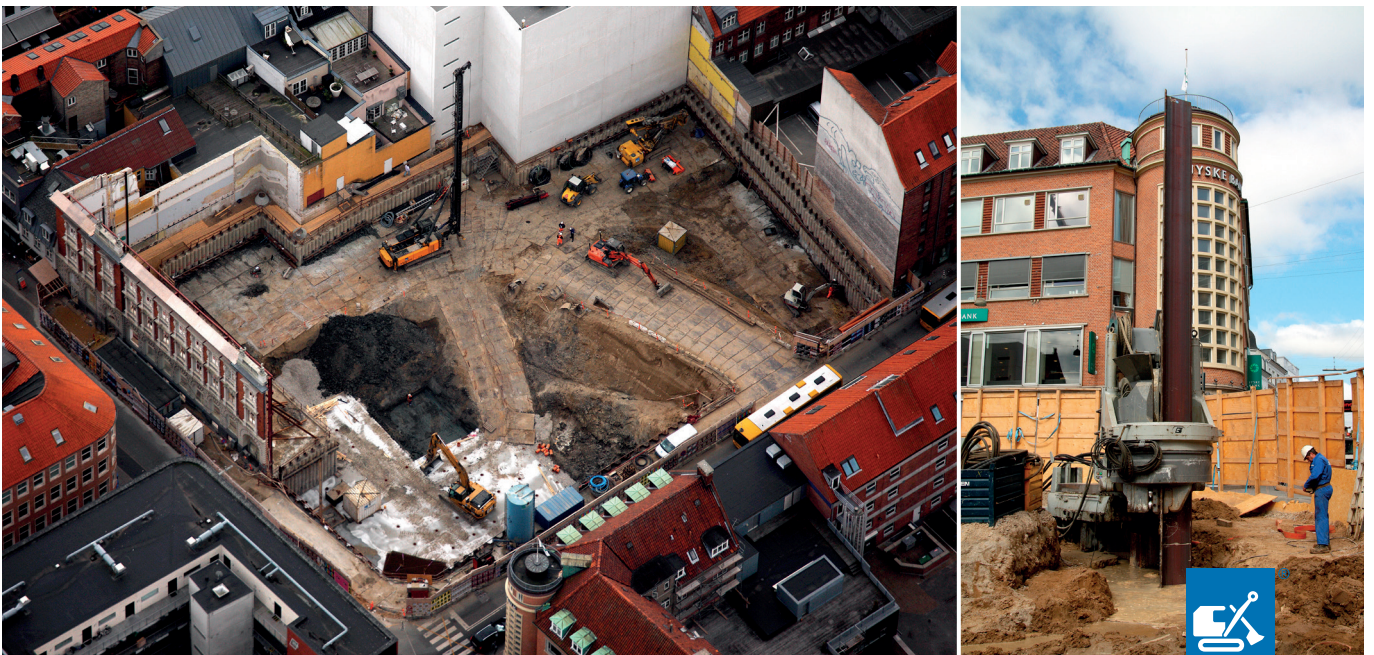


Construction pit in the heart of Aarhus

2,600 square metres of construction pit for Scandic Hotel



AARSLEFF

In the centre of Aarhus, Aarsleff has carried out the construction pit for Scandic's new hotel which is scheduled for completion in 2012.

Secant piles

In connection with the construction work, Aarsleff has carried out retaining walls, eg. as pressed sheet piles. In addition to the pressed sheet piles, the retaining walls also included a secant pile wall. The retaining walls were supported by approx. 330 strand anchors in up to three levels. Finally, we excavated approx. 18,000 cubic metres of soil for disposal at Port of Aarhus and installed drains and discharge pipes completed by a 15-centimetre-thick reinforced levelling layer of concrete for the 2,600-square-metre-large construction pit.

1,250 square metres of pressed sheet piles

The job was challenging, as our work was carried out in the middle of the hectic town centre, and we were to disturb the surroundings as little as possible. It was eg. important to respect the noise and vibration limits for the sheet piling work. Thus,

the 1,250 square metres of sheet piles for the construction pit retaining walls were pressed in place by means of a Z Crush Piler which loosens the soil and at the same time presses the sheet piles down into their final position.

Anchoring of the base slab

The hotel will have a two-storey underground parking, and with an excavation depth of 8.5 metres, there is a risk that the bottom might swell. The reason for that is that the deposits of fissured clay expand when the soil above is removed and when the clay becomes wet. To protect against swelling, we installed approx. 350 vertical GEWI anchors down to a depth of 20 metres below the level of the base slab to keep the concrete base slab in place.



Data

- Excavation and removal of approx. 18,000 m³ of soil
- 330 inclined strand anchors
- 350 DN40 vertical GEWI anchors bored with displacement auger
- Casting of 2,600 m² of blinding concrete
- 1,250 m² of pressed sheet piles installed as 85 mm sealed sheet pile wall
- 145 mm of secant pile wall
- 25 mm of internal, temporary bracing of construction pit.

Client

A. Enggaard A/S

Type of contract

Turnkey contract

Contractor

Aarsleff, Construction and Piling

Consultant

Moe & Brødsgaard A/S

Construction period

July 2010-August 2010

Contract price

DKK 23 million

Contact

Per Aarsleff A/S
Construction and
Ground Engineering
Estimation & Tender
kalkulation@arsleff.com
Tel +45 8744 2222

ANLÆG-154UK-rev.2 11/2016