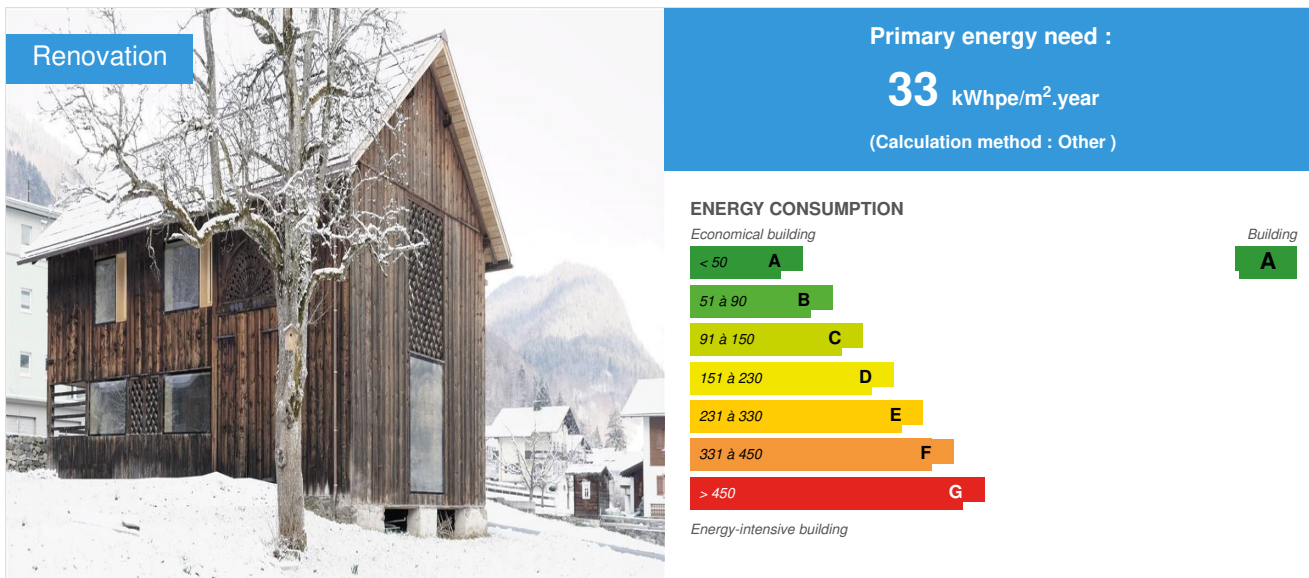


House Breuer, Tschagguns

by Tobias Hatt / 2021-04-01 12:04:31 / International / 1915 / EN



Building Type : Isolated or semi-detached house
Construction Year : 1900
Delivery year : 2015
Address 1 - street : Batloggstraße 36 6780 SCHRUNS/TSCHAGGUNS, Austria
Climate zone : [Cfc] Marine Cool Winter & summer- Mild with no dry season.

Net Floor Area : 160 m² NGF (de)
Construction/refurbishment cost : 400 000 €
Cost/m2 : 2500 €/m²

Proposed by :



General information

As part of the Alpine building culture, many agricultural buildings outside of the protection of historical monuments have a high identification character and, if they are in good structural condition, store CO₂ in their building materials in addition to expertise in historic building techniques.

According to an inscription above the main gate, Stable B is a good hundred years old, and parts of the building are probably even from the 18th century. The wooden cladding of the facade is most likely from 1914. The associated farmhouse was demolished at the beginning of the 1970s. The aim was to convert the farm building into a high-quality residential building.

In the process, the outer shell was supplemented by a few openings, which makes the new use of the building readable. The work on the original construction was carried out using old techniques wherever possible. Thus the plugged connections are again in this form. The outer wooden facade was preserved entirely.

[See more details about this project](#)

<https://www.hiberatlas.com/de/haus-breuer-tschagguns--2-109.html>

<https://stand-montafon.at/raum-region/montafoner-baukultur/verleihung-montafoner-baukultur-2017/haus-breuer-tschagguns>

Photo credit

Bernhard Breuer
MarCello Girardelli

Stakeholders

Contractor

Name : Architekt Bernhard Breuer
Contact : info@bernhardbreuer.com
<http://www.bernhardbreuer.com/wordpress/>

Construction Manager

Name : Architekt Bernhard Breuer

Building users opinion

The residents of the house have shut down the ventilation system because it was too loud for them. There were also draughts. The desired air quality of the building will now be achieved by shock ventilation in the morning.

Energy

Energy consumption

Primary energy need : 33,00 kWhpe/m².year
Primary energy need for standard building : 38,00 kWhpe/m².year
Calculation method : Other
Breakdown for energy consumption : Heating: 33; Hot water: 13; Looses: 19;
Initial consumption : 1 000,00 kWhpe/m².year

Envelope performance

Envelope U-Value : 0,29 W.m⁻².K⁻¹
More information :
Old Structure and facade used. Wood fibre (Steico flex) was used for the insulation.
Building Compactness Coefficient : 0,70

More information

The values above are the heating demand according to the Vorarlberg Energy Certificate. The initial consumption was zero due to the use as a stable.

Real final energy consumption

Final Energy : 65,00 kWhfe/m².year

Renewables & systems

Systems

Heating system :

- Low temperature floor heating
- Wood boiler
- Solar thermal

Hot water system :

- Solar Thermal
- Wood boiler

Cooling system :

- No cooling system

Ventilation system :

- Double flow heat exchanger

Renewable systems :

- Solar photovoltaic
- Wood boiler

Renewable energy production : 80,00 %

Environment

Urban environment

The stable building sits on the eaves about one meter below the nearby Zelfenstraße in a small hollow. The slender structure and the longitudinal gable lie in the fall line of the slightly sloping terrain. The natural slope is clearly visible on the bricked base on the north-west side of the building. Here the building still stands freely in the landscape thanks to the surrounding meadows. This quality is reflected in the restrained open space design, which largely dispenses with adjustments to the terrain and reduces planting in the area of the house to a minimum.

The bus stop is right in front of the door

Costs

Construction and exploitation costs

Total cost of the building : 400 000 €

Energy bill

Forecasted energy bill/year : 1 400,00 €

Real energy cost/m² : 8.75

Real energy cost/Dwelling : 1400

Health and comfort

Indoor Air quality

The residents of the house have shut down the ventilation system because it was too loud for them. There were also draughts. The desired air quality of the building will now be achieved by shock ventilation in the morning.

Comfort

Health & comfort :

The building is in a rather remote location, which means there is little disturbing outside noise. Due to the low noise level, the internal building services are more important. This was also one of the reasons why the ventilation system was switched off.

Carbon

GHG emissions

Building lifetime : 50,00 year(s)

Reasons for participating in the competition(s)

Low CO2 emissions:

The building avoids emissions during construction by utilizing old structures and the existing fabric. This means that fewer new building materials are used. There is no basement and therefore less reinforced concrete is used. Wood is used as the building material for the renovation part.

The building also consistently avoids CO2 emissions during operation. On the one hand, through high efficiency and good insulation of the building envelope, on the other hand, through the use of renewable energies in the form of biomass, solar thermal, PV system, but also a ventilation system with heat recovery.

Building candidate in the category



Low Carbon



POWERED BY Construction2log

