



City Conversion - Quartier Normand - Speyer

Basic Building Information



Aerial image 1997

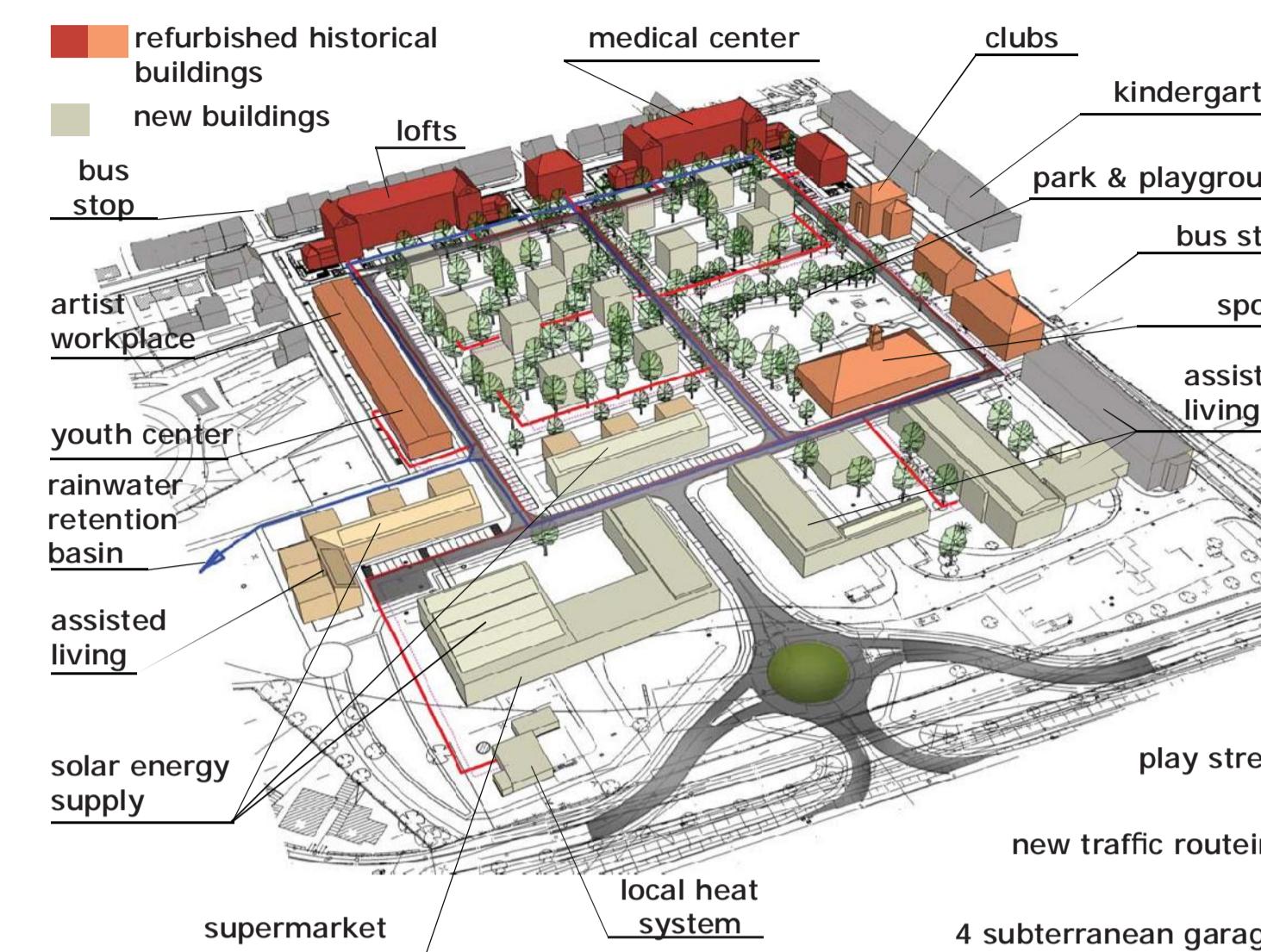
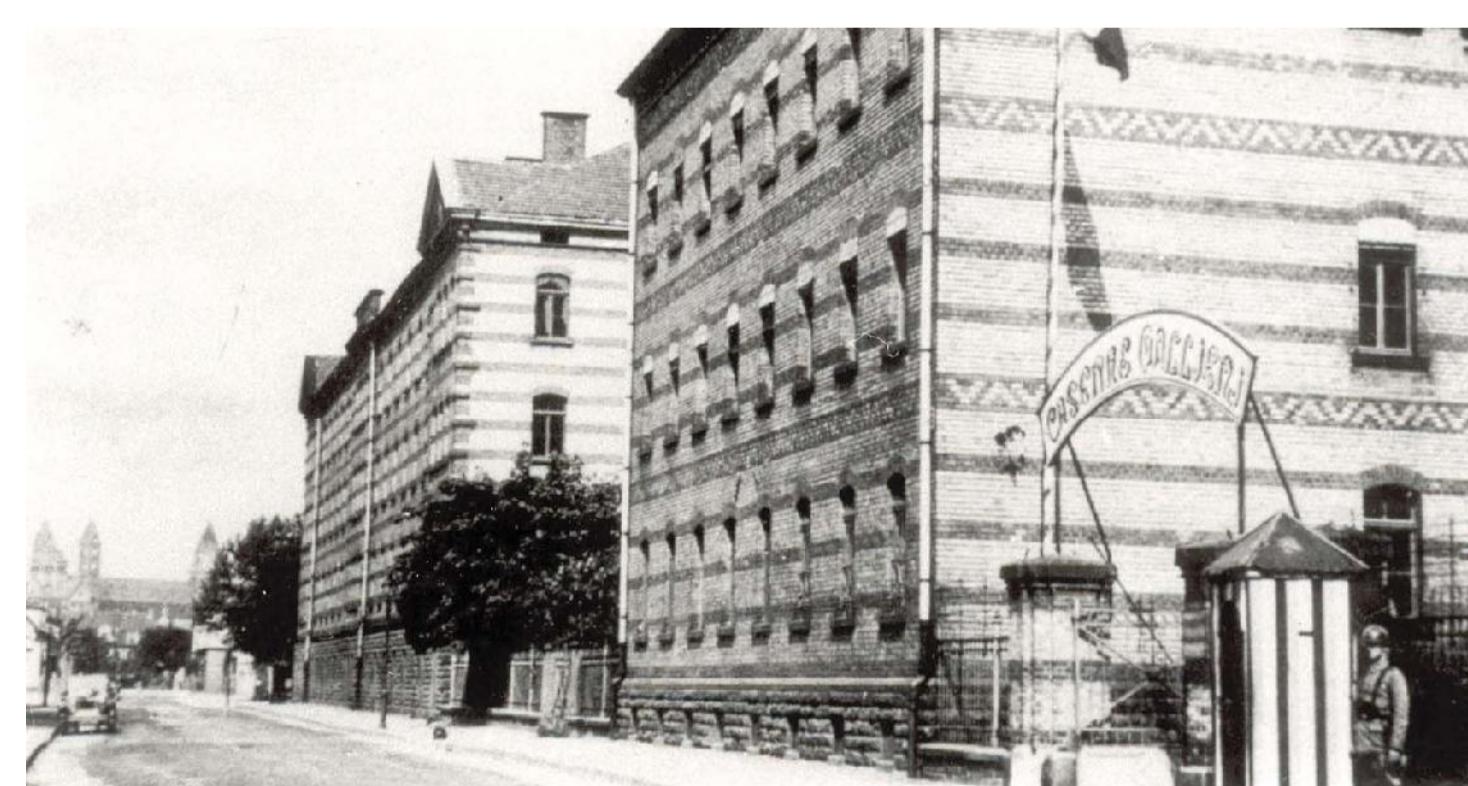
Rediscovering the city

The charm and appeal of downtown districts in European cities come from the historical structures that have evolved over the time. As a result of structural change, new city conversion areas are increasingly emerging in Europe.

Inspired by the Past Built for the Future!

