

# Sustainability strategy for construction projects

## BAUER Spezialtiefbau GmbH



## Sustainability organization

The BAUER Group is a leading provider of services, equipment and products related to ground and groundwater. The operations are divided into three future-oriented segments with a high potential for synergy: Construction, Equipment and Resources. BAUER Spezialtiefbau GmbH and its subsidiaries make up the Construction segment of the BAUER Group and apply all the established methods and techniques of specialist foundation engineering all over the world. These include executing complex excavation pits and foundations for large-scale infrastructure projects and buildings, as well as the execution of cut-off walls and soil improvements.

The prime responsibility in terms of sustainable development of the BAUER Group lies with the Executive Board and particularly with the Group CEO, as well as with the managing directors of the main companies in the Construction, Equipment and Resources segments. A Group CSR steering committee coordinates and defines key activities around the topic of sustainability.

We face the challenges of the future, in particular understanding that sustainability is an important focus topic. Accordingly, BAUER Spezialtiefbau GmbH is committed to a comprehensive and global sustainability strategy based on the 17 sustainable development goals (SDGs) of the United Nations as well as the environmental goals of the European Union within the framework of the European Green Deal.

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All sustainability activities within the Group are combined and coordinated under the keyword **B.sustainable**. We consider all our employees to be part of our sustainability strategy. We are convinced that sustainability is governed by a continuous process of development from an ecological, social, economic and political standpoint. For this reason, we do not view our sustainability strategy as a rigid corset. Our approach is to continually review and optimize our goals and measures.

## B.sustainable

Where we see a need for action, we will refine and expand on our strategy and goals. Based on our innovative portfolio and our slogan *"Passion for Progress,"* we want to do our part in the development of sustainable specialist foundation engineering.

The basis for the materiality analysis that we conducted as part of creating a sustainability strategy were the 17 sustainable development goals (SDGs) of the United Nations. We used these to work out twelve sustainability aspects from the areas of environmental, social and governance values. We then subjected these twelve aspects to a materiality analysis. Two perspectives were adopted in the process: On the one hand, the effects of the aspects on future business activity (opportunities and risks) and on the other hand, the effects of the business activity on people and the environment (positive and negative impacts) were considered.

At the end, the following aspects were identified with a higher significance for BAUER Spezialtiefbau GmbH: **Energy and climate protection, adaptation to climate change, resources and circular economy, local environment, and employee development and training.**



Materiality matrix (As at: 2022)



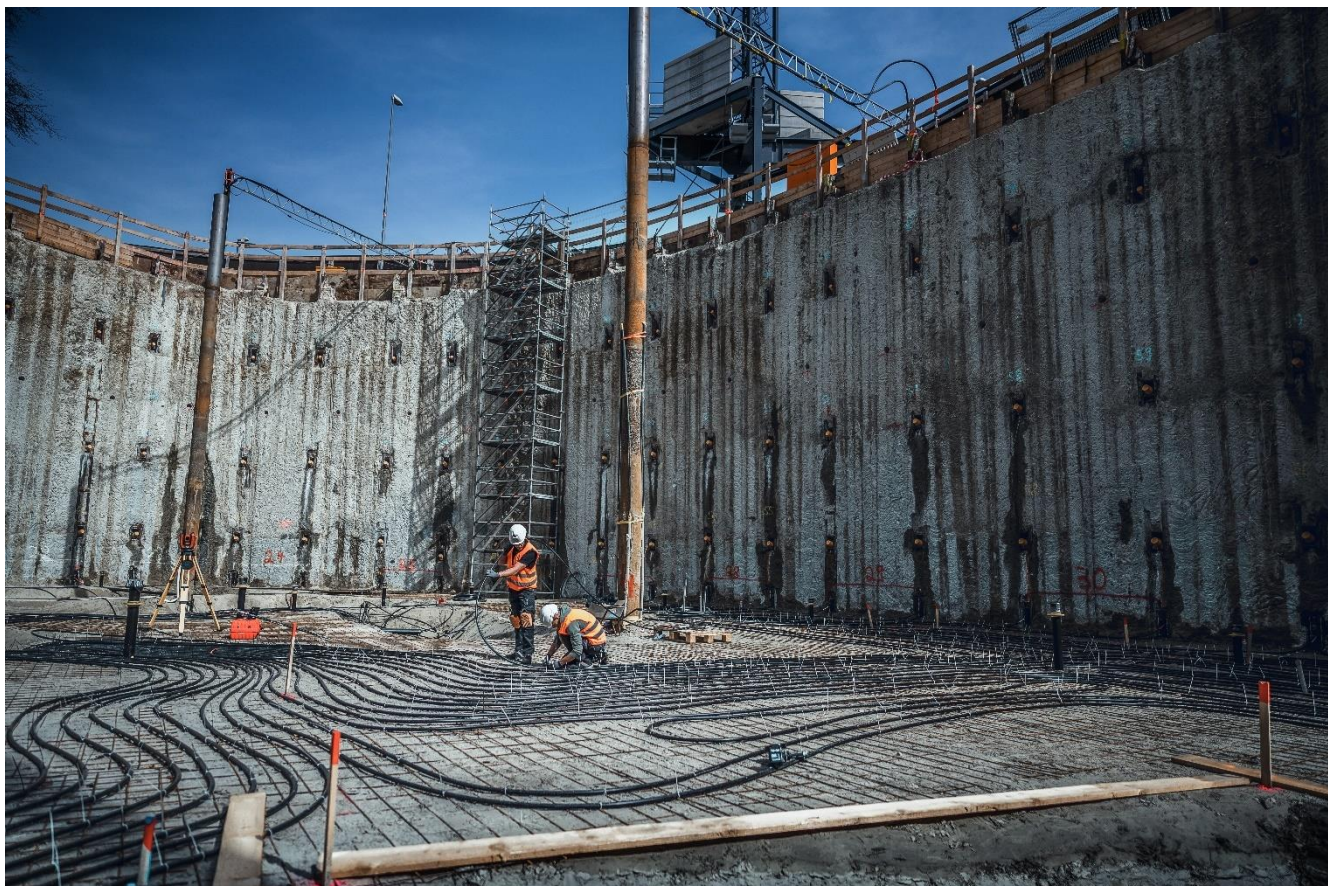
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### Standards and certifications

