



Noise reduction solutions using glass

The following tables take the recommended design sound levels from AS/NZS 2107 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 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. 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 (room side of glass)				Internal noise level (room side of glass)			
		Minimum Compliance	dB	Recommended	dB	Minimum Compliance	dB	Recommended	dB
Board Room (Recommended 30) (Min. Compliance 40)	65	4mm Float	37	10.5mm V Lam Hush	29	4mm VFloat	36	6.5mm V Lam Hush	30
	70	6.38mm VLam	40	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30	6.38mm VLam	38	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	29
	75	10.5mm VLam Hush	39	10mm VFloat + 200mm Gap + 6mm VFloat	30	6.5mm VLam Hush	40	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	No standard solution	-	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39	No standard solution	-
Cafeteria (Recommended 45) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	4mm VFloat	42	4mm VFloat	41	4mm VFloat	41
	75	4mm VFloat	47	6.38mm VLam	45	4mm VFloat	46	5mm VFloat	45
	80	6.38mm VLam	50	10.5mm VLam Hush	44	6.5mm VLam	45	6.5mm VLam Hush	45
Call Centre (Recommended 40) (Min. Compliance 45)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	40	4mm VFloat	41	6.38mm VLam	38
	75	6.38mm VLam	45	10.5mm VLam Hush	39	5mm VFloat	45	6.5mm VLam Hush	40
	80	10.5mm VLam Hush	44	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	6.5mm VLam Hush	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39
Computer Room (Recommended 45) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	4mm VFloat	42	4mm VFloat	41	4mm VFloat	41
	75	4mm VFloat	47	6.38mm VLam	45	4mm VFloat	46	5mm VFloat	45
	80	6.38mm VLam	50	10.5mm VLam Hush	44	6.38mm VLam	45	6.5mm VLam Hush	45
Design Office (Recommended 40) (Min. Compliance 45)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	40	4mm VFloat	41	6.38mm VLam	38
	75	6.38mm VLam	45	10.5mm VLam Hush	39	5mm VFloat	45	6.5mm VLam Hush	40
	80	10.5mm VLam Hush	44	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	6.5mm VLam Hush	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39

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Type of Occupancy	External Noise Level	Traffic Noise				Aircraft Noise			
		Internal noise (room side of glass)				Internal noise (room side of glass)			
		Minimum Compliance	dB	Recommended	dB	Minimum Compliance	dB	Recommended	dB
General Office Areas (Recommended 40) (Min. Compliance 45)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	40	4mm VFloat	41	6.38mm VLam	38
	75	6.38mm VLam	45	10.5mm VLam Hush	39	5mm VFloat	45	6.5mm VLam Hush	40
	80	10.5mm VLam Hush	44	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	6.5mm VLam Hush	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39
Private Office (Recommended 35) (Min. Compliance 40)	65	4mm VFloat	37	6.38mm VLam	35	4mm VFloat	36	5mm VFloat	35
	70	6.38mm VLam	40	10.5mm VLam Hush	34	6.38mm VLam	40	6.5mm VLam Hush	35
	75	10.5mm VLam Hush	39	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	6.5mm VLam Hush	40	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	34
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	10mm VFloat + 200mm Gap + 6mm VFloat	35	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35
Reception Area (Recommended 40) (Min. Compliance 45)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	40	4mm VFloat	41	6.38mm VLam	38
	75	6.38mm VLam	45	10.5mm VLam Hush	39	5mm VFloat	45	6.5mm VLam Hush	40
	80	10.5mm VLam Hush	44	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	6.5mm VLam Hush	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39
Lobby (Recommended 45) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	4mm VFloat	42	4mm VFloat	41	4mm VFloat	41
	75	4mm VFloat	47	6.38mm VLam	45	4mm VFloat	46	5mm VFloat	45
	80	6.38mm VLam	50	10.5mm VLam Hush	44	6.5mm VLam	45	6.5mm VLam Hush	45
Airport Departure Lounge (Recommended 45) (Min. Compliance 55)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	4mm VFloat	42	4mm VFloat	41	4mm VFloat	41
	75	4mm VFloat	47	6.38mm VLam	45	4mm VFloat	46	5mm VFloat	45
	80	4mm VFloat	52	10.5mm VLam Hush	44	4mm VFloat	51	6.5mm VLam Hush	45
Airport Passenger Check-in Area (Recommended 45) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	4mm VFloat	42	4mm VFloat	41	4mm VFloat	41
	75	4mm VFloat	47	6.38mm VLam	45	4mm VFloat	46	5mm VFloat	45
	80	6.38mm VLam	50	10.5mm VLam Hush	44	6.38mm VLam	45	6.5mm VLam Hush	45
Art Gallery (Recommended 40) (Min. Compliance 45)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	40	4mm VFloat	41	6.38mm VLam	38
	75	6.38mm VLam	45	10.5mm VLam Hush	39	5mm VFloat	45	6.5mm VLam Hush	40
	80	10.5mm VLam Hush	44	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	6.5mm VLam Hush	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39
Exhibition Areas (Recommended 40) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	40	4mm VFloat	41	6.38mm VLam	38
	75	4mm VFloat	47	10.5mm VLam Hush	39	4mm VFloat	46	6.5mm VLam Hush	40
	80	6.38mm VLam	50	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	6.5mm VLam Hush	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39
Place of Worship (Recommended 30) (Min. Compliance 35)	65	6.38mm VLam	35	10.5mm VLam Hush	29	5mm VFloat	35	6mm VLam Hush	30
	70	10.5mm VLam Hush	34	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30	6.5mm VLam Hush	35	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	29
	75	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	10mm VFloat + 200mm Gap + 6mm VFloat	30	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	34	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30
	80	10mm VFloat 200mm Gap + 6mm VFloat	35	No standard solution	-	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	No standard solution	-

