

321-339 Finchley Road, UK



Structural Isolation CDM Simple Bearings



Main Contractor YJL
Architect KSR
Structural Engineer Elliott Wood
Acoustic Consultant Bickerdike Allen
Weight 68MN

321-339 Finchley Road is a new quality residential development directly adjacent to Finchley and Frognal railway station. The platform of the station is less than 1 metre away from the rear façade of the building. As well as the regular daytime passenger rail traffic there is also regular freight traffic, with several trains passing the new building through the night-time.

The local authority granted planning permission for this project on the basis that building was installed on building isolation.

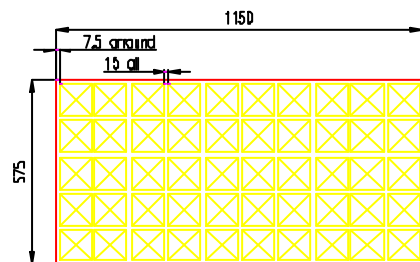
The acoustic consultant carried out extensive on-site vibration measurements and determined that the natural frequency of the installed building isolation systems should be a maximum of 10Hz.

All buildings within 15m of the railway were required to be isolated to control the levels of vibration and re-radiated noise within the development. This requirement necessitated that 2 independent structures, Block A and Block C, should be isolated on CDM elastomeric bearings.



Block A

The strategy in Block A was to install strip isolation bearings beneath a mass concrete ring beam just above foundation level. Structural blockwork walls were then built off the ring beam and then pre-cast concrete planks supported between the structural walls. The lift pit was also isolated below ground level.



Col. U (1150x575mm)
50 n° 106x100 in CDM-B31045

Block C

The strategy in Block C is slightly more traditional with main column bearings at 3rd floor level (directly beneath the residential accommodation) and the lift pit isolated at its base.



CASE STUDY – CDM-ISO-STRUCTURE

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