



Canal trough bridge, Schwarzach near Nuremberg

Data and facts

Company	PORR Spezialtiefbau GmbH
Type	Rehabilitation
Runtime	06.2021 - 03.2022
Principal	Lühns GmbH, Kreuzwertheim

[Project report online](#)

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Rehabilitation of a canal trough bridge across the Schwarzach River

Solution for challenging subsoil: the vibro-flushing method

The sheet piles are positioned in the canal embankments parallel to the wing walls of the bridge abutments. The slope makes frame-led vibro-compaction of the up to 13m-long double sheet piles impossible, so the sheet pile walls had to be compacted without a frame. In some areas, hydraulic flushing had to be used when driving the sheet piles in order to break through obstructions in the ground and soil layers that are very difficult to push through. This method is called the vibro-flushing method.

In-house planning expertise

Our fellow engineers from PORR Spezialtiefbau Planung supported the specialist civil engineering team with their planning expertise during the rehabilitation of the Schwarzach Bridge: they took care of the structural analysis of the excavation shoring and the soil nailed jetcrete headwall and were responsible for supplementing the execution technology for the construction pit shoring and soil nailing. Four more test anchors with lengths of up to 50m were successfully installed on the bridge abutments despite the limited headroom and extremely restricted spatial conditions.

Impressions



Image notes

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Due to the challenging subsoil, the vibro-flushing method was the ideal solution for installing the sheet pile walls.

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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