

Object name

**De Pinte, Semi detached passive retrofit****Belgium**

## Object description

For their home renovation, the owners bore in mind a healthy and energy efficient residence with lots of light and open spaces. Having conferred on this with their architect, they decided to renovate according to the passive standards, which implied a rather complex renovation of the existing building. The main volume was stripped down entirely and equipped with a new insulation shell. The storey was raised and subsequently provided with a roof structure. The existing annexes were completely demolished and replaced by a well-isolated and highly compact annex building. During the renovation the owners decided to position the bedroom on the first floor and maintain the original arrangement to the largest possible extent. By raising the storey, more room became available for the living areas. The owners' preference for renovation instead of the total demolition and reconstruction of the existing building is founded on three reasons: the favourable structure of the existing building, the economy of resources by preserving the existing structure and the reduced VAT rate of 6%.

## Fact sheet

Semi-detached house in De Pinte  
 Treated Floor Area 128 m<sup>2</sup>  
 Number of apartments -  
 Completion date 2008

**Energy standard [PHPP]**

Heat requirement / year 15 kWh/m<sup>2</sup>a  
 Heat load 11 W/m<sup>2</sup>  
 Primary energy requ. 67 kWh/m<sup>2</sup>a  
 Air-tightness (n<sub>50</sub>-value) 0,56 1/h  
 Building type Timber frame

**U-value**

Exterior wall 0,13 W/m<sup>2</sup>K  
 Roof 0,12 W/m<sup>2</sup>K  
 Basement floor / Floor slab 0,09 W/m<sup>2</sup>K  
 Windows / average 0,76 W/m<sup>2</sup>K

**Specification ventilation system**

Central ventilation with heat recovery

**Heating installation**

Electrical heater on ventilation air

**Building owner**

Huyghe-Van Steeland

**Architect/Planner**

Alexis Versele

**Photo credits**

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