



PROGRESS: 100% - COMPLETED
AUSTRIA

APARTMENT COMPLEX WITH WAVE DESIGN



WHA Gregorygasse 10 + 10A, Vienna

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In just 20 months, PORR has constructed an apartment complex containing 220 apartments and a two-storey underground parking garage in the 23rd city district.

The construction period was kept short through a combination of forward-thinking execution and the use of partially and fully prefabricated elements. Fully adhered facade profiles featuring a striking wave design lend the complex a distinctive visual appearance.

Overview

In the middle of a park-like complex near the Liesingbach, PORR operated under contract to Arwag to construct an apartment complex comprising a total of 220 apartments in four buildings. The buildings are connected by a subterranean parking garage and contain a broad range of apartment types and floor plans. A five-storey building element along Gregorygasse contains the very compact “smart apartments” with reduced internal infrastructure, as well as space-optimised subsidised rental apartments. The remaining three seven-storey buildings, in contrast, contain spacious, independently financed rental and freehold apartments.

Project data

Employer	Arwag Bauträger GmbH, Arwag Objektvermietungsgesellschaft
Contractor	ARGE Gregorygasse PORR – SWIETELSKY
Architect	SMAC Smart Architectural Concepts KG
Order type	Generalunternehmer
Project type	Building construction . Residential building
Project scope	New construction of an apartment complex with underground garage
Order volume	22 million euros
Construction start	04/2017
Construction end	12/2018

The height variation in the individual building sections enables the complex to blend into the surrounding area of predominantly single-family houses. A recessed top floor on the building along Gregorygasse further emphasizes this variation. When establishing ground floor access from the street, PORR made use of the natural lie of the land, which slopes considerably from east to west.



The three seven-storey building elements contain spacious, independently financed rental and freehold apartments, while space-optimised subsidised apartments have been constructed in the longer building along Gregorygasse. Source: PORR



THE INCREASED USE OF PARTIALLY AND FULLY PREFABRICATED COMPONENTS KEPT THE SHELL CONSTRUCTION TIME TO A MINIMUM AND ENSURED THE PROJECT REMAINED WITHIN THE TIGHT TIMETABLE REQUIRED.

Reinhard Rieser
Construction manager, PORR Bau GmbH

Short shell construction stage

Owing to the poor load bearing capacity of the soil, the entire complex was constructed on a foundation of 290 bored piles. Both basement floors were constructed from waterproof concrete, rendering additional sealing works on the exterior cellar walls unnecessary.

The structural engineering was conceived as a continuous design across all floors. The buildings have load-bearing external walls and a supporting staircase core. Supporting walls and plates subdividing the individual accommodation units also contribute to the building structure, resulting in smaller spans and optimal slab thicknesses.

The load-bearing building elements, the entire cellar and the ground floor were constructed from in-situ concrete. The remaining floors chiefly consist of partially prefabricated elements together with cavity walls and prefabricated ceilings. The balcony slabs, lift shafts and staircases were made from fully prefabricated elements. This construction method made it possible to complete the shell construction within a short time frame, and work was able to begin on the interior after only eight months.



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Reinhard Rieser
Construction manager, PORR Bau GmbH

Building shell with design elements

The shell of the building comprises load-bearing reinforced concrete walling and a thermal insulation system. The most striking feature of the whole project is the special wave design of the fully adhered facade profiles. All the building elements share a vertically structured facade design. The openings consist of French windows with large glass surfaces. The smooth, white main facade represents a geometric interplay with the generous window areas and the individual wave-patterned sections, enhanced by broad balconies. The sleek, uninterrupted white surface of the upper storeys provides a smooth finish to the facade. This subtle contrast between the outer surface structures is particularly evident in sunny daylight conditions.

High-quality fittings

Each apartment includes an outdoor area in the form of a terrace, balcony or private garden on the ground floor. There are slight differences in the interior fittings between the subsidised and independently financed apartments. For instance, the subsidised apartments feature wooden windows with aluminium cover caps. The living areas and wet rooms are finished with laminate and small tiles. By contrast, the independently financed apartments are equipped with plastic windows with aluminium cover caps, and parquet flooring and larger tiles feature in their execution. Each window is fitted with external, electrically controlled solar shading.



All bathrooms include electric underfloor heating. Source: Arwag

Spacious outdoor areas

The outdoor concept of the complex is characterised by efficient pathway design, ensuring the

various levels of the site are fully accessible and connected via the shortest possible distances. Owing to the differences in level, access to the complex is via a broad external staircase, complemented by a convenient, accessible ramp construction. A broad range of spacious outdoor areas, including an infants' playground and children's playground, will satisfy all the tenants' requirements, and spaces for meetings and communication were also included in the plans.

Conclusion

PORR has operated in consortium with Swietelsky to build a home where all residents will feel comfortable - the Gregorygasse 10 + 10A apartment complex. The effective and forward-thinking collaboration of the entire project team made it possible to complete the construction scheme with optimum results. Work remained constantly one step ahead of schedule, so unexpected developments could be addressed in good time and there was never any danger of exceeding the planned construction period.

Technical data



11,050m²

Plot area

14,500m³

Excavation volume

Gross floor area	21,650m ²
Usable living area	16,800m ²
Built area	3,550m ²
Car parking spaces	176
Sheet piling (wall)	80rm
Bored piles	290
Steel incorporated	1,630t
Concrete incorporated	15,500m ³



The wave-patterned facade profiles raise the look of the apartment complex to another level in comparison to other, similar projects. Source: Austrotherm