

# PROTECTAHOME LTD STRUCTURAL SOLUTIONS

Targeting problems with the best solutions

Established 1980

## STRUCTURAL REPAIRS – BERTRAM STREET, CARDIFF

Case Study: 210

### THE PROBLEM

Constructed circa 1880, this mid terraced house with forecourt is located in the centre of Cardiff.

Following a report of internal cracking, local Chartered Building Surveyors were instructed to inspect the front wall of the property for required structural repairs.

Constructed of 450mm dressed local Pennant sandstone, laid in black ash mortar with decorative brick quoins, the wall displayed a lack of lateral restraint. Consistent with this, inspection discovered a bulge at first floor level. There was also evidence present of debonding of the two skins of stone work.

### THE SOLUTION

Protectahome were employed to undertake the structural repairs with the introduction of lateral restraint and consolidation of the two stonework skins.

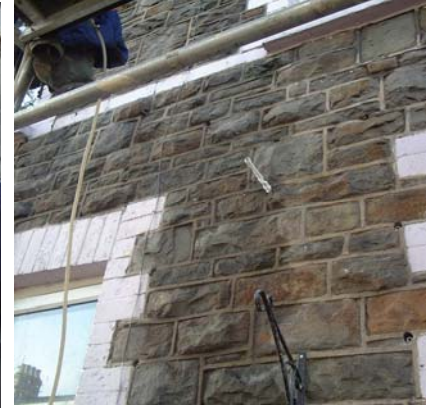
Our structural repair technicians installed a total of 75 Cintec anchors including 375mm Cintec RAC consolidation anchors to the complete front elevation.

Before the anchors were installed, wet core drilling was used to create 25mm diameter holes. An anchor with a grout sock was inserted into the holes and Presstec cementitious grout was injected to inflate it.

375mm stud anchors, which were fitted with threaded bar, were fixed at first floor level. Arm locks were fitted to these, connecting them to every other first floor joist. This provided the much needed lateral restraint.

In addition to these structural repairs, the ground floor wall between the hall and the lounge showed signs of cracking and required Helifix crack stitching. Protectahome's structural repair technicians installed 5m of Helibar to repair this.

Protectahome also issued a long term guarantee for the work.



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**0845 601 1980**  
[www.protectahome.co.uk](http://www.protectahome.co.uk)

