tunnel tubes to 5G networks are made
- Extra (car) charging point for the service buildings
- Extra casing pipes for future connections will be installed



Air filtration

Fine dust concentrations

- Something different from CO₂, but important for (local) air quality is the BESIX Clean-Air barrier. This barrier is installed at the N434 in July 2019. The BESIX Clean Air moss covered barrier filters PM10 and 2,5 out of the air in a natural way.
- This barrier combines mosses and technology to get a reduction of up to 43% in PM10 and 22,8% for PM2,5.





Materials passport

- The basis for a circular economy
 - We use this passport to map necessary information of materials
 - If we know the characteristics of the materials, there is a greater opportunity for high-value reuse
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- COMOL5 and the Province of Zuid Holland were part of a national pilot project: the Materials Expedition
 - Most important lessons learned (for all lessons learned click [here](#); in Dutch):
 - It is hard to implement the Materials passport in an ongoing project; therefore start working on a Materials Passport at the beginning of a project. Make sure the structure is known and the tasks and responsibilities are allocated in the organisation.
 - Ensure that the request for documentation is standardized (preferably sector-wide, connect to existing systems such as the OTL and ILS).
 - Most often, it is not worth the time/investment to make a materials passport for existing infrastructure. This might be a different case when demolition and (possible) reuse are on the agenda.

