

Limburg an der Lahn Fachinger Tunnel

Data and facts

Company	PORR GmbH & Co. KGaA
Type	Tunneling
Runtime	01.2023 - 11.2026
Principal	DB InfraGO AG

[Project report online](#)www.porr.de

Refurbishment of a historic railway tunnel whilst rail services continue to operate

Renovation of a historic railway tunnel

The 426-metre-long Fachinger Tunnel was built between 1861 and 1862 and forms part of the Lahntal Railway between Wetzlar and Koblenz. As part of the construction project, the existing tunnel cross-section was widened and adapted to the required clearance gauge. The scope of works included the refurbishment of the tunnel structure with a new in-situ concrete inner lining, as well as the construction of the portal structures and access walkways.

Tunnel-in-tunnel method whilst rail services were operating

The renewal was carried out using the ‘tunnel-in-tunnel’ method with a tunnel-widening system. For this purpose, a temporary track was installed in the centre of the existing tunnel and operated within an enclosure. This construction method enabled the tunnel cross-section to be widened in sections whilst train services were largely maintained. Total closures were necessary for individual construction phases.

New inner lining and supplementary infrastructure works

In addition to the widening and the installation of the new in-situ concrete inner lining, the project included further works in the vicinity of the tunnel: the individual works were coordinated with the tunnelling and the operational requirements of the railway line.

- Renewal of the track bed
- Construction of retaining walls
- Stabilisation of embankments and slopes
- Replacement of a culvert
- Underground cable works and cable laying
- Signalling works
- Construction of portal structures and access paths

Rail-based site logistics

The spatial conditions inside and in front of the tunnel, as well as the restricted accessibility, determined the site logistics. A significant proportion of the transport of materials and equipment was carried out via the railway tracks. The works had to be coordinated with railway operations, the available closure periods and the construction conditions within the existing tunnel cross-section.

Work within the medicinal spring protection area

The construction site was located within Protection Zone III of the ‘Staatlich Fachingen’ medicinal spring protection area. As part of the construction work, project-specific measures for water and soil protection were implemented. The work was also subject to environmental monitoring. Once construction work is complete, the areas used for this purpose are to be reclaimed.

Final double-track configuration of the Fachingen Tunnel

A key phase of the project was the completion of the final double-track configuration during a total closure in spring 2026. The refurbished Fachingen Tunnel was put into operation on 15 May 2026. Further project works and finalisation tasks are scheduled to be completed by November 2026.

Foundation for continued rail operations on the Lahntal Railway

With the widening of the tunnel cross-section, the new in-situ concrete inner lining and the supplementary infrastructure works, the Fachinger Tunnel has been adapted to meet the requirements of future rail transport. The project combines the refurbishment of a historic tunnel structure with the largely uninterrupted continuation of rail operations during the runtime.

Impressions

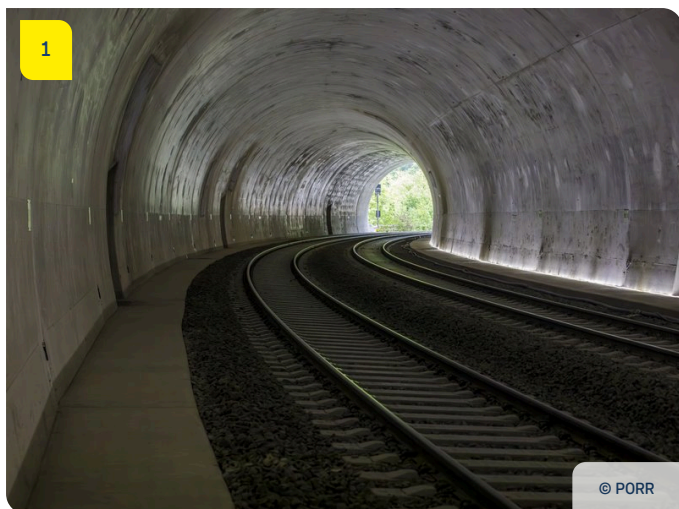


Image notes

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Do you have questions about the project or would you like to learn more? Feel free to contact us for further information.

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