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Major step in Lee Tunnel integration negotiated at Beckton



An important link to join London's existing and future waste water systems has been made at Beckton Waste Water Treatment Works (WWTW).

Civil engineering and infrastructure specialist Barhale was brought in by Costain, Atkins and Black & Veatch (CABV), delivery partner for Thames Water's eight₂O alliance, to make the connection. It required the installation of a 45m long 2.8m diameter steel pipeline to join the existing Lee Tunnel to a new storm tunnel as part of integration into the Thames Tideway Tunnel system.

The complex installation required the use of a 200t mobile crane and a 90t crawler crane working in tandem to manoeuvre the sections of pipe, measuring up to 11.6m in length and weighting up to 22.7t, into the vertical shaft. Barhale also installed an overland horizontal pipeline connecting the underground elements to the existing Lee Tunnel Flow Collection Chamber.

Other than the pipe itself, all steelwork on the project was designed, fabricated and installed by Barhale. This included the fabrication and installation of a bespoke 25m access stair case into the vertical shaft.

Regional manager Ovi Frunza said that Barhale's in house steel fabrication capability provided a huge benefit. "We were able to turn around the steelwork manufacture and

installation in less than eight weeks from the drawings' acceptance, "he said. "In particular, offsite construction and a modular assembly approach enabled us to reduce significantly the installation time from an anticipated six weeks to just five days.

"Another key factor in the swift delivery was the successful integration of client and contractor's 3D modelling software which allowed us to align key parameters for all parties.

"Ultimately we are very pleased with the way that the project has come together. This is an important step to help grow the capacity of the waste water system for London and the South East."