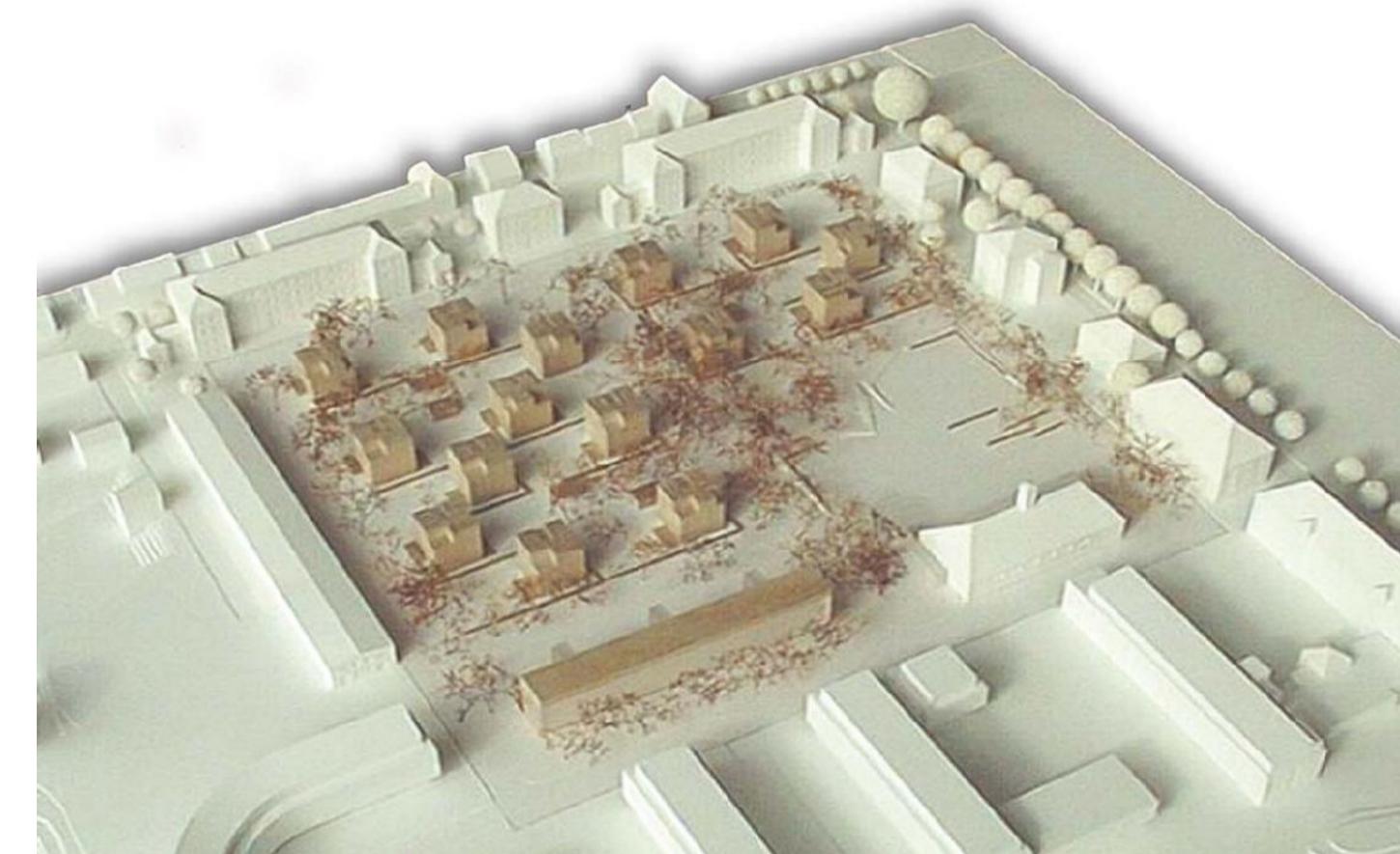
The former military area has been reorganized to a new residential area, offering an excellent quality of life. The Pioneer Barracks were built in 1888. Two housing units, a post office, a guard buliding and an officer's mess framed the parade ground. French forces were stationed there and left Speyer in 1997, freeing up a formerly closed section of the city center.

In 2003/2004, the city of Speyer sold the historic buildings to Osika GmbH for premium renovation.



Rethinking the City

The sustainable, future-oriented renovation allows to implement flexible residential concepts and transforms barracks into a lively city district.



Model 2003



Initiator / Client:

Location:

Building Cost:

Gross Floor Area:
Construction Period:

Units:

Contact:

info@osika.de
www.osika.de

Jakob-Binder-Strasse 16
67063 Ludwigshafen / Germany
fon 0049 (0) 621 59503 - 40
fax 0049 (0) 621 59503 - 50

Cross Generation Living

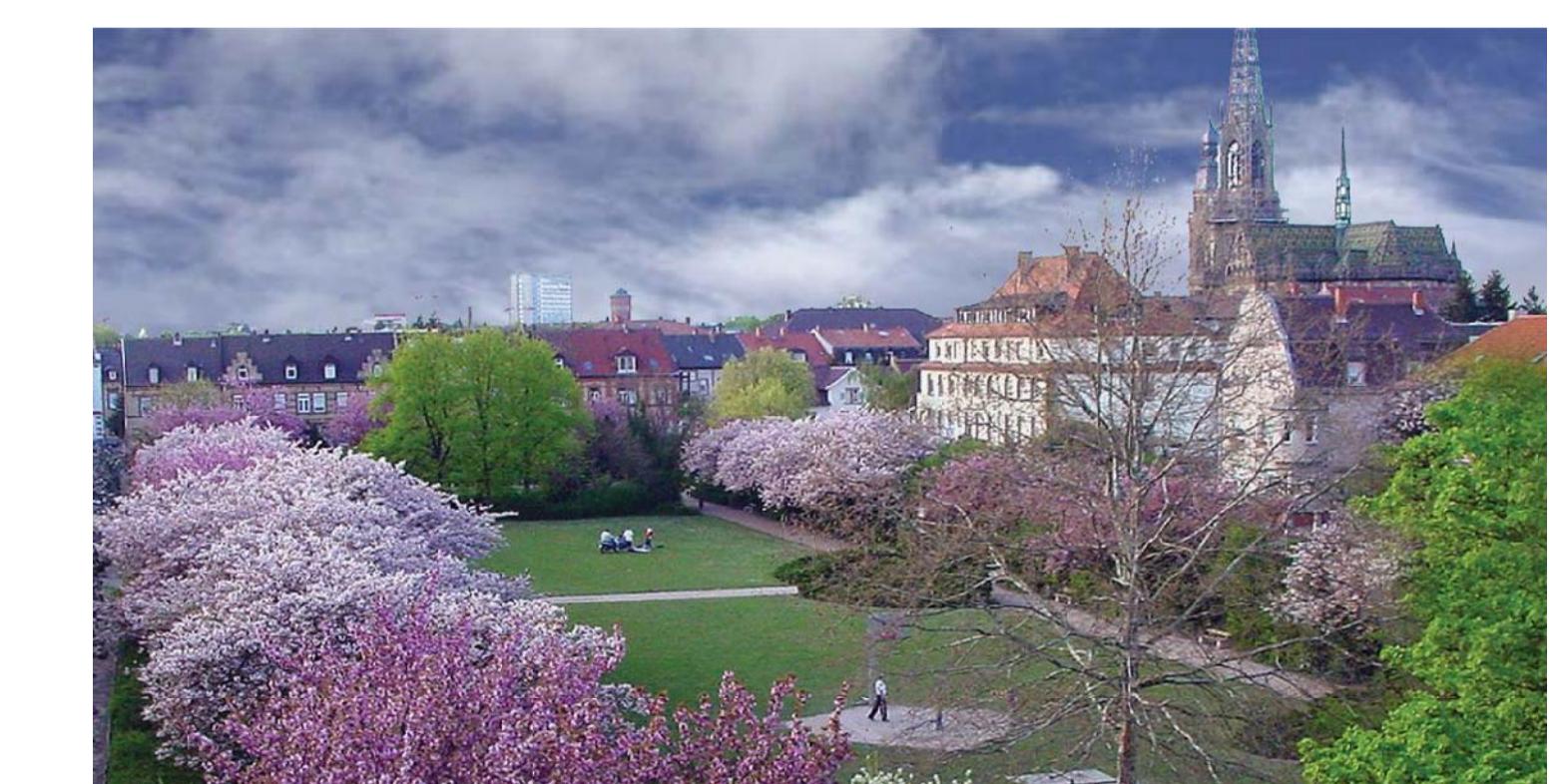
The aim of this project is to achieve sustainable district development taking into account demographic development that is socially open, spans generations, is committed to cultural heritage, networks various urban areas and opens up public spaces.

Integration into Urban Context

The quality of any given building certainly depends on its surroundings. Based on the quality of the grounds around the Quartier Normand life literally begins on the street.

