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New headquarters for the Institute of Building Biology and Sustainability

After more than 30 years in Neubeuern in southern Germany, the IBN Institute of Building Biology and Sustainability moved into its new building in Rosenheim, Bavaria, in 2014. The building showcases what is both possible and sensible in the field of healthy and sustainable building.

An existing ground level building, formerly a "Konsum" supplies and grocery store built in 1955, has been extensively renovated. The curved arc of the existing building is a masonry structure and has been given a new, glueless timber upper storey and a glazed staircase. Special emphasis was given to reviving the architectural charm of the 1950s, harmoniously integrated the building into the scale of the surroundings,

preserving the surrounding deciduous trees and an energy-saving, sustainable overall concept.

This landmark project was realised as a passive standard house with the help of planners and contractors from the region. The building employs, for example, foam glass insulation for the wall base, a composite thermal insulation system using softwood fibreboard and wood fibre blow-in cavity insulation, dowel laminated ceiling slabs with acoustic profiling, passive house windows, solid wood doors and parquet made of various woods, clay building boards, clay plasters and paints, a wood-pellet heating system with inspection window, flicker-free LED lighting, natural wood furniture and much more.

01 IBN headquarters – West elevation with new staircase



The key facts about the new IBN building:

- Function: office/consulting/planning/exhibitions/allergy-friendly show apartment
- Masonry ground floor/timber top floor
- Made of renewable and mineral building materials
- Passive house and plus energy standard:
heating demand: ~ 4,500 kWh/year (20 kWh/m²)
photovoltaic yield: ~ 7,500 kWh/year
U-value of building envelope; ~ 0.1 W/m²K
U_w-value of passivhaus windows = 0.66 W/m²K
- Healthy indoor climate through the use of building materials and furnishings made of materials with good moisture balance and a balanced ratio of thermal insulation, heat retention, pellet heating, low-temperature wall and floor heating, ventilation system with air humidity recovery and carbon dioxide control system
- Best possible reduction of electrosmog (low and high frequency)
- Bright, well-lit interiors and energy-saving flicker-free lighting
- Rainwater infiltration and management
- Electric charging point in combination with photovoltaic system
- Insect-friendly outdoor grounds
- Reachable via public transport: Bus stop in front of the building

For further details on the construction process, see www.NeubauIBN.baubiologie.de.

Design: Architekturbüro Martin Schaub with IBN-Architekt*innen Karin Hick and Winfried Schneider
Photos: Maximilian Mutzhas (mutzhas.com)

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02 The rear elevation to the east opens onto the courtyard and garden house with green roof





03 Offices on the upper floor with earth building boards and various surfaces



04 Earth building board walls, softwood fibreboard ceilings, clay plaster and lime paint



05 Seminar and consulting room on the ground floor with clay plaster walls



06 Bedroom in the allergy-friendly apartment with clay plaster and green earth-based paint



07 Seating near the pellet heating, oiled solid wood flooring and natural furniture



08 Clay finishing plaster with straw additive visible in the surface structure