

# Sussex Gardens - Phase 1

<b>Client:</b>	Thames Water, Crossrail
<b>Location:</b>	Paddington, Central London
<b>Value:</b>	£2m
<b>Duration:</b>	10 Months

## In Brief...

Barhale were contracted by Thames Water and Crossrail to re-lay a Victorian Cast Iron trunk water mains in Sussex Gardens, Paddington, West London. This work was necessary for settlement mitigation as a result of the Crossrail TBM passing under the area in late 2012. Barhale were awarded this work due to their experience of working with large diameter trunk water mains.

Phase 1 of the work consisted of:

- The slip lining of 50m of 15" Cast Iron (CI) pipe Water main with PE plastic pipe.
- The slip lining of 50m of 36" CI pipe Water main with PE plastic pipe.
- The slip lining 50m of 21" CI pipe Water main with PE plastic pipe.

**Interesting fact- The 36" water main has 16million litres passing through it every day**

## Customer Benefits...

The area is highly congested at peak times with both traffic and pedestrians (due to the surrounding tube stations). Barhale have ensured the safety of all involved through carefully designed Traffic Management and foot pedestrian management plans. The rigorous Section 61 Noise rules by the local London Borough were met successfully in an area that consists of mixed use, residential and hotel business. Barhale balanced noise generated and production to maximise Customer Satisfaction.



Launch pit photo looking East



Site compound set up & traffic management



Sound moitor points



Acoustic tent



View looking West - illustrating noise mitigation

## Contract Information...

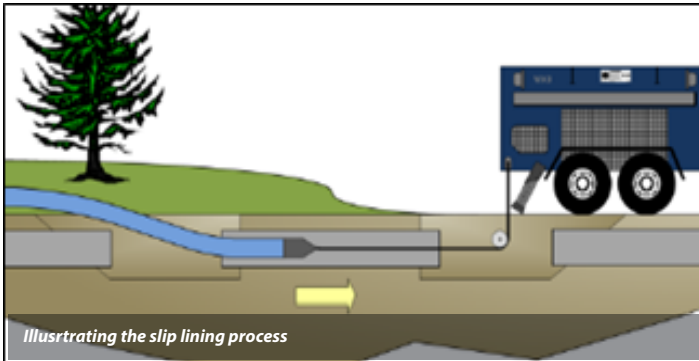
The contract used was New Engineering Contract (NEC) 3 Option E Cost Reimbursable. The contract duration was from July 2014 to April 2015. The contract was completed on-time, safely and on budget to the satisfaction of Crossrail and Thames Water.

## Technical Features...

### Slip lining

Slip lining is a trenchless technique. It involves the insertion of a new pipe into an existing pipe. Benefits are less muck-away and lorry movements, and less interaction with utilities.





Illustrating the slip lining process

### School visit...

On 4th December the site team invited a local primary school St. James and St. John CE Primary School to visit.

A number of pupils accompanied by supervisors visited the site, with the help of Ivor Goodsite from the considerate constructor's scheme. During their visit the children were invited to ask as many questions as they wanted, made hand prints in concrete cubes and had their first 'Tool Box Talk' from Contracts Manager John Prendergast.

### Innovation of safe digging practices...

One of the key features of the project to date has been successful excavation of deep pits in a highly congested utilities environment. Excavation of soil using an excavator was not an option due to buried water-mains. Barhale excavated large volumes by digging all the pits by hand and filling skips which were lowered into the pit. To avoid operative fatigue issues a trial was carried out with lighter tools. Operatives gave continual feedback and selected the tools most suitable for the job.



Hand prints in concrete cubes and the winning artist showing off his artwork

### Christmas Jumper day for Charity...

Friday 12th December was Christmas Jumper day at Sussex Gardens. All site staff and operatives were encouraged to wear Christmas jumpers, and took part in a sponsored breakfast to raise money for the chosen charity of The Salvation Army.



Christmas jumpers for charity



Barhale site management team and visitors