

Courtyard Waberg, Adetswil

2024



The St. Michael Association runs the Waberg farm, which provides a home and work for people in need of support. Timbatec was responsible for the timber engineering, fire protection, and building physics aspects of the farm renovation.

The project

Above Lake Pfäffikon in the municipality of Bäretswil, people in need of support live and work on the Waberg farm with a farming family. Timbatec was asked to contribute to the planning of the renovation in terms of timber construction engineering, fire protection, and building physics. The project comprises two sub-projects: on the one hand, the agricultural building complex was expanded to include a modern free-range barn for dairy farming and a new shed. The existing barn was converted; the ground floor now houses cloakrooms, an office, and the building services for the entire site, while the attic now serves as a hayloft. On the other hand, a replacement building with a guest apartment was constructed on the site of the old barn.

The construction method

The existing barn was converted into a commercial building and renovated to improve its energy efficiency. The lower floor was thus converted into heated commercial premises (office, showers, cloakrooms, technical rooms). The replacement building comprises a residential building with a guest apartment. The planning included thermal insulation in winter, thermal insulation in summer, and sound insulation between the guest apartment and the assisted living area to meet requirements.

The challenge

The existing quarry stone masonry in the barn was fitted with internal insulation as part of the energy-efficient renovation. A hygrothermal simulation was carried out to understand the moisture behavior of the component. It was shown that no unacceptable moisture can accumulate in the structure over the years.



Ceiling insulation in barn conversion.



Exterior view of barn renovation.



Optimally insulated components ensure a comfortable living environment.



Building technology and building envelope are coordinated.

Construction Data

- Construction volume $V = 6880 \text{ m}^3$

Construction costs

- BKP 1-9: CHF 5.35 million
- BKP 2: CHF 4.63 million
- BKP 214: CHF 0.98 million

Services of Timbatec

- SIA Phase 11 Zustandsanalyse
- SIA Phase 31 Vorprojekt
- SIA Phase 32 Bauprojekt
- SIA Phase 41 Ausschreibung und Offertenvergleich
- SIA Phase 51 Ausführungsprojekt
- Fachplanung Bauphysik
- Building acoustics measurements
- Private inspection of thermal insulation
- Private inspection of noise protection

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