MAXIWALL

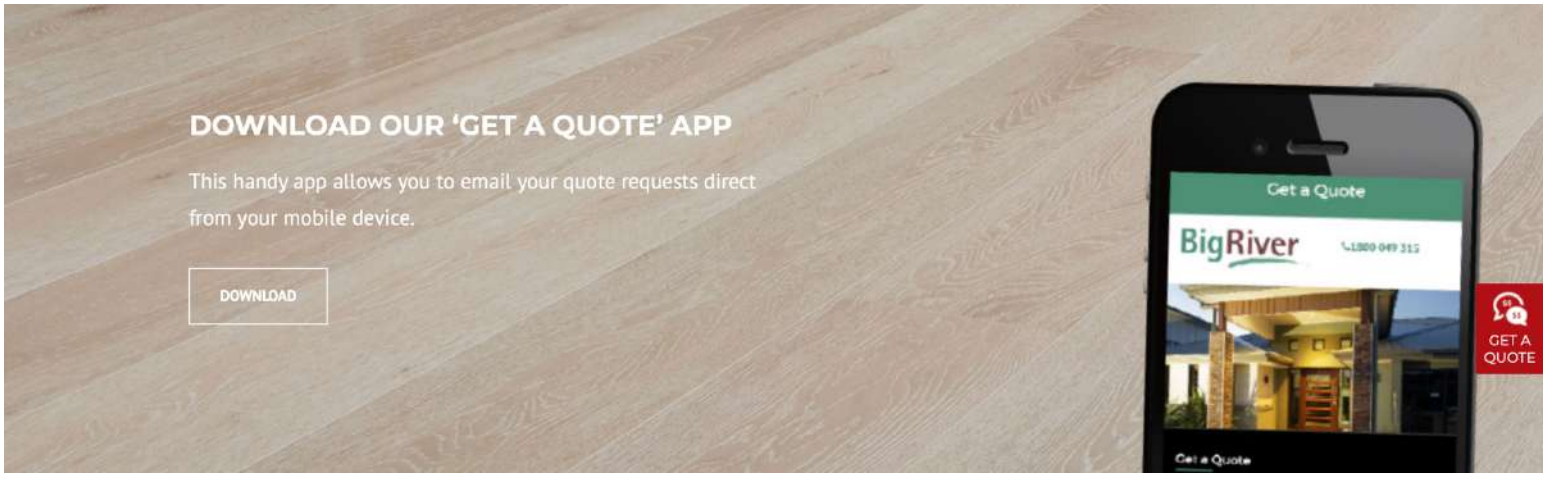
# Installation Guide

BR-005V1, May 2019 - MaxiWall 50mm (Vertical)
Low-Rise Multi-Residential Buildings & Houses

## 1. About Big River

Big River Group began in the early 1900s as a family owned timber business. Today, it has advanced and established itself as a major Australian building materials distributor, supplying an extensive range of high-quality timber, builder's hardware, building supplies and services for the residential, commercial, industrial, building and construction industries.

Big River distributes the MaxiWall and MaxiFloor AAC panels exclusively in Australia. Its distribution outlets are strategically located throughout the country, with Perth, Melbourne, Sydney, Illawarra, Brisbane, Sunshine Coast, Townsville and Adelaide offering customers national coverage with local delivery.




BigRiver

Building Australia for over 100 years

## 2. Contents & Use of Manual



This Installation Guide contains design and installation details intended for use as a general guide by qualified design and building professionals including licensed builders in the construction of external walls for low-rise multi-residential buildings and houses.

It does not substitute the essential evaluations, assessments and decisions of qualified design and building construction professionals. They should be consulted to ensure that the specific wall systems, its components and installations are suitable for the projects and conform to the National Construction Code of Australia (NCC).

Big River is not responsible for ensuring the correctness or suitability of the installation details and systems or its compliance with federal, state or local laws and regulations, including building, environmental and other codes.

## 3. MaxiWall Panel

MaxiWall panel is an autoclaved aerated concrete (AAC) steel reinforced, durable, lightweight building panel. It offers excellent benefits as an external wall system for low-rise multi-residential buildings and houses.

The MaxiWall external wall system has an advantage over other wall systems when plaster, stucco or render finishes are used, as no additional preparation work is required.

It comprises of 50mm thick AAC panels installed vertically to horizontal steel tophats and fastened to load-bearing timber or steel frames. It can also be installed horizontally.

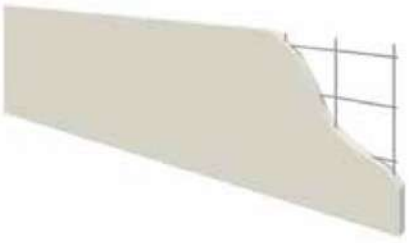
Made from natural raw materials - lime, sand, gypsum, water and a small amount of aerating agent plus cement, the MaxiWall panel is ecologically friendly and energy conserving. It is a very strong but lightweight construction material for outdoors and indoors alike.

AAC panels are faster to install, easy to handle and offers flexible solutions for external wall cladding requirements. MaxiWall panels can also be used for internal, party and boundary walls including flooring.

AAC has been used in Europe for more than 70 years and is widely accepted in Australia since its introduction over 25 years ago as a lightweight material for cladding and flooring.

MaxiWall panels are available in the following dimensions and steel reinforcement.

| | |
|---|---|
| Thickness: | 50mm |
| Width: | 600mm |
| Length: | 1800, 2200 mm |
| Reinforcement: | Single steel mesh centrally located |
| Steel wire: | 4 x Ø 5mm longitudinal and 6-8 transverse bars |



## 4. Advantage & Benefits

**Environmentally friendly and sustainable**

Helps reduce about 30% of environmental waste compared to traditional concrete and 50% of greenhouse gas emissions.

**Energy cost savings**

Excellent insulation properties with improved thermal efficiency that reduces the heating and cooling load in buildings.

**Excellent soundproofing**

Effective sound barrier for privacy both from outside noises and other rooms when used as interior partition walls.

**Superior fire protection**

Non-combustible. Suited for fire-rated applications achieving a two hour rating when installed with approved systems.

**Non-toxic substances**

Pollutant free building material that does not emit toxic gases or other toxic substances.

**Quick construction**

Easy to work with, including cutting, shaving and shaping thus reducing construction time and labour costs.

**Lightweight and durable**

Durable and dimensionally stable, the lightweight cellular properties provide design and construction flexibility.

## 5. Design Consideration

For the MaxiWall external wall system to be effective and economical the following design process to capitalise on the product benefits and architectural features is important.

- Determine site wind load and wind category, soil type and movement.

- Ensure the wall system complies with the requirements of the NCC (National Construction Code).

  ✓ Fire Resistance Level (FRL)
  ✓ Bushfire Attack Level (BAL)
  ✓ Sound Insulation Performance (Rw values)
  ✓ Energy Efficiency (R-Value)

- Determine wall frame spacing, batten quantity, screw fixing and cantilever distance (refer to Table 2 – Fixing Description).

- Structural framing must comply with AS 1684 for timber frames and NASH standard for residential and low-rise steel frames.

- Fasteners must comply with AS 3566.
  → Class 3 coated screws are to be used in a benign or moderate environment.
  → Class 4 coated screws for marine exposure of more than 100m from breaking surf.
  → Grade 304 or 316 stainless steel screws for severe marine exposure less than 100m from breaking surf.

