



NEIDHARDT  
GRUNDBAU

# Ørestad School Copenhagen

**Client:**

Engelhardt Scandinavia ApS Ground Engineering

**Quick Info:**

Uplift protection of a foundation plate with multiple foundation strips for the erection of a school building and a city library by means of micropiles

**Technical Information:**

System:	Gewi-Micropile DKS/steel diameter 63,5 mm/steel grade 550/700
Quantity:	68 pcs.
Length:	15 m
Service Load:	ca. 800 kN
Technique:	rotary percussive flush drilling
Building Ground:	Limestone
Time Frame of Works:	August – September 2010

The young borough „Ørestad“ in Copenhagen has steadily been enlarged for a number of years. Momentarily, a new school and library complex is being built, in which we participated by providing the uplift protection piles. Due to the highwater table, the foundation plate, which is enforced by several additional plates, had to be tied back vertically against the uplifting forces of the ground water.

The planning by the project owner intended to solve this problem by installing a total of 68 GEWI-micropiles, type 63,5 mm, with double corrosion protection. We produced these piles using a rotary percussive flush drilling technique. Despite the numerous presence of glacial boulders in the building ground, our works went as planned. However, the whole building pit was submerged with water in heavy rainfalls, presumably because of the failure of the dewatering facility, on the weekend of 14./15. of August 2010. Consequently, we were left to rescue our drill rig and pump station with heavy-duty lifting equipment for damage control. Nonetheless, we continued our job only a few weeks later with a spare drill unit, so we were able to finish our works to the content of all participants. Image 2 depicts a few of our fully completed micropiles including the mounted pile heads after being girdled in steel reinforcement and before being embedded in concrete.



Image 1



Image 2