Built Architecture as a Resource

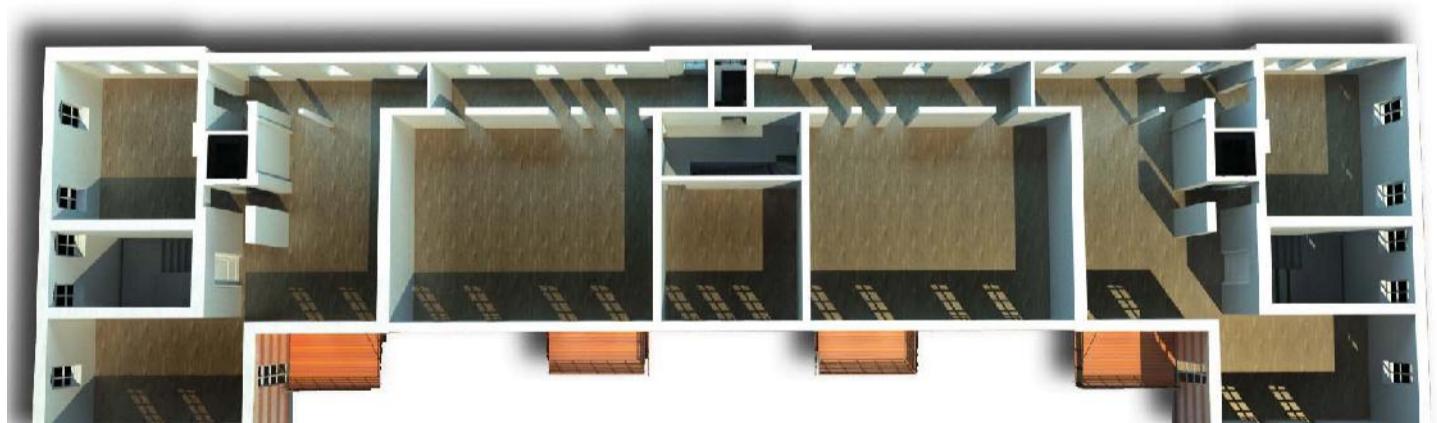
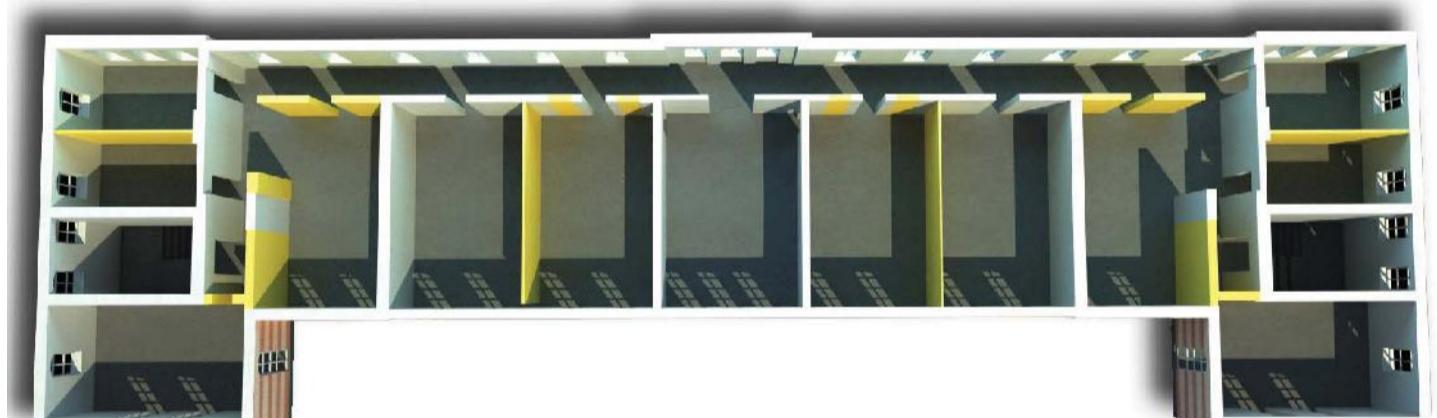
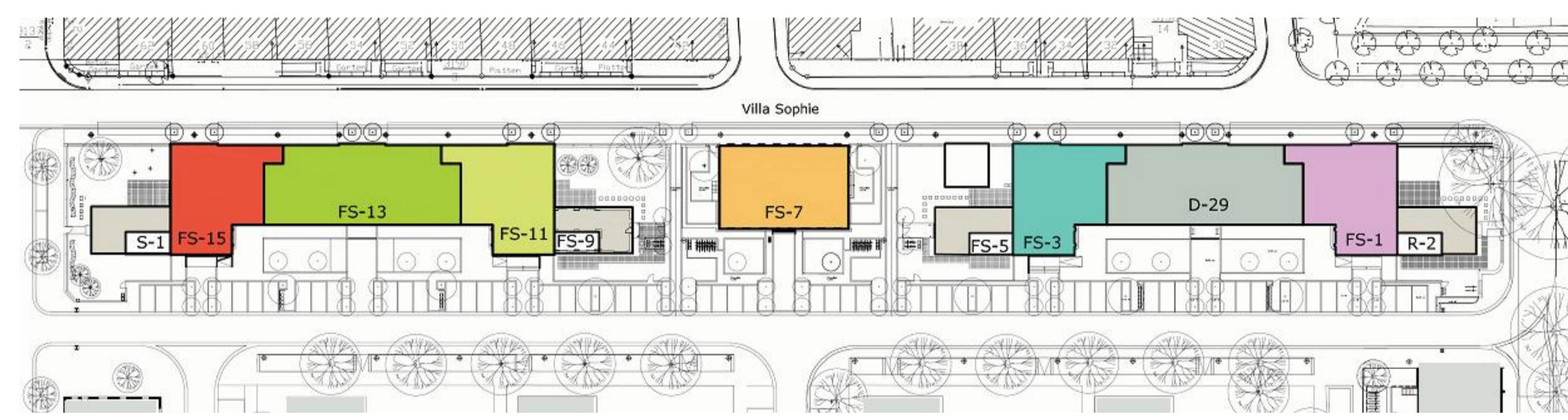
The historical buiding ensemble as a given frame shows regional diversity and identity. 8.500m² former military buildings used as flats for soldiers and officers' bureaus have been refurbished. This area in the center of the town was isolated for 110 years.





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Building Potential/ Actual Performance



Integrated Design

All owners were involved in designing their floor plans. Diverse supplies were inserted, so noone had to use the same spot for bathroom, kitchen etc. Overall the structural reinforcement gave the opportunity for creating individual living spaces. The flats can be devided into two units with small effort and costs.

Inside-Outside Heritage against Modern Living?

There is a conclusion with the cultural heritage and the renovation to future-oriented apartments. Facing to the city the buildings represent their well-known appearance but now clean and open. Inside the quarter large balconies, roof extention, large french-doors open the facade and cut the monotony.

Appreciated Living - Suitable for Everyone

Entrances and apartments are barrier-free so everyone young or elder people, families and singles found their way to Speyer. As alternative to live in the open countryside younger people decided to stay in the urban area with new living concepts. Elder people decided to return downtown.



Utilization Mix: habitation & Medical Center



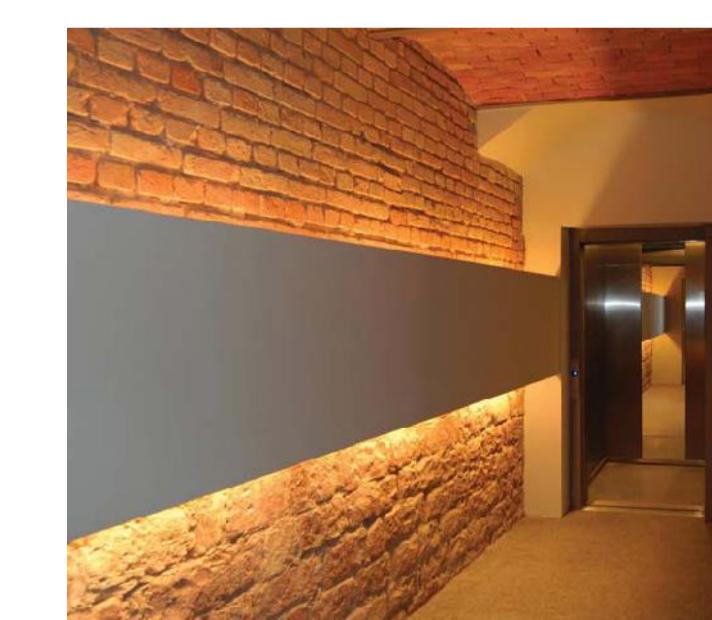
The exterior facilities, barrier-free entryways, stairwells, elevators and inner courtyards welcome all visitors. Living and working in a historical ambience means to maintain the existing architectural culture and create new residential designs through sustainable, future-oriented renovation and utmost flexibility.



