

PROGRESS: 100% - COMPLETED
CZECHIA/2017-18

THEATRE REVITALISATION – WITH A FEW SURPRISES

Divadlo Jiřího Myrona

Text: Lukáš Cibulka

In Ostrava, in the Czech Republic, PORR has revitalised a theatre complex consisting of three buildings – all during ongoing theatre operations.

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Overview

The redesign of the National Moravian-Silesian Theatre in Ostrava comprised the theatre building itself, the Malá Scéna or small theatre, and an administration building. All three buildings had listed façades that needed renovating. The foyer of the “Divadlo Jiřího Myrona” theatre was also redesigned and all the floor structures, including the marble flooring, were replaced. The staircase was demolished and a new one built. This meant that theatre buffets and new sanitary facilities could be constructed on each floor. The theatre café and the ceremonial hall were also completely redesigned, creating additional spaces for ticket sales and a shopping arcade with direct access to the theatre café.

Project data

Employer	Národní divadlo Moravskoslezské (Nationales Mährisch-Schlesisches Theater)
Contractor	PORR a.s.
Architect	Dipl.-Ing. arch. Jiří Stejskalík
Order type	Generalunternehmerleistungen
Project type	Building construction . Revitalisation
Project scope	Extensive redesign of the National Moravian-Silesian Theatre building complex
Order volume	CZK 161 million (6.15 million euros)
Construction start	10/2017
Construction end	11/2018

The Malá Scéna building, which until recently had housed an insurance company, was redesigned to feature a small stage with an auditorium seating around 60 people, a bar, and sanitary facilities. The offices on the upper floor were also converted.

Finally, the offices in the administration building were comprehensively renovated and several new rooms added. These include a ballet studio and an orchestra rehearsal room in the previously unused attic.



The newly designed Malá Scéna, for which PORR also supplied the stage technology and all the audiovisual equipment, can accommodate up to 60 audience members. Source: PORR

The original order volume was CZK 137 million. However, during the course of the work it quickly became apparent that it would not be possible to meet either the budget and the original deadline. A total of 155 amendments was necessary for proper completion, and as a result, the price rose to CZK 161 million and the handover had to be postponed until the end of November 2018.



THE ENTIRE REVITALISATION PROCESS WAS VERY DEMANDING IN TERMS OF STRUCTURAL ENGINEERING. WE WERE CONSTANTLY FACED WITH SURPRISES AND CHANGES OF PLAN.

Lukáš Cibulka
Project manager, PORR a.s.

Lots of challenges

The fact that PORR had a tough nut to crack with this project was evident from the very beginning, when the contract was awarded. The revitalisation was carried out while the theatre was still in operation. This meant that the construction stages and execution had to be planned in minute detail. The areas in which the work was carried out were kept completely separate from the theatre. New steel supporting structures were erected in the small theatre, the ballet studio and the orchestra rehearsal room, necessitating major interventions in the load-bearing structures. Only then could the existing brickwork and in-situ concrete structures such as walls, ceilings and joists be demolished. The works were all carried out under the constant supervision of a structural engineer. Regular adjustments and new plans were also necessary due to the condition of the old building fabric.

Sophisticated construction logistics

The entire logistics, transporting materials to and from the construction site, and the assembly procedures also posed challenges for the PORR construction site team. The steel joist for the ballet studio was 9.5m long and could not be divided. The steel support structures weighed 50 metric tonnes, and the demolition material came to 2,000 tonnes. A micro-pile platform had to be dismantled and rebuilt in the basement because it wouldn't fit through a 1m wide doorway. A particular challenge was the demolition of an entire floor and the construction of a new portal in the Malá Scéna at a height of 6m. This necessitated a steel construction consisting of four steel girders, each of them 10m long. It was anchored in the block foundations outside the building.



The future Malá Scéna, or small theatre, before... Source: PORR



...and during the conversion work Source: PORR

Building fabric in poor condition

A new ticket office, a shopping arcade and a café were added to the main building. A ceremonial hall was built directly above the café, replacing the former ballet studio. The existing structures posed a number of problems. They were actually supposed to be preserved, but in many cases, their poor structural condition made this impossible.

Sections frequently had to be demolished and replaced by new, functional constructions. A mural from the 1920s was discovered behind a suspended ceiling in the theatre café. Again, it was impossible to restore these frescos due to their

poor condition, so they were preserved in their current state. The team also erected a new steel construction for the suspended ceiling.

Technical data



8.000m²

Gross floor area

2.500m²

Facade area

Plot area 2.500m²

Bored piles Micro-pile foundations

Steel incorporated 50t

Concrete incorporated 30m³

In-situ concrete/reinforced concrete incorporated
..... 35m³

More than just construction works

The construction of the new ballet studio and orchestra rehearsal room in the administration building meant that the existing and demolished constructions had to be comprehensively secured, and a number of fire safety measures became necessary. PORR installed special sound insulation cladding on the walls and ceilings to meet the acoustic requirements. In addition, some of the wooden ceiling's load-bearing beams had to be refurbished or replaced to ensure stability for the new dry floor structures. Technical building services included installing new pipelines for the sanitary facilities, ventilation and heating, and high and low-voltage power lines, including terminals, distributors and units.

In the Malá Scéna, PORR was not only responsible for the structural measures but also for the audiovisual equipment, the stage technology and the entire lighting system. One special feature is the bar that replaced the old ticket office. An ingenious device hoists the tables up to the ceiling at the touch of a button so the area can be used as a dance floor.



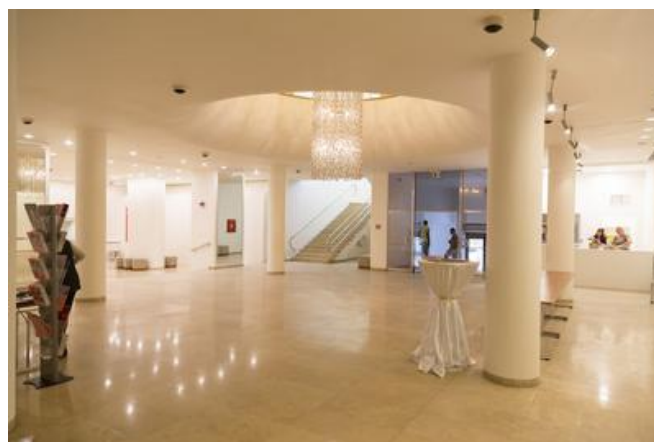
Space for dancing: the tables are raised to the ceiling at the touch of a button. Source: PORR

Unavoidable delays

The revitalisation of the façade proved to be particularly tricky. For this reason, PORR commissioned a specialist company from the start of construction that, in close cooperation with the National Heritage Institute (NPÚ), drew up a new service description for the renovation of the façade and defined the necessary materials. Specifications such as the mandatory use of Roman cement led to far-reaching changes in the scope of services, which in turn resulted in a significant increase in costs and a postponement of the handover deadlines.

Conclusion

On 1 September, PORR handed over the revitalised theatre building, the new Malá Scéna and the theatre bar to the client for immediate use. The other rooms were handed over at the end of November. Despite the new problems and challenges constantly cropping up during the course of the project, due to the poor state of the building fabric, that resulted in numerous changes of plan, PORR's elaborate revitalisation of the theatre complex delights not only the client, but also hundreds of theatre-goers.



In the main building, the foyer was redesigned and all the floor structures were replaced, including the marble flooring shown here. Source: PORR