

PIPE JACKING CASE STUDY

CHP Pipeline Tunnels and Shafts



www.pipejacking.org

PROJECT	CHP Pipeline Tunnels and Shafts
CLIENT	E-ON/Stockton Drilling Ltd
CONTRACTOR	A E Yates Trenchless Solutions Ltd
TUNNELLING MACHINE	Herrenknecht AVN
VALUE	£1,600,000



PROJECT OVERVIEW

A combined heat and power pipeline (CHP) was required at Grain Power Station, in the Thames Estuary. The expansion was required to triple capacity at the power station and enable up to 12% of UK gas demand to be imported through it.

DESCRIPTION OF WORKS

Shaft sinking works comprised two 9000mm diameter, 25 metres deep segmental shafts. Four 2022mm diameter pipe jacked slurry tunnels were driven from the shafts: two 145 metres and two 120 metres in length.

The tunnels provided sleeves below the existing surface features, through which the new CHP pipes passed. All tunnels were installed using a Herrenknecht AVN machine fitted with its soft ground cutter head in conjunction with bespoke 6 metre long GRP jacking pipes.

The ground conditions throughout the works consisted of approximately 4 metre depth of made ground and gravelly river terrace deposits overlying the London Clay formation for the remainder of the construction horizon. All the tunnels were constructed wholly within the London Clay formation.

Security measures on the site included an above ground reinforced concrete trough founded on concrete piles. To mitigate the risks to the asset the tunnels that ran below them were constructed at an uphill gradient.

FURTHER INFORMATION: www.aeyates.co.uk

