

# Eichenweg, Kilchberg

2020

---



The apartment building in Kilchberg is completely built in wood, including staircase. The special feature: The wooden outer wall of the first floor is half buried in the ground.

## The project

A new multi-family house with three apartments is being built in an excellent location in Kilchberg. The plot of land with a hillside location determines the basic shape of the house. The four-story building consists of a basement, a first floor half buried in the slope, and two upper floors. The floor slab is supported by steel beams integrated into the ceiling. The plastered exterior insulation gives the building a classical look and makes the wooden structure disappear behind it. The distance to the oak path is very small. As a result, complex retaining walls were necessary to still create parking spaces for the future residents.

## The construction

The basement of the apartment building was built in solid construction. From the ceiling above the basement, the building is completely made of wood, including the staircase. Exterior walls, ceilings and staircase construction are made of cross-laminated timber boards, interior walls of stud construction. The roof is designed as a hollow box girder.

## The challenge

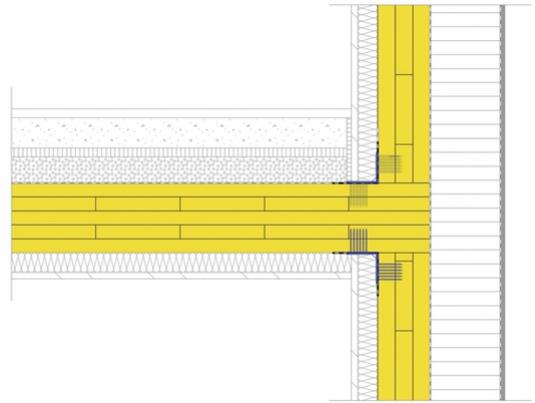
In order to keep the interface between solid and timber construction as simple as possible, this was set at the upper edge of the ceiling above the basement. This resulted in some exterior timber walls being buried in the ground to a floor level. This unusual position of the building component for timber construction not only required new ideas with regard to construction and sealing, but also with regard to statics, new effects (earth pressure) for timber construction had to be taken into account.



Passage living room - kitchen



View to the balcony



Detail floor transition - Images: Jürg Zimmermann, 8038 Zürich

### Construction Data

- Cross laminated timber: 125 m<sup>3</sup> / 930 m<sup>2</sup>

### Services of Timbatec

- 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
- Statics and construction
- Fire protection planning
- Fire protection Quality assurance QSS2
- Cost estimation
- Product development

### Client

Leupin Roth community of heirs  
8134 Adliswil

### Architect

Architektur Hürzeler AG  
8703 Erlenbach

### Timber constructionengineer & Civil engineer

Timbatec Holzbauingenieure (Schweiz) AG Zurich  
8005 Zurich

### Timberconstruction

Hürlimann Holzbau AG  
6314 Unterägeri

### Building physics

BAKUS Bauphysik & Akustik GmbH  
8045 Zurich

### Construction management

Architektur Hürzeler AG  
8703 Erlenbach