

## STUDENT RESIDENCE KARLSHOF DARMSTADT (Germany)

### New building

**Client:** Student's Union, Darmstadt

**Architects:** Trautmann Architekten, Darmstadt  
Loewer + Partner Architekten, Darmstadt

**Our services:**

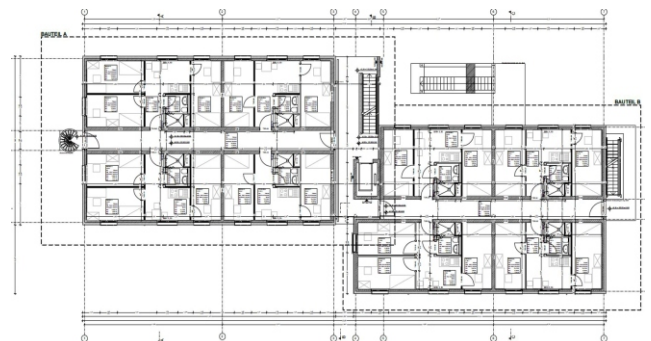
- Full structural design
- Establishing the basis
- Preliminary design
- Final design
- Approval documentation
- Execution drawings
- Preparation of contract award
- Earthquake engineering
- Structural fire protection
- Thermal building physics
- Sound insulation
- Thermal building physics
- Proof of buoyancy safety

**Brief description:**

Extension to a student hall of residence through the construction of two new apartment buildings (48 residential units) with space for technical equipment, storage rooms and bicycles

- solid construction using reinforced concrete and masonry
- constructed with 5- and 7-storeys and basement
- floor plan in each case approx. 45 m x 18 m
- staircase open on two sides linking both buildings, use of load-bearing thermal insulation components (Schöck insulated baskets) as connecting elements
- flat foundations supported by a flexibly bedded, partially haunched base plate
- basement constructed using waterproof concrete because of the high groundwater level
- reinforcement via reinforced concrete slabs and walls of reinforced concrete and masonry
- load transfer in the basement through columns and, due to high loads through irregularly arranged floor plans, also through wall-like beams
- load-bearing outer walls of masonry with a thickness of 17.5 cm
- flat slabs, designed as filigree ceilings, with spans of up to 5.50 m
- external steel spiral staircases as emergency stairs
- façade constructed as thermal insulation composite system with textured plaster
- green flat roof
- partially barrier-free development

**Completion:** 2020



Floor plan, ground floor

