



Donegan



DRIVE SHAFT



Scheme Location:- Oakenholt, Flint

Scheme Title :- Croes Atti

Client :- Costain / Welsh Water

Value :- £0.4m

Programme Duration :- 11 Weeks

Date Completed :- March 2009

Client Project Manager :- Terry Barlow /
David Hancock

Project Description :-

The client needing an outfall, for a development from a Brown field site, had to make a connection under the North Wales Main Line, operated by Network Rail. Donegan being Network Rail approved, had been approached by Costain for a tunnelled solution. The Site Investigation showed weak clays, silts and sand, and seemed to lend itself to a Iseki Unclemole soft head solution. However whilst constructing the drive shaft, a number of large boulders were found, and a decision made to change machine type to an Iseki Super, with Rock head



TUNNELLING MACHINE RECOVERY



Scope of the works;-

To establish a working compound in a confined area outside the boundaries of Network Rail land.

Construct a working shaft, in the reclaimed estuary, contending with large boulders, and tidal influence.

Construct the reception shaft in wholly different conditions, with artesian pressure affecting the formation to the shaft base.

Acquire a completely different tunnelling machine to that envisaged, utilising, a rock head, to deal with the potential of boulders.

Construct the drive, with the Earth Pressure Balance tunnelling machine to ensure zero settlement of the Railway Line.