

Broadway Theatre



Box-in-Box construction

CDM-ISO-MONT-100



Image of completed site

Architect

Tim Foster Architects

Acoustic Consultant

Paul Gillieron Acoustic Design

Main Contractor

Rooff Ltd

Area

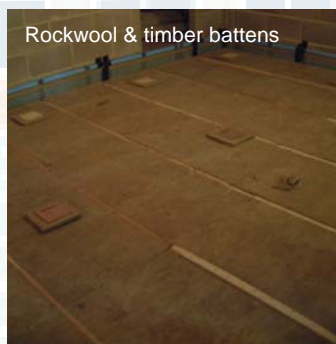
Studio & Control Room 65m²

This 1950s Civic Hall in Barking is being re-developed into a high class performing arts centre in Barking, London. The new development includes a 250-300 seat theatre and industry standard recording studio.

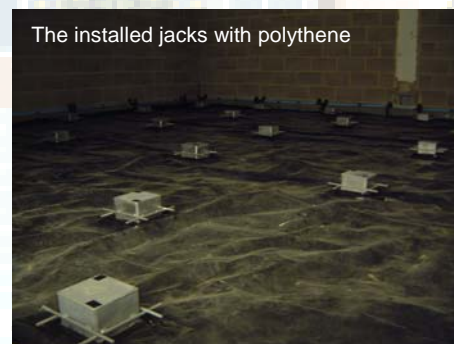
The recording studio is situated in an area of the existing building that is limited in headroom but is close to several other noise sensitive and noise producing areas. The acoustic consultant therefore specified a CDM-ISO-MONT jack-up floating floor system using a 100mm reinforced concrete slab over a 50mm airspace.



Plinths to level the jacks



Rockwool & timber battens



The installed jacks with polythene

To accommodate the level differences in the supporting slab, plinths were installed at the locations of the jacks. These plinths were levelled to $\pm 2\text{mm}$ using a laser level therefore ensuring that the CDM-ISO-MONT jacks would be level. Lateral isolation was installed around the perimeter of the room and then 25mm dense Rockwool and timber battens were installed in between plinths. The 25mm Rockwool was used to form 25mm of the 50mm air void beneath the slab and to provide some important sound absorption in the air void. The timber battens were installed to provide temporary support for the reinforcing mesh.



The jack in concrete



Jacking up the slab



The slab after jacking

One week after the concrete was poured the slab was jacked up to create the 50mm air void and the solid steel lids of the jacks replaced.

The blockwork walls and heavy ceiling construction were then built off the jack-up slab to form a high performance box-in-box construction. The jacks were located just inside the blockwork walls so that access can be gained to the jacks at a later date should any changes to the function or performance of the room be required in the future.

CASE STUDY – CDM-ISO-BOX

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