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MORRISON WATER SERVICES REDUCES THE RISK OF FUTURE PIPE BURSTS IN HACKNEY

2 years ago

As part of its ongoing work to strengthen three strategic trunk main water pipes in Hackney, London, Morrison Water Services' (MWS) Trunk Main Leakage team has been using innovative technology to reduce the impact on the local community and environment.

The project has seen MWS working with its client, Thames Water, to reline the existing (36"CI) mains. Pipe replacement can be very disruptive to the local community and environment, especially in congested areas, such as the area of the project, between Finsbury Park Road and Seven Sisters Road. Relining is an innovative alternative, which minimises the impact of the work on the local community, avoiding open cut trenches and months of road, business and customer disruption.

MWS carefully considered a selection of technology that could be used to reline the existing mains, to ensure minimised installation size while achieving minimum bore requirements post-installation. MWS, Thames Water and AECOM decided to move forward with the Die Draw method, as the network modelling prohibited any significant loss of bore. Traditional slip lining of pipes means a substantially reduced bore on the pipe being inserted, but Die Draw allows for the temporary shrinking of the inserted pipe whilst being pulled through. Once in situ, the pipe reverts to its original size, therefore allowing a substantially reduced loss of bore.

The Die Draw process involved digging down at either end of the existing pipe and cleaning it out, before laying out the new plastic liner.

The new thermoplastic liner was then pulled through a die to elastically reduce its diameter. The new plastic liner was then pulled through the old pipe. The use of the tight-fitting plastic liner allowed the same capacity as the old pipe, while reducing the risk of leaks.

Die Draw technology has resulted in less impact to the community and environment in the area surrounding the project, as it is pulled through at either end of the straight sections of the existing pipe, reducing the need for long road and rail closures, as well as noisy construction work. As the use of the Die Draw method requires less excavation and materials, it also decreases carbon over the life of the scheme.

Speaking on the project, Tom Shanahan, Project Manager at MWS, said: “This has been a great example of a project team pulling together to use technology to solve a complex issue. Traditional open cut installation of this main would have caused huge disruption to the community, but using the Die Draw technology has led to a highly successful installation, renewing a pipe that has burst numerous times in a hugely congested area, with minimal community impact and giving the largest possible capacity for water, by using this tight fit method.”

Esther Sharples, Operations Director for London at Thames Water, said: “We’re committed to reducing leakage across London, which is why we are upgrading our network of aging pipes, some of which are over 150 years old.

“Due to a history of leaks in the area, it was clear we needed to urgently upgrade our pipes. This multi-million-pound investment will build resilience for the future and keeping taps flowing for our customers.

“The Die Draw technology has significantly accelerated the project delivery and mitigated traffic build up along a busy TfL route, while reducing noise and disruption for residents in the process.”

To minimise disruption to those operating along Seven Sisters Road, the 36-inch cast iron mains are being relined in multiple phases. Phases One & Two are now complete, with the team now working on Phase Three, which is expected to be completed by early summer 2024.

MWS continue to incorporate sustainable and innovative solutions into daily operations, as well as finding long-term solutions that benefit both our clients, the community and the environment.