



Client:

Sedgefield Underbridge

Location:

Norton on Tees to Ferrybridge
South line

Summary

The parapet walls of the 150 year old underbridge on the Norton on Tees to Ferrybridge South line had displaced due to pressure applied from the railway above. CML were appointed to repair and strengthen the structure. This was a challenging project, working over a main water course, with limited access.

Project Overview

- Underpinning the revetment walls of the bridge.
- Removing existing stone parapet walls and provide temporary support to the embankment.
- Temporary removing and realignment of the spandrels.
- Repairing the voussoir (arch) stones.
- Reinforced concrete retaining walls constructed in place of the failing old masonry parapets.
- Re-facing retaining walls with existing reclaimed parapet stone.
- 4 Nr 25mm galvanised steel ties installed through the railway embankment to tie the two parapet walls together using 450mm diameter pattress plates.
- Re-grading the embankment above the new parapets and installing new handrail edge protection.



Successes

Existing stone reused to maintain the bridge façade.

Precision directional drilling techniques used to drill 18 linear metres through the embankment within 100mm accuracy.