

RESIDENTIAL ESTATE SCHILDACKER, 1. PHASE OF CONSTRUCTION Freiburg (Germany)

NEW BUILDING

Client: Freiburger Urban Development Authority GmbH, Freiburg

Architects: ASTOC ARCHITECTS AND PLANNERS GmbH, Köln

Our services: Full structural design
Establishing the basis
Preliminary design
Final design
Approval documentation
Execution drawings
Preparation of contract award
Structural fire protection
Earthquake engineering
Thermal insulation
Sound insulation

Brief description: New residential block with 89 flats and a separate underground car park having 54 spaces

- 6-storey solid construction built with reinforced concrete and brickwork
- measurements 145 x 11 m
- building divided into 6 parts which, due to concrete deforming, creeping and shrinking has expansion joints in the 1st – 5th floors, the ground and subterranean floors are without expansion joint
- shallow foundations with resiliently embedded base plate together with individual and strip footings
- stiffening through the reinforced concrete slabs and the walls of reinforced concrete and brickwork
- load transfer on the ground floor through heavy loads deep beams and far reaching joists due to diverse arrangement of the load-bearing parts on different floors
- slabs spanning up to 7.8 m
- basement with accessible media corridor, machine room, built as white tank
- different sections of building accessible separately, each with own stairway, barrier-free development
- flats on the upper floors with loggias and on the ground floor with terraces
- perforated facade with numerous openings for window
- flat roof fitted with solar fields
- due to construction on hillside increased pressure on the 145 m long perimeter wall
- heavy loads Europilz supports in the underground car park carrying punching shear loads from the long-span slabs, support matrix 8 x 8 m
- separate underground car park adjacent the whole length of the building at ground floor on the hill side
- columns in the underground car park designed to withstand dynamic impact forces, underground car park with green roof accessible to pedestrians
- underground car park with no base plate, paved

Completion: 2018



Development plan Schildacker, first phase of construction

