

# CEMINTEL<sup>®</sup>

DESIGN AND INSTALLATION GUIDE



MOSAIC<sup>®</sup>  
Residential Façade Cladding System

CSR

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## DESCRIPTION

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Cemintel Mosaic cladding provides a versatile and durable façade with modern geometric styling for residential buildings. Cemintel Mosaic is a highly adaptable system which can be used over steel or timber stud framing.

Cemintel Mosaic Panel is an 8mm thick, fibre cement cladding which is purpose manufactured for use on residential building façades.

The panels are supported by advanced lightweight fibre cement battens. The panels may be arranged in a variety of patterns, and surface relief is produced by expressed joint finishing. Cemintel Mosaic is a square edge panel with a smooth flat surface that can be finished with a wide variety of exterior grade acrylic paint or aggregate finishes, resulting in a high degree of design freedom.

Easy to install, Cemintel Mosaic cladding can be fixed with machine driven nails, and comes with pre-primed face and primed black edges, reducing required finishing time and helping to create a durable, attractive and professional finish.

Cemintel Mosaic cladding conforms to the requirements of AS2908.2 – Cellulose-cement products, Part: 2 - Flat sheets, Category 3 Type A.

## APPLICATIONS

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Cemintel Mosaic cladding is designed as a residential cladding, and can be used in many external applications including:

- New homes
- Duplex and townhouse developments
- Upper and lower storey additions
- Composite construction
- Gable ends
- Infill panels around windows and doors
- Outbuildings including garages and tool-sheds

Cemintel Mosaic cladding may be installed to timber or steel framing built in accordance with the relevant Australian Standards, and is suitable for wind zones up to N5/C3 in accordance with AS4055: Wind loads for housing.

The Cemintel Mosaic System has been designed as a drained cavity system (similar to traditional cavity brick systems), and is suitable for exposed applications.

The Cemintel Mosaic System can also be used as an exterior ceiling. Contact CSR Cemintel for details.



# ADVANTAGES

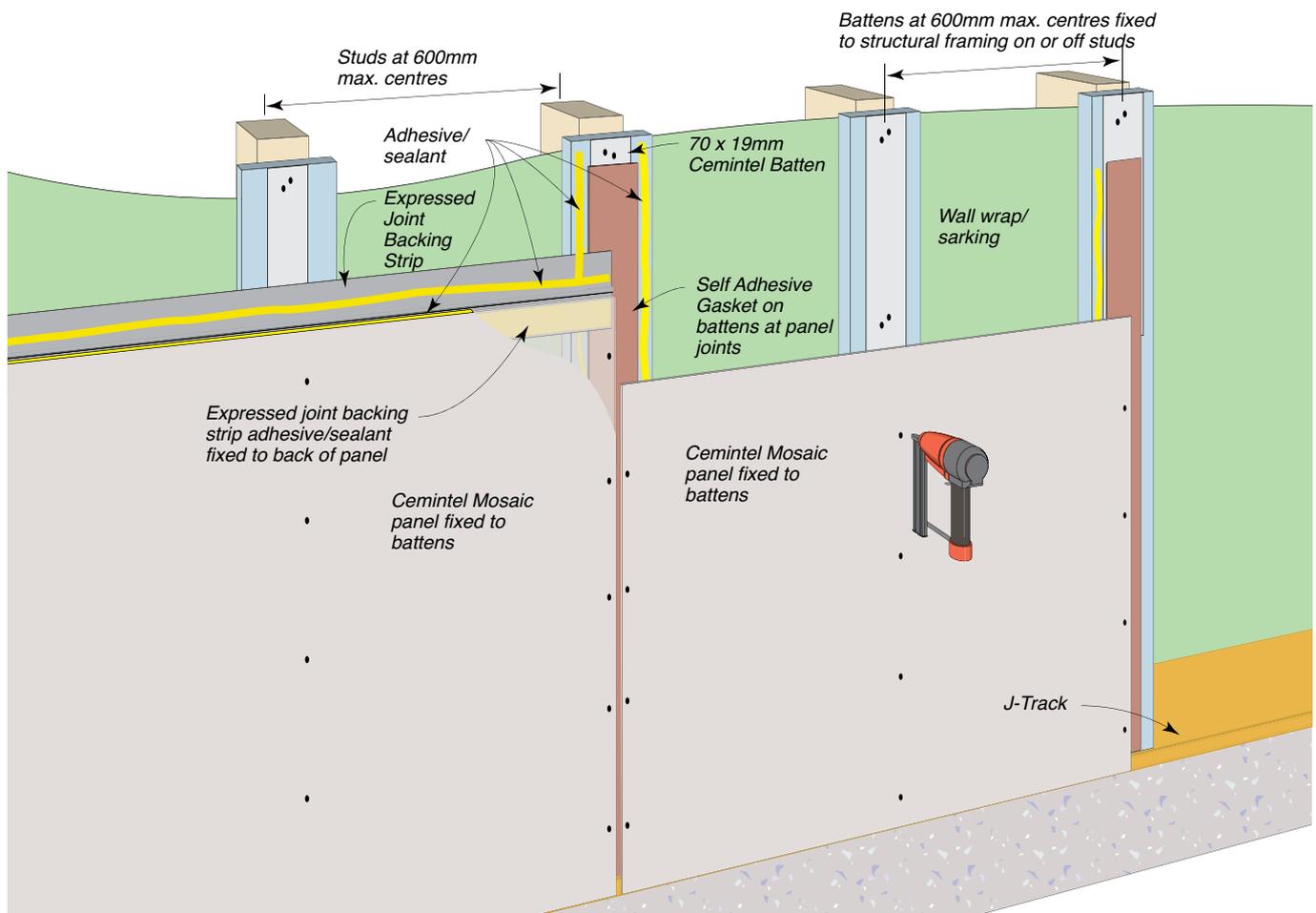
## SYSTEM BENEFITS

- Modern geometric styling with expressed joint appearance.
- Horizontal, vertical or angled geometric pattern installation for maximum design versatility.
- Smooth surface finish on panel face easily accepts exterior paint or aggregate finishes.
- Edges of the panels are pre-painted with a black pigmented sealer to accentuate the expressed joint.
- Drained cavity system for better moisture ingress control.
- Machine driven brad nailing minimises surface disruption.
- Highly durable, low maintenance components.
- Cemintel Mosaic cladding is immune to permanent water damage in both short and long-term exposure.
- Cladding will not rot, burn or corrode, and is unaffected by termites, air, steam, salt and sunlight.
- Can be used in coastal areas up to C4 (High).
- Sealed on all sides. Pre-primed on exposed face.

## INSTALLATION BENEFITS

- Simple and quick to install using standard lightweight construction methods.
- Battens may be fixed on or off studs, providing complete versatility for horizontal, vertical or angled panel installation.
- On or off stud battens also enable installation solutions for an extensive range of wind category regions.
- Dimensionally accurate panels.
- Machine driven nailing for faster installation.
- Pre-primed face to minimise required finishing time.
- Edges of the panels are pre-primed with a black pigmented sealer, minimising cutting-in when finishing.

# SYSTEM OVERVIEW



# DESIGN CONSIDERATIONS

## SYSTEM DESIGN

This guide represents good practice, though it is not intended as an exhaustive statement of all relevant information. It remains the responsibility of the building designer to verify that the Cemintel Mosaic cladding system is suitable for the particular requirements of any given project.

## NCC/BCA COMPLIANCE

Clause P2.2.2 of the 2015 National Construction Code (NCC) includes a test method to verify that a cladding system meets stipulated weatherproofing requirements. The cavity system using Cemintel Mosaic cladding as detailed in this manual has been independently certified by AECOM that it meets the performance requirements of the NCC based on tests carried out to the NCC method, in Wind Categories up to N5/C3 (max. 2.96kPa).

## DRAINED CAVITY BATTENS

Drained cavity systems provide an effective method to manage the migration of water vapour through stud framed wall systems. With the Cemintel Mosaic cladding system, a drained cavity is created by fixing Cemintel Battens to the face of structural framing, over a layer of wall wrap/sarking, and then fixing the Cemintel Mosaic cladding to the face of the battens.

Battens are to be fixed vertically to stud framing and may be fixed on-stud, or off-stud with the addition of support framing such as noggings at each fixing point.

Where additional backing is required for flashings etc, a short trimmer batten may be used and must be fixed with a minimum fall of 5° to the horizontal to allow drainage of any moisture.

## WEATHERPROOFING

The control of water ingress to a building is the responsibility of the designer. All flashings, damp proof courses, tapes and sealants must be installed in accordance with the relevant instructions, standards and building codes.

## FRAMING

The Cemintel Mosaic cladding system can be fixed to timber framing with studs at 600mm centres maximum.

Framing shall be in accordance with the following relevant standard:

- AS1684 – Residential Timber-Framed Construction.
- AS4055 – Wind loads for housing.
- The Building Code of Australia (BCA).

## Timber Framing

Timber shall be seasoned or have reached an equilibrium moisture content of 16% or less at the time of framing. Unseasoned timber is not recommended.

## WIND LOADING

Cemintel Mosaic cladding is suitable for buildings within the geometric limits of AS4055 – Wind Loads for Housing. These limits include a roof height less than 8.5m, eaves height less than 6m, and a building width less than 16m.

Tables are provided for wind classes N1 to N5 and C1 to C3 for timber and steel framing. It is the responsibility of the building designer to determine the wind class of the building and the suitability of the system.

