

Road Bridge Altenbrückentorstraße Lüneburg

Project Owner:

Hanseatic City of Lüneburg

Client:

Johann Bunte Bauunternehmung GmbH & Co. KG

Quick Info:

Tie-back of a support wall in the course of the erection of a new road bridge in Lüneburg

Technical Information:

System:	Gewi-permanent bar anchor, type 40 w/ double corrosion protection
Quantity:	6 Spcs.
Length:	20,00 - 26,00 m
Service Load:	365 kN
Test Load:	402 kN
Technique:	flush drilling w/secondary injections
Building Ground:	marl/sand
Time Frame of Works:	March 2011



Image 1

Due to the desired enlargement of the train station area in Lüneburg (Lower Saxony), a new road bridge was supposed to be erected for the access ramp to the central bus terminal. Meanwhile, the adjacent bridge was demolished and built back. We were contracted for securing the existing support wall alongside the lowered roadway. The support wall consisted of a steel sheet pile embedded into a concrete capping beam with a brick façade that was temporarily removed in parts for our anchor works.



Image 2

The relatively small work space rendered the use of a nimble mini drill rig necessary. Due to the unusual height of the given drill points, we had to insert the GEWI-steel bars from a mobile aluminium scaffold (see Image 2). When our bore fluid turned up on the surface behind the support wall while drilling through an unknown surveying duct, we decided to leave the steel casing in the ground in order to counter any concerns that a nearby transmitter mast by the Deutsche Bahn might be de-stabilised and subsequently experience any settlements. Afterwards, we bored through the left-behind casing with a smaller diameter, extended the bore hole and fixed anchor length by 6 m in order to make up for the reduced skin friction of the narrow grout body. The remaining gap in the free anchor length was filled up with grout material. It was later confirmed to us that no settlement of the transmitter mast had taken place.