

WHITECROSS WEIR TRADITIONALS

Client: Falkirk Council
Approved Installer: AC Whyte & Co Ltd
Building Type: Weir Traditional Brick
Project Size: 60 properties (3,430m²)
System: Thin Coat NSC2b External Wall Insulation
Finish: Dash Aggregate

Social Housing Refurbishment | Whitecross, Falkirk

REFURBISHMENT OF WEIR TRADITIONAL BRICK PROPERTIES USING EXTERNAL WALL INSULATION

Project Background:

As part of their corporate plan, Falkirk Council has a specific focus on alleviating the causes and affects of poverty and addressing inequalities. Their social housing capital investment fund of £89m includes a proportion for energy efficiency works such as insulation to reduce fuel poverty.

Having used Structherm external wall insulation systems on previous refurbishment projects the council once again specified our Thin Coat External Wall Insulation system for 60 Weir Traditional Brick properties in the Whitecross area of Falkirk and appointed AC Whyte & Co Ltd as the specialist installer.

Problems:

Surveys showed that the properties were built with a 100mm thick dense blockwork inner wall and a 102.5mm thick brick outer wall with a very narrow, unfilled, cavity.

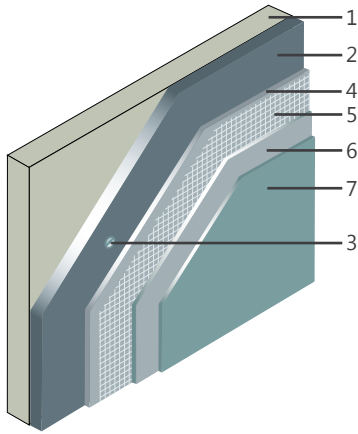
Heat loss through these walls was high and the thermal performance was calculated at a very poor 1.94W/m²K.

This was resulting in high fuel bills for residents who were having to use large amounts of energy to keep their homes warm.

Due to the age of the properties many were also looking tired and in need of external refurbishment to smarten them up.

STRUCTHERM'S EXTERNAL WALL INSULATION SYSTEM PROVIDED THE PROTECTION, THERMAL AND AESTHETIC QUALITIES REQUIRED

Thin Coat System - NSC2b



1. Substrate
2. 80mm Phenolic insulation
3. Fixing
4. Basecoat render 3mm
5. Glass fibre reinforcing mesh
6. Basecoat render 3mm
7. Dash receiver and aggregate finish 8mm

Client Requirements:

Falkirk Council wanted a cost effective external refurbishment solution that would:

- Bring the houses up to current Part L Building Regulation standards in relation to thermal efficiency requirements.
- Improve the external appearance of the houses.

Design Solution:

Falkirk Council appointed AC Whyte & Co Ltd as the specialist installer for this project and specified Structherm's Thin Coat NSC2b External Wall Insulation (EWI). The system consisted of a layer of high performance Phenolic insulation boards 80mm thick designed to meet the current Building Regulation requirements for thermal performance.

The insulation boards were fixed in to the brick outer walls using specially selected fixings to ensure there would be no failure of the system in years to come.

Basecoat render was then applied in two coats. The first layer of high polymer modified basecoat render incorporating lightweight aggregates and reinforcing polyester fibres was applied to a thickness of 3mm followed by glass fibre reinforcing mesh in roll form, embedded into first layer of basecoat render. The second 3mm layer of basecoat render was then applied over the mesh to give a thickness of 6mm.

To complete the system an 8mm layer of dash receiver was applied followed by a decorative dashing aggregate.

Results:

- Thermal performance has improved greatly with the U value of the walls dropping from 1.94W/m²K to 0.22W/m²K.
- Energy usage has vastly reduced as each house now requires less fuel to heat to a comfortable temperature. This has also helped to reduce residents fuel bills.
- The decorative dashing aggregate has brightened up the houses that were previously quite dull and drab.



Before refurbishment



During refurbishment



After refurbishment



After refurbishment