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Type of Occupancy	External Noise Level	Traffic Noise				Aircraft Noise			
		Internal noise level (room side of glass)				Internal noise level (room side of glass)			
		Minimum Compliance	dB	Recommended	dB	Minimum Compliance	dB	Recommended	dB
Court Room (Recommended 25) (Min. Compliance 35)	65	6.38mm VLam	35	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	25	5mm VFloat	35	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	23
	70	10.5mm VLam Hush	34	10mm VFloat + 200mm Gap + 6mm VFloat	25	6.5mm VLam Hush	35	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	25
	75	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	No standard solution	-	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	No standard solution	-
	80	10mm VFloat + 200mm Gap + 6mm VFloat	35	No standard solution	-	10mm VFloat + 200mm Gap + 6mm VFloat	35	No standard solution	-
Library Reading Area (Recommended 40) (Min. Compliance 45)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	40	4mm VFloat	41	6.38mm VLam	38
	75	6.38mm VLam	45	10.5mm VLam Hush	39	5mm VFloat	45	6.5mm VLam Hush	40
	80	10.5mm VLam Hush	44	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	6.5mm VLam Hush	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39
Museum Exhibition Area (Recommended 40) (Min. Compliance 45)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	40	4mm VFloat	41	6.38mm VLam	38
	75	6.38mm VLam	45	10.5mm VLam Hush	39	5mm VFloat	45	6.5mm VLam Hush	40
	80	10.5mm VLam Hush	44	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	6.5mm VLam Hush	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39
Post office & General Banking Areas (Recommended 45) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	42	4mm VFloat	41	4mm VFloat	41
	75	6.38mm VLam	47	10.5mm VLam Hush	45	5mm VFloat	46	5mm VFloat	45
	80	10.5mm VLam Hush	50	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	44	6.38mm VLam	48	6.5mm VLam Hush	45
Railway & Bus Terminal Ticket Areas (Recommended 45) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	42	4mm VFloat	41	4mm VFloat	41
	75	6.38mm VLam	47	10.5mm VLam Hush	45	5mm VFloat	46	5mm VFloat	45
	80	10.5mm VLam Hush	50	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	44	6.38mm VLam	48	6.5mm VLam Hush	45
Restaurants (Recommended 45) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	42	4mm VFloat	41	4mm VFloat	41
	75	6.38mm VLam	47	10.5mm VLam Hush	45	5mm VFloat	46	5mm VFloat	45
	80	10.5mm VLam Hush	50	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	44	6.5mm VLam	48	6.5mm VLam Hush	45
Coffee Bars (Recommended 45) (Min. Compliance 50)	65	4mm VFloat	37	4mm VFloat	37	4mm VFloat	36	4mm VFloat	36
	70	4mm VFloat	42	6.38mm VLam	42	4mm VFloat	41	4mm VFloat	41
	75	6.38mm VLam	47	10.5mm VLam Hush	45	5mm VFloat	46	5mm VFloat	45
	80	10.5mm VLam Hush	50	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	44	6.38mm VLam	48	6.5mm VLam Hush	45
Houses & Apartments near minor roads Sleeping Areas (Recommended 30) (Min. Compliance 35)	65	4mm Float	37	10.5mm VLam Hush	29	6.38mm VLam	35	6.5mm VLam Hush	30
	70	10.5mm VLam Hush	34	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30	6.5mm VLam Hush	35	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	29
	75	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	10mm VFloat + 200mm Gap + 6mm VFloat	30	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	34	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30
	80	10mm VFloat + 200mm Gap + 6mm VFloat	35	No standard solution	-	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	No standard solution	-