## LIMITATIONS

Cemintel Mosaic cladding is unsuitable for the following applications: non-vertical framing (e.g. parapet capping); water features; chimney cladding; exposure to temperatures over 50°C; contact with standing snow or ice.

## BUSHFIRE PRONE AREAS

In accordance with AS3959, Cemintel Mosaic cladding installed with recommended wall wrap/sarking is suitable as an external wall cladding for buildings assessed up to BAL-29. Systems are available for higher Bushfire Attack Levels, contact CSR DesignLINK for details. Refer to "FIRE RATED EXTERNAL WALL SYSTEMS" on page 10 of this guide and to the BCA for additional requirements and further details.

## STRUCTURAL BRACING

Cemintel Mosaic cladding is not designed to act as structural bracing. Bracing must be provided in the structural framing in the normal manner by using methods such as strap bracing or sheet bracing. Where sheet bracing is used, the entire wall framing to be clad with Cemintel Mosaic cladding must be sheeted to maintain a uniform fixing plane. Note that window set-out may also be affected.

## CONTROL JOINTS

Control joints in the Cemintel Mosaic system are required to correspond to control joints in the supporting structure and anywhere that significant structural movement is expected.

A control joint must be installed when a masonry wall adjoins framed construction, and at the junction of framed additions or existing buildings, to allow for differential movement. The current and new framing and cladding systems must be discontinuous at this control joint. Refer to 'Installation Details'.

Movement joints provided in framing should be carried through the cladding.

For two storey construction, a horizontal control joint is required at the first floor level. The magnitude of the deflection must be verified by the building designer.

## TERMITE PROTECTION

There is a wide variety of methods for managing termite entry to buildings, and selecting the appropriate method for any structure depends on specific risk factors and the form of construction. Measures for termite management have not been addressed in this guide.

Refer to your local pest management service, the BCA, AS3660, or your local building authorities for more information about the requirements for the design of a suitable termite management system.

## SERVICES

The Cemintel Mosaic cladding system will accommodate services that are run through the framing. Any notches or holes formed must be considered in the framing design.

## PENETRATIONS

Penetrations in the Cemintel Mosaic cladding must be neatly cut using appropriate tools such as a saw, drill or hole saw. Penetrations should be prepared with a clearance of 5-8mm all around and the gap must be fully sealed with sealant.

## WALL WRAP/SARKING SELECTION

To ensure occupant comfort and protection of the building frame, the following factors should be considered during the selection of the correct wall wrap/sarking.

- **Condensation Risk:** This is a complex problem and can occur under a variety of conditions (not just in cold and tropical climates) so selection of the right wall wrap/sarking needs to consider the local climate, building use and orientation, material R-Value of the insulation, as well as the degree and location of ventilation.
- **Weather Barrier:** Wind loads can produce lower air pressures within buildings than on the outside, forcing water through small gaps in the building envelope around penetrations and joints, even at low wind speeds.

Careful selection of a wall wrap/sarking with the appropriate level of vapour permeability or vapour resistance is one key factor in reducing condensation risk. Table 1 provides guidance on recommended wall wrap/sarking selection. Key selection characteristics for a suitable wall wrap/sarking are as follows:

- The wall wrap/sarking must have a 'high' water barrier classification – an 'unclassified' rating is not suitable.
- Wall wrap/sarking must meet the requirements of AS/NZS4200.1: Pliable building membranes and underlays – Materials, and be installed in accordance with AS/NZS4200.2: Pliable building membranes and underlays – Installation requirements.

Whilst the requirement to seal joints and penetrations may vary depending upon BCA and/or state requirements, CSR recommends sealing the external wall wrap/sarking to maintain vapour performance and draught proofing effectiveness, as well as to ensure water barrier integrity. As there are a number of factors that need to be considered in assessing and managing condensation risk, it is recommended that designers undertake a condensation risk analysis prior to wall wrap/sarking selection as part of the building design. Additional literature on this subject is available from CSIRO/BRANZ/ASHRAE/ABCB and CSR DesignLINK can help with this assessment.

**Table 1: Guidance on Wall Wrap/Sarking Selection**

Climate	Guidance on wall wrap/sarking to be used behind the cladding	Performance Criteria	Recommended Product
Cold Climates*	In cold climates where the risk of condensation is high, vapour permeable membranes should always be installed on the cold external side of the insulation.	Vapour Permeability > 2.5µg/N.s	Enviroseal ProctorWrap RW or CW
Temperate and inland climate zones	It is recommended to use vapour permeable membranes to avoid creating a seasonal moisture trap and to allow drying in either direction – interior or exterior.	Vapour Permeability > 2.5µg/N.s	Enviroseal ProctorWrap RW or CW
Warm humid coastal and tropical climates	Where vapour flow is typically inward, such as where the building is air-conditioned, membrane should be non-permeable.	Vapour Resistance > 7MNs/g	Thermoseal Resiwrap or Thermoseal Wall Wrap or Thermoseal 733

\* For alpine areas and buildings that have high internal levels of humidity (such as indoor swimming pool areas), please contact CSR Bradford for project specific technical advice.

## INSULATION

Energy efficiency requirements for buildings are set out in the BCA as performance requirements and acceptable construction practices, and are dependant on geographical climate zones. To meet the requirements, it is recommended that CSR Bradford insulation be installed in the wall framing. Check with local building authorities for minimum insulation requirements.

It is recommended that insulation values above the minimum be chosen for energy conservation and occupant comfort. Insulation also improves the acoustic performance of the wall against outside noise.

The level of insulation provided in a wall is described by its R-value. The higher the R-value the greater the insulation provided. R-values for some systems are given in Table 2.

Refer to 'Components' for product information.

## COLD CLIMATES

Cemintel Mosaic cladding is not designed to be in contact with snow or ice build-up for extended periods, such as is experienced in alpine areas subject to snowdrifts.

## LININGS

Internal linings are to be designed for the applicable pressures calculated in accordance with AS4055. For Gyprock Standard Plasterboard linings, the arrangements in Table 3 may be used. Sheet fixing details are to be in accordance with GYP547 Gyprock Residential Installation Guide. For other lining materials, consult the manufacturer.

Table 3: Internal Lining Design

Wind Category	Stud Spacing mm max.	Lining	Sheet Orientation
N1, N2, N3	600	1 x 10mm Gyprock Standard Plasterboard	Horizontal or Vertical
N4, N5, N6 C1	600	1 x 13mm Gyprock Standard Plasterboard	Horizontal
C2, C3	600	2 x 13mm Gyprock Standard Plasterboard or 1 x 13mm Gyprock Soundchek	Horizontal
	450	1 x 13mm Gyprock Standard Plasterboard	Horizontal
C4	600	1 x 13mm Gyprock Soundchek	Horizontal
	450	1 x 13mm Gyprock Standard Plasterboard	Horizontal

## CORROSIVITY CATEGORIES & COASTAL AREAS

Corrosivity categories are as described in AS4312 - Atmospheric corrosivity zones in Australia. The code has methods for determining categories as well as maps and tables of major population centres.

### C1: Very Low

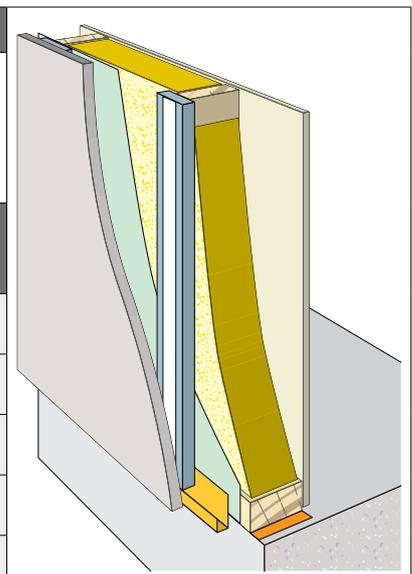
Generally inside buildings, semi-sheltered locations away from marine or industrial influence, and some alpine regions.

### C2: Low

Dry, rural areas, away from the coast or sources of pollution. Most areas of Australia at least 50 kilometres from the coast, which can extend to within one kilometre from quiet, sheltered seas. Most inland towns, such as Canberra,

Table 2: Thermal Performance Selection

CEMINTEL Mosaic CLADDING				
Wall Frame	Insulation	Wall Wrap/Sarking	Winter Total Wall R-Value	Summer Total Wall R-Value
70mm	(a) BRADFORD 70mm Gold Wall Batts R2.1	Bradford Thermoseal Wall Wrap or Enviroseal ProctorWrap RW	2.6	2.4
90mm	(b) BRADFORD 90mm Gold Wall Batts R2.5	Bradford Thermoseal Wall Wrap or Enviroseal ProctorWrap RW	3.1	2.8
90mm	(c) Bradford 90mm Gold Wall Batts R2.7HP	Bradford Enviroseal Proctorwrap RW or CW	3.3	3.0
90mm	(d) Bradford 90mm Gold Wall Batts R2.7HP	Bradford Thermoseal Wall Wrap or Resiwrap	3.3	3.0
70mm	(e) NIL	Bradford Thermoseal 733*	1.5	1.3



NOTES: Values calculated in accordance with AS4859.1, and are based on an un-ventilated cavity and using Bradford Thermal Calculator v1.6. \* Bright side of foil facing stud cavity. Bradford Thermofoil 733 is wall wrap/sarking with reflective finish both sides. Using an alternative product with anti-glare finish will REDUCE the stated R-value performance.

