

Tottenham Court Road / Bond Street

Client:	Thames Water
Location:	Central London
Value:	£6.3m
Duration:	3 Years, 11 Months

In Brief...

The project was part of the £1 bn investment made to upgrade the capacity of the Tottenham Court Road Tube station, building a new station for the Crossrail railway and creating a new piazza outside Centre Point. When the expanded Tube station is integrated with the new Crossrail station this will form a major interchange within the heart of London.

To create a larger station, the space under the road and footpath, where the former ticket hall was located, needed to be enlarged. The proposed works space was full of sewers, ducts and pipes carrying electricity, telecommunications and water and so London Underground had to carry out a programme of utility diversions.

Thames Water own much of the drainage and sewerage system and appointed Barhale Construction, in their capacity as an AMP4 / 5 Framework contractor to deliver the necessary works on their behalf in the capacity of principal contractor.

Customer Benefits...

- **Successful delivery** - The project was completed on time and to budget and all service quality objectives were met
- **Awards** - Barhale won the Thames Water Best Practice in Health and Safety Collaboration Award for its approach to public safety during the scheme and was also shortlisted for an award in the Excellence in Health and Safety Performance category
- **Live station environment** - Barhale completed works under a lot of pressure as works were conducted within a live station environment, at Bond Street which is used by 155,000 passengers a day
- **Multi-phased Traffic Management** - The attention to detail and practical application was important for the safety of cyclists, pedestrians, and road users. With such heavy volumes of pedestrians crossing the highway, temporary traffic signal controlled crossings were in conjunction with courtesy signage

Efficiency...

As the scheme was to be delivered to such a tight deadline Barhale had to ensure that they acted quickly and had contingency plans in place if there were to be any disruptions. Effective logistics management was vital in ensuring that materials were delivered on site when required. Close liaison and engagement with other contractors was important, ensuring we worked collaboratively to complete the works safely and efficiently.

Health and Safety...

In order to protect the public and minimise disruption, Barhale carried out work on the footpaths early in the morning and late at night, with excavations being backfilled prior to increased pedestrian traffic during rush hour and at weekends. Due to the nature of the works Barhale ensured all employees received a comprehensive level of health screening prior to the works starting.





Tunnelling across Tottenham Court Road using box heading tunnelling method



Construction of foul water sewers

Customer Care...

Ensuring pedestrians were safe was a key priority of the works as Oxford Street is the busiest shopping street in Europe. The works caused significant disruption to local people. Therefore, close liaison was required with Transport for London, London Underground, the local council, local residents, businesses and high street traders.

Due to the extent of the disruptions we held a Very Important Pedestrian Day. The event required the complete demobilisation from site of all Barhale works to ensure Oxford Street was safe for pedestrians. The effort and planning required for this was immense and close collaboration between Barhale, Thames Water, CoLOR and LUL resulted in the day being a success.

Technical Features...

The Soho package ran from Jan 2008 through to December 2011 and consisted of the following:

- Construction of Foul Water Sewers, up to 450mm dia. at a depth of 4.5 to 5m and, other 400mm dia sewers at a depth of 2.5 to 4.5m
- Construction of a manhole at junction of Soho Square and Sutton Row Depth: 5m
- Construction of 5 nr manholes in Sutton Row and Falconberg Mews Depth: 3.5-5m
- Temporary & permanent diversion of 24" water main in Soho Square, Depth: 2.5-3m
- Construction of 300mm dia. Fire main in Sutton Row (2nr 150mm dia. fire mains in Falconberg Mews)
- Temporary & permanent diversion of 6" water main in Sutton Row and Falconberg Mews Depth: 1-1.5m
- Reinstatement of the flexible carriageway and footpath pavements

Additional to the Soho package, Barhale were awarded the package for the permanent sewer diversion for Thames Water, so that the underground station could be redeveloped and made larger.

This project involved the installation of two manholes (MH 3 has 3.6m ID) and approximately 40 metres of stainless steel 1200 x 800mm pipe. The work involved tunnelling across Tottenham Court Road using the box heading tunnelling method for a distance of 18m. Despite very little space on site, Phase 1 and Phase 2 were completed successfully to the satisfaction of the client and the local Councils, as was Phase 3, involving the closing of Oxford Street for several months. Phase 2 involved successfully tying into the existing 1300mm diameter cast iron Northumberland sewer. The contract had to be carried out in phases, due to the main contractor having to divert services to allow Barhale to carry out the works.