

CROSS-GENERATION HOUSING

AGORA

Darmstadt (Germany)

NEW BUILDING

Client: AGORA Housing Cooperative eG

Architects: werk.um architekten, Darmstadt

Our services: Full structural design
Establishing the basis
Preliminary design
Final design
Approval documentation
Execution drawings
Structural fire protection
Earthquake engineering

Brief description: Cooperative association housing with 45 flats, café, seminar rooms, common rooms, underground car park and parking level

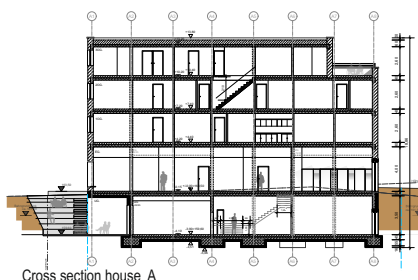
Buildings

- four buildings with up to five storeys, top storey partially as a staggered floor
- building measurements
house A: 25 x 13 m
house B: 50 x 13 m
house C: 50 x 13 m
house D: 25 x 13 m
- reinforced concrete skeleton and composite construction
- flat roofs
- stiffening through walls, floors and stairwells
- maximum span of slabs over ground floor up to 7.25 m, over the upper floors up to 5.1 m
- balcony cantilevering up to 2.3 m
- lower floors with flats, ancillary rooms and underground car park
- lower floor wall out of water-resistant concrete
- non-load bearing, thin base plate (25 cm)
- shallow foundations with spot and strip footing
- slope stabilization during the building phase (classical Berlin pit shoring)

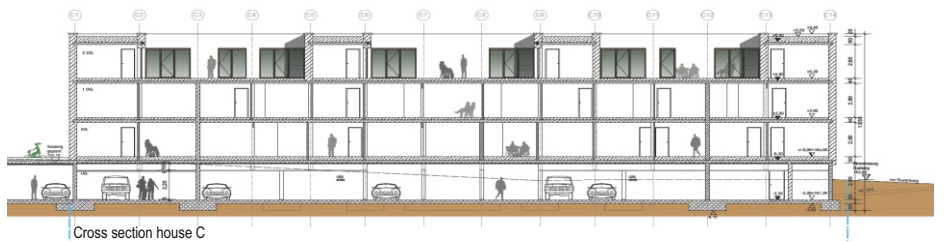
Underground car park

- 35 parking spaces
- load transfer from upper levels using composite steel girders (HEA 500, HEM 500, HEB 500)
- supports constructed to withstand collision
- floor span of up to 8 m
- outside parking level with 12 parking spaces built on top of underground car park

Completion: 2017



Cross section house A



Cross section house C

Pictures / Illustrations: Professor Pfeifer and Partner Part GmbH, werk.um architekten, Schick Industriebau