

Battersea Chamber

Client:	Thames Water
Location:	London Borough of Wandsworth
Value:	£420k
Duration:	9 Weeks

In Brief...

As part of a pressure management scheme for Thames Water, Barhale were contracted to carry out improvement works on 2no water mains within a Thames Water compound on Cringle Street, near Battersea Power Station. The works entailed replacing sections of old pipework and the installation of new plug valves on both Putney and Crouch Hill mains, and the construction of a new chamber for the pipework. These works allow Thames Water to better monitor and manage the pressure inside their water distribution network and thus to create an accurate profile for the pressure management of clean water for this area. This will ultimately result in more efficient asset management and an improved water supply for Thames Water's customers.



New sections of pipework with new plug valves

Technical Features...

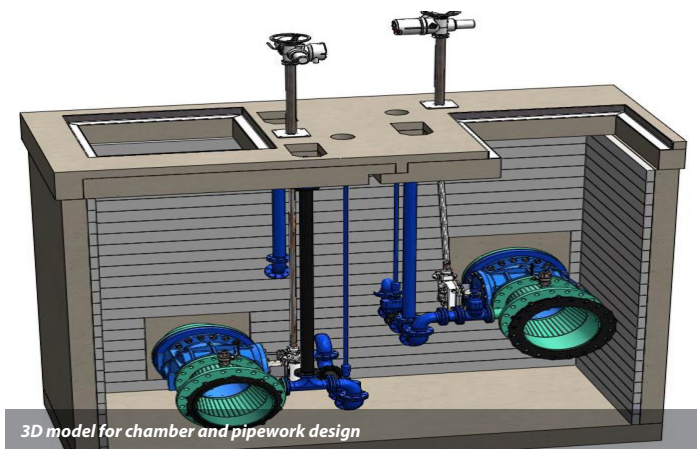
The full scope of works included:

- Excavate and expose 2no water mains
- Replace sections of old pipework
- Build a chamber to house the newly installed valves and pipework
- Install spindles and actuators for the newly installed plug valves

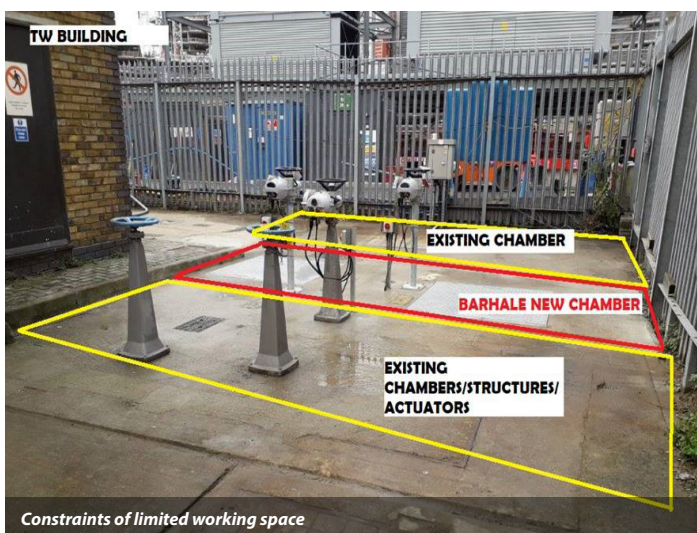
The works were intricate and the space available was extremely limited. The new chamber was built between two existing manhole chambers and a Thames Water building. These were located within a Thames Water compound, with a heavy presence of Thames Water personnel and other subcontractors. Besides the health and safety risks associated with working in a congested environment, this also raised challenges for finding a feasible, cost-effective solution for the installation of the pipework.

Barhale addressed this by working collaboratively with Thames Water to develop a detailed 3D design of the pipework and chamber. This proposed an alternative solution to the initial concept design, which had suggested casting the chamber in-situ with reinforced concrete walls. Barhale's alternative design involved using polysections with concrete surround instead. Not only was this safer, but it also saved cost and time. The team adopted working methods that were both safer and quicker. For examples, the team used a vacuum excavator when excavating around the existing pipework.

The success of the scheme hinged significantly on a thorough management of outages when cutting into critical mains. Barhale worked closely with Thames Water to ensure that the proper procedure for outages arranged by Thames Water was followed at all times. We agreed and confirmed the isolation procedure with Thames Water, and documented it with valve lock and sign off sheet. Thames Water issued all the permits once the isolation was successfully completed. Barhale also temporarily disconnected and removed 1no existing actuator and then reinstated and connected it when the works were finished.



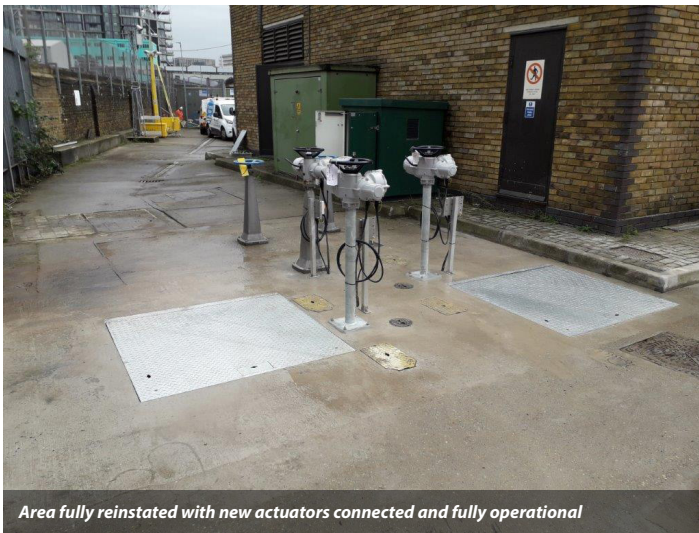
3D model for chamber and pipework design



Constraints of limited working space



Excavation works completed with temporary trench support installed



Area fully reinstated with new actuators connected and fully operational

Technical Features Cont...

Barhale exhibited collaborative behaviour throughout, and were flexible with evolving Thames Water requirements, which were speedily incorporated into the scope of works, while staying within programme. For example, Thames Water required that additional works be done to the new pipework. Barhale arranged for these to be carried out off-site, prior to installation, thus avoiding delays to the programme. After the new pipework was installed, Thames Water decided to add extra-valves to the bypass pipework. Barhale promptly adjusted the design to accommodate the new requirement and installed the valves, to Thames Water's satisfaction.