

RETAINING WALL STABILISATION MANNINGTREE, ESSEX

Client: **Essex County Council**
Main Contractor: **Jackson Civil Engineering**
Project Engineers: **WS Atkins**
Installer: **WT Specialist Contracts**

Requirements

Where the busy Ipswich to London rail line crosses the main road at Manningtree, Essex, there is both a level crossing and an adjacent underpass to enable traffic to keep moving despite frequent trains.

However, in order to avoid the possibility of any future structural problems it was necessary to secure the brick retaining wall between the two roads to ensure it was able to meet the latest EU weight loading regulations.



Solution

Project engineers WS Atkins, following previous good experience, specified the versatile and well proven Duckbill ground anchors as a rapid and efficient means of ensuring the retaining wall was fully strengthened and stabilised.

Duckbill MR2 anchors with 16mm grip bars were installed in rows into the retaining wall on both sides of the bridge by sister company WT Specialist Contracts.

Having cored through the brickwork, WT used a special installation rig to drive the stainless steel anchors 6m into ground conditions of fairly weak clays with sand present. Once in position the Duckbills were locked and set to a working load of 55kN.

To provide an aesthetic finish with no visible external plates, the brickwork had been over-cored to allow the Duckbill anchors to be fitted with recessed load plates. Once the 170mm diameter plates were fitted and the anchors locked, the cored bricks were replaced leaving the wall fully secured and with little visible evidence of the structural works which had taken place.

