

**Shieldhill**  
Falkirk

Installer: Ailsa Ltd.

Sector: Social Housing  
Low Rise  
Refurbishment



**Client:**  
Falkirk Council

**Building Type:**  
Weir Timber

**Project Size:**  
38 Properties

**Product:**  
Structural External Wall  
Insulation

## Project Background:

From October 2017 to September 2018 Structerm Limited's unique Structural External Wall Insulation System (SEWI) was installed by one of their Specialist Approved Installers, Ailsa Building Contractors Ltd. on 38 Weir timber properties in Shieldhill, Falkirk on behalf of Falkirk Council.

The construction of Weir timber properties was introduced in 1925, but developed after the Second World War to have a frame made exclusively of timber due to the shortage of steel. The new design also included plasterboard insulation, as well as vertical timber boarding.

As with most non-traditional homes, these houses were designed to be built quickly and cheaply, with little thought for longevity and energy efficiency. These particular homes had since been finished in render and dry dash, and some also had failed external wall insulation which needed to be removed.

## Design Solution:

Structerm's SEWI system is a cost-effective method of extending the life of non-traditional 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.

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Falkirk Council specified a Structerm SEWI system, to be installed by Ailsa Building as part of a larger refurbishment scheme. The design of the system included repositioning gas meters, which reduced cold bridging.

These 38 houses were finished with a cream dry dash, in keeping with the original dash finish popular in the area. This ensured the properties are aesthetically pleasing and of traditional appearance.



## Results:

- Structerm'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 Weir timber properties is transformational
- SEWI is a cost-effective solution for thermal and aesthetic upgrading of non-traditional housing
- Falkirk's Weir timber properties were thermally upgraded from 1.26W/m<sup>2</sup>K to 0.22 W/m<sup>2</sup>K - a dramatic improvement.
- There was no requirement for decanting tenants.