

Project Profile: Tipner Interchange

Project: M275 Tipner Interchange Bridges, Portsmouth

Client: Portsmouth City Council



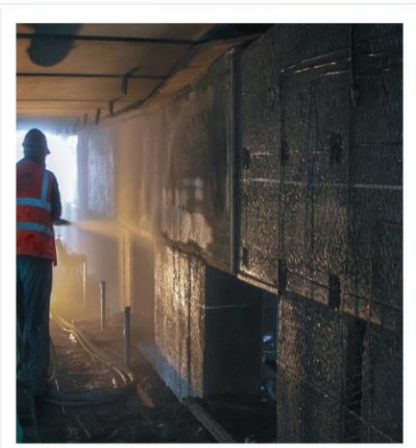
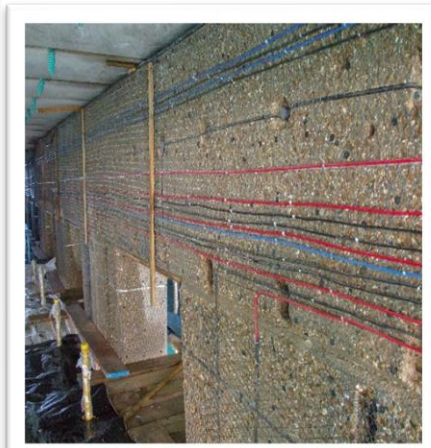
**CONCRETE
REPAIRS**

The project: Tipner Interchange Bridges are part of the main gateway to the city of Portsmouth, supporting the M275 motorway. The interchange was designed to accommodate a grade separated junction between the M275 & Tipner, an area that was earmarked to undergo major redevelopment to form the 'key gateway' to Portsmouth. Principal Bridge Inspections highlighted leaking deck joints and patch defects in the supporting structures. Concrete testing also confirmed the presence of high chloride ion concentrations. As part of an Early Contractor Involvement scheme (ECI), **APA** were selected as the specialist contractor to provide practical design assistance and the main works package during the construction phase.



The project team, headed by Portsmouth City Council, was formed with **APA Concrete Repairs Ltd** chosen as one of the preferred partners and members of the Design Team for the E.C.I. phase of the Project. The team formed a repair & protect scheme to maintain the life of the bridges, avoiding the costlier option of demolition & rebuild.

The solution: This scheme primarily involved the design, installation and commissioning of an impressed current cathodic protection system (ICCP). A 'mesh & overlay' type ICCP system was selected by the team and installed by **APA**. Titanium mesh anode was fixed to the structure & overlaid with a 30mm thick layer of dry-sprayed concrete.



The outcome: The works were successfully completed with the ICCP System being commissioned and working well to provide ongoing protection to the support structures from future corrosion. The deteriorated concrete was repaired, and the sprayed concrete overlay successfully encapsulated the ICCP system and provided an improved aesthetic finish.



Materials Utilised:

- Weber Certite Bedding Mortar
- Weber Mulsifix Keycoat
- Weber Mulsifix High Build Repair Mortar
- Masterseal 525 Waterproof Coating
- Weber Mulsifix Brushcoat
- Weber Mulsifix Spray Concrete DS

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