- Select insulation and/or building wrap material to meet energy efficiency and weatherproofing requirements.

- Flashings and damp-proof courses must comply with AS 2904 and installed in accordance with NCC requirements.

- Sealants are to be of external grade polyurethane and fire and/or acoustic rated if required, prepared and installed in accordance with manufacturer's instruction for AAC substrate.

- Window reveal must be of the correct size to suit the MaxiWall panel.

- Select an exterior surface coating system which meets the required coating specification and be warranted by the manufacturer.

The MaxiWall external wall system for low-rise multi-residential buildings and houses in this guide is based on accepted design principles used in a typical Australian residential building to satisfy the nominated requirements of the NCC, Volume One, Building Code of Australia (BCA) for Class 2 to Class 9 Buildings and Volume 2 – Class 1 and Class 10 Buildings – Housing Provisions.

It is important that a Designer and/or Project Engineer assess the adequacy of the external wall system and approve construction design and compliance with NCC performance requirements.

The MaxiWall 50mm AAC wall panel system complies to the nominated Performance Requirements and Deemed-to-Satisfy Provisions of the National Construction Code 2019, AS 5146 Part 1:2015 (+A1), AS 5146 Part 2:2018 Clause 1.1 and when constructed in accordance with this guide and AS 5146 Part 3:2018. For information please refer to Big River Group.

## 6. System Component

| | |
|---|---|
| AAC Adhesive | Factory prepared blend of carefully selected raw materials such as cement, graded aggregates and strengthening and performance additives. A dry mixed product used as a structural thin bed adhesive for adhering the panels in the construction of external and boundary walls. |
| Anti-corrosion Paint | Coating and protection of the exposed steel reinforcement mesh from corrosion after cutting. |
| Joint Sealant | Sealing joints and wall penetrations that are subjected to high humidity and movements. The joint sealant provides superior integrity for fire and acoustic sealing. Even when excessively stretched, sealants help maintain the joint's integrity. |
| Patch Compound | Pre-mixed, water based jointing and patching compound used for repairing minor chips, cracks and damages particularly to the corners and edges of panels. It can also be used as a filler compound. |
| Render Coating | High build acrylic modified cement-based renders designed to provide weather resistant, decorative and durable surface finishes over the panels. |
| Thin-Bed Mortar | Thin-bed mortar with high strength specifically manufactured for the placement of panels where levelling and bonding is required for external and boundary wall construction. The mortar helps in the integrity of an airtight construction for sound insulation and fire protection at the base of the panels. |
| 24 mm deep x 30 mm wide x 0.42 BMT |  |
| No.12-11 x 35 mm Hex Head Type 17 Screw |  |
| No.10-16 x 16 mm Hex Head Tek Screw |  |
| No.14-10 x 65 mm Bugle Head Type 17 Screw |  |

### Important

- System components must be approved and/or supplied by Big River and its supply partners. Refer to www.bigrivergroup.com.au

## 7. Construction Notes

- All services must be run in the timber or steel wall frames.
- If services penetrate the panels, allow a gap of 5 mm around the services and fill with backing rod and sealant.

### 7.1 Framing and top hats set-out

- Framing and fixing shall be in accordance with the required criteria described in Section 5 and fixing specification in Section 8.
- Framed heads to openings shall be designed to support the mass of AAC panels and coating system.
- Set out top hats horizontally on the frame within the limits of the design specifications for the appropriate wind class and with the following considerations:

  a. Max. end spacing at the top and bottom of the wall shall be 100 mm min. and 200 mm max.

  b. When panels are staggered in a stretcher bond arrangement, the max. cantilever of a panel in the wall area shall be the max. top hat spacing for the wind class divided by 4, or 200 mm, whichever is greater.

  c. Panels shall be fixed to top hat battens in accordance with Table 1. and Table 2. Space screws 100 mm from each edge and evenly distributed across the panels where more than 2 screws are specified.

  d. When panels are suspended from frame, the maximum top hat spacing shall not exceed 900 mm. A minimum of 3 x screws shall be installed per top hat panel width.

  e. Provide additional top hats to window and door opening heads as required.

- Panels are to be joined using approved thin bed adhesive. Joints shall be 2-3 mm thick and fully filled. Wipe any excess and fill voids.
- For walls up to 3,000 mm height not supported on a slab edge and mortar course, provide a continuous 75x50x2.0 mm galvanized angle.
- DPC shall be installed over the angle and expressed to the outside face of the finished wall.
- The 75 mm leg of the angle shall be fixed to the frame as follows:
  - Timber frame – 2 x No. 12-11x35 mm screws at maximum 600 mm centres.
  - Steel frame – 2 x No. 14-100 x 20 mm screws at maximum 600 mm centres.
- Min. panel width when trimmed shall be 200 mm.

### 7.2 Slabs and Footings

- Slabs and footings supporting MaxiWall panel should be designed, specified and constructed in accordance with AS 2870 for minimum construction category of “masonry veneer”.
- Bed first course of panels in nom. 10 mm mortar at the base of the wall when constructed on a slab edge set-down.
- Base of panel shall be min. 50 mm below slab floor level or min. 100mm below finished floor level if suspended from frame. Refer to compliance requirements imposed by the States or local councils.

## 7.3 Corner Panels

- Due to the increase of wind load around corners of buildings, extra top hat battens and screws may be required (N3 and greater) to fix MaxiWall panels in accordance with Table 2.

- Fixed panel corner joints are to be fixed additionally with No. 14-10x125 mm screws at 600 centres maximum vertically, although generally corner joints shall be detailed as per a control joint.

The corner zone is defined in AS 4055 as pressure zones and applies to walls within 1,200 mm in each direction of the external building corners.

## 7.4 Damp-Proof Courses

- DPC shall be installed to the first top hat or min. 150 mm above the finished slab level inside the wall. DPC shall be expressed to the outside face of the wall.

- Building wrap or sarking shall overlap DPC by min. 100 mm. Tape building wrap to DPC around the perimeter and at all laps.

## 7.5 Control Joints

To control cracking resulting from the expansion and contraction of the AAC, concrete slab, foundation movement and thermal expansion or contraction, control joints must be installed.

- Provide vertical control joints, minimum 10 mm wide in walls at the following locations:

  a. Max. 6,000 mm centres;
  b. External and internal corners;
  c. Above and below all doors, including sliding and garage doors;
  d. Where wall height changes by greater than 20%;
  e. A change in wall thickness;
  f. Corresponding to structure (slab) control joints; and
  g. At junctions of different wall systems.

- Top hats must be discontinuous behind control joints. 20 mm nominal gap must be provided between the ends of the top hats.

- Seal control joints with backing rod and external grade polyurethane sealant, fire and/or acoustic rated if required, min. 10 mm width and 5 mm deep.

- Sealant shall be approved for the application by the manufacturer. Surfaces to be bonded must be clean, free of dust and debris and prepared and primed as required.

## 7.6 Termite Management

- Although MaxiWall panels are resistant to termites, protection from termite attack is a mandatory requirement for internal building components. It is the builder's responsibility to ensure that all laws imposed by the State and local councils are fully adhered to in the protection of buildings from termite attack in accordance with AS 366

## 8. Fixing Specification

The fixing system shall be according to the wind category at the site and method of construction, either with the panels fixed at the base or with the panels suspended from the frame. The MaxiWall panel is fixed to structural framing with minimum 24 mm deep x 30 mm wide x 0.42 BMT G550 cold-formed steel top hat batten Z275 or AZ150 in accordance with AS 1397.

