

Bixteth Street, UK



Structural Isolation CDM Simple Bearings



Main Contractor Sunley Turriff
Architect KKA
Structural Engineer John Sutcliffe
Acoustic Consultant Sol Acoustics
Weight 84MN

Bixteth Street is a luxury 6-storey apartment block in the rejuvenated heart of Liverpool City Centre. Directly beneath the foundations of the building is the city's efficient underground train system.

The acoustic consultant carried out extensive vibration survey measurements on the site and predicted re-radiated noise levels in the apartments with and without varying degrees of isolation.

After a subjective demonstration of these noise levels the client decided that the building should be isolated on elastomeric bearings with a natural frequency of 10Hz.

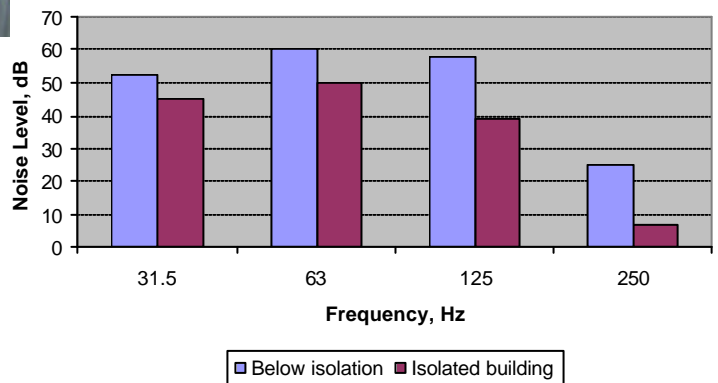
The bottom 2 storeys of the development are car parking, with the floor above being retail. The most convenient location for the building isolation was therefore chosen as directly underneath the ground floor slab in the upper level of the car park, directly beneath the retail areas.

This provided an opportunity to design simple and elegant column details with easy access to the bearings throughout the construction programme.

The detail was also designed to allow a simple and cost effective means of providing fire protection for the bearings.



Initial acoustic measurements by the acoustic consultant showed that the building isolation was working well with additional performance expected when the whole building was complete.



CASE STUDY – CDM-ISO-STRUCTURE

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