



GRAIN CHP **150M TWIN HEAT** **PIPE MICROTUNNELS** **E.ON UK LIMITED**

The construction of piled pits and segmental shafts to facilitate the installation of 4 GRP pipejacked tunnels.

STOCKTON

**GRAIN CHP
HEAT PIPE MICROTUNNELS
E.ON UK LIMITED**

“I would have no hesitation in recommending Stockton Drilling as a potential Design and Build contractor in the areas of Horizontal Directional Drilling (HDD), microtunnelling or general pipeline installation works.”

**GRAHAM GERAGHTY
E.ON UK**

PROJECT SUMMARY

- **Full project and site management**
- **Three piled cofferdams and two 25m deep, 9m diameter segmental shafts**
- **Two 150m GRP pipejacked tunnels under the B2001**
- **Two 120m GRP inclined pipejacked tunnels under the cryogenic gas pipeline**
- **Many previously unknown services and structures, active and disused**
- **Environmental Issues from hazardous chemicals likely to be present**
- **Ecological issues from great crested newts, water vole, protected habitats and wintering birds**
- **Threat of unexploded ordnance, especially whilst tunnelling close to the cryogenic line**

THE PROJECT

The four 2.0 i.d. tunnels are to be used as sleeves for the CHP project's hot water conduits (i.e. the supply of waste hot water from E-ON's CHP station, one of the world's largest at 1,275 MW capacity, to the nearby LNG Terminal) which contributes to the station's overall efficiency of 72%.

The selected routes attempted to minimise the likely issues inherent in the brownfield site being a former major oil refinery from the 50s through to the 80s. However, despite exhaustive cutting-edge site investigation and mitigation, there were numerous interesting challenges to Stockton's engineering team including the uncharted structures and services, environmental concerns from anticipated chemical contaminations, the possible presence of wartime ordinance and ecological impacts to the more recently encouraged flora and fauna.

Overcoming these challenges, a high quality construction was provided for the installation of the product pipes.

ENVIRONMENT

The construction works were carried out close to the Medway Estuary and Marshes Special Protection Area (SPA)/ Ramsar site and the Thames Estuary and Marshes SPA/ Ramsar site. The anticipated hazards were addressed proactively by deploying Stockton's pre-established Environmental Management System.

This was tailored to the site specific risks and strengthened with the inclusion of onsite ecological and environmental staff backed up with contingency measures for the potential of asbestos and hydrocarbons, which were not required beyond the planned checks. This forward thinking went a long way to satisfying the requirements of the Medway Council planning department and providing confidence to the landowners, NGPHL.

PROJECT MANAGEMENT

As the Main Contractor, Stockton managed all aspects of the construction design and its implementation either in-house or through specialist subcontractors. The final product was vastly different to the simplistic initial concept, largely due to the latent challenges that emerged as construction progressed. Endorsement by the client's senior staff upon the project's successful completion reflects Stockton's no nonsense, relentlessly positive attitude towards getting the job done.

CONTACT US

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