

Creates a quieter environment
Reduces sleep disturbance
Meets noise planning constraints

Aids increased concentration and productivity
Protects hearing
Keeps annoyance and stress levels low

Guidance and regulations

Noise:

Sound is measured as a pressure and expressed in dB (decibels), where to the human ear a change of 3dB is just about noticeable. An increase in pressure levels to 10dB approximates to a doubling of loudness.

UK Guidelines include:

BS 8233:1999 'sound insulation and noise reduction for buildings'

Planning and Policy Guidance 24: planning and noise

Building Bulletin 93: Acoustic design in schools

The WHO (World Health Organisation) 'Guidelines for Community noise' revised 1999 provides recommendations for inclusion in national guidelines

Reasonable noise levels at a glance:

Room	Noise level
Bedrooms	30 - 35 dB
Music rooms	30 - 35 dB
Living rooms	30 - 40 dB
Classrooms/meeting rooms	35 - 40 dB

Libraries	35 - 40 dB
Open offices	45 - 50 dB

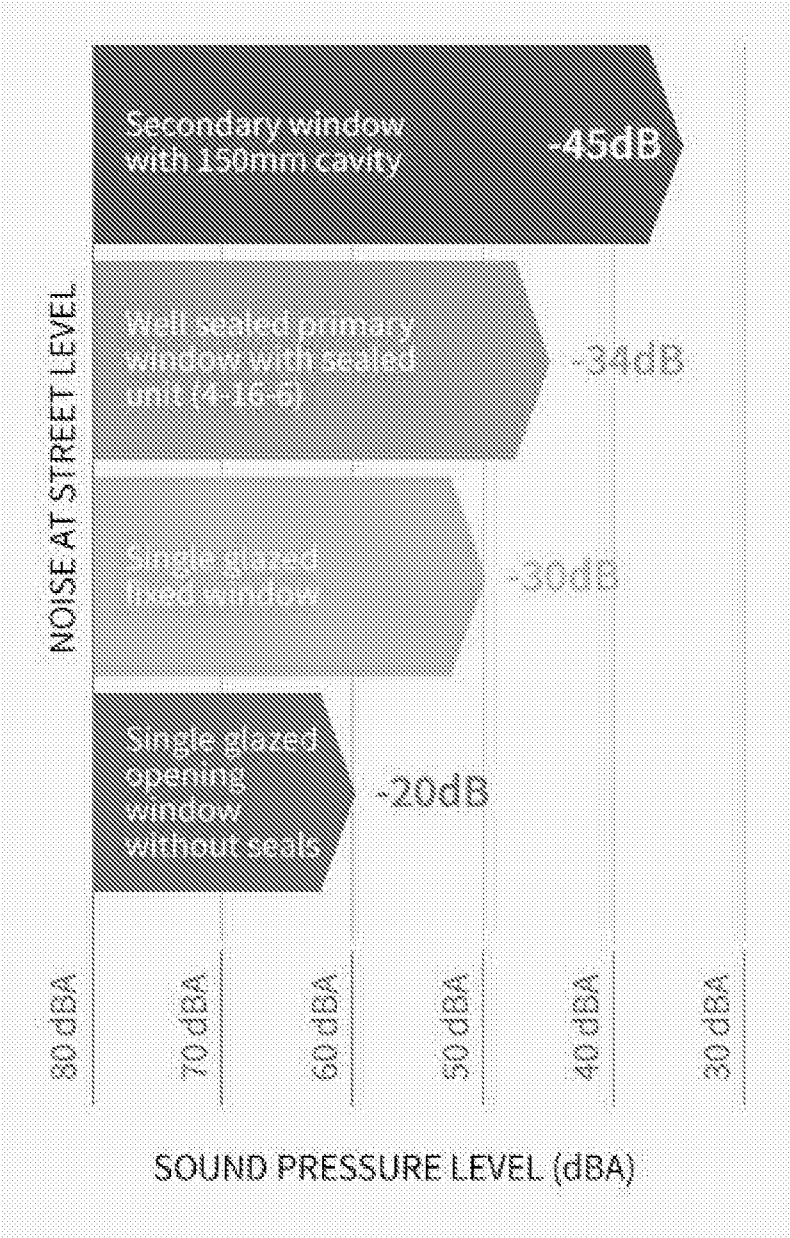
Effect of glass

Thicker glass has greater mass and will provide better performance. Acoustic laminate glass will show further improvements particularly at higher frequencies as it provides further dampening. Ideally the secondary glazing should have a different thickness of glass to the primary window to avoid sympathetic resonance which will increase noise transmission.

