

Press Release

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ThermoShell Is Put To The Test On Laboratory Refurbishment

Responding to the need to upgrade the energy efficiency of an existing building in creating its new laboratory facility in St Helens, Knauf Insulation installed its ThermoShell® External Wall Insulation (EWI) system.

With the objective of uniting all departments together under one roof, the Knauf Insulation Process and Product Development (PPD) Laboratory building has undergone a refurbishment programme, which has resulted in a highly insulated and thermally efficient building fabric replacing an extremely inefficient one, as well as exchanging the existing windows and roof.



Architects Gornall Cross, based in St Helens, assisted in the new design, which incorporated Knauf Insulation's ThermoShell EWI System, as a cost effective, thermally efficient solution to insulating solid and hard to treat walls.

To upgrade the thermal efficiency of a solid wall requires an insulation layer to be installed either on the internal surface (Internal Wall Insulation, commonly known as IWI), or on the outer surface of the wall, EWI. "In this instance, EWI was the most fitting solution," said architect Stephen Culley, "as it avoids any internal disruption, so it is particularly suitable for large residential properties, flats and office buildings."

The system has been designed for the lifetime of the property, protecting the existing façade from the effects of weathering and extending the longevity of the building. Installing an external wall insulation system also provides the opportunity to enhance and upgrade the appearance of the façade, which was an attractive prospect to Knauf Insulation.



The cost-effective ThermoShell system can upgrade a property to current Building Regulation thermal standards and beyond, drastically reducing carbon dioxide emissions and in turn helping to significantly lower energy bills.

Main contractors Ibbotson Construction, along with leading insulation installers Mark Group, installed the system, which comprises 10mm hand or machine applied bonding mortar, with 130mm ThermoShell rock mineral wool slabs mechanically fixed to the existing walls. Designed specifically for the refurbishment of existing solid walls, the highly breathable ThermoShell Rock Mineral Wool System is both robust and durable, whilst having superior fire rating performance as it is non-combustible and classified as A1 to BS EN ISO 13501-1 – a crucial requirement for any public building.

The insulation is finished with a 5-7mm layer of reinforcing mortar, which can be applied by either hand or machine. One of the most important elements of the system is an alkali resistant glass fibre mesh, which is installed to add protection to the system and to help prevent cracking. A quartz sand primer is then applied over the dry reinforcing coat providing superior adhesion before finishing off with a UV resistant / low maintenance topcoat render over the entire system.

David Sherlock, Divisional Head - Solid Wall Systems from Mark Group Ltd explains: "As an approved Knauf Insulation installer we were pleased to have the opportunity to be one of the first in the UK to install the Knauf Insulation ThermoShell EWI system. The ease of application and technical robustness of the system makes it ideal for such applications."

Gary Peacey, EWI Development Manager at Knauf Insulation comments: "In terms of non-domestic properties, there are almost two million in the UK, which are responsible for approximately 17 per cent of our carbon emissions, making this a key area of opportunity for fighting climate change. One of the easiest means of improving the energy performance of any building is upgrading the insulation in the fabric.

"The ThermoShell range also includes an Internal Wall Insulation (IWI) option providing a solution to properties where internal insulation is preferred or more suitable. By offering both EWI and IWI, the ThermoShell systems offer ideal solutions for upgrading existing solid wall constructions while still delivering high levels of thermal performance, giving developers and installers alike greater choice and flexibility in specifying the right application – or hybrid solution to suit the particular project requirements."



For more information on Knauf Insulation's ThermoShell EWI system please visit
<http://www.thermoshell.co.uk>

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