The goal formulated in the 2015 Paris Convention, and thus uniformly adopted globally, is to protect the climate and limit global warming to below 1.5 °C. To achieve this goal, significant measures must be adopted immediately. In this context, the central goal for the construction sector must also be an appropriate reduction of environmentally harmful greenhouse gases.



#### **Geothermically activated mixed soil wall and foundation slab, Lindau on Lake Constance**

Sustainable retaining structure – Construction of a geothermally activated Mixed-in-Place wall with a total area of roughly 4,000 m<sup>2</sup> and a depth of 22 m as well as the entire foundation slab.

Establishing the sustainable site as a standard must be the goal of everyone involved in the construction process. We believe that certification systems (e.g. DGNB, BREEAM, LEED) as well as standard rules (e.g. BES 6001) are suitable building blocks for systematically pursuing the various sustainability goals. As a standard calculation basis and internationally recognized method, the Carbon Calculator developed in collaboration with the BAUER Group is also used. This makes it possible to precisely quantify and compare the CO<sub>2</sub> footprint. Furthermore, the European Federation of Foundation Contractors (EFFC) published a Carbon Reduction Guide. The principles described in this guide are the basis for implementation in our construction projects.

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### Strategy

Our sustainability strategy for construction projects encompasses the following goals, which we pursue consistently:

- **We respect the Paris Climate Agreement, the 17 sustainability goals of the United Nations (SDGs) and the European Green Deal with the accompanying EU Taxonomy Regulation.**
- **We are committed to the goal of “Net Zero” climate neutrality by 2050.**
- **We think and act sustainably in harmony with our business activities.**
- **We reduce our CO<sub>2</sub> footprint on sites and offer our customers more sustainable solutions.**
- **We set realistic interim goals and track them with suitable measuring parameters.**
- **Topics relating to sustainability are an important component of our project management system BAUER Construction Process.**
- **We continually review the possibilities of reducing greenhouse gases and other emissions in our projects.**

According to our possibilities, we have an influence on the sustainability goals through:

- **Sustainable products and solutions for specialist foundation engineering**
  - resource-efficient Mixed-in-Place, cutter soil mixing and other soil mixing techniques
  - ecological and energy-saving LWS softgel injection base for horizontal groundwater barriers
  - low-emission soil improvements (e.g. vibration displacement, vibrocompaction technology, dynamic drop plate compaction)
  - generation of renewable energy with the help of
    - geothermically activated specialist foundation engineering products (e.g. geothermal heat piles, geothermically activated walls)
    - offshore foundations for wind parks
  - resource efficiency through the use of recycled or alternative materials
  - reduction of emissions through optimized design with state-of-the-art software solutions



