

**Structherm | Cladding**

**Bucknall Crescent**  
Bartley Green, Birmingham

**Sector:** Social Housing  
Medium Rise Flats  
Refurbishment

After refurbishment



Before



After



**Client:**  
Birmingham City Council

**Building Type:**  
3 Storey Brick &  
Concrete Panel

**Project Size:**  
12 Flats

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

## Project Background:

Structherm has been working closely with Birmingham City Council on its large scale, five year, housing refurbishment programme. The scheme involves around 68,000 properties of which 12,000 are of non-traditional construction encompassing over 40 different building types.

These flats, in a three storey block in Bartley Green, were built using a combination of brick and concrete panels. The flats urgently required external refurbishment due to the failure of wall ties and problems with damp, condensation, water ingress and poor thermal performance. The flats were also looking dilapidated and in a bad state of repair in particular the balcony balustrades which were badly rusted.

## Client Requirements:

The client wanted a cost effective solution for externally refurbishing the flats and one that would:

- Solve the structural problems associated with failed wall ties without the need to remove them
- Improve thermal performance and therefore cut fuel bills
- Reduce CO<sub>2</sub> emissions
- Improve the external appearance of the whole block, especially the balcony areas

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The balconies prior to refurbishment were an eyesore with badly rusted balustrades.



## Design Solution:

Structherm's unique Structural Insulated Cladding system incorporating 80mm thick Enhanced EPS was chosen for the external refurbishment of the properties as it was the most cost effective solution and did not require the failed wall ties to be removed. The system spanned from column to column, 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 traditional Macerend brick effect render finish was applied to the ground floor along with a striking combination of FlessCoat Cortina Normale TH acrylic render in orange and white to the other floors. In addition metal chequer plate was installed under the windows where the balconies were to give the block a fresh modern appearance.

## Results:

- The Structural Insulated Cladding has eliminated the risks associated with the failed wall ties.
- Thermal performance has improved greatly with the U value dropping from 1.53W/m<sup>2</sup>K to 0.28W/m<sup>2</sup>K.
- The aesthetic appearance of the properties has greatly improved with the refurbishment programme in particular the balcony enclosures which were once unsightly.

The balconies after refurbishment now portray a fresh modern appearance with the use of metal chequer plate detailing.

