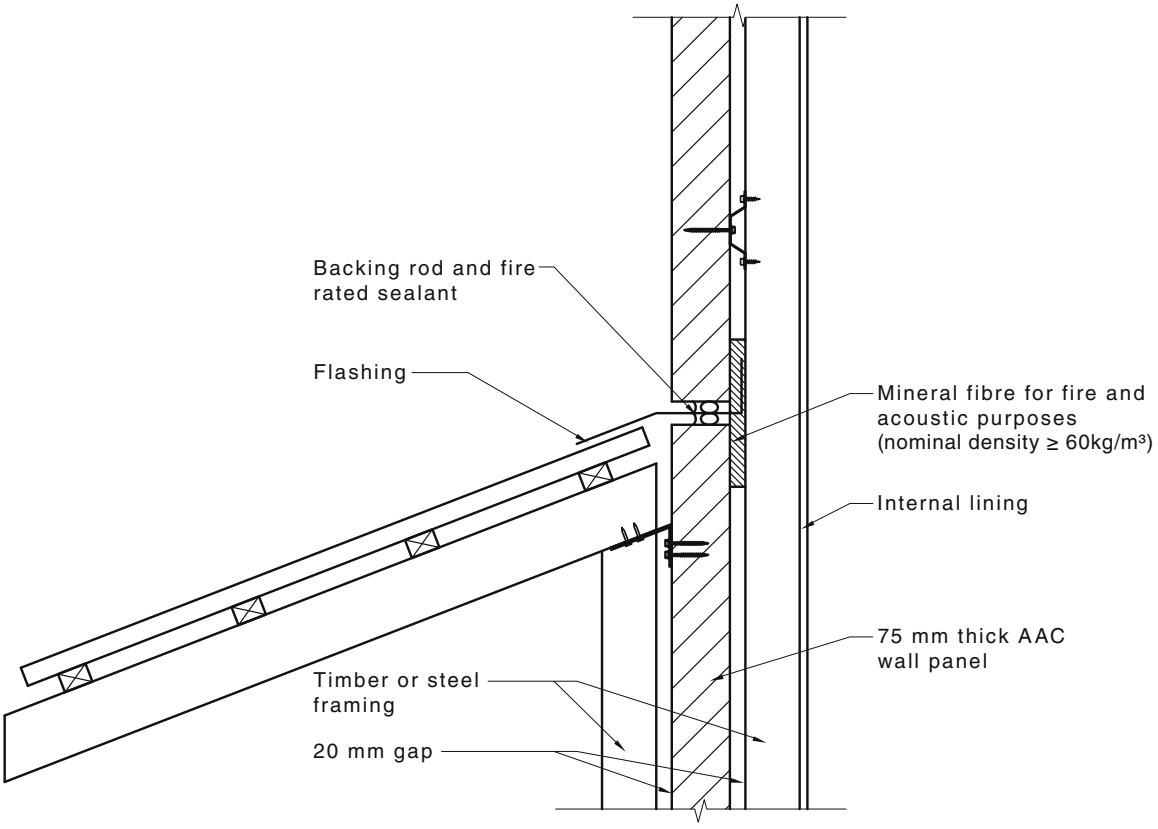

NOTES:

1 Details are applicable to 75 mm Reinforced AAC panels.

2 Reinforced AAC panels to be fixed by aluminium brackets at top and bottom only such that there is no continuous construction across the cavity.

FIGURE 5.3(N) STEP IN ROOF FOR REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEMS

SECTION 6 75 mm REINFORCED AAC FLOORS IN HOUSES, LOW-RISE MULTI-RESIDENTIAL AND COMMERCIAL BUILDINGS

6.1 SCOPE OF SECTION

This Section sets out requirements for the construction of 75 mm thick Reinforced AAC floors for use in houses and low-rise multi-residential and commercial buildings.

The building system shall consist of the following:

(a) 75 mm thick Reinforced AAC floor panels designed in accordance with AS 5146.1 and AS 5146.2 and constructed in accordance with Section 2 and Clauses 6.2 and 6.3 (see Note 1).

(b) Flashings detailed in accordance with Section 2 and Clauses 6.2 and 6.3 (see Note 1).

(c) Screw fixings of the type and spacing specified in Section 2, Section 3 and Clauses 6.2 and 6.3, securing the Reinforced AAC floor panels to horizontal joists (see Note 1).

(d) Horizontal timber or light gauge steel joists fixed to timber or steel structural supporting frames (see Note 2).