Table 1. Connection Specification

| Wall System | Top hat to stud | Fasteners and fixings |
|---|---|---|
| Residential External Wall | Timber | 2 x No.12-11 x 35 mm Hex Head Type 17 Screw |
| | Steel | 2 x No.10-16 x 16 mm Hex Head Tek Screw |
| | **MaxiWall panel** | **Fasteners and fixings** |
| | Panel to top hat | No.14-10 x 65 mm Bugle Head Type 17 (Class 3 min.) |
| | End distance | Min. 100 mm, Max. 200 mm (unless otherwise specified) |
| | Edge distance | Nominal 100 mm |

Detail Section

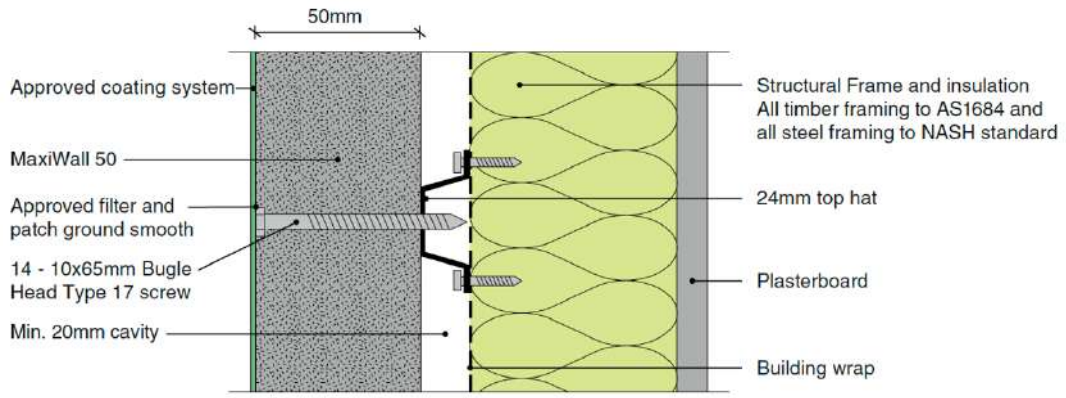



Table 2. Fixing Specification

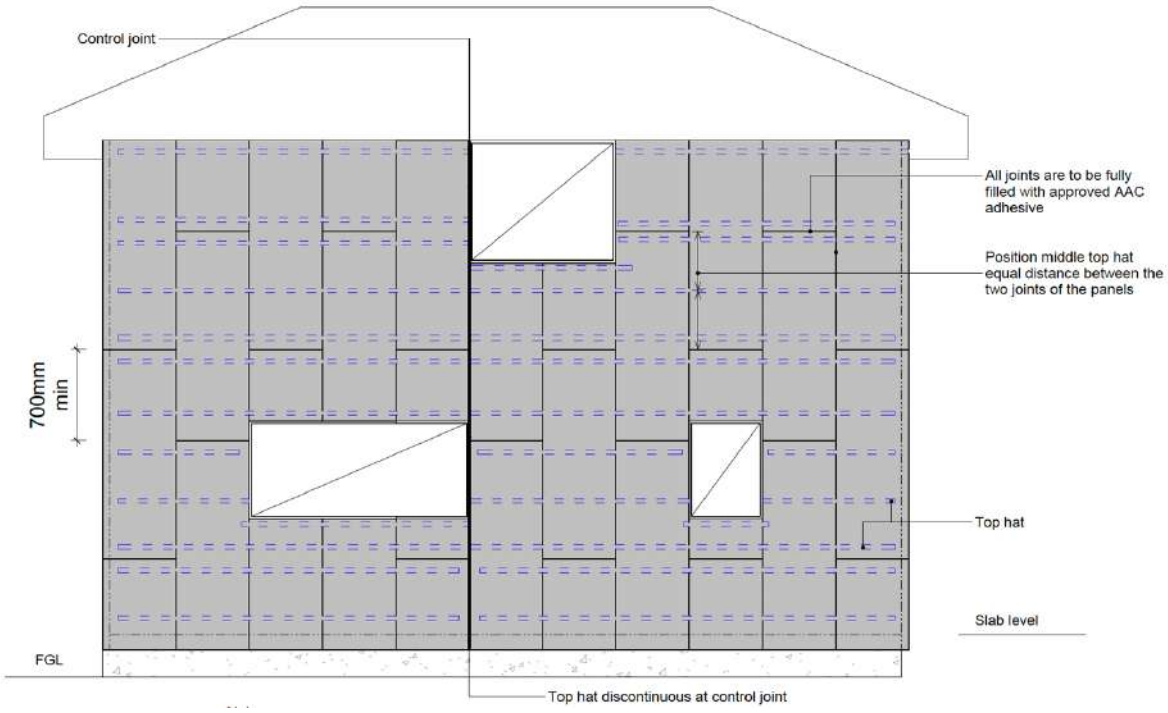
| Wind class | Max. Stud Spacing (mm) | Max. Spacing of Top Hat $s_{th}$ (mm) | | Min. Number of Screws per Top Hat (per 600 mm panel width) |
|---|---|---|---|---|
| | | General Areas | Corner Zone | |
| N1 | 600 | 1,100 | 1,100 | 2 |
| N2 | 600 | 1,100 | 1,100 | 2 |
| N3 | 600 | 1,100 | 900 | 3 |
| N4 | 450 | 1,000 | 700 | 3 |
| N5 | 450 | 800 | 600 | 4 |
| C1 | 450 | 1,100 | 900 | 3 |
| C2 | 450 | 1,000 | 700 | 3 |
| C3 | 450 | 800 | 600 | 4 |

