

Neath Abbey

Overview Phase 1:

Site Location:	>> Neath Abbey
Client:	>> Welsh Water
Contract Value:	>> £4,100,000
Project Duration:	>> 1 year



Phase One tackled storage overflow in storm situations from a CSO system, into the Redgi sewer, then into a rectangular storage tank, and pumped into the first circular shaft through a screen filter. The lift pumps are capable of pumping 600 Lts per second. The length of the tunnel is 60 meters and 1200 diameter pipe was used. The dig was carried out using a tunnel-boring machine and driven under the existing Tenent Canal that supplies water for British Petroleum (10million gallons a day). It was vitally important the supply was not interrupted by damage to the canal bed.

A height restriction determined by a railway bridge dictated the design of the sewer line, so limiting the size of plant capable of working under the bridge. Particular care was taken not to cause any structural damage to the bridge.



Excavating and Piledriving opposite the Abby necessitated an archaeologist to be present at all times, to ensure nothing was unduly disturbed and to investigate any items or artefacts that may have been unearthed.



Tunnelling under the canal from Tank One



Overflow tank piled and ready for concrete lining.



Overflow tank with concrete



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Overview Phase 2:



Tank 2

Major value engineering input had led to a total re-design of the storage solution proposed for the second phase of Neath Abbey.

The final solution now includes 2Nr 9.000m deep 19.000m diameter single pass segmental shafts which will provide the required storage.



Tank 3

In addition, the inlet pipeline extension, collecting a currently off site CSO, will include the installation of 700m of 600mm dia. gravity pipeline and numerous rising main/CSO installations to connect the Phase 2 works to both the Phase 1 and existing work.



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