



ENS Acoustics
consulting

ACOUSTIC CONSULTING

Environmental Noise Solutions (ENS) is an independent acoustic consultancy specialising in noise in the built environment.

We undertake projects that encompass small, local development projects and new school developments through to major developments including large residential developments and hotels.

Our consultants all have a broad range of experience, both in the public and private sector, and who all work to our high standards of delivering the best possible service to our clients in a proactive and responsive manner required by the modern, commercial environment we all work in.



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New Justice Centre

DELIVERING THE SOLUTIONS YOU NEED

Although the majority of 'standard constructions' work well in domestic buildings it is usually the case that for specific use buildings, such as police stations, modern justice centres and law courts, the acoustic needs of the future occupants of the buildings need to be carefully considered to ensure that the building is ultimately fit for purpose. With internal offices, interview rooms and prisoner cells sometimes in close proximity it essential to ensure the building has 'good acoustics'

flexible solutions for public sector development

Privacy and Good Sound Insulation

The most recent Justice Centre for which we were asked to provide our acoustic consultancy had been poorly designed and constructed for acoustics. The use of modern metal framed, stud partition walls and mechanical ventilation systems with poor crosstalk attenuation gave rise to loss of privacy between interview rooms and the potential loss of client confidentiality between a solicitor and a prisoner.

The situation was so poor that every second interview room had to remain unused to ensure that there was sufficient sound attenuation between the rooms being used. To investigate the problem a number of measurements were taken on site to determine the sound insulation properties of the walls, the background levels within the interview rooms and the reverberation (echo) time within each room. The combination of poorly designed stud partition walls (based on laboratory figures and not field test figures) and very low background noise levels gave rise to interview rooms that were not fit for purpose.

Our recommendations for crosstalk attenuators for the ventilation system, additional wall linings to improve sound insulation between the rooms and further absorption in the interview rooms to control reverberation all resulted in a Justice Centre that met the needs of its multifarious users.



FUTURE CONSIDERATIONS FOR JUSTICE CENTRES

The design of building acoustics should always take a 'bottom up' approach. By measuring the noise levels at the site it will be possible to determine the likely internal noise levels within the proposed building – a quiet location means quiet noise levels within the building. Quiet internal noise levels also mean that some separating walls will need to provide a very high level of sound insulation to ensure that speech is unintelligible between rooms (technically 'internal noise level + sound insulation' > 75dB).

Justice Centres offer many challenges to the acoustic consultant. Open plan entrances to the centre (where good reverberation control is key) leading to offices, interview rooms and prison cells where sound insulation and privacy is essential for the work and activities that take place in these buildings on a virtually 24x7 basis.

For further details about how ENS Acoustics can help you with sound insulation and acoustics for any new public sector development that needs to satisfy the requirements of BS8233 and those of a specialist 'user community', please contact:

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