

Realex - Office block rue de la Loi

greisch

Rue de la Loi 103/105, Brussels (BE)

Complete stability mission

Owner
LEASELEX sprl

Architect
Assar Architects

Cost of the works
€87 Mio excl. vat
€18 Mio for the structure

Studies
2011 - en cours

Execution
Stand-by

ST



The tower rising 114 m above the ground is an essentially concrete structure.

The inner core housing the service ducts, stairs and lift, is formed of in-situ cast reinforced concrete walls (climbing formwork) and provides the structure with horizontal stability.

The majority of floors are made of prestressed prefabricated elements laid on prestressed prefabricated beams for high laying efficiency. The compression layer, of in-situ reinforced concrete, secures the whole floor, providing a diaphragm for taking up the horizontal forces and ensuring non-progressive collapse performance.

The columns are made of prefabricated reinforced concrete elements. For maximum reduction of column dimensions, a high-performance concrete is used (C80/95). In some cases, the columns also have a composite steel-concrete structure.

The project includes the construction of 4 basement levels. A particular feature is that these are built within an enclosure defined by a diaphragm wall constructed for another project. The bottom level of the basements is sited around 7 m below the maximum water table level. The waterproof foundation raft



is designed to withstand this uplift. The temporary earthmoving phases take into account the lowering of the water table by reinjecting the water outside the enclosure to avoid settlement problems (hydrogeological study).

The whole building is set on deep foundations, box piles, reaching the Landenien layer around 70 m down.