

# *PROVEN PERFORMANCE*

*LONDON BRIDGE STATION*

*TOPFLOW*

*When the complex design of Network Rail's new London Bridge station demanded 1500m<sup>3</sup> of bespoke self-compacting concrete with a T3 finish for custom-made metal formwork, Costain turned to Tarmac to provide a solution.*

### THE CHALLENGE

Integral to the redevelopment of the station is a spacious concourse. Trains will run above on a series of steel composite bridge decks, also carrying the rebuilt station's precast concrete platforms and roof canopies.

The design features exposed concrete within the main concourse, in the composite bridges' 21 concrete columns and cross-heads. The architect, Grimshaw, specified a F3 finish for the concrete, a requirement made difficult to achieve by the steel formwork. Costain needed a solution to meet the technical specifications for high strength and aesthetics in a short time.

### OUR SOLUTION

Tarmac created a new Topflow mix. The pulverised fuel ash mix was replaced with a mix containing both ground granulated blast furnace slag and limestone filler. This enhanced the finish while maintaining a high CEEQUAL rating.

Tarmac experimented with placing methodologies and release agents to find the ideal solution. They dedicated their Kings Cross readymix plant to Topflow production for the one and a half hours needed to batch each pour, doing each one at night, to ensure a continuous pour with a consistent finish, helping sequencing on site and avoiding London traffic delays.

### RESULTS AND BENEFITS

Tarmac's bespoke Topflow mix met all technical specifications for the complex project, while delivering a perfect, blemish free and smooth surface with no defects. All of the project deadlines were met and there was zero wastage.

Costain has been so impressed with the Tarmac solution at London Bridge that it has awarded the company a contract for its Bond Street Crossrail project, potentially involving 2000m<sup>3</sup> of Topflow.

For more details contact [topflow@tarmac.com](mailto:topflow@tarmac.com) or call **0800 1 218 218**