

## Chiltern Firehouse

Complete	Area	Client	Architect
2014	UK England	Andre Balazs Properties Manhattan Loft Corporation JV	David Archer Architects

The Chiltern Firehouse is a conversion of a Grade II listed Fire Station along with a new build extension to create a unique 26 suite luxury hotel in Marylebone. The Manchester Square Fire Station was originally constructed in 1889. For its transformation into a luxury five star hotel, the fire station was completely rebuilt whilst respecting the historic, listed elements of the building.

The scheme was for the refurbishment of the existing building and the conversion of the appliance room into a restaurant and included the addition of a new five-storey annex. The station courtyard has been retained and re-paved to provide a generous outdoor area that is accessible from the restaurant.

The hotel also offers conference and meeting room facilities, gym, restaurant and private dining area.



© Kieth Erskine / Alamy stock photo

## Services provided

As part of an ongoing brief, Sandy Brown provided comprehensive acoustic design services which included:

- sound insulation of the listed façade
- room acoustics in the restaurant and function room
- environmental noise criteria for plant
- Internal separation between retained floors and walls
- Building services noise and vibration.

## Special acoustic features

Music and activity noise from the restaurant and private function room were both important considerations and for the development to be a success it was important to achieve an acceptable balance between the sound levels generated in these spaces and the amount of sound insulation practicable.

The sound insulation performance of the existing floors and the correct balance between sound insulation, depth and additional weight was a key acoustic consideration.

One of the main acoustic issues for the Chiltern Firehouse was establishing the optimum floor constructions in terms of weight that met the stringent sound insulation requirements whilst retaining the original floor constructions. We carried out extensive on site testing to establish the optimum floor build up and worked closely with the end client to establish the optimum design relation to the control of fan coil unit noise and music noise from function room and restaurant.

In terms of sustainability we worked closely with the design team to establish which constructions could be retained and reused. We provided detailed recommendations to control noise from rooftop plant to meet stringent noise levels and achieve BREEAM requirements.