

Mersey Gateway, Cheshire

Bridging the gap with unique formwork solutions

Key Benefits:

Stable work platform amidst high winds

Intricate concrete finishing

Accommodates complex geometries for pier table formwork

The project at a glance

Merseyside's transport network is undergoing significant improvements, as a commitment to its commuters. The Mersey Gateway – a cable-stayed bridge stretching over 2,000m from Runcorn to Widnes – is one of these, providing an alternative route while bringing in 4,640 new jobs and generating an estimated £61.9m in Gross Added Value by 2030.

“Every part of the formwork has been specially designed to suit the geometry of the bridge structure, requiring a large amount of in-depth planning for each section of the construction work.”

Project Manager, PERI
TONY PEARCE

The PERI logo consists of the word "PERI" in a bold, red, sans-serif font. To the left of the text is a yellow graphic element that resembles a stylized 'L' or a corner bracket, with the top horizontal bar extending to the right and the vertical bar extending downwards.

Client:

Merseylink Civil Contractors (FCC Construcción S.A., Kier Infrastructure and Overseas Limited and Samsung C&T Corporation)

Developer:

Halton Borough Council

Project type:

Infrastructure / Bridges

Products and Services:

Automatic Climbing System, VARIO GT24 formwork with SB Frames and VARIOKIT system, PERI UP

What did the client need?

After impressing Merseylink Civil Contractors with our design work, we were called upon to deliver formwork solutions for the lower pylons and hammerheads.

What was the challenge?

High wind speeds are a challenge to all bridge projects and the Mersey Gateway is no exception. Our unique Automatic Climbing System (ACS) is designed for this challenge, supporting and providing access to formwork systems while withstanding higher wind speeds for fewer disruptions. Another challenge, specific to the design of the pier table formwork, was the need to transfer high vertical loads into embedded anchors within the lower pylon.

How did we help?

For the hammerheads, we used our VARIO GT24 formwork with SB Frames and VARIOKIT system. Unlike a typical application, we employed the frames as a platform, necessitating a unique design for the intricate shape of the hammerhead. Once the central hammerhead had been completed, the platform was reused for the pier tables. Our solution was to use a sequenced construction in layers, avoiding the accumulation of vertical forces; ensuring a safer, more manageable process.

Our team had a constant on-site presence throughout construction of the Mersey Gateway. Once the lower pylons and hammerheads had been completed, we got to work on the central pier table and three more different-sized pylons. With the south pylon rising to 125m high, our ACS and custom formwork platforms were on hand to combat the challenging wind speeds, ahead of the Mersey Gateway's opening in autumn 2017.



Contact us by email
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