

CASE STUDY

GEOTECHNICAL SERVICES, BRIDGEWATER CANAL

Project: Bridge re-development
Location: Astley Green, Manchester
Client: Wardell Armstrong

Project Overview

Whitehead Hall and Vicars Hall bridges were both due for re-development. Site investigation was needed into the canal bed to determine the ground conditions for the new footings. British Waterways' popularity has grown dramatically over the last few decades and the bridges will provide much needed access for both pedestrian and vehicular traffic.

Both bridges had to be closed during the site investigations as the rig sat on the bridge, drilling down through a removed section of the bridge deck into the canal bed below. The access was obviously tight for the rig and the investigation required some fairly deep drilling, so the rig best suited for the job was our unique Vetrak®.

The Vetrak® is just 780mm wide – ideal for access across the canal bridges and along the canal footpaths. It also offers the drilling capabilities of a cable percussion rig, so we could get to the depths we needed.

Result

We were on site for two weeks, as per the programme. In that time we had to leave the rig in position over night. This gave us two issues to resolve. Firstly, we had to ensure access for boats below was safe, so we positioned the rig to enable access either side, making sure the rig was marked 'hazard aware' for both day and night time traffic. Secondly we had to organise on-site security for our rig over night.

We drilled 5m into the natural ground of the canal bed, nothing problematic was found and the report enabled the bridge re-development to go ahead.

Technical information

We drilled 6 No boreholes to 10m deep, 10 No boreholes to 5m deep including monitoring well installations, 6 No hand-dug trial pits to 1.2m deep.

Rig used: Vetrak® restricted access rig, Archway Competitor window sampling rig.