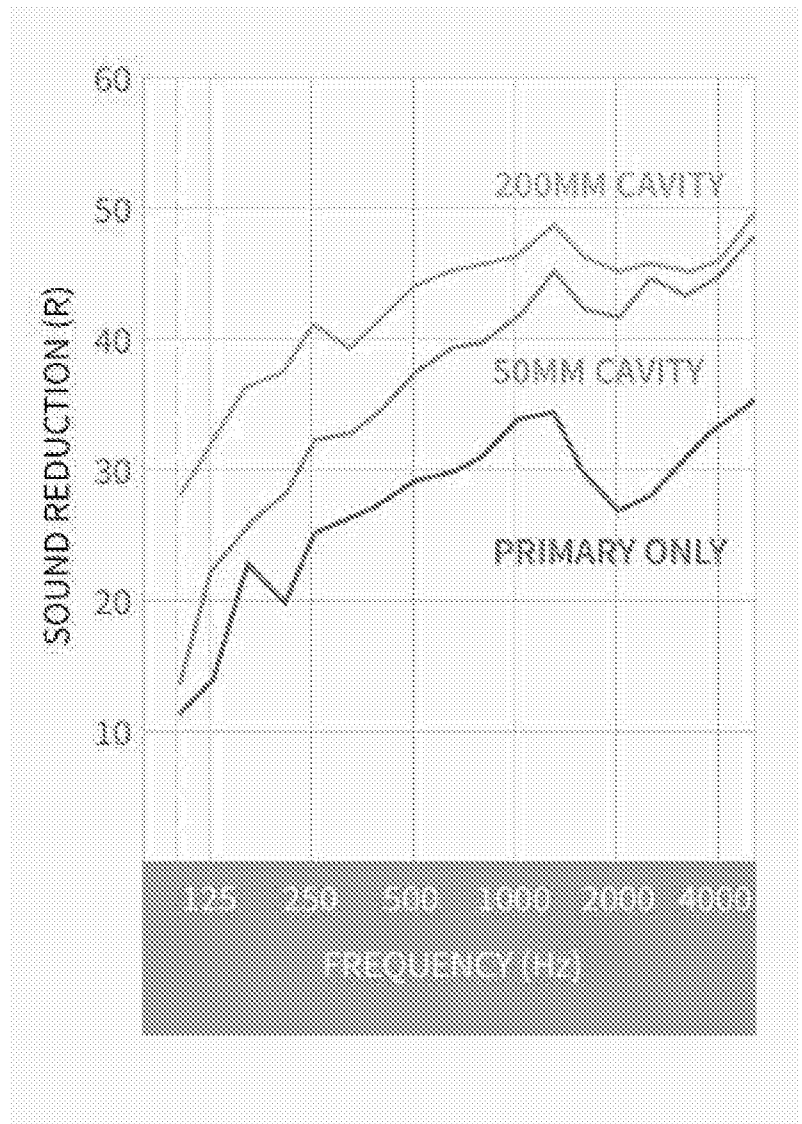
Effect of cavity

The cavity is the space between the existing primary window and the secondary window. A larger cavity will make a significant difference to the level of noise insulation.

Acoustic performance of windows



Effect of cavity



Acoustic performance

Rw dB values for Selectaglaze secondary glazing systems

These figures are based on testing to Standard BSEN ISO 140-3:1995
 ‘Laboratory measurement of air-borne sound insulation of building
 elements’

Rw dB values for Selectaglaze secondary glazing systems with a 50mm
 cavity

Glazing	4mm toughened glass	4mm glass	6mm	8
S10 HS	39	39	39	
S20 VS	39	39	39	
S30 LO	38	38	38	
S41 SHC	41	41	41	
S41 DSH	39	39	39	
S40 FL	41	41	41	
S45 SHC	41	41	41	
S45 DSH	39	39	39	
S46 FL	-	-	41	
S50 SHC	-	-	40	
S55 DFL	-	-	-	
S60 TVS	40	40	40	
S80 HS	-	-	40	
S85 HS	-	-	-	
S90 VS	-	-	40	
S95 VS	-	-	-	

Rw dB values for Selectaglaze secondary glazing systems with a 100mm cavity

Glazing	4mm toughened glass	4mm glass	6mm	8
S10 HS	43	43	43	
S20 VS	43	43	43	
S30 LO	42	42	42	
S41 SHC	45	45	45	
S41 DSH	43	43	43	
S40 FL	45	45	45	

Glazing	4mm toughened glass	4mm glass	6mm	6
S45 SHC	45	45	45	
S45 DSH	43	43	43	
S46 FL	-	-	45	
S50 SHC	-	-	44	
S55 DFL	-	-	-	
S60 TVS	44	44	44	
S80 HS	-	-	44	
S85 HS	-	-	-	
S90 VS	-	-	44	
S95 VS	-	-	-	

Rw dB values for Selectaglaze secondary glazing systems with a 150mm cavity

Glazing	4mm toughened glass	4mm glass	6mm	6
S10 HS	45	45	45	
S20 VS	45	45	45	
S30 LO	44	44	44	
S41 SHC	47	47	47	
S41 DSH	45	45	45	
S40 FL	47	47	47	
S45 SHC	47	47	47	
S45 DSH	45	45	45	
S46 FL	-	-	47	
S50 SHC	-	-	46	
S55 DFL	-	-	-	
S60 TVS	46	46	46	
S80 HS	-	-	46	
S85 HS	-	-	-	

Glazing	4mm toughened glass	4mm glass	6mm	6
S90 VS	-	-	46	
S95 VS	-	-	-	

Rw dB values for Selectaglaze secondary glazing systems with a 200mm cavity

Glazing	4mm toughened glass	4mm glass	6mm	6
S10 HS	45	45	45	
S20 VS	45	45	45	
S30 LO	44	44	44	
S41 SHC	47	47	47	
S41 DSH	45	45	45	
S40 FL	47	47	47	
S45 SHC	47	47	47	
S45 DSH	45	45	45	
S46 FL	-	-	47	
S50 SHC	-	-	46	
S55 DFL	-	-	-	
S60 TVS	46	46	46	
S80 HS	-	-	46	
S85 HS	-	-	-	
S90 VS	-	-	46	
S95 VS	-	-	-	

(<https://www.google.co.uk/maps/place/Selectaglaze+Ltd/@51.7>

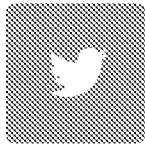


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