Administrative center and dwellings in Etterbeek

Avenue des Casernes in Brussels (BE)

Complete stability mission, PEB advisor, integrated feasibility study author and assessor BREEAM International New Construction

Owner
Commune d'Etterbeek

Architects
AM Jaspers Eyers - BAEB

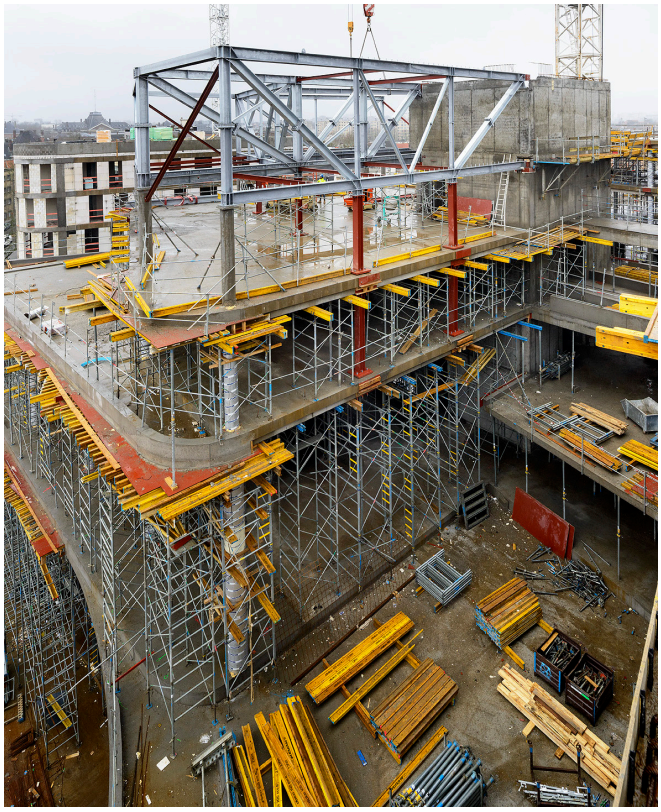
Cost of the works
€ 35,3 M excl. vat of which
€ 10,5 M € excl. vat for structure

Studies
2014 - 2020

Execution
2017 - 2020

ST EN

Property Award in the category of Best International Public Service Building

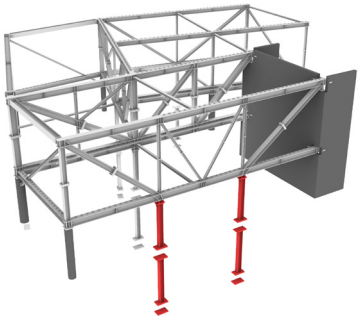


The project consists of a new administrative center and apartment complex in Etterbeek, over a shared esplanade providing 3 levels of parking and underground storage space (36,400 m² of which 22,700 above the ground level for one volume of 113 500 m³).

The 3 underground levels, totalling 16,800 m², include archive facilities and 278 parking spaces. Level -3 has a watertight foundation raft and the upper levels are made of a prefabricated structure of columns/girder/slabs. The perimeter is comprised of concrete walls and secant piles. The columns are supported on direct foundations.

The apartment complex has 6 levels and a net surface area of 5,100 m². The floors are pre-slabs supported by siliceous limestone walls.

The administrative center has 6 levels and a net surface of 14,500 m². The floors are made up of precast slabs laid on prefabricated beams providing high laying efficiency. The in-situ reinforced concrete compression layer stabilises the floors by creating a diaphragm for taking up the horizontal loads; the columns, also prefabricated, are of concrete C50/60, thus reducing the size of the sections. The wing containing the conference room has a special feature: the floors of the upper levels (floors 4 and 5) are suspended by a network of steel lattice



beams installed inside the technical rooms on the 6th floor so there is no central column within the conference room. Steel rods suspended from the lattice beams support the floors on the levels below. The lattice has a span of between 14 and 16 metres.

In the front part of the administrative zone, two columns have been removed on the ground floor. A double structure comprising oblique rods arranged in the plane of the façades and in different compartments takes up the loads and is designed so that one of the double structures can be lost in case of fire without the building collapsing.