

# Renovation/ new construction Cormanon school, Villars-sur-Glâne

2017

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In Villars-sûr-Glâne, two school buildings were renovated and the gymnasium and the connecting wooden wing were newly built - and all this during ongoing school operations. For everyone involved, this meant planning the work very precisely.

## The project

Time has not passed the Cormanon school complex from 1965 without leaving a trace. The buildings no longer met the structural requirements and also needed to be thermally renovated. Timbatec was commissioned to analyze the structural framework of the timber truss roof. The timber engineers determined that the roofs of two school buildings were in such poor condition that they needed to be reinforced and partially replaced. Construction method: In order to plan the new roof elements into the existing support structure, Timbatec measured the building three-dimensionally with a total station. This made it possible to fit the elements precisely during assembly. For the thermal refurbishment, 200 mm thick insulation was applied to the existing solid walls. Prefabricated wooden elements were attached to the walls. The cellulose insulation was blown into these elements. A rear-ventilated Eternit panel serves as the outer cladding.



One unit: on the left you can see the gymnasium, next to it the connecting wing, on the right the renovated school building



Remarkable size: the gym is 50 meters long and 25 meters wide

## The construction

In contrast to the two school buildings, the renovation of the dilapidated gymnasium and the connecting wing was no longer worthwhile. The hall, which had even been closed off recently, was demolished and rebuilt on the existing foundation using the timber construction method. The glulam trusses, which form the gable roof, were placed on the facade supports. The exterior walls as well as the roof of the hall, for which Timbatec was responsible among other things for the statics, were built in timber frame construction and prefabricated as elements. The bracing interior walls are made of cross laminated timber. The new two-story connecting wing was also built of wood.

## The challenge

The renovation work had to be carried out while the school was still in operation. Complex work such as raising the roof had to be planned so that it could be carried out during the school vacations.



Lots of wood: View of the interior of the new two-story connecting wing



Thanks to light wood and large windows: friendly atmosphere in the gym corridor

**Construction Data**

- Glulam 277 m<sup>3</sup>
- Cross laminated timber 357 m<sup>3</sup>
- Total wood consumption 963 m<sup>3</sup>

**Construction costs**

- BKP 1-9: 13.5 million CHF
- BKP 214: 2.0 million CHF

**Services of Timbatec**

- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project
- SIA Phase 52 Execution
- Statics and construction
- Site supervision and site inspections
- 3-D measurements

**Timber construction engineer**

Timbatec Holzbauingenieure Schweiz AG, Bern  
3012 Bern

**Architect / Construction Management**

LZ&A Architectes EPF-SIA SA  
1700 Fribourg

**Client**

Commune de Villars-sur-Glâne  
1752 Villars-sur-Glâne

**Holzbauergymnasium**

ARGE Zumwald AG and Vonlanthen AG  
1719 Zumholz / 3185 Schmitten

**Holzbauer School building conversion**

Charpentes Vial SA  
1724 Le Mouret