A E YATES DIRECTIONAL DRILLING
A E YATES GROUP

CASE STUDY

TIEBAR DUCT INSTALLATION
NECHELLS, BIRMINGHAM

Drilling ducts for tiebars

PROCESS
HORIZONTAL DIRECTIONAL DRILLING

CONTRACT NO.
DD0008

GROUND CONDITIONS
MADE GROUND

This project in the Nechells area of Birmingham which makes innovative use of our Horizontal Directional Drilling (HDD) technique. Two contiguous piled walls are being tied together on a live rail project to allow the existing embankment to be removed. It is not the first time we have installed tiebars on piled walls on the railway. We have previously assisted sister company SPI Piling in installing tiebars to a steel sheet piled retaining wall. So we have form in this area but there was a key difference.

Contiguous piles are bored concrete piles constructed in a line with spaces, in this case 200mm, between them. Using our mid size Toro 4045 rig we installed 125mm diameter plastic ducts around 15m long to allow the piled walls to be tied together forming structural retaining walls. It is testament to the skill of our operators that we 'hit' the opposite 200mm spaces using only our 'walkover' tracking system.

The project has been carried out over three weekend Network Rail track possessions. Our customer excavated down to 3.5m to allow six ducts to be installed during our first visit. Tiebars and horizontal waler beams were fitted and the next 3.5m depth of excavation carried out to allow the next four ducts to be installed on the next visit. This operation was then repeated to allow the final two ducts to be installed completing our works on the project. HDD is an excellent solution for rail and highways as the duct is more or less the diameter of the drill bore resulting in no deflection of the track or road surface.