



Hamburg HafenCity

Data and facts

Company	PORR Spezialtiefbau GmbH
Type	Turnkey construction pits
Runtime	01.2019 - 12.2020
Principal	Garbe Immobilien-Projekte GmbH und BG Halbinsulaner

[Project report online](#)

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Construction pit and pile foundation for the Creative Blocks project.

Back anchoring not possible

The U4 underground railway line runs along the north side of the construction site. The planned shoring consisted of a terminated bored pile wall with concealed bearer supports. Jetcrete was used for the lower section. Owing to the presence of the underground railway line, this could not be back anchored. The shoring was therefore positioned horizontally against the ceiling plate above the first UG and supported to the inside. This process was also used on the eastern side of the site, near the deep foundations of an existing bridge abutment.

An old quay wall onsite

The Versmann Quay and the Baaken Harbour are located to the south of the 82 construction site. In that area the construction pit was constructed with sloped sides.

The construction site also contained the remains of another, old quay wall. The anchors were separated and more widely spaced around this old quay wall. The pile application points for the new quay wall were planned in such a way as to avoid impact on the anchors.

Pile foundations with obstacles

Numerous obstacles impeded the execution of the pile foundations. The soil of the site contained brick walls from former buildings, reinforced concrete elements from the old quay wall and remnants of timber and reinforced concrete existing piles.

The structural work was handed over in October 2019. In spring 2020, the horizontal props were inserted and the remaining works carried out.

Technical data / quantities

Number of piles	506 TVB piles 78 GBP (shoring)
Drilling depth	up to 24m
Pile diameter	61cm and 78cm
Pile load	up to 3,300kN (design)

Impressions



Image notes

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Internal bracing of the underground railway line.

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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