

Building the new headquarters for Danske Bank

Design & build contract for construction of 73,000-square-metre office building

A new city district is being built on the former central post facility site near Tivoli in central Copenhagen. Here, Danske Bank's new headquarters has been built, accommodating 4,150 employees. Working in One Company collaboration with our sister company Wicotec Kirkebjerg A/S, Per Aarsleff A/S delivered the design & build contract for the construction of the 73,000-m² office building and the associated 40,000-m² plinth and basement structure.

Early involvement and several phases

Prior to the design & build contract, we liaised with the client and partners in an early involvement phase where we provided our wide range of expertise and so were able to optimise our services. This joint effort helped to ensure a carefully planned project and to reduce risks. Two additional phases were included: A redevelopment and demolition contract delivered in collaboration with Tscherning plus a construction pit contract.

On the first contract, Aarsleff was responsible for managing and coordinating the redevelopment and demolition of the former central post facility site. On the second contract, we delivered the 30,000-m²-large construction pit and land development.

For the large-scale construction pit, we used 16,000 m² of sheet piles installed in a drilled trench and braced with two anchor levels. We excavated around 190,000 m³ of soil to make way for the foundation of the office building. Moreover, we undertook extensive groundwater lowering and relocated a 110-year-old wastewater pipeline in operation. Both contracts were ongoing when we started the construction work for the office building.

Having a constant high level of construction site activities meant that we prioritised good communication and carefully planned and managed all our operations.

Around 150 salaried employees and 350 hourly workers were involved throughout the busiest period of the project.

Multiple, concurrent activities

Once we had removed the old buildings and established the construction pit, we began installing and drilling the piles for the foundation and cast the base slab for the new office building. Keeping more than 100 employees busy, we progressed well with the shell structure work which was ongoing at the same time as work for the element installation, the in-situ casting of slabs and walls as well as the reinforcement work.

When the shell structure was complete, we started on the façade work, consisting of 11,000 m² of brickwork and 12,000 m² of glass and aluminium facade.

The plinth houses most of the technical installations, delivered by the Aarsleff company Wicotec Kirkebjerg A/S, and will have



AARSLEFF

a two-storey car park with space for 636 vehicles. On the roof of the plinth between the buildings, an urban space open to the public was established. A bridge links it to the nearby buildings SEB and the National Archives, thereby creating a coherent, green urban space.

VDC and LEED

Using Aarsleff's in-house VDC expertise on this project allowed us to build virtually before we built physically. In this way, we ensured a buildable project design and reduced mistakes and unforeseen challenges on the construction site. More

specifically, it meant that we could model almost all aspects of the project, check for collisions and buildability as well as simulate logistics and construction stages. Throughout the execution phase, we used laser scans to make sure everything measured up to our models.

The building construction was completed in June 2023 and is certified according to LEED Gold v4 for system type "BD+C: New Construction and Major Renovation" which is the second highest level on the U.S. Green Building Council's LEED scale within sustainable building construction.

Data

- 73,000 m² of office building
- 40,000 m² of plinth
- 2,450 driven concrete piles 30×30 mm and 40×40 mm at lengths varying from 7-9 m
- 558 GEWI-piles (17-m-long drilled uplift anchors and 10-18.5-m-long drilled GEWI-piles for foundations)
- 62 drilled piles in sizes varying from DN880-DN1800 mm as well as lengths varying from 10-16.5 m
- 35,000 m³ of concrete
- 9,290 m of steel composite beams
- 7,500 tons of reinforcement
- 19,566 m² of aerated concrete
- 10,413 installation of concrete elements for slabs and walls
- 11,000 m² of facade brickwork consisting of 693,000 bricks
- 12,000 m² of installation of aluminium and glass facade

Client

Ejendomsselskabet
Project Nord P/S

Contractor

Per Aarsleff A/S

Type of contract

Design & build contract

Consultants

COWI A/S
Lundgaard & Tranberg Arkitekter A/S

Construction period

June 2018 to June 2023

Contract value

Approx. DKK 3 billion



Contact

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

C-262 rev2 01/2024

