

InstaCoustic®

THE SOUND SOLUTION

Acoustic Testing

InstaCoustic is the UK leader for the provision of effective sound insulation systems to the construction industry. Offering a wide range of high performance acoustic floor, wall and ceiling systems manufactured to exacting standards, InstaCoustic has over 10 years experience of designing and implementing reliable acoustic solutions.

To enable house builders, main contractors, local authorities and housing associations to meet the requirements of Building Regulations Part E (H in Scotland, G in Northern Ireland), for both new build and conversion projects, InstaCoustic offers a complete acoustic solution from the visual assessment of problem sites to the supply and fitting of materials, plus full certification using independent UKAS accredited sound insulation test consultants.



The Building Design Test Team

With a comprehensive service from concept to completion, the Building Design Test Team covers two main areas of operation:

Residential Conversions – providing proof of performance for properties undergoing a material change of use.

EcoHomes – meeting insulation standards that are higher than those required by Building Regulations in order to obtain EcoHomes credits during the construction of new social housing.

The Troubleshooting Test Team

Providing a rapid response to situations on problematic sites, where the original specification has failed, in order to provide effective and economical remedial solutions – currently with a 100% success rate.

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The Building Design Test Team

Conversions – Material Change of Use

The InstaCoustic Building Design Test Team undertakes early on-site testing to eliminate potential over specification and the possibility of costly failures and delays. By constructing sound test booths at an early stage in the project the Team can demonstrate, by providing proof of performance, the most cost-effective design solution for Part E compliance.

Testing is conducted by independent UKAS accredited acoustic consultants to determine the requirements of individual properties, even specific parts of individual



properties, as all sites are different and there will never be a standard solution - one mill being converted to residential apartments was found to have 12 different floor constructions.

Early on-site testing results in a reliable and economical design specification that will achieve the required sound insulation standard, providing the developer with confidence in the system and the ability to meet project deadlines by avoiding expensive failures.

Case Study



Project Usage

1960's 20 storey office tower, The Rotunda, Birmingham
Conversion to residential apartments and seven floors of retail units

Construction Testing

Concrete frame building with unscreeded 200mm concrete slabs
Test rooms were constructed on-site, using C40 flooring and isolating strips under all partition walls, before stripping out completed. Early testing overcame the unpredictability of existing buildings, avoided delays and provided assurances on acoustic performance for developers, Urban Splash

Results

Impact: 40dB $L'_{nT,w}$
(Building Regulations requirements: not more than 62dB $L'_{nT,w}$)
Airborne: 56dB $D_{nT,w} + C_{tr}$
(Building Regulations requirements: not less than 43dB $D_{nT,w} + C_{tr}$)

System used

C40 and CK30 acoustic flooring

Case Study



Project Usage

1960's office tower block, Baldwin Street, Bristol
Residential – conversion to 60 apartments

Construction

Two kinds of existing floor – beam and block with 50mm screed and hollow pots with 50mm screed.

Original specification

Cradle & batten floor system;
acoustic ceiling system with secondary ceiling system.

Original cost

£90/m²

Testing

Test rooms were constructed on-site for both types of existing floor and residential/residential tests carried out, prior to PCT. Only an acoustic floor was needed.

