PRO PANEL
UNITED BUILDING SUPPLY PTY LTD.

Houses and Low-Rise Multi-Residential Party Wall System

Vertical 50/75mm AAC

Design & Installation Guide

CodeMark Australia
Certificate CM40418
CMI Certification

Version 1, July 2024

CONTENTS

CONTENTS

1 INTRODUCTION

1.1 PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System, by United Building Supply, provides an NCC 2022 compliant Autoclaved Aerated Concrete (AAC) panel Deemed-to-Satisfy Solution for a party wall system in residential, commercial or light industrial applications not greater than 3 storeys in height.

This manual is provided for use by designers and builders. It describes the performance; installation; and typical detailing requirements for use of the PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System.

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System delivers a high performance, high quality, solution to party walls requiring strength, fire, acoustic, & thermal performance.

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System has been tested, appraised and certified to the applicable DTS requirements of the NCC 2022, Volumes One, Two & Housing Provisions, Building Code of Australia:

Structure: B1D4(b)(ii) Determination of structural resistance of materials and forms of construction in accordance with AS 5146.1 and AS 5146.3; and H1D7(4)(a) when designed and constructed in accordance with AS 5146.1.

Fire Safety: C2D2(2) and 9.3.1(1)(a)(i) for Fire Resistance Level tested and assessed to AS 1530.4 for FRL 120/120/120, (note AS 5146.3 Cl.2.6.2 provisions are for non-load bearing walls only).

Non-Combustible: C2D10(5)(e), Autoclaved aerated concrete, including mortar are non-combustible and may be used wherever a non-combustible material is required.

Fire Hazard Properties: C2D11(3) do not apply to Autoclaved aerated concrete. Internal wall linings, materials and assemblies to comply with C2D11(1)(b) (S7C4 & S7C7).

Sound Insulation: F7P2, F7P4, and H4P6 & 10.7.1(1). PRO PANEL (VERTICAL) 50/75mm AAC Party Wall System achieves Rw + Ctr (airborne) not less than 50; and is discontinuous construction.

Energy Efficiency: J4D6, and H6D2(1), 13.2.5. PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System achieves high Total R-values which may be used to satisfy J4D6 and H6D2(1) external wall insulation requirements, or as input to house energy rating software to achieve an energy rating.

1.2 System Summary

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System consists of 50mm or 75mm thick AAC panels screwed to either steel or timber wall framing through horizontal aluminium wall brackets.

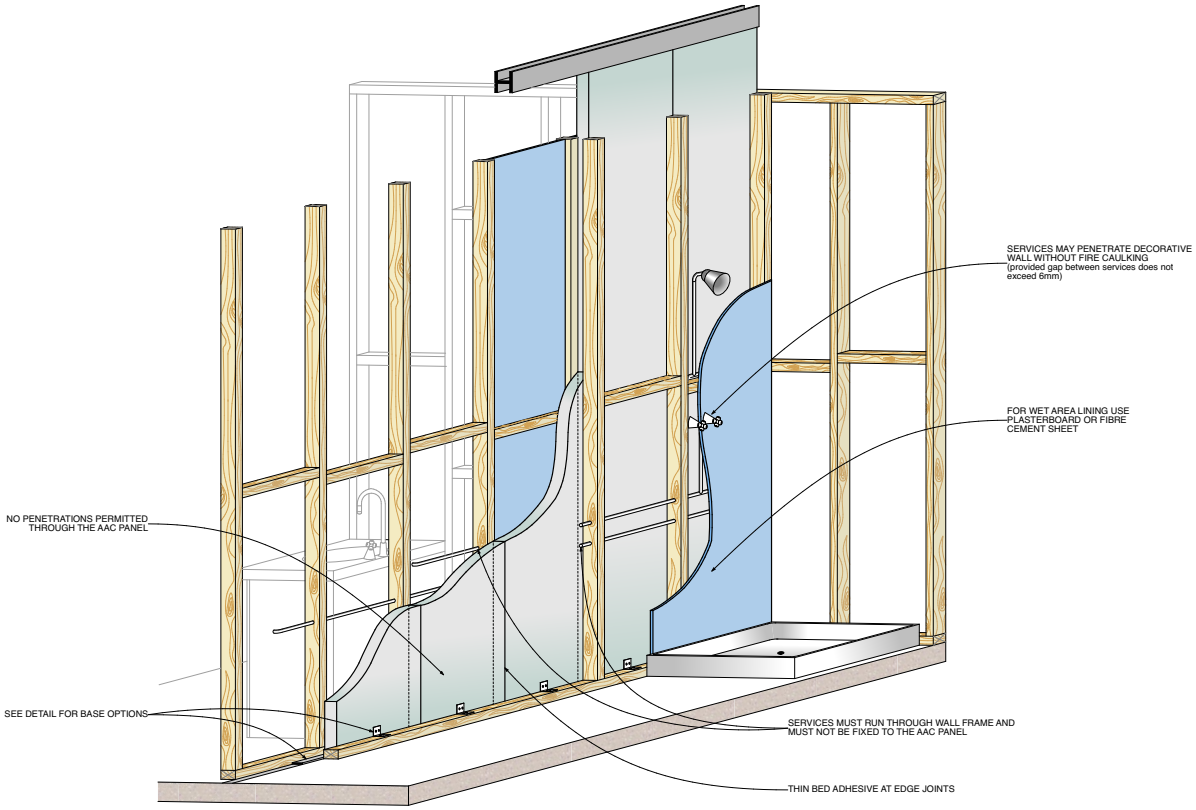


Figure 1: PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System

The system is lightweight making it easy to install.

It provides an energy efficient barrier to the elements through its high thermal insulation properties.

It is versatile and designed to be able to be installed on all types of elements such as concrete slab-on ground or timber or steel wall framing to allow the architect to include in most buildings that require a separating wall.

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System provides the necessary FRL, and airborne & impact sound insulation required by NCC 2022 for walls separating dwellings without the limitations of high mass construction.

PRO PANEL (VERTICAL) 50/75mm AAC other benefits include:
- High insulation performance for Energy Efficient construction,
- Adaptable to a wide-range of architectural designs,
- Lightweight for quick handling & construction,
- Durable to the elements & impact, and
- Detailed to proven Australian Standards for builders and specifiers.

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System is designed in Australia and is fully compliant to Australian requirements conditions. A proven successful high-performing construction system used successfully in Australia & Europe for many years. Lightweight and easy to install, adaptable to different designs, provides economy and confidence.

Product selection, and incorporation into the building design, must be made by a person who is conversant with the application and technical aspects of the product, and has ready access to the relevant technical information related to the product use.

Product installation must be carried out by a competent carpenter or other tradesman under the direction of a Builder, both of whom are conversant with the method of product installation and have access to all relevant technical information on product installation.

2 AAC MATERIAL PROPERTIES

Material Properties are determined in accordance with AS 5146 Parts 1 & 2 - Reinforced Autoclaved Aerated Concrete.

2.1 Physical Properties

Thicknesses: 50mm & 75mm

Width: 600mm

Lengths 50mm: 1800, 2200, 2400, 2550, 2700, 2850, 3000 mm

Lengths 75mm: 1800, 2400, 2550, 2700, 2850, 3000 mm

Edge Straightness Deviation (max.): +-1.5mm

Steel Reinforcement: Panel lengths 1800mm to 3000mm - Single layer of steel mesh 4 x Ø5mm longitudinal & 6-8 x Ø5mm transverse steel bars depending on panel length.

Declared Density Class (Dry): 500

Panel Density for transport/lifting (AS 5146.2, Cl.3.2.7): 740 kg/m^3

2.2 Strength Properties

Declared Compressive Strength Class: AAC 2.5

2.3 Thermal Properties

Declared AAC Thermal Resistance: 50mm = 0.38m^2K/W, 75mm = 0.57m^2K/W

2.4 Cutting

Panels typically should not be less than 270mm wide, and in all cases must achieve the specified minimum support and fixing requirements.

3 NATIONAL CONSTRUCTION CODE (NCC) 2022

The performance-based NCC consists of solutions that enable a building to be constructed to achieve minimum levels of compliance. This may be demonstrated through compliance with a Deemed-to-Satisfy Solution, or by a Performance Solution.

Party Walls are required to comply with those performance requirements as applicable for; structure; fire; acoustic; and energy efficiency. Details of compliance are outlined below.

3.1 Structural Performance, B1D4(b)(ii) & H1D7(4)(a)

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System has been tested in accordance with AS 5146.1 with design and construction in accordance with AS 5146.3.

As referenced in NCC 2022 Volume Two, H1D7(4)(a), performance requirement H1P1 is satisfied for autoclaved aerated concrete if it is designed and constructed in accordance with AS 5146.1.

As referenced in NCC 2022 Volume One, B1D4(b)(ii), structural resistance of materials and forms of construction for autoclaved aerated concrete must be determined in accordance with AS 5146.1 & AS 5146.3.

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System is non-loadbearing and is not intended to carry vertical loads other than their self-weight. The steel or timber framing must be designed independently, taking into account internal pressures, and control joints are required at regular intervals to allow for building movement.

In all cases, PRO PANEL shall be temporarily braced to resist construction loads, including wind.

3.2 Fire Safety Performance, C2D2(2) & 9.3.1(1)(a)(i)

The PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System with:

– PRO PANEL (VERTICAL) 50/75mm AAC, mechanically fixed to either steel or timber wall framing (by others) using aluminium wall brackets attached only to the top and bottom plates such that there is no continuous construction across the cavity.

– The brackets must be angles not smaller than 76 mm x 43 mm x 50 mm in size and fabricated from a minimum of 1.6 mm thick Grade 5005 aluminium.

– Fixings (Nails & Screws).

  - To fix aluminium bracket to top and bottom plate:
    - For timber plates, 2/25 x 2.5 mm galvanized nails or 2/12–11 x 35 mm hex head type 17 screws (Class 3 or 4).
    - For steel plates, 2/10–16 x 16 mm wafer head/hex head screws (Class 3 or 4).
  - To fix aluminium bracket to PRO PANEL 50/75mm AAC panel:
    - 2/14–10 Hex Head screws (Class 3 or 4). Screw length shall be 10 mm shorter than the panel thickness.

- Screws shall be:
  - at least Class 3 for moderate and mild exposure environments.
  - at least Class 4 for severe marine further than 100 m from breaking surf, marine and industrial exposure environments; and
  - Class 4 stainless steel for severe marine exposure environments within 100 m of breaking surf.