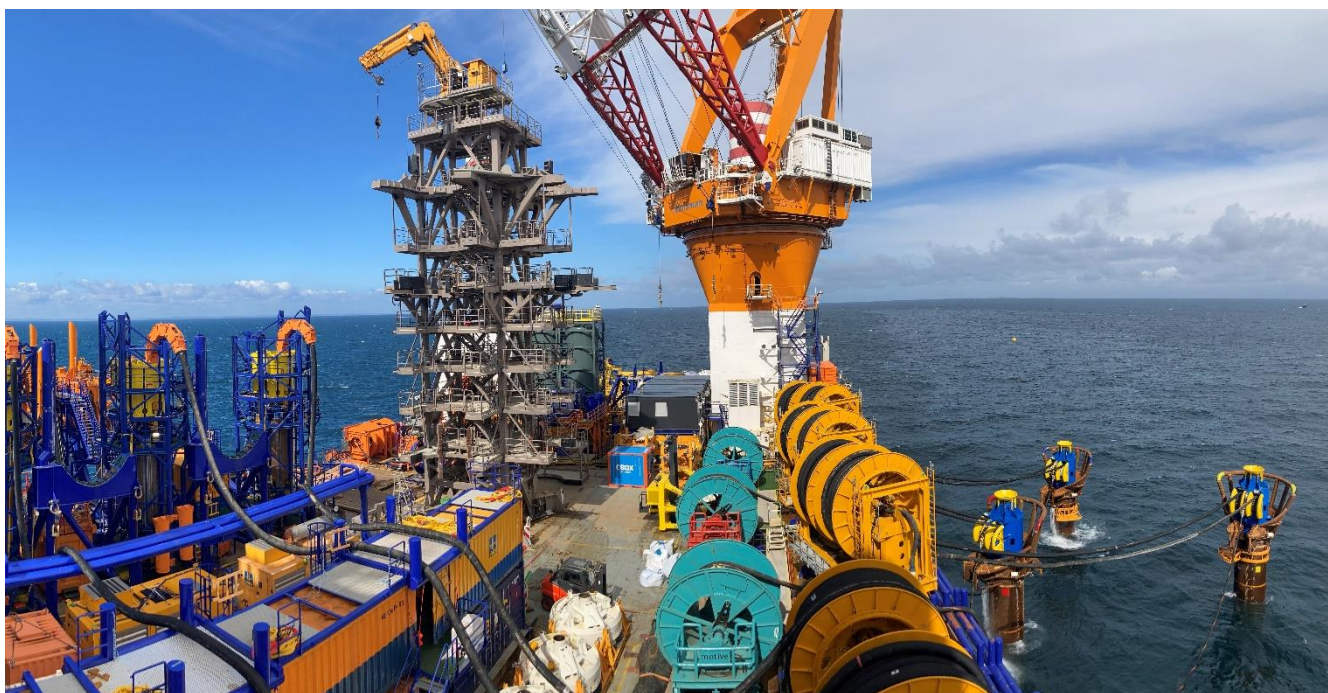
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### Quartier Heidestrasse QH Track, Berlin

The horizontal seal of the excavation pit, comprising around 9,600 m<sup>2</sup>, was carried out in the form of a silica gel layer (ecological LWS injection base).



### Offshore foundations, BAUER Dive Drill C 40

Bauer Spezialtiefbau has various new equipment models and innovative methods that enable the construction of safe, low-emissions and economical foundations even in hard, rocky soils and with difficult side conditions.



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- **Efficient construction equipment, machines and tools**
  - alternative fuels (e.g. green energy, electric drive systems, HVO, hydrogen)
  - low-emission engines
  - low-noise tools
  - measuring technology to reduce the consumption of resources
  - tolerance optimization



