

Pre - Case Study



Main Contractor:



Approved Installer:



Treuddyn Enveloping Scheme

Client: Flintshire County Council

Sector: Social Housing
Low Rise

Building Type: Cavity Wall

Project Size: 14 Properties

Product: Structherm
Structural
External Wall
Insulation &
Silicone Render
Finish



The Problem:



The existing cavity wall ties of the properties had failed due to corrosion. Which in turn had caused cracking in the render leading to extensive damage.

In addition to the corrosion of the wall ties, the **cavity wall insulation had failed** and been extracted. Cavity wall insulation can lead to trapped moisture, cold spots, condensation and mould. Failure can occur for a number of reasons including:

- Insulation being over-packed or under filled
- Insulation has slumped in key areas
- Areas have been missed
- Vents have been blocked or obstructions missed

The client was advised to remove or isolate the failed wall ties, and replace with remedial wall ties, prior to the installation of an external wall insulation system. This would have required extensive drilling and led to almost 10 fixings per square metre needing to be installed.

This amount of drilling can cause additional damage to the external leaf and possibly destabilise the existing structure. Because of this, an external wall insulation system may not sufficiently stabilise the structure.

With this in mind, an alternative solution was required.

The Solution:

Structural External Wall Insulation - GPL125

Considering the nature of the damage, Structherm's recommendation was to install their Structural External Wall Insulation system. Each panel includes a core of rigid insulation set within a galvanised steel welded wire space frame. These frames compose of a series of warren trusses interconnected by vertical and horizontal wires.

The stability of this product ensures there would be no need for existing wall ties to be removed or isolated. The structural stability of the panel ensures any further movement will not cause future cracking

With the use of mechanical ties, the structural insulation panels are attached with only two fixings per square metre. This approach means there will be significantly less drilling and disruption to the external wall.

