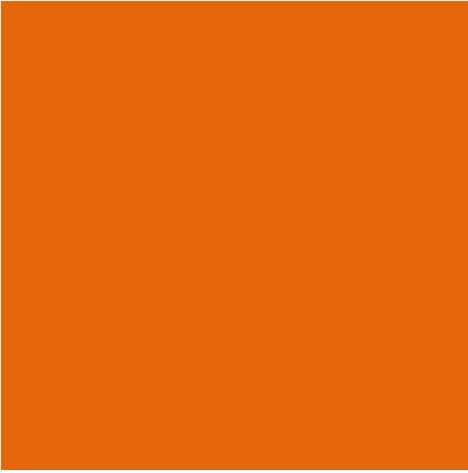


Structherm | Cladding
Port Seton
Tranent, East Lothian

Sector: Social Housing
Low Rise
Refurbishment



Client:
East Lothian Council

Building Type:
Cruden Rural

Project Size:
16 Properties

Product:
Structural Insulated Cladding
& Render Finish

Project Background:

East Lothian Council (ELC) is going through a programme of upgrading its stock of Social Housing helping to bring it up to Scottish Quality Housing Standards. ELC had previously used Structherm systems to externally refurbish Stuart Steel non traditional houses so when they were faced with Cruden Rural steel framed and precast concrete block properties in urgent need of an upgrade they once again turned to Structherm.

The Cruden Rural properties stand less than 1 mile from the coast at Port Seton, East Lothian, approximately 15 miles east of Edinburgh and are exposed to weather elements, in particular, rain and wind. Since construction in 1947 these conditions have taken their toll causing the façades of the properties to deteriorate resulting in cracking of the existing protective over coat which had failed due to the movement of the structure and concrete block walling. The fear was that the cold rolled steel column stanchions used to build the frames of the properties would also be corroded especially at the bases.

Client Requirements:

ELC wanted a cost effective solution for externally refurbishing the properties and one that would:

- Solve the structural problems associated with the properties
- Improve thermal performance and therefore cut fuel bills
- Reduce CO₂ emissions
- Improve the external appearance of each property
- Be resilient against the effects of the severe coastal weather

Design Solution:

The properties were inspected by structural engineers to determine if the existing steel columns had in fact corroded. This was done by cutting open “pockets” of each property until the steel was exposed. Fortunately the findings were positive and the columns were found to be in relatively good condition with no corrosion.

For further information on
this or other
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projects please contact us on
0800 040 7460
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www.structherm.co.uk



Structherm’s unique Structural Insulated Cladding system was chosen for the external refurbishment of the properties as it was able to offer a solution to each of ELC’s requirements.

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 fibre reinforced 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 Dash finish was applied. This finished layer provided the properties with an attractive façade that fully met the client’s aesthetic expectations.

Results:

- The Structural Insulated Cladding has stabilised all the properties and anchored back all the loose Cruden concrete precast blocks.
- Thermal performance has improved greatly with the U value dropping from 0.75W/m²K to 0.27W/m²K. The properties cost less to heat to a comfortable level and thus CO₂ emissions have significantly reduced.
- The aesthetic appearance of the properties has greatly improved with the refurbishment programme also including new roofs, soffits, fascias and downpipes as well as the overhaul of the façade.