



Norden-Norddeich

Outdoor swimming pool

Data and facts

Company	PORR Spezialtiefbau GmbH
Type	Foundations
Runtime	04.2025 - 08.2025
Principal	Wirtschaftsbetriebe der Stadt Norden GmbH

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Micropile foundations for the new outdoor swimming pool

The outdoor swimming pool is situated in the immediate vicinity of the North Sea coast and complements the leisure facilities on offer at the North Sea spa resort of Norden-Norddeich. The plans included a 25-metre swimming pool, a separate non-swimmers' pool as well as a children's area with various water features. The new facility is being built on a site where the ground conditions are just as defining as its location between the dyke, the coast and the Wadden Sea. Even before bathers can use the new pools, the foundations for the future structures are being laid beneath the surface.

Micro piles for the pools and plant building

The subsoil consists of clay, peat and alternating layers. Stable sand layers are only reached at greater depths. A total of 215 GEWI® solid-bar micro piles with diameters of 40 mm and 50 mm were therefore manufactured for the foundations of the swimming pools and the plant building. The piles reach lengths of up to 25 m and transfer the loads from the structures to the deeper, load-bearing soil layers. The water in the future swimming pool alone exerts a weight of around 720 t on the foundations. Before series production began, several test piles were installed and static load tests were carried out. The results formed the basis for the further execution of the deep foundation works.

Foundations in the foreshore

The deep foundations were carried out in accordance with the geotechnical conditions of the North German coastal landscape. The varying soil layers as well as the location in the foreshore determined the requirements for planning and execution. Micro piles in accordance with DIN EN 14199 were used for the work. PORR special civil engineering holds general type approvals from the German Institute for Building Technology (DIBt) for the execution of such systems. The design of the foundations was tailored to the requirements of the future pool facilities and the technical building.

Work between the dyke and the construction site

The micro piles were installed on a confined construction site in the immediate vicinity of the future leisure complex. The construction sequences were tailored to the local conditions as well as to the subsequent building works. Step by step, from pile fabrication through load testing to the preparation of the foundation areas, the conditions for the next construction phases were created.

The foundation for the new outdoor swimming pool

Even before the pools, water features and recreational areas take shape, their foundations are being laid deep beneath the ground surface. With the completion of the micropile foundation, the groundwork for further work on the new building has been laid. Situated between the Wadden Sea, the dyke and the North Sea coast, the deep foundation forms the basis for the new outdoor swimming pool complex in Norden-Norddeich.

Impressions



Image notes

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Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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