

# Replacement construction of old brickworks, Haufland Riedikon

2024



The replacement construction of a modern office and commercial building using timber construction methods is combined with the use of clay as a material. The implementation impresses with its sustainable construction and excellent CO2 balance.

## The project

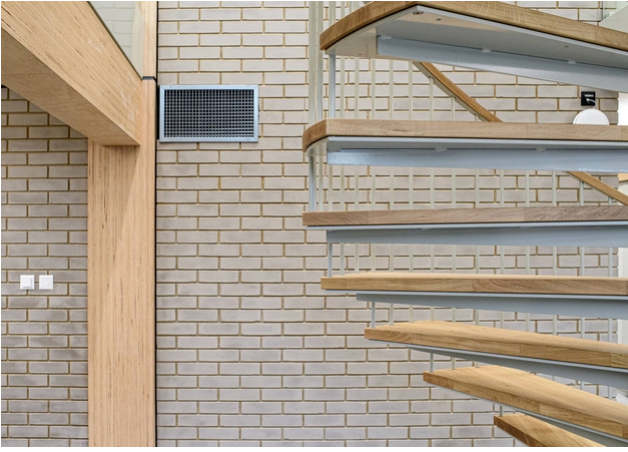
The office building is designed entirely as a timber construction from the ground floor upwards, including the enclosed stairwell and lift shaft. To improve the indoor climate and highlight the history of the building site as a brickworks, the stairwell was walled in with unfired clay bricks. The commercial building combines a variety of uses such as workshops, storage rooms, and offices under one roof. A 10-ton crane is installed on a crane runway made of construction beech in the 8-meter-high workshop. The flat roof houses a large 1,300 m<sup>2</sup> photovoltaic system that generates sustainable energy. The project combines modern timber construction with historical elements and sustainable energy production.

## The construction method

Both buildings were constructed using a skeleton structure with high-performance beams made of construction beech. The office building is mainly reinforced by the central stairwell, while the commercial building also features regular exterior walls. Moisture-resistant glued laminated timber made of ash was used for the beams in the car wash.

## The challenge

The office building, located close to the main road, is designed to remain stable even in the event of high impact loads and subsequent failure of the edge supports. In commercial construction, the crane runway was also constructed using timber, which was made possible by precise fatigue analysis.



### Construction Data

- Ceilings made of CLT: 1650 m<sup>2</sup>
- Ceilings made of horizontal glulam: 1800 m<sup>2</sup>
- Flat roof made of hollow box beams: 2000 m<sup>2</sup>
- Pitched roof: 1000 m<sup>2</sup>
- Total wood used in kg: 880'000 kg

### Construction costs

- BKP214: approx. CHF 5.0 million

### Services of Timbatec

- SIA Phase 31 Preliminary project
- SIA Phase 32 Construction project
- SIA Phase 41 Tendering and comparison of offers
- SIA Phase 51 Execution project
- SIA Phase 52 Execution
- SIA Phase 53 Commissioning
- Statics and construction
- Technical planning for building physics
- Technical for fire protection planning
- Fire protection quality assurance QSS2

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