

Peulwys Estate
Colwyn Bay

Sector: Social Housing
Low Rise
Refurbishment



Client:
Cartrefi Conwy /
G Purchase Construction Ltd

Building Type:
Lowton Cubitt

Project Size:
230 Properties / 13,800m²

Product:
External Wall Insulation
& Render Finish

Project Background:

Following the successful delivery of a £30m housing improvement programme to bring all their properties up to the Welsh Housing Quality Standard, Cartrefi Conwy began a programme of environmental improvements. As part of this programme and its commitment to reducing carbon emissions, Cartrefi Conwy is carrying out a £4m project to improve the energy efficiency of 230 properties on the Peulwys Estate.

The properties were eligible for funding through the Community Energy Saving Programme (CESP) as they were in a Lower Super Output Area ranked in the bottom 15% of the income domain of the Welsh Index of Multiple Deprivation (2005). Cartrefi Conwy were able to secure £2.3m from CESP through Scottish and Southern Energy.

Client Requirements:

Cartrefi Conwy wanted to totally transform this deprived estate and eliminate fuel poverty, so as part of the energy efficiency measures they planned to install External Wall Insulation (EWI) to all the properties. The trust wanted a system that was cost effective and one that would:

- Allow residents to remain in their homes during the work
- Improve the thermal performance of these non-traditional Lowton Cubitt steel framed properties, which have no cavity.
- Reduce CO₂ emissions and lower residents' fuel consumption
- Improve the external appearance of the houses

Design Solution:

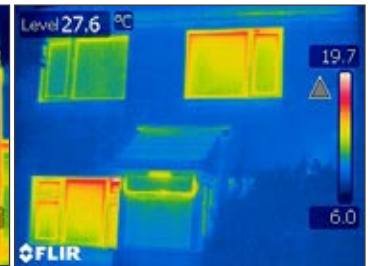
Cartrefi Conwy chose to specify a Structerm External Wall Insulation system. This consisted of a layer of high performance, 90mm thick, Enhanced EPS insulation boards fixed directly back to the brick walls and rendered timber boarding. The "High Build" render system was then applied, which was made up of two layers of 3mm basecoat render with polypropylene reinforcing mesh embedded. To complete the system the client chose a high performance through coloured Silicone render finish in six different shades, to provide a modern and fresh look to each street on the estate.

Results:

- The External Wall Insulation was installed while residents remained in their homes.
- Thermal performance has improved greatly with the U value of the walls dropping from 1.77W/m²K to 0.28W/m²K
- Carbon emissions for the estate have reduced by an estimated 54,000 tonnes and average household fuel savings are £350 helping to eliminate fuel poverty.
- The aesthetic appearance of the properties has greatly improved as the refurbishment programme also included new roof, soffits, fascia boards, guttering and porches.



Thermal image of front elevation before refurbishment shows excessive heat loss through the walls and windows.



Thermal image of front elevation after refurbishment shows dramatic reduction of heat loss through walls and windows.

Photograph showing a view of the estate after refurbishment from high ground.