## 9. Installation Detail

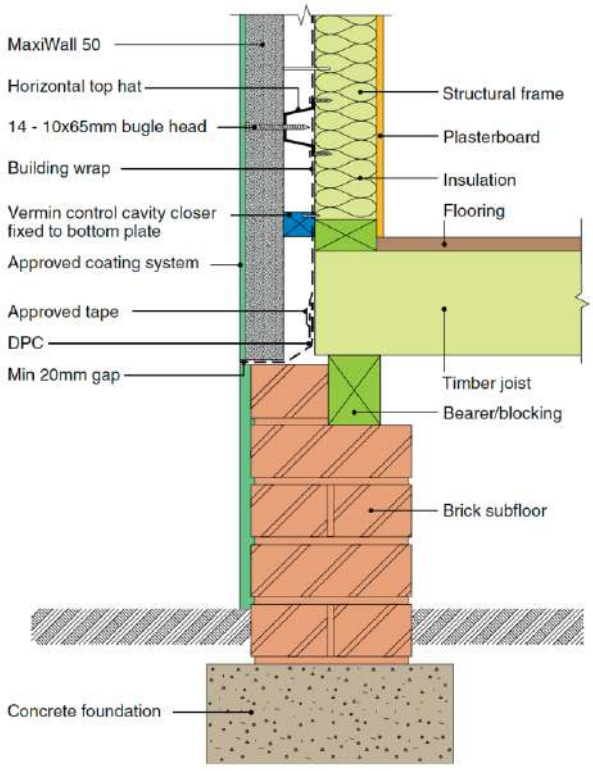
### 1. Top hat set out – hip roof


### 2. Top hat set out – gable end

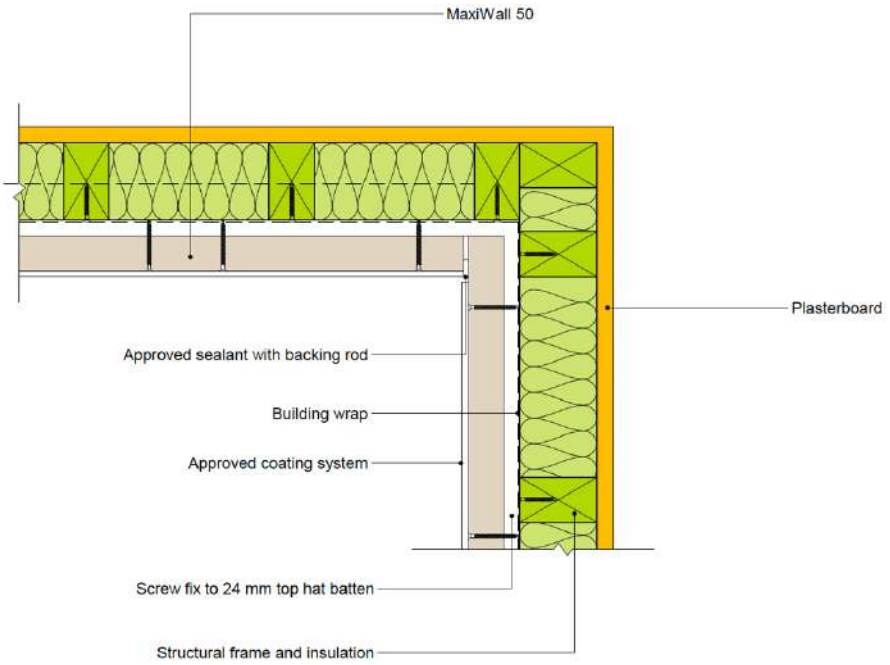
## 3. Top hat set out – double storey



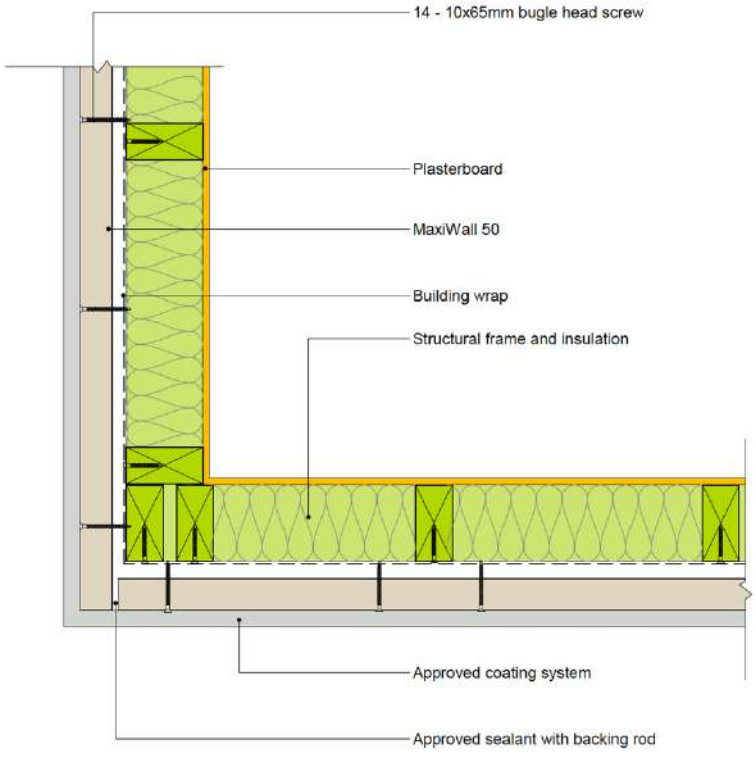

## 4. Timber sub-floor



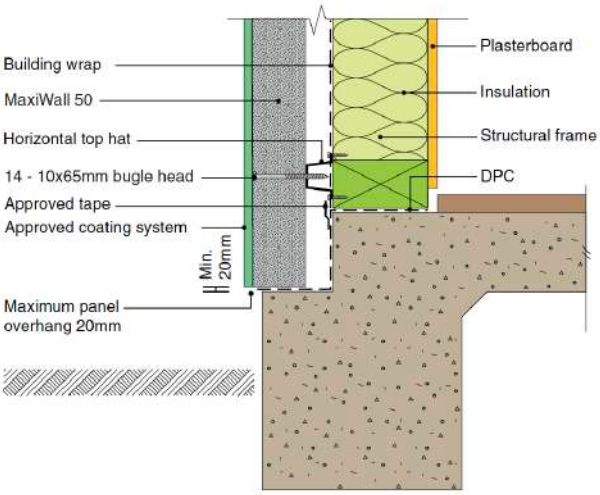
## 5. Internal corner



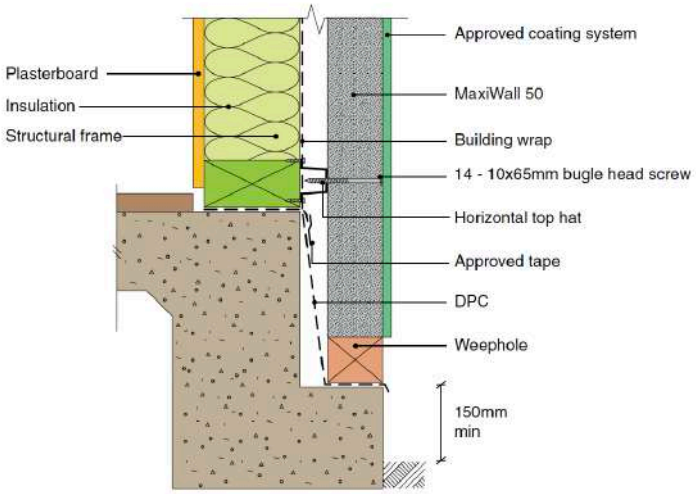

## 6. External corner



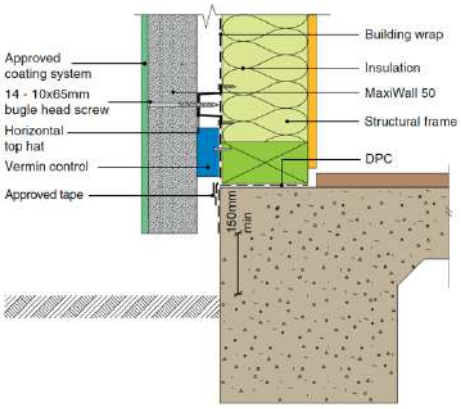
## 7. Rebated step-down



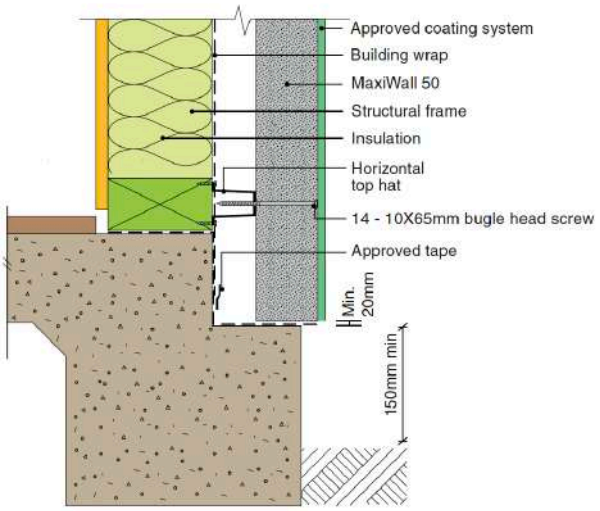

## 8. Step-down with brick course



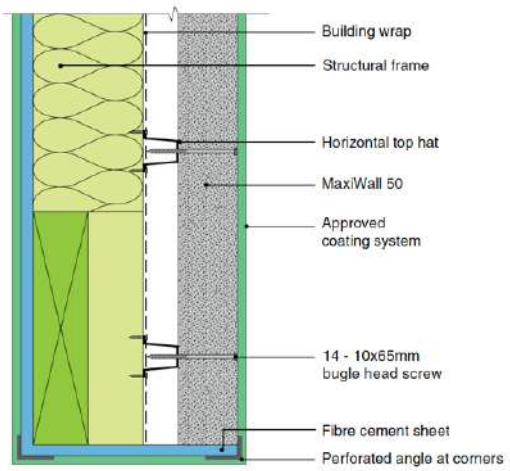

## 9. Over-hang



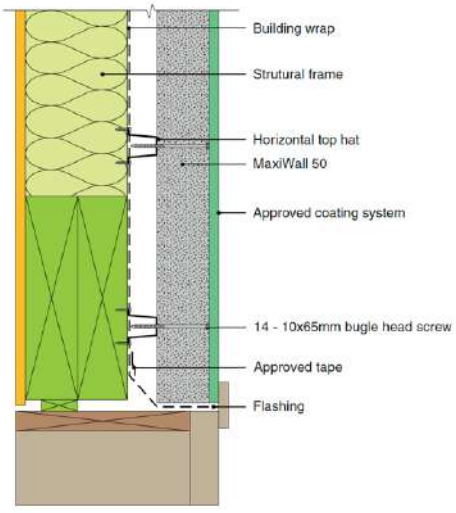
## 10. Rebated foundation



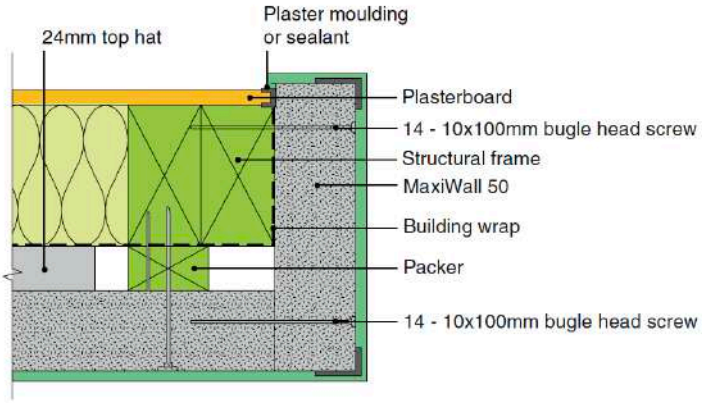

## 11. Door head - Option 1



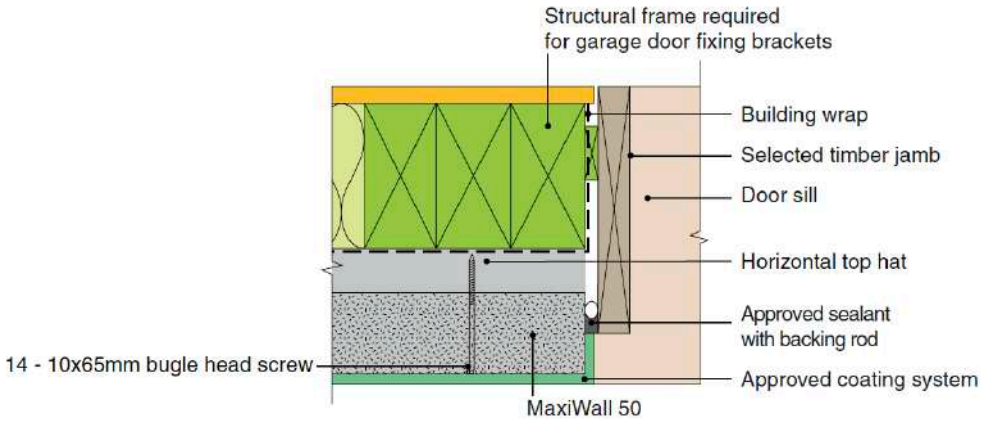

## 12. Door head – Option 2



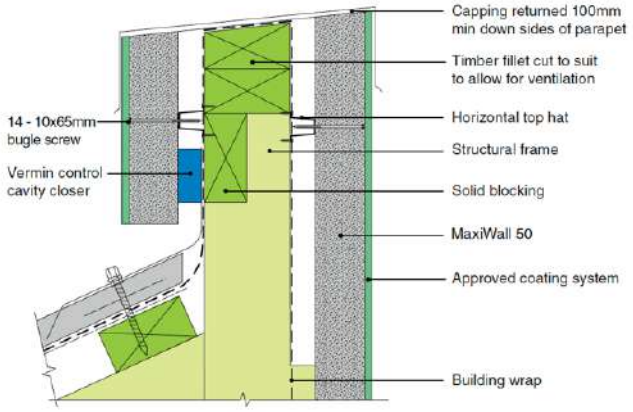
## 13. Door jamb – Option 1



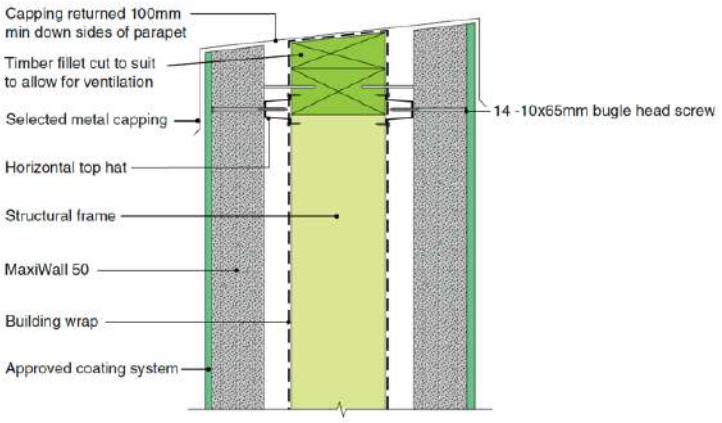

## 14. Door jamb – Option 2



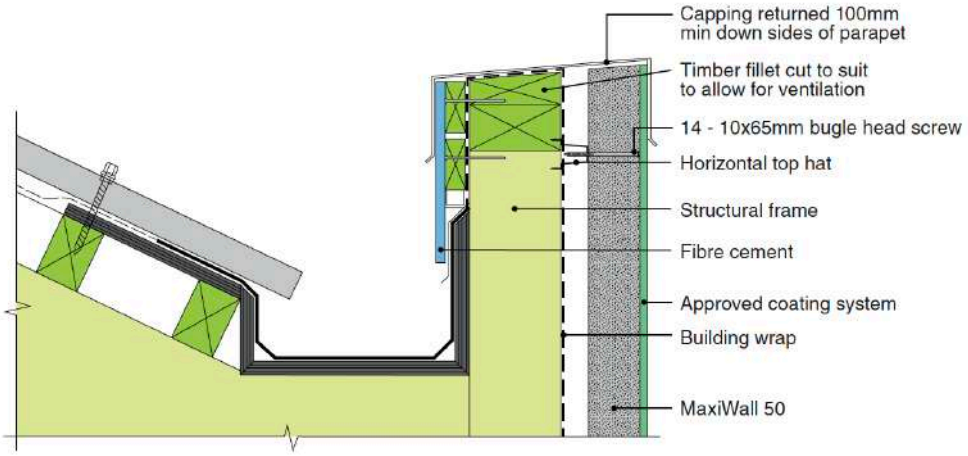

## 15. Parapet – Option 1



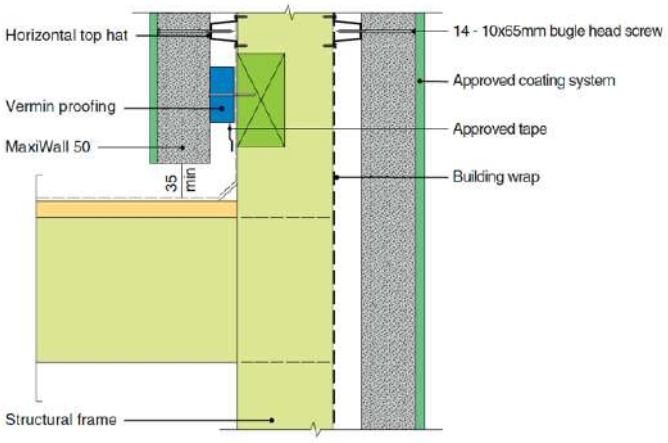
## 16. Parapet – Option 2



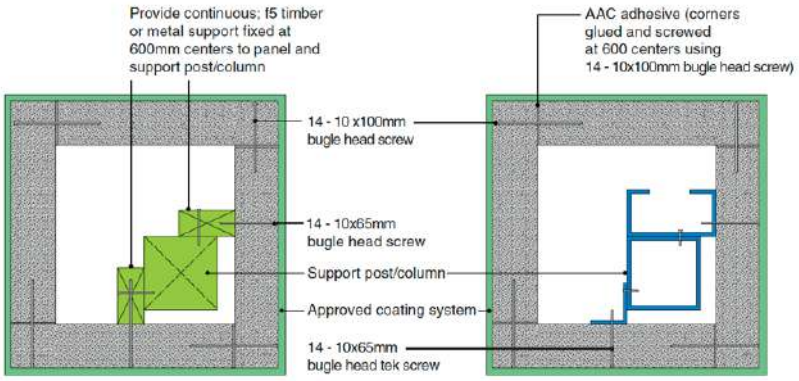

## 17. Parapet with box gutter



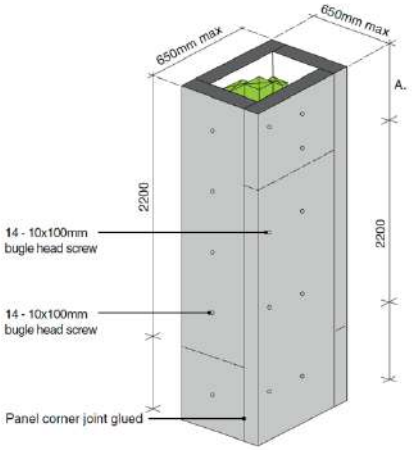

## 18. Flat roofing



## 19. Column



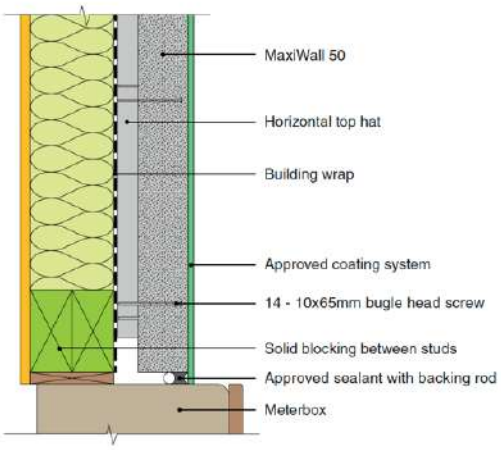

## 20. Shaft construction



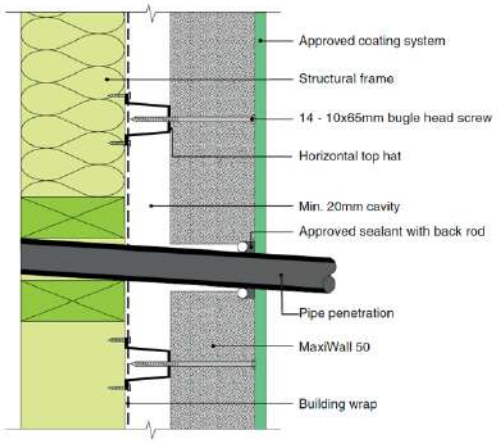

NOTE: THIS DETAIL IS NOT SUITABLE FOR SUSPENDED PANELS

MAXIMUM SQUARE COLUMN SIZE 650MM X 650MM
MAXIMUM RECTANGULAR COLUMN SIZE 700MM X 600MM
'A' DENOTES STAGGERED PANEL JOINT

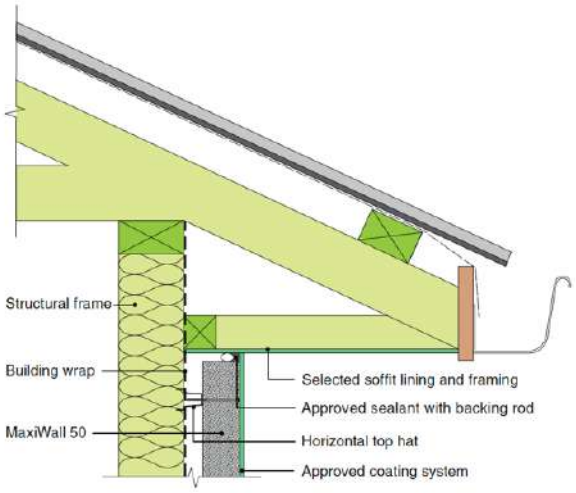
## 21. Meter box jamb



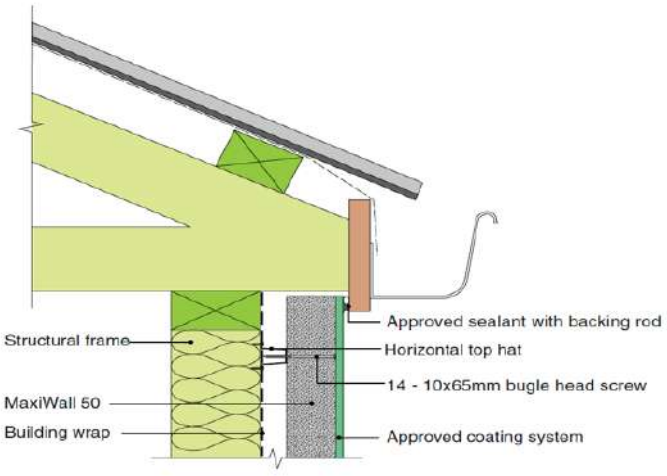
## 22. Pipe penetration



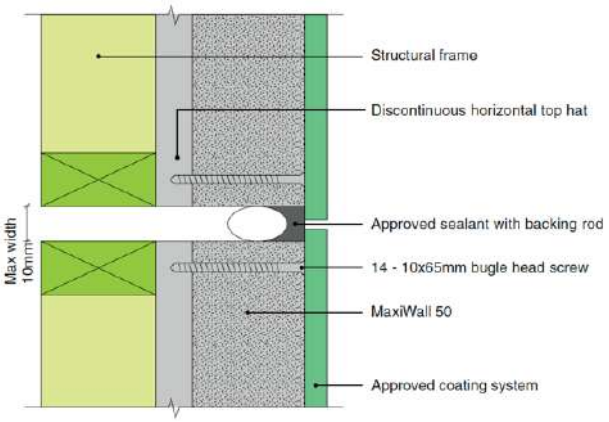

## 23. Soffit and wall junction – Option 1




## 24. Soffit and wall junction – Option 2



## 25. Vertical control joint



## 10. System Property

### 10.1 Durability & Maintenance

Autoclaved aerated concrete has high porosity and relatively low alkalinity compared to traditional concrete. As a cement-based material, AAC resists water, rot, mold and mildew and can be precisely shaped and cut to tight tolerances when used in building construction.

