

The Complete Construction Service



Donegan
Civil Engineering



Title: **Brunswick Road**
Location: Altrincham, Cheshire
Client: United Utilities
Project Manager: M. Moran / G. Finnegan
Main Contractor: Balfour Beatty USL
Commenced: September 2007
Completed: June 2008
Value: £1.75m

Background Of The Works:

This Balfour Beatty framework project for United Utilities required a 20.00m diameter shaft to be constructed in very wet bad ground.

As a more experienced professional in the civil engineering industry will note, a 20.00m diameter shaft is too big to safely caisson.

Therefore Donegan, having undertaken a number of shaft construction sub-contracts for BB on their framework with UU, were tasked with finding a solution which would enable the safe construction of this detention tank.

Civil Engineering & Tunnelling Contractors

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Scope Of The Works:

Install 10m long Larson steel sheet piles to form an octagonal cofferdam with 3 heavy duty tank braces to support the surrounding ground during excavation.

This would then enable the casting of a mass concrete guide collar some 9m below ground level in suitable / stable ground.

Once the collar had cured the segmental rings were built back up to ground level, the annulus between the rings and sheet piles was filled with excavated material, and the piles and braces were removed.

The shaft was then underpinned to a depth of approx 20m below ground level and the reinforced base slab was poured. Giving over 5,000m³ / 5million litres storage capacity.



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