Measures

- division into manageable owner communities (House-in-house principle)
- addition of individual free areas for each unit
- various housing offers for different user groups
- development of individual layouts design from one-room apartments to loft apartments
- combined commercial and residential use
- sophisticated outdoor spaces are integral part of project

By this way, these new "old" parts of the city have not only been sustainable renovated and developed for their own benefit, but are additionally setting an example that is being followed in neighbouring districts.

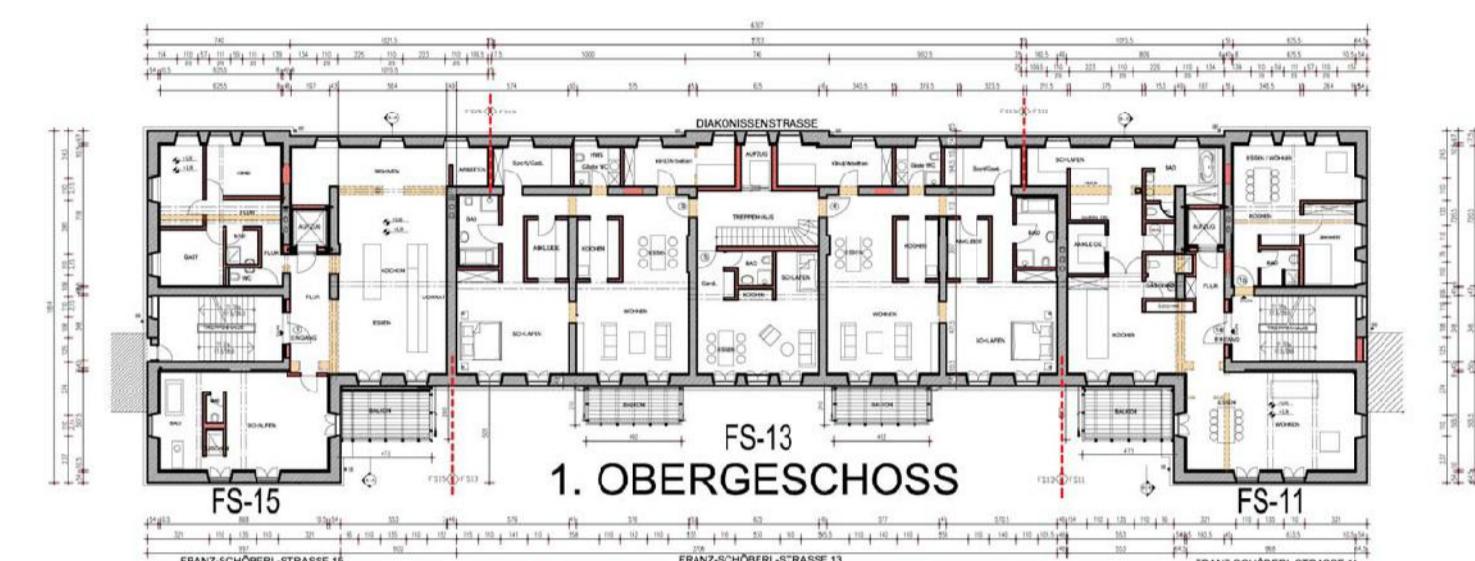




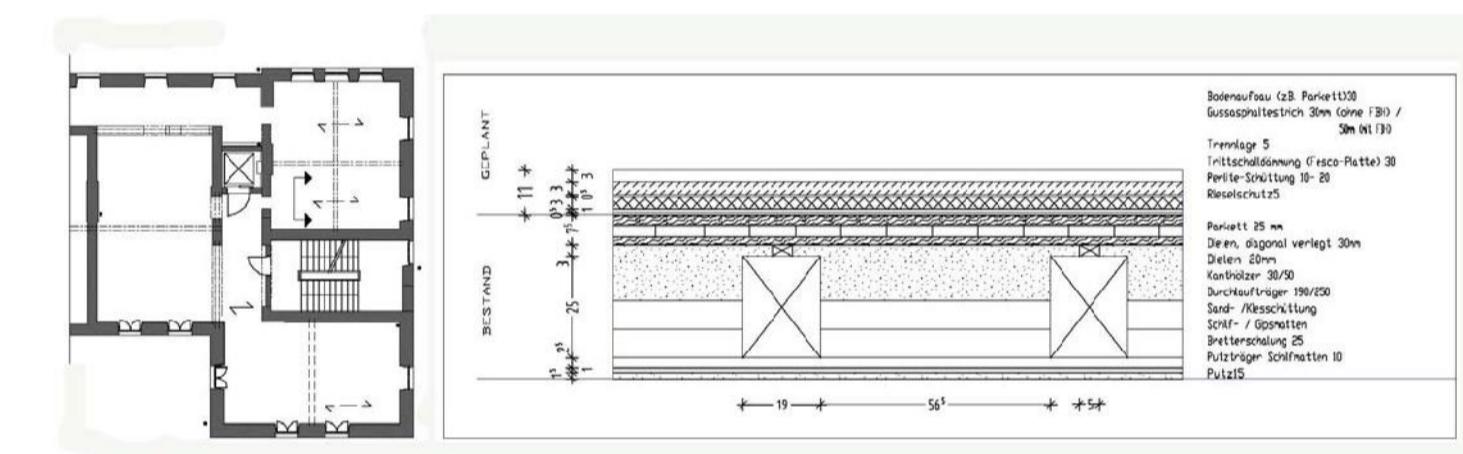
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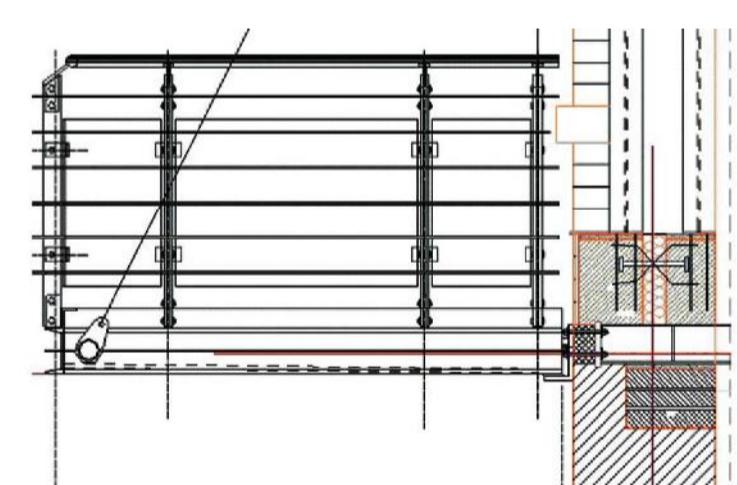
Frontal view of Franz-Schöberl-Street