MaxiWall panels are embedded with steel mesh that is coated with corrosion resistant paint applied in a two-dip coating process. If panels are cut, apply anti-corrosion paint on the exposed steel. In typical applications, the completed external wall system is protected from moisture ingress by moisture proof sealed joints and an external surface coating.

Where there is significant and prolonged exposure to moisture, a waterproof tanking membrane must be applied to the panel surface. For durability in buildings refer to ABCB Handbook 2015.

### 10.2 Fire Resistance

MaxiWall panels come with CodeMark Certificate of Conformity and/or professional engineering report as a cladding wall element to clad timber, reinforced concrete frame or steel framed buildings complying with NCC provisions and state or territory variations for building classification Class 1 and 10 and Class 2 to Class 9.

The panels can be used as a non-loadbearing infill panel wall or fixed to a primary building element where when shielding the primary element from the effects of fire satisfy structural adequacy requirements up to a Fire Resistance Level (FRL) of at least (90)/90/90 in a wall arrangement. If an FRL in excess to what is stated herein is required please consult a design and building construction professional, as there are certain performance requirements that must be complied as outlined in the NCC.

### 10.3 Energy Efficiency

The NCC Volume 2, Class 1 and 10 Buildings – Housing Provisions provides minimum total R-Values that an external wall can comply with to be “Deemed-to-Satisfy’. The following table outlines the energy efficiency levels that comply with climatic zone requirement in the NCC.

Table 3. Climatic Zone Requirement

| Climate Zone | Minimum Total R-Value ($m^2K/W$) |
|---|---|
| 1, 2, 3, 4, 5, 6 and 7 | 2.8 |
| 8 | 3.8 |

The MaxiWall 50 mm AAC panel has an energy efficiency of R-Value 0.209 and can be used in conjunction with other building elements to achieve a total R-Value that is required for the project. It is the responsibility of the design and building construction professionals to ensure that the insulation material selected and installed for the MaxiWall external wall system complies with AS/NZS4859.1. or AS 2464.3 for loose fill insulation.