Results

Airborne: passed
Impact: Before = 88dB $L'_{nT,w}$
After = 40dB $L'_{nT,w}$

System used

IN20 acoustic flooring

Actual cost

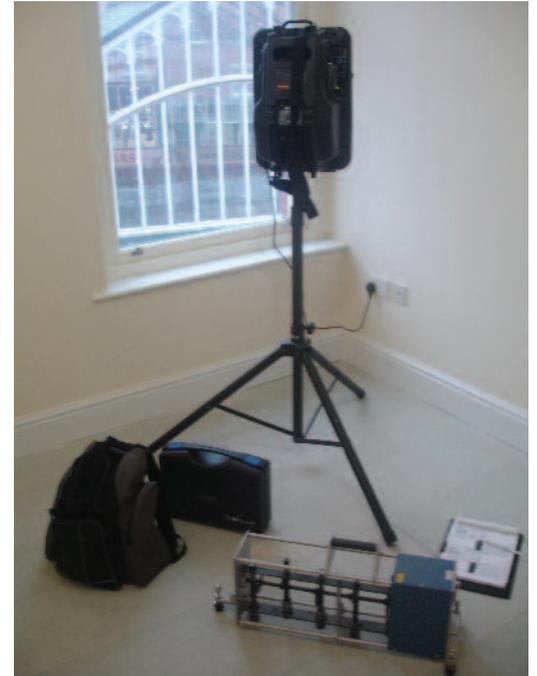
£20/m²

EcoHomes Projects

Concerned with the environmental rating for new social housing, EcoHomes relates to government and local authority backed schemes or private developments where a percentage of dwellings are stipulated for social housing.

With EcoHomes projects, credits are available for the developer on a range of environmental assessments with one of the highest individual categories, at 7.52% of the total, achievable through high levels of sound insulation. With up to 4 credits available, the developer must achieve an improvement up to +5dB over and above the minimum performance standards for airborne and impact sound insulation as required in Table 1 on P.8 of Approved Document E 2003.

Credits	Minimum No. of tests per 10 dwellings	Improvement on Part E Airborne	Improvement on Part E Impact
1	2	0	0
2	3	0	0
3	3	+3	-3
4	3	+5	-5



In order to achieve the maximum number of credits for sound insulation a more comprehensive test regime must be applied, e.g. up to 3 in 10, or 30%, over and above the standard sampling associated with Approved Document E (1 in 10 or 10%). Furthermore, the sound insulation testing must be carried out or verified by a UKAS accredited testing laboratory.

NOTE: It is important to note that **Robust Details have no credit status under the EcoHomes credit system.** Eco Credits can only be achieved through the use of a **UKAS accredited** Testing Laboratory.

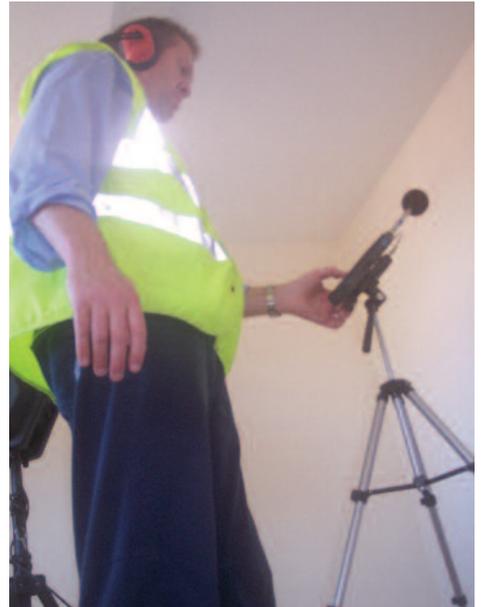
The InstaCoustic design team can provide expert advice on EcoHomes projects. This covers the necessary treatment specification, the correct installation of acoustic systems and base construction materials and completion of the EcoHomes sound insulation test regime by an independent UKAS accredited laboratory.



The Troubleshooting Test Team

On certain problematic sites or where the original acoustic specification was incorrect, sound insulation failures do occur. As these are often discovered late on in the project programme it is essential that these problems are overcome quickly and efficiently.

The rapid-response InstaCoustic Troubleshooting Test Team was established for exactly this type of situation and, in conjunction with independent UKAS acousticians, can quickly diagnose the reasons for failure and provide cost-effective remedial solutions.



So far, in all troubleshooting situations, the Team's success rate is 100%

With its considerable experience and expertise in all aspects of acoustic insulation, the Team is able to pinpoint the reasons for failure and offer economical remedial specifications that help developers and contractors avoid lengthy delays and stringent financial penalties.



***“Sound insulation is testing.
Get it right first time - call InstaCoustic”***



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