

ElbSchloss Bleckede, Remodeling the Remise

Project Owner:

City of Bleckede

Client:

City of Bleckede

Quick Info:

Deep foundations for the erection of several aquariums within the remise of the historic ElbSchloss in Bleckede

Technical Information:

System:	Gewi-pile / steel diameter 32,5 and 40 mm
Quantity:	17 pcs.
Length:	10,50 – 13,00 m
Service Load:	up to 420 kN
Technique:	single head flush drilling
Building Ground:	turf/sand
Time Frame of Works:	17th to 20th, May 2010

In order to strengthen the landmark protected ElbSchloss ("Castle of the Elbe"), which was erected by Herzog Ernst II. von Braunschweig-Lüneburg in 1600, in its role as a regional tourism magnet in the Lüneburg Heath, the enlargement of the info centre for the Biosphaerium Reservation of the Lower-Saxony Elbe-Valley-Meadow by several aquariums and an outdoor beaver facility had been decided in 2009. Upon completion a total of eight aquariums are supposed to exhibit the grand variety of approx. 100 fish species in the Elbe and thereby strengthen public awareness of species protection in the Elbe river valley (see Image 1). In order to realise this project, the old remise, which used to house different art ateliers until recently and extends to the courtyard of the castle, was predestined for this underwater world. Attempting to follow in the footsteps of the 'beaver'

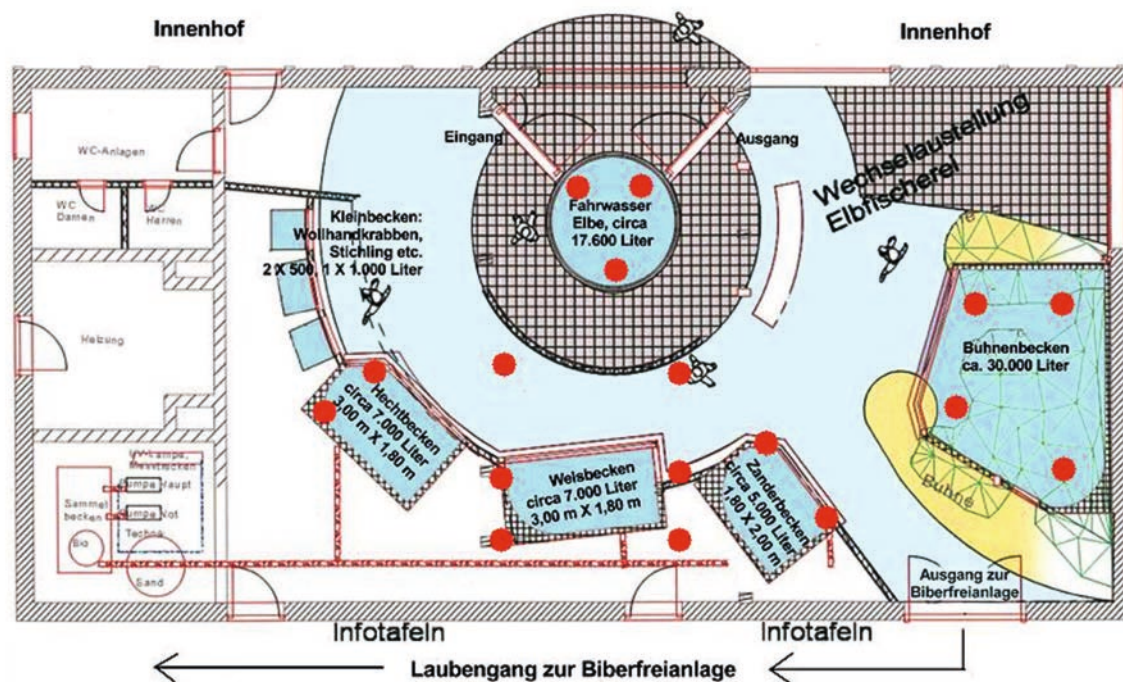


Image 1

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as the master builder among animals, we took upon ourselves the task to construct the deep foundations necessary for these aquariums.

One major provision we had to meet during our works lay in a very careful handling of the historic building substance. For that matter we decided to employ an especially gentle drilling technique. Powered by a separate hydraulic aggregate to further limit the impact on the surface floor, our drill rig was especially re-equipped by our machine engineering division to have our drill mast fit precisely underneath the wooden beams (see Image 2). Moreover, we pumped our water-cement suspension from a self-made basin at the bore hole into an exterior container in order to keep interior pollution at a minimum.

The production of our 17 micro piles, depicted as red dots in Image 1, through the existing foundation did not present a significant challenge to our drill team. Due to the local height restriction we had to insert and couple the Gewi-steel elements in one-meter long pieces. In order to prevent any load transmission from the new aquariums to the existing structures, we inserted additional plastic tubes in the upper portion of each bore hole. As it stands today, the completion of the entire building project including the outdoor beaver facility is scheduled for the upcoming year. We were very pleased to contribute our part to this project for preserving the Elbe as one of the richest rivers in Europe in terms of its species variety and hope for a timely and successful opening!



Image 2