



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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# Flooring Options for Hotels

## DELIVERING THE SOLUTIONS YOU NEED

We were approached by a hotel operator who had recently opened a new hotel to serve a largely commercial customer base. The hotel had only been open a number of weeks before the general manager of the hotel started to receive complaints from residents about foot fall noise from adjacent hotel rooms. We were requested to investigate the issue and comment on why such foot fall noise was audible in adjacent rooms.

## flexible solutions for the hotel market

### Good Standards in Hotels

Many of the modern hotel chains adopt a standard approach to providing a reasonable level of sound insulation between hotel bedrooms which is typically the minimum level of sound insulation required for new build residential homes and apartments.

In all cases, the walls and floors of these hotel bedrooms need to achieve these minimum levels of sound insulation in the absence of any soft floor furnishings (such as carpets on the floors and wardrobes against walls) and currently, a sample of these walls and floors need to be sound insulation tested to verify that the walls/floors comply with the minimum requirements of the client (and also Building Regulations).

In this particular instance, the hotel bedrooms had been tested and shown to comply with client requirements but had been finished with a hard wearing, solid/laminate wood floor over a cushioning resilient layer.

And the reason for the complaints? Since the underlying structural floor provides the minimum level of sound insulation required by the hotel operator it is our opinion that the chosen floor is 'noise generating' when walked on (compared to a carpet which is not).



## HARD FLOORING vs CARPETS

The choice of floor covering for most hotels is generally driven by styling and potential operational cost benefits (such as the costs of cleaning of one floor covering compared to another).

However, from an acoustic perspective, the choice of carpets over a hard floor covering does have a bearing on the 'room acoustics'. A hard surface floor will make a room more reverberant ('echoey') whereas a carpet will act as a sound absorber. Perhaps more importantly though is that a hard floor covering (such as tiles/wood) has the potential to generate noise when walked upon compared to a carpet which does not.

In the instance where the occupant of a hotel room with a hard floor surface is wearing 'hard heeled/soled' shoes then it is likely that walking around the room will cause a 'clack' sound and it is possible that this impulsive sound may be audible in adjacent hotel bedrooms.

Although most main contractors for new hotel developments are generally not responsible for the internal fit out of hotel bedrooms we would recommend that guidance on the choice of the final room floor covering is discussed with the client to ensure that the acoustic benefits of a soft floor covering over a hard floor covering are not entirely discounted without due consideration.

For further details about how ENS Acoustics can help you with 'best practice' acoustics for hotel developments and compliance with detailed client requirements and Part E of the Building Regulations please contact:

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