

PROJECT DETAILS

DEVELOPER:
Delancey

CONTRACTOR:
Multiplex

VALUE: £2m+

PROJECT START:
2021

PROJECT FINISH:
Ongoing

LOCATION:
*Elephant & Castle
Town Centre,
London*

ELEPHANT & CASTLE TOWN CENTRE DEVELOPMENT

District Heating

Project Overview

Browne were engaged by Delancey and, later by Multiplex, on several utility-based projects. Since 2021, we've delivered several complex and challenging installations, including:

1. Design & Build of S185 Thames Water Trunk Sewer Diversion
2. Design & Build of S106 Thames Water Sewer Connections
3. S278 highway works on TfL Carriageway for Proposed Site Entrances
4. Design & Build of Underpinning to Network Rail Brick Façade
5. Design & Build of Network Rail Viaduct District Heating Network.

Construction and installation of the District Heating Network took place in the heavily congested, urban area of Elephant & Castle town centre.



Figure 1 Installation of twin 450mm DH pipes

Key constraints

Installation of the district heating elements presented several challenges, including:

External pedestrian access around deep excavation works

Traffic restrictions

Compliance with London Borough of Southwark and TfL requirements

Network rail approvals

High groundwater levels

Underground obstructions e.g., conflicting utility services.

Our solution

Our ability to collaborate across the various stakeholders involved allowed us to overcome these constraints. For example, we worked closely with our partners BG&E and Geobear to create a 3D model of the Victorian station and viaduct, enabling us to map out all known underground utility services and develop a suitable methodology for the temporary works.

We gained third party approval which enabled us to install twin 450mm district heating pipes insitu within the extremely tight working space. We worked with the local council to avoid impeding on pedestrian and vehicle access. Our solution was to tunnel where possible, minimising disruption to the community in which we worked.

Positive, tangible impacts to environment and industry Net Zero targets

District Heating Networks are an opportunity for the UK energy and water sector to work towards a strong, resilient, zero carbon economy.

Heat networks distribute heat or cooling from centralised sources to a variety of customers, such as public buildings, shops, offices, hospitals, universities, and homes. These highly efficient systems have the potential to supply a few neighbouring buildings or entire cities and removes the need for individual boilers or heaters in each connected building. This reduces the carbon emissions generated from heating and cooling water at individual properties. Heat networks are inherently flexible, recovering low-carbon heat from sources that would otherwise be wasted, such as industry, energy-from-waste plants, or naturally occurring sources such as geothermal or rivers.

We also delivered greater sustainability benefits using trenchless methods as opposed to traditional open cut when installing the twin 450mm DH pipes.

Commendations

"Browne have demonstrated their technical and operational capabilities to overcome difficult issues on numerous occasions on this development. Their can-do attitude and willingness to work with third party stakeholders was paramount in the early engagement stage of the project."- **Simon Stothard, Multiplex M&E Project Lead**