

**Structherm | Cladding**  
**De Traffords**  
Irlam, Greater Manchester

**Sector:** Social Housing  
Low Rise  
Refurbishment

Reema semi-detached property after refurbishment



**Client:**  
City West Housing Trust

**Building Type:**  
Reema (Semi Detached & Flats)

**Project Size:**  
Phase 3 - 71 Properties  
4848m<sup>2</sup>

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

## Project Background:

City West Housing Trust (CWHT) were formed in 2008 to manage the social housing stock in Salford, Greater Manchester. The trust has a 5 year programme to upgrade over 300 non traditional properties comprising of various building types such as Unity, No Fines Concrete and Reema.

Phase 3 of the programme was for the refurbishment of 71 non-traditional Reema properties at De Traffords, Irlam. There were three different types of the Reema system on the site:

- Two storey semi-detached
- Two storey linked maisonettes
- Three storey terraced flats

Designated defective by the British Research Establishment (BRE) these Reema properties were constructed using a concrete frame and hollow prefabricated reinforced concrete panels with a coarse exposed aggregate finish.

The structural survey showed that although the properties were structurally stable the hollow panels were unsuitable for fixing standard external wall insulation (EWI) to them. The properties also had very poor thermal performance of just 1.62W/m<sup>2</sup>K and were looking dilapidated and in a bad state of repair, with previous remedial works beginning to fail.

## Client Requirements:

City West Housing Trust wanted a solution for refurbishing all the different types of property and one that would:

- Have the ability to span between each loadbearing column
- Improve thermal performance and therefore cut fuel bills
- Reduce CO<sub>2</sub> emissions
- Improve the external appearance of each property and the whole area

## Design Solution:

Structherm's unique Structural Insulated Cladding system was chosen for the external refurbishment of the properties ahead of other EWI systems as it is the only structural cladding system to carry a BBA Certificate allowing it to successfully span the loadbearing columns. It also met the clients requirements for improved thermal performance and aesthetic qualities.

The system is based on the performance of a unique, two-way spanning, lightweight galvanised steel wire space frame with a rigid insulation core - the Structural Insulated Panel. These panels were joined together with mesh to provide a rigid, continuous envelope around the properties with real structural integrity and excellent thermal performance.

A 12mm layer of basecoat render was then applied to the system which worked with the panels to provide a high degree of spanning and racking strength. To complete the system a high performing render finish was applied. On the ground floors Macerend Brick Effect render in Aldridge Red was used whilst high performing Acrylic Flesscoat Cortina TH in Cream was used on the first floors.

## Results:

- The Structural Insulated Cladding has given the properties a further life expectancy of at least 30 years.
- Thermal performance has improved greatly with the U value dropping from 1.62W/m<sup>2</sup>K to 0.29W/m<sup>2</sup>K. The properties cost less to heat to a comfortable level and thus CO<sub>2</sub> emissions have significantly reduced.
- The aesthetic appearance of the whole area has greatly improved. The client and residents are extremely happy with the results, especially the render finishes which have been used to great effect, transforming tired looking properties into homes they are proud of.

Three storey terraced flats after refurbishment showing Macerend brick effect render detailing on ground floor and between windows.

