



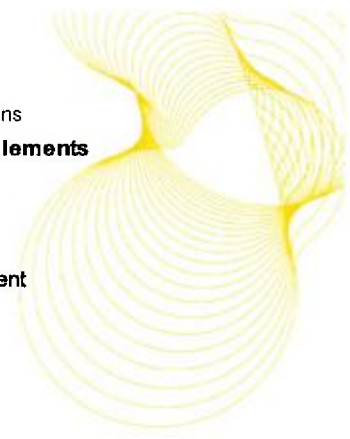
**Laboratory measurement of airborne sound insulation of small building elements**  
**Element-normalized level difference according to BS EN 20140-10:1992**  
**BRE horizontal transmission suite (B9)**

**Client:** Rytons Building Products Ltd  
**Test date:** 12/02/2013      **Test number:** L112-077      **Test element:** vent  
 0578

**Filler wall area:** 9.8 m<sup>2</sup>

**Description:**

AAC125LPCWL – Cowled Super Acoustic LookRyt® AirCore®



**Source room volume:** 130 m<sup>3</sup>  
**Receive room volume:** 115 m<sup>3</sup>

**Air temperature:** 9 °C  
**Air relative humidity:** 55 %

Frequency (Hz)	Reverberation time (s)	Background level (dB)	Source level (dB)	Receive level (dB)	<i>D</i> <sub>n,e</sub> (dB)
50	1.68	23.1	93.3	69.8	24.3
63	1.51	20.1	97.9	73.6	24.7
80	1.28	17.7	97.1	64.6	32.2
100	1.56	19.4	98.0	59.0	39.6
125	1.72	16.6	98.8	56.5	43.3
160	1.72	16.8	96.7	53.7	44.0
200	1.80	12.1	98.4	59.6	38.7
250	1.58	14.6	96.1	61.7	33.7
315	1.66	11.0	94.0	57.0	36.5
400	1.60	11.8	92.6	56.8	35.1
500	1.57	15.7	93.6	54.0	38.9
630	1.61	14.7	95.2	51.5	43.1
800	1.59	12.1	95.5	49.3	45.6
1,000	1.56	9.3	95.0	44.9	49.4
1,250	1.62	11.3	95.5	37.9	57.0
1,600	1.59	12.8	95.7	33.4	61.7
2,000	1.57	10.3	93.3	34.2	58.5
2,500	1.51	8.7	93.7	33.9	58.9
3,150	1.38	7.5	94.7	27.5	65.9
4,000	1.25	7.9	99.6	25.6	72.3
5,000	1.13	7.4	99.9	24.6	73.2

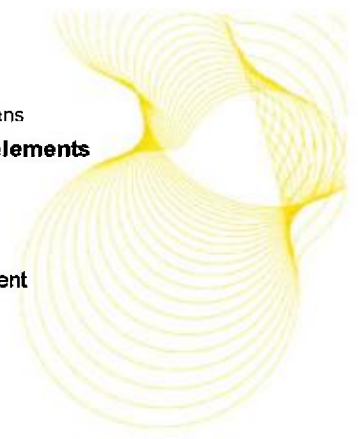
o Correction = 13 dB

Rating according to BS EN ISO 717-1:1997					
<b><i>D</i><sub>n,e,w</sub>(<i>C</i>; <i>C</i><sub>tr</sub>) = 45 (0;-3) dB</b>	<i>C</i> <sub>50-3150</sub> = -1 dB	<i>C</i> <sub>50-5000</sub> = 0 dB	<i>C</i> <sub>100-5000</sub> = 1 dB		
	<i>C</i> <sub>tr,50-3150</sub> = -	<i>C</i> <sub>tr,50-5000</sub> = -	<i>C</i> <sub>tr,100-5000</sub> = -3 dB		
Evaluation based on laboratory measurement results obtained by an engineering method					
Based on the data provided in BS EN 20140-2:1993 it is estimated that the measurement uncertainty should not exceed ±1 dB for the single quantity ( <i>D</i> <sub>n,e,w</sub> ) and should not exceed the values in Table A1 of BS EN 20140-2:1993 for the data in the individual third octaves ( <i>D</i> <sub>n,e</sub> )					