(e) Timber, steel or concrete structural supporting frames and slabs, including bracing capable of resisting applicable horizontal and vertical loads, complying with AS 1684, AS/NZS 4600 or AS 3600 respectively (see Note 2).

(f) Reinforced concrete slab-on-ground or reinforced concrete footings complying with AS 2870 or AS 3600 (see Note 2).

NOTES:

1 This Standard includes requirements for the construction of Reinforced AAC floor panels, the screws fixing the Reinforced AAC floor panels to the joists and the flashing arrangement.

2 The design of the timber or steel structural joists, frame (including all bracing), concrete slabs and footings and other building components are excluded from the scope of this Standard.

6.2 CUSTOMIZED DETAILS

For each building, details shall be prepared and reproduced on design documents. Such details shall be based on Sections 2 and 3 and the Figures in Clause 6.3, and shall be modified and supplemented if necessary.

The spacing of joists shall be in accordance with Clause 3.4 and shall be shown in the documents.

The location of control joints, slip joints and flashings shall be in accordance with Section 2, and shall be shown in the documents. The supports shall be specified as applicable.

6.3 STANDARDS DETAILS

Figures 6.3(A) to 6.3(ZS) provide a range of details that meet the requirements of Clause 6.1.

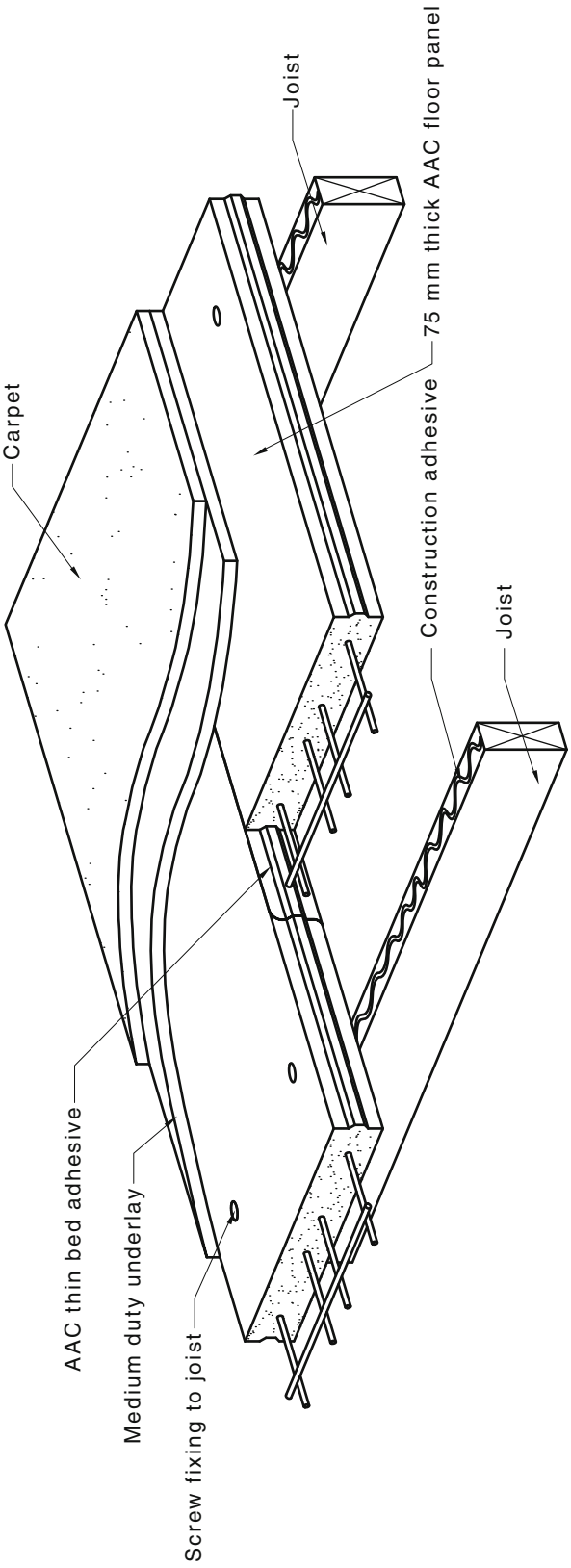

FIGURE 6.3(A) (in part) 75 mm THICK REINFORCED AAC FLOOR WITH CARPET

Carpet	Fire	Acoustic			Thermal	
System description	Resistance to fire from top only	R_w	R_w+C_{tr}	$L_{nw}+C_1$	R-value up	R-value down
AAC houses, low rise and commercial floor-carpet ground floor enclosed	240/240/240	33	30	45	1.46	1.58
AAC houses, low rise and commercial floor-carpet ground floor unenclosed		33	30	45	0.87	0.92
AAC houses, low rise and commercial floor-carpet 2nd storey plasterboard ceiling		55	48	35	3.07	3.36

NOTE: This floor system provides fire resistance only in applications where the fire source is above the floor. In order to comply with the NCC, it may be necessary to have a fire-resistant ceiling below.

