

Multi family house, Bachstrasse, Buchs

2021



The new apartment building in Buchs, Aargau, combines the advantages of timber construction with those of solid-frame construction. The wooden floor slabs, which are only 39 centimeters thick, rest on slender supports and provide good sound insulation.

The Project

The three-story apartment building was originally planned entirely as a solid-construction structure. Today, the client is delighted with a building that combines the advantages of timber construction and solid construction: The building offers a pleasant living environment, has a low ecological footprint, provides high flexibility of use, and was completed quickly and within the planned budget. The floor structure is very slim, measuring less than 40 centimeters. Sound measurements were conducted for quality assurance, and the requirements were met.

The Construction Method

The cross-laminated timber floor slabs are connected to large-scale areas using TS3 joints. They rest on very slender reinforced concrete columns and on the load-bearing exterior walls. This construction method resulted in a total of 190 m² of TS3 floor area. Six centimeters of elastic-bound gravel fill and four centimeters of impact sound insulation ensure soundproofing between the apartments.

The Challenge

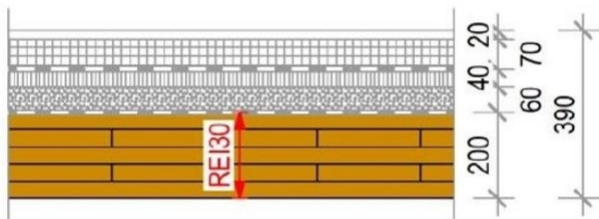
The connection details between the very slender reinforced concrete columns and the cross-laminated timber floors, as well as the stairwell constructed using timber, are the exciting challenges of this project. And the thin floor slabs required careful planning and execution of the details.



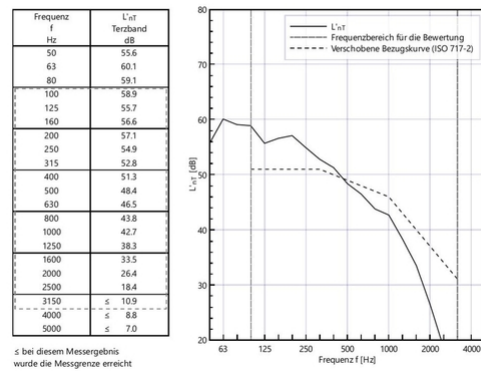
Interior view



Airborne sound measurements



Floor structure



Impact sound measurements floor

Construction Data

- CLT 35 m³
- C24 15 m³

Construction costs

- BKP 1-9: CHF 1.60 million
- BKP 2: CHF 1.50 million.
- BKP 214: CHF 430,000

Services of Timbatec

- SIA Phase 31 Preliminary design
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of bids
- SIA Phase 51 Implementation project
- SIA Phase 52 Execution
- SIA Phase 53 Commissioning
- Structural engineering and construction
- Specialist planning building physics
- Specialist planning for fire protection
- Fire protection quality assurance QSS1
- Cost estimation
- Specialist construction management and site inspections
- TS3

Client

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Architect

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Timber Construction Engineer

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Building physics

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Construction management

Andreas Marti & Partner Architekten AG, 5000 Aarau

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