



Project: Earls Mill Road

Client: Amey Ltd

Testing & Report and Concrete Repairs

Main Contractor: SWCR Ltd

Date: January 2015 - May 2015



The Problem

Following the appearance for several large cracks to the corner of the retaining wall and sinking of the steps on the inside of the wall, a full geotechnical investigation was carried out by John Grimes Partnership a firm of Civil, Structural and Geotechnical consulting engineers. The report concluded wall movement and sinkage of the steps was due to pressure from the saturated or settlement of the fill materials behind the wall.



The Solution

The John Grimes Partnership proposed using Rock Anchors drilled into the rock behind the backfill and strengthening of the existing wall to prevent any further movement.

South West Concrete Repairs were chosen to execute the works.



Rock Anchor Fixing - First step was to core drill through the existing wall and then drill through the backfill material and into the rock, fitting the Rock Anchors and grouting the position. The drilling and anchor fixing was carried out using drill rig mounted in a custom built basket on a Tel-Handler with our Subcontractors Saxton Drilling. Cast iron adjustable angel plates were then fitted to secure the wall.

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Wall Strengthening - The masonry feature corner and base wall were demolished and removed, the footing excavated around the base of the wall and new foundations laid with steel starter bars. New reinforcement erected and temporary framework fitted. Concrete pours were carried out in phases of 1200mm at a time to ensure the wall strength was uniform and no overloading could occur. FCS Construction (Sub-Contractor) played a key role in the wall strengthening part of the works.



Finishing Works - A new coping details was incorporated onto the last concrete pour and custom built shuttering boxes to form the bearing plates of the anchors were made and poured, followed by render and pebble dashing of the walls to match the rest of the retaining wall.

As the mains works proceeded additional items such as crack stitching, temporary crack repairs, fitting new weep holes, re-fixing existing coping stones, concrete repairs to the steps and other ancillary works were completed.

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