FIGURE 6.3(A) (in part) 75 mm THICK REINFORCED AAC FLOOR WITH CARPET

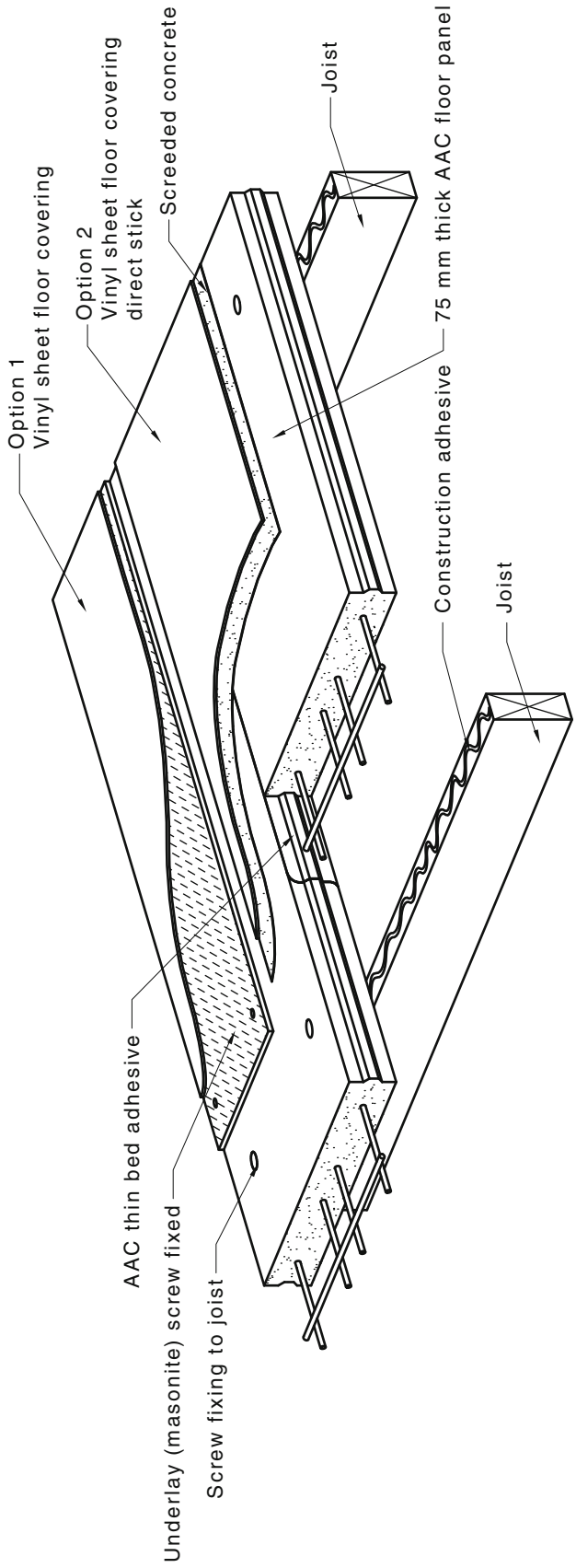

FIGURE 6.3(B) (in part) 75 mm THICK REINFORCED AAC FLOOR WITH VINYL FLOOR COVERING ON HARDBOARD

Vinyl sheet with hardboard	Fire	Acoustic			Thermal	
System description	Resistance to fire from top only	R_w	R_w+C_{tr}	$L_{nw}+C_1$	R-value up	R-value down
AAC houses, low rise and commercial floor-vinyl ground floor enclosed	240/240/240	37	33	76	1.18	1.30
AAC houses, low rise and commercial floor-vinyl ground floor unenclosed		37	33	76	0.59	0.64
AAC houses, low rise and commercial floor-vinyl 2nd storey plasterboard ceiling		58	51	70	2.79	3.08

NOTE: This floor system provides fire resistance only in applications where the fire source is above the floor. In order to comply with the NCC, it may be necessary to have a fire-resistant ceiling below.