Table 4. below provides examples of system R-Value calculations for the MaxiWall 50 mm external wall system and their applicability to the range of climate zone requirements outlined in the NCC.

Table 4. Energy Efficiency Performance

| Reference (Modified) | System Description | Total R-Value ($m^2K$-W) | |
|---|---|---|---|
| | | Winter | Summer |
| 467w011 | MaxiWall 50 mm panel – 75mm stud + Unreflective sarking + R2.0 insulation | 2.94 | 2.71 |
| 467w011 | MaxiWall 50 mm panel – 75mm stud + Unreflective sarking + R2.2 insulation | 3.09 | 2.86 |
| 467w011 | MaxiWall 50 mm panel – 90mm stud + Unreflective sarking + R2.5 insulation | 3.86 | 3.58 |

**Note:** The Total R-Value calculations in Table 3. Includes outdoor air film, coating system, 25mm unreflective space, 10mm plasterboard and indoor air film.

## 10.4 Acoustic Performance

The MaxiWall external wall system is typically used for low-rise multi-residential buildings and houses. Under the NCC, these buildings are generally classified as Class 1 or 10 buildings. The acoustic performance required for external walls in these buildings and/or their building elements are currently not detailed in the NCC. Acoustic performance assessment is available upon request.

Acoustic performance of MaxiWall panel may be impacted if standard installation configurations shown in this manual are changed, such as increasing cavity widths or use of interior wall linings of a higher density and installation of thicker insulation products or plasterboard.

Where the external wall system requires specific acoustic performance such as local council regulations or for a particular wall purpose, engaging a specialist acoustic consultant for such projects for design advice and installation detail is recommended.

## 10.5 Weatherproofing

### a. Sealants

Suitable external grade acoustic and/or fire rated paintable sealant should be used to fully seal all control joints. An appropriate external grade sealant should be used to seal all gaps between panels and framing around windows. Sealant shall be approved for the application by the manufacturer.