First floor



Special floor construction - sound insulation



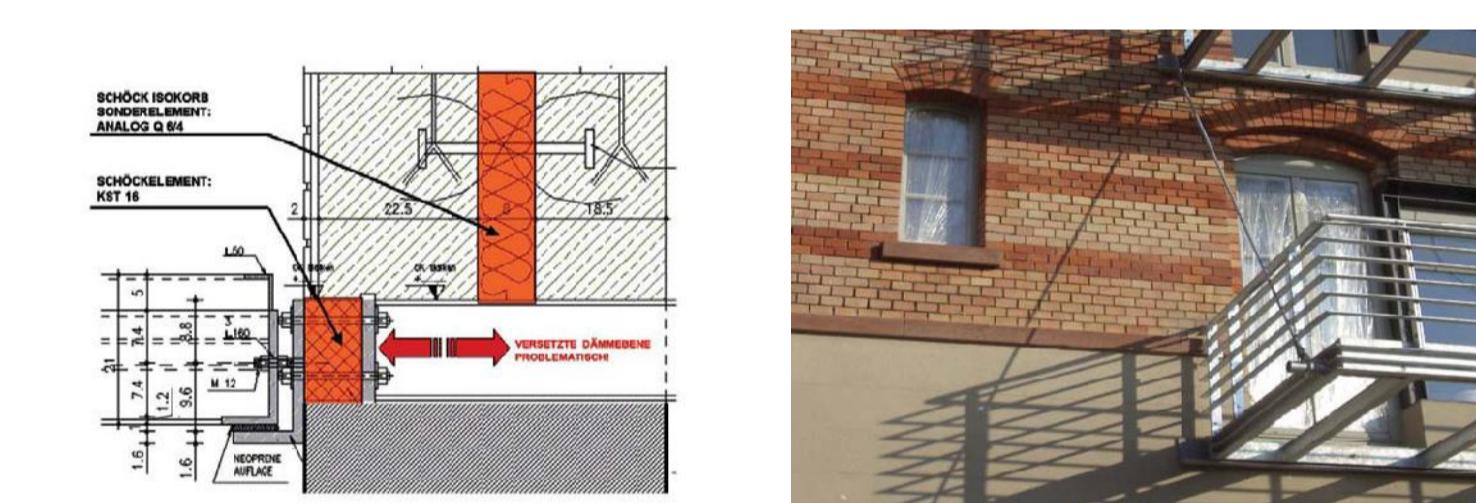
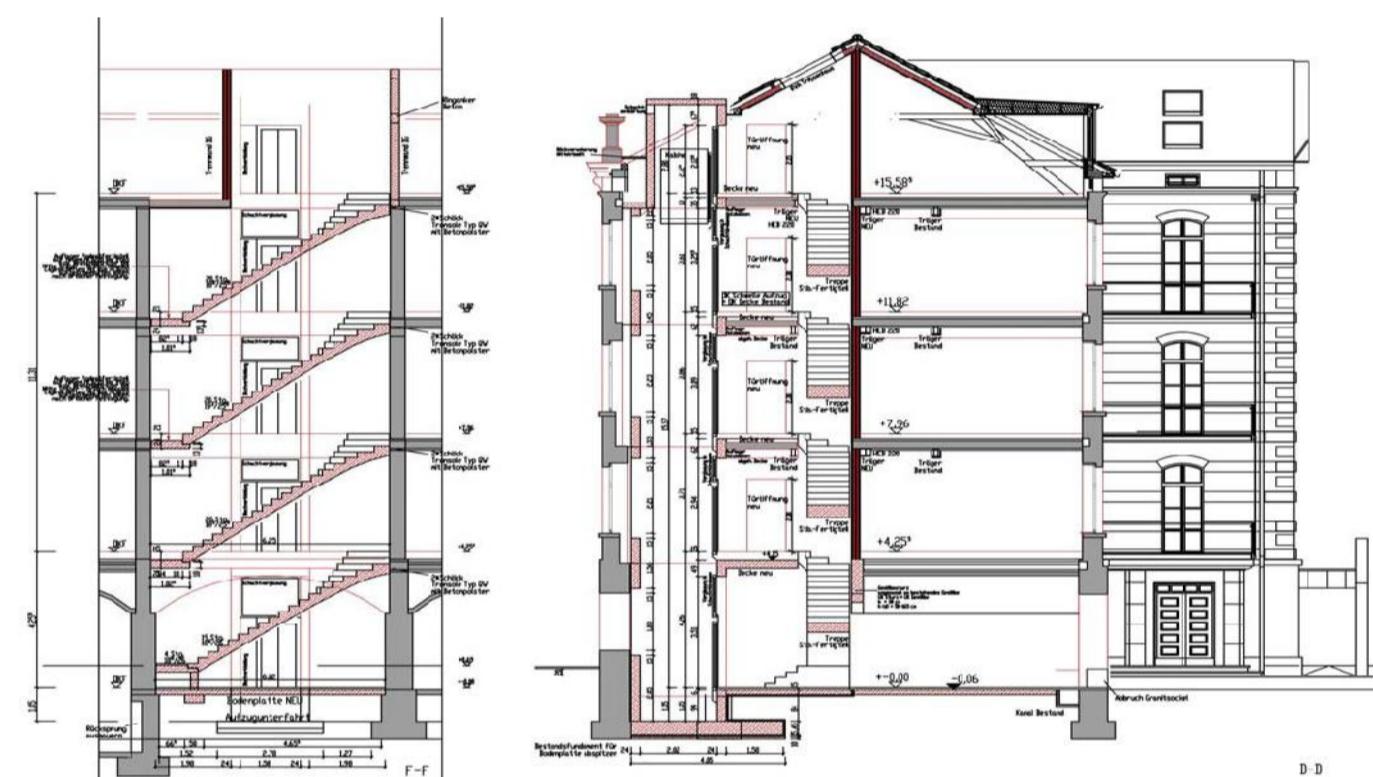
Suspended balconies with construction elements, avoiding thermal bridges.



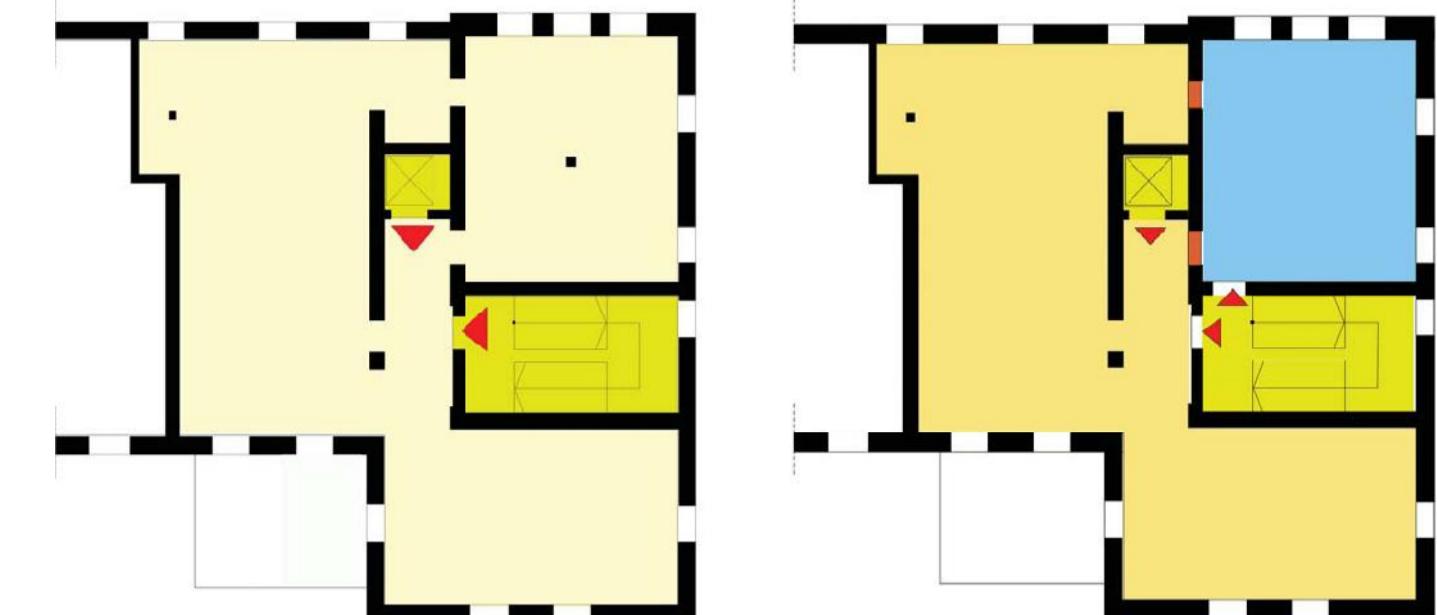
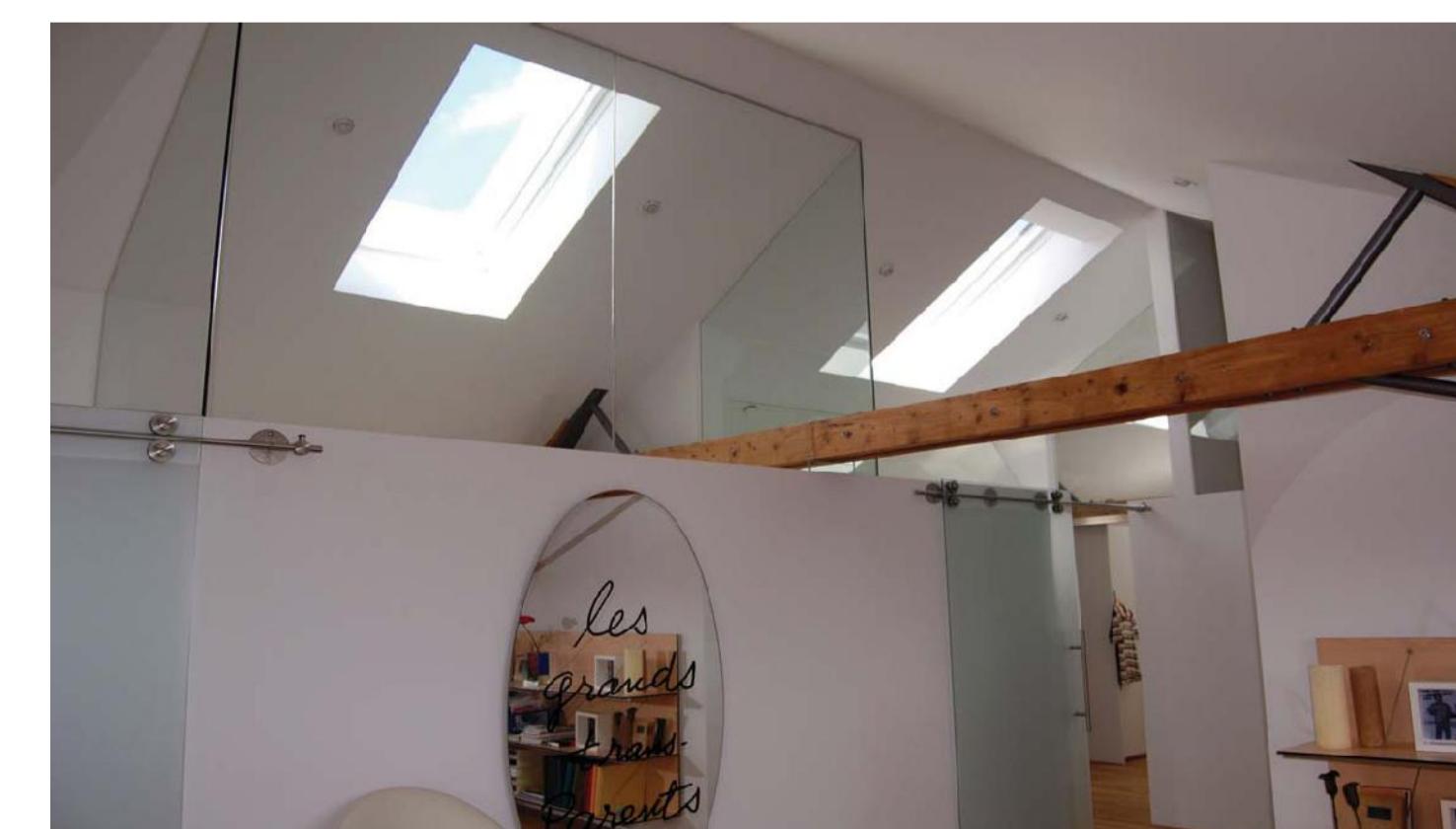
Utilization Diversity

