Noise reduction solutions using glass

The following tables take the recommended design sound levels from AS/NZS 2107:2000 for both satisfactory and maximum levels and lists the glass to be used to achieve the desired sound level at the inside of the glass. Maximum 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 satisfactory solution is more desirable for the occupant than the maximum 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 accoustic 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	Maximum	Satisfactory	Maximum
Board Room	65	10.5mm VLam Hush	4mm Float	6.5mm VLam Hush	4mm VFloat
	70	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.38mm VLam
	75	10mm VFloat + 200mm Gap + 6mm VFloat	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush
	80	No listed solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No listed solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Cafeteria	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	6.38mm VLam	4mm VFloat	5mm VFloat	4mm VFloat
	80	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.5mm VLam
Call Centre	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Computer Room	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	6.38mm VLam	4mm VFloat	5mm VFloat	4mm VFloat
	80	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.38mm VLam
Design Office	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush

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	Maximum	Satisfactory	Maximum
General Office Areas	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Private Office	65	6.38mm VLam	4mm VFloat	5mm VFloat	4mm VFloat
	70	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.38mm VLam
	75	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
	80	10mm VFloat + 200mm Gap + 6mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Reception Area	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Lobby	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	6.38mm VLam	4mm VFloat	5mm VFloat	4mm VFloat
	80	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.5mm VLam
Airport Departure Lounge	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	6.38mm VLam	4mm VFloat	5mm VFloat	4mm VFloat
	80	10.5mm VLam Hush	4mm VFloat	6.5mm VLam Hush	4mm VFloat
Airport Passenger Check-in Area	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	75	6.38mm VLam	4mm VFloat	5mm VFloat	4mm VFloat
	80	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.38mm VLam
Art Gallery	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Exhibition Areas	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	4mm VFloat	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	5mm VFloat	4mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	6.5mm VLam Hush	6.38mm VLam
Place of Worship	65	10.5mm VLam Hush	4mm VFloat	6mm VFloat	6mm VFloat
	70	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.5mm VLam Hush
	75	10mm VFloat + 200mm Gap + 6mm VFloat	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
	80	No listed solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No listed solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush

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	Maximum	Satisfactory	Maximum
Court Room	65	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	5mm VFloat
	70	6mm VFloat + 150mm Gap + 4mm VFloat	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush
	75	No standard solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
	80	No standard solution	6mm VFloat + 150mm Gap + 4mm VFloat	No standard solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush
Library Reading Area	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	4mm VFloat	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	5mm VFloat	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	6.5mm VLam Hush	6.5mm VLam Hush
Museum Exhibition Area	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	4mm VFloat	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	5mm VFloat	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm 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	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Railway & Bus Terminal Ticket Areas	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Restaurants	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Coffee Bars	65	4mm VFloat	4mm VFloat	4mm VFloat	4mm VFloat
	70	6.38mm VLam	4mm VFloat	6.38mm VLam	4mm VFloat
	75	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Houses & Appartments near minor roads Sleeping Areas	65	10.5mm VLam Hush	4mm Float	6mm VFloat	4mm VFloat
	70	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.38mm VLam
	75	10mm VFloat + 200mm Gap + 6mm VFloat	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush
	80	No selection solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No selection solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush

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	Maximum	Satisfactory	Maximum
Houses & Appartments near minor roads Living Areas	65	10.5mm VLam Hush	4mm Float	6mm VFloat	4mm VFloat
	70	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.38mm VLam
	75	10mm VFloat + 200mm Gap + 6mm VFloat	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush
	80	No standard solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Houses & Appartments near major roads Sleeping Areas	65	10.5mm VLam Hush	4mm Float	6mm VFloat	4mm VFloat
	70	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.38mm VLam
	75	10mm VFloat + 200mm Gap + 6mm VFloat	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush
	80	No standard solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VFloat + 16mm Gap + 10.5mm VLam Hush
Houses & Appartments near major roads Living Areas	65	6.38mm VLam	4mm VFloat	6mm VFloat	4mm VFloat
	70	10.5mm VLam Hush	4mm VFloat	6.5mm VLam Hush	4mm VFloat
	75	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	5mm VFloat
	80	10mm VFloat + 200mm Gap + 6mm VFloat	10.5mm VLam Hush	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	6.5mm VLam Hush
Hotels & Motels near minor roads Sleeping Areas	65	10.5mm VLam Hush	4mm Float	6mm VFloat	4mm VFloat
	70	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.38mm VLam
	75	10mm VFloat + 200mm Gap + 6mm VFloat	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush
	80	No standard solution	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VLam Hush + 16mm Gap + 10.5mm VLam Hush
Hotels & Motels near major roads Sleeping Areas	65	6.38mm VLam	4mm Float	6mm VFloat	4mm VFloat
	70	10.5mm VLam Hush	6.38mm VLam	6.5mm VLam Hush	6.38mm VLam
	75	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	10.5mm VLam Hush	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	6.5mm VLam Hush
	80	10mm VFloat + 200mm Gap + 6mm VFloat	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	No standard solution	8mm VLam Hush + 16mm Gap + 10.5mm VLam Hush