**eBG 33**  
The first electrified drilling rig of the BAUER Group

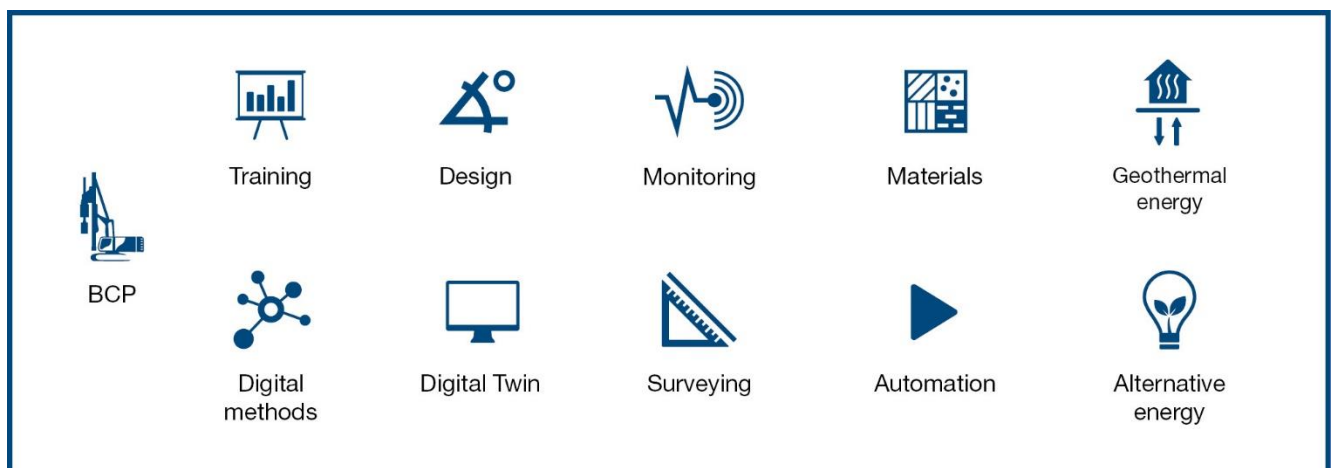
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- **BAUER Construction Process (BCP)**
  - Starting with the tender phase, our projects are processed using BCP all the way to completion. This is a construction production system developed in-house at Bauer with the goal of sustainable value enhancement and waste reduction on sites, based on the LEAN management approach.
- **Supplier and subcontractor selection**
  - Selection under consideration of ecological and economical factors
- **Training and education of employees**
  - Targeted training and continuing education regarding all 17 sustainability goals of the United Nations as well as our specific sustainability goals
- **Research and development**
  - Employees are motivated to submit suggestions for improvements concerning sustainability
  - Targeted promotion of projects related to sustainability
    - With research and development projects
    - With projects that are promoted through the cross-segment BAUER Research Community

We emphasize pursuit of our sustainability goals across a wide range of topics and activities and have earmarked the following areas of potential for ourselves:



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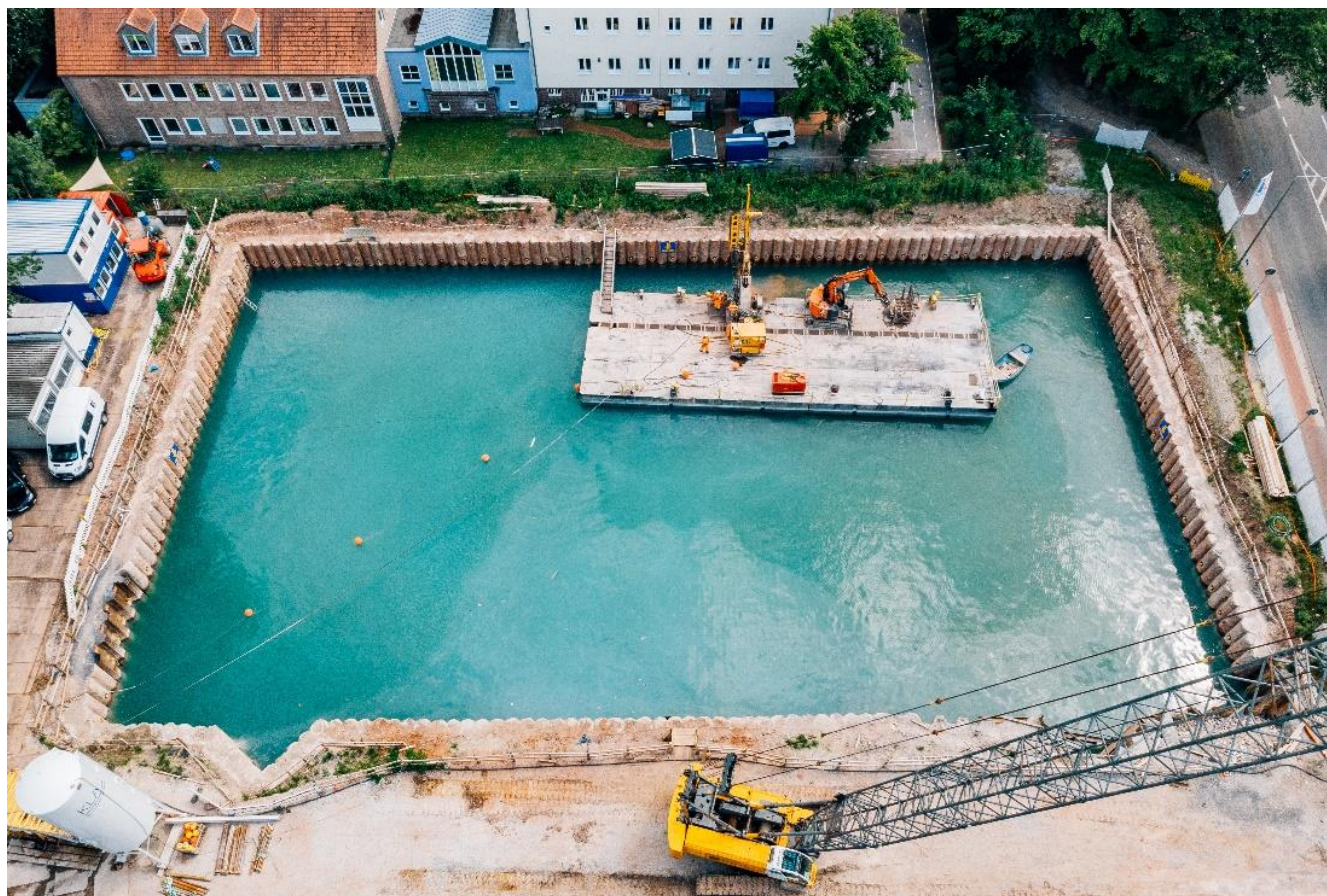


