

New construction of Wühri Bridge, Horrenbach-Buchen

2017



The new wooden bridge connects the two Bernese villages of Horrenbach-Buchen and Teuffenthal near Thun and replaces an old concrete bridge. The new crossing is capable of carrying loads of up to 32 tons.

The project

The previous bridge over the Wühribach was already over 70 years old. The ravages of time had clearly taken their toll on the structure, and the concrete bridge had become dilapidated. For this reason, those responsible in the two communities of Horrenbach-Buchen and Teuffenthal decided to tear down the existing concrete structure and build a new bridge. At first, the communities did not agree on whether the bridge should be made of wood or solid construction. The decisive factor for the decision in favor of wood was the community of Horrenbach-Buchen, which is primarily dependent on the bridge. There, it was felt that for a place that has a lot of forest, a wooden bridge would also be a commitment to native wood.

The construction method

The requirements for the bridge over the Wühribach are high, as it has to withstand quite a lot of stress. Vehicles from forestry companies regularly transport tree trunks across the stream. In the immediate vicinity of the Wühri Bridge are a sawmill and other operations that are supplied every day by trucks weighing tons. The bridge is therefore approved for 32 tons. The wooden bridge, for which Timbatec was responsible for the structural engineering, has a span of 13.5 meters, the clearance gauge is 4 meters wide and 4.50 meters high. The side walls were designed as trusses. The clearance gauge of the bridge, which is quite large, defined the height of the structure. In contrast to the old concrete bridge, the new bridge is covered. On the one hand, this has static reasons, on the other hand, the roof protects the wooden bridge structure from the effects of weather and thus ensures a long service life of the structure.



All wood: the flooring of the bridge is made of oak planks



Instead of a concrete bridge, there is a new wooden bridge in the Bernese Forest



In detail: the supporting structure of the new wooden bridge



Half timber node: two truss structures converge here

Construction Data

- Cross laminated timber 32 m³
- Structural timber C24 1.7 m³
- Oak planks for the road surface 53 m²

Construction costs

- BKP 1-9: 391'000.-

Services of Timbatec

- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- SIA Phase 51 Implementation project
- Statics and construction
- SIA Phase 52 Execution

Client

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