

Structherm | Cladding

Leven Court
West Bridgend, Dunbarton

Sector: Social Housing
High Rise
Refurbishment



Client:
West Dunbartonshire Council

Building Type:
Skarne Cruden High Rise

Project Size:
16 Storey 3000m²

Product:

- Structural Insulated Cladding & Render Finish
- Fastbrick - Real Brick Slip Cladding to Ground Floor

After refurbishment



Project Background:

West Dunbartonshire Council (WDC) are going through a programme of upgrading their Social Housing helping to bring them up to Scottish Quality Housing Standards by 2015.

Within their stock WDC has 26 high rise blocks which have been surveyed by structural engineers. One of these blocks, Leven Court, was found to have a structurally sound concrete frame but failing concrete infill panels. The building also had extremely poor thermal performance resulting in high fuel bills for residents, pushing them into fuel poverty.

Client Requirements:

WDC wanted to refurbish the block in order to extend its life by 30 years to comply with their long term Local Housing Strategy. As part of the external works WDC required a solution that would:

- Solve the structural problems associated with the failing concrete infill panels
- Improve thermal performance and therefore cut fuel bills
- Improve the external appearance of the building

Design Solution:

Structherm's unique Structural Insulated Cladding and Fastbrick systems were chosen for the external refurbishment of the building as they were able to offer solutions to each of WDC's requirements.

The Structural Insulated Cladding system is based on the performance of a unique, lightweight galvanised steel wire space frame with an insulated core. The vertical panel spanning method was used to provide a rigid, continuous envelope around the upper floors of the building.

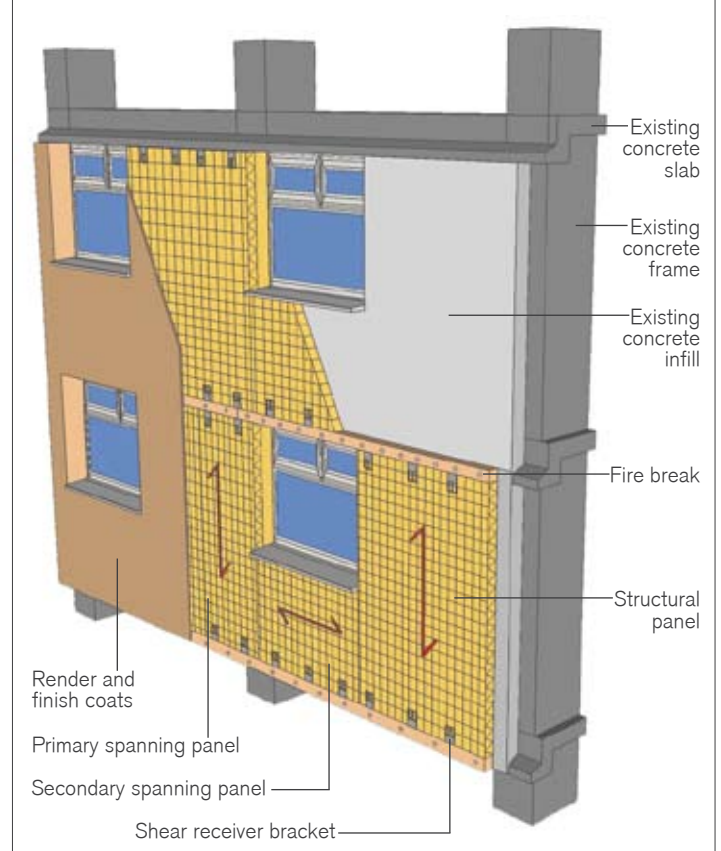
To complete the system a 12mm layer of basecoat and then a contemporary Silicone finish was applied in two contrasting colours and in two textures, fine and medium. This finished layer provided the properties with an attractive façade that fully met the client's aesthetic expectations.

On the ground floor Fastbrick, an insulated real brick slip cladding system, was chosen because of its robustness and impact resistant properties. The system comprised of a rigid phenolic insulation panel pre-bonded to a brickwork coordinating carrier sheet. The panels were fixed to the existing ground floor brick work with an additional 50mm thickness of Enhanced EPS insulation between in order to increase the thermal performance of the system. Striking blue, smooth brick slips were then fixed to the carrier sheet using a purpose made adhesive and a black pointing mortar applied.

Results:

- The Structural Insulated Cladding has stabilised all the failing concrete infill panels and anchored back areas of loose material.
- Thermal performance has improved greatly with the U value dropping from 2.83W/m²K to 0.27W/m²K resulting in each flat costing less to heat.
- The fresh, contemporary appearance of the building along with new roof and entrance upgrade have helped transform Leven Court.

Detail showing fixing method for high rise vertical panel spanning



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