



Mixed-use development completed using the Kingspan TEK® Building System

Project Brief

The Kingspan TEK® Building System has been used to construct an apartment block situated above an Aldi store in Blaby, Leicester. A hybrid steel, timber and concrete structure was specified for the building to meet the unique demands of the architectural design.

The Kingspan TEK® Building System is based on SIP (Structural Insulated Panel) technology. It is able to deliver very low U-values due to its composition of 110 mm of high performance insulation core, which has zero ODP (ozone depletion potential) and low GWP (global warming potential), sandwiched between two sheets of 15 mm OSB/3. Thermal performance is further enhanced by the high level of air-tightness and low thermal bridging the system delivers. This is primarily achieved by the panel's unique sealed insulated jointing system. The OSB/3 boards are autohesively bonded to the insulation core during manufacture resulting in superior adhesive strength and premium structural properties.



Project Type/Application

Designed by Birmingham based architects, Dalkin Scotton Partnership Architects Limited, the development comprises 22 apartments, across two storeys above the retail unit. The apartments were constructed using the Kingspan TEK® Building System and completed with a reinforced concrete curved-seam roof.

The combination of the Kingspan TEK® Building System with the steel frame system used for the Aldi store itself, within this project highlights the flexibility of SIP technology and in particular the Kingspan TEK® Building System. The System clearly demonstrates excellent thermal performance and structural performance while providing designers with all the flexibility expected of a Modern Method of Construction.

The use of the Kingspan TEK® Building System for the apartments above the Aldi store also allowed this section of the project to be completed quickly, creating a complete weather-tight structure on site faster than may have been the case with a traditional building method.



Outcome/Result/Success Factors

This development highlights the ability of the Kingspan TEK® Building System to meet the increasingly technical challenges presented by modern building design.

Bob Pudge, Construction Manager at DSP Construction Management Limited, commented: "The Kingspan TEK® Building System was an ideal solution for the apartments above the Aldi store. It allowed us to have the design flexibility, whilst providing proven structural and thermal performance. After the success of this project, we have specified the same hybrid building system for a second site."



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