

Wrexham Aireys
North Wales

Sector: Social Housing
Low Rise
Refurbishment

After refurbishment



Before refurbishment



Client:
Wrexham County Borough
Council

Building Type:
Airey

Project Size:
75 Properties

Product:
Structural External Wall
Insulation

Project Background:

From October 2016 to August 2017 Structherm Limited's unique Structural External Wall Insulation System (SEWI) was installed by one of their Specialist Approved Installers, Westdale Services Limited on to circa 75 Airey properties in Wrexham, North Wales on behalf of Wrexham County Borough Council.

The construction of Airey properties was introduced by Sir Edwin Airey and were constructed after the Second World War to ease the chronic shortage of housing. They were constructed at a time when traditional building materials and skilled labour were in short supply.

Airey houses were only designed to have a lifespan of maximum twenty years so consequently many of them have exceeded this expectation. Airey properties are designated "defective" by the Building Research Establishment (BRE).

Design Solution:

Structherm's SEWI system is a cost-effective method of extending the life of non-traditional, defective properties – both low and high rise.

The SEWI system provides a rigid, structurally continuous envelope around the property and various aesthetic finishes can be incorporated into the design.

The construction of the unique panels used is based upon a core of rigid insulation set within a steel cage. The

panels are immensely strong and rigid yet are sufficiently lightweight for handling by one individual. They can be installed both horizontally and vertically and have a maximum spanning capacity of 3.6m.

Wrexham County Borough Council appointed Westdale Services Limited to deliver a Structherm SEWI refurbishment scheme. The system being installed with an ArtBrick™ finish to the ground floor, this ensures the properties are aesthetically pleasing and of traditional appearance.



During refurbishment

Results:

- Structherm's SEWI system, combined with re-roofing and additional external work allowed the design life of these properties to be extended by an additional thirty years - minimum.
- The aesthetic upgrade of the Airey property is transformational
- SEWI is a cost-effective solution for thermal and aesthetic upgrading of non-traditional (classified defective) housing especially when compared to costly demolition and re-building
- Wrexham's Airey properties were thermally upgraded from 0.59W/m²K to 0.20 W/m²K
- There was no requirement for decanting tenants.

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