

Appendix 6. Noise Insulation Construction Schedule

(the schedule describes the minimum requirements necessary to achieve an external sound insulation level of $D_{nT,w} + C_{tr} > 30$ dB)

Building Element	<u>Minimum</u> Construction Requirement	
<u>External Walls</u> of Habitable Rooms	<u>Stud Walls:</u> Exterior cladding: Cavity infill: Interior lining: Combined superficial density:	20 mm timber or 9mm compressed fibre cement sheet over timber frame (100 mm x 50 mm). * Fibrous acoustic blanket (batts or similar of a minimum mass of 9 kg/m ³) required in cavity for all exterior walls. Minimum 90 mm wall cavity. One layer of 12 mm gypsum plasterboard. Where exterior walls have continuous cladding with a mass of greater than 25 kg/m ² (e.g. brick veneer or minimum 25 mm stucco plaster), internal wall linings need to be no thicker than 10 mm gypsum plasterboard. Minimum not less than 25 kg/m ² being the combined mass of external and internal linings excluding structural elements (e.g. window frames or wall studs) with no less than 10 kg/m ² on each side of structural elements.
	<u>Mass Walls:</u>	190 mm concrete block, strapped and lined internally with 10 mm gypsum plaster board, or 150 mm concrete wall.
<u>Glazed Areas</u> of Habitable Rooms	Glazed areas up to 10% of <u>floor</u> area: Glazed areas between 10% and 35% of <u>floor</u> area: Glazed areas greater than 35% of <u>floor</u> area:	6 mm glazing single float 6 mm laminated glazing Require a specialist acoustic report to show conformance with the insulation rule.
	Frames to be aluminium window frames with compression seals.	

Building Element	<u>Minimum</u> Construction Requirement	
Skillion <u>Roof</u>	Cladding:	0.5 mm profiled steel or 6 mm corrugated fibre cement, or membrane over 15mm thick ply, or concrete or clay tiles.
	Sarking:	17mm plywood (no gaps).
	Frame:	Minimum 100 mm gap with fibrous acoustic blanket (batts or similar of a mass of 9 kg/m ³).
	Ceiling:	Two layers of 10 mm gypsum plaster board (no through ceiling lighting penetrations unless correctly acoustically rated). Fibrous acoustic blanket (batts or similar of a minimum mass of 9 kg/m ³).
	Combined superficial density:	Combined mass of cladding and lining of not less than 25 kg/m ² with no less than 10 kg/m ² on each side of structural elements.
Pitched <u>Roof</u> (all roofs other than skillion roofs)	Cladding:	0.5 mm profiled steel or tiles, or membrane over 15mm thick ply.
	Frame:	Timber truss with 100 mm fibrous acoustic blanket. (batts or similar of a minimum mass of 9 kg/m ³) required for all ceilings.
	Ceiling:	12 mm gypsum plaster board.
	Combined superficial density:	Combined mass with cladding and lining of not less than 25 kg/m ² .
<u>Floor</u> areas open to outside	Cladding:	Under-floor areas of non-concrete slab type floors exposed to external sound will require a cladding layer lining the underside of floor joists of not less than 12 mm ply
	Combined superficial density:	Floors to attain a combined mass not less than 25 kg/m ² for the floor layer and any external cladding (excluding floor joists or bearers).
External <u>Door</u> to Habitable Rooms	Solid core door (min 25 kg/m ²) with compression seals (where the door is exposed to exterior noise).	

Notes:

- *The table refers to common specifications for timber size. Nominal specifications may in some cases be slightly less than the common specifications stated in the schedule for timber size.
- In determining the insulating performance of roof/ceiling arrangements, roof spaces are assumed to have no more than the casual ventilation typical of the jointing capping and guttering detail used in normal construction.”