



**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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# The Residential Conversion

## DELIVERING THE SOLUTIONS YOU NEED

We are regularly commissioned by architects, developers and contractors to review and verify their designs prior to residential conversion work taking place. Concerns over existing floor and wall constructions; concerns over proposed proprietary wall and floor solutions all lead to the requirement for independent, specialist acoustic design advice that considers not only the individual elements of the conversion but the building as a whole.

## flexible solutions for residential developments

### Part E – Resistance to the Passage of Sound

With all residential conversions there is a need to satisfy the minimum sound insulation testing requirements of Part E of the Building Regulations, namely at least 43dB for airborne sound and at most 64dB for impact sound.

In a classic example of residential conversion, we were commissioned to review the building acoustics for a large Victorian Villa which was to be converted into apartments and where the existing internal floors were to become separating, party floors and where separating walls were to be created from both new and existing walls.

The team delivering the building acoustics for this development was headed by one of our principal consultants, Jonathan Rigg, who also leads the built environment acoustics team within ENS.

The client required a responsive approach to the project to ensure that all key project acoustic requirements were met in full, namely compliance with Part E, but also to ensure that costs were constrained given the tight budgets that all parties were working to.



## THE ON GOING PROJECT

The project involved the design of separating wall and floor details where ancillary issues such as flanking under timber floors and along continuous timber floors was considered, recommendations for the use of either dynamic batten floors or independent ceilings was given to allow for service runs within new apartments whilst also addressing the needs of Part E of the Building Regulations.

We also took time to explain to our clients the differences between the various acoustic parameters such as  $R_w$ ,  $D_{ntw}$ ,  $R_w+C_{tr}$ ,  $D_{ntw}+C_{tr}$ , all of which, if incorrectly applied to any design, can lead to acoustically poor performing partition walls and floors being constructed.

The conversion is currently underway and is expected to be completed in 2011.

For further details about how ENS Acoustics can help you with sound insulation and acoustics for any residential conversion that needs to satisfy the stringent requirements of Part E of the Building Regulations, please contact:

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