



## VIENNA - SALZBURG HIGH-PERFORMANCE RAILWAY LINE, LAMBACH - BREITENSCHÜTZING SECTION

Client: ÖBB-Infrastruktur AG (Austrian Railways Infrastructure AG)  
Development Period: 2002 to 2013

### THE PROJECT

The 4.1 km long section Lambach - Breitenschützing closed yet another gap within the development of the Western Railway Line into a high-performance route. The level of the new tracks correspond approximately with the existing ones. Over a length of 1 km, a straightening of the line was necessary to mitigate the curve radius. In this section, the embankment of the line leads over floodplain sediments very susceptible to settlement.

Furthermore, the construction comprised five new crossing structures and the station 'Neukirchen bei Lambach' with an access tunnel.

### OUR FUNCTION

For this project, BGG Consult provided consulting in the fields of geotechnics and hydrogeology since the phase of the construction permission procedure until the implementation.

Based on the results of subsoil explorations, a geotechnical and hydrogeological expert's report has been prepared. In the tendering phase, additional soil investigations were carried out.

During construction, the works were supervised with respect to geotechnics und hydrogeology. Furthermore, hydrogeological preservation of evidence was conducted.

#### *Schwaiger Brook Soil Improvement:*

The course of the new line along the objective section required the crossing of the *Schwaiger Brook* lowland on an embankment with a height of up to 4 m. Up to a depth of several metres, the subsoil in this area consists of alluvial and floodplain deposits with very disadvantageous bearing and deformation properties.

For an improvement and a faster consolidation of the subsoil, a soil improvement in this area was indispensable. For this, a vibro-displacement technique in combination with an overburden fill has been proposed and carried out as the technically and economically optimal option. During implementation, the number and depth of the vibro-displacement columns were optimised by BGG Consult based on numerous exploratory pits.



*Vibro-displacement in the Area of the  
Schwaiger Brook Floodplain*