



BUILDING COMPLEX VIENNA TWENTYTWO

Client: FODO Holding GmbH & Co KG

Development Period: since 2017

THE PROJECT

In the immediate vicinity of the underground station 'Kagraner Platz', the building complex *VIENNA TWENTYTWO* is currently being developed on a plot area of 15.000 m².

The total of six buildings comprises heights between 27 m and 155 m and three joint basement levels which reach down to 12.5 m below the actual terrain level.

OUR FUNCTION

BGG Consult is commissioned for this project with geotechnical and hydrogeological consulting for all the planning and building phases.

After survey and evaluation of existing underground investigations, supplementary core drillings were carried out and developed into wells. Subsequently, pumping tests were run in order to establish the hydraulic permeability of the aquifer. With all these information, a geotechnical expert's report was compiled. Additionally, a concept for the construction pit support system, including the soil static dimensioning was prepared.

During the tender phase, BGG Consult attends to the expertise regarding the special heavy construction works and especially regarding the projected thermal use of the underground.

Settlement Analysis with Numeric Modelling:

In the immediate vicinity of the building complex, a large sewer of the municipality of Vienna as well as facilities of the Viennese Underground Lines are situated. For the evaluation of the impact of the new buildings on the existing facilities, comprehensive settlement analyses with a 3-dimensional finite element model were conducted.

Thermal Use of the Groundwater and Thermo Activation of the Building Elements:

For the energy supply of the building, renewable energy is to be used for a great part. For this, a thermal use of the groundwater and a thermo activation of building elements below ground are planned. In this connection, BGG Consult first established, with a 3-dimensional, transient ground water model, the maximum amount of the usable energy from the ground water and subsequently the interaction between ground water use and the geothermal use (thermo activation). Built on this, the documents for the permission procedure pertaining water rights were prepared.



Visualisation of the project

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