Ballarat, Toowoomba and Alice Springs, and suburbs of cities on sheltered bays (Brisbane, Melbourne, Hobart) that are more than one kilometre from the sea. Adelaide suburbs more than 6 kilometres from the coast in the southern suburbs, through to 3 kilometres from the coast in the northern suburbs.

### C3: Medium

Coastal areas with low salinity, extended by factors such as wind, topography and vegetation. Sheltered areas such as Port Philip Bay 50 metres from the shoreline to about one kilometre inland. Around less sheltered bays such as Adelaide to about 3 to 6 kilometres inland. Along ocean front areas with breaking surf and significant salt spray extending from about one kilometre inland to between 10 and 50 kilometres inland, depending on the strength of prevailing winds and topography. Includes much of the metropolitan areas of Wollongong, Sydney, Newcastle and the Gold Coast, most of the Yorke Peninsula South Australia, and from Victor Harbour to the Victorian border, extending between 30 and 70 kilometres inland. Urban and industrial areas with low pollution levels, and for several kilometres around large industries such as steelworks and smelters.

### C4: High

Around sheltered bays up to 50 metres inland from the shoreline. Areas with rough seas and surf, extending from several hundred metres inland to about one kilometre inland and depends on winds, wave action and topography. Up to 1.5 kilometres downwind of large industrial plants.

### C5: Very High

Offshore and on the beachfront in regions of rough seas and surf beaches, and inland for several hundred metres, e.g. around Newcastle extending over half a kilometre from the coast. Aggressive industrial areas where the environment may be acidic with a pH of less than 5.

**Table 4: Requirements for Corrosive Environments**

Corrosivity Category (AS4312)	Fixings (minimum)
C1 : Very Low C2 : Low	Class 3 or Class 4 stainless steel fixings
C3 : Medium	Class 3 or Class 4 stainless steel fixings
C4 : High	Class 4 countersunk head screws filled and finished level with Cemintel External Joint Compound or Class 4 stainless steel fixings
C5 : Very High	Not Suitable

## WASH-DOWN

Walls must be washed down twice per year, to remove salt/corrosive build-up. When Cleaning cladding, use no more than 700psi (50kg/cm<sup>2</sup>) of water pressure at 3m to 3.5m distance from the face. Water pressure should be applied downward to avoid forcing water into openings.

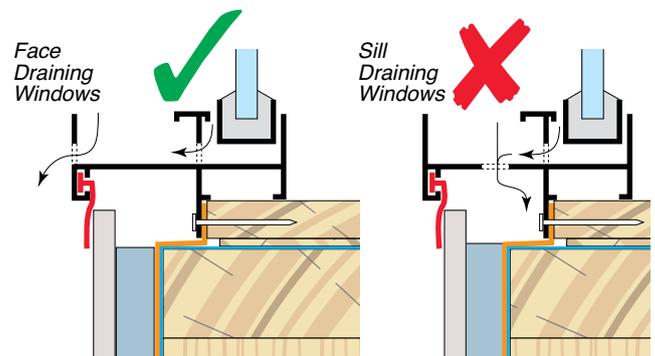
## WALL FLASHINGS

In general, flashings shall be designed and installed in accordance with SAA - HB39 1997 - Installation Code for Metal Roofing and Wall Cladding. Stop ends shall be incorporated with all flashings. All flashings are supplied by others.

## WINDOW SELECTION

The cladding system is designed to accept standard aluminium or timber framed windows. Aluminium windows **MUST NOT** have sill drain holes which can direct water behind the cladding. Windows with face draining format **MUST** be used.

### Window Drainage



Jamb flashing is required in all cases, and for ease of installation, these should be included when ordering windows.

The cladding system can accept many standard window types. Refer to the 'Installation Details' in this guide. Other window types can be installed in a similar manner by varying the timber reveal depth to suit the overall wall thickness.

## BUILDING RENOVATIONS

When undertaking building renovations, remove all cladding and wall wrap/sarking from the original wall framing. Ensure the condition of the framing is in accordance with current applicable requirements. Install additional studs where required and prepare framing, wall wrap/sarking and flashings as per details in this publication.

## PAINTING

Cemintel Mosaic panels are sealed on all sides, pre-primed on the face and must be coated with an appropriate finish within three (3) months of installation. Panels should be finished with two coats of exterior grade acrylic paint, applied in accordance with the paint manufacturer's instructions. Alternatively a proprietary textured finish may be applied in accordance with the respective manufacturer's instructions.

Mosaic panels are supplied with pre-painted black edges.

Where panels are cut on site, the cut edges must be sealed and coated with an exterior grade acrylic paint such as Dulux Weathershield X10™.

Where countersunk screw fixing is used, the exterior face of Cemintel Mosaic panels can be finished with any of a wide variety of coatings, provided it is compatible with fibre cement, the screws, and with the filler used to cover the countersunk heads. High build, exterior grade acrylic paint or aggregate finishes provide the best results.

A minimum of two coats is recommended to ensure adequate cover for the fasteners.

High gloss and low build finishes will require additional surface preparation to minimise fastener show-through. In all cases the coating manufacturer's application instructions must be followed.

Exposed Self Adhesive Gaskets can be painted with an exterior grade acrylic paint.

Prior to painting Sikaflex™ Pro sealant confirm compatibility of the coating with Sika Australia.

In all cases the surface must be clean and dry before coating application.

Before applying finishes in C3 and C4 coastal areas (refer to definition), all panels must be thoroughly washed with fresh water to remove any salt residue. Refer to coating manufacturer for additional requirements.

The durability of the system can be increased by the additional treatment of steelwork, and by painting all exposed sealants to the sealant manufacturer's recommendations.

## DURABILITY & MAINTENANCE

The durability of the Cemintel cladding systems can be enhanced by periodic inspection and maintenance. Inspections should include examination of the coatings, flashings, gaskets and sealants. Paint finishes must be maintained in accordance with the manufacturer's recommendations. Any cracked or damaged finish or sealants which would allow water ingress, must be repaired immediately by recoating or resealing the effected area, or by removing the panel and replacing gaskets and sealants. Any damaged flashings, panels or gaskets must be replaced as for new work.

Regularly inspect board surfaces and follow wash-down procedures as described in this guide.

Ensure ventilation and drainage gaps between cladding and flashings are kept clear of any debris.

The durability of the system can also be increased by the additional treatment of steelwork, and by painting all exposed sealants to the sealant manufacturer's recommendations.



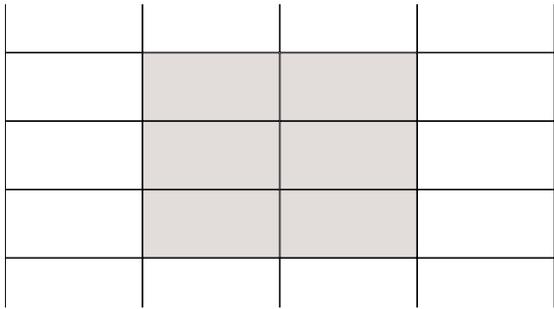
## PANEL LAYOUT

Panel layout for the Cemintel Mosaic cladding system involves the coordination of the following:

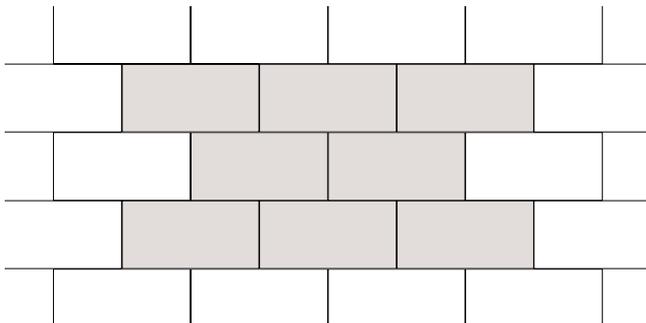
- Aesthetic design
- Type of structural support
- Stud, batten and framing spacing
- Openings – size and location
- Building size
- Mosaic panel size and joint width. (Horizontal and vertical joints are nominal 10mm)
- Building control joint location

Panel layout may be in a grid pattern where vertical and horizontal joints are continuous or may be in a staggered formation. Panels may be positioned vertically or horizontally and may be rotated up to 45° in the wall plane. Typical layouts are shown in the following diagrams. For rotated patterns battens must be installed as detailed for off-stud fixing and must run parallel with the edge of the panel.

