

EDINBURGH TRAM NETWORK

TOWER PLACE BRIDGE, SCOTLAND (2010)



Edinburgh's urban population continues to grow. Between 2004 and 2024, the population in Edinburgh is estimated to grow by around 45,000 putting greater demands on public transport and roads. Without trams, the cities roads will not cope.

North Edinburgh is expected to continue to grow and West Edinburgh has been identified by the Scottish Government as a national growth point. The tram connects both of these development areas via the city centre.

Contractor / client - Mc Kean & Company awarded Dawson Contract Piling the contract to install 8 permanent piles which will support an extension to an existing bridge.

The extension will allow the proposed tram network to link with a new planned housing estate. The extended bridge including two planned tram lines, will have a new footpath and a duct to hold all the required cabling.

Work commenced on the 1st of April 2010 and was complete on time and budget, meeting all the clients demands.

Technical Specifications

Initially the LRB125 fixed mast leader rig was fitted with a resonance free vibrator. This then pitched and drove the 7-8m long temporary tubular piles (with an inside diameter to accommodate the permanent tubular piles).

Once the temporary work was completed, stage 2 involved the pre-augering inside the temporary tubular piles to an agreed depth. The aim was to loosen the ground and aid the alignment & position of the permanent tubular piles during their installation, without causing any contamination to the river.

This was achieved with the Dawson Hitachi Excavator fitted with a Lodril attachment

and finished with the LRB125 which had its front end equipment changed from the vibrator to an auger motor.

To complete the final stage of permanent pile installation, a resonance free vibrator was used for the initial penetration through the weak strata founding in the clays. This was then removed and replaced with a Dawson crane suspended hydraulic hammer driving the piles to refusal.

With all the work complete the temporary piles were removed using the leader rig and the resonance free vibrator.

