

**Structherm | Cladding**  
**Maddiston**  
Falkirk

**Sector:** Social Housing  
Low Rise  
Refurbishment



**Client:**  
Falkirk Council

**Building Type:**  
BISF

**Project Size:**  
33 Houses

**Product:**  
Structural Insulated Cladding  
& Render Finish

## Project Background:

Falkirk Council recently embarked on a programme to upgrade the various non-traditional built properties in their stock and decided that they required a specialist designer / supplier to carry out the refurbishments. Structerm were in regular contact with the Architects and Quantity Surveyors and, due to their track record and their unique Structural Insulated Cladding system, were asked to assist in the design for the refurbishment of 33 BISF type properties in Maddiston.

The properties were severely defective, one had a 3ft hole in the ground floor external wall through which the internal plasterboard could be seen. All were poorly insulated and extremely expensive to heat. BISF properties are renowned for corrosion of the steel loadbearing column bases due to the ingress of water and condensation thereafter. Inspections of the column bases were carried out by cutting small exploratory holes through the walls; fortunately they were not found to be defective.

## Client Requirements:

The Council wanted a cost effective solution for externally refurbishing the houses and one that would:

- Allow residents to remain in their homes during the work without stripping back the walls to the columns
- Create a watertight and thermally efficient building envelope
- Reduce CO<sub>2</sub> emissions and lower residents fuel bills
- Improve the external appearance of the houses

## Design Solution:

Structerm's unique Structural Insulated Cladding system incorporating 80mm thick PIR insulation was chosen for the external refurbishment of the properties as it was able to be installed over the original walls and metal cladding without removing any of the original building. To complete the system a traditional York Sand Dash Receiver and Castle Harvest Dash Aggregate finish was applied to significantly improve the appearance of the properties.

## Results:

- There was no need to temporarily relocate residents as the Structural Insulated Cladding was installed while they remained in their homes.
- Thermal performance has improved greatly with the U value dropping from 0.96W/m<sup>2</sup>K to 0.22W/m<sup>2</sup>K.
- The carbon footprint of each house has reduced by virtue of requiring less fuel to heat them to a comfortable temperature. This has also had the positive benefit of reducing fuel bills for residents
- The aesthetic appearance of the properties has greatly improved with the refurbishment programme also including new windows, doors, roofs, soffits, fascia boards and guttering.

