



Noise reduction solutions using glass

The following tables take the recommended design sound levels from AS/NZS 2107:2000 for both recommended and satisfactory levels and lists the glass to be used to achieve the desired sound level at the inside of the glass. Satisfactory refers to the highest levels of noise in the room which is believed tolerable by AS/NZS 2107:2000 for the activity being undertaken in that room. Therefore the recommended solution is more desirable for the occupant than the satisfactory solution.

The tables provide the solution for both traffic and aircraft noise for the building use designations shown in AS/NZS 2107:2000. The attenuation of traffic noise in this table is represented by R_w+C_{tr} and aircraft noise is represented by R_w+C .

This table relates to the noise level at the inside surface of the glass not necessarily the noise

level in the room because the level in the room is influenced by the vagaries caused by differences in window type or window frame type.

It should be remembered the acceptable noise levels suggested in AS2107 may not be suitable for all people. There are various methods for analysing and finding a solution to a noise problem. An acoustic consultant is an authoritative source of information and advice for analysing and developing solutions to noise problems. Consideration should be given to employing their expertise.

Further information on the acoustic properties of glass including attenuation data is available on our website.

Sound attenuation solutions

Type of Occupancy	External Noise Level	Traffic Noise		Aircraft Noise	
		Internal noise level to be achieved		Internal noise level to be achieved	
		Satisfactory	Recommended	Satisfactory	Recommended
Board Room	65	4mm Float	10.5mm VLam Hush	4mm VFloat	6.5mm VLam Hush
	70	6.38mm VLam	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
	75	10.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VFloat	6.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No listed solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	No listed solution
Cafeteria	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	4mm VFloat	6.38mm VLam	4mm VFloat	5mm VFloat
	80	6.38mm VLam	10.5mm VLam Hush	6.5mm VLam	6.5mm VLam Hush
Call Centre	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Computer Room	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	4mm VFloat	6.38mm VLam	4mm VFloat	5mm VFloat
	80	6.38mm VLam	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
Design Office	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush

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Type of Occupancy	External Noise Level	Traffic Noise		Aircraft Noise	
		Internal noise level to be achieved		Internal noise level to be achieved	
		Satisfactory	Recommended	Satisfactory	Recommended
General Office Areas	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Private Office	65	4mm VFloat	6.38mm VLam	4mm VFloat	5mm VFloat
	70	6.38mm VLam	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
	75	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
Reception Area	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Lobby	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	4mm VFloat	6.38mm VLam	4mm VFloat	5mm VFloat
	80	6.38mm VLam	10.5mm VLam Hush	6.5mm VLam	6.5mm VLam Hush
Airport Departure Lounge	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	4mm VFloat	6.38mm VLam	4mm VFloat	5mm VFloat
	80	4mm VFloat	10.5mm VLam Hush	4mm VFloat	6.5mm VLam Hush
Airport Passenger Check-in Area	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	4mm VFloat	6.38mm VLam	4mm VFloat	5mm VFloat
	80	6.38mm VLam	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
Art Gallery	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Exhibition Areas	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	4mm VFloat
	75	6.38mm VLam	10.5mm VLam Hush	4mm VFloat	5mm VFloat
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
Place of Worship	65	4mm VFloat	10.5mm VLam Hush	6mm VFloat	6mm VFloat
	70	6.38mm VLam	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	6.5mm VLam Hush
	75	10.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VFloat	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No listed solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No listed solution

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Type of Occupancy	External Noise Level	Traffic Noise		Aircraft Noise	
		Internal noise level to be achieved		Internal noise level to be achieved	
		Satisfactory	Recommended	Satisfactory	Recommended
Court Room	65	6.38mm VLam	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	5mm VFloat	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
	70	10.5mm VLam Hush	6mm VFloat + 150mm Gap + 4mm VFloat	6.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
	75	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	No standard solution
	80	6mm VFloat + 150mm Gap + 4mm VFloat	No standard solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution
Library Reading Area	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	4mm VFloat
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	5mm VFloat
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	6.5mm VLam Hush
Museum Exhibition Area	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	4mm VFloat
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	5mm VFloat
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	6.5mm VLam Hush
Post office & General Banking Areas	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Railway & Bus Terminal Ticket Areas	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Restaurants	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Coffee Bars	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	6.38mm VLam	4mm VFloat	6.38mm VLam
	75	6.38mm VLam	10.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Houses & Appartments near minor roads Sleeping Areas	65	4mm Float	10.5mm VLam Hush	4mm VFloat	6mm VFloat
	70	6.38mm VLam	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
	75	10.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VFloat	6.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No selection solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	No selection solution

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Type of Occupancy	External Noise Level	Traffic Noise		Aircraft Noise	
		Internal noise level to be achieved		Internal noise level to be achieved	
		Satisfactory	Recommended	Satisfactory	Recommended
Houses & Appartments near minor roads Living Areas	65	4mm Float	10.5mm VLam Hush	4mm VFloat	6mm VFloat
	70	6.38mm VLam	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
	75	10.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VFloat	6.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	No standard solution
Houses & Appartments near major roads Sleeping Areas	65	4mm Float	10.5mm VLam Hush	4mm VFloat	6mm VFloat
	70	6.38mm VLam	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
	75	10.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VFloat	6.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	No standard solution
Houses & Appartments near major roads Living Areas	65	4mm VFloat	6.38mm VLam	4mm VFloat	6mm VFloat
	70	4mm VFloat	10.5mm VLam Hush	4mm VFloat	6.5mm VLam Hush
	75	6.38mm VLam	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	5mm VFloat	6.5mm VLam Hush
	80	10.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VFloat	6.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Hotels & Motels near minor roads Sleeping Areas	65	4mm Float	10.5mm VLam Hush	4mm VFloat	6mm VFloat
	70	6.38mm VLam	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
	75	10.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VFloat	6.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VLam Hush + 16mm Gap + 10.5mm VLam Hush	No standard solution
Hotels & Motels near major roads Sleeping Areas	65	4mm Float	6.38mm VLam	4mm VFloat	6mm VFloat
	70	6.38mm VLam	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush
	75	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10mm VFloat + 200mm Gap + 6mm VFloat	8mm VLam Hush + 16mm Gap + 10.5mm VLam Hush	No standard solution