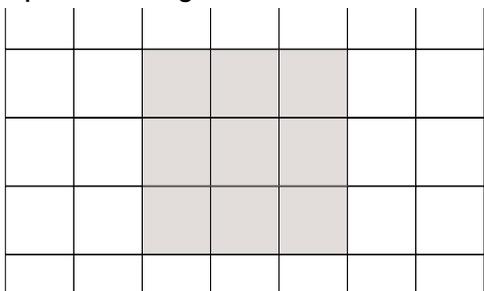
**FIG 1: Horizontal Sheeting – Stack Bond Pattern**



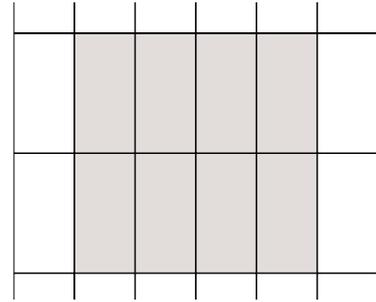
**FIG 2: Horizontal Sheeting – Stretcher Bond Pattern**



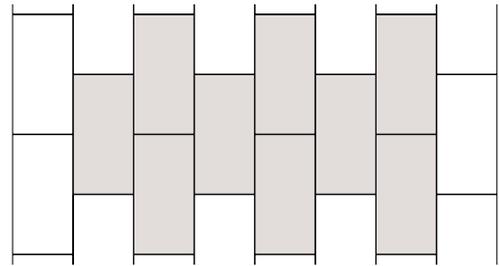
**FIG 3: Square Sheeting – Stack Bond Pattern**



**FIG 4: Vertical Sheeting – Stack Bond Pattern**

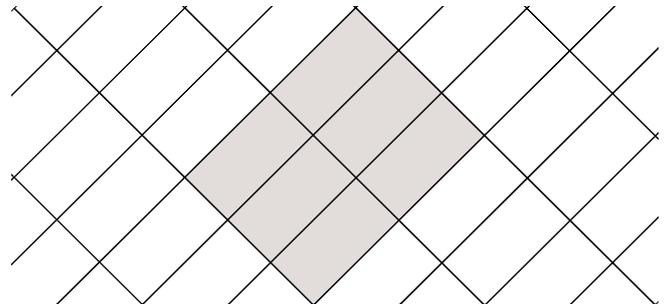


**FIG 5: Vertical Sheeting – Stretcher Bond Pattern**

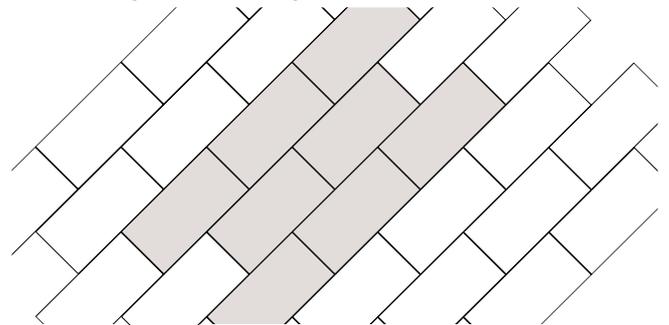


NOTE: Where diagonal sheeting layouts are used, install batten supports as for off-stud fixing. Refer to Table 6.

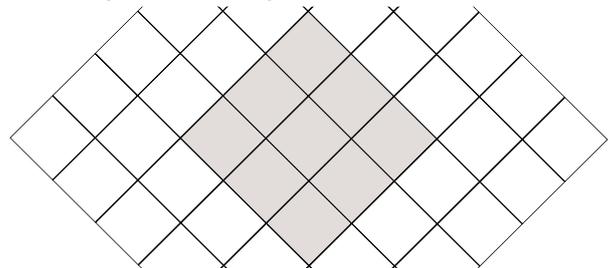
**FIG 6: Diagonal Sheeting – Stack Bond Pattern**



**FIG 7: Diagonal Sheeting – Stretcher Bond Pattern**



**FIG 8: Diagonal Sheeting – Stack Bond Pattern**



# FIRE RATED EXTERNAL WALL SYSTEMS

Cemintel fibre cement cladding products are suitable for use in bushfire zones in accordance with AS3959, and for fire rated external walls in accordance with the Building Code of Australia (BCA).

## WALL SYSTEMS FOR BUSHFIRE ZONES BAL-12.5 TO BAL-40

In accordance with AS3959, Cemintel fibre cement cladding products are suitable as an external wall lining for buildings in bushfire zones. Refer to Table 5 for product suitability and performance.

Cemintel wall systems for BAL-12.5 to BAL-40 require little variation from the standard installation practices.

In order to achieve the stated bushfire rating, the Cemintel wall system must include sarking/wall wrap with a flammability index of not more than 5 (AS1530.2) to the outside of framing; internal linings of 1 layer x 10mm Gyprock plasterboard or 1 x 6mm Cemintel Wallboard.

Refer to Table 5 and FIG 9. Also refer to Treatment of Gaps in the following section. Refer to the BCA and AS3959 for additional requirements and further details.

## WALL SYSTEMS FOR BUSHFIRE ZONE BAL-FZ

Cemintel wall systems that achieve BAL-FZ are based on standard construction methods.

In order to achieve BAL-FZ requirements, the Cemintel wall system must include 1 layer x 16mm Gyprock Fyrchek MR plasterboard to the outside of framing; sarking/wall wrap with a flammability index of not more than 5 (AS1530.2) to the outside of plasterboard; internal linings of 1 layer x 10mm Gyprock plasterboard or 1 x 6mm Cemintel Wallboard.

Refer to Table 5 and FIG 9. Also refer to Treatment of Gaps in the following section. Refer to the BCA and AS3959 for additional requirements and further details.

## TREATMENT OF GAPS – FOR ALL BUSHFIRE ZONES

In accordance with AS3959, all joints in the external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed to prevent gaps greater than 3mm. Vents in external walls shall be screened with a mesh with a maximum aperture of 2mm, made of corrosion-resistant steel or bronze, except where they are less than 3mm.

When using cavity/batten fix systems, it is important to maintain the ventilation at the head and base of walls, but also to reduce the risk of ember penetration.

Refer to AS3959 for additional details.

## FRL RATED EXTERNAL WALL SYSTEMS

In accordance with the fire safety requirements of the Building Code of Australia (BCA), walls within close proximity to the property boundary or when exposed to a fire source are required to have a Fire Rating Level (FRL from outside only). Walls may include:

- External walls in a Bushfire Flame Zone (BAL-FZ),
- External walls to Class 1 buildings within 900mm of the boundary including Zero-Lot walls,
- External walls adjacent an external fire source (such as an Electrical Sub-Station).

In accordance with the BCA, Vol 2, Part 3.7.1.2, Cemintel fibre cement sheets can be used wherever non-combustible material is required by the code, and Cemintel offers wall systems to achieve various FRLs. Refer to Table 5 and FIG 9 and Gyprock publication, GYP500 – The Red Book™ Fire & Acoustic Design Guide. For additional assistance, contact CSR DesignLINK. Refer to the BCA for additional requirements and details.

## FRL RATED WALL INSTALLATION

Cemintel wall systems that achieve FRL ratings are based on standard construction methods.

In order to achieve FRL ratings as detailed in Table 5, Cemintel FRL compliant wall systems must incorporate 1 or 2 layers of Gyprock Fyrchek MR plasterboard to the outside of framing (in accordance with the system specification); sarking/wall wrap with a flammability index of not more than 5 (AS1530.2) to the outside of plasterboard; and internal lining (in accordance with the system specification). Refer to FIG 9 for typical installation details.

For alternative systems and additional information, refer to Gyprock publication, GYP500 – The Red Book™ Fire & Acoustic Design Guide. For additional assistance, contact CSR DesignLINK.

## ROOF & EAVES DESIGN

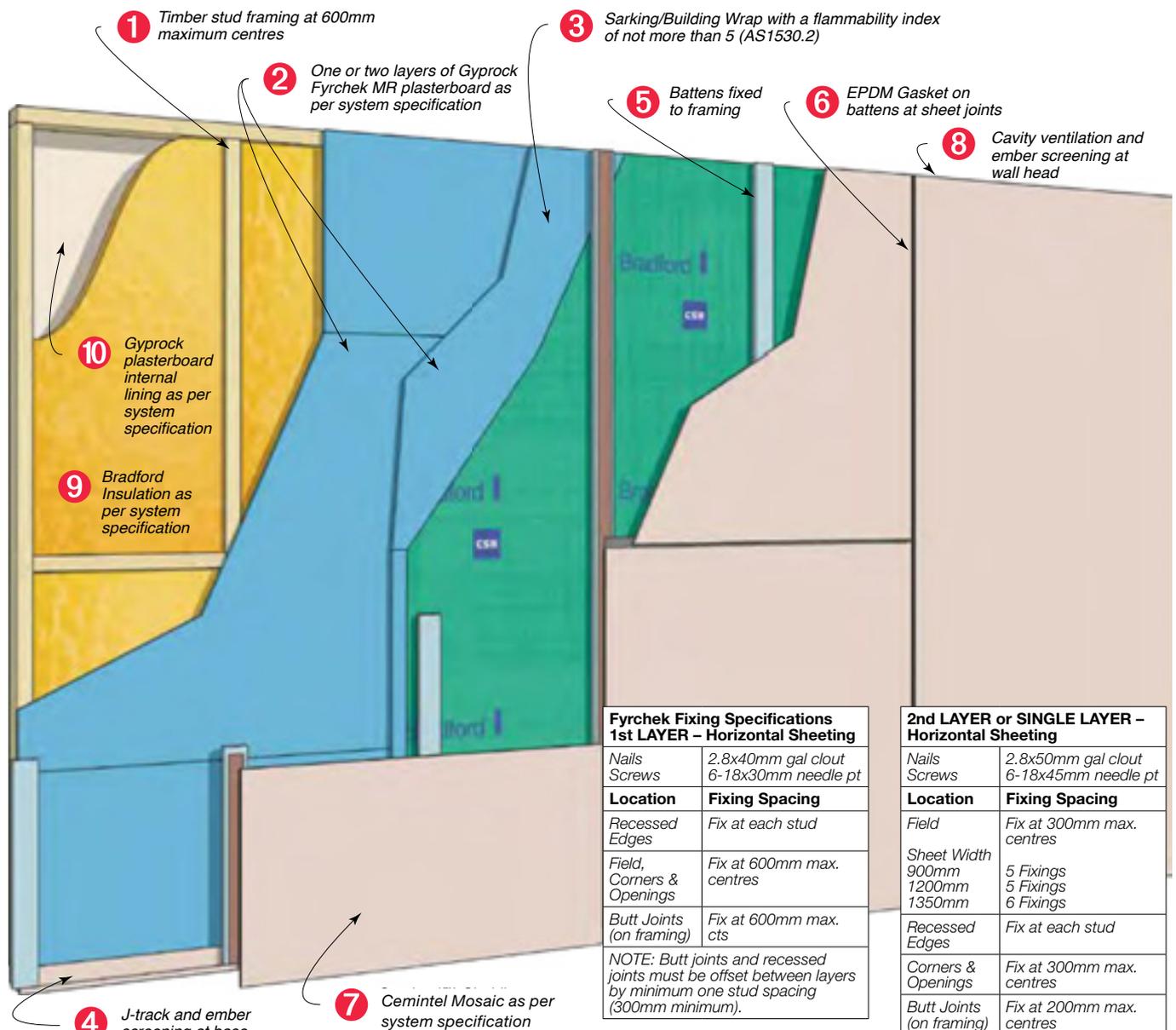
Refer to the Cemintel Construction Guide for Fire Rated External Walls (FC978), available at [www.cemintel.com.au](http://www.cemintel.com.au) and the Bradford Bushfire Roofing Systems Design Guide, available at [www.bradfordinsulation.com.au](http://www.bradfordinsulation.com.au).

