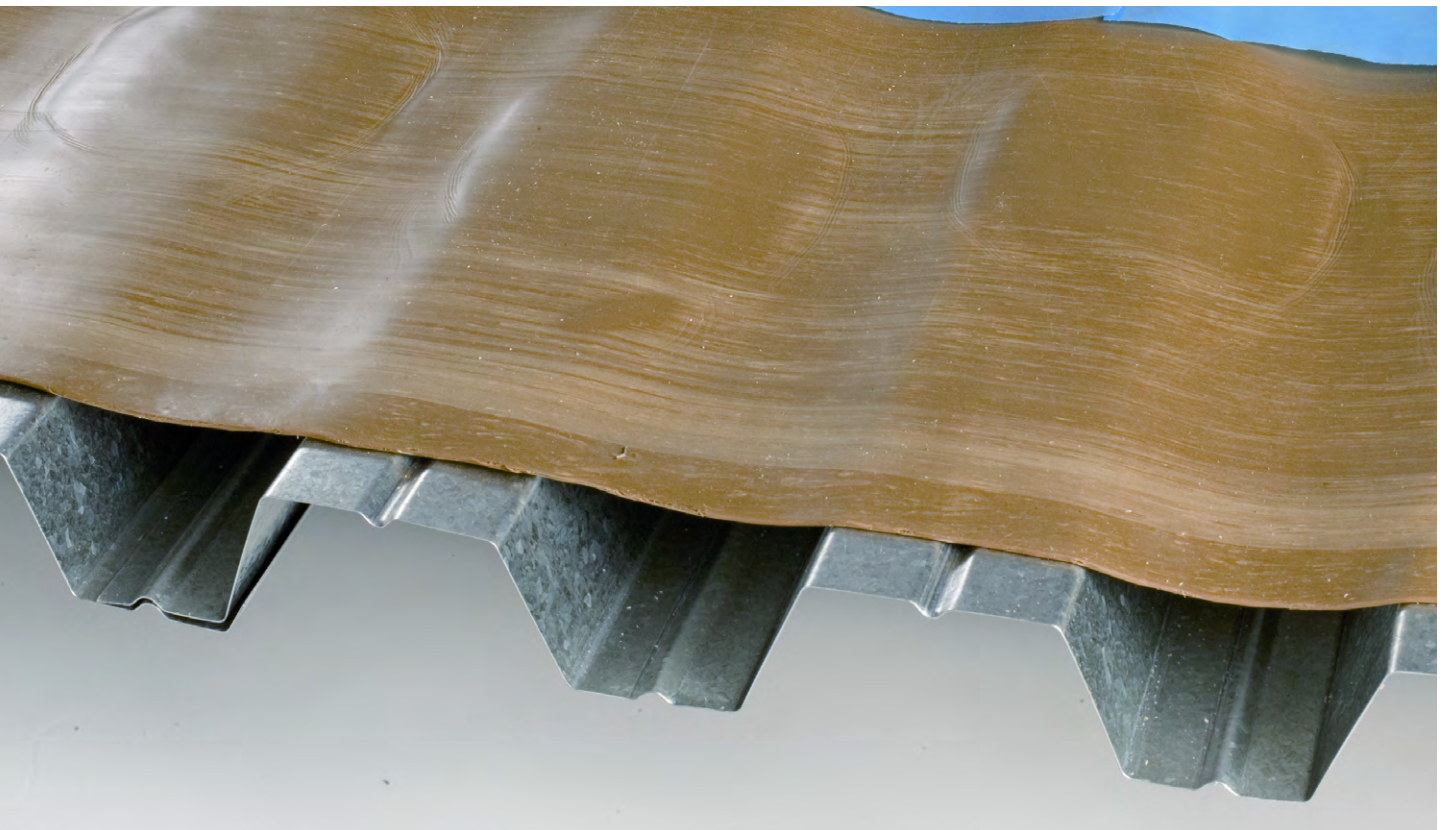


Case study

# ROCKWOOL® provides acoustic solution to Kier HQ

Kier Construction HQ, Cambridge





## The project

Kier Group is a leading property, residential, construction, and services group which invests in, builds, maintains, and renews buildings operating across many sectors, including housing, defence, education, power, transport, and utilities.

Kier has a long-standing relationship with the Cambridgeshire area, having worked on 23 projects with the University of Cambridge so it was no surprise when they decided to build their brand new three-storey headquarters in the Cambridge Research Park. Although delivering the project themselves, Kier decided that with a flat roof forming part of the design they required a roofing material that would provide exceptional acoustic management, good thermal insulation and a high quality finish that needed minimal maintenance.

Kier handled both the design and delivery process and worked directly with Cottenham based roofing contractor, Voland Roofing, on this project.





## The challenge

The primary challenge faced during this project was Kier's stipulation that the new roof deliver high levels of acoustic performance.

Kier wanted the roof to not only insulate against airborne sound, but also to reduce noise from the impact of raindrops on the roof. This meant that Voland Roofing had to achieve Rw 41 dB airborne sound reduction and Rw 52 dB LiA rain impact noise. Alongside this, it was important that the roof provides long term thermal performance to keep the building warm and reduce heating costs.



## The solution

Voland Roofing was responsible for installing ROCKWOOL® HardRock® Multi-Fix (DD) and HardRock Multi-Fix (DD) Underlay, with the ROCKWOOL Acoustic Membrane to cover the flat roof.

Having worked with these products previously, Voland Roofing was familiar with the installation process, allowing the project to be completed in good time.

HardRock Multi-Fix (DD) was installed within a mechanically fixed EPDM system. With only one fixing required per m<sup>2</sup> of the total insulation thickness, this significantly reduced the complexity of the installation, cutting time and costs. The vast roof space on Kier's new building is on two different levels. The ROCKWOOL solution had to be flexible enough to accommodate the change in level and be installed smoothly and tightly around all the corners and edges. Thanks to the ease of installation of these products this didn't cause a problem for Voland Roofing.

The ROCKWOOL HardRock Multi-Fix products have been tested within a range of acoustic roof systems in accordance with BS EN ISO 10140-2:2010. When used in tandem with the ROCKWOOL Acoustic Membrane it offers a complete acoustic system. Another added benefit is that this solution can be used with a variety of roof systems.

Approximately 1100m<sup>2</sup> of the 60mm HardRock Multi-Fix (DD) and 1100m<sup>2</sup> of the 150mm HardRock Multi-Fix Underlay were laid across the roof, with 1100m<sup>2</sup> of 5kgm<sup>2</sup> ROCKWOOL Acoustic Membrane laid directly beneath the insulation.

In addition to the acoustic properties ROCKWOOL HardRock Multi-Fix products provided 0.039W/mK thermal conductivity, and offered a Euroclass A1 Fire Classification, the highest class for non-combustible products that do not contribute to a fire.

ROCKWOOL's products have provided the new Kier Construction offices with a complete roofing solution that more than satisfies the brief which Voland Roofing was set. They significantly reduce the airborne and impact noise and effectively insulate the building, which also helps to lower costs for Kier.



## The result

For its new office, Kier required a roofing solution that reduces noise, insulates the building efficiently, and has a long lifespan.

ROCKWOOL provided a tested acoustic system that has not only met all the key requirements, but its non-combustible properties meet the highest European fire classification performance, achieving an A1 rating. The ROCKWOOL boards also provide a long term and stable thermal performance.