### b. Wall Flashings

The use of flashing is an important part of the external wall system. In general, flashing must be designed to provide weather-resistance for the wall cladding, independent of the use of sealants or other materials for weatherproofing. Qualified tradesmen or other suitable expertise should be sought when designing, cutting and fastening flashing to a building.

### c. Building Wrap

The use of building wrap or sarking helps to control condensation and act as an air-barrier to reduce energy loss through the walls in the building. The design and building construction professionals must approve the sarking configuration. The material selected and installed must comply with AS/NZS4200 Part 1 - Materials and Part 2 - Installation.

## 10.6 External Coating

### a. Coating Application

A range of options for external surface coating system is available for MaxiWall panels from approved supply partners. Generally, the coating system involves high build acrylic cement-based renders designed to provide weather resistant, decorative and durable finishes for application over the MaxiWall panels. It is the responsibility of the applicator and/or installer to ensure that a fit-for-purpose coating system is selected that meets as a minimum with the performance requirements below.

Table 5. Coating Performance Specification

| Test Type | Performance Requirement |
|---|---|
| Resistance to water transmission | <10 g/m$^2$/24hr/1kPa |
| Water Vapour Permeability | w. sd ≤ 0.2 kg/(m$^2$.h$^{0.5}$) |
| Co-efficient of Water Absorption | w ≤ 0.2 kg/(m$^2$.h$^{0.5}$) |
| Equivalent Air Layer Thickness of Water Vapour Diffusion | Sd ≤ 2m |
| Durability (Warranty provided by manufacturer) | Min. 7 years |
| Elasticity | Ability to bridge a min. 1mm crack width |

Note: If other manufacturer's coating systems are used on MaxiWall panels, please ensure that the coating system meets the above performance specification and is warranted by the manufacturer.