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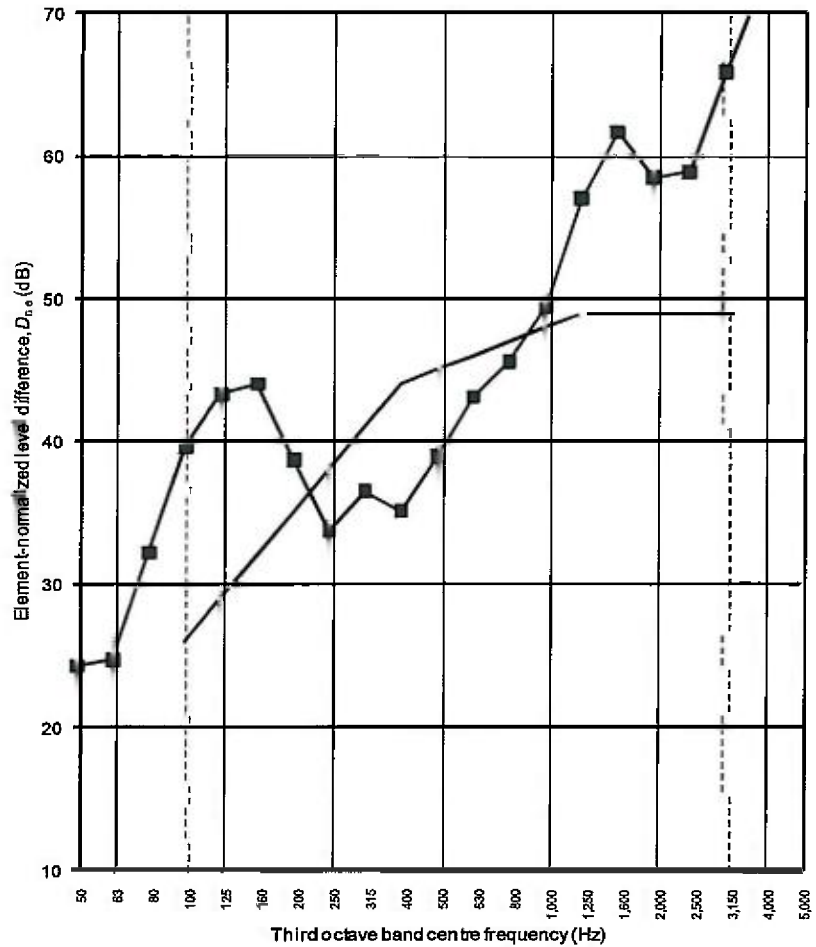
Description:

AAC125LPCWL – Cowled Super Acoustic LookRyt® AirCore®

Source room volume: 130 m<sup>3</sup>  
 Receive room volume: 115 m<sup>3</sup>

Air temperature: 9 °C  
 Air relative humidity: 55 %

Frequency (Hz)	$D_{n,e}$ One-third octave (dB)
50	24.3
63	24.7
80	32.2
100	39.6
125	43.3
160	44.0
200	38.7
250	33.7
315	36.5
400	35.1
500	38.9
630	43.1
800	45.6
1,000	49.4
1,250	57.0
1,600	61.7
2,000	58.5
2,500	58.9
3,150	65.9
4,000	72.3
5,000	73.2



o Correction = 1.3 dB

Rating according to BS EN ISO 717-1:1997

$D_{n,e,w}(C;C_{tr}) = 45 (0;-3) \text{ dB}$	$C_{50-3150} = -1 \text{ dB}$	$C_{50-5000} = 0 \text{ dB}$	$C_{100-5000} = 1 \text{ dB}$
	$C_{tr,50-3150} = -$	$C_{tr,50-5000} = -$	$C_{tr,100-5000} = -3 \text{ dB}$

Evaluation based on laboratory measurement results obtained by an engineering method

Based on the data provided in BS EN 20140-2:1993 it is estimated that the measurement uncertainty should not exceed  $\pm 1 \text{ dB}$  for the single quantity ( $D_{n,e,w}$ ) and should not exceed the values in Table A1 of BS EN 20140-2:1993 for the data in the individual third octaves ( $D_{n,e,w}$ )

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The BRE logo is displayed in a bold, lowercase, yellow sans-serif font. It is positioned on the left side of the page, set against a dark teal background. The background features a complex pattern of thin, yellow, curved lines that create a sense of depth and movement, resembling a stylized architectural or scientific structure.

bre

**Rytons Building  
Products Ltd.  
Laboratory Sound  
Insulation Test of Core  
Ventilators in the BRE  
Horizontal Transmission  
Suite**

Prepared for:  
Design House  
Orion Way  
Kettering Business Park  
Kettering Northants  
NN15 6NL

3<sup>rd</sup> April 2013

Test report number **284908**



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