

Addition of storey Erikastrasse 11, Zurich

2021



The four-story solid building in Zurich was raised in timber construction in the course of renovation. The roof shape with large spans and kink in the roof area posed a challenge for statics and construction. Timbatec also supervised the fire protection and the solid construction statics.

The project

The four-story building is located in Zurich's District 3. In the course of the renovation, the building was raised, the remaining floors and the building services were renewed. Timbatec was responsible for the structural analysis and design of the timber construction, the solid structural analysis and the fire protection (QSS2 due to encapsulated components). The earthquake safety of the building was also assessed by Timbatec.

The construction

The existing building was erected in 1946 as a solid construction (concrete ceilings, exterior and interior masonry walls, stiffening concrete frame construction). The extension was realized in prefabricated timber frame construction. Due to the considerable span as well as the kink in the roof shape, the ribs of the northern roof side were cut out of Kerto panels. The 11-meter spanned ridge beam was realized with over-height glulam.

The challenge

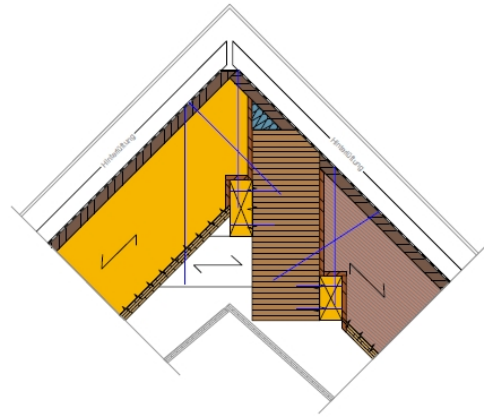
In the project, it was necessary to find an economical supporting structure for the roof, with which the kink in the roof shape could be realized. For this purpose, the girder ribs were form-fabricated from Kerto plates, which eliminated the need for complex moment connections.



Living room



Kitchen



Rear ventilation

Construction Data

- Ridge span: 11 m

Construction costs

- BKP 1-9: 6 million CHF
- BKP 214: 1
- 1 million CHF
- Solid construction: 300'000 CHF

Services of Timbatec

- SIA Phase 21 Structural review
- 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
- SIA Phase 53 Commissioning
- Statics and construction
- Fire protection planning
- Fire protection Quality assurance QSS2
- Cost estimation

Client

Christoph Schifferli
8003 Zurich

Architect

Caruso St. John Architects
8045 Zurich

Timber construction

Timbatec Holzbauingenieure (Schweiz) AG Zurich
8005 Zurich

Photography

Architecture Photography Philip Heckhausen