

Damhusledningen

Large shafts with secant piles

For HOFOR A/S, Per Aarsleff A/S has established a 3.4-km reservoir pipe under the park Vigerslevparken in Hvidovre in joint venture with Entreprenørfirmaet Østergaard A/S. The work was carried out to improve the water quality of the stream Damhusåen that runs through major parts of Hvidovre and ends at the southern part of Port of Copenhagen. The reservoir pipe has a diameter of DN3000 millimetres and has a capacity to collect large amounts of water and in this way reduce the overflow to Damhusåen in case of heavy rain.

As part of the project, Aarsleff Ground Engineering has constructed four large shafts 18-22 metres below ground level. The large shafts have a varying diameter of 14-18 metres and are made with secant piles carried out with two of our drilling rigs: Bauer BG36H and Casagrande C850.

Concurrently with the establishment of the major shafts, we constructed two shafts as drain structures. The two minor shafts were also carried out with our drilling rig; first, two tubular steel pipes of DN 1300 mm and DN2000 mm were installed, and subsequently, soil and limestone was drilled up.

Geological conditions

All drillings are carried out in 5-7 metres of top soil (clay till and sand) with underlying layers of flint and limestone.

Drilling activities according to plan

There were several minor adjustments in the execution phase, but without influence on the drilling activities. Throughout the entire project, we had a good collaboration with the client and the other parties, and we were able to switch between the different shafts without waiting. Our shafts were handed over on time.



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Data

4 access shafts, diameter between 14-18 metres, construction with approx. 400 secant piles:

- DN 1180 mm
- 20-22 m long
- 930/1000 mm centre distance
- 1% drilling tolerance
- Drain structures, DN2000mm carried out in one drilling

Total metres drilled:

approx. 5200

Drilling rigs: Bauer BG 36 H and Casagrande C 850 NG

Client

HOFOR A/S

Contact person:
Morten E. Jensen,
Project Manager

Contractor

Østergaard-Aarsleff JV I/S

Business partners

Entreprenørfirmaet Østergaard A/S

Type of contract

Partnering

Consulting engineer

Niras A/S

Construction period

June 2013 – June 2014

Contract value

DKK 100 million

Aarsleff Ground Engineering is one of Europe's leading piling contractors, and we undertake a wide variety of piling, drilling and foundation projects in Denmark and abroad. We have offices in Poland, Sweden, Germany and the UK.

Our fleet covers fully hydraulic piling and drilling rigs as well as cranes and vibrators.

Contact

Per Aarsleff A/S
Ground Engineering
info@arsleff.com
Tlf. +45 8744 2222

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