– Wall framing either timber framing 70x45 mm MGP10, or light-gauge steel framing (min. 0.55mm BMT) compliant with the relevant framing code.

– R2.0, 70mm, 10.3kg/m3 Glasswool Batt Insulation

– Min. 10mm thickness Standard Grade Plasterboard fixed with stud adhesive, paper tape 6gx25mm bugle head needle point screws

– Horizontal joints shall be made with either;

  - Continuous steel channel, 76 x 32 x 0.75mm BMT or 76 x 50 x 0.70mm Deflection Track or J-Track, fixed back-to-back with 10-16 x 16mm wafer head screws at 600mm max. ctrs, with 16mm fire rated plasterboard fixed to panel with 10 x 50mm bugle head laminating screws at 400mm max. ctrs. on one side, or

  - 100mm wide, 13mm thick, mineral fibre strips with a density of not less than 110kg/m^3

– Maximum wall height of 12.0m.

has been tested and assessed as having the capacity to maintain an FRL of 60/60/60, 90/90/90 or 120/120/120 as applicable to the application.

As a non-combustible FRL-rated wall system, PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System may be installed in:

– Intertenancy Walls in Low-Rise Multi-Residential Buildings.

3.3 Non Combustible, C2D10

Non-Combustible: C2D10(5)(e), Autoclaved aerated concrete, including mortar are non-combustible and may be used wherever a non-combustible material is required.

3.4 Fire Hazard Properties, C2D11

As a concrete product, C2D11(1) requirements for Group Number, $SMOGRA_{RC}$, ASEA, Spread-of-Flame and Smoke-Developed Indices, "…do not apply…" to PRO PANEL (per C2D11(3)).

3.5 Acoustic Performance, F7P2, F7P4, H4P6(2) & 10.7.1

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System timber and steel framing configurations achieve airborne sound insulation performance, calculated as weighted sound reduction indices with spectrum adaptation terms of:

– R_w (dB) from 63 to 74; and,

– R_w+C_{tr} (dB) from 50 to 61.

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System achieves NCC Volume One, F7P2 & F7P4 for;

– Rw+Ctr (dB) not less than 50; and,

- discontinuous construction when constructed with a minimum 20 mm cavity between leaves and there is no mechanical linkage between leaves except at the periphery, where;

  - intermediate brackets are not required for walls up to 3m in height; and

  - maximum intermediate bracket vertical spacings of 3m for walls up to 12m in height.

PRO PANEL Thickness (mm)	Plasterboard (each side)	Min. Stud Depth (mm)	Frame-Panel Gap (mm)	R_w (dB)	R_w+C_{tr} (dB)
50	1 x 13mm fire-rated/acoustic/water-resistant	70	20	65	50
50	1 x 13mm standard	70	40	65	51
50	1 x 13mm standard	90	20	65	51
75	1 x 13mm standard	70	20	64	50

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System achieves NCC Volume Two, 10.7.1(1) requirement for;

– a separating wall to have an Rw+Ctr (airborne) not less than 50; and

– for discontinuous construction when constructed with a minimum 20 mm cavity between leaves and there is no mechanical linkage between leaves except at the periphery, where;

  - intermediate brackets are not required for walls up to 3m in height; and

  - maximum intermediate bracket vertical spacings of 3m for walls up to 12m in height.

3.6 Thermal Performance, J4D6, H6D2(1) & 13.2.5

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System incorporating 50mm or 75mm thickness panel, aluminium wall brackets, R2.0m2K/W, and 10mm plasterboard lining achieves the following Total R-values in accordance with AS/NZS 4859.1:2018 which may be used to satisfy the minimum Total R-value requirements of NCC 2022, Volume One J4D6, Volume Two H6D2(1)(b)(i) & Housing Provisions 13.2.5 external wall insulation requirements, where these values are higher, or as input to house energy rating software to achieve an energy rating.

PRO PANEL (VERTICAL) 50/75mm AAC Party Wall System (with R2.0, 70mm batts)		**Total R-value (m^2.K/W)**	
		Winter (Heat flow outwards)	**Summer** (Heat flow inwards)
50 mm	**Timber Frame**	4.5	4.3
	Steel Frame	3.8	3.6
75 mm	**Timber Frame**	4.7	4.5
	Steel Frame	4.1	3.9

4 SYSTEM COMPONENTS

Components of the PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System are listed below. The use of other components is not authorised and will alter the performance of the system.

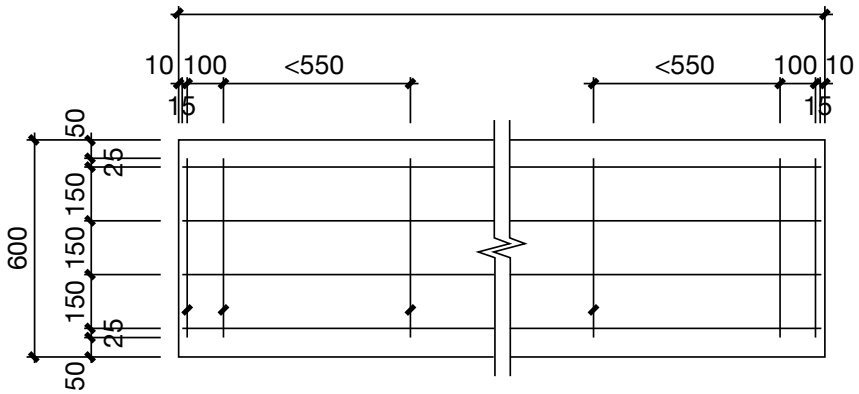
4.1.1 50mm AAC Panel

Product:	Autoclaved aerated concrete panels
Thickness:	50mm
Width:	600mm
Lengths:	1800, 2200, 2400, 2550, 2700, 2850, 3000mm
Reinforcement:	Single layer steel mesh, centrally located.
Steel bars:	4 x Ø 5mm longitudinal bars and 6-8 x Ø 5mm transverse bars (@<550mm spacing) depending on panel length.

4.1.2 75mm AAC Panel

Product:	Autoclaved aerated concrete panels
Thickness:	75mm
Width:	600mm
Lengths:	1800, 2400, 2550, 2700, 2850, 3000 mm
Reinforcement:	1800 to 3000mm single layer steel mesh, centrally located.
Steel bars	4 x Ø 5mm longitudinal bars and 6-8 x Ø 5mm transverse bars (@<550mm spacing) depending on panel length.

Typical steel reinforcement layout:



4.2 Aluminium Wall Brackets

Pro Panel (vertical) 50mm/75mm Party Wall System is mechanically fixed to either steel or timber wall framing (by others) using horizontal aluminium wall brackets. The brackets must be angles not smaller than 76 mm x 43 mm x 50 mm in size and fabricated from a minimum of 1.6 mm thick Grade 5005 aluminium.

In all cases the supporting structure must be designed accordance to AS 1684 for timber or NASH; or AS/NZS 4600 for steel, with the steel having a minimum thickness of 0.55 mm BMT; with recognition of the Pro Panel (vertical) 50mm/75mm AAC Party Wall System spanning and fixing requirements.

4.3 Damp Proof Course

Damp proof course (DPC) must conform with AS/NZS 2904 and the following:

(a) Embossed black polyethylene film of high impact resistance and low slip, with a nominal thickness of 0.5 mm prior to embossing, and meeting the requirements of AS/NZS 2904.

(b) Polyethylene-coated metal damp-proof barriers with an aluminium core not less than 0.1 mm thick, coated both sides with bitumen adhesive enclosed in polyethylene film not less than 0.1 mm thick on each face, and a nominal total thickness of not less than 0.5 mm prior to embossing.

(c) Bitumen-impregnated materials, of not less than 2.5 mm thick, that meet the requirements of AS/NZS 2904, when used in walls that are not higher than 7.8 m above the level of the damp-proof barriers.

4.4 Flashings

Flashings are required where it is necessary to provide a barrier to prevent moisture from entering into the interior of a building from the exterior, as follows:

a) Metal and metal-cored flashings shall not be used in locations that expose them to saline ground water or rising salt damp.

b) Metal flashings shall be compatible with the materials with which they are in contact, and shall not give rise to electrolytic action. If there is potential for electrolytic action to occur, flashings shall be isolated by inner materials.

c) Flashings intended to hold their shape shall be manufactured from rigid material (e.g. metal cored material).

Flashings shall conform with AS/NZS 2904 and the following:

a) Flashing in concealed locations (e.g. cavity flashings) shall be one of the following:

   a. Uncoated annealed lead having a mass not less than 10 kg/m2, in lengths not exceeding 1.5 m, except that it shall not be used on any roof that is used to catch potable water.

   b. Uncoated copper having a mass not less than 2.8 kg/m2 and having a thickness of 0.3 mm to 0.5 mm.

   c. Bitumen-coated metal (normally aluminium) with a total coated thickness of 0.6 mm to 1.0 mm.

   d. Zinc-coated steel with a thickness not less than 0.6 mm.

   e. Embossed/quilted polyethylene sheet with an average thickness not less than 0.5 mm.

b) Flashings in exposed locations (e.g. flashings from the roof to wall) shall be one of the following:

   a. Uncoated annealed lead having a mass not less than 20 kg/m2 in lengths not exceeding 1.5 m, except that it shall not be used on any roof that is used to catch potable water.

   b. Uncoated copper having a mass not less than 2.8 kg/m2 and a thickness of 0.3 mm to 0.5 mm.

   c. Bitumen-coated metal (normally aluminium) with a total coated thickness of 0.6 mm to 1.0 mm.

   d. Zinc-coated steel not less than 0.6 mm thick.

4.5 Panel Screws

To fix PRO PANEL 50mm or 75mm AAC panel to aluminium bracket, 2/14–10 Hex Head screws (Class 3 or 4). Screw length shall be 10 mm shorter than the panel thickness.

Screws shall be:

a) at least Class 3 for moderate and mild exposure environments;

b) at least Class 4 for severe marine further than 100 m from breaking surf, marine and industrial exposure environments; and

c) Class 4 stainless steel for severe marine exposure environments within 100 m of breaking surf.

4.6 Bracket Screws

For timber framing, 2/25 x 2.5 mm galvanized nails or 2/12–11 x 35 mm hex head type 17 screws (Class 3 or 4).

For steel framing, 2/10–16 x 16 mm wafer head/hex head screws (Class 3 or 4).

Screws shall be:

a) at least Class 3 for moderate and mild exposure environments;

b) at least Class 4 for severe marine further than 100 m from breaking surf, marine and industrial exposure environments; and

c) Class 4 stainless steel for severe marine exposure environments within 100 m of breaking surf.

