

CASE STUDY

RESTRICTED ACCESS PILING, WALSALL RING ROAD

Project: Widening of the existing Littleton Street ring road, bridge and embankment
Location: Walsall, West Midlands
Client: Norwest Holst (Vinci Construction Ltd)

Project Overview

The existing ring road consisted of 1 lane in either direction and due to the increase in traffic volumes long queues were a daily occurrence. The scheme involved installing a piled retaining wall and bearing piles to allow the road to be widened to 2 lanes in either direction.

We installed the retaining wall piles from the existing road and due to the length that these piles were to be above ground level once excavated, we anchored them.



The bearing piles were installed along the side of the main rail route between Birmingham and Stoke to take the load of the 2 new lanes of ring road to be built. This would allow the new road to span the existing rail route as the original road had done.

Result

Understanding the rail-specific issues involved on this project allowed us to utilise the correct rig for the job ensuring that both Network Rail and the client were completely happy with the service we carried out and the health and safety implications of working in such close proximity to a major rail line. The Klemm was also able to operate without infringing upon the existing ring road maintaining normal traffic flow.

Due to the pre-works preparation, the communication with the client and our team approach to the project, we achieved better production rates than expected and the client, Network Rail and the local council highways division were extremely happy with the service we provided.

Technical information

Four areas of piles: The rig used throughout was a Klemm 709 with a 5m mast height.
Area 1) East Temporary Works consisting of 33 No 450mm diameter piles to around 8.5m (reinforcement 8 No T25 full depth). Plus 25 number Ground Anchors.
Area 2) West Temporary Works consisting of 13 No 450mm diameter piles to 9.5m (reinforcement 8 No T25 full depth). Plus 12 number ground anchors.
Area 3) East Side Main Works 34 No 450mm diameter piles temp cased and drilled, to varying lengths up to 9m (reinforcement 6 No T25 full depth).
Area 4) West Main Works 33 No. 450 Diameter piles up to 9m again Temp cased and drilled (508mm dia casing).