

# Single family house, Tafers

2013



The single-family house is located in a beautiful location with a view of the foothills of the Alps in Tafers. The quarter was planned by the architectural office hb architekten ag in Schmiten and realized entirely in wood.

## The project

A single-family house in a beautiful location with a view of the foothills of the Alps in Tafers, completely prefabricated in timber frame construction.

## The construction method

The EFH was completely prefabricated in timber frame construction. The flat roof consists of a beam layer, which has a span of 7m and is weighted with gravel. The ground floor/ground floor ceiling has a span of 6m and is designed as a box girder. The ceilings are planked at the bottom with a visible three-layer slab, which forms the finished ceiling at the same time. The exterior walls consist of a timber frame wall planked on both sides and clad on the outside with open larch sheathing. In the interior, Fermacell panels are installed, which were then plastered white.

## The challenge

The challenge lay in the large spans of the ceilings, which are extremely sensitive to vibrations. In the area of one bay window, no support could be installed in the corner of the building. Therefore, the loads were transferred to the columns via a large wooden beam that was installed in the wall on the upper floor. To further complicate matters, only a few walls were available to brace the building, so the wind loads were transferred via clearly defined wall plates.



East facade



West facade



Facade after 5 years



Facade view

### Construction Data

- 28 m<sup>3</sup> Wood share

### Services of Timbatec

- SIA phase 32 construction project
- Structural analysis and design
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- Works planning 3D and 2D
- Site supervision and site inspections

### Client

Family Aeby  
1712 Tafers

### Architect

hb architekten ag  
3185 Schmiten

### Timber construction engineer

Timbatec Holzbauingenieure Schweiz AG, Bern  
3012 Bern

### Timber construction contractor

Vonlanthen Holzbau  
3186 Schmiten