

Ref: AS7013.130708.L1

09 July 2013

Jeremy Heppell  
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Dear Jeremy

**AS7013 HOMEBASE SITE, BEDHAMPTON**

**Noise Intrusion via Chimney Stack**

An assessment has been conducted based on a direct sound insulation measurement via a traditional brick built chimney stack; following procedures in ISO140 part 5 Part 5: *Field measurements of airborne sound insulation of facade elements and facades*.

The following equipment was used during the course of the survey:

- Norsonic data logging sound level meter type 118;
- Norsonic sound level calibrator type 1253<sup>[1]</sup>.
- Fohhn FP1 pro battery powered loudspeaker system

([1] The calibration of the sound level meter was verified before and after use. No calibration drift was detected.)

The stack, chimney and hearth dimensions were all larger than likely to be constructed, providing more cross-sectional area of flanking transmission path, and therefore a pessimistic assessment case.

Worst case source noise levels of daytime rush hour traffic measured during our surveys on site were used to assess the likely internal room levels due to transmission via the chimney.

The highest anticipated in-room levels transmitted via the chimney stack would be:

- 27dB  $L_{Aeq}$
- 43dB  $L_{Amax}$

Which (for this transmission path) would be within the more onerous BS8233 requirements for night-time in bedrooms.

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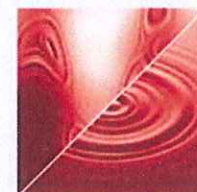
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We can conclude, therefore, that motorway noise transmission via the proposed chimneys will not compromise Havant's requirements for in-room noise conditions; even if open fires were specified in bedrooms (which we understand is not the case).

Yours sincerely  
for ALAN SAUNDERS ASSOCIATES



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