Each of the two large buildings were divided into 5 self-contained units with own entrances and stairways, elevators, HVAC, etc. For better management these units now represent 5 independent condominium parties with only a few participants.

Beside the so called "loft-apartments" starting at about 120 m² a variety of flats measuring 90-110 m² and smaller apartments of 45 m² have been created. The abandonment of floor plan and size determination provided highest flexibility in design for the residents. They were able to adjust the units to their needs. That is why each floor plan is individual and the loft sizes can be developed between 120 m² up to 500 m².



"Passive house" element balcony suspension



The 190m² apartment can be divided into 2 units (145m² / 45m²). This division was already prepared in the construction phase and can be accomplished by each owner with two low-cost measures.



Final plan - ventilation heat recovery





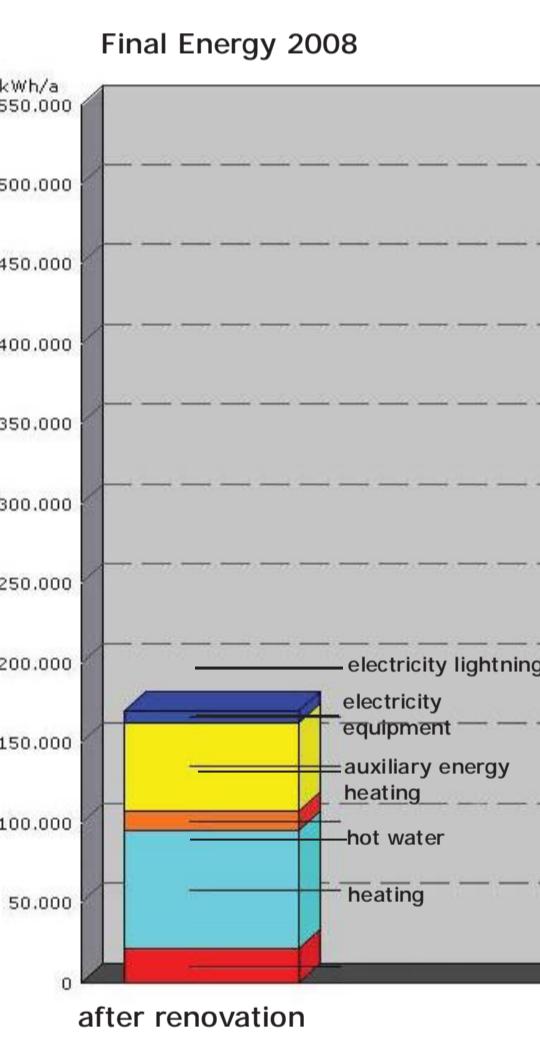
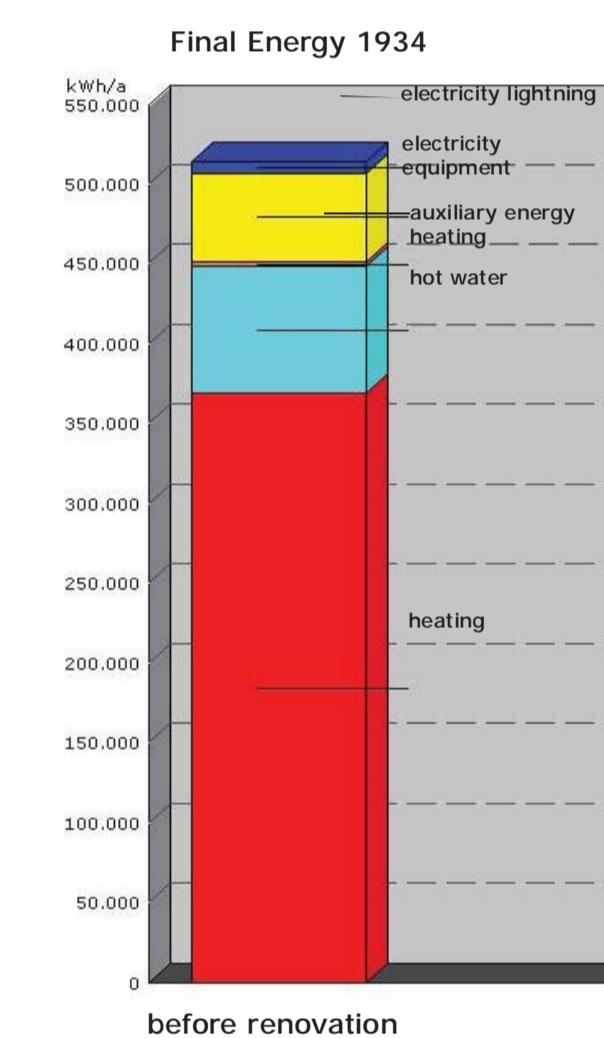
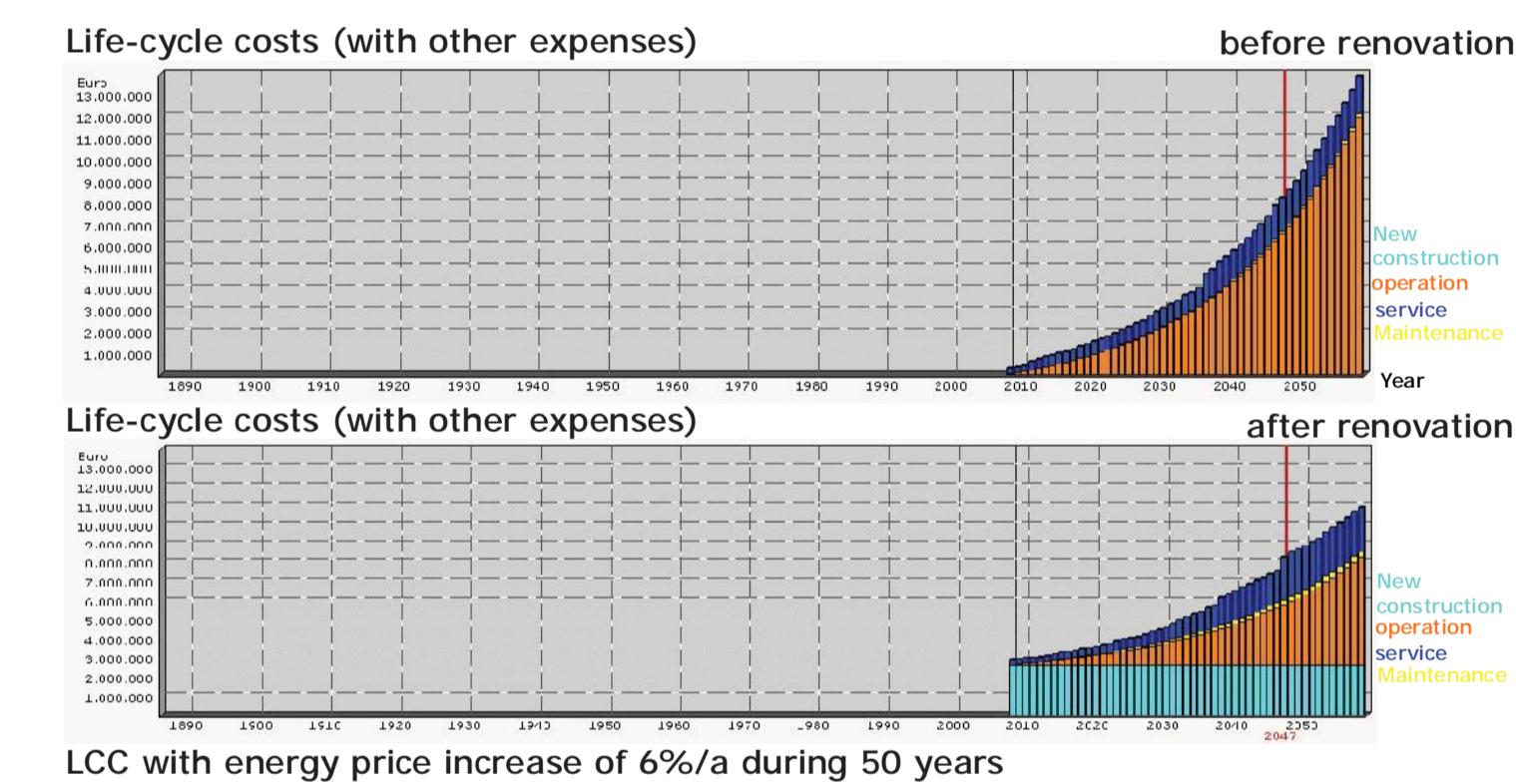
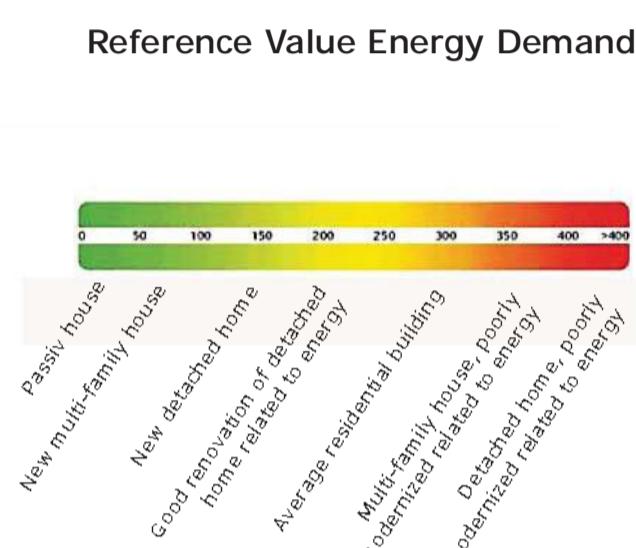
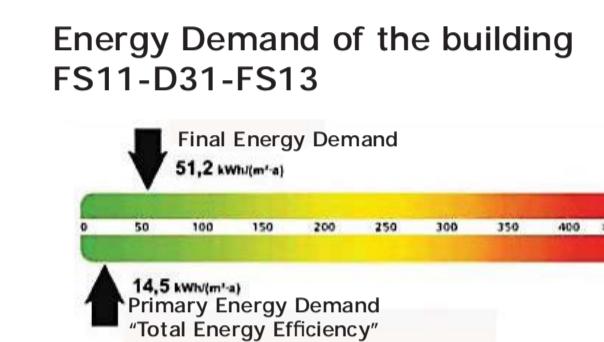
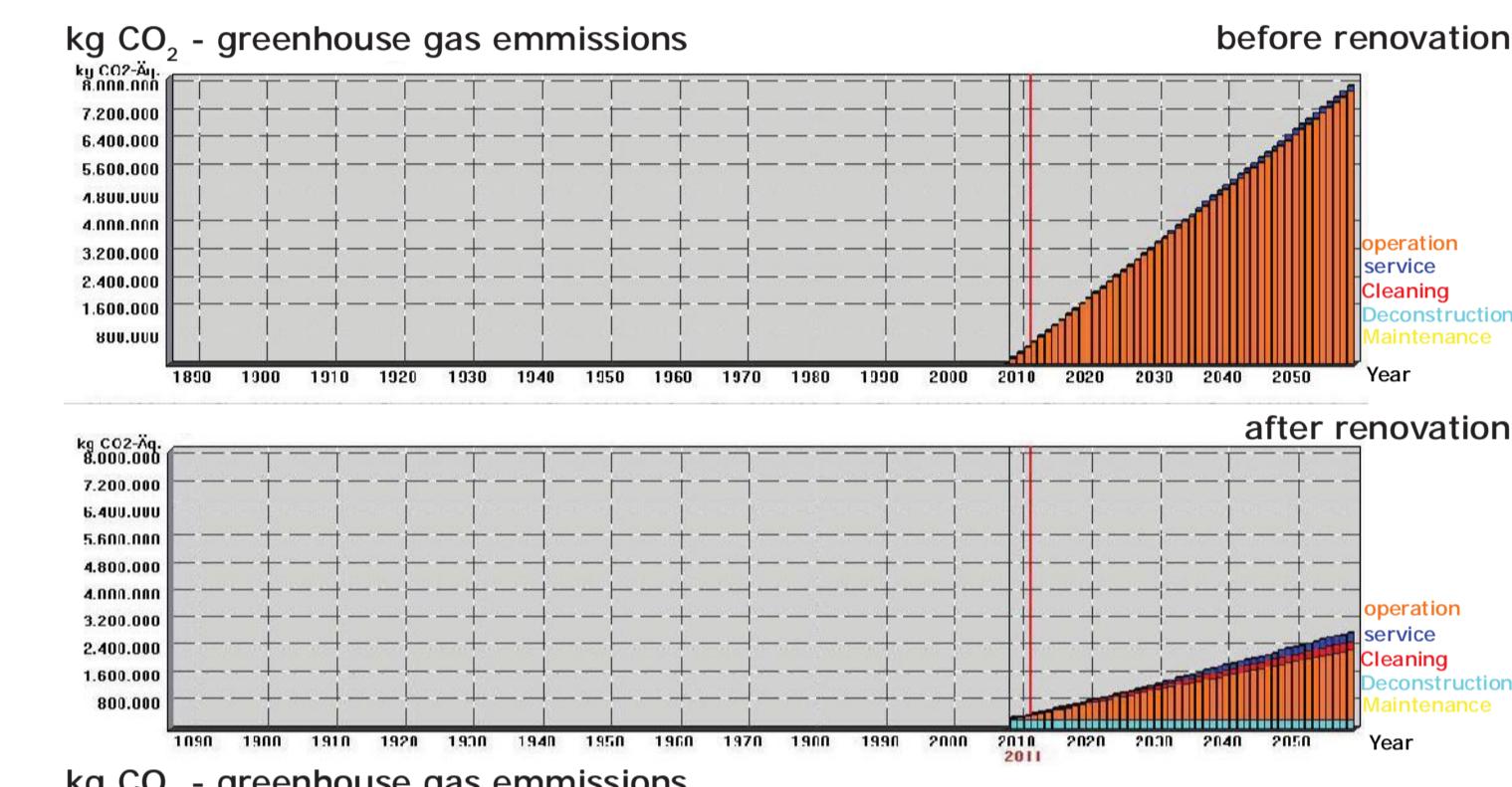
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Highlights of Assessment Results

Summary of Key Performance Indicators (KPI)

A	Primary Energy of Non Renewable Energy Sources	41.00 [kWh/m ² GFA]
B	Final Energy / Primary Energy of Renewable Energy Sources	21.18 [kWh/m ² GFA]
C	Total Energy, (A+B) annual data	X predicted □ monitored
D	CO ₂ Emissions (CO ₂ equivalent)	62.25 [kWh/m ² GFA]
E	Potable Water Demand/Consumption, annual data	5.57 [kg/m ² GFA]
F	Construction Cost, price level 2007	579.48 [l/m ² GFA]
G	Operating Costs, annual, price level 2007	1,300 [EUR/m ² GFA]
		3.28 [EUR/m ² GFA]