### Key Performance Indicators (KPIs)

We measure our successes on the path towards climate neutrality. To this end, we collect operating data and compile it with relevant Key Performance Indicators (KPIs) to compare this with our sustainability goals. The objective data is derived from a digital and largely automated project data collection system including electronically recorded equipment data and data on purchasing processes.

Data collected include

- Diesel consumption per operating hour (l/h)
- Number of tenders for construction tasks with sustainable solution (demonstrably lower CO<sub>2</sub> emissions)
- Number of construction projects applying BCP project management
- Number of tenders in the context of renewable energy (geothermal heat, wind parks etc.)
- Number of internal suggestions for improvement specifically related to sustainability (Employee Suggestion System)
- Number of research and development projects specifically related to sustainability
- Employee training on the topic of sustainability (hours per year)



#### **Project rainwater retention basin Teutoburger Straße, Bielefeld**

Excavation pit for the rainwater retention basin as tied-back secant pile wall in CFA method – Uplift prevention with micropiles from a pontoon.



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### Interim goals for 2030

For BAUER Spezialtiefbau GmbH, our construction projects are the focus. By the year 2030 we have set the first specific interim goals for ourselves:

- Reduction of CO<sub>2</sub> emissions in construction equipment (scope 1 emissions) by 20%\*
- Increase in share of “green projects” (e.g. with geothermal activation or offshore foundations for green energy) by 25%\*
- Application of our construction production system BAUER Construction Process in at least 80% of our projects worldwide

*\* The reference values are the measurement data record in a defined period for the years 2022 and 2023.*

The development of resource-efficient, environmentally compatible innovations and technologies has for years been a clear focus at BAUER Spezialtiefbau GmbH. The aim is to reduce the environmental strain caused by specialist foundation engineering, to use raw materials more efficiently and strategically, and to sustainably manage projects in an environmentally compatible way.

### Greenhouse gas emissions

For the goal of reducing our greenhouse gas emissions, we rely on the generally recognized concept for classifying and reporting in three “scopes” according to the Greenhouse Gas Protocol (<https://ghgprotocol.org/>).

With regard to our business activities, the emissions generated can be categorized as follows:

#### Climate change – Scope 1 emissions

- Direct emissions of our construction equipment and vehicles, e.g. diesel, gasoline, LNG, LPG

#### Climate change – Scope 2 emissions

- Indirect emissions from purchased power, long-distance energy for heating or cooling on our sites and in our offices (energy providers)

#### Climate change – Scope 3 emissions

- Extended indirect emissions along our value chain (upstream and downstream supply chain), e.g. concrete, steel, wood, bentonite, business trips and waste