

Movement Joints & Crack Stitching Verallo Drive, Cardiff

Client: Housing Association

Completed: 2016

Case Study No: 262

- Helifix Approved Contractor
- Crack Stitching Repairs
- Movement Joints
- Lintel Repairs

The Project:

To repair existing cracking as a result of thermal movement and install addition movement joints to this brick built residential accommodation complex.



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Structural Repairs, Verallo Drive - The Problem

This four storey Housing Association accommodation of brick cavity construction, was suffering from cracking to the rear elevation as a result of thermal movement and an insufficient number of movement joints installed during construction.

As was the case here, thermal movement often occurs to elevations that receive large amounts of direct sunlight throughout the day. The sunlight causes the temperature of the elevation to rise and slight expansion movement to occur. If adequately installed movement joints are not present, this can lead to cracking on the elevation.

Protectahome were selected as the contractor to undertake the remedial works that involved installing additional movement joints to the full height of the elevation and installing close to 300m of Helifix HeliBar to repair several cracks and strengthen lintels across the elevation.



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Structural Repairs, Verallo Drive - The Solution

Movement joints were completed by first installing Helifix DryFix Ties to strategic areas either side of the proposed joint and, using a twin-bladed, diamond tipped wall chaser with vacuum attachment, cutting a vertical expansion slot with additional intersecting horizontal slots to the specified height and width.

6mm HeliBar was then fitted to the horizontal slots with one half of each Helibar encased in a de-bond sleeve. It is this sleeve that allows the required movement to take place following installation. Polypus Resin was used to secure the HeliBar into the masonry. The joints were then sealed using a flexible, weatherproof mastic type material to complete the installation.

To strengthen the existing lintels, a mixture of twin and single band HeliBars were installed across the full width of the elevation providing almost 300m of reinforcement. The stainless steel HeliBar was bonded into channelled out mortar beds using Helibond cementitious grout.

Using the same installation technique as the lintel repairs, 6mm HeliBar was also used to repair the existing cracking to the elevation.

All external drill holes, chases and mortar beds were repointed using matching material to leave a near invisible repair and a long term Protectahome guarantee was issued.



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