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Cartwright Gardens, London

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Client: JP Dunn

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Main Contractor: BMCE

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Architect: TP Bennett + Engle

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Acoustic Consultant: SRL Technical Services

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## Challenge

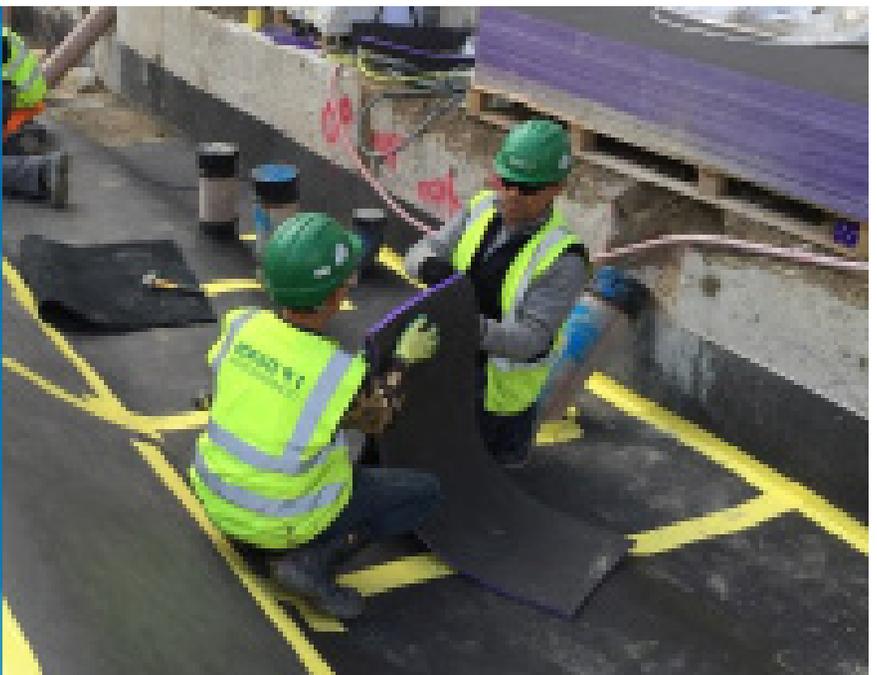
**Cartwright Gardens is a major redevelopment project in the prestigious Bloomsbury Conservation Area of Central London delivering 954 modern student rooms in partnership with The University of London (UoL). Through the refurbishment of intercollegiate accommodation, the outstanding new scheme combines high quality architectural design with extensive social facilities and public access to newly redesigned gardens.**

The key challenge on this project was that the new design included keeping the existing building slab and sub structure. This presented a design problem as the site overlays part of the London Underground network producing disturbing vibrations that would require uniform deflection. The south end of the building is built over Piccadilly Underground rail line with a third of the building requiring acoustic isolation. Proximity to the underground tunnel and problems with the soil strata below required a 500-650mm reinforced concrete raft-slab as the foundation design for the new building.



Quote from the Client goes in here, ideally from the Main Contractor.

Amir Shirazi  
Senior Contract Manager,  
JP Dunn Construction



## Solution

Farrat worked closely with the project acoustic consultants (SRL Technical Services) to develop a full-area isolation system based on Farrat's Verlimber VR27 material

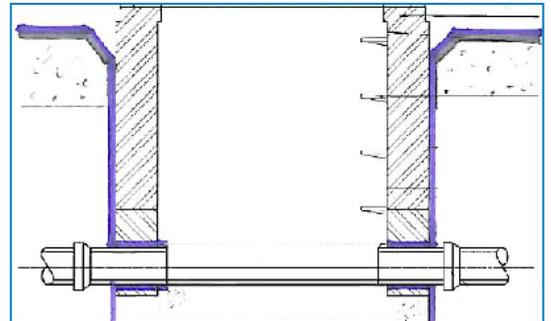
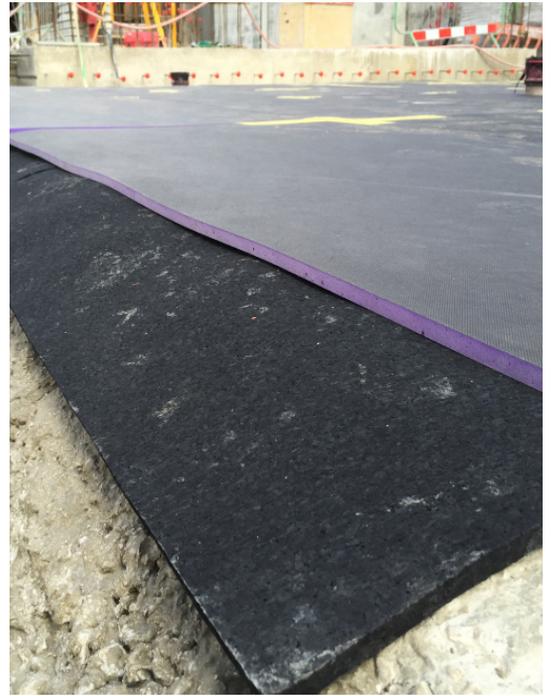
for this complex project. The depth of the raft slab meant that loads from the building above were spread fairly evenly, presenting even pressure to the ground below and resulting in no concentrated load points to support with Acoustic Laminated Bearings.

This high-performance polyurethane material had the ability to provide the necessary level of vibration isolation ( $f_n = 22\text{Hz}$ ) at a thickness of only 12.5mm, however an additional 12.5mm layer of Farrat Favim FV10 was also provided to protect the Verlimber from protrusions/imperfections in the blinding layer.

Farrat Verlimber VR27 was ideally suited to this project as it has a closed-cell structure meaning that its performance would not be affected if it got wet. It is also highly flexible, which allowed it to easily follow the unusual contours of the underside of the raft slab, as well as wrap around any protrusions or service penetrations.

Farrat delivered over 2100 sheets of isolation material to this project, and were able to help the main contractor manage the tight space on site by storing the material locally and making weekly drops as installation progressed.

In addition to supplying the isolation material, Farrat provided a training and supervision service which involved training the main contractor's operatives to install the product and visiting the site regularly to check installed works.



## Key Facts

Farrat provided over 2100 sheets of Isolation material including Farrat Verlimber and Farrat Favim

1,894m<sup>2</sup> Full area mat Verlimber Vibration Isolation (22Hz)

Overall contract value of approximately £235,000