FIGURE 6.3(B) (in part) 75 mm THICK REINFORCED AAC FLOOR WITH VINYL FLOOR COVERING ON HARDBOARD

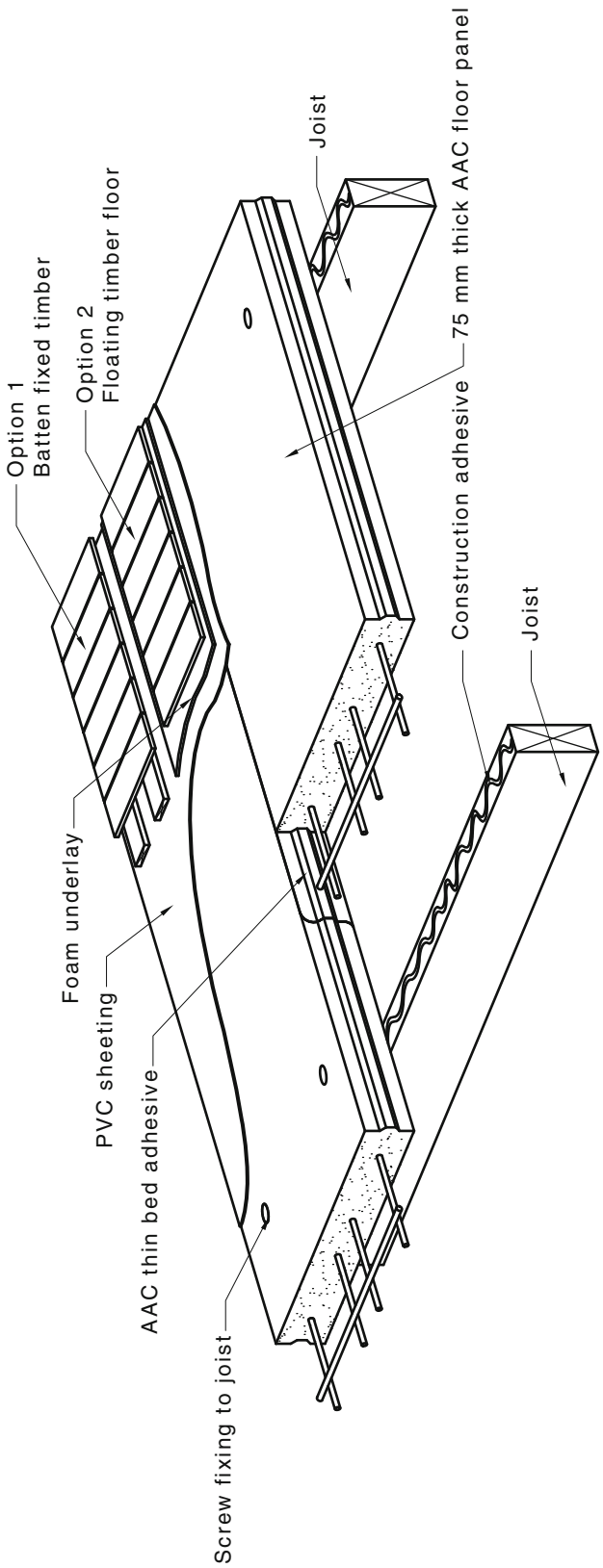

FIGURE 6.3(C) (in part) 75 mm THICK REINFORCED AAC FLOOR WITH TIMBER PANEL FLOORING

Timber of battens	Fire	Acoustic			Thermal	
System description	Resistance to fire from top only	R_w	R_w+C_{tr}	$L_{nw}+C_1$	R-value up	R-value down
AAC houses, low rise and commercial floor-timber battens ground floor enclosed	240/240/240	37	33	83	1.43	1.59
AAC houses, low rise and commercial floor-timber battens ground floor unenclosed		37	33	83	0.84	0.93
AAC houses, low rise and commercial floor-timber battens 2nd storey plasterboard ceiling		55	48	66	3.05	3.38

Timber floating floor	Fire	Acoustic			Thermal	
System description	Resistance to fire from top only	R_w	R_w+C_{tr}	$L_{nw}+C_1$	R-value up	R-value down
AAC houses, low rise and commercial floor-timber floating ground floor enclosed	240/240/240	37	33	83	1.33	1.45
AAC houses, low rise and commercial floor-timber floating ground floor unenclosed		37	33	83	0.74	0.79
AAC houses, low rise and commercial floor-timber floating 2nd storey plasterboard ceiling		55	48	66	2.94	3.23

NOTE: This floor system provides fire resistance only in applications where the fire source is above the floor. In order to comply with the NCC, it may be necessary to have a fire-resistant ceiling below.