4.7 Thin Bed Adhesive

The thin-bed adhesive shall have a characteristic tensile strength equal to or greater than the characteristic tensile strength of the AAC, and be C1E classification in accordance with AS ISO 13007.1.

4.8 Mineral Wool – Horizontal Joints

100mm wide, 13mm thick, mineral wool fibre strips with a density of not less than 110kg/m^3.

4.9 Steel & Plasterboard– Horizontal Joints

Continuous steel channel, 76 x 32 x 0.75mm BMT, or

76 x 50 x 0.70mm Deflection Track or J-Track, fixed back to back with 10-16 x 16mm wafer head screws at 600mm max. ctrs.,

with 16mm Fire rated plasterboard fixed to panel with 10 x 50mm bugle head laminating screw @ 400mm max. ctrs. on one side of the joint

5 SPECIFICATIONS

The following are outside the scope of this manual, and are therefore not covered by this specification:

a) The design process.

b) Site control and supervision.

c) Quality assurance.

d) Workplace health and safety.

e) The construction of other building elements (such as supporting framing and the like).

Wall framing supporting AAC wall panels shall be in accordance with AS 1684 for timber or NASH or AS/NZS 4600 for steel where the steel shall have a minimum thickness of 0.55 mm BMT. Reinforced concrete slab-on-ground or reinforced concrete footings shall confirm to AS 2870 or AS 3600 requirements. The design of the timber or steel structural frame (including all bracing), concrete slabs and footings and other building components are excluded from the scope of the PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System.

The placement and correct installation of all jointing is the responsibility of the Building Designer.

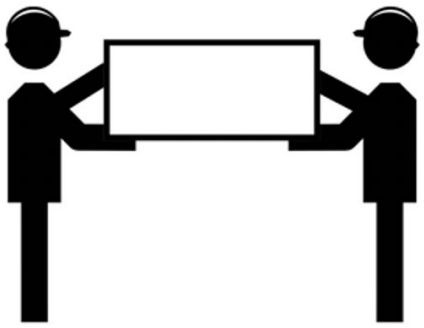
5.1 Storage and Handling

Physical damage - During construction, PRO PANEL 50/75mm AAC panel shall be protected to avoid damage and surface contamination.

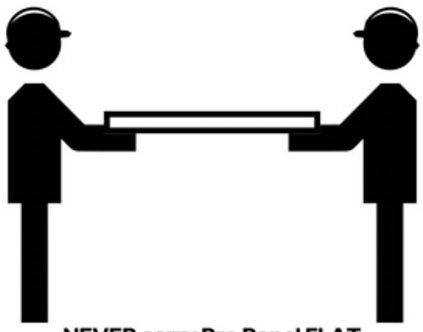
Weather protection - During construction, the top surface of PRO PANEL 50/75mm AAC panel shall be covered to prevent the entry of rainwater.

Packs of panels must only be stacked one pack high and must be properly supported on a level surface. Always verify the structural adequacy before placing packs on any structure.

Manual handling of PRO PANEL 50/75mm AAC panel should be kept to a minimum. Ensure the panel is turned onto its long edge.



ALWAYS carry Pro Panel ON EDGE



NEVER carry Pro Panel FLAT

Cutting of cement based products may cause dust, which contains respirable crystalline silica. When cutting AAC products, wear a P1 or P2 respirator and eye & ear protection, and use dust extraction equipment that complies with AS/NZS 60335.2.69 class M or H requirements. Wet cutting may be mandatory in certain States and/or Territories, confirm with local work safe authority on cutting requirement for AAC products. Always refer to the appropriate Safety Data Sheet for further information.

Steel panel reinforcement exposed during cutting must be re-coated with anti-corrosion protection paint.

6 INSTALLATION

6.1 General

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System must be installed only by qualified and experienced carpenters or other tradesmen, who are conversant with the installation techniques set out in the PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System Manual, AS 5146.3 and the NCC 2022.

In accordance with AS 5146.3, Clause 3.1;

- the structural capacities of UBS Pro Panel 50&75mm Party Wall System for use in low-rise multi-residential buildings as detailed, including fixings, are determined in accordance with AS 5146.1 and AS 5146.2, and the Standards referenced therein; and,
- UBS Pro Panel 50&75mm panels and their fixings are capable of supporting their own self-weight; and,
- UBS Pro Panel 50&75mm panels and their fixings shall be supported within buildings consisting of timber, steel or concrete structural supporting frames, slabs & footings, capable of resisting applicable horizontal and vertical loads.

In accordance with AS 5146.3, Clause 5.1;

- timber, steel or concrete structural supporting frames and slabs, including bracing capable of resisting applicable horizontal and vertical loads, conforming with AS 1684, AS/NZS 4600 or AS 3600 respectively; and,
- reinforced concrete slab-on-ground or reinforced concrete footings conforming with AS 2870 or AS 3600; and,
- the design of the timber or steel structural frame (including all bracing), concrete slabs and footings and other building components are excluded from the scope of the UBS Pro Panel 50mm & 75mm Party Wall System.

In accordance with AS 5146.3, Figure 5.4.1(B);

- maximum panel length is 3300mm (Note: Pro Panel max. length is 3000mm); and,
- maximum vertical aluminium bracket spacing is 3000mm; and,
- maximum party wall height is 12000mm.

The aluminium wall brackets must be fixed to both-sides of Pro Panel to the top and bottom plates. Aluminium wall brackets must be located within 50mm of the centreline of every panel. Each bracket must be fixed with 2 fixings into the Pro Panel and 2 fixings into the frame. See Typical Details for additional information.

6.2 Control Joints and Articulation Joints

Specific requirements for Control joints and articulation joints will vary from building to building. It is the responsibility of the designer to ensure the PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System is suitable for any application. General guidance for control joints and articulation joints is provided in AS 5146.3 and as follows.

At minimum, vertical control joints or articulation joints shall be built into a wall at the following locations:

a) Centres not exceeding 6.0 m.

b) For external and inter-tenancy walls of houses and low-rise multi-residential buildings, at centres not more than the values given in AS 5146.3 Table 2.9.1 for different site soil classes..

c) At the position where a wall changes height by more than 20%.

d) At a change in thickness of a wall.

e) At control joints or construction joints in supporting concrete slabs.

f) At the junctions of walls constructed of different materials.

g) At corners, as measured from the inside edge, as follows:

   a. At the corner of itself.
   b. At a maximum of 1.2 m one side of a corner, or
   c. At a maximum of 2.4 m on each side of a corner.

At minimum, horizontal control joints shall be built into a wall at the following locations:

a) At the position where the Reinforced AAC members continue vertically past a suspended floor.

b) At the position where the ends of two or more adjacent panels are aligned.

6.3 Installation Steps

6.3.1 Accessories Installation:

1. Damp-proof Course and Flashings – shall be installed in accordance with the PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System Typical Construction Details, NCC requirements (e.g. NCC 2022 Volume Two, 5.7.4), and as follows.

   A surface upon which a sheet of damp-proof barrier or flashing is to be laid shall be as smooth as necessary to prevent puncturing and to prevent keying of supported Reinforced AAC members if they are required to be able to slip on the surface.

   Where joints in damp-proof barriers or flashings cannot be avoided, the material shall be lapped or sealed against moisture penetration. The length of lapping shall be not less than 150 mm.

   Damp-proof barriers and flashings shall not be breached or punctured during construction. They may be pierced and sealed if steel starter bars are required to pass through.

   Damp-proof barriers shall be built-in to project from both faces of the wall. On completion of the construction, the projections shall be either cut off flush with the external face of the finished wall or turned down.

   Flashings, including over-flashings, shall be built-in with projections that are of a size and orientation to direct the moisture from the Reinforced AAC in the required manner and fixed to the wall frames at not less than 600 mm spacing.

   Over-flashings shall overlap under-flashings by at least 50 mm.

6.3.2 Panel Installation:

1. Holes and chases shall not be made in Reinforced AAC.
2. Reinforced AAC members shall not be cut during construction, except at positions specified in the design documents.
3. Thin bed adhesive shall be applied to the entire edge surface of all joints between Reinforced AAC panels, other than control or articulation joints. The joint shall be 2–3 mm wide.
4. Horizontal Joints - Provide horizontal joints at all locations as noted for the specific project. Horizontal control joints are made using either; Mineral Wool; or, Steel and Plasterboard as described in the Typical Details.
5. Vertical Joints – Provide vertical joints, at all locations as noted for the specific project. Vertical control joints are made using Mineral Wool as described in the Typical Details.

