

LINCOLN ESTATE CONSTRUCTION FIELD B 3.1 Darmstadt (Germany)

NEW BUILDING

Client: bauverein AG, Darmstadt

Architects: werk.um architekten, Darmstadt

Our services:

- Full structural design
- Establishing the basis
- Preliminary design
- Final design
- Approval documentation
- Execution drawings
- Preparation of contract award
- Construction supervision
- Fire protection
- Earthquake engineering
- Thermal building physics
- Sound insulation

Brief description:

Construction of 2 new residential blocks with 77 flats on an urban redevelopment site, once property of the US Armed Forces "Lincoln Family Housing Area".

- 5-storey residential blocks with additional staggered floors, solid construction, masonry and reinforced concrete
- individual floor area each 73 m x 13 m
- shallow foundations, 40 cm base plate with basement
- bracing via load-bearing inner and outer walls
- enforced concrete flat slabs
- prefabricated loggias and balconies
- extensive roof greening on the topmost floor
- basement designed as a "white tank"

Completion: 2019



Fotos / Darstellungen: ProfessorPfeiferundPartner PartGmbB, werk.um architekten

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Our services:



Thermal insulation certificates

Energy performance according to EnEV 2014
(German energy-saving directive from 2014) including
the more stringent 2016 issue and incorporating the
EEWärmeG (German renewable energy-saving act)

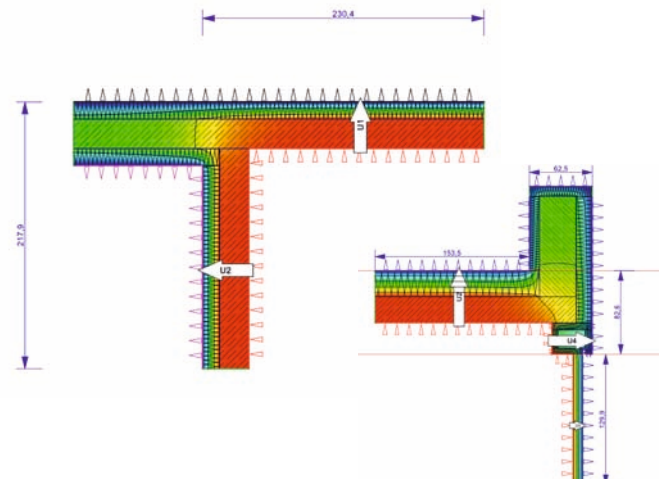
- consultation in energy-saving thermal insulation with regard to construction and building materials
- consultation in energy-saving technology including high ventilation requirements
- thermal insulation certification in accordance with DIN V 18599 using the reference-building method
- detailed thermal bridge calculation
- certification of summer thermal insulation

Building soundproofing certification

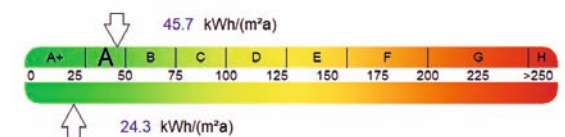
- Consulting services for comprehensive sound insulation
- rating the required airborne and impact sound insulation
 - proofing against noises penetrating from outside
 - proofing against noises generated by technical apparatus and other equipment
 - soundproofing design of doors and partition walls
 - planning assistance in reducing sound propagation in pipe connections and flanking areas as well as considering ventilation components set in the facade
 - planning assistance in reducing impact noise on stairs, landings and fixtures on floors

Brief description: New construction of two apartment buildings with 77 residential units on an inner-city conversion area, the former real estate of the US armed forces "Lincoln Family Housing Area"

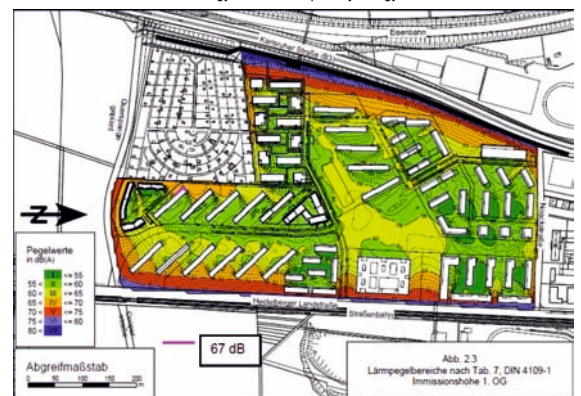
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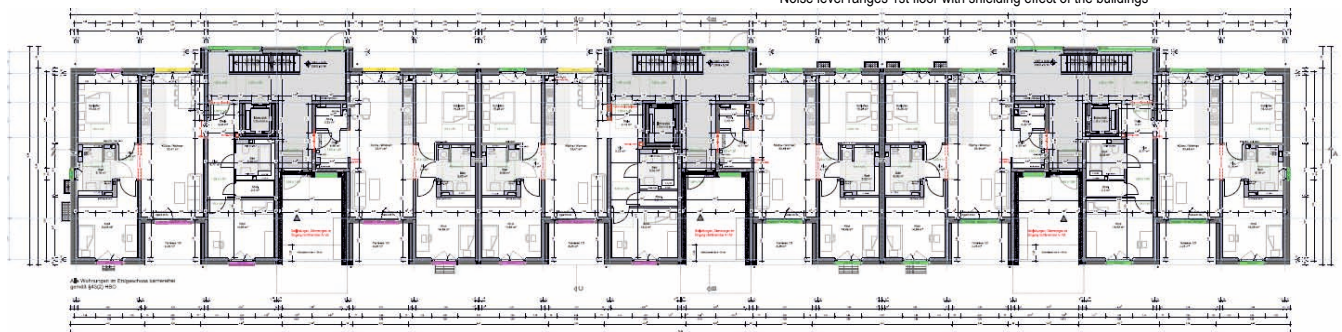
Calculations thermal bridges



Extract from the calculation of energy demand and primary energy demand



Noise level ranges 1st floor with shielding effect of the buildings



Extract from the calculation of the required R_w , p value for windows