Table 5: Cemintel Bushfire & Fire Rated External Wall Systems Specifications

Cemintel Product	System Specifications		Bushfire Zone Walls		Fire Rated External Wall Systems	
			Mosaic Fixed Over Sarking + Battens + 1 x 10mm Gyprock Plasterboard to internal face	Mosaic Fixed Over Sarking + Battens + 1 x 16mm Gyprock Fyrchek MR Plasterboard + 1 x 10mm Gyprock Standard Plasterboard to internal face Refer to FIG 9	CSR 900 or CSR 5711 Refer to The Gyprock Red Book for details and additional systems Refer to FIG 9	CSR 907 or CSR 5706 Refer to The Gyprock Red Book for details and additional systems Refer to FIG 9
	Panel Thickness (nominal mm)	Panel Thickness (minimum mm)	Bushfire Attack Level (BAL max.)		FRL	
Mosaic	8.0	8.0	BAL-29	<b>BAL-FZ</b> ① <b>30/30/30</b> (from outside only)	<b>60/60/60</b> (from outside only) ②	<b>90/90/90</b> (from outside only) ②

NOTE: • In accordance with the Building Code of Australia, Vol 2, Part 3.7.1.2, Cemintel fibre cement sheets can be used wherever non-combustible material is required by the code.  
 • Sarking/Building Wrap must have a flammability index of not more than 5 (AS1530.2).  
 ① BAL-FZ walls must have a minimum setback distance of 10m from classified vegetation. Also refer to local building regulations.  
 ② For additional systems and information, refer to GYP500 The Red Book™.

FIG 9: Typical Cemintel Mosaic and Gyprock Plasterboard Fire Rated External Wall System – Cavity System Shown



# COMPONENTS

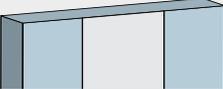
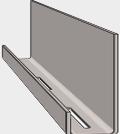
## CEMINTEL Mosaic PANEL

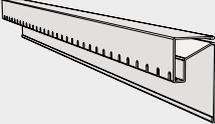
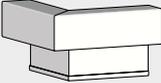
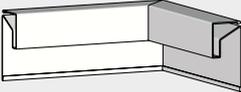
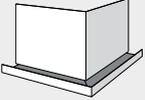
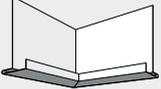
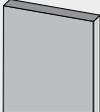
- Cemintel Mosaic Panel is 8mm thick and is available in a range of sizes. Panels have a pre-primed face and square edges pre-painted with a black pigmented sealer.

Panel Size (mm)	Qty	Order N°
590 x 2390	30	123333
890 x 1790	30	123331
1190 x 1190	30	123332
1190 x 2990	30	123280

## MANUFACTURING TOLERANCES

Panel – 8mm thickness (nominal)	12.6kg/m <sup>2</sup>
Panel Width	-3 /+0mm
Panel Length	-3 /+0mm
Panel Thickness	-0 /+0.5mm
Diagonal Difference	<3mm

Product	Description	Size	Qty	Order Code
	<ul style="list-style-type: none"> <li><b>Cavity Batten</b> – Advanced lightweight fibre cement structural grade batten with PVC strip on face. Battens are fixed to structural framing to create a 19mm deep drained cavity system.</li> </ul>	19 x 70mm x 2700mm	1	125431
	<ul style="list-style-type: none"> <li><b>Nails</b> – Used for fixing battens to timber framing. Machine driven D-head, Galvanised collated.</li> </ul>	2.80 x 50mm	3000	127799
	<ul style="list-style-type: none"> <li><b>Screws</b> – Used to fix battens to timber framing. Class 3, countersunk ribbed head, Phillips drive, treated pine screw.</li> </ul>	8-10 x 50mm	1000	127801
	<ul style="list-style-type: none"> <li><b>Brad Nails</b> – Used for fixing Cemintel cladding to Cemintel FC Batten. C25 machine driven Brad nails, Class 3 or Stainless Steel.</li> </ul>	16G x 25mm (Stainless)	2500	162751
			2500 (inc. 2 cells)	162752
	<ul style="list-style-type: none"> <li><b>Screws</b> – Used for fixing Cemintel cladding to Cemintel Batten Type 17 screw, 8-15 x 30mm Countersunk Ribbed Head, Phillips drive, Class 3 finish.</li> </ul>	10G-18 x 30mm	1000 (loose)	125614
			1000 (collated)	118224
	<ul style="list-style-type: none"> <li><b>J-Track PVC Cavity Vent Strip</b> – PVC extrusion fitted at base of battens to provide drainage, air flow and vermin proofing.</li> </ul>	19 x 19 x 70mm x 3000mm	1	134845
	<ul style="list-style-type: none"> <li><b>Closed Cell Batten Tape</b> – A self-adhesive closed cell flexible foam tape to assist water tightness at expressed joints. It is applied under sheet joints to the face of the battens.</li> </ul>	1.6x28mm x 23m roll	1	132317
	<ul style="list-style-type: none"> <li><b>ExpressWall® Backing Strip</b> – Used for backing horizontal sheet joints. Backing Strip is manufactured from high tensile Colorbond steel, and is black in colour</li> </ul>	1194mm	1	21089
		2394mm	1	21088
		2994mm	1	21087
	<ul style="list-style-type: none"> <li><b>Sikaflex® 11FC Black (Backing Strip Adhesive)</b> – used to bond Expressed Joint Backing Strip to the back of Mosaic Panels. Also required to bond panels to battens. It may also be used to fix Cemintel Sill and Reveal profiles. NOTE: This product is NOT recommended for control joints, sealing around windows/doors or penetrations.</li> </ul>	310 ml tube	1	44510
	<ul style="list-style-type: none"> <li><b>Sikaflex® Sealant PRO-2HP</b> – polyurethane sealant for control joints, gaps around windows, doors and other penetrations. Paintable. Apply to manufacturer's specifications.</li> </ul>	310 ml tube	1 x Grey	11378
			1 x Black	39488
	<ul style="list-style-type: none"> <li><b>Sika Primer 3</b> – Should be applied to surfaces prior to sealant to improve the long-term performance of joints. Apply to manufacturer's specifications.</li> </ul>	250 ml	1	115227
	<ul style="list-style-type: none"> <li><b>Sealant Bond Breaker Tape</b> – Used behind expressed joints made on framing. Tape is applied behind the joints and the gap is filled with sealant. Tesa Multiform Tape 7492, polyethylene closed cell foam tape. Self adhesive back.</li> </ul>	3 x 48mm x 25m	1	13172
	<ul style="list-style-type: none"> <li><b>Corner Flashing Metal</b> – Used at internal and external corners to assist with weather proofing.</li> </ul>	50 x 50 x 3030mm	1	111498
	<ul style="list-style-type: none"> <li><b>Cemintel Edge Sealer</b> – For sealing panel edges after on-site cutting.</li> </ul>	200mL	1	100166

