PROJECT REPORT

Berlin
Palais an den Ministergärten

Data and facts

Company	PORR Spezialtiefbau GmbH
Type	Turnkey construction pits, Sealing slabs
Runtime	01.2019 - 12.2020
Principal	MUC Areal Bau GmbH

Project report online

www.porr.de

Turnkey construction pit in a city centre location

To secure the excavation pit, in-situ concrete diaphragm walls were constructed with single-layer rear anchoring using strand anchors. The design provided for horizontal waterproofing over the marl layer present in the subsoil, which, with thicknesses of up to 2.0 m, was to be used as a natural water-retaining layer. To increase the reliability of the works, the construction pit was additionally divided into three sub-construction pits by means of waterproof bulkheads. This allowed individual areas to be worked on independently of one another.

Remains of air-raid shelters in the subsoil

The subsoil survey had already documented the remains of historic air-raid shelters as potential obstacles. These structural remains were exposed and removed during the preparatory work by means of overlapping large-diameter boreholes measuring 880 mm in diameter. During the earthworks, a further air-raid shelter, which had not previously been documented, was also discovered. Following a heritage assessment, this was also dismantled. The area remaining outside the construction pit was subsequently backfilled with liquid soil.

Additional DSV base for construction pit waterproofing

During the diaphragm wall works, it became apparent that the natural marl layer was not present throughout certain areas or was not found in the form originally assumed. Furthermore, natural obstacles were identified on the water-retaining layer. This necessitated additional waterproofing measures. Supplementary waterproofing bulkheads as well as approximately 600 m² of additional DSV base were constructed for the construction pit using the jet grouting method. These measures complemented the construction pit's waterproofing concept and were adapted to the actual ground conditions encountered.

Diaphragm walls, anchors and DSV from a single source

The combination of in-situ concrete diaphragm walls, strand anchors, sealing bulkheads and a DSV base formed the shoring and waterproofing system for the construction pit. The work was carried out in accordance with the geotechnical constraints and the project's inner-city location.

The foundation for the new Palais an den Ministergärten

The excavation of the construction pit laid the groundwork for the construction of the mixed-use residential and commercial building. The diaphragm walls, anchors and DSV works formed the basis for the subsequent structural works at the Berlin-Mitte site.

Impressions

1

Image notes

1

Berlin Palais an den Ministergärten

Specialist Stiff Construction was commissioned to carry out a construction pit with a depth of up to 9.5 metres.

© PORR

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