

Object name

**Single family house Hradčany****Czech Republic**

Object photo



Object description

The house is situated 30 km northwest from Brno in a new part of a village called Sunny Street. The whole area is designed within the aim of sustainable development.

The house is built of wooden timber-frame construction, based above the ground (with ventilated space) for better protection of a wood from the humidity. The interior is using the coloured earth plasters for higher accumulation of the heat and humidity. On the top of the house we can see green roof with several varieties of rock plants.

The house is designed as a barrier free bungalow with the small treated floor area, which at the end caused a little more energy consumption than required for passive house.



Fact sheet

SFH Hradčany u Tišnova  
Treated Floor Area **106 m<sup>2</sup>**  
Number of apartments **1**  
Completion date **2007**

**Energy standard [PHPP]**

Heat requirement / year **19 kWh/m<sup>2</sup>a**  
Heat load **14 W/m<sup>2</sup>**  
Primary energy requ. **108 kWh/m<sup>2</sup>a**  
Air-tightness (n<sub>50</sub>-value) **0,7 1/h**  
Building type **Timber construction**

**U-value**

Exterior wall **0,11 W/m<sup>2</sup>K**  
Roof **0,10 W/m<sup>2</sup>K**  
Basement floor /  
Floor slab **0,11 W/m<sup>2</sup>K**  
Windows / average **0,76 W/m<sup>2</sup>K**

**Specification ventilation system**

Central System

**Heating installation**

Biomass, solar collector

Construction costs **1200 Euro/m<sup>2</sup>****Building owner**

Miroslav Navrátil, fi. RIGI

**Architect/Planner**

Aleš Brotánek Design Studio

**Photo credits**

M. Navrátil