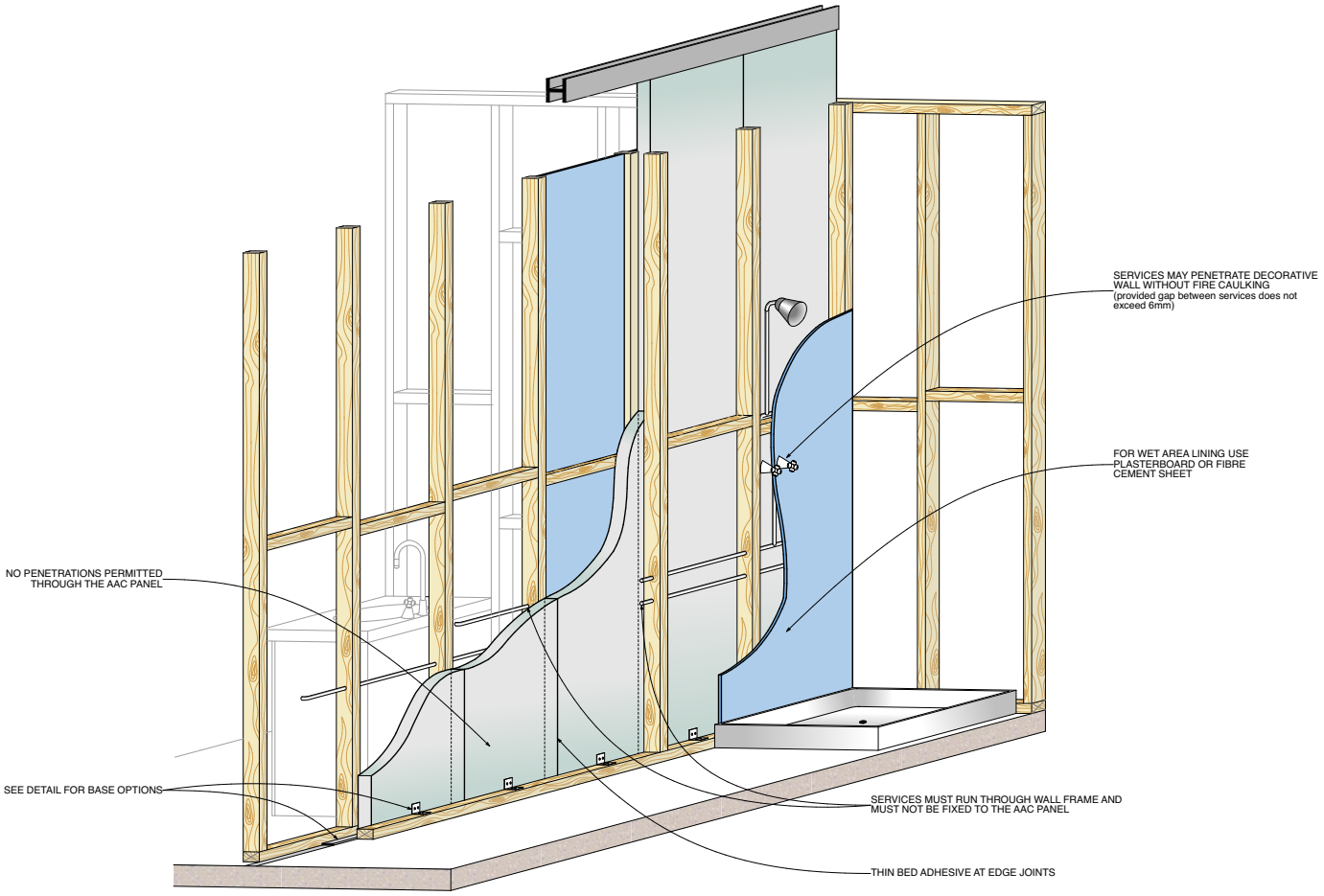
7 CONSTRUCTION DETAILS

7.1 Typical Details

PRO PANEL (VERTICAL) 50/75mm AAC Low-Rise Party Wall System must be installed in strict accordance with this Technical and Installation Manual and comply with all relevant building codes and local government regulations.

These typical construction details are provided as a guide for construction industry professionals. These typical construction details do not constitute a project specific specification and should only be used within the context of project specifications.

Modifications to these drawings shall not be made without the approval of United Building Supply.

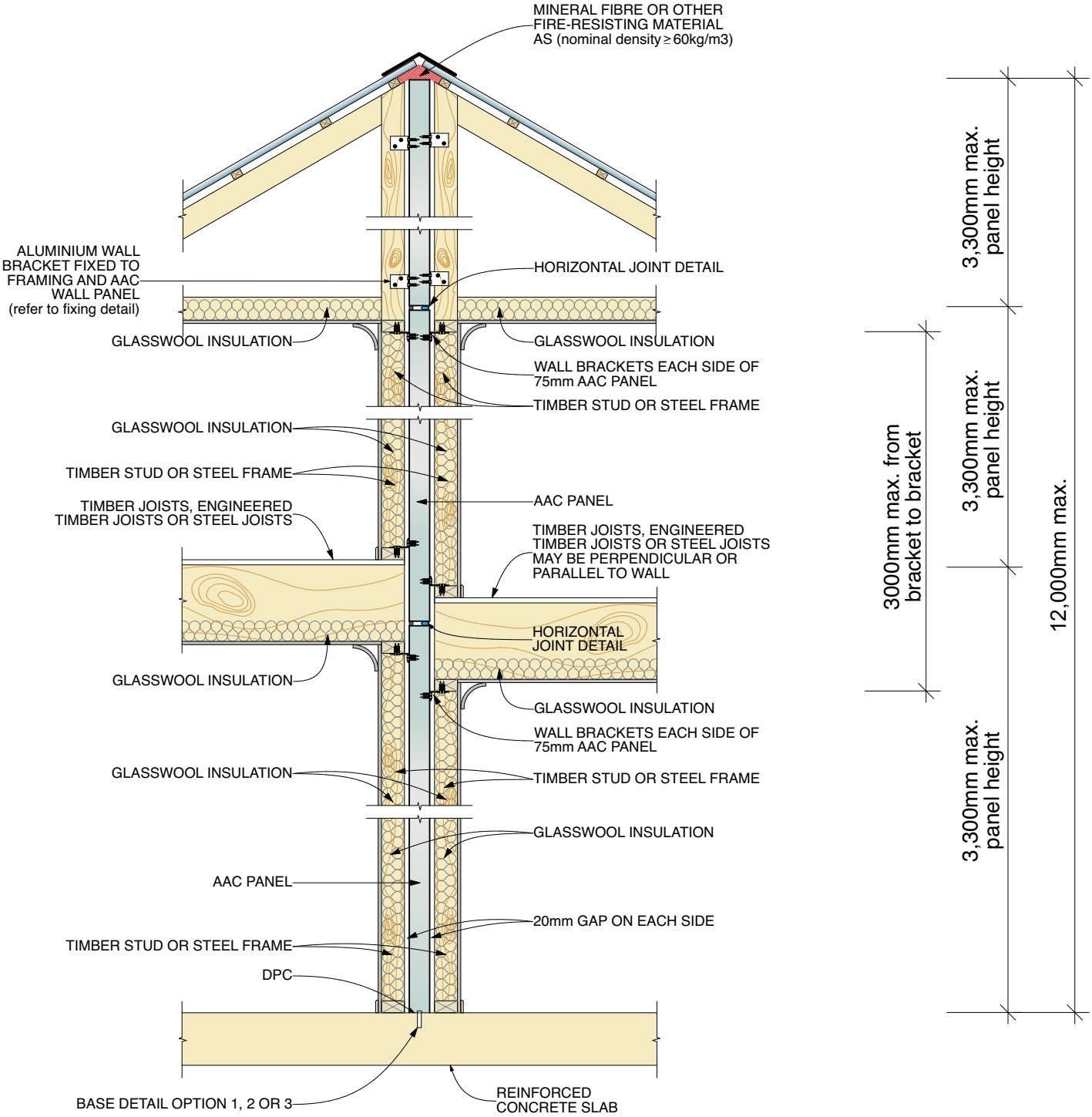


NOTES:

1 - Panels to be fixed by aluminium brackets at top and bottom only such that there is no continuous construction across the cavity.

GENERAL LAYOUT FOR VERTICALLY ALIGNED INTER-TENANCY DISCONTINUOUS WALL SYSTEM

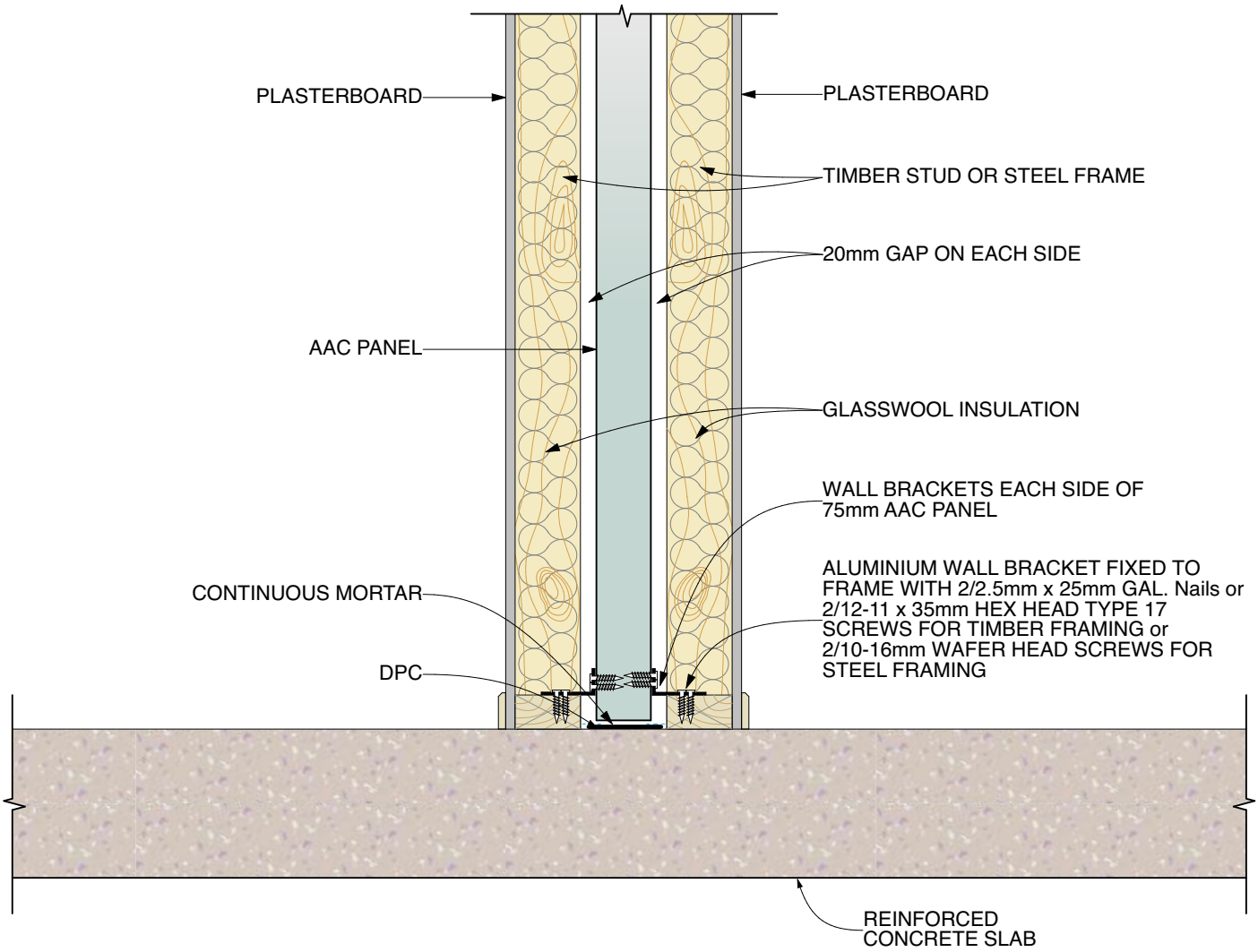
7.1.1 CROSS SECTION OF VERTICALLY ALGINED REINFORCED AAC INTER-TENANCY DISCONTINOUS WALL SYSTEM



NOTES:

