

# NCRL Laboratories



## Box-in-Box construction CDM-ISO-MONT, CDM-ISO-WALL



**Client** Noise Control Research Laboratories  
**Acoustic Consultant** AWN Consulting  
**Area** 3 rooms totalling 150m<sup>2</sup>

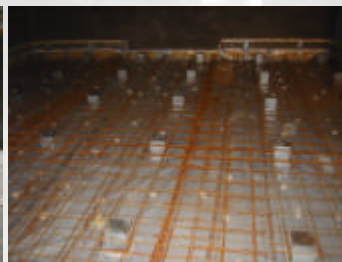
The Noise Control Research Laboratories, NCRL, have moved their headquarters to the hilltop County Wicklow town of Blessington, just a few miles south of Dublin in Ireland. The move gave them the opportunity to build an international standard suite of acoustic laboratories. The laboratories include 3 adjacent rooms with a central sound source room and 2 receiver rooms either side of the source room. There is also a room directly above the source room to allow the measurement of sound insulation and impact isolation of floors.

The acoustic consultants, AWN, specified that each floor in the 3 bottom rooms had to have 200mm thick floating floors with a natural frequency of less than 20Hz as well as independently resiliently supported walls with the same performance.

To minimise the thickness of the floating floor system and to provide a flexible system with re-placeable bearings the **CDM-ISO-MONT** jack-up floating floor system was chosen. The 200mm slab was jacked up by 20mm using elastomer bearings with a natural frequency of 7Hz providing a overall system performance of significantly less than 20Hz, even accounting for the stiffness of the trapped air layer beneath the slabs.



The installed jacks



With reinforcement



Lids removed after concrete pour



Jacking the slab up

The walls were supported on **CDM-ISO-WALL** isolation strips were used to build the perimeter internal structures thus effectively creating a fully isolated box-in-box construction.



## CASE STUDY – CDM-ISO-BOX

CDM-UK  
 PO Box 7035  
 Melton Mowbray  
 Leics LE13 1WG



T: + 44 (0) 1664 482486  
 F: +44 (0) 1664 482487  
 E: info@cdm-uk.co.uk  
 www.cdm-uk.co.uk