VITAL ENERGi

CASE STUDY

Barking Town Centre Heat Network

BRINGING SOCIAL VALUE TO INFRASTRUCTURE UPGRADE PROJECT

PROJECT OVERVIEW

The Barking Town Centre district heat network will take heat from both the Gascoigne East energy centre and the Barking Town Centre Strategic Energy Centre (BTC SEC) facility and distribute it throughout the area to a range of council-owned buildings and residential developments.

This phase of the heat network is connecting the Town Hall, Broadway Theatre, Abbey Leisure Centre and the Axe Street, Gascoigne West and Crown House Developments, with additional organisations and housing projects planned to connect in future phases.

One of the core goals we shared with the council was minimising disruption and to achieve this we liaised with all stakeholders to learn about the issues which affected them. We then compiled a comprehensive plan which incorporated their feedback into core areas such as working patterns, scheduling, and traffic management plans.

VITAL SOLUTION

District Heating projects can involve disruption, so it's important to meet with all stakeholders at the earliest opportunity to begin plans to minimise this. This involved arranging meeting with organisations such as Barking Council, Wates, McLaren Group, Everyone Active (Leisure Centre) & developers Eco World.

Consultation often yields information which allows us to work with the community to deliver the project in a way which best suits all constituents. A prime example of this came when we were informed that the local market was due to open after COVID restrictions and we were asked if we could accelerate the delivery programme so they could reopen as scheduled, giving our team just 4 weeks to complete this section of the project.

This involved our team excavating 133m of trench, welding and jointing 266m of 300/500mm Logstor Series 2 steel mains, backfilling the trench and delivering reinstatement works. To do this we brought in additional delivery teams to allow us to work 7 days per week and, on occasions, work from 7:30am to 10pm.

The result was that we were able to meet the accelerated deadline and allow the market to open on time.

Social Value - Education

We have a core belief that our projects are opportunities to bring social value to an area and worked with

PROJECT SUMMARY:

CLIENT
B&D Energy
PROJECT
Town Centre Heat Network
TIMESCALE:
Dec 2020-May 2022

VALUE: £9m

THE BENEFITS:

- £2,000 donated to local schools.
- Local college student given 6 month work placment.
- 8 new trees planted during project.
- Hired local archaeologist to oversee digs historically important areas.
- Climate education delivered at 2 schools.

We worked with Barking Town Council to ensure social value was embedded at the heart of the project and benefitted the local community. This included tree planting and school visits.

'There was a real opportunity on this project to deliver social value, from charitable contributions and tree planting, to school visits and providing work placement. We're delighted the council workd with us to create thse fantastic opportunites'

ASHLEY WALSH - MANAGING DIRECTOR - HEAT NETWORKS
VITAL ENERGI

the local council to understand how we could bring the widest possible benefits to the community. One of the most rewarding opportunities on the Barking Heat Network project came when we got the opportunity to engage with two local primary schools. This saw our Managing Director of Heat Networks visit both St Joseph's RC Primary School and Gascoigne Primary School to take part in climate education session, teaching the children about the challenges facing our planet and how the Barking Heat Network will lower carbon emissions throughout the area.

The day also saw a tree planting event and poster design competition, with some of the winners being used on the hoarding boards across the scheme. Additionally Vital Energi donated £1,000 to each of the schools.

Social Value – Employment

We were able to engage with the local college to employ a student on a 6-month work placement which gave her real-life working experience across all aspects of the project. As part of this, they were able to undertake CSCS training, allowing her to experience the site-wide engineering aspect of the project. On completion, the candidate commented on how useful the 6-month placement had been and that it had solidified her goal of becoming an engineer.

Social Value – Local Business

We try and work with local businesses to minimise disruption and this can range from small gestures to significant contributions.

As part of the project, we made a weekly purchase of fruit from the local market for our delivery team and encouraged them to spend locally by advertising local businesses in our offices and welfare spaces.

Traffic Management

It became clear that any significant traffic restrictions which occurred in Barking town centre would potentially impact the A406 north circular road and cause massive disruption. We liaised closely with the highways team throughout the project to create traffic management plan which would ensure this did not happen.

Additionally, we carried out numerous trial holes across the scheme to assess the route and identify any potential issues at the earliest moment. This meant our traffic management plan could not be impacted by unexpected issues, such as a clash with existing services.

Delivering District Heating in a Historically Rich Environment

If we're working in a location with a rich historical heritage, we will often hire a local archaeologist to ensure works are done in a sensitive way and any finds can be fully investigated. As part of this project we installed district heating in close proximity to the historically important, 7th century Barking Abby, it was essential to have an archaeological presence to investigate any potentially important finds.

Because the Abby is historically important, we had to ensure that we did not affect the integrity of the old stone wall which ran adjacent to our trenches. To guarantee the safety of the wall we set up movement monitor to check for movement in existing cracks and carried out regular inspections to ensure no new cracks were appearing.

As excavations can traditionally involve high-vibration machinery to break through the tarmac, we needed a new approach and used a deep saw to cut through and then lift the tarmac/concrete out of the trench.

Installing The Network

We installed 4km of district heating pipework throughout the town centre, with much of the installation taking place on the highways. The pipework was Logstor series 2 with a fusion welded jointing system which ensures longevity due to its resilient nature. The network was predominantly 300mm pipework, with smaller branches off the mains to connect individual buildings.

Overcoming Storage issues

District heating pipework comes in lengths of 12m which need to be lifted into the trenches and as this project was delivered in a densely populated area of London, finding a suitable storage area can be problematic. To solve this is arranged with the local shopping centre who allowed us to place our welfare cabins of the roof of their multi-storey car park and worked with a local landowner to arrange a storage area 5 miles from the project.

Testing & Flushing the Network

The scale of the project presented the team with a significant challenge. Once installed, district heating pipework needs to be cleaned and this is traditionally done by running chemically treated water through it. On a 4km heat network this is a significant undertaking.

We ensured that our operatives delivered the project in a way which would make the flushing process as straightforward as possible. This included sealing the pipework with drainage bungs at the end of each day to protect them from debris entering the system. We also installed full bore loop in the system to accommodate the velocities of water needed for flushing.