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Type of Occupancy	External Noise Level	Traffic Noise				Aircraft Noise			
		Internal noise level (room side of glass)				Internal noise level (room side of glass)			
		Minimum Compliance	dB	Recommended	dB	Minimum Compliance	dB	Recommended	dB
Houses & Appartments near minor roads Living Areas (Recommended 30) (Min. Compliance 40)	65	4mm Float	37	10.5mm VLam Hush	29	4mm VFloat	36	6.5mm VLam Hush	30
	70	6.38mm VLam	40	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30	6.38mm VLam	38	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	29
	75	10.5mm VLam Hush	39	10mm VFloat + 200mm Gap + 6mm VFloat	30	6.5mm VLam Hush	40	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	No standard solution	-	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39	No standard solution	-
Houses & Appartments near major roads Sleeping Areas (Recommended 30) (Min. Compliance 40)	65	4mm Float	37	10.5mm VLam Hush	29	4mm VFloat	36	6.5mm VLam Hush	30
	70	6.38mm VLam	40	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30	6.38mm VLam	38	8mm VLam Hush + 16mm Gap + 10.5mm VLam Hush	29
	75	10.5mm VLam Hush	39	10mm VFloat + 200mm Gap + 6mm VFloat	30	6.5mm VLam Hush	40	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	No standard solution	-	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	39	No standard solution	-
Houses & Appartments near major roads Living Areas (Recommended 35) (Min. Compliance 45)	65	4mm VFloat	37	6.38mm VLam	35	4mm VFloat	36	5mm VFloat	35
	70	4mm VFloat	42	10.5mm VLam Hush	34	4mm VFloat	41	6.5mm VLam Hush	35
	75	6.38mm VLam	45	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	5mm VFloat	45	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	34
	80	10.5mm VLam Hush	44	10mm VFloat + 200mm Gap + 6mm VFloat	35	6.5mm VLam Hush	45	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35
Hotels & Motels near minor roads Sleeping Areas (Recommended 30) (Min. Compliance 35)	65	6.38mm VLam	35	10.5mm VLam Hush	29	5mm VFloat	35	6.5mm VLam Hush	30
	70	10.5mm VLam Hush	34	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30	6.5mm VLam Hush	35	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	29
	75	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	10mm VFloat + 200mm Gap + 6mm VFloat	30	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	34	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	30
	80	10mm VFloat + 200mm Gap + 6mm VFloat	35	No standard solution	-	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	No standard solution	-
Hotels & Motels near major roads Sleeping Areas (Recommended 35) (Min. Compliance 40)	65	4mm Float	37	6.38mm VLam	35	4mm VFloat	36	5mm VFloat	35
	70	6.38mm VLam	40	10.5mm VLam Hush	34	6.38mm VLam	40	6.5mm VLam Hush	35
	75	10.5mm VLam Hush	39	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35	6.5mm VLam Hush	40	8mm VFloat + 16mm Gap + 10.5mm VLam Hush	34
	80	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	40	10mm VFloat + 200mm Gap + 6mm VFloat	35	8mm VLam Hush + 16mm Gap + 10.5mm VLam Hush	39	8.5mm VLam Hush + 16mm Gap + 12.5mm VLam Hush	35