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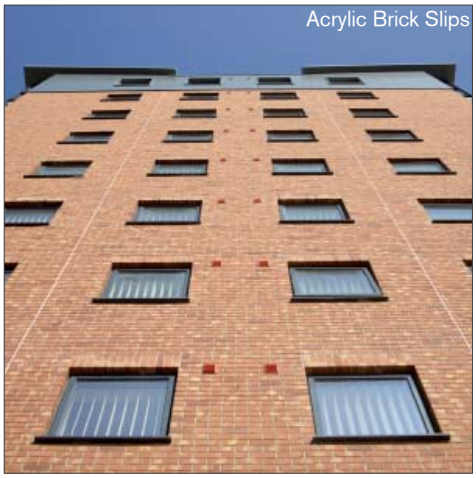
Engels House
Eccles, Salford

Sector: Social Housing High Rise Refurbishment

Before refurbishment

Photograph after refurbishment showing:
1. Acrylic brick slips
2. Silicone render finish
3. Fastbrick brick slips

Acrylic Brick Slips



Client:
City West Housing Trust

Building Type:
Solid Brick High Rise Block

Project Size:
10 Storey 1450m^2

Product:
- External Wall Insulation
- Fastbrick - Real Brick Slip Cladding to Ground Floor
- Acrylic Brick Slips and Render Finish to Elevations

Project Background:

City West Housing Trust (CWHT) was formed in 2008 to manage the social housing stock in Salford, Greater Manchester. The trust has a 5 year programme to upgrade over 300 non traditional properties comprising of various building types and 12 high rise blocks of flats.

Having completed various phases of low rise refurbishment works using Hanson Structherm external wall insulation (EWI) systems, CWHT decided to look at how one of four high rise blocks in the Barton Village area of Eccles could be refurbished.

Engels House was in a bad state of repair, from the outside it looked dilapidated and had cracks and holes where water was ingressing causing problems with damp and condensation. On the inside the kitchens and bathrooms were old and outdated, and the flats were very poorly insulated making them hard to keep warm, meaning that most of the residents were in fuel poverty.

Client Requirements:

CWHT wanted to completely transform Engels House on the inside and the outside and for it to set the standard for the remainder of their high rise refuirbishment programme.

As part of the external refurbishment CWHT wanted a solution to the problems associated with poor thermal performance and one that would:

- Improve thermal performance and therefore cut fuel bills.
- Reduce CO_2 emissions.
- Improve the external appearance of the block by using materials sympathetic to the local area.

Design Solution:

Structherm's "High Build" External Wall Insulation (EWI) with a combination of finishes and Fastbrick insulated real brick slip cladding systems were specified as they were able to offer solutions to each of CWHT's requirements.

The EWI consisted of a layer of high performance, 60mm thick, EPS insulation boards fixed directly back to the brick walls. 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 two types of finishes for the upper floors, a high performance through coloured Silicone render and Acrylic Brick Slips. Hanson Structherm were able to match the acrylic brick slips to Calderstone Gold, a local brick used on surrounding buildings.

On the ground floor the Fastbrick system was chosen because of its robustness and impact resistant properties. The system comprised of 50mm phenolic insulation panels pre-bonded to a brickwork coordinating carrier sheet. Cradley Smooth Red brick slips were then fixed to the carrier sheet using a purpose made adhesive.

Results:

- Thermal performance has improved greatly with the U value of the walls dropping from 0.35W/m²K to 0.22W/m²K
- The carbon footprint has reduced as it now requires less fuel to heat each home to a comfortable temperature.
- The aesthetic appearance of the flats has greatly improved as the refurbishment programme also included enclosure of the balconies to create conservatories, and the installation of new energy efficient windows.
- Other improvements to the flats included new kitchens, bathrooms, ventilation system and an award winning solar powered heating system.

Fastbrick on ground floor with Silicone render detailing around windows

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