

CULVERT REPLACEMENT AND REPAIR AT FERRYHILL

Client:

Network Rail

Summary:

Replacing Culvert STF31 which had collapsed underneath a live freight railway line.

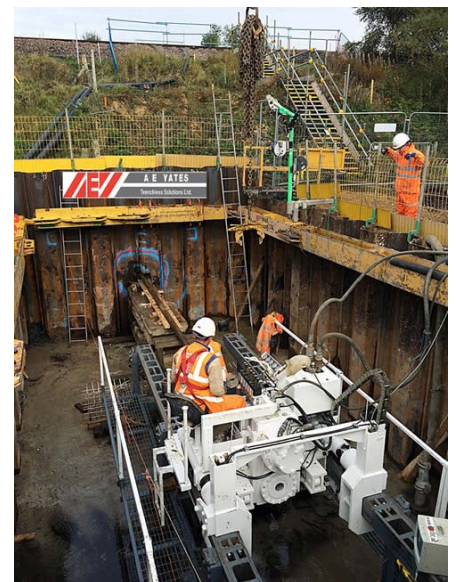


PROJECT DETAILS

CULVERT REPLACEMENT AND REPAIR

The Ferryhill project involved replacing culvert STF31 which had collapsed underneath a live freight railway line and was subsequently backfilled with concrete by the Principal Contractor. To manage the watercourse, overpumping was setup and run 24/7. The Principal Contractor, AMCO approached A. E. Yates Trenchless Solutions Ltd to assess the various different methods to construct a new culvert. Due to the location of the culvert being directly underneath a railway and in poor ground conditions, the safest and more efficient option was to use our Bohrtec BM600LSC guided auger boring machine.

Due to the geology of the site being approximately 2m peat overlying soft organic clay, we had to excavate the peat strata and design and construct a lifting platform before the pre-piled pit construction and lifting operations could commence. Two piled pits were installed either side of the railway line, serving as launch and reception pits, the 7m long piles were installed using an excavator mounted Movax hammer. The pits were excavated to 3m below ground level. Using our BM600LSC machine including a modified 1250mmOD hydraulic powered cutter head; we installed 49m of 1220mm ODx35mmWT steel pipe in 6m lengths with each joint welded using a gas shielded flux core welding technique which was tested by magnetic particle inspection. We constructed the new drainage, diverting existing land drains to the new watercourse channel and also RC headwalls at both inlet and outlet of the new pipe



GROUND CONDITIONS

- Peat and soft organic CLAY