

Residential complex in Zurich

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Building construction



Factbox

Client: Neuapostolische Kirche Schweiz (NAK)

Contractor: PORR SUISSE AG

Architect: Guignard & Saner

Contract Type: Generalunternehmer

Project Type: Building construction, Residential construction

Scope: Demolition of an old church and an auxiliary building New build of two residential buildings with a total of 34 rental apartments and an underground car park

Contract Volume: CHF 10.5 million (about EUR 8.5 million)

Construction Start: 10/2015

Construction End: 05/2017

Location: Zürich

In the residential district of Wiedikon, Zurich, PORR SUISSE AG has constructed two innovative apartment blocks in the place of a disused church.

The structures' modern architecture sets them apart from the traditional masonry structures in the vicinity. The 34 apartments were successfully delivered on-time and free of faults in May 2017 following a construction period of 20 months.

Until 2015, Bühlsstraße in the Wiedikon district of Zurich was home to the largest New Apostolic Church (NAK Schweiz) in Switzerland. Following a restructuring of the NAK Schweiz, there was no further use for the church, which was built between 1950 and 1952. As a result, it was demolished along with an auxiliary building, and two residential buildings constructed in its place. The plans for the new residential complex were drawn up by the Zurich-based architect team of Guignard & Saner; PORR was commissioned as main contractor and entrusted with turn-key implementation of the project (including demolition of the existing building).

Tradition meets modernity

The district of Wiedikon, incorporated in 1893, is characterised by its open building structures interspersed with green spaces. The architectural team picked up on this feature of the district's urban design, incorporating a variety of green outdoor spaces in the concept for the new build. Considerable attention was given to the choice of plants and their various blooming periods, ensuring that the green spaces' appearances will transform completely from one season to the next. Furthermore, the skilful positioning of structures on the plot has created a semi-public space between the two buildings. Not only does this create a generous approach area to the building entrances, it also provides space for a generous play area. While the direct surroundings are characterised by classical masonry construction, Guignard & Saner opted for more

contemporary designs and materials in the new buildings. This creates a visual contrast and makes the project truly eye-catching. The modern design also incorporates generous windows and doorways, which provide plenty of natural light and allow the buildings' interiors and exteriors to coalesce. The apartments, which range from 2.5 to 4.5 rooms in size, have a surface area of between 58m² and 113m². Each accommodation unit boasts its own balcony or terrace, and all areas have been fit-out to a high standard. This includes the stairwells, for example, which have been finished using exposed concrete, while the apartments' flooring features diagonally laid parquet flooring with surrounding frieze. Both houses are certified according to the Swiss Minergie standard for low-energy buildings.



The client was very satisfied with the planning and execution quality, also thanks to the cooperation with subcontractors.

Matthias Hugentobler
Project manager PORR SUISSE AG

Demolition and the temporary construction pit system



The construction pit following demolition of the largest New Apostolic Church in Switzerland. Image: PORR AG

Before work to erect the residential complex could begin, the church first had to be demolished. In addition to building rubble, in demolishing the church PORR also stumbled across an old oil tank that had to be removed. All contaminated materials were disposed of in accordance with local environmental provisions and recycled, where possible. The disassembled contaminated materials had to be replaced with clean materials to the planned base level.

In terms of the temporary construction pit system, the site used a soil nail wall on the uphill side, while the pit was sufficiently secured by a slope on the downhill side. No dewatering was required on the site due to the shallow nature of the pit and the lack of groundwater or seepage water.

Earthquake-proof structural engineering & ventilated facade

The two buildings are situated above a shared underground car park. This transfers the loads through a raft foundation and into the ground. The foundations are situated in an area unaffected by groundwater. Together with the reinforced concrete wall slabs, the staircases – also built using reinforced concrete – act as bracing elements for the building's load-bearing structure. At

the same time, these elements ensure the buildings are protected against earthquakes.

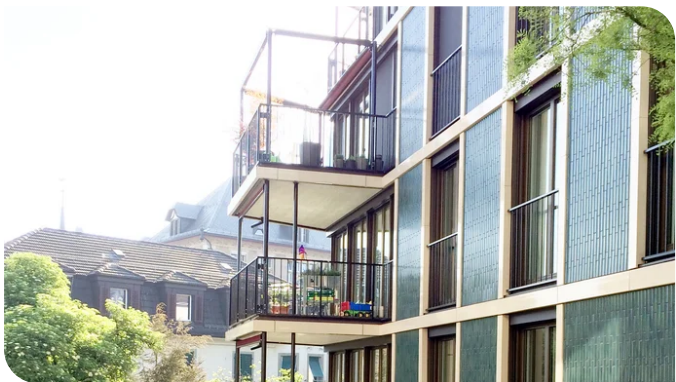
Each building features a ventilated facade. The mounting plates, coated with tiling, are all encircled by horizontal and vertical fascias. There are 1.2m to 1.8m-long ceramic profiles individually manufactured according to the architects' specifications. The windows are high-quality wood-aluminium windows.

Gallery



Summary

This construction scheme once again afforded PORR the opportunity to demonstrate the high quality of its building work and its ability to work to deadline. All apartments were delivered on-time and free of faults. Special mention in regard to this project should be given to the positive collaboration with subcontractors and the architect team of Guignard & Saner, which was made possible thanks to the high standard of planning work. Under the direction of PORR, the construction site enjoyed a constructive and cooperative working atmosphere throughout the construction period. The client was also more than satisfied with the quality of project planning and execution. PORR had previously proven these qualities in other construction projects for the NAK Schweiz.



All 34 accommodation units boast either a balcony or a terrace. Image: PORR AG

Technical data

Building volume	14.200m³
Excavation	3.520m³
Beton	2.535m³
Number of apartments	34
Apartment sizes	58 - 113m²
Floor space	4.900m²
Reinforcement	296t