### b. Surface Preparation

Prior to the application of the coating system to the external walls, the applicator and/or installer must ensure that all required penetrations and fire collars have been installed correctly and fully sealed. Ensure that the MaxiWall panels are dry and free of debris/oil.

Patching compounds specifically designed to be compatible with the panels are available to repair damaged areas prior to coating application. Exposed steel reinforcement bars must be coated with approved anti-rust corrosion protection paint. It is recommended that for rendered coatings, a 5 mm grid mesh be applied to the panels prior to rendering to prevent cracking of the render due to thermal movement.

MaxiWall panels are natural white to grey-white in colour. Slight variations may occur due to storage, raw materials and climate. Pores of different size at the surface are an inherent characteristic of autoclaved aerated concrete. The compounds and coatings must bond with the autoclaved aerated concrete to prevent moisture penetration yet allow breathability for moisture vapour.

# 11. Material Handling

## 11.1 Panel Unloading

MaxiWall panels are shipped in packs of 20 and stacked flat. The packs are strapped to strengthened timber pallets and wrapped in resilient plastic sheeting. Crane slings and forklifts may be used in accordance with standard industry practice. The Project Engineer is cautioned regarding the initial delivery of the panel packs as it should be unloaded as close as possible to the installation site. Secondary handling of the panels increases the risk of damage, and installation of damaged panels may void the warranty.

### 11.2 Storage & Protection

MaxiWall panel packs, when on construction sites must be stored on a flat-grade level that is not prone to standing water, erosion or settling. It must be left on its edge to avoid sagging. The packs may be stacked up to 3 packs high on flat load-bearing stable platforms so far as is reasonably practical and safe for workers and others. The packs should not be stacked if stored on un-level and natural ground.

MaxiWall panels should ideally be kept dry with attention paid to protecting panel ends, edges and surfaces. In adverse weather conditions the panels must be kept covered. Do not "shake-out" stored panels until they are ready to be installed.

MaxiWall panels with a central single layer of reinforcement and length over 1800mm are at risk of cracking under their self-weight when carried or lifted from the horizontal or tilted from the vertical position. Adequate support must be provided when lifting. Panels must always be carried edge up. Lifting equipment must be used when necessary.

Most chipped corners and edges can be repaired with MaxiWall's approved patching compounds. If reinforcing steel mesh is visible it must be protected using the approved anti-corrosion paint. Panels that have surface or minor cracks are usable but if not sure contact an authorized Big River Group's representative.

### 11.3 Health & Safety

Safety Data Sheets (SDS) are provided with all MaxiWall panels including major components associated with the system such as coatings, patching compound, thin-bed adhesive and reinforcement touch-up paint.

AAC building products contain Crystalline Silica (Quartz) that as dust is produced during cutting, grinding or drilling. It is categorized as a health hazard when inhaled. Approved dust masks and protective safety glasses or goggles must be worn for dust generating operations.

All AAC products are to be handled and worked on-site with the appropriate protective clothing. Protective gloves must be used for all construction operations. It is the responsibility of the builder/site supervisor to ensure that installation contractors adhere to safe work practices and suitable clothing.

## 12. Material Property

Table 6. Physical Property and Structural Design Capacity

| Property | Value | Unit |
|---|---|---|
| Declared Mean Dry Density $P_{m,g}$ | 525 | kg/m$^3$ |
| Characteristic Compressive Strength $f_{ck}$ | 3.0 | MPa |
| Characteristic Flexural Strength $f_{cflk}$ | 0.54 | MPa |

Table 7. Wall System Comparison

| Wall System | Wall Element Width (mm) | | | Total Width (mm) |
|---|---|---|---|---|
| | Timber Frame | Cavity | Masonry Leaf | |
| Brick Veneer | 70 | 40 | 110 | 220 |
| MaxiWall | 70 | 24-35 | 50 | 144-155 |
| Brick Veneer | 90 | 40 | 110 | 240 |
| MaxiWall | 90 | 24-35 | 50 | 164-175 |

## 13. Standard and Compliance

| No. | Compliance Standard | Compliance Description |
|---|---|---|
| 1. | NCC Vol. One: BP1.1, BP1.2 | Nominated fixing method and spacing for wind actions |
| 2. | NCC Vol. Two: P2.1.1 | Structural stability and resistance to actions |
| 3. | NCC Vol. One: A2.2(a), (v) | Ultimate static wind load |
| 4. | NCC Vol. Two: 1.2.2(a), (iii) | Ultimate static wind load |
| 5. | NCC Vol. One: CP1, CP2, GP5.1 | Fire resistance level for external wall system – In progress |
| 6. | NCC Vol. Two: P2.3.1, P2.3.4 | Fire resistance level for external wall system – In progress |
| 7. | NCC Vol. One: Part FP1 | Weatherproofing for external wall system |
| 8. | NCC Vol. Two: BP2.2.2 | Weatherproofing for external wall system |
| 9. | NCC Vol. One: JP1 | Energy efficiency performance requirements |
| 10. | NCC Vol. Two: P2.6.1 | Energy efficiency performance requirements |
| 11. | NCC Vol. One: A2.2(a), (v) | Thermal conductivity and resistance |
| 12. | NCC Vol. Two: 1.2.2(a), (iii) | Thermal conductivity and resistance |
| 13. | AS/NZS 1170.2 | Wind actions |
| 14. | AS 4055 | Wind loads for housing |
| 15. | AS 4040.2 | Resistance to wind pressures for non-cyclone regions |
| 16. | AS 1530.4 | Fire resistance test of elements of construction |
| 17. | AS 3959 | Construction of buildings in bushfire-prone areas |
| 18. | AS 1684 | Residential timber – framed construction |
| 19. | AS 1720 | Timber structures |
| 19. | AS/NZS 4200 Part 1, Part 2 & Part 3 | Installation of pliable building membranes |
| 20. | AS 5146 Part 1 | Reinforced aerated concrete |
| 21. | NASH Standard | Residential and low-rise steel framing |
| 22. | AS/NZS 4600 | Cold-formed steel structures |
| 23. | AS 4654.1 | External waterproofing membrane systems |
| 24. | AS/NZS 2904 | Damp-proof courses and flashing |

## 14. Responsibility and Warranty

### 14.1 Responsibility

The final specification and certification of the external and boundary wall system using MaxiWall 50 mm AAC panels lie solely with the qualified design and building construction professionals responsible for the project. These professionals would generally comprise of structural engineers, fire engineers and acoustic engineers. The design consideration, fixing specifications and installation details in this manual represent common types of construction and detailing practice used in Australia. A competent professional must approve any variations or alternatives to the design and installation details described in this manual.

### 14.2 Warranty

MaxiWall panels are manufactured to international quality standards. Warranty statement for the panels is available on Big River Group's website: www.bigrivergroup.com.au. Big River Group warrants that its panels are free from defects in materials and manufacture subject to the conditions and exclusions set out in the Product Warranty.

## Disclaimer

The information contained in this Installation Guide is only advisory and general in nature. It is not intended to substitute advice or consultation from registered building construction professionals to ensure designs, systems and installation for projects conform to the National Construction Code and Building Codes of Australia including any other laws imposed by the States or local councils.

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