

# Bispebjerg Hospital

Construction of new laboratory and logistics building



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In connection with reconstructing and expanding Bispebjerg Hospital, Per Aarsleff A/S has built a new, four-storey laboratory and logistics building of a total area of 7,700 square metres as well as a basement of 2,800 square metres. The contract was carried out in a One Company collaboration with the Aarsleff Group's company Wicotec Kirkebjerg A/S.

The main contract comprised sewer work, in situ concrete and element installation work as well as façade work for the shell structure. Interior building work including electricity, plumbing, sprinkler and ventilation systems were also a part of the project. We delivered much of the work without using any subcontractors.

## First, we built virtually

During the entire project, the use of VDC (Virtual Design & Construction) was a great advantage. Our own VDC coordinators were involved during the entire process allowing us to influence the

development of technical models and to carry out quantity verification and collision tests across all disciplines. Moreover, we used virtual reality when carrying out concrete work and cable routing.

In short, we built the entire laboratory and logistics building virtually prior to the actual construction. This allowed us to optimise both time and quality as we have been able to test and verify changes in the models as the project proceeded.

## Creative solutions

As one of the few buildings in Denmark, the building was constructed under a complete cover – a 32-metre-high tent. This protected the building from rain and wind until it was closed on the outside, allowing us to cut three months off the schedule. As the existing hospital had to be fully functional throughout the construction period, there were special demands on logistics and access conditions.

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#### **Data**

Construction of laboratory and logistics building:

- 4,000 m<sup>3</sup> of excavation and disposal of soil
- 620 m of DN110-DN315 mm sewer work
- 1,215 m<sup>2</sup> of in situ concrete
- 1,920 m<sup>2</sup> of concrete elements
- 7,800 m<sup>2</sup> of voided slabs
- 3,690 m<sup>2</sup> of cladding work
- 7,600 m<sup>2</sup> of floors
- 4,900 m<sup>2</sup> of plaster walls
- 1,500 m<sup>2</sup> of aerated concrete walls

- 800 m<sup>2</sup> of interior glass walls
- 24,000 m<sup>2</sup> of painting work.

#### **Client**

Capital Region of Denmark

#### **Contractor**

Per Aarsleff A/S

#### **Collaboration partners**

Per Aarsleff A/S  
Wicotec Kirkebjerg A/S

#### **Type of contract**

Main contract

#### **Consultants/Architects**

Kuben Management A/S  
(client's consultant)  
Mikkelsen Arkitekter A/S  
(consultant)  
WHR Arkitekter  
(laboratory consultant)  
Alectia A/S  
(construction/installation consultant)

#### **Construction period**

August 2016-July 2018

#### **Contract value**

DKK 200 million.

#### **Contact**

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