Product	Description	Size	Qty	Order Code
	<ul style="list-style-type: none"> <li>• <b>Backing Rod</b> – Used at some joints with sealant. Also used as an air seal at windows and other locations. The diameter of backing rod must be appropriate for the width of the gap being filled.</li> </ul>	10mm x 50m	1	11177
	<ul style="list-style-type: none"> <li>• <b>Eave Trim</b> – Provides an attractive finish at eaves junction and provides cavity ventilation. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Suits all products up to 16mm thickness. Colour – White.</li> </ul>	60 x 26mm x 3030mmL White	1	134451
	<ul style="list-style-type: none"> <li>• <b>Eave Trim External Corner</b> – Provides an attractive joint at eaves trim corner. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Colour – White.</li> </ul>	100 x 100mm White	1	134426
	<ul style="list-style-type: none"> <li>• <b>Eave Trim Internal Corner</b> – Provides an attractive joint at eaves trim corner. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Colour – White.</li> </ul>	150 x 150mm White	1	134429
	<ul style="list-style-type: none"> <li>• <b>Soffit Trim</b> – Provides an attractive finish at soffit edge as well as cavity ventilation and cavity closure below battens. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating.</li> </ul>	18 x 3030mm	1	134452
	<ul style="list-style-type: none"> <li>• <b>Soffit Trim External Corner</b> – Provides an attractive joint at soffit trim corner. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating.</li> </ul>	18 x 76.5 x 76.5mm	1	134431
	<ul style="list-style-type: none"> <li>• <b>Soffit Trim Internal Corner</b> – Provides an attractive joint at soffit trim corner. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating.</li> </ul>	18 x 91.5 x 91.5mm	1	134432
	<ul style="list-style-type: none"> <li>• <b>External Jointing Compound</b> – Used to conceal the countersunk fastener heads, to prevent moisture penetration, and to provide a flat surface for decorative coating.</li> </ul>	6kg bucket	1	101549
		15kg bucket	1	101548
	<ul style="list-style-type: none"> <li>• <b>Thermal Break</b> – Used where fixing to metal frame.</li> </ul>	6 x 38 x 1250mm PK 450LM	1	129333
	<ul style="list-style-type: none"> <li>• <b>Thermoseal™ Wall Wrap</b> – Classification – Non-permeable Reflective Water Classification – High</li> </ul>	1350mm	30m roll	107458
		1350mm	60m roll	10576
	<ul style="list-style-type: none"> <li>• <b>Thermoseal™ Resiwrap</b> – Classification – Non-permeable Reflective Water Classification – High</li> </ul>	1350mm	30m roll	116531
		1350mm	60m roll	116532
	<ul style="list-style-type: none"> <li>• <b>Enviroseal ProctorWrap™ Residential (RW)</b> – Classification – Permeability High Water Classification – High</li> </ul>	1500mm	50m roll	120923
	<ul style="list-style-type: none"> <li>• <b>Enviroseal ProctorWrap™ Commercial (CW)</b> Classification – Permeability High Water Classification – High</li> </ul>	1500mm	50m roll	118593
<ul style="list-style-type: none"> <li>• <b>Thermoseal™ 733</b> – Classification – Non-permeable Reflective Water Classification – High</li> </ul>	1350mm	1 roll	86166	
	<ul style="list-style-type: none"> <li>• <b>Enviroseal ProctorWrap Hightack Tape</b> – Used to seal vertical and horizontal joints around openings, corners and flashing. Black, single sided, aggressive adhesive tape with a high initial grab and flexible carrier.</li> </ul>	60mm x 25m	1 roll	160950
	<ul style="list-style-type: none"> <li>• <b>Enviroseal ProctorWrap SLS Flexi Tape</b> – Used to tape corners of openings</li> </ul>	60mm x 25m	1 roll	124872
	<ul style="list-style-type: none"> <li>• <b>Bradford Gold Wall Batts – R1.5 (75mm)</b></li> </ul>	1160mm x 430mm	22 pack	113938
	<ul style="list-style-type: none"> <li>• <b>Bradford Gold Wall Batts – R1.5 (75mm)</b></li> </ul>	1160mm x 580mm	22 pack	113939
	<ul style="list-style-type: none"> <li>• <b>Bradford Gold Wall Batts – R2.0 (HP) (75mm)</b></li> </ul>	1160mm x 420mm	12 pack	153643
	<ul style="list-style-type: none"> <li>• <b>Bradford Gold Wall Batts – R2.0 (HP) (75mm)</b></li> </ul>	1160mm x 570mm	12 pack	153648
	<ul style="list-style-type: none"> <li>• <b>Bradford Gold Wall Batts – R2.5 (HP) (90mm)</b></li> </ul>	1160mm x 420mm	8 pack	153646
	<ul style="list-style-type: none"> <li>• <b>Bradford Gold Wall Batts – R2.5 (HP) (90mm)</b></li> </ul>	1160mm x 570mm	8 pack	153651
	<ul style="list-style-type: none"> <li>• <b>Bradford Gold Wall Batts – R2.7 (HP) (90mm)</b></li> </ul>	1160mm x 420mm	5 pack	153647
	<ul style="list-style-type: none"> <li>• <b>Bradford Gold Wall Batts – R2.7 (HP) (90mm)</b></li> </ul>	1160mm x 570mm	5 pack	153652

# INSTALLATION METHODS

## HANDLING & STORAGE

Cemintel cladding must be treated with care. During handling, avoid damage to edges, ends and surfaces.

Panels must be stacked flat, clear of the ground, and supported at 450mm maximum centres on a level platform. Panels must be carried on edge.

Material must be kept dry, preferably by being stored inside the building. Panels exposed to moisture prior to installation may be subject to shrinkage, and voiding of warranty. Protect from contaminants such as silicone spray. Where it is necessary to store panels outside, they must be protected from the weather.

Sheets must be dry prior to fixing, joint sealing and coating.

## TOOLS

All saws, drill/drivers, cutting blades, drill bits and hand tools must be maintained in good and clean condition to ensure appropriate cutting and drilling.

CSR recommends the use of following tools in conjunction with appropriate dust reduction methods.

## PANEL CUTTING

Panels should be cut from the back using a power saw. CSR recommends using the FESTO TS 55 EBQ Plunge Cut Saw with guide rail and appropriate blade.

All exposed cut edges such as at the window heads and roof junctions must be coated with approved paint.

## PENETRATIONS

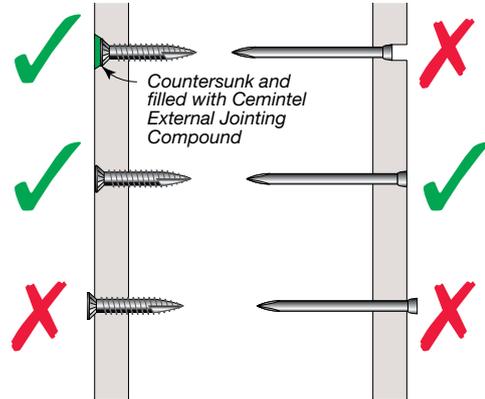
Penetrations in cladding panels may be cut or drilled prior to installation. Cut from the back or drill from the front. Cut penetrations oversize by 6 –8mm all around. Mask, prime and fill gaps with sealant in accordance with recommended methods and products.

## DRILLING

Use high speed masonry drills. Do not use the hammer action.

## FASTENER DRIVING

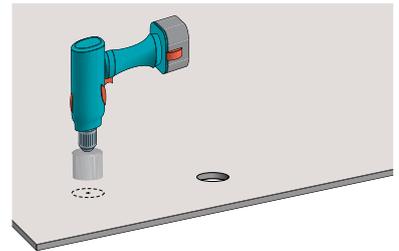
Fastener head must be driven flush with sheet surface (except where countersunk and covered screws are required).



## HOLE FORMING

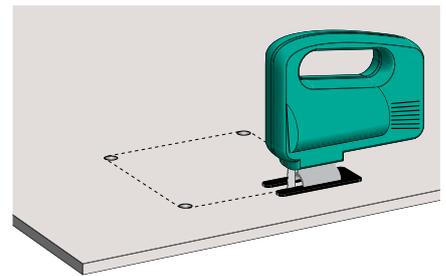
**Small holes are formed by using a Hole Saw:**

1. Locate the centre of the hole.
2. Form hole with appropriate sized hole saw.



**Large holes or openings are formed by using a Jig Saw fitted with masonry blade:**

1. Mark the required opening.
2. Drill holes in all corners.
3. Cut along marked lines.



## SAFETY

When cutting, drilling or grinding cladding panels using power tools, always ensure the work area is well

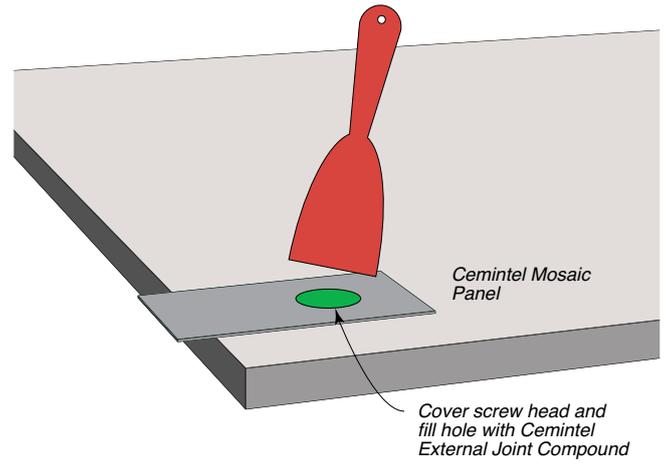
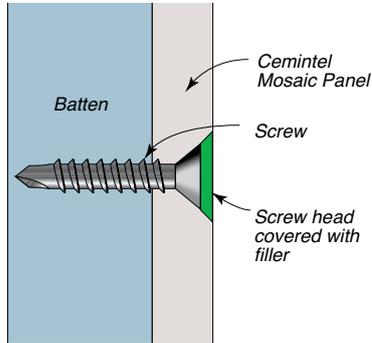
ventilated. An approved dust mask (AS1715 and AS1716) and safety glasses (AS1337) must be worn. CSR recommends that hearing protection be worn.



