DISTRICT HEATING PLANT ARSENAL, VIENNA

Client: Fernwärme Wien AG (District Heating Vienna AG)
Development Period: since 2010

THE PROJECT

On the Arsenal premises in central Vienna, a new district heating plant is to be built in the vicinity of the existing plant.
The station comprises basically two boilers with thermal outputs of 170 MW each as well as the associated power control system, pressure reducing stations, oil tanks, pumping stations and a water reservoir.
The project extends over an area of 90 m x 40 m and consistently reaches 10 m below surface.

OUR FUNCTION

For this project, BGG Consult is comissioned with the compilation of the expert's reports "Geotechnics" and "Hydrogeology" for the combined procedure of environmental assessment and building permission.
In order to obtain the necessary basic information, subsoil explorations in form of drillings, dynamic probings and exploratory pits were carried out. The boreholes were developed into ground water gauges or wells to obtain information on the ground water situation. In specific wells, pumping tests were conducted.

Hydrogeological Situation:
Since the structure reaches several meters below the ground water table, the hydrogeological situation had to be carefully examined with regard to the construction pit securing as well as to the environmental impact.
Based on the exploration results, a water-tight pit securing can be avoided. Instead, a shotcrete wall was proposed, which is more economical in comparison to the originally planned jet grouting wall. Using this method, a reduction of the impact on the environment is possible by placing a gravel filter layer below the structure, which allows for a ground water exchange.

Computer graphic of the new heating plant (Architect PERNTHALER, Graz)