

### Statement of Capability

Acoustical Investigation & Research Organisation Ltd (AIRO) was established in 1958, so can provide the benefits of 50 years of providing technical expertise and measurement services in the field of acoustics. Being an independent private company, free from any corporate connections with building or noise control products, AIRO can be seen to offer an unbiased professional service to its clients.

From a total staff of 10, AIRO has 7 professionally qualified and experienced staff 4 of whom have more than 25 years experience working in acoustics at the company. This provides the benefits of continuity and personal knowledge of the business of delivering all scales of development, the depth of knowledge to be able to "tell it how it is" where necessary, being able to contribute constructive ideas and solutions to resolve design issues where they arise and an ability to work successfully with the wider project team.

Also, AIRO has a proven track record of conducting on-site measurements with the vast majority of such measurements relating to sound insulation issues associated with The Building Regulations. Currently, AIRO conducts hundreds of on-site measurements a year for developers and/or manufacturers relating to performance testing according to Approved Document E.

AIRO provides comprehensive acoustical measurement services. Our well established laboratory complex includes 3 horizontal transmission suites, 1 vertical transmission suite, and airflow facilities. We have a wide range of measurement equipment including sound intensity instrumentation. Sound insulation measurements are a specialism, and for example AIRO has measured the sound insulation of around 800 different systems in the laboratory over the last 10 years alone.

AIRO's consultancy services range over many facets of acoustics, noise and vibration. A considerable proportion is related to the acoustics of buildings, including sound insulation between internal compartments and of the external building envelope.

Resulting from our wide experience with the building industry, AIRO is aware of both technical and practical issues of building design and construction. AIRO has worked with many client firms in the house-building industry, some through formal partnering consultant agreements, and is pleased to note a growing understanding on the part of our clients of the value of early design advice.

Since 1987 AIRO has maintained accreditation by the accreditation body now known as the United Kingdom Accreditation Service (UKAS). AIRO is accredited for all of the key measurement standards referred to in Approved Document E, both on-site and in the laboratory. Via the internal and external audit processes, AIRO's commitment to the highest quality of measurement work is amply demonstrated.

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## Research Experience, Residential Sound Insulation

AIRO has been involved in numerous research contracts on behalf of the Government, the majority for the Department of the Environment let via the Building Research Establishment. Many of these contracts have investigated sound insulation of specific constructions or related issues in dwellings, to inform the development of Approved Document E. AIRO's research projects for Government in relation to domestic sound insulation include:

<b>AIRO JOB No.</b>	<b>CONTRACT PERIOD</b>	<b>NATURE OF WORK</b>
1874	1972	Sound Insulation in dwellings
2041	1973-74	Sound insulation in dwellings
2095	1974-75	Sound insulation in dwellings
2154	1974-75	Sound insulation in dwellings
2235	1975-76	Sound insulation in dwellings
2340	1976-77	Sound insulation in dwellings
2415	1977	Sound insulation in dwellings
2450	1977-78	Sound insulation in dwellings
2594	1979-80	Sound insulation in dwellings
2607	1979	Facade insulation of dwellings
2663	1980-81	Sound insulation in dwellings
2684	1980-81	Facade insulation of dwellings
2715	1981-82	Sound insulation in dwellings
2780	1982	Sound insulation in dwellings
2921	1984	Door slamming noise in dwellings
L/1809	1985-86	Laboratory study of impact test methods
3233	1987	Sound insulation of floors in converted flats
3239	1987	Sound insulation in dwellings
3651	1992-94	Sound insulation in dwellings, re complaints
3764	1993-94	Sound insulation in dwellings
4075	1996-98	Sound insulation in dwellings
L/2538	1997	Laboratory evaluation of floating floor designs
L/2683	1999-2000	Laboratory evaluation of timber floor designs

The extensive list of research contract involvement demonstrates AIRO's ability and track record in the provision of such services.

In respect of robust details, AIRO served by invitation as one of the technical experts for the masonry working group and was part of the team which audited the work of Napier University, the project managers for the Robust Standard Details Project.

AIRO has three Robust Detail Senior Inspectors conducting visits and measurements for Robust Details Ltd.