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

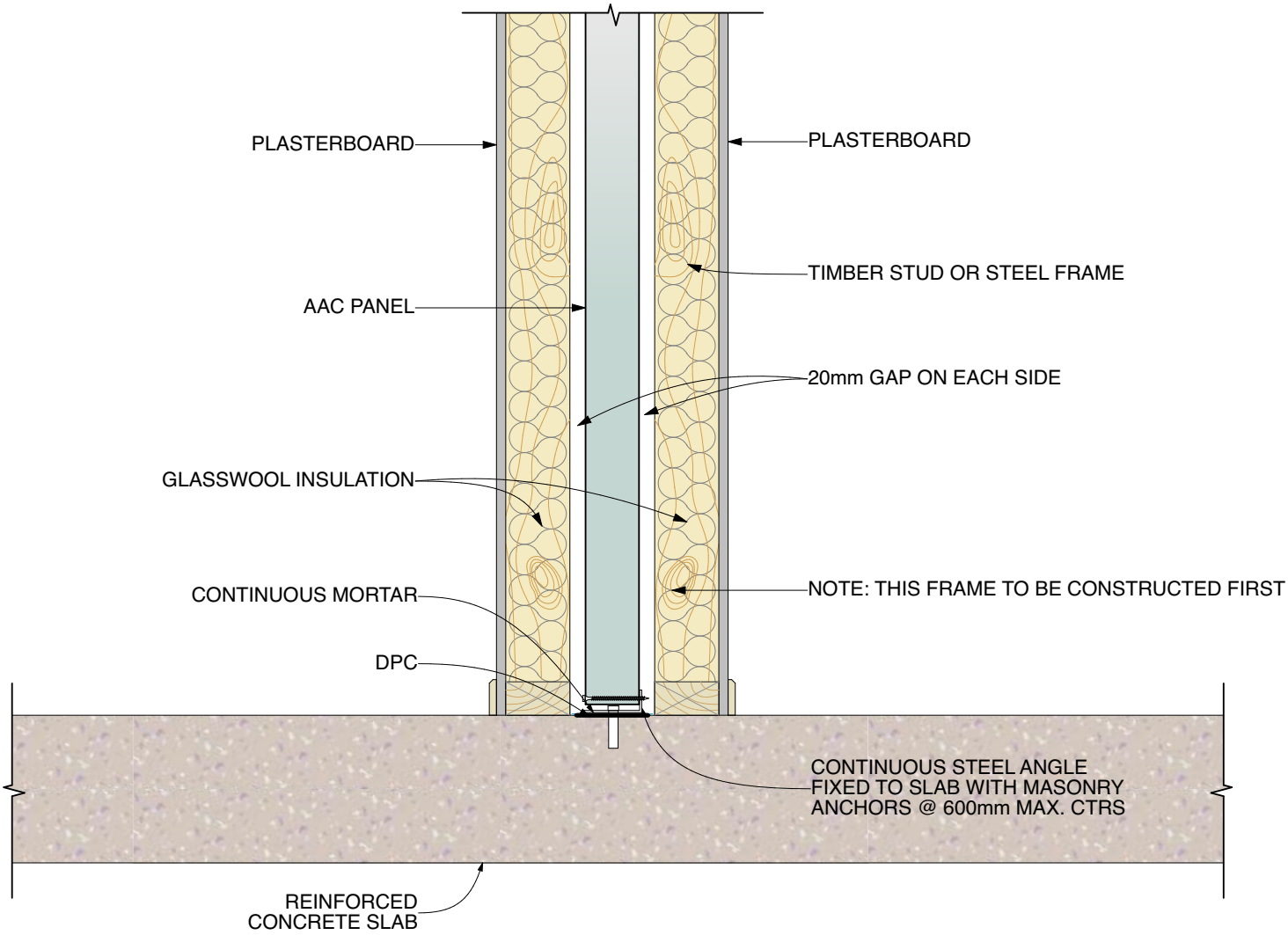
7.1.2 BASE CONNECTION FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM – OPTION 1



NOTES:

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

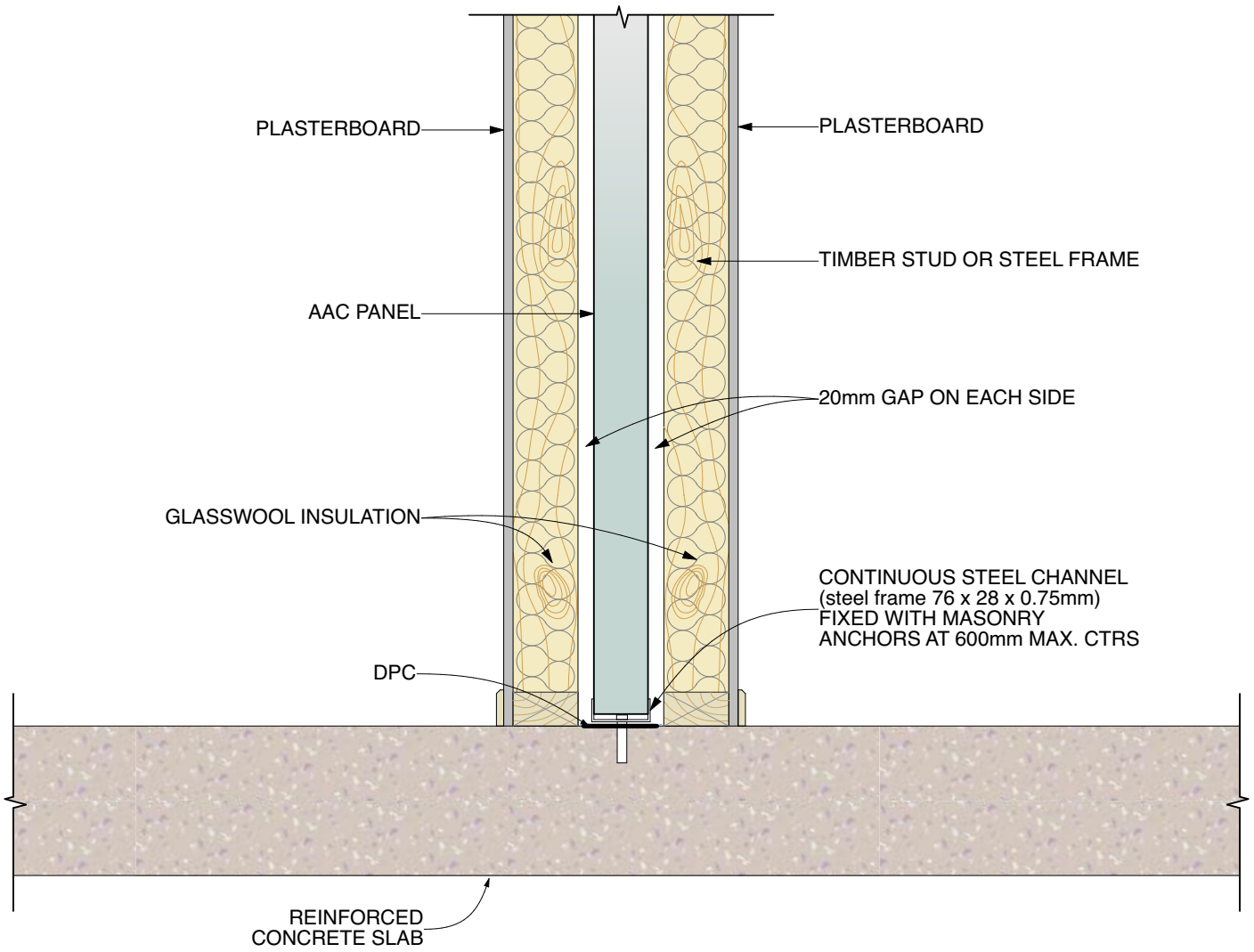
7.1.3 BASE CONNECTION FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM – OPTION 2



NOTES:

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

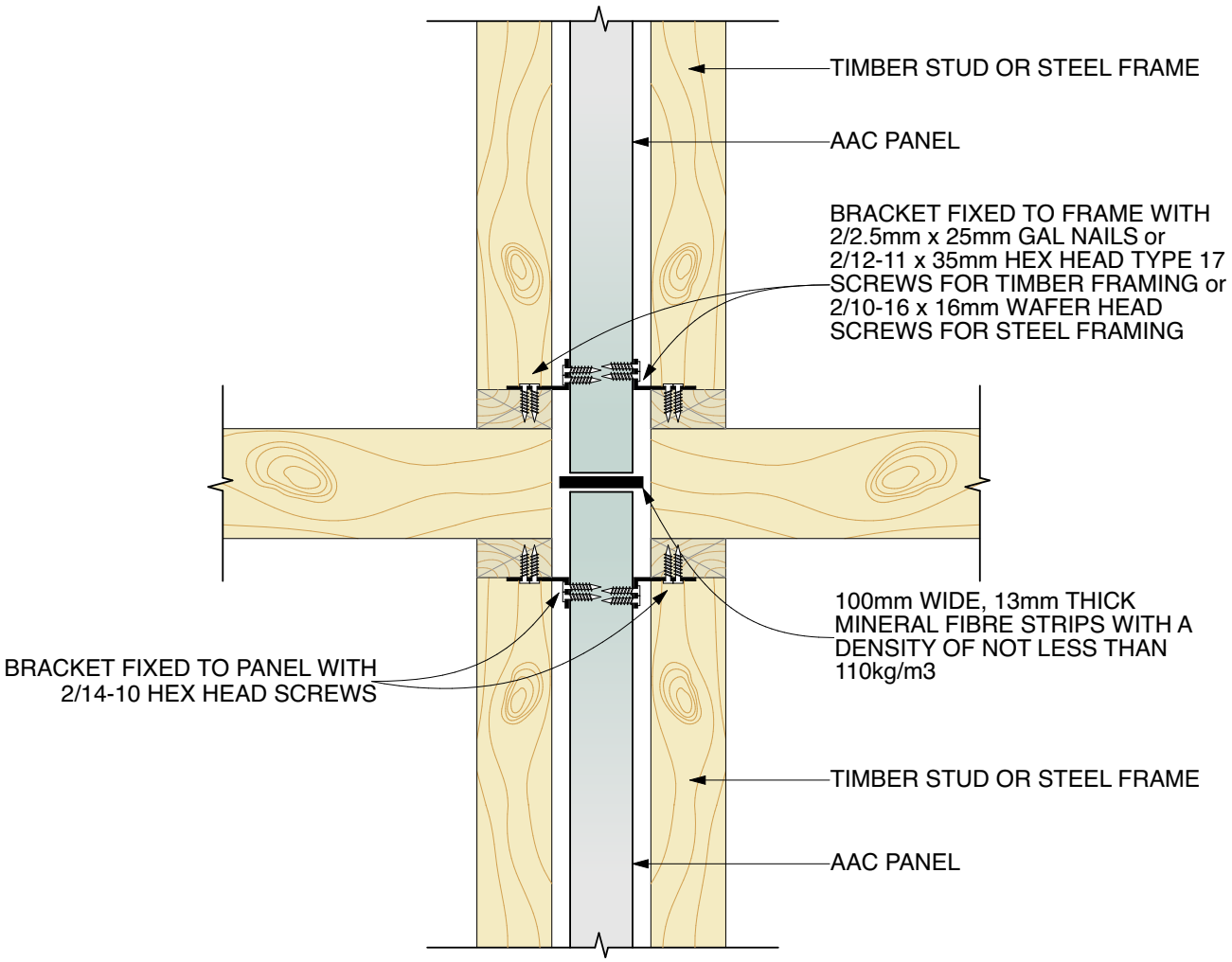
7.1.4 BASE CONNECTION FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM – OPTION 3



