CASE STUDY:

Over 10km of Logstor pipes at Greenwich Peninsula

Client: Knight Dragon  Contract scope: £5m  Timescale: ?
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- The largest single regeneration project
- London has ever seen
- A district heat network delivering low carbon heat into homes & businesses

Introduction

LOGSTOR is helping to shape the future of energy in the heart of London, by supplying over 10 kilometres of pre-insulated steel pipe for the low carbon Greenwich Peninsular development.

This is a significant project for Logstor, with the potential for future district-heating schemes across the UK increasing.

Comments Christopher Hill, UK Sales Manager for LOGSTOR: “Greenwich Peninsula is one of the largest regeneration projects in the UK and probably one of the most notable domestic district heating networks in Europe. We are delighted that Logstor pipes have been chosen. The decision represents a significant testament to the superior technology, quality and performance of the .”

The Greenwich Peninsula is a 190 acre brownfield development bounded by the River Thames on three sides of previously mixed land use including industrial, gas works and agricultural.

The site boasts an energy centre which is designed to generate some 87 MWth of heat. Given time, it will provide heat to more than 10,000 homes and 300,000 square metres of commercial space via the district heating network.▶

● defining network efficiency

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The development

The Low Carbon Energy Centre at Greenwich Peninsula will house technically advanced boilers and Combined Heat & Power (CHP) that will provide heat energy to businesses and 10,000 homes due to be built on the development in the coming years.

On completion, the development will also boast 3.5 million square feet of low carbon offices, shops and restaurants. The scheme is to take place over twenty years, and will eventually serve 25,000 residents of the London Borough of Greenwich.

“Choosing the correct pipe technology is very important and was determined through assessment of the technological innovation and heat-less efficiency of the pipes which had to reflect the aspirations for low carbon energy and the requirement for a cost effective solution.”

Peter Mildensteim, Design Director at Pinnacle Power, the company leading the development of the district energy centre and network on the Greenwich Peninsula

Heat energy will be distributed via a District Heating Network from the Energy Centre to each plot across the development. In this way, the Energy Centre could save 15–20 thousand tonnes of carbon.

Pinnacle Power is responsible for the design, delivery, operation, maintenance and customer service of the low carbon district energy centre and network and is working for funders of the ESCo to deliver a low risk, controlled residential based heating asset.

Project development is already well underway with installation company, Trent Energy having successfully installed kilometres of Logstor Series 3 pre-insulated steel pipework, which currently connects to phase 1, temporary energy centres and right now provides heat to 750 homes and is connected to 1000 more homes that are under construction.
Why Logstor?

LOGSTOR uses both external and in-house testing facilities to measure and control the insulation values of its pipes. This robust and transparent testing proves the insulation values obtained for all products are significantly better than demanded for pre-insulated pipe systems and the built in diffusion barrier ensures the quality is the same over the lifetime of the network.

In addition, the single components of LOGSTOR pipes are designed with the aim to ensure easy and fault free installation. Intelligent data management offers further quality assurance and the installation of a 24/7 surveillance system - LOGSTOR Detect - as an integrated part of a district heating network, means any possible fault can be identified and repaired, minimising downtime, repair costs and increasing network service life.

Performance and endurance is crucial to the ongoing success of the district heating network. We didn’t want to take on huge technology risks as we have customers that need heat 24 hours a day, every day. This is where the robust jointing system of the Logstor pipes offer extra added value to the project.”

Peter Mildenstein, Pinnacle Power

Infrastructure

Construction of the infrastructure associated with the District Heating Network involves the installation of over 10 kilometres of pre-insulated steel pipe, a bulk supply connection in 61 buildings and a heat interface unit in every apartment.

Due to the size of the development and the complexity of the build programme, Pinnacle Power has had to install intermediary energy centres around the Peninsula, each large enough to heat multiple housing blocks. These are being deployed as the development grows and as it becomes viable to connect additional properties to the phase 2 Energy Centre.

Knight Dragon already has nearly 3,000 homes under construction, with 700 homes completing this autumn and the first residents moving in this month. The scheme has a gross development value of £8.4billion.