

Grain CHP Heat Pipe Microtunnels

Stockton Drilling
Information
Factsheet

E.ON

UK Limited

STOCKTON

“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



Pipelines Projects HDD Specialists Management

Stockton is a specialist pipeline contractor based in the UK, operating worldwide with the largest privately owned maxi-rig fleet of directional drilling equipment in the UK. A pioneer in Horizontal Directional Drilling (HDD) Stockton combines expertise in traditional open-cut methods with state-of-the-art HDD and tunnelling techniques to successfully tackle a variety of challenging situations.

In recent years the Stockton team has grown and developed and can now offer a full project management capability – while still taking care of those specialist crossings and demanding terrain and geology.

Project and Site Management

The construction of Piled Pits and Segmental Shafts to facilitate the installation of 4 GRP pipejacked tunnels using a Herrenknecht AVN 1800 tunnel boring machine.

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 stations overall efficiency of 72%.



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

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 SDL's pre-established Environmental Management System.

This was tailored to the site specific risks and strengthened, as required, 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, SDL managed all aspects of the construction design and its implementation either by themselves or by 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 SDL's no nonsense, relentlessly positive attitude towards getting the job done.

Project Summary

- Full Project and Site Management
- Three Piled Cofferdams and two 25m deep, 9m dia. 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.

Stockton Drilling

15 Navigation Court
Calder Park, Wakefield
West Yorkshire WF2 7BJ
Tel +44 0 1924 242 128
Fax +44 0 1924 253 177
info@stocktondrilling.com
www.stocktondrilling.com

STOCKTON