



## ASPERN URBAN LAKESIDE, VIENNA: RESOURCE MANAGEMENT AND 20 BUILDING CONSTRUCTIONS

Client: Vienna Business Agency, div. Building Developers, div. Construction Companies  
Development Period: since 2006

### THE PROJECT

At the site of the former airfield Aspern in the 22<sup>nd</sup> district of Vienna, the Aspern Urban Lakeside, one of the biggest urban development projects in Europe, is currently emerging. Until the year 2030, an area of 240 ha is to be built on. In addition to residential and office buildings, trade and industry will settle beside recreation facilities and the artificial lake. Up to 2017, the southern part with 3500 residential units and a gross floor area of 240.000 m<sup>2</sup> will be completed.

With this project, great importance was attached to resource-conserving and environment-friendly construction methods. The construction concept therefore implies the use of mass building materials excavated to a great extent within the construction area.

### OUR FUNCTION

For this project, BGG Consult was already involved in the preliminary study of the resource management, module "Material Excavation" and "Ground Modelling". For this, an expertise with regard to the building ground was prepared, based on all available data and additional exploratory pits. In preparation for the first building constructions, geotechnical expert's reports were compiled for the permission documents of 20 building lots (mean area 5.000 m<sup>2</sup>) on behalf of the different building developers. Further subsoil exploration works were necessary for this purpose. Finally, a geotechnical supervision and a hydrogeological preservation of evidence were performed during construction by order of the general contractors.

#### *Different Foundation Methods:*

As uniform the even airfield looks like on the surface, as strongly does the underground vary at a small range. For instance, within one building lot, the upper edge of the gravel varies up to 4 metres. Furthermore, the density of the quaternary gravel fluctuates significantly. Accordingly, for each building lot (partly for each structure), ground improvement measures were determined adapted to each individual situation. The following alternatives were implemented at the objective building lots:

- No ground improvement
- Ground exchange above gravel
- Vibro-compaction
- Vibro-displacement compaction
- Impulse compaction (partly with soil stabilisation)

*Construction of 20 projects at the same time*

