

New school building on the Plateau de Diesse, Prêles

2023



Between 2021 and 2023, a new school building made entirely of wood was constructed in Prêles. Swiss timber from the municipality was used by means of in-house procurement, Timbatec was responsible for the timber construction engineering work and building physics.

The project

The new school building is located on the plateau of the village of Prêles, where a natural ice rink used to form during prolonged and severe cold spells. Ideally positioned on a hill, the building offers a marvellous view of the natural surroundings of the village and the recreational areas of the region. The decision to use local timber for the construction was present from the very first project meetings and exchange discussions. The experience of the Timbatec office then proved to be a great advantage in the development of the project. Currently, 1159 tons of CO₂ are stored in the structure of the new building, which comprises a total of around 2800 m² of school, extracurricular and office space.

The construction

The structure is designed according to a post-and-beam principle. The load-bearing elements are made entirely of timber, including the cores of the vertical circulation, which are made of encapsulated CLT panels. A wood/wood ribbed ceiling, supplemented by a weighting layer that allows partial integration of the building services, offers a fast execution and perfectly fulfils the sound insulation requirements.

The challenge

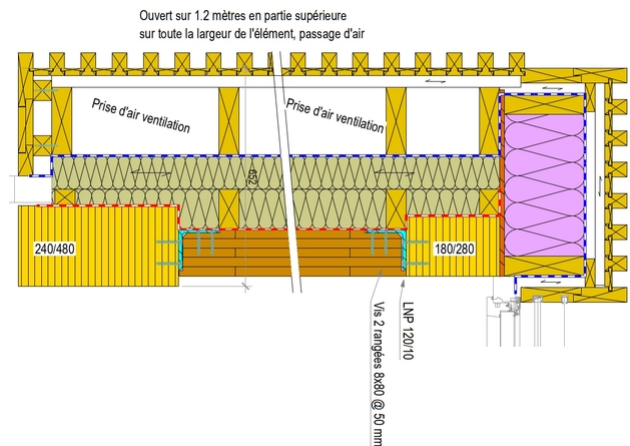
The successful integration of local timber into the construction was of great importance for the realisation of the project. A timber quality test with representative samples of the specimens found in the selected forest allowed conclusions to be drawn about the existing qualities for the realisation of the project.



Interior of a classroom.



First floor under construction.



Integration of fresh air intakes in the facade.

Construction Data

- Above-ground building volume: 12'700 m³
- Wooden surfaces: 3468 m²
- Net volume of timber used: 1093 m³

Construction costs

- BKP 1-9: 14.3 millions CHF TTC
- BKP 214: 2.6 millions CHF TTC
- BKP 214: 205 CHF/m³ TTC

Services of Timbatec

- SIA Phase 31 Preliminary project
- SIA Phase 32 Construction project
- SIA Phase 41 Tender and comparison of offers
- SIA Phase 51 Implementation project
- SIA Phase 52 Execution
- SIA Phase 53 Commissioning
- Statics and construction
- Specialist planning for building physics
- Cost estimate
- Managing, coordinating and controlling the flow of timber from felling in the forest to assembly on site.

Client

Commune du Plateau de Diesse
2515 Prêles

Architect

Riforma architecture SA
1700 Fribourg

Timber construction engineer

Timbatec SA ingénieur bois
2800 Delémont

Timber construction

Charpentes Vial SA
1724 Le Mouret

Wood gluing

JPF-Ducret à Orges

Supply of multilayer panels

Schilliger Holz à Kusnacht