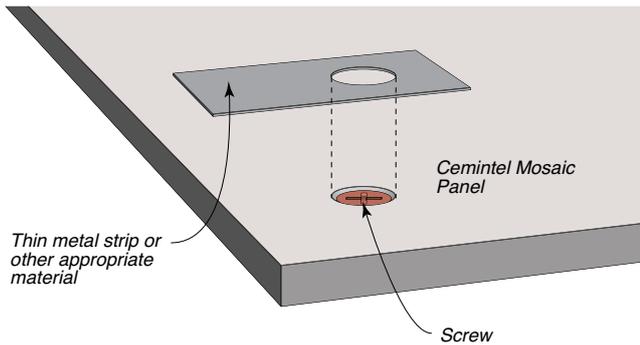
## SCREW HEAD COVERING FOR COUNTERSUNK SCREWS

All countersunk screw heads must be covered with Cemintel External Joint Compound and flush finished with the panel face.

FIG 10: Filler Covering of Screw Heads



**HINT:** One way of applying filler is through a 20mm hole in thin metal sheet (0.6mm or less) or other suitable material. This will minimise spill-over and allow for some shrink back of the filler without having to repeat the application.



### Recommended Cutting Tools

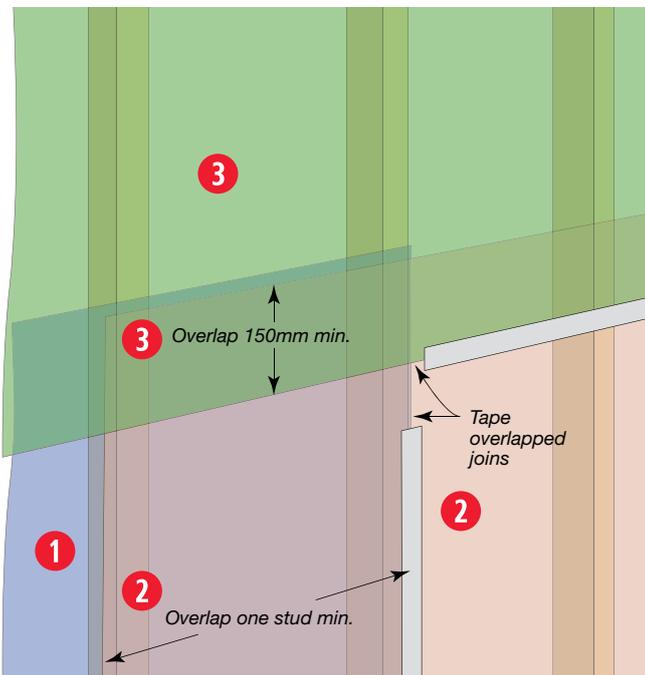
Product	Description	Size	Quantity	Product Code
	<b>Makita Plunge Saw Kit (1300W) includes 1400mm guide rail and bonus 165mm fibre cement saw blade</b> – excellent for cutting cement based sheets	165mm	1	165485
	<b>Makita 165mm Fibre Cement Saw Blade</b> – ideal for use with the Makita Plunge saw and other 165mm circular saws fitted with vacuum extraction systems	165mmx20x4T	1	165486

## INSTALLATION OF SARKING

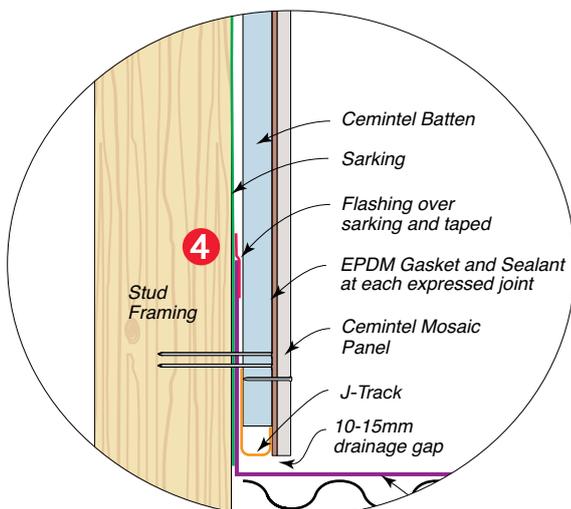
- 1 Install wall wrap/sarking to outside face of wall framing. Temporary fixing or sarking to framing may be by double sided tapes or other approved methods. Refer to the sarking manufacturer's specifications.

If the membrane is used to provide a continuous air tight layer, all overlaps should be sealed with tape.

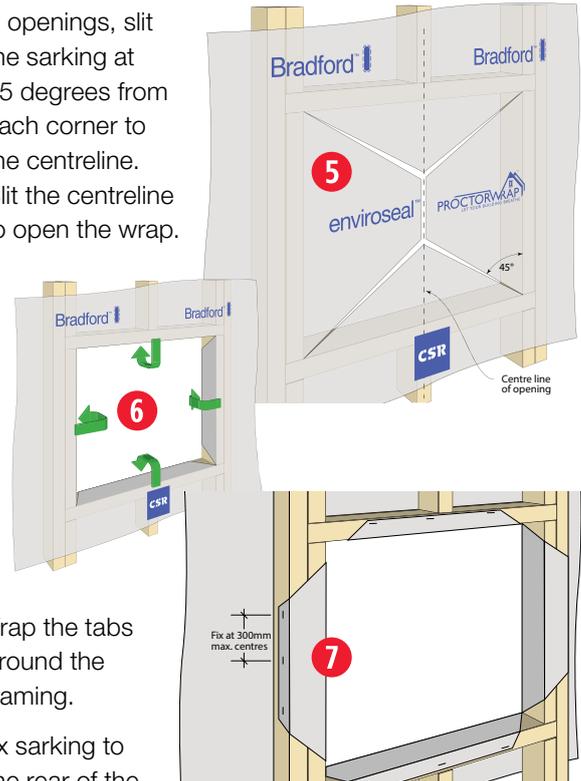
- 2 Vertical laps (including corners) should overlap by one stud spacing minimum and should be staggered between adjacent layers.
- 3 Upper layers should overlap lower layers by 150mm minimum to ensure that water is always shed towards the outside of the membrane and building.



- 4 Horizontal flashings such as at the head of doors and windows, horizontal storey junctions and at the wall base (when used) require special treatment to ensure water is always shed towards the outside. Refer to appropriate junction details for specific requirements. A typical detail is shown below.



- 5 At openings, slit the sarking at 45 degrees from each corner to the centreline. Slit the centreline to open the wrap.



- 6 Wrap the tabs around the framing.
- 7 Fix sarking to the rear of the framing with staples at 300mm maximum centres.

- 8 Apply Enviroseal ProctorWrap tape to the corners of openings.
- 9 Wipe tape over the frame edge onto the face of the wall wrap.

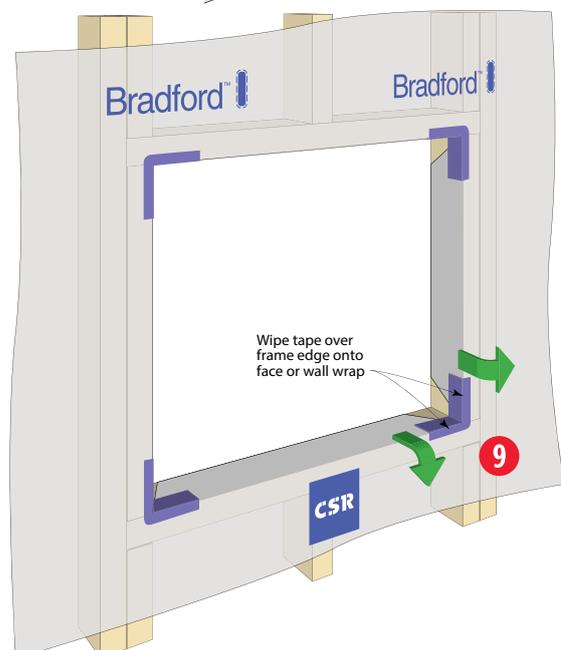
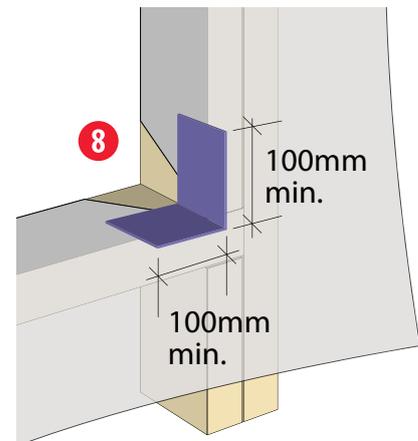
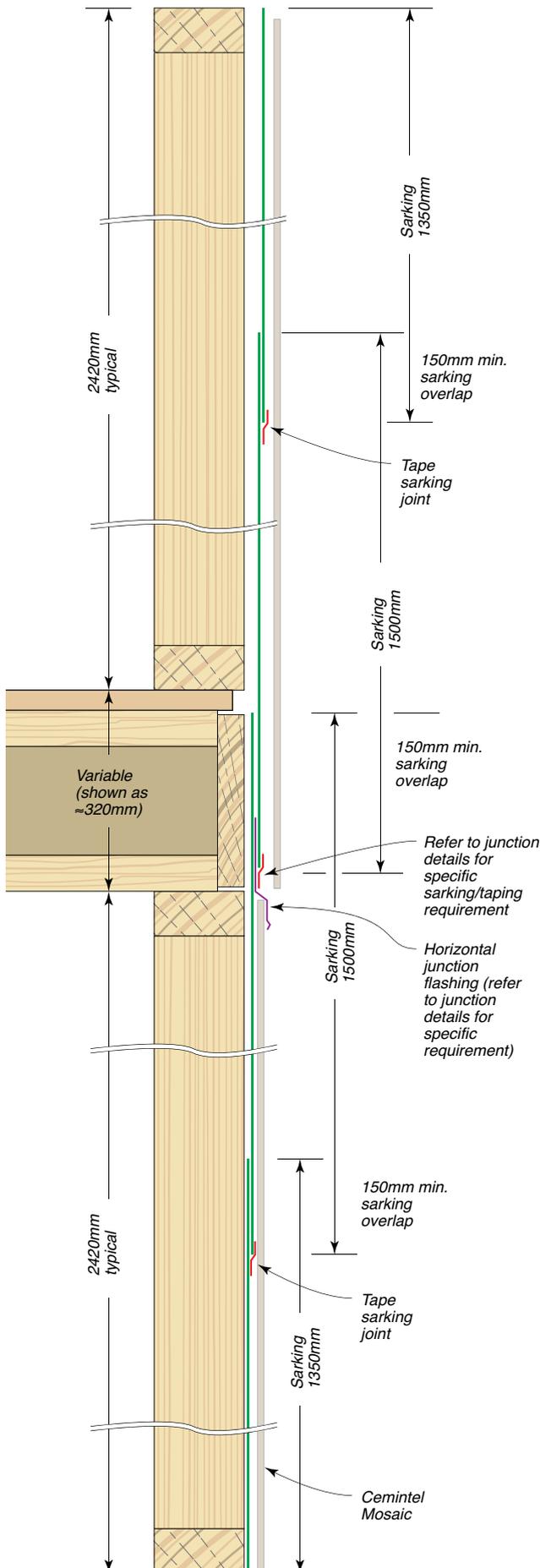


