



after refurbishment



before refurbishment

GENERAL INFORMATION	
Building owner	Gesellschaft für Bauen und Wohnen Hannover mbG (GBH), association for construction and living in Hannover
Address	Beuthener Straße 25–31, Hannover-Mittelfeld
Number of dwellings	24 social housing units (before and after refurbishment)
Number of floors	3
Average size of the dwellings	dwellings with 3 rooms, floor area of about 66 m ² (before and after refurbishment)
Total heated floor area	1,592 m ² (before and after refurbishment)
Year of construction	1957
Year of refurbishment	2004/2005
Has the refurbishment been carried out while the dwelling was occupied?	The complete refurbishment measures have been carried out while the flats were (partially) occupied.
Has an independent quality assurance been carried out?	
Total building costs	approx. 1,055,000 € total
Building costs concerning energy recovery	

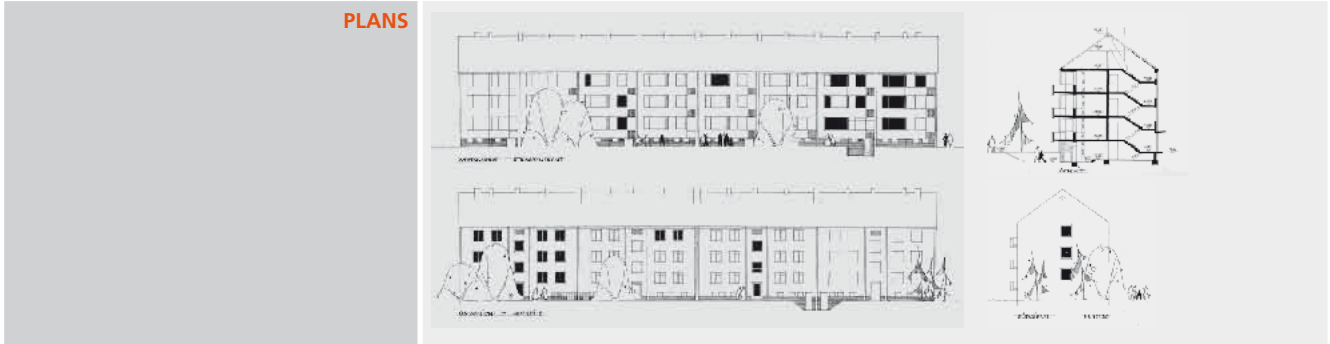


INITIAL SITUATION/LOCAL CONDITION	The whole complex of buildings (comprises 4 buildings) will be modernised. With refurbishment measures, an enhancement particularly in attractiveness of the buildings as well as of the single flat as such should be achieved.
TYPE OF REFURBISHMENT (MEASURES WHICH HAVE BEEN CARRIED OUT)	<ul style="list-style-type: none"> • The refurbishment was basically accomplished according to aspects of energy recovery. • The building envelope was provided with an external thermal insulation system, a new facade paint and a new roof covering. • In all of the flats bathrooms as well as kitchens will be modernised and updated. • A modification of the floor plans is not planned.
WHY HAVE THE MENTIONED MEASURES BEEN CARRIED OUT?	The object has not been refurbished yet. Taken refurbishment measures now aim at higher attractiveness of the building and its flats. Furthermore, the tenant's satisfaction should be improved.

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ENERGY RELATED ACTIVITIES			
Exterior components	<ul style="list-style-type: none"> • exterior thermal insulation system 		
Systems engineering	<ul style="list-style-type: none"> • heating system/heated surfaces/distribution • heating system/hot water tank • solar collection/collector • decentral ventilation 		
ENERGY RELATED INDICATORS			
	Initial situation	After refurbishment	Reduction
Energy performance		119.25 kWh/m ² a (average)	
Energy consumption		209,530 kWh/a	
CO ₂ -emission			
Heating system		central condensing boiler	
DHW-system		central heating of hot tap water (in each building)	
Monitoring system	yes, quality assurance is accomplished by collections of data over a period of 2 years after refurbishment		
Regional energy costs			

PROMOTION	
SUBSIDIES	
STATEMENT	Margret Hornbostel, GBH representative: A refurbishment of occupied flats always makes great demands on planner, performer and tenant. It can only successfully be achieved with careful planning together with optimised construction procedures.
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