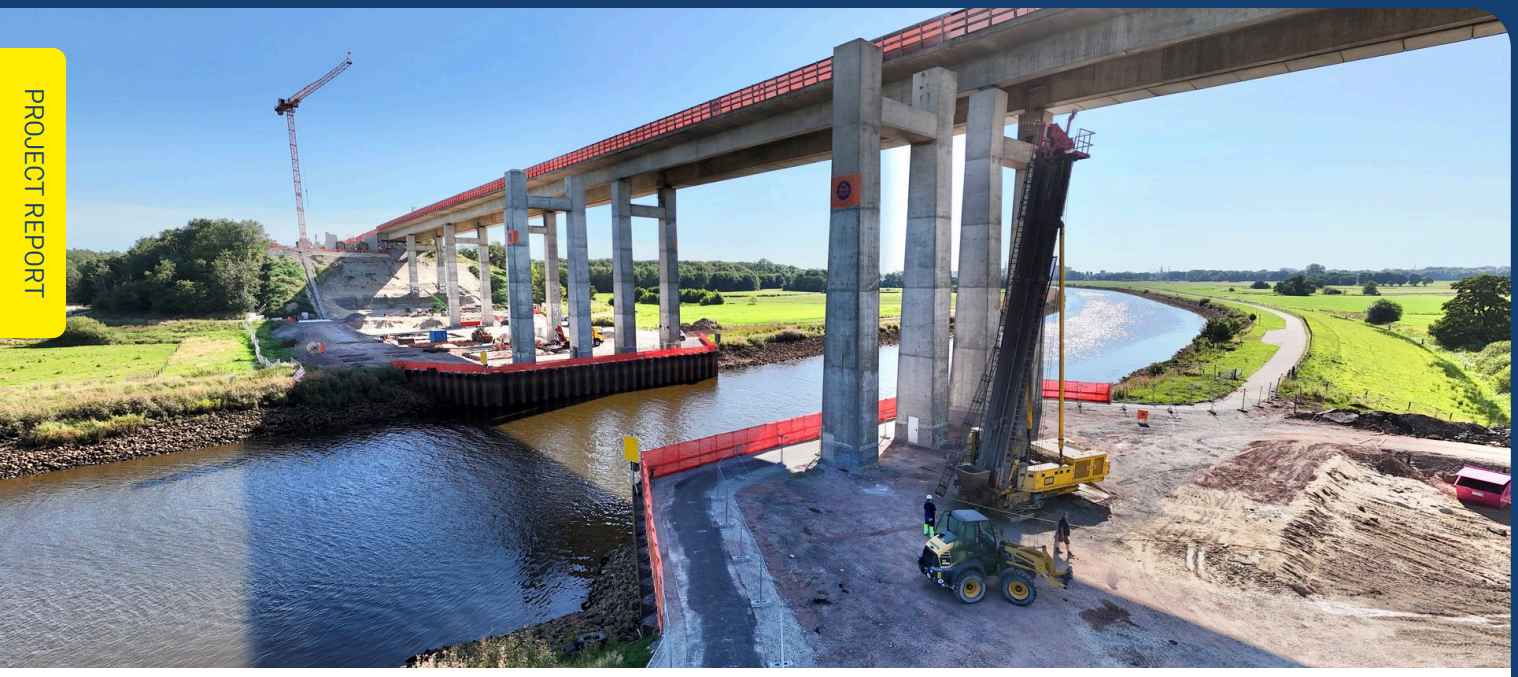
PROJECT REPORT



Oldenburg
Reconstruction of the Hunte Bridge

Data and facts

Company	PORR Spezialtiefbau GmbH
Type	Foundations
Runtime	12.2023 - 11.2025
Principal	Adam Hörnig Baugesellschaft mbH & Co. KG

Project report online

www.porr.de

260 pile caps for the new Hunte Bridge

Foundations for a new crossing over the River Hunte

The new bridge will have 14 V-shaped piers and will replace the existing structure, which has 36 individual piers. For the foundation work, PORR special civil engineering manufactured a total of 260 Frankipiles NG®. With diameters of 610 mm and lengths of up to 15 m, the piles penetrate fill, peat and clay layers down to the load-bearing sand layers of the subsoil. There, they take on the load-bearing function for the future bridge structure and form the foundation for the abutments and piers of the new Hunte crossing. In December 2023, static load tests were carried out and evaluated. The results formed the basis for the further execution of the pile foundation works.

Pile foundations between water, marshland and subsoil

The River Hunte not only shapes the landscape around Oldenburg, but also determines the geological conditions along the route. Beneath the ground surface, there is an alternating sequence of fill, peat layers, clay and load-bearing sands. The Frankipile NG® from the Greenpile® product family of PORR Spezialtiefbau was used for the foundation works. The pile system was selected to meet the requirements of the bridge structure and the local ground conditions. The foundations were designed to withstand the loads from the future piers as well as to accommodate the geological conditions along the River Hunte.

Construction under constrained conditions

The work was carried out under conditions where access to the site was via a single-lane road along the River Hunte, as well as within spatially limited working areas. At axes 20 and 80, increased driving resistance was observed during construction. To adapt to the local ground conditions, supplementary loosening boreholes were used. In addition to the geological conditions, the construction sequences on the site as well as the coordination of the various trades along the route had to be taken into account. The balance between the watercourse, site logistics and bridge locations thus formed the basis for the subsequent civil engineering works.

Measures on the construction site

As part of the site organisation, guidelines for the handling of operating fluids as well as project-specific requirements for site facilities were implemented. These included, amongst other things, containment systems for operating fluids, the provision of suitable binding agents, and organisational measures for refuelling and maintenance work. The site organisation was tailored to the requirements of the location along the River Hunte.

Foundation for the new bridge

The construction of the pile foundations laid the groundwork for the subsequent construction phases of the replacement bridge. Even before the piers and superstructures came to define the appearance of the new Hunte Bridge, the foundations for the future crossing were being laid beneath the surface. Situated between the river landscape, the transport routes and the subsoil, the pile foundations form the basis for a further section of the transport infrastructure around Oldenburg.

Impressions

Image notes

1

Spezialtiefbau Huntebruecke

The replacement structure will stand on 14 V-shaped pillars.

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2

Spezialtiefbau Huntebruecke 1

One reinforcement cage for each pile, each around 15 metres long.

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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.

PORR GmbH & Co. KGaA
Walter-Gropius-Straße 23
80807 Munich
T +49 89 71001-0
E-Mail: info@porr.de