

PIPE JACKING CASE STUDY

Fleetwood Storage, Tunnel Works



www.pipejacking.org

PROJECT	Fleetwood Storage, Tunnel Works
CLIENT	United Utilities/KMI Plus
CONTRACTOR	A E Yates Trenchless Solutions Ltd
PIPE SUPPLIER	F P McCann
TUNNELLING MACHINE	Herrenknecht AVN 1800
VALUE	£1,400,000



PROJECT OVERVIEW

At Fleetwood, in Lancashire, the construction of a 40 metre diameter storage tank required a pipeline connection to an existing wastewater treatment works storage tank system.

DESCRIPTION OF WORKS

Four large reinforced concrete headwalls, two 1800mm diameter pipe jacks, one 40 metres, was installed using a Herrenknecht AVN 1800, and a 3 metre hand drive was installed through split face soil condition of wet loose silty sand overlying firm clay. The ground around the tunnel horizon was treated using a jet grouting process to provide stability and groundwater control.

To prevent ground loss on the launch and reception of the tunnelling machine particular attention was paid to the entry and exit seals. Movement monitoring of the existing structure was undertaken using fixed inclinometers and high frequency manual surveying confirmed that no movement of the WwTW structures occurred.

The challenging ground conditions coupled with the potential of the tunnelling works to adversely affect the existing underground storage tanks required a very cautious engineering approach to be adopted when designing, specifying and undertaking the pipe jacking works.

FURTHER INFORMATION: www.aeyates.co.uk

