Expanding possibilities

Case Study

Stylite External Wall Insulation - PlusTherm

Social Housing Refurbishment

Project: Social Housing Refurbishment
Location: Alloa, Clackmannanshire, Scotland
Sector: Walls
System: Stylite External Wall Insulation - PlusTherm
Size: 105 Houses / 10,000m²
Client: Clackmannanshire Council

The Stylite External Wall Insulation boards offered the following key benefits to our client:

- ☑ Excellent thermal performance
- ☑ High compression and tensile strength
- ☑ Minimal water absorption
- ☑ Lightweight
- ☑ Cost effective

Problems

Clackmannanshire Council are currently carrying out necessary refurbishment and upgrading of its social housing stock. Through cyclical maintenance inspections and stock condition surveys 105 properties were identified as being constructed from Wimpey No-fines concrete. These property types have no wall cavity and therefore no insulation, resulting in an extremely poor thermal U-value of just 2.1W/m²K. The properties were also very unsightly having had no external maintenance for many years.

Client Requirement

Through the Housing Capital Improvement Programme, Clackmannanshire Councils objective is to maintain its housing stock in the best possible condition and to ensure that every household has access to good quality and affordable homes that meet their needs. Providing insulation to improve the thermal performance whilst also improving the appearance of these Wimpey No-fines properties were the priority.

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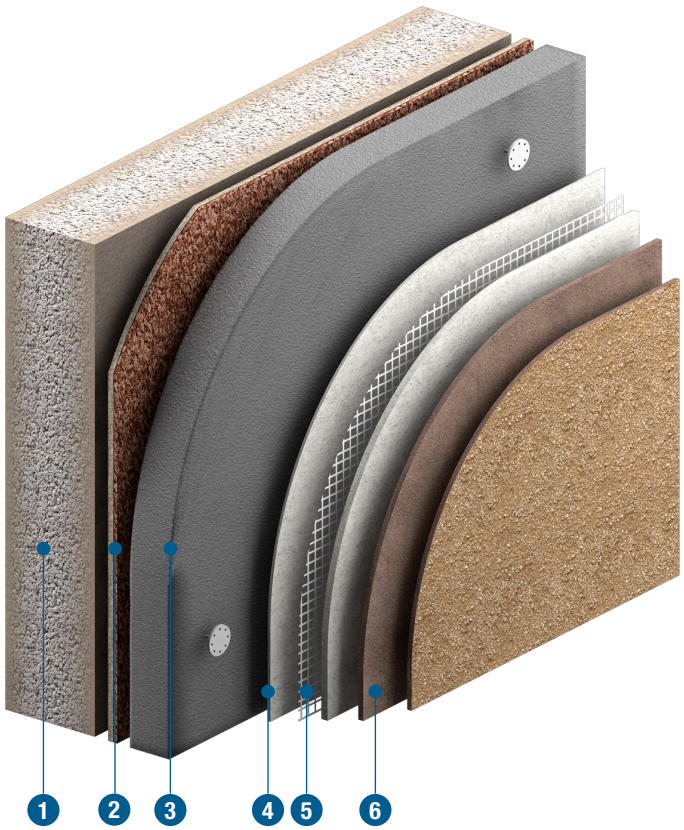
Project Build up

1. Wimpey no-fines concrete wall
2. Existing layer - dash receiver and aggregate
3. PlusTherm
4. Base coat render
5. Mesh
6. Dash receiver and aggregate



Design Solution

The contractor, working on behalf of the council, specified an External Wall Insulation (EWI) system incorporating Stylite PlusTherm Expanded Polystyrene (EPS) insulation boards. These lightweight boards measuring (L)1200 x (W)600 x (T)90, were mechanically installed over the existing façades. Base coat render and a final traditional dash aggregate top coat were then applied to the insulation boards to provide a protective and weatherproof finish to the properties.

Result

The external wall insulation system achieved a low U-value of 0.3W/m^{2}K to meet current Building Regulations. This level of thermal performance resulted in reduced energy usage and lower energy bills for the residents.

The final dash aggregate topcoat provided the system with a watertight finish and excellent weather resistance and an attractive façade that fully met the councils aesthetic expectations.

“We like to use Stylite EWI boards whenever we can as EPS is cost effective, yet durable, lightweight, and completely recyclable. We worked closely with SPI to select the best product for the job and to ensure it provided the necessary insulation value.” EWI System Designer

U-Value
0.30 W/m^{2}K

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