

ASPERN URBAN LAKESIDE, VIENNA, BUILDING COMPLEX PIER05

Client: PIER05 KOMP2 Ltd. (STC Development Ltd.), Vienna
Development Period: since 2023

THE PROJECT

Within the urban development area Aspern Urban Lakeside, the building complex PIER05 is planned at the northern bank of the *Aspern Lake* and west of the underground line U2, consisting of four structures.

At the lakefront lies the high-rise building FARO with a height of 82 m and 25 storeys and at the opposite side of the plot the ANCORA with 18 storeys. The NAVIS (seven storeys) and the PORTA (four storeys) are located in between. A common basement extends almost across the whole estate.

In the case of the two high-rise buildings, the foundation is planned by a combined pile-plate system and for the remaining area by means of a bottom plate (shallow foundation).

OUR FUNCTION

For this project, BGG Consult is commissioned with geotechnical and hydro-geological consulting during all planning and construction phases.

Based on core drillings (maximum depth 40 m), dynamic probings, exploratory pits, pumping and seepage tests, a geotechnical expert's report, a seepage concept and the documents for permission pertaining to water and waterways (thermal use of groundwater and dewatering during construction) were elaborated.

Settlement analyses by means of numerical modelling:

At the east side of the building complex runs the elevated underground station, founded on bored piles. The impact of the new structure on the existing facility has been established by settlement analyses, using a 3-dimensional numerical model with the method of finite elements.

Use of groundwater in the vicinity of the Aspern Lake:

The energy supply is to be accomplished on the one hand by geothermic heat and on the other hand by water/water heat pumps. Due to the closeness of the *Aspern Lake*, a negative impact of the temperature of the lake on the thermal use of groundwater could not be excluded. Based on a pumping test over several weeks, the potential capacity for energy use was established.



Visualisation of the project
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