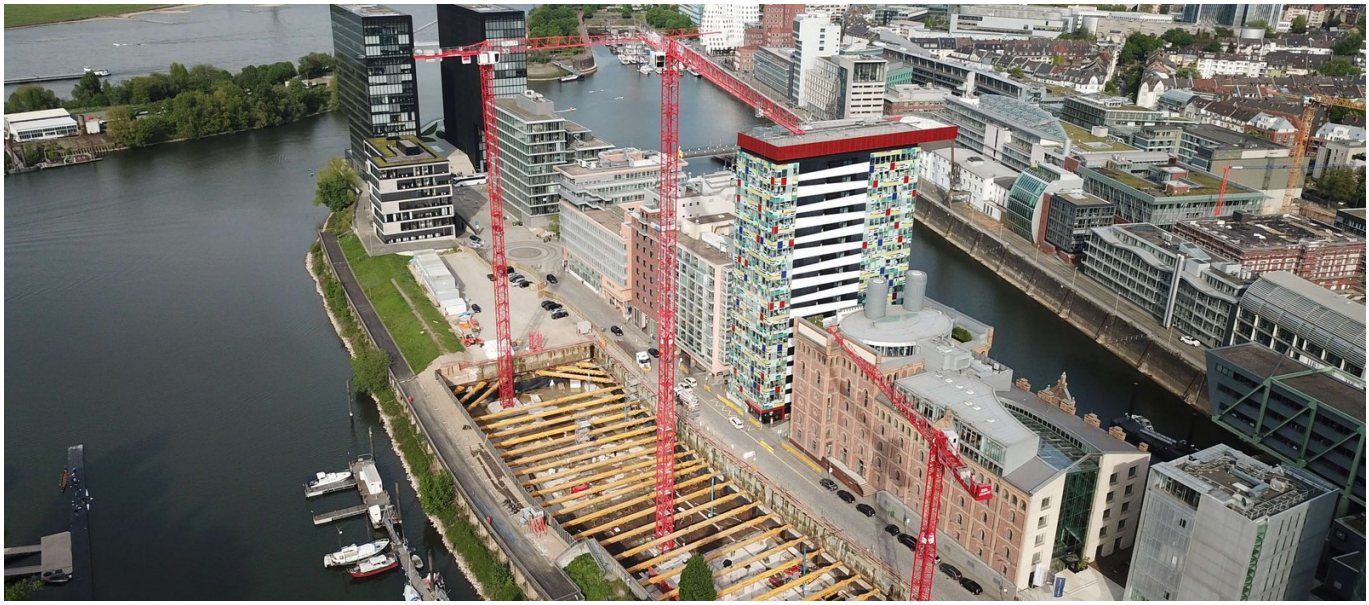
Heimathafen Düsseldorf



SHORT DESCRIPTION

In Düsseldorf's Media Harbour, an excavation pit was constructed for the construction of two approx. 100 m high residential towers with underground parking.

THE PROJECT

Implenia Spezialtiefbau GmbH was awarded the contract to construct this excavation using diaphragm wall construction with tertiary tie-in, whereby the upper termination of the walls consisted of a cut-off wall between set girders. This was necessary due to the requirement of the city of Düsseldorf to keep the upper 2.5 m free of steel and concrete. Due to the cramped location between harbour basin A and the only access road, which was designed as a dead end, a later demolition down to -2.5 m would not have been possible. In addition, 226 bored piles with a total length of 1,994 m were constructed for the foundation of the buildings. These were grouted in the shell and footing.

Due to the location, no classical back anchoring of the up to approx. 10 m projecting shoring walls could be carried out. The bracing was therefore carried out by means of pipe stiffeners of the Groundforce system, with a diameter of approx. 1.0 m and a self-supporting span of up to approx. 40 m. The support of the pipe stiffeners was carried out by means of a compression moulding. The pipe stiffeners were supported on steel chords, which were additionally provided with a shear anchorage in the diaphragm wall in the corner areas.

The pipe stiffeners were removed in sections during the shell construction, as soon as the stiffening slab under the pipe stiffeners had been produced and was sufficiently load-bearing.

During the construction of the excavation pit, it had to be flooded twice as planned due to the high water level of the Rhine

in order to prevent excessive loading of the as yet unsecured excavation pit shoring.

FACTS

Location	Franziusstrasse , Düsseldorf , Germany
Status	completed
Construction volume (value of our services)	6.99 M EUR
Start of construction	August 2017
Completion	October 2018

SERVICES

Special Foundations