

PROVEN PERFORMANCE

London Underground

POZAMENT

Product Pozament PX-Q Cement
Client Transport For London
Location London
Date of completion October 2016

THE CHALLENGE

CAs part of a wider schedule of remedial works on London Underground's Metropolitan Line to replace ballasted track with concrete slabs, new drainage channels were commissioned in two locations.

Given the isolated nature of the prospective channel locations, and the fact that they would needed to be cast in situ, TFL faced a number of logistical challenges, including the excavation and removal of existing ballast. A further complication involved mixing the concrete at street-level and transferring it to the installation site without setting or affecting its inherent strength.

To provide a reliable, high-strength product solution, and negate the logistical difficulties, TFL turned to Tarmac's Pozament division.

For more details contact
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OUR SOLUTION

Prior to the project, Tarmac's Pozament team had been working on a new formulation of its quick-setting ultra-rapid strength gain PQ-X cement. This process included successful laboratory and volumetric mixer tests to retard the curing time, making it possible to transport the material in a pourable state whilst still meeting the requirements of a minimum strength of 15N in 12 hours.

As such, the team were readily available to provide the necessary product solution to facilitate the construction of the two new drainage channels on the Metropolitan line.

The material for the first pour was provided through Accumix Ltd with a total volume of 8.25m³. The concrete was forced under the central shuttering with a vibrating poker, before floating up to the bottom of the base plates that hold the track in place. It was critical that no air was trapped under the base plates as they would later need to be bolted onto a solid and flat surface.

Whilst the preparatory work for the second pour was still underway, the results of the cube tests reported that the Pozament's PQ-X cement went above and beyond the required specification, achieving 46.1N after just eight hours.

Despite complex access to the site and a strict schedule to rule out any delay to passengers, a total of 7.25m³ of concrete was poured at the second site Sunday night, at a later time than originally planned with the confidence in the product's performance from the previous pour that the line would still be opened and operational in plenty of time for Monday's commuters. As expected the drainage works were successfully cast in-situ due to the flexibility and performance of the PQ-X product. All work was undertaken with minimal disruption, and within the tight timescales set by TFL.