



**Case study building - Properties I** Date: 14.06.2007  
Name: Rene Hummer



Registration code

Country

Period of construction

Standard

Diffusion of building type 
 Please note that the basic renovation unit (building or building part) that will be renovated should be described. The repetition of renovation units is acquired under "Building size".

**Basic renovation unit**

Detached

Attached

Integrated

Corner building

**Building shape**

Rectangular

Square

Structured

Irregular

**Floor plan**

Floor plan layout

Building structure

Frame construction

Panel construction

Partially massive constr.

Massive construction

**Apartment access**

Periferal staircase, double flight

Periferal staircase, single flight

Central staircase

Access gallery, internal stair

Access gallery, external stair(s)

Elevator

**Roof**

Flat roof  No attic / empty

Low slope roof  Attic space

Gable roof  Living space

Hipped roof  Roof terrasse

Dormers  Canopy

Roof construction

Roofing material

**Basement**

No basement

Partial basement

Full basement

Basement partially underground

Basement partially or fully heated

Crawl space

## Case study building - Properties II

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### Building size

Number of blocks		3
Number of staircases per block		1
Number of floors		4
Typical room height		m 2,6
Length/width	L m 29,0	W m 12,0
Façade/volume ratio		0,4

### Apartment size

	Number	Rooms	Bath	m2
Appartments	24	3,0	1	71
Appartments	24	3,0	1	64
Appartments	0	0,0	0	0
Total (all blocks)	48	6	2	135

### Façades

Façade construction	masonry
Façade finish	plaster

### Windows

	% of façade	U-value	U-value	Sun-shading
South	10%	W/(m2K)	2,6	<input checked="" type="checkbox"/>
West	30%	W/(m2K)	2,6	<input checked="" type="checkbox"/>
North	10%	W/(m2K)	2,6	<input checked="" type="checkbox"/>
East	30%	W/(m2K)	2,6	<input checked="" type="checkbox"/>

#### Dominant window types

Front façade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Back façade	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### Floor slabs

Top floor slab	wowden beam slab
Standard floor slabs	hollow brick slab

### Balconies

<input type="checkbox"/>	<input type="radio"/> none		<input checked="" type="radio"/> regular
<input type="checkbox"/>	<input type="radio"/> integrated		<input type="radio"/> irregular
<input type="checkbox"/>	<input type="radio"/> partially exposed	<input checked="" type="checkbox"/> thermal bridge	
<input type="checkbox"/>	<input type="radio"/> exposed		<input checked="" type="radio"/> "hanging"
<input type="checkbox"/>	<input type="radio"/> full length		<input type="radio"/> supported

### Heating

- Central heating, radiator heating
- Central heating, floor heating
- Central air heating
- Individual apartment heating
- Individual room heating (electric)
- Individual room heating (oil / gas / wood / coal)

### Ventilation

- None, natural ventilation only
- Exhaust air system, natural (stack ventilation)
- Exhaust air system, mechanical (bathrooms)
- Exhaust air system, mechanical (kitchen)
- Exhaust air, mechanical, bath and kitchen
- Mechanical ventilation (supply/exhaust airtr)

### Hot water

- Central hot water, single pipe system
- Central hot water, circulation pipe system
- Individual hot water tanks (electric)

- Individual boilers (electric)
- Individual boilers (gas)
- Central solar system



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## Case study building - Urban context



Address

Rent

### Orientation

No spec. orientation  
 N-S  NW-SE  
 NE-SW  E-W

### Urban situation

Detached building in inhomogeneous neighbourhood  
 Detached building in homogeneous neighbourhood  
 Block development in homogeneous neighbourhood

### View

Front / Back

Flat  Top view only  
 Slope  Good view  
 Slope  Green Garden view  
 Slope  No view

### Neighbourhood

Public transportation   
 Shops, services, centre   
 Play grounds, sport   
 Schools

### Environment

Quality of neighbourhood   
 Air pollution, emissions   
 Outdoor noise level



**Case study buildings - Renovation needs / options**

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**General information on retrofit situation**

Head demand before retrofit HWB=184 kWh/m<sup>2</sup>a  
 (calculated via PHPP)

**Façade options**

- Compact insulation
- Blow in fibres
- Ventilated insulation
- Prefab module

- Living room extension possible
- Kitchen extension possible
- Bath room extension possible
- New, separate balconies possible
- New elevator (external) possible
- New elevator (internal) possible

**Roof options and additions**

- Roof panels
- Flat roof panels
- Attic space module
- Attic space module

- With canopy
- Without canopy
- Dormers
- Access to attic / roof level
- Roof terrasse

**Actual state of building components**

- Walls/ceilings used up
- Floors used up
- Windows used up /untight
- Façade used up
- Roof used up

**Actual state of installations**

- Piping system used up
- Electrical system old
- Ventilation used up
- Kitchen used
- Bathroom used

**Additional Renovation measures**

- Kitchen no renovation
- Bathroom no renovation
- Staircase(s) no renovation

- Living and bedrooms no renovation
- Windows no renovation
- Floorings no renovation