

Crossrail, Farringdon Station

A unique solution for ambitious infrastructure

Key Benefits:

Incorporated scaffold design to accommodate for truck access

Adaptable to meet structural requirements

The project at a glance

One of the most significant infrastructure projects ever undertaken in the UK, London's Crossrail is a high-frequency, high-capacity service enabling faster travel across the capital. Forming part of Crossrail's plan to open up 10 new stations, the remodeling of Farringdon station endeavours to prevent overcrowding and generate economic growth in the area. On completion, the railway will be named the Elizabeth line when it opens in 2018.

"The new system reduced the time required to move the tower from one hour to 20 minutes, leading to an increase in production from five metres of tunnel per day to 12 metres."

Section Engineer, BFK
GUILLERMO LALINDE

Client:

Bam Ferrovial Kier JV (BFK), Prestec

Contractor:

Thameslink, Crossrail, London Underground

Project type:

Infrastructure / Rail

Products and Services:

PERI UP, Rail Climbing System, VARIOKIT

What did the client need?

Farringdon Station is one of 40 locations being linked by 21km of new twin-bore tunnels, and PERI were brought in by principal contractor BFK and waterproofing specialist Prestec to help design and erect a solution for installing waterproofing membrane for its tunnels.

What was the challenge?

To construct the tunnels at Farringdon, mobile scaffolding of over 8m diameter was required to enable both waterproofing and spray concrete lining. A major challenge was to meet Prestec's need for a castor-mounted structure, which restricted the weight PERI had to work with, while the size of the scaffolding would restrict movement along the tunnel. Compounding this was a requirement for truck access directly into the tunnel in order for works to progress simultaneously.

How did we help?

PERI's design team tailored the system so it could fit detachable cantilevered console brackets on the edges of the structure to enable waterproofing as well as subsequent concrete spraying, reducing construction time for the client. To enable truck access direct to site, the scaffolding featured a 4.4m x 3m passage through the middle, enabling construction to continue with no disruption to waterproofing works.

Following the success of the PERI UP system on the castors, BFK extended its partnership with PERI to work on another section of the tunnel, which required the system to adapt in order to work on heavy-duty rollers with PERI's Rail Climbing System (RCS) and VARIOKIT. PERI continued to work on the Crossrail project, designing a system for construction of the escalator shafts ahead of the operation's final completion in 2018.



Contact us by email
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