

The Complete Construction Service



Donegan
Civil Engineering



Title:	<u>Clifton WwTW</u>
Location:	Clifton, Penrith, Cumbria
Client:	United Utilities
Main Contractor:	Daniel Contractors
Project Manager:	Glenn Mallinson
Programme:	8 Weeks
Completed:	March 2010
Value:	£400k

Background Of The Works:

The purpose of the project was to improve the local sewerage system in the area.

A 150mm Ø rising main needed to cross underneath the West Coast Mainline Railway and the clients designers MWH specified a 1000mm Ø sleeve pipe, constructed by a full-face TBM, after consulting with Network Rail.

During the initial ground investigation boulders were noted within the clay and when a number of trial holes were dug by the MC at the request of Donegan this became further evident.

Civil Engineering & Tunnelling Contractors

The Complete Construction Service



Subsequently Donegan approached both the MC and UU raising concerns over the size of the boulders and the specified methods capabilities.

Taking this into consideration the Network Rail were consulted and it was decided to lower the level of the drive increasing the cover and change the sleeve to a 1500mm Ø pipejack constructed with an open-face backacter.

Scope Of The Works:

Constructing a 6.00m Ø Drive shaft and a 4.50m Ø Reception shaft both approx 8m deep on opposite sides of the railway line.

Carrying out a 1500mm Ø pipejack approx 40m in length through 'Boulder Clay' from the drive shaft to the reception shaft.

Also in nearby Hackthorpe a 6.00m Ø shaft was also constructed in Mudstone which was converted into a pumping station.

