

News from Kingspan

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KINGSPAN FOR 'SUPER-INSULATED' PIONEERING LOW CARBON DEVELOPMENT

Kingspan Insulation has helped a pioneering mixed-use refurbishment in Leeds to reap a 60% increase in overall energy efficiency, thanks to a design combining high specification insulation with cutting edge renewable energy technologies.

The Greenhouse, a former workers' hostel, is the latest project from Citu. The seven-storey development designed by West and Machell Architects has been refurbished and extended to house 166 one, two and three-bedroom apartments, plus office space, transforming the 1930's art deco brick and concrete building.

When compared with a conventional development, the £27m scheme is anticipated to save 169 tonnes of carbon and 3.8m litres of water each year – not to mention an estimated £600 per year in energy costs for each resident. The new building which has received awards, including Project of the Year at the INCA Awards, will easily achieve Level 4 of the Code for Sustainable Homes but is expected to achieve Level 6 once the definition changes to recognise off site renewable technologies.

Pivotal to this success is the external wall insulation for the rendered structure, as Anne-Marie Armstrong for Wetherby Building Systems Ltd (WBS) explained “One of the key factors in this development was the design of the external wall insulation system, which required an ambitious U-value of just 0.15 W/m²K. We supplied the WBS External Wall Insulation System for The Greenhouse, incorporating 130mm Kingspan Kooltherm K5 External Wall Board. This system was the only one that offered enough flexibility for a development of this scale, where refurbishment and new build techniques were required and a modern seamless façade had to be achieved regardless of the building’s substrate.”

The Kingspan Kooltherm K-range comprises premium performance rigid thermoset insulation for roofs, walls and floors. Its unrivalled thermal conductivity (as low as 0.020 W/m.K) can help achieve excellent U-values even where space is at a premium. Kooltherm is safe and easy to install producing no irritable fibres; and provides reliable long term thermal performance over the lifetime of the building.

Kingspan Insulation Thermataper TT47 was also installed, under a Sarnafil G410-12EL membrane, on the Greenhouse’s flat roof, achieving a U-value of 0.10 W/m²K. Kingspan Thermataper Systems comprises high performance rigid thermoset insulation and can extend the life of a roof by providing excellent water run off and reducing the risk of ponding, whilst maintaining high levels of long-term thermal performance.

The Greenhouse’s pioneering technology includes: a ground source heat pump to supplement heating; solar panels for hot water; roof wind turbines to provide an electricity source for communal lighting and lifts; and recycled water. Residents can exercise control over their energy usage by keeping track of their CO₂ emissions in real time through the IPTV energy monitoring system, which allows them to view utility bills and CO₂ output via their TV.

The Greenhouse was recently awarded the CEDIA (Customer Electronic Design and Installation Association) award 2010 for Best Multi-Dwelling Installation, commended by the judges for being “a unique installation that brings social and environmental responsibility to the fore”.

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Notes to Editors

A member of the fast-growing Kingspan Group plc, Kingspan Insulation produces the widest range of insulants available from any UK or Irish manufacturer. They are the market leader in the manufacture of rigid phenolic and rigid urethane insulation, and offer products for use in the industrial, commercial and housing sectors.

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