NOTES:

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

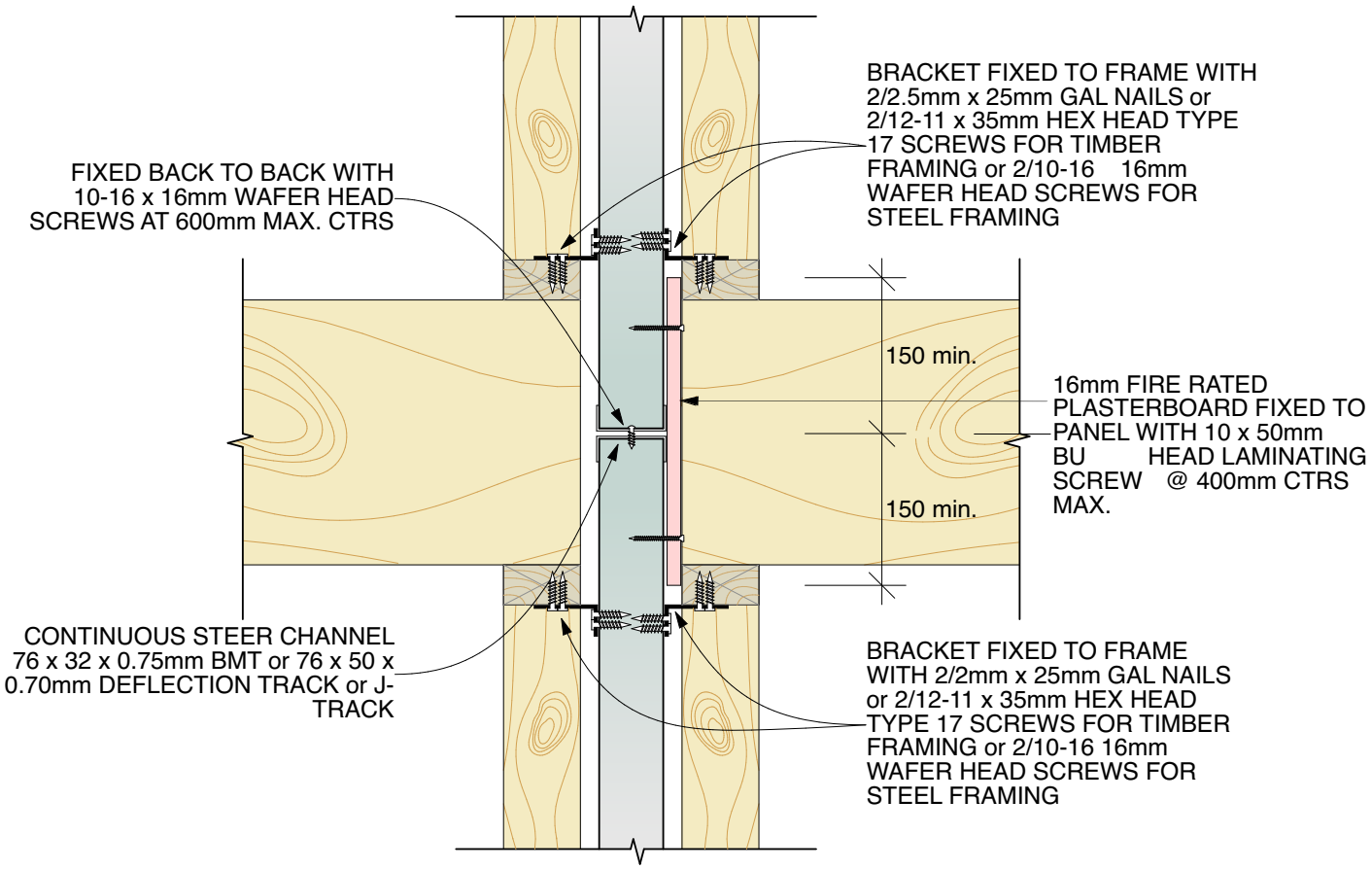
7.1.5 HORIZONTAL JOINT FIXING FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM – OPTION 1



NOTES:

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

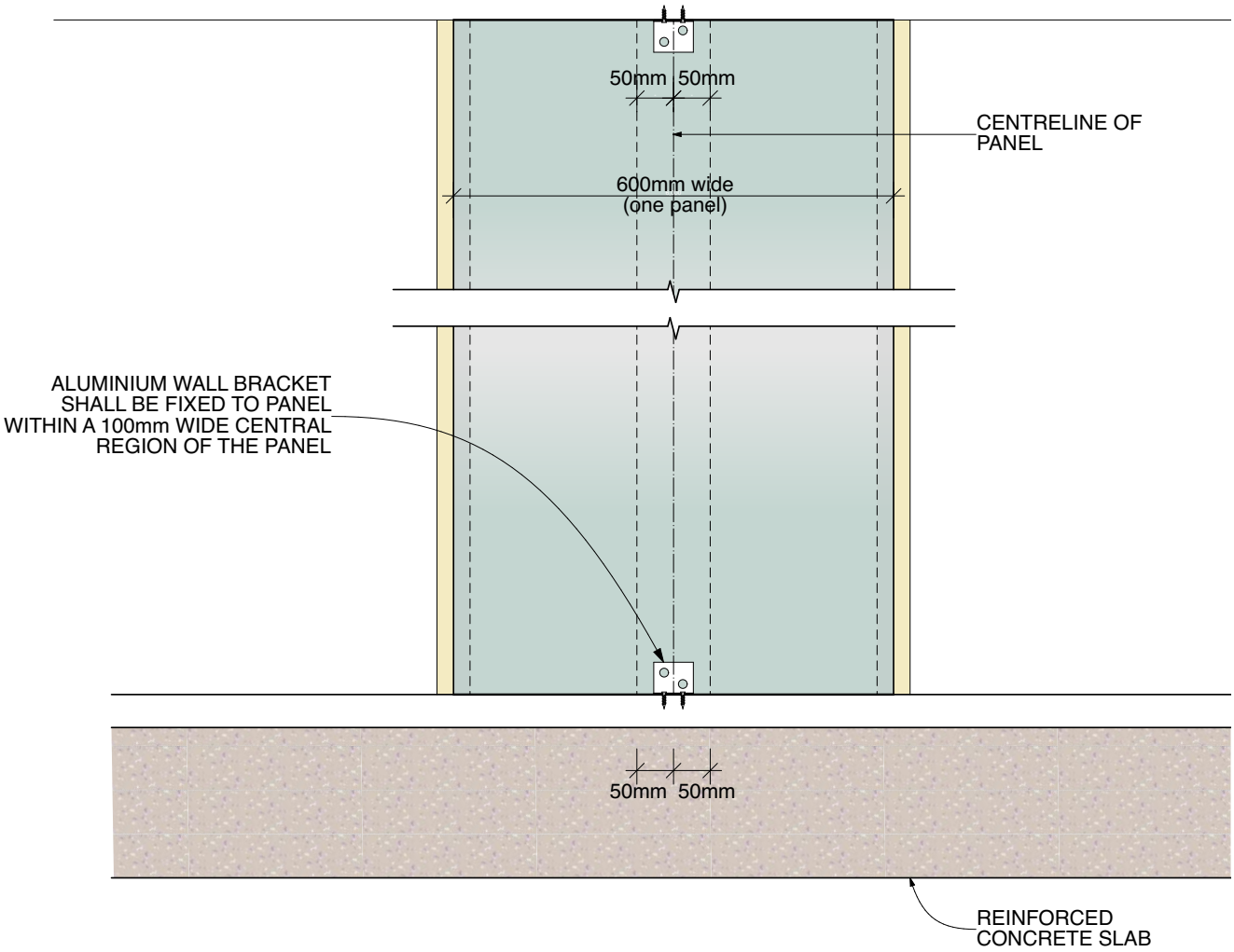
7.1.6 HORIZONTAL LOINT FIXING FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM – OPTION 2



NOTES:

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

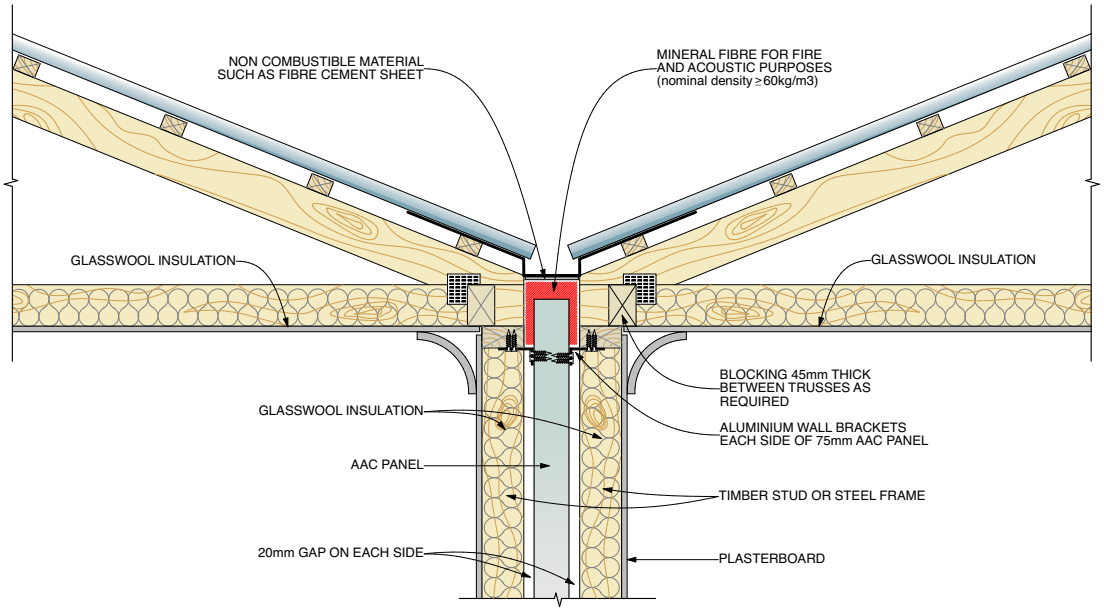
7.1.7 BRACKET FIXING FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM



