



**PROJECT SUMMARY:**



**CLIENT**  
Energetik/Lovell/  
Countryside Properties

**PROJECT**  
Ponders End Heat  
Network

**TIMESCALE:**  
2015 - present

**CONTRACT VALUE:**  
£2.4 million

**THE BENEFITS:**

- > Innovative district heating network to connect two separate housing developments
- > Temporary solution that can be reused across Energetik's heat networks
- > Prefabricated plant room to provide programme certainty, quality and efficient installation/removal
- > Futureproofed network for connection to the larger Meridian Water Heat Network

**PROJECT OVERVIEW**

Energetik is the London Borough of Enfield's energy company. Energetik owns and manages a number of heat networks that provide heat and hot water to a series of large developments across Enfield. Energetik's long term decarbonisation plan is to link all its heat networks to a new Energy Recovery Facility at Edmonton that will, as a result, profoundly reduce the amount of carbon and NOx released into the atmosphere as a result of reduced reliance on fossil fuels.

Two new build developments were provided with district heating at Ponders End in 2017

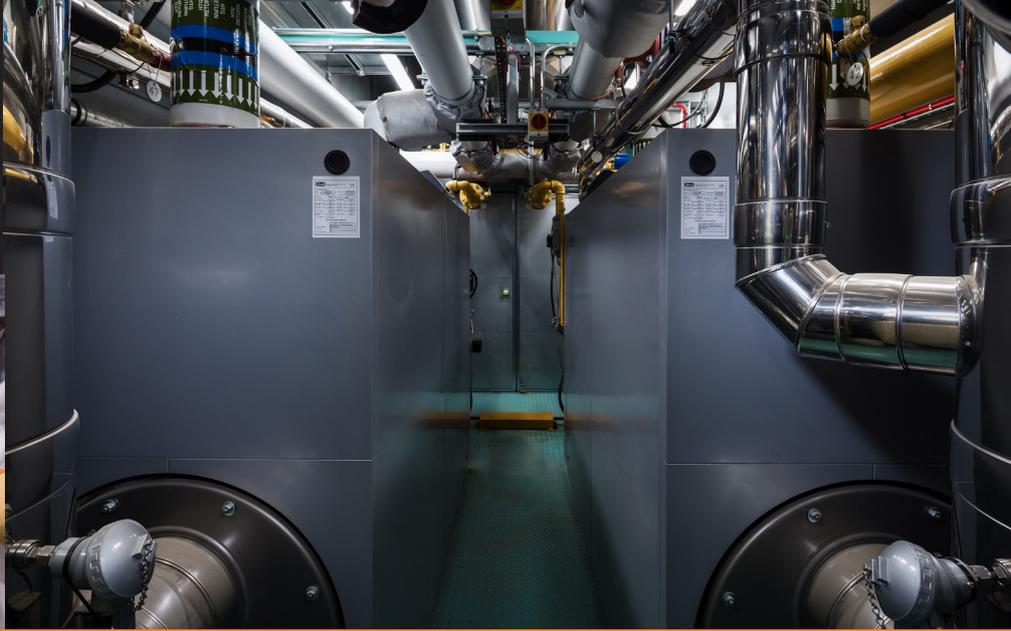
and are currently in construction with a number of phases already complete: The Electric Quarter by developers Lovell consisting of 167 properties in Ponders End, and the Elements development in Alma by Countryside Properties comprising of an eventual 1,250 properties, both presently operating on temporary energy supplies. With Energetik, Vital Energi are providing a district heating solution that will link the two developments to a permanent district heating system known as the Ponders End Heat Network, which in the longer term will connect to the larger Meridian Water Heat Network.

**VITAL SOLUTION**

To connect the two developments to a single energy centre at the Elements development via a communal district heating network. Vital Energi are responsible for the

build of the energy centre at the Elements development as well as the network extension to Electric Quarter.

▶ The first phase of the project saw the installation of two temporary plant rooms to supple the first properties at each development.



“ Vital Energi has a “real world” practical design expertise that ensures that working drawings are produced for construction that reflect a complete and coordinated installation ensuring both quality of installation as well installing it right first time. This is as important for developers as it is for Energetik. ”

IAN GUEST, TECHNICAL DIRECTOR, ENERGETIK

### ***Futureproofed network providing financial savings on construction costs***

The network has been futureproofed to cater for connections to further developments by laying pipe to the perimeters of the two developments and capping the ends to allow for easy expansion, and in the long term connection to the Meridian Water Heat Network.

By creating one heat network with a single energy centre, capital expenditure has been reduced due to only purchasing one set of energy centre equipment and the associated costs through construction. Likewise, this solution reduces future operation and maintenance costs and produces greater energy efficiencies.

### ***Innovative prefabricated temporary energy solution to abide by site spatial restrictions***

The two developments were scheduled to be completed at different times, the first being The Electric Quarter which would need

heat and hot water first. Vital Energi provided a temporary plant room to serve these first properties until construction of the district heating link and main energy centre had been completed at the Elements. This resolved the problem with its programme being ahead of the main energy centre at the Elements and allowed The Electric Quarter to be designed to connect to a district heating network.

The temporary plant room, which contains a 760kW capacity condensing gas boiler plant and pumps was to be located within a bike store. To ensure control of programme, product quality and to ensure the most efficient means of installation followed by its removal when no longer required, the equipment and plant was prefabricated offsite as part of a steel framed plantroom, which included offsite testing. The steel framed plantroom has been designed to have cladding panels added at a later date so that it can become an external weatherproof plantroom after removal from the bike store.

### ***Reusable trailer-mounted energy solution providing heat and hot water for first properties***

Properties at the Elements development are being built in phases which means that as more properties are developed, the energy demand will increase. The first properties will require heat and hot water before the main energy centre has been completed so an innovative solution was needed to cater for this demand. A prefabricated transportable trailer-mounted temporary energy centre was placed at the development to serve these first properties during the main energy centre's ongoing construction.

This was a more cost effective solution as the trailer-mounted temporary energy centre and the temporary plant room can be reused by Energetik on future district energy schemes as a temporary energy source. They can also provide a back-up source during times of maintenance.