High-performance Waterproofing Protects Bridge Deck

ELIMINATOR® and METASET® systems used on £1.5m Putney Bridge repair and refurbishment project

Project	Putney Bridge, London, UK
Client	Wandsworth Borough Council
Contractor	FM Conway
Authorised Contractor (Waterproofing Applicator)	Metrail Construction Ltd
GCP Solutions	ELIMINATOR® Bridge Deck Waterproofing and METASET® systems

Project

Identifying potential structural failures

A £1.5m project to refurbish and repair Putney Bridge in southwest London, commenced in July 2014 and was originally scheduled for completion in October of the same year.

The Grade II listed arch bridge which crosses the Thames had a Ground Penetrating Radar (GPR) report undertaken in 2010, which identified the deck as having areas with significant moisture and even saturation within its roadway and supporting structure. The bridge was in need of protection from water penetration to prevent structural damage.

Minimising disruption to commuters

Until the excavation and removal works had taken place, there was no way to ascertain the full extent of the repair works required and the additional time and cost implications these would have on the project.

Putney Bridge is a major route across the Thames, so minimising congestion and disruption to commuters and tourists was imperative and, as a consequence, the repair and waterproofing systems chosen needed to match this requirement.

Fast track bridge repair

Wandsworth Council specified the ELIMINATOR® system from Stirling Lloyd (now GCP Applied Technologies) as an immediate, cost-effective solution for waterproofing the surface and curb areas since its fast cure time would reduce bridge closure times. METASET® Resifilla was chosen for the deck repair since it achieves very high early compressive strengths, excellent thermal and mechanical shock resistance and also cures rapidly across a wide range of temperatures.

On site, the existing surfacing and waterproofing, along with the curb detail, were removed by main contractor, FM Conway. Wandsworth Council's in-house engineering consultancy assessed the bridge structure and found that the existing polyurethane waterproofing system had completely de-bonded and delaminated from the concrete substrate. In addition, loose, friable material needed to be replaced with a robust, concrete detail. Metrail Construction Ltd repaired the bridge, applied waterproofing, added new paving stone and upgraded the drainage system.

The combination of strong collaboration and high performance products ensured a successful project, with the bridge reopening to traffic two weeks ahead of schedule.

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The power of GCP products, performance and people

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