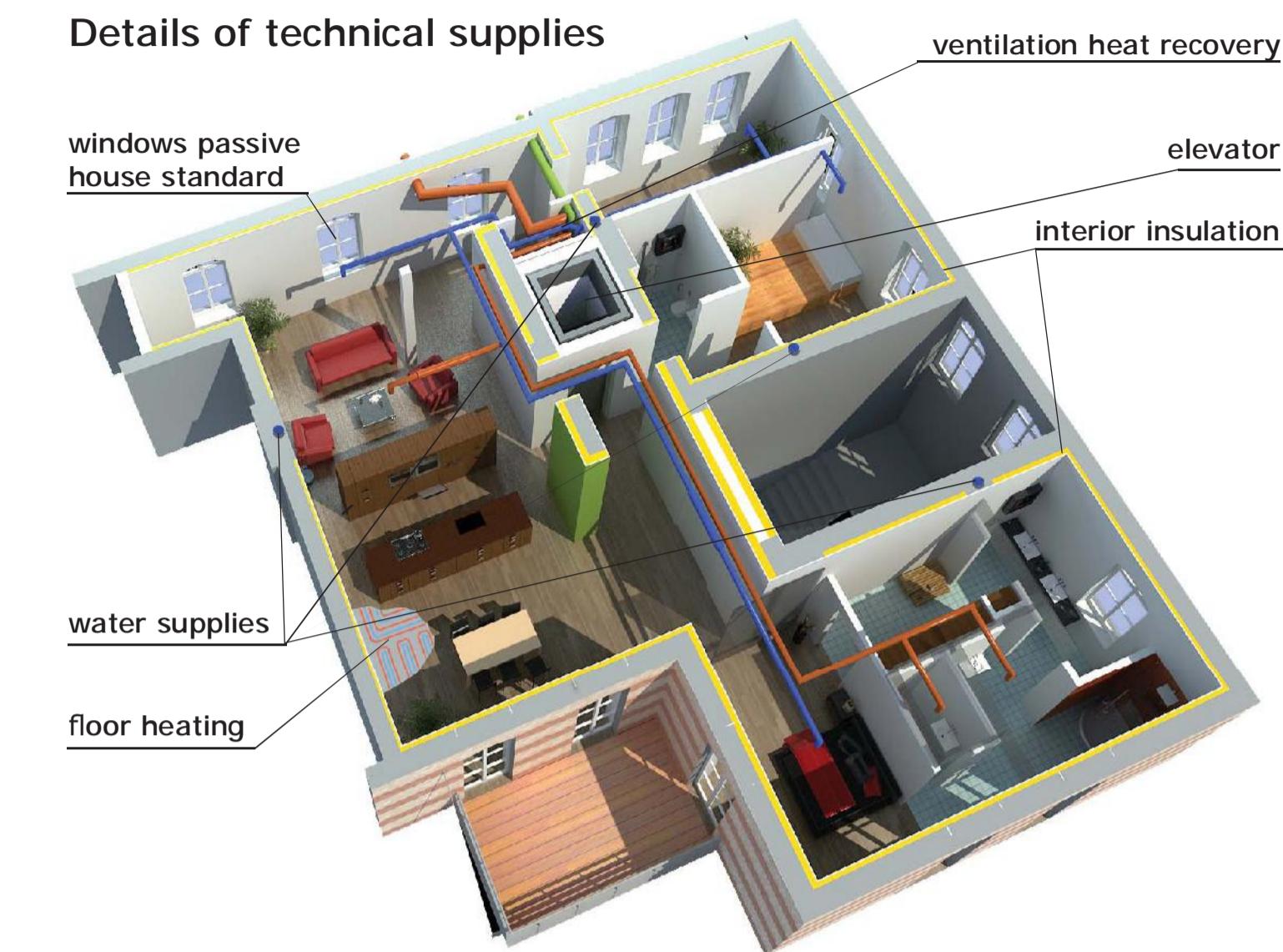
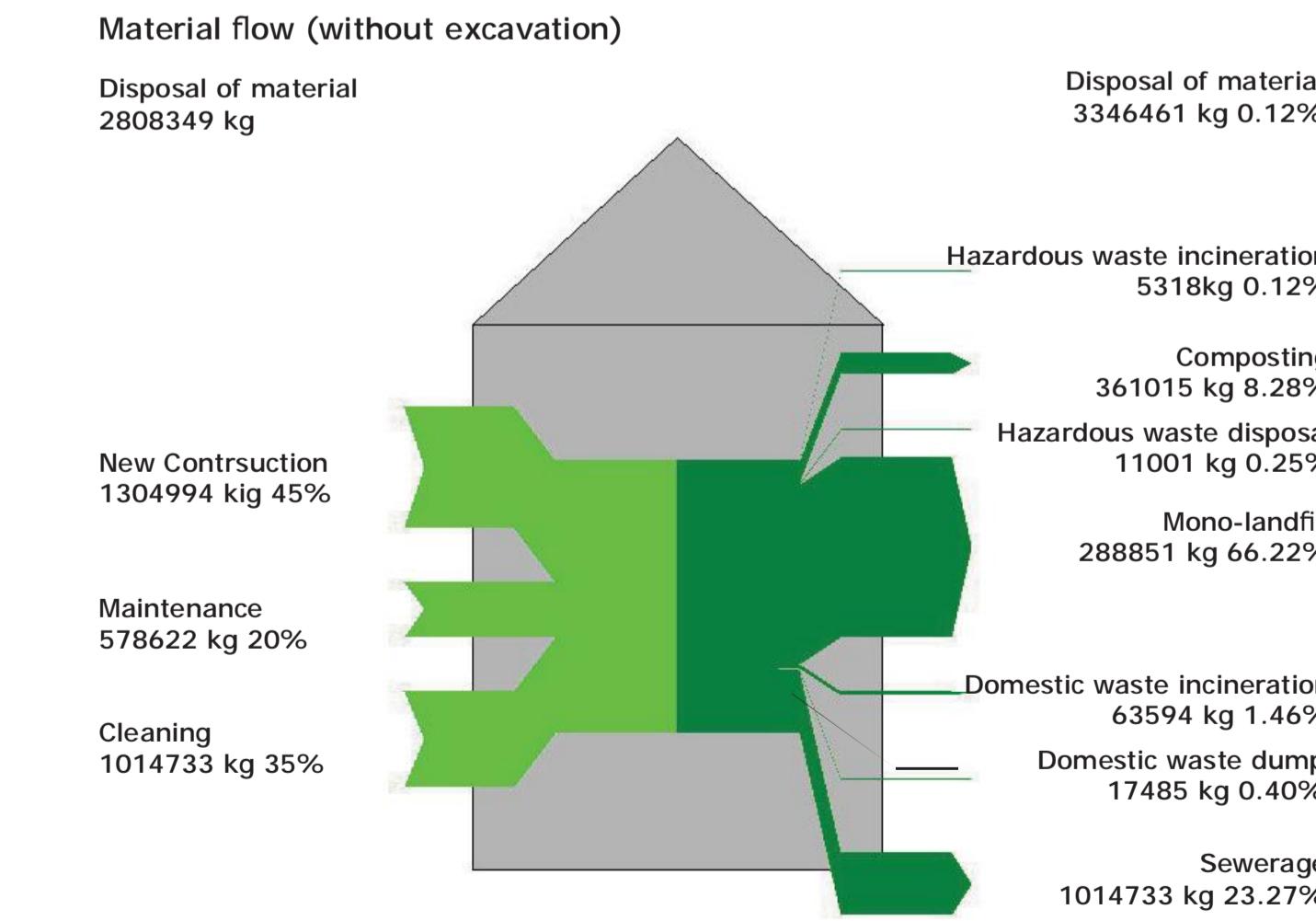
Ground Floor Area = GFA



CO₂ neutral heat supply.
Neutral heat supply only biomass and solar energy.
A single local cogeneration plant supplies the whole Quartier Normand.



- interior insulation (walls 100mm and roof 240mm)
- new fire prevention and noise insulation on ceilings / floors
- Utilization of "passive house" elements.



Ventilation System

- decentralized ventilation with 90% heat recovery managed by each owner himself.
- extra ventilation for bathrooms and toilets
- exhaust air for the kitchen

Materials

