

# Case Study - Bespoke floating floor Structural isolation



## University College London

<b>Client</b>	University College London
<b>Acoustic Consultant</b>	Sharps Redmore Partnership
<b>Isolation Area</b>	55m <sup>2</sup>

### In brief

CMS Vibration Solutions has delivered a bespoke floating floor isolation system for University College London, to prevent exercise activity in the free weights area of its third floor gym from causing excessive noise in the Bloomsbury theatre below.

### Project scope

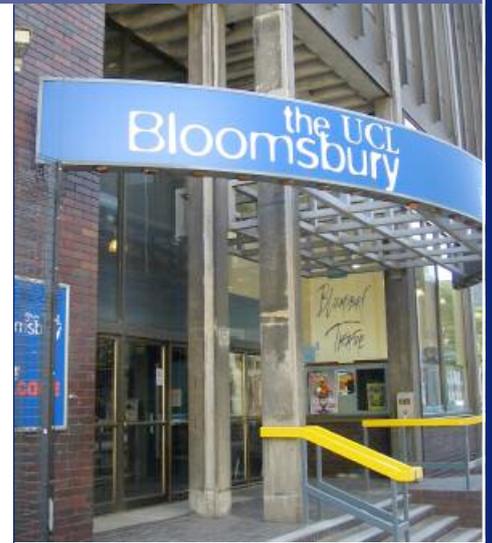
When a new weight training area was introduced to the gym at University College London, the force of free weights impacting the floor resulted in structure-borne noise. This had a predominant low frequency component, which caused noticeable disruption during performances in the Bloomsbury theatre below.

The approach to reducing the noise was control at source, which required a system that could be installed over the existing concrete floor.

In consultation with the Sharps Redmore Partnership, CMS Vibrations created a high performance floating floor using the Kinetics Roll-out Isolation Material for wooden floors (RIM-W) overlaid with Regupol KushinPad.

Kinetics RIM-W is constructed from a series of Kinetics Isolation Pads (KIPs) laid at 600mm centres and fixed in fibreglass matting. The area was flanked at three sides with Perimeter Isolation Board (PIB) and covered alternately with three layers of plywood and two layers of plasterboard at a total thickness of 75mm. While this standard RIM-W system construction delivers superior vibration isolation, enhanced performance was achieved by installing a layer of Regupol Kushin Pad on top of the plywood.

Regupol Kushin Pad is a laminated structure of high performance and environmentally friendly Regupol RAV systems. Made from polyurethane bound rubber granulate material, Regupol Kushin Pad offers excellent dampening and isolation characteristics with the advantage of a robust and hard wearing acoustic floor finish.



**CMS Vibrations delivered a bespoke structural isolation system to meet the high performance requirements of UCL.**



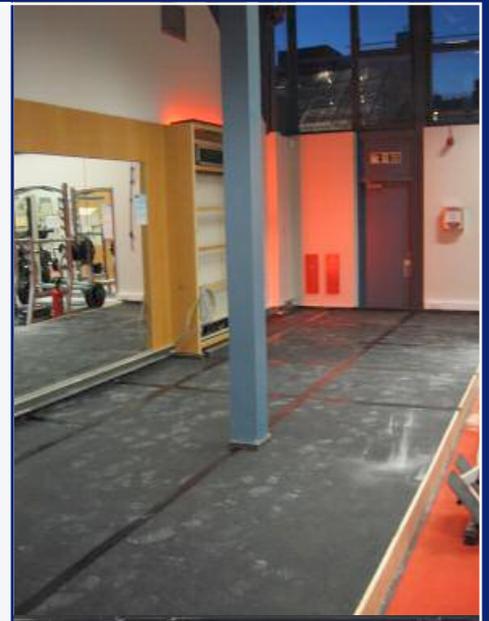
## Results

Prior to installation, onsite testing of a 1.25m x 1.25m system sample confirmed that this combination had significantly improved the sound reduction between the gym and the theatre.

Rory Sullivan, senior acoustic consultant at Sharps Redmore, concludes: "Early testing indicated no single resilient product was likely to be sufficient. By combining the two CMS systems, onsite testing of the sample indicated a real and significant improvement, which was far less likely to result in future disturbance

## Benefits

- Achieves excellent airborne and impact noise ratings
- Withstands varying loads without significantly altering the natural frequency
- Excellent dampening and isolation
- Quick and easy to install
- Offers long lasting and stable performance
- Cost effective



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