FIGURE 6.3(C) (in part) 75 mm THICK REINFORCED AAC FLOOR WITH TIMBER PANEL FLOORING

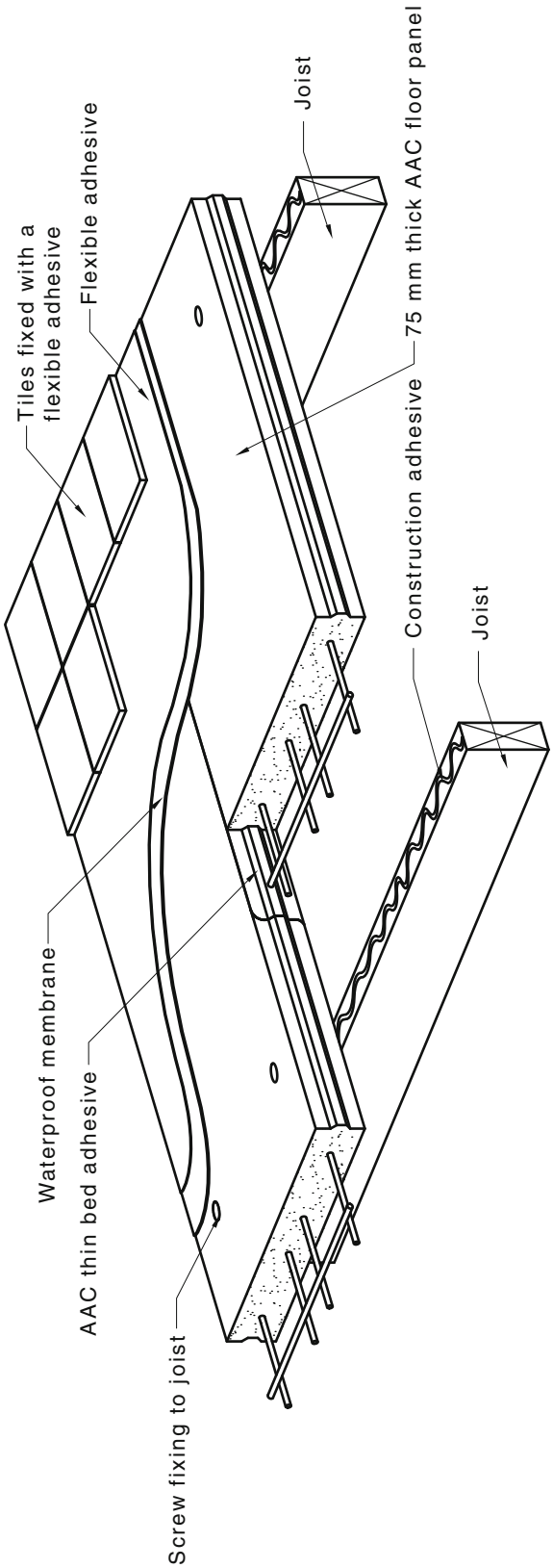

FIGURE 6.3(D) (in part) 75 mm THICK REINFORCED AAC FLOOR WITH 8 mm CERAMIC TILES

8 mm ceramic tiles	Fire	Acoustic			Thermal	
System description	Resistance to fire from top only	R_w	R_w+C_{tr}	$L_{nw}+C_1$	R-value up	R-value down
AAC houses, low rise and commercial floor-tiles ground floor enclosed	240/240/240	36	31	72	1.19	1.31
AAC houses, low rise and commercial floor-tiles ground floor unenclosed		36	31	72	0.60	0.65
AAC houses, low rise and commercial floor-tiles 2nd storey plasterboard ceiling		54	48	64	2.80	3.09

NOTE: This floor system provides fire resistance only in applications where the fire source is above the floor. In order to comply with the NCC, it may be necessary to have a fire-resistant ceiling below.

FIGURE 6.3(D) (in part) 75 mm THICK REINFORCED AAC FLOOR WITH 8 mm CERAMIC TILES