

## CASE STUDY: BATTERSEA (NORTHERN LINE EXTENSION)

Falco were appointed to construct a new combined sewer connection draining the new Battersea Power Tube Station and the Power Station development - a jointly funded scheme which is part of the Nine Elms Regeneration Project.

The installation called for construction of a six-metre deep manhole and a 23-metre timber heading out under Battersea Park Road to connect a 300mm pipe with Thames Water (TW) sewer Lower Level 1 (LL1)

LL1 is notorious for fast flow and surges during rainfall so excavating and drilling into it, from outside risked sewer collapse and flooding the heading. After detailed methodologies were successfully presented to Thames Water's Independent Authorising Body (IAB), Falco entered LL1 on a Saturday night when TW had reduced flow and core drilled a sample to establish its integrity.

A sealing plate was fitted to the inside and a steel pin through to the outside

so when the heading reached the outside, the pin would be found and ensure the break in was inside the sealed plate. The sealing plate was designed by Falco's Temporary Works designers who have a good relationship with Thames Water thus easing acceptance. Detailed surveying triangulated from inside the sewer, up to and across the road to the heading start point to ensure pinpoint accuracy

Innovative dewatering techniques were required when excavating the heading in pure ballast approximately one metre into the ground water.

As the ultimate client, London Underground Ltd closely scrutinised all documentation and the installation and had particular requirements e.g. regular grouting of the heading timbers as we progressed. Out of Hours working was required by Thames Water to enable them to isolate the water mains above as we passed beneath.

Sector: Water

Client: London Underground

Principal Contractor: Ferrovial Laing O'Rourke

Value: £450k

Duration: 9 months

Completed: Dec 2019

Location: London SW11

Despite the challenging ground conditions combined with demanding requirements by London Underground and Thames Water, Falco completed the installation on time and budget. Installation of water mains to the station and additional deep site drainage were added to the package involving approximately 100 metres of HDPE water mains and associated valves etc. to serve the new station plus four more manholes and a series of 150mm - 500mm pipes installed.