NOTES:

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

7.1.8 ROOF VALLEY FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM

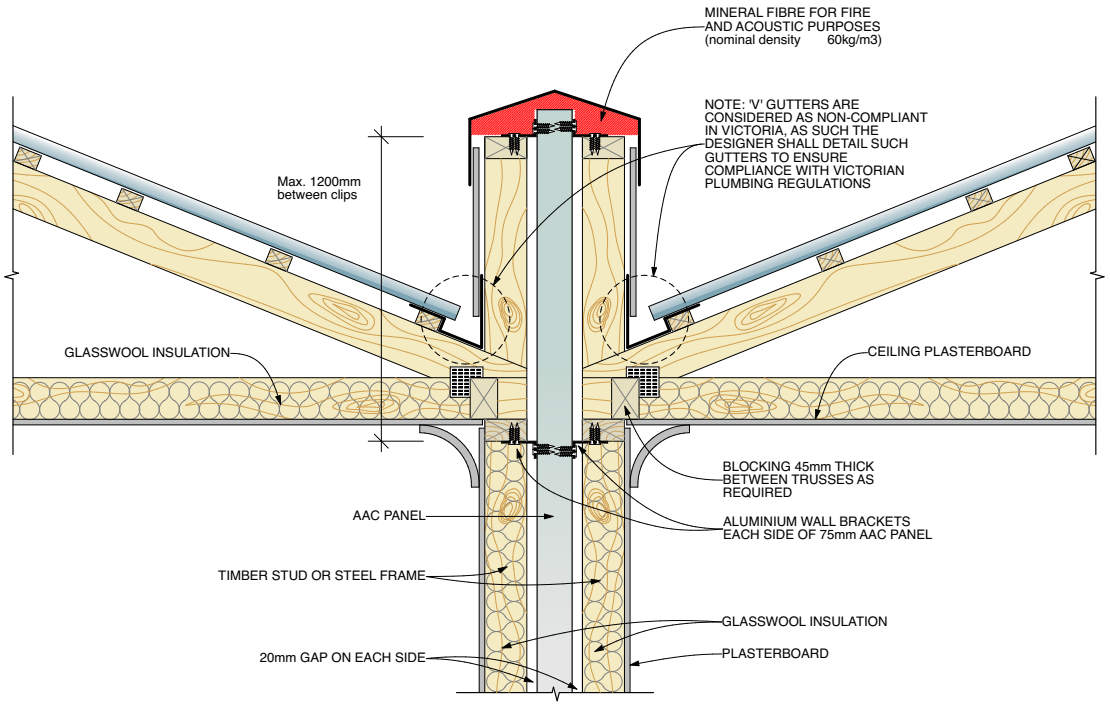


NOTES:

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

Boxgutter in accordance with AS 3500.3

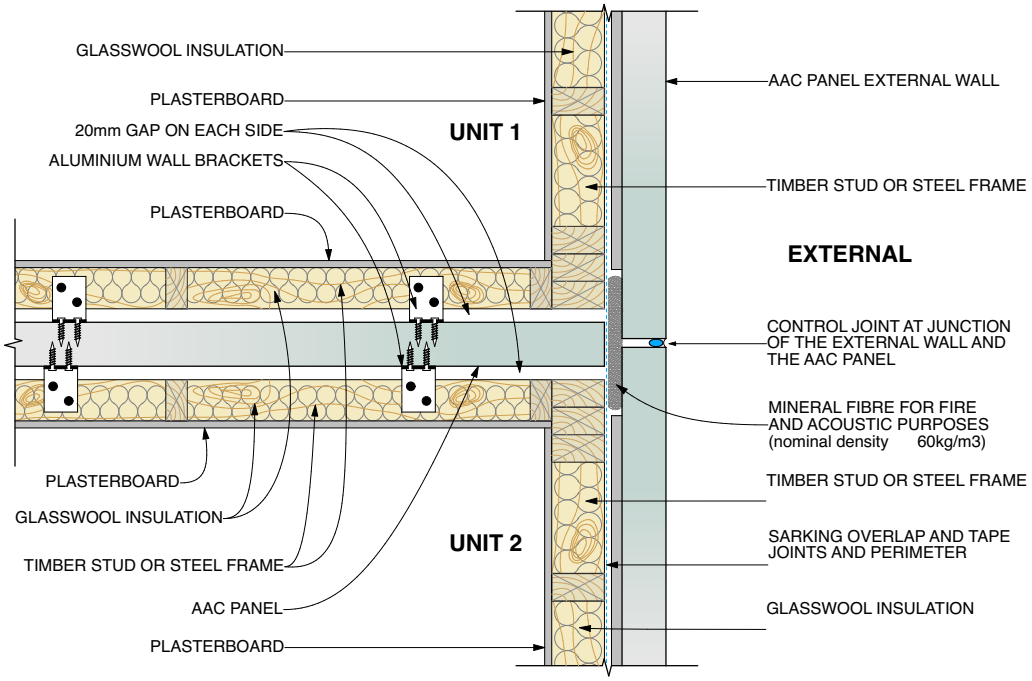
7.1.9 ROOF PARAPET FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM



NOTES:

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

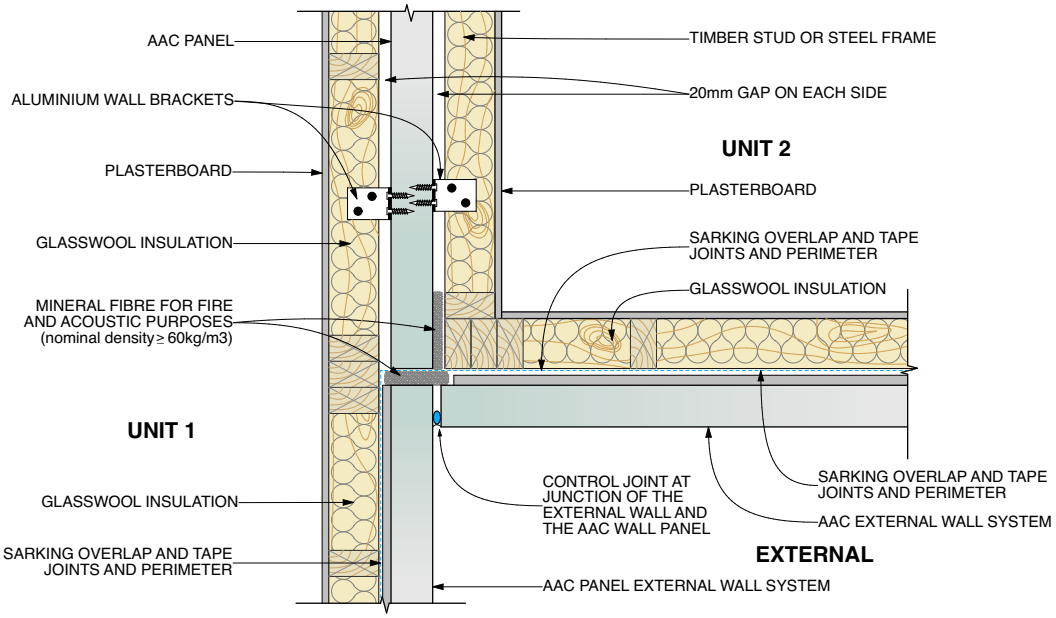
7.1.10 EXTERNAL WALL JUNCTION FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM



NOTES:

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

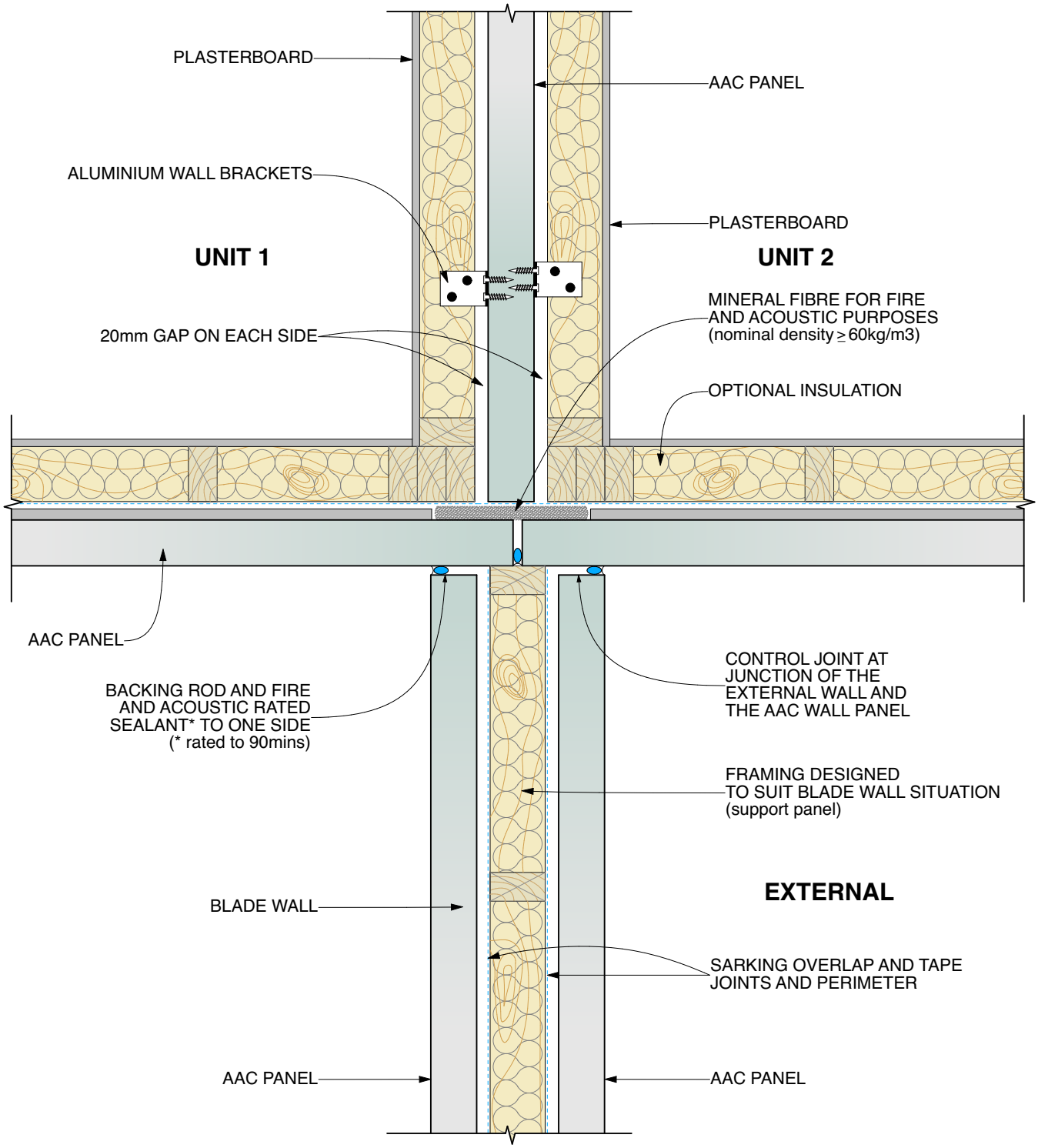
7.1.11 EXTERNAL WALL CORNER FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM



