Construction pit and basement for residential tower

Earthwork, piling, concrete and pipe work for 94-metre-high residential building

In the northern part of Aarhus, Per Soil & Building A/S has carried out the main contract for construction pit, basement as well as sewer and pipe work for the future 28-storey residential tower La Tour. The tower will have a height of 94 metres above ground level and will be comprising approx. 650 apartments, primarily for the growing number of students attending the city's educat- ional institutions. Since the tower is located at the highest point in Aarhus above sea level, the penthouse apartments will be placed about 170 metres above sea level.

High degree of in-house production

Our part of the project, which was named after the old La Tour Hotel located at the site for numerous years, was carried out in an in-house One Company collaboration allowing us to draw on our specialist skills, especially within ground engineering, construction and building work. Our in-house production included excavation, soil management, installation of sheet piles and soil anchors as well as in situ concrete work for the basement structure.

In August 2020, the excavation for the 5,300-square-metre construction pit began. First, we installed a 150-metre-long sheet pile wall where the distance to the boundary was too small for open excavation. Then, we started on the concrete work which included almost 4,500 square metres of concrete with 640 tons built-in reinforcement. Finally, we established 1,400 square metres of floor slab comprising insulation and fibre-reinforced concrete in the basement as well as subsequent excavation for sprinkler tank, district heating and 1,300 metres of pipe.

Highly contaminated soil

The earthwork was particularly challenging comprising 15 different soil fractions – including 4,000 tons of old landfill waste. During the entire excavation phase, we had to comply with the client's requirements to full-time supervision and samples. Through ongoing dialogue, coordination and close collaboration with the soil specialists from GEO who were responsible for client supervision and present at the construction site, we sorted and removed the soil correctly.

SOIL & BUILDING A/S

Data

- 150 m of sheet pile wall
- 40,000 tons of excavated soil, (of this 4,000 tons of old landfill waste)
- 640 tons of reinforcement
- 4.400 m³ of concrete
- 800 m² of bentonite membrane
- 1,300 m of pipe.

Client
KPC Herning A/S

Contractor
Soil & Building A/S

Type of contract
Main contract

Construction period
August 2020–March 2021

Contract value
DKK 31.3 million

Contact

Soil & Building A/S
Construction Tender & Estimation
soilb@soilanbuilding.Com
Tel +45 9375 5235

SOIL & BUILDING A/S