

Blümlimattweg 15, Thun

2021



At Blümlimattweg 15 in Thun, Switzerland's first apartment building with a basement made of wood with TS3 joints was built. The building is also the Living Lab of the DeepWood research project and has innovative approaches to building physics.

The Project

An apartment building full of innovations was built in Thun. No concrete or steel was used in the entire house with 5 residential units - not even in the basement. Cross-laminated timber panels lie on top of a 160 mm thick insulation board. Black insulation encases the wood for moisture protection. The interior walls are non-load-bearing; columns and the exterior walls support the cross-laminated timber floor slab. Thus, the basement is very flexible in use and can be used in many ways, thanks to the pleasant indoor climate due to the visible and tangible wood.

The house in Thun is also the living lab of the DeepWood research project together with the Lucerne University of Applied Sciences and Arts and the Bern University of Applied Sciences. With DeepWood, the planning methods Building Information Modeling (BIM) are being further developed.

The Construction

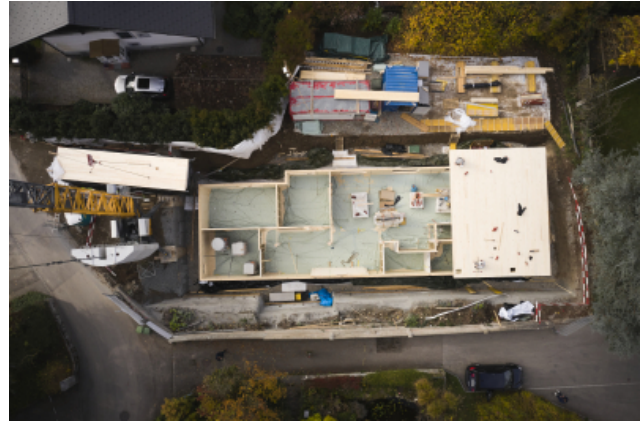
The basement is a solid timber structure made of cross laminated timber panels. TS3 joints allow the floor slabs without beams. The exterior walls in timber frame construction are optimally insulated, which makes it possible to dispense with a heating system. After all, there is no conventional heating system in this building. Instead, there is a warm air supply is available as a backup.

The Challenges

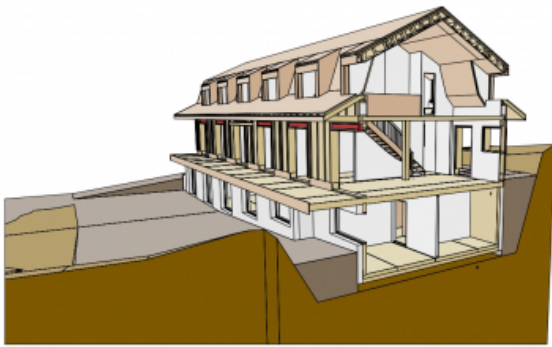
The Blümlimattweg was the first time a 45-degree joint was grouted on a construction project. TS3 only had experience with this from research projects. Another challenge of this project was the cold temperatures during grouting. For the first time, winter construction measures had to be developed and used. The joints were heated locally.



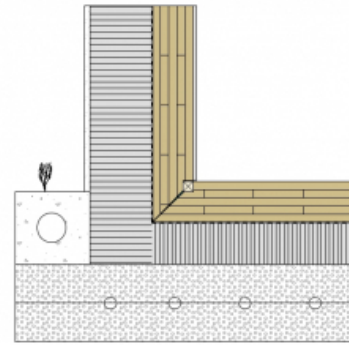
Wooden basement



View from above of the wooden basement



Section through building



Detail cellar from wood

Construction Data

- Number of floors: 3
- Gross floor area: 998 m²
- Glulam: 178 m³
- TS3 technology: 360 linear meters of joints

Architecture

HLS Architekten, Zürich

Building Owner

Yamanakako AG, Thun

Timber Construction Engineers

Timbatec Holzbauingenieure, Zürich

Timber Construction

Stuber Holzbau, Schüpfen

General Contractor

Stuber Holzbau, Schüpfen

Photographie

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