



## OFFICE QUARTER TOWNTOWN, COMPANY BUILDING 21 ("ORBI TOWER"), VIENNA

Client: IWS TownTown AG, Vienna  
Development Period: since 8/2013

### THE PROJECT

The 27-storied and 111 metre high Company Building 21, the so-called Orbi Tower, will be erected adjacent to the prominent tower of the "Wiener Stadtwerke" (Viennese public services) within the office quarter "TownTown" (3<sup>rd</sup> district).

The layout is formed by an equilateral triangle with side lengths of 40 m. Since three underground levels are planned, the structure reaches up to 12 metres below terrain.

The building is grounded by means of a combined pile-plate foundation. For the temporary building pit support system, an overlapping bored pile wall with bracing is necessary.

### OUR FUNCTION

For this project, BGG Consult has been commissioned with the compilation of an expert's report with regard to geotechnics and hydrogeology for the submission and tender documents and with a concept for the seepage of water during construction and during operation of the building. In Addition the submission of the water lowering measures with regard to laws pertaining to water and waterways and settlement calculations was handled.

For the subsoil exploration, two core drillings with depths of 50 m and 40 m, dynamic probings and exploratory pits were planned, supervised and evaluated in addition to the existing subsoil profiles from the Viennese public register. Furthermore, soil physical laboratory tests were carried out.

During construction, BGG Consult was responsible for the geotechnical and hydrogeological attendance. This comprised, among other things, the documentation of the subsoil situation in the

course of the underground heavy construction work, the evaluation of the continuous deformation monitoring as well as the supervision of the dewatering measures.

#### *Vicinity to Existing Structures:*

The planned office tower is situated in the immediate vicinity of existing buildings of the WIENER LINIEN (underground railway), the complex of the AUSTRO CONTROL as well as sites of the ASFINAG (Prater motorway junction). For this reason, comprehensive analyses with the method of finite elements were conducted in order to investigate the settlement behaviour of the neighbouring structures resulting from the new project.

"Orbi Tower" (right),  
visualisation (© expressiv)

