



## The UK's largest off-site housing development using the Kingspan TEK® Building System

### Project Brief

The Kingspan TEK® Building System has been used by affordable housing developer, Lovell, to construct 80 homes in the first phase of 'The Way' development in Manchester, which will consist of 550 high performance, affordable homes on completion, making it the UK's largest residential development built using off-site construction techniques. The project required excellent energy performance alongside flexible design potential.

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 110mm 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.



### Project Type/Application

Paul Jeffrey, Director at Manchester based architects Bowker Sadler, specified the Kingspan TEK® Building System for 'The Way' development. He commented: "Having designed the houses from inside out and outside in, with the living experience to the fore, we then looked in detail at the technical challenges this presented. The client had an aspiration for off-site manufacture and the benefits of an integral structural insulated panel with good thermal properties could not be ignored. Hence SIP technology was selected by Lovell and it quickly became evident that the Kingspan TEK® Building System would be flexible enough not to have to compromise on aesthetics."

The Kingspan TEK® Building System was able to meet the energy performance requirements of the brief while offering all the additional benefits of modern off-site timber construction techniques such as fast build speed, minimal on-site waste and excellent sustainability credentials.



## Outcome/Result/Success Factors

The performance of the Kingspan TEK® Building System has impressed Paul Jeffrey - Director at Manchester based architects Bowker Sadler - "Given the U-values and air-tightness that the TEK® Building System provides, larger glazed areas have been possible, thus gaining a balance in terms of thermal efficiency. Allied to the use of off-peak electricity and a gas fed boiler capable of generating electricity, SAP targets for the development have been achieved and running costs for the houses will be economical."

Paul Hulme the Regional Director at Lovell explains that "...innovation informs every aspect of The Way, from the design of the homes and the use of the Kingspan Off-Site TEK® Building System, to the incorporation of advanced energy saving features. We have had a tremendous response, both in terms of the reaction to the development locally and the response from home buyers, with all 80 homes in the first phase selling extremely quickly."



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