

# Addition of stories Rheinfeldenstrasse 12/14, Birsfelden

2010

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Ideas, requirements and implementations are not always easy to combine. But in some cases it succeeds!

## The project

The residential and commercial building at Rheinfelderstrasse 12/14 in Birsfelden consisted of 2 basement floors and 3 floors above ground. The existing building was now to be extended by a parapet floor in wooden element construction and four 5-room apartments were to be realized in the new attic. In addition, Minergie standard was to be achieved. Other hurdles that had to be overcome were the avoidance of cold bridges and the connections of the timber construction to the steel girders. The extensive installations also had to be integrated into the level of the steel girders.

## The construction

A layer of beams resting on the steel girders formed the supporting structure for the floor structure. The walls were made of timber frame construction. The roof elements were prefabricated as hollow box elements. In this case, screw-press bonding three-layer panels were glued to the ribs. A three-layer panel forms the structure for the canopy. Sloped insulation was laid over the entire roof, with a waterproofing layer with a green roof on top.

## The challenge

One challenge was the load transfer of the attic floor to the 2nd floor below. A steel girder grid was laid on the existing concrete floor to distribute the loads from the attic floor to the load-bearing columns and walls of the 2nd floor. This simplified the room layout on the attic floor.



Shell



Vordach



Window lintel



Beam position

### Construction Data

- Structural timber 68.7 m<sup>3</sup>
- Steel 24.2 t
- Roof area 478 m<sup>2</sup>
- Wall area 246 m<sup>2</sup>

### Services of Timbatec

- SIA phase 31 preliminary project
- Cost estimate
- 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

### Architect

Holbi 14 Architekten GmbH  
4051 Basel

### Client

Careal Holding Pension Fund  
8022 Zurich

### Timber construction contractors

Haudenschild Holzbau AG  
4704 Niederbipp

### Timber construction engineers

Timbatec Holzbauingenieure Schweiz AG, Thun  
3600 Thun