

## Road Traffic and Passenger Rail Quiet House Requirements (Based on Table 3 of State Planning Policy 5.4 2019)

Exposure Category	Orientation to corridor	Acoustic rating and example constructions					Mechanical ventilation/air
		Walls	External doors	Windows	Roofs and ceilings of highest floors	Outdoor Living areas	conditioning considerations
A Quiet House A	Facing Side On	Bedroom and Indoor Living and work areas to Rw + Ctr 45dB  Stud Frame Walls  One row of 92mm studs at 60mm centres with:  Resilient steel channels fixed to the outside of the studs; and  9.5mm hardboard or 9mm fibre cement weatherboards or one layer of 19mm board cladding fixed to the outside of the channels; and  75mm glass wool (11kg/m3) or 75mm polyester (14kg/m3) insulation, positioned between the studs; and  -Two layers of 16mm fire-protective grade plasterboard fixed to the inside face of the studs.  Brick Walls  Single leaf of 150mm brick masonry with 13mm cement render on each face: OR  Double brick: two leaves of 90 mm clay	Pully glazed hinged door with certified R <sub>w</sub> +C <sub>tr</sub> 28dB rated door and frame including seals and 6mm glass  Indoor Living and work areas:  → 35mm solid core timber hinged door and frame system certified to Rw 28dB including seals: OR  → Glazed sliding door with 10 mm glass and weather seals  As per "Facing" above, except R <sub>w</sub> +C <sub>tr</sub> values may be 3dB less, e.g. glazed sliding door with 10 mm glass and weather seals for bedrooms	hung with minimum 10 mm single or 6mm- 12mm-10mm double insulted glazing (Rw+Ctr 28 dB). Sealed awning or casement windows may use 6 mm glazing instead: OR   Up to 60% floor area: as per above but must be sealed awning or casement type windows (Rw+Ctr 31dB).  Indoor Living and work areas  Up to 40% floor area: Sliding, awning, casement or double hung with minimum 6mm single pane or 6mm-12mm-6mm double insulted glazing (Rw+Ctr 25dB): OR  Up to 60% floor area: As per Bedrooms at up to 40% area (Rw+Ctr28 dB: OR  Up to 80% floor area: As per Bedrooms at up to 60% area (Rw+Ctr 31 dB).  As above, except Rw+Ctr values may be 3dB less, or max % area increased by 20%	To R <sub>w</sub> +C <sub>tr</sub> 35dB  Concrete or terracotta tile or metal sheet roof with sarking and at least 10mm plasterboard ceiling	At least one outdoor living area located on the opposite side of the building from the transport corridor and/or at least one ground level outdoor living area screened using a solid continuous fence or other structure of minimum 2 metres height above ground level	<ul> <li>Acoustically rated openings and ductwork to provide a minimum sound reduction performance of Rw 40dB into sensitive spaces</li> <li>Evaporative systems require attenuated ceiling air vents to allow closed windows</li> <li>Refrigerant-based systems need to be designed to achieve National Construction Code fresh air ventilation requirements</li> <li>Openings such as eaves, vents and air inlets must be acoustically treated, closed or relocated to building sides facing away from the corridor where practicable</li> </ul>
	Opposite	brick masonry with a 20mm cavity between leaves.	No specific requirements	No specific requirements			