

HEALTHY BUILDING NETWORK

BEST PRACTICE PROJECT: NEW KREISARCHIV VIERSEN

# HEALTHY DESIGN

## Situation

- Climate change
  - Paris 1.5°C
  - 40 % CO<sub>2</sub>
- Waste of resources in the building sector
  - 50 % waste
- Unhealthy materials in buildings
  - diseases

## Task

- New archive
  - Secure storage for the archive records
    - Air conditioning
    - Fire protection
    - Occupational health and safety
    - Protection against theft
  - Good workplaces
  - Optimised processes and procedures
  - Positive public perception
  - Joint project of all municipalities in the Kreis Viersen
- Circular and sustainable
  - Resource-saving
  - Energy-saving
  - Durable
  - Healthy
- BIM
  - Integrated planning on the 3D model
  - Collision check
  - Retrievability of materials

## Solutions

- Architecture
  - Central magazine building,
    - 4-storey
    - No window
    - Berfes (Genius Logic)
    - Visible throughout the building, glass roof corridor

- perimeter building as protection
  - Lightweight construction
  - Glass facade for views in and out
  - All uses of daily life on one level
  - High quality of stay
  - Terrace
  - Natural garden design (biodiversity)
- Healthy materials
  - Wood
  - Mineral roof insulation (NaturePlus)
  - Clay
  - Clay tiles
- Dismountability
  - Screw connections
  - No gluing
  - Loose laying with ballast
  - Surfaces remain raw
  - Visible, open installation of pipes
  - Reinforced concrete prefabricated parts screwed
- Recyclable building materials
  - Wood
  - Foam glass
  - Aluminium
- Use of already recycled materials
  - Brick
  - Poured asphalt
  - Recycled glass wool
- Water protection
  - No pollutants in construction and operation
  - Green roof
  - Pond
- Building services
  - Renewable energy
    - Ice storage
    - Heat pumps
    - Power roof with Photovoltaic
  - Ventilation
    - Magazine and lecture room only
    - Simple pipe routing
    - Textile ducts (C2C)
  - Lighting

- Freely suspended and demountable
  - Energy-saving LED
- Flexibility
  - Ground floor statics without bracing walls
  - Partition walls can be dismantled
  - Extension possible

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