

Extension workshop, Gurmels

2017



The municipality of Gurmels in the Lake District of Fribourg recently opened a new workshop hall. The timber structure measures 28 by 21 meters and can be opened almost completely on one side - a challenge for Timbatec's timber engineers in terms of building bracing.

The project

Gurmels, neighboring municipality of Murten, has grown enormously in the last two decades due to mergers with surrounding villages. Since the turn of the millennium, the population has risen from 1500 to almost 4500 people, and the municipal area has tripled to over 17 km². Because of this growth, the 1991 depot no longer met the needs of the community, which is why a new depot was built in 2017.

The construction

The supporting structure of the workshop was made of glulam. The trusses have a length of 25 meters and rest on 4.5 meter high wooden columns. Rafter purlins were suspended between the trusses at a distance of 62.5 cm. The roof is braced with the help of a three-layer slab. The prefabricated wall elements in timber frame construction with an insulation thickness of 220 mm were clad with trapezoidal sheets.

The challenge

The bracing of the building presented a challenge. The building can be practically completely opened up on one long side, which means that it has no load-bearing and bracing walls there. In addition, it could not be attached to the existing building. Since the building has no interior walls, only a few walls were available for bracing; they are also not arranged very symmetrically. As a result, high forces can occur in the walls due to wind and earthquakes, which have to be transferred into the foundation. In order to ensure the bracing, steel parts were inserted in the concrete beforehand to connect the bracing walls to it.



The new garage offers plenty of space for all kinds of vehicles...



And also serves as material storage for the fire department and civil defense of Gurmels



View inside: The 25 meter long trusses support the hall roof



The canopy of the new garage is a proud 5 meters wide

Construction Data

- BSH GL24h: 62 m³
- frame timber: 21 m³
- Three-layer boards: 1275 m²

Construction costs

- BKP 1-9: 3.0 Mio.
- BKP 2: 2.5 Mio.
- BKP 214: 0.5 Mio.

Services of Timbatec

- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- Technical site supervision and site inspections
- Structural analysis and design
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Implementation project

Woodworker

Waeber Holzbau AG
3212 Gurmels

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Timber construction engineer

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