

The Complete Construction Service



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Civil Engineering



Title: **Croes Atti Sewer Requisition**
Location: Oakenholt, Flint
Client: Welsh Water
Project Manager: David Hancock
Main Contractor: Costain
Commenced: October 2008
Completed: March 2009
Value: £450k

Background Of The Works:

The client needed a pipeline to a new outfall for a brown field site development. A section of the pipeline had to run underneath the North Wales Mainline railway operated by Network Rail.

Being 'Link Up' approved Donegan Civil Engineering were approached by Costain to undertake a tunnelled solution.

The ground boreholes in the area pointed to a soft ground TBM ideal for silts and sands.

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However during the construction of the drive and reception shafts a number of boulders were found which required an alternative TBM capable of crushing any obstructions of a similar size.

Scope Of The Works:

Establish working area compounds on both sides of the railway line outside the zone of influence.

Construct a 6.00m diameter Drive shaft approx 8m deep and a 4.00m diameter Reception shaft 7m deep. Both of which were caissoned down in very wet sands and clays with sub-artesian pressure pushing up on the base slabs.

Source a entirely different TBM than was first envisaged, which could contend with the boulders which were encountered.

Carry out the 1200mm diameter pipejack which was approx 40m in length.