NOTES:

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

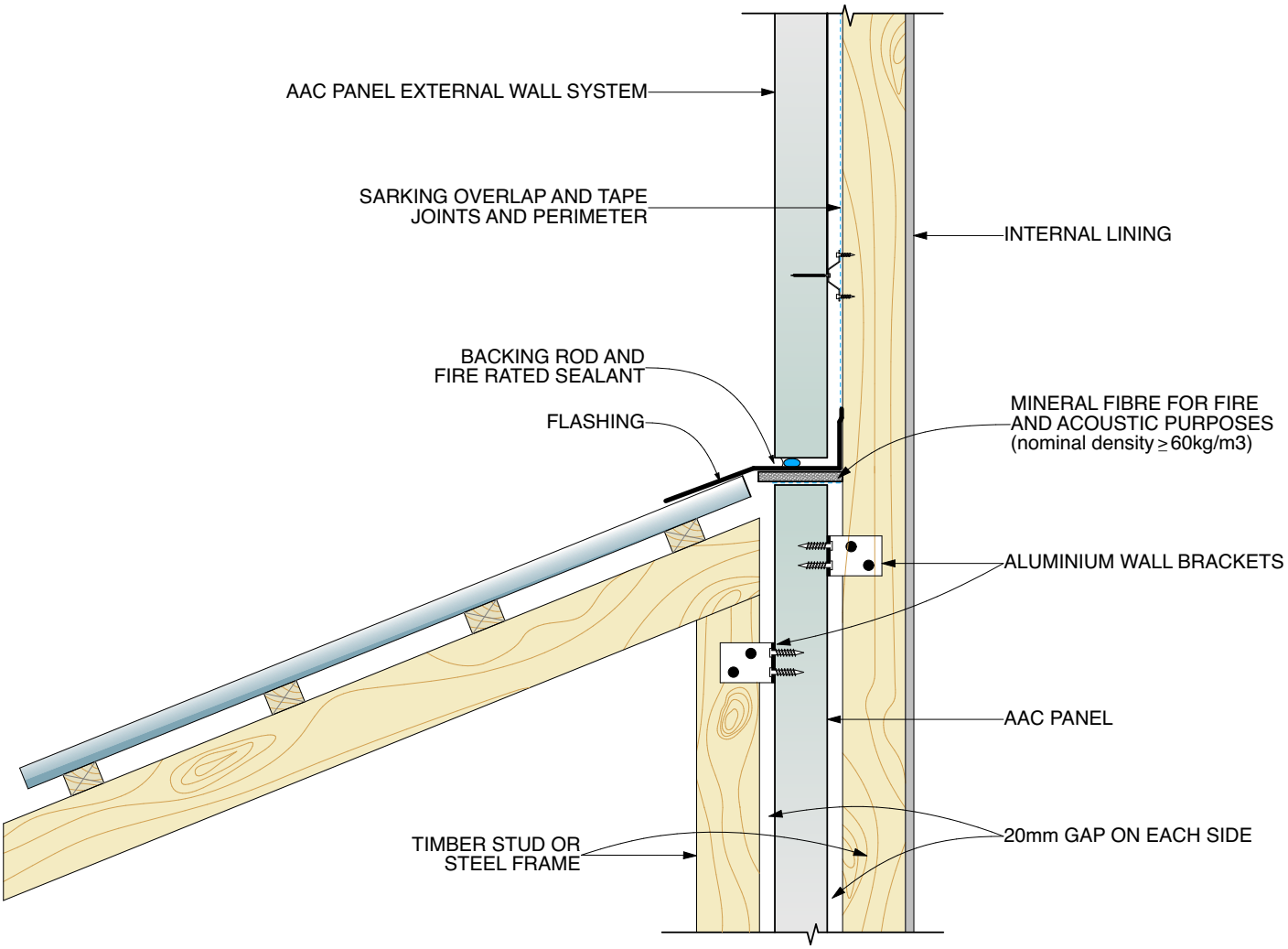
7.1.12 BLADE WALL JUNCTION FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM



NOTES:

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

7.1.13 STEP IN ROOF FOR VERTICALLY ALIGNED REINFORCED AAC INTER-TENANCY DISCONTINUOUS WALL SYSTEM



NOTES:

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

8 WARRANTY

UBS Products warrants to the purchaser of the Product and the last purchaser prior to the installation of the Product for a period of 10 years from the date of purchase that PRO PANEL 50/75mm AAC panels (the "Product") will be free from defects due to defective factory workmanship or materials and, subject to compliance with the conditions below, will be resistant to cracking, rotting and damage from termite attack.

Nothing in this document shall exclude or modify any legal rights a customer may have under the Trade Practices Act or otherwise which cannot be excluded or modified at law.

Conditions of warranty

The warranty is strictly subject to the following conditions:

(a) The customer shall provide any reasonable documents reasonably requested by UBS Pro Panel in support of the claim, including but not limited to proof of purchase, and ensure that the Pro Panel products have been paid for in full.

(b) UBS Pro Panel must be notified within 12 weeks after the alleged defect is discovered, or after it ought to have been discovered, and in no circumstances after the expiry of the relevant Pro Panel warranty.

(c) UBS Pro Panel shall be provided with a reasonable opportunity to inspect the alleged defective Pro Panel products in situ prior to their removal, repair, or replacement. The claimant is responsible for any testing and investigation directed by UBS in order to ascertain the underlying cause of the problems encountered. UBS will refund such costs reasonably incurred if it subsequently determines that the underlying cause is covered by this warranty.

(d) The Pro Panel products must have been handled, installed, and maintained in accordance with UBS Pro Panel's current literature at the time of purchase.

(e) All components used as part of a system, as outlined in the literature ("Pro Panel System"), in which the Pro Panel products are installed, must be as specified and sold by UBS Pro Panel.

(f) The relevant Pro Panel System must have been constructed in compliance with UBS Pro Panel's current literature at the time of purchase, and in accordance with the National Construction Code of Australia, all relevant Australian Standards at the time of installation, and any other applicable laws, regulations, and industry codes.

Exclusions:

(a) Damage to or deterioration of Pro Panel products resulting from external causes beyond UBS's control, such as building structure movement, welding, pollution, exposure to conditions detrimental to conventional concrete products (e.g., acidic environments), mechanical damage, hydrostatic pressure, electrical or electrolytic damage, incorrect cleaning, neglect, fire, explosion, radiation, collision, acts of nature, wars, riots, civil commotion, vandalism, malicious damage, industrial action, adverse weather conditions (e.g., hail storms, sand storms), and similar events.

(b) Damage to or deterioration of Pro Panel products caused by work performed on the Pro Panel products and/or Pro Panel System or any other part of the structure before, during, or after installation.

(c) Damage to or deterioration of Pro Panel products caused by mishandling (including failure to adhere to any "Panel Handling" instructions in the literature) of the Pro Panel products and/or Pro Panel System before, during, or after installation.

(d) Any faults to the extent that they are caused or contributed to by third-party design or engineering of the building or structure to which the Pro Panel products and/or relevant Pro Panel System are attached, including but not limited to the design of the frame or foundations to which the Pro Panel products and/or relevant Pro Panel System are incorporated or affixed.

(e) Any faults to the extent they are caused or contributed to by materials or accessories supplied by third parties.

(f) Cracking in any coatings (or sealants) applied over any Pro Panel products (including any damage to the relevant Pro Panel System caused by such cracking). Note: Prior to selecting a coating (or sealant system), it is the purchaser's responsibility to communicate with the manufacturer of those systems to ensure suitability to the Pro Panel products substrate and to provide the minimum elasticity and water ingress protection in accordance with UBS Pro Panel literature current at the time of purchase.

Except as explicitly stated in this Pro Panel Warranty, and the warranties that cannot be excluded under the Australian Consumer Law (Schedule 2 of the Competition and Consumer Act 2010 (Cth)) and any other applicable law, UBS excludes all other warranties and guarantees concerning Pro Panel products, including all implied warranties and guarantees.

To the extent permitted, UBS excludes all liability for loss and damage (including consequential loss) where the relevant Pro Panel product is a good other than of a kind ordinarily acquired for personal, domestic, or household use

Disclaimer

The mere provision of this Pro Panel Warranty to a specific individual, organization, or for a particular building does not imply that UBS has verified compliance with any of the conditions of this warranty, including (but not limited to) the exclusive use of Pro Panel products in its construction. Furthermore, UBS is not responsible for ensuring the suitability of Pro Panel products for their intended application. It is the responsibility of the warranty beneficiary to verify both aspects. Any site visits conducted by UBS do not constitute inspections, nor do they serve as a guarantee or warranty regarding third-party installation.

The **PRO PANEL** Low-Rise Party Wall System designed to be able to be installed on all types of elements such as concrete slab-on ground or timber or steel wall framing to allow the architect to include in most buildings that require a separating wall.

PRO PANEL
UNITED BUILDING SUPPLY PTY LTD.

Information on PRO PANEL (VERTICAL)
50/75mm AAC Low-Rise Party Wall
System can be found at:

www.ubs-aac.com.au

United Building Supply Pty Ltd
36 Randor Drive Deer Park VIC 3023