

MAKE YOUR HOME IN THE CITY OF FILMS



Die exklusive Wohnanlage „Am Rosenhügel“ überzeugt mit einer historischen Lage und anspruchsvoller Architektur. Quelle: PORR

PROGRESS: 100% - COMPLETED
AUSTRIA/VIENNA/2016-18



Der Rosenhügel: a residential complex in Vienna

Text: Marco Hanschitz

PORR has developed an exclusive residential complex, located on the site of the former Rosenhügel film studios.

The sophisticated architecture, with large quantities of exposed concrete, presented PORR with a number of challenges. For structural reasons, prefabricated parts could not be used for the balconies, meaning creative solutions had to be found.

Background

In 2016, Rosenhügel Entwicklungs-, Errichtungs- und Verwertungsgesellschaft mbH, a project consortium comprising UBM Development Österreich GmbH and IMMOVATE Management GmbH, awarded PORR the contract to build an unusual residential facility in Vienna's 23rd district. PORR was assigned the general contractor role for the construction of seven buildings, which would house a total of 204 privately financed apartments and be linked by an underground garage. The complex was to be developed on the large former Rosenhügel film studio site, over just two years, under the name Der Rosenhügel. The order volume for PORR came to around 29 million euros.



The new residential complex comprises seven free-standing buildings along with numerous communal facilities – saunas, fitness rooms, party areas... Source: PORR

Project data

Employer	Rosenhügel Entwicklungs- Errichtungs- und Verwertungsgesellschaft mbH u. Co KG
Contractor	PORR Bau GmbH
Order type	Generalunternehmer
Project type	Building construction . Residential building
Project scope	Construction of 7 freestanding buildings comprising 204 privately financed apartments
Order volume	29 million euros
Construction start	06/2016
Construction end	05/2018



EVEN WITHOUT USING PREFABRICATED CONCRETE PARTS, WE PRODUCED 3 KM OF BALCONY EDGE BEAMS IN DELIGHTFUL EXPOSED CONCRETE.

Marco Hanschitz
Site Supervisor, PORR Bau GmbH

Preliminary challenges

The former film studios were built between 1919 and 1923 and various parts of the site have been heritage listed since 2011, including the Synchron Stage Vienna and the first artificial light recording hall. In order to ensure that these listed buildings were protected, PORR opted for a particularly cautious back-and-forth building technique designed to avoid damages. Another challenge resulted from the construction project's location in the middle of a residential area, which complicated the coordination of material deliveries. In addition to these issues, there was a group of trees in the middle of the construction area which had to be left in place and incorporated in all the plans. They were protected with a sheet pile wall during the foundation work.



During the foundation work, a group of trees in the middle of the construction site had to be taken into account... Source: PORR



... as did the heritage-listed buildings around them. Source: PORR

Complex facade with large areas of exposed concrete.

Once the underground garage was complete, the next challenge was constructing the main buildings – complete with different numbers of storeys, variable heights, and oscillating balcony formations. The architects had designed five of the seven houses to be encircled by curved balconies made from in-situ concrete. The visible undersides of the balconies and their lateral front surfaces were to be created in exposed concrete quality. For structural reasons, it was not possible to use prefabricated concrete components to create an approximate implementation. PORR’s construction site team had to find an alternative method of creating the 3 km length of balcony edge beams. The solution they came up with was to use a girder slab formwork to produce the visible balcony undersides. Around 500 structural supports and 1500 visual supports were concreted in as the carcass was created.



The formwork for the 3 km of balcony edge beams presented a particular challenge. Source: PORR

A further 300 supports were produced as cladding for the rainwater drainage system: PORR used a system of rainwater pipes which were then inserted into the visual supports. Just a cone and foundation element were concreted into the carcass. The formwork for the lateral balcony edge beams was realised using individual, adjustable mounting brackets. Using a thin formwork plate allowed for precise execution. In order to maintain the exact geometry, the team worked with a geosystem: a robotic total station. Manual placement, with the planned execution, would have caused additional tensions during the building process.

Technical data:



56.500m³

Excavation volume:

27.000m³

Concrete incorporated:

Gross floor area:	37.500m ²
Usable area:	23.150m ²
Site area:	15.165m ²
Construction pit depth:	7m
Car parking spaces:	239
Reinforced concrete incorporated:	2.494t

Extensive safety measures

The geometrically varied, curved balconies for the individual storeys gave rise to a further task, as the formwork could not be stripped off these ahead of time. Technical and safety issues made it tricky to dismantle to a skeleton support framework before concreting the balcony floor plates on the final storey. This had a knock-on effect in the form of considerable delays to the internal finishing work and subsequent window installation.

In order to ensure that the facade work was carried out smoothly and safely, the final balcony railings were built right into the carcass. This meant that work did not have to stop for safety measures, and the use of safety nets ensured complete safety of all workers.



The completed project. Source: PORR

Summary

PORR has completed an architecturally unique project in the Rosenhügel residential complex. Despite the problems that emerged, the team was able to rise to the challenges relating to the unusual facade. The 3 km of balcony edge beams were created in delightful exposed concrete despite the restriction on using prefabricated concrete parts. Time and cost pressures were overcome and the project was handed over to the client in May 2018.