

Structherm | Cladding
Pentwyn Court
Aberdare, South Wales

Sector: Social Housing
Low Rise
Refurbishment

Arcal properties after refurbishment



Arcal property before refurbishment



Arcal property after refurbishment

Client:
Rhondda Cynon Taff Homes

Building Type:
Arcal

Project Size:
10 Houses / 730m²

Product:
Structural Insulated Cladding
& Dash Finish

Project Background:

Rhondda Cynon Taff (RCT) Homes was formed in 2007 and is currently undertaking the largest home improvement programme Wales has ever seen. Around £170 million is being invested in homes and communities in Rhondda Cynon Taff over a five year period – and around £750 million over the next 30 years – to bring more than 10,000 homes up to Welsh Housing Quality Standard.

As part of the investment programme RCT is externally refurbishing many properties. This includes 10 non-traditional Arcal type properties in Aberdare, South Wales which have a long list of defects as follows:

- Severe corrosion of stanchion bases
- Cracking and spalling render
- Rain penetration and rot in cladding panels
- Missing or poorly fixed asbestos cement sheet cladding
- Deterioration of protective coatings

Client Requirements:

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

- Solve the structural problems associated with the corrosion
- Create a watertight and thermally efficient building envelope
- Reduce CO₂ emissions and lower residents' fuel consumption
- Improve the external appearance of the houses

Design Solution:

Structherm's unique Structural Insulated Cladding system incorporating 80mm thick Extruded Polystyrene insulation was specified for the external refurbishment of the properties as it can be installed over the original cladding. Steel repairs were carried out to the corroded stanchion bases. To complete the system a two tone dash finish was applied to significantly improve the appearance of the properties.

Results:

- The Structural Insulated Cladding and steel repairs have made the properties structurally sound and watertight.
- Thermal performance has improved greatly with the U value dropping from 1.75W/m²K to 0.29W/m²K.
- The carbon footprint of each house has reduced by virtue of requiring less fuel to heat them to a comfortable temperature. This will have the positive benefit of reducing fuel consumption for residents.
- The aesthetic appearance of the properties has greatly improved as the refurbishment programme also included new windows, doors, roofs, soffits, fascia boards and guttering.



Arcal terraced properties after refurbishment showing traditional two tone dash finish.