

Vibration Prediction and Control Award

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ACOUSTICS



★ **Winner:** Hoare Lea, *Cambridge House*

Cambridge House is being brought back to life as a luxury hotel and apartment residence. Constructed between 1756–1761, the building is Grade I listed and retains many of its original features.

Being in close proximity to the Piccadilly, Jubilee and Victoria underground rail lines, noise and vibration from underground rail presented a significant challenge in providing and maintaining the quality aspirations of the Client, who required low levels of ground borne noise within noise sensitive spaces. This project required the retrofit of full building isolation to the main 270 year-old building and describes, what is believed to be, a world first in terms of retro-fit isolation at this scale.

This project stood out as it demonstrates comprehensive building isolation, auralisation and modelling, and innovative load transfer as well as excellent collaboration with the architect, engineer and the bearing suppliers. It is rare to see this level of retrofit in a Grade 1 listed building, so the project shows how heritage buildings can continue to fulfil

modern uses, in this case as a hotel. There was a challenging programme and there was restricted use of standard mitigation techniques. As the project is finished it gave the judges confidence that it has been successful and the testimonial from the client shows that: "Our acoustic consultant, working in collaboration with our architects (StudioPDP), engineers (AKT2), contractor (DUK) and bearing specialists (Masons) conceived and then developed in detail, a range of measures to manage both the air borne noise and the ground borne vibration; the latter being a particularly innovative design, given the need to incorporate a suppression system which maintained the Grade 1 and 2 listed interiors and utilised the existing 300 year old load bearing structure."

ACOUSTIC AWARDS 2024

These awards demonstrate the unique skills of UK based acoustic consultants in addressing challenges, championing innovation and originality and showcasing the significance of a profession which blends art and science to transformational effect.