

M233 AMLAIRD STRATEGIC WATER MAIN

Client:

Scottish Water

Principal Contractor

Caledonia Water Alliance

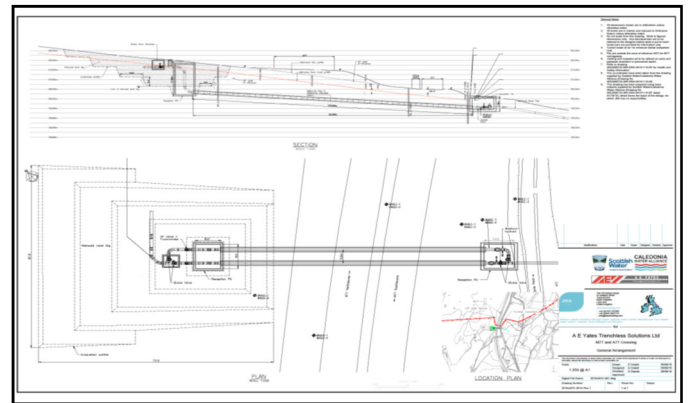
Programme

March 2016

Summary:

Scottish Water had identified the requirement to increase the efficiency of the network system in the vicinity of Gorbals to Amlaird Water Operational Area (WOA) through a series of main outs.

Caledonia Water Alliance (CWA) were commissioned by Scottish Water to deliver the Gorbals to Amlaird pipe line.



PROJECT DETAILS

As part of this scheme, a new rising water main, with a diameter of 900mm, was constructed beneath the Neilston railway line and M77 motorway near Newton Mearns. Two parallel tunnels were required at each location. The tunneling, temporary design works, Network Rail and Highways Scotland approval process was to be managed by CWA. CWA engaged AEY at an early state to develop the outline design and subsequently produce the final design and obtain the necessary approvals. JBA Consultants acted as designers for AE Yates.

The railway crossing comprised single battered drive and reception pits accommodating the twin bores and two parallel 1500 microtunnels each 80m long. The tunnels were installed using AE Yates Herrenknecht AVN 1500 TBM. Ground conditions were a mixture of clay with cobbles and large boulders (circa 1.2m diameter) and solid conglomerate igneous rock in the middle section. The M77 reception pit was a battered excavation. The drive pit however was piled and battered as there was a requirement to actively support the motorway embankment. The twin 82.5m long tunnels were constructed through basalt using AE Yates Herrenknecht AVN 1800 TBM.