

Treuddyn Enveloping Scheme

Mold, Wales

Client: Flintshire County Council

Sector: Low Rise Refurbishment

Building Type: Cavity Wall



Before refurbishment



After refurbishment



Main Contractor:
WRPS Ltd.

Approved Installer:
Thomas Niamh Contracting Ltd

Project Size:
14 Properties

Product:
GPL 125 Structural External Wall Insulation

Project Background:

In 2018, Structherm were approached to work on the Treuddyn enveloping scheme for Flintshire County Council. Several issues needed to be addressed with the refurbishment.

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 so this had to be extracted.

The client was previously advised to remove or isolate the failed wall ties and replace with remedial wall ties. All this had to be undertaken before an external wall insulation system could be installed. This would have required extensive drilling and led to almost 10 fixings being installed per square metre.

This amount of drilling could have damaged the external skin and may have destabilised the existing structure.

Design Solution:

Since a standard external wall insulation system relies on the integrity of the wall, this was not a viable option. With this in mind, an alternative solution was required.

Considering the nature of the damage, Structherm recommended the use of a Structural External Wall Insulation system. Each panel includes a core of rigid insulation within a galvanised steel welded wire space

frame cage. Warren trusses interconnected by vertical and horizontal wires make the frame.

The strength of this product ensured existing wall ties could remain in the wall; and that any further movement would not cause future cracking.

With the use of mechanical ties, the structural insulation panels were attached with only two fixings per square metre. This approach meant less drilling and disruption to the external wall.

Installed by our approved installer, Thomas Niamh Contracting Limited, the GPL 125 panels were made with 105mm Enhanced EPS insulation and finished in cream silicone render.



Results:

- Structherm's SEWI system allowed the design life of these properties to be extended by an additional thirty years - minimum.
- The aesthetic upgrade of the properties is transformational.
- The properties were thermally upgraded from 1.67W/m²K to 0.30 W/m²K.
- There was no requirement for decanting tenants.
- The client saved time and money as the Structherm structural system was a more efficient alternative to isolating or removing existing wall ties.

For further information on this or other Structherm Cladding projects please contact us on **01484 850 098** or visit: www.structherm.co.uk