FIG 11: Typical Sarking Layout for Two-storey Framing



# BUILDER'S INSTALLATION CHECKLIST

The following builder's checklist can assist in making the Cemintel Mosaic installation process run smoothly.

ACTION	COMPLETED	
<b>PRE-CLADDING CHECKLIST</b>		
1	Confirm that studs are located in accordance with project specifications. Refer to Table 6 and Table 7.	
2	Confirm additional framing is appropriately located for fixing of off-stud battens when used.	
3	Confirm timber framing alignment is in accordance with AS1684, or steel framing is in accordance with AS/NZS4600, and correct if necessary.	
4	Confirm bracing is in place.	
5	Confirm ground clearance to the bottom of the cladding sheets will be accordance with Australian Standards and Cemintel requirements of minimum 25mm to paved surface or 75mm to unpaved surface.	
6	Confirm that the wall wrap/sarking has been fully and correctly installed, and overlapped and taped at joints and flashings.	
7	Confirm windows are front draining type.	
8	Confirm all window and door flashings are correctly installed and taped where appropriate.	
9	Confirm that window placement/reveal depth provides the appropriate clearance for board installation.	
10	Confirm adequate structural support for fixtures such as pergolas and decks has been provided. No loads may be carried by the cladding.	
11	Confirm membranes and flashings for deck areas have been installed in accordance with manufacturer's specifications.	
12	Confirm batten spacing and fixing methods.	
13	Arrange for a pre-cladding inspection by the appropriate local building authority.	
<b>POST-CLADDING CHECKLIST</b>		
1	Confirm all appropriate joints (such as wall end junctions) have been neatly filled with recommended sealant.	
2	Confirm all fastener heads have been finished flush with the surface.	
3	Confirm sealant has been applied to gaps at openings (where appropriate).	
5	Confirm all trims at corners and soffit have been completed correctly.	
6	Confirm appropriate painting of cladding and all exposed edges.	

# INSTALLATION PROCEDURE

## FRAMING PREPARATION

Inspect the frame carefully for bowed, warped, or twisted studs, and for alignment of all framing members, including noggings. Check alignment of all framing with a long straight-edge. The maximum misalignment should not exceed 4mm over 3,000mm, or 3mm over 1,200mm, or 2mm over 600mm, when checked both horizontally and vertically. Ensure all noggings are flush.

Studs are to be spaced in accordance with Table 6 (maximum 600mm centres).

## BATTEN FIXING

Battens fixed to the face of studs are to be fixed with the specified nails or screws in accordance with Table 6. Nails are to be used in pairs, spaced 30 to 100mm apart.

For battens fixed off-stud, suitably designed framing supports must be provided behind each fixing point in accordance with Table 6. Refer to FIG 12.

FIG 12: Fixing of Mosaic Panels – Off-stud Battens shown

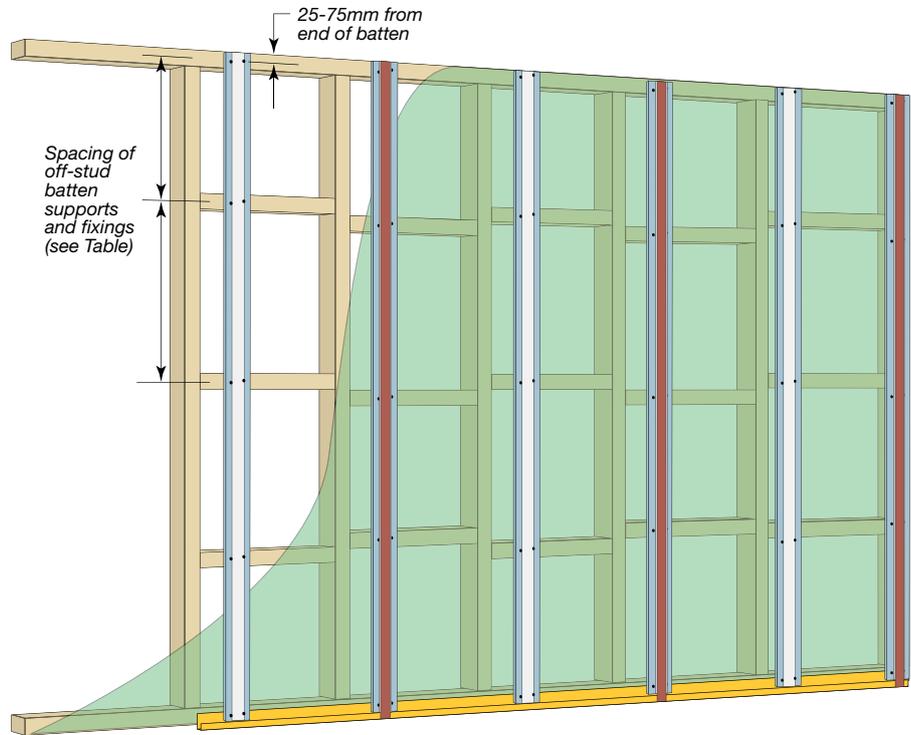


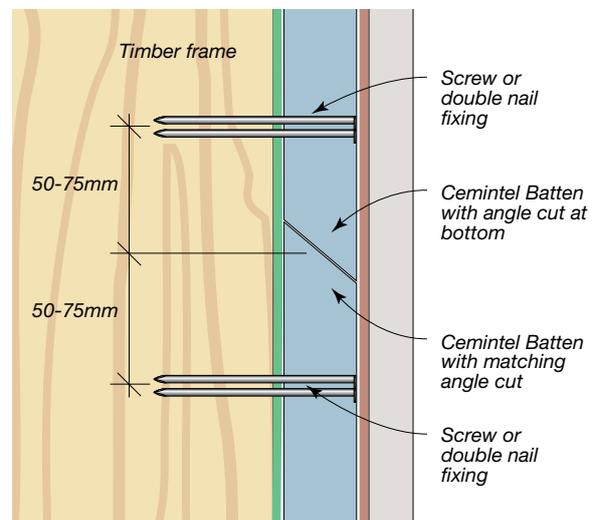
Table 6: Maximum Fastener Spacing for Fixing Battens to Timber Framing – On-stud and Off-stud Fixing

NOTE: Off-stud fixing requires appropriate support framing (such as noggings) at each fixing point.

Batten Spacing (mm)	Wind Category	Cemintel Batten (Fibre Cement)	
		Nails (2 x 2.8x50)	Screw (8G-10x50)
Maximum Fixing Spacing (mm)			
600	N1	650	650
	N2	550	550
	N3/C1	400	450
	N4/C2	250	350
	N5/C3	180	300
450	N1	700	700
	N2	650	650
	N3/C1	500	500
	N4/C2	350	400
	N5/C3	200	350
300	N1	800	800
	N2	800	800
	N3/C1	600	600
	N4/C2	500	500
	N5/C3	350	400

Cemintel Battens can be joined on-stud or other suitably designed structural framing, such as noggings. Refer to FIG 13.

FIG 13: Batten Joining – On-stud Only



## PANEL FIXING

Vertical joints between panels must always coincide with a supporting batten. Joints perpendicular to these must be supported with backing strip.

Self adhesive EPDM gasket is to be fixed to the face of battens (over the PVC strip) at all vertical joints between panels. Refer to FIG 14 and FIG 15.

Where joint backing strip is to be used, it should be fixed to the back of panels at least 2 hours prior to panel fixing to framing. Refer to FIG 16.

Immediately prior to panel installation, approved adhesive is to be applied behind the panel to assist fixing. Refer to FIG 15 and FIG 16.

Fasteners are to be positioned as detailed in Table 7. Fasteners must be positioned a 50-150mm from panel corners, 50-75mm from horizontal (backing strip) joints and 12mm from panel edges.

Brad nail heads must be driven flush with the panel surface. Screw fixings may be finished flush or may be countersunk 1.0 to 2.0mm in accordance with Table 4. The countersinking must be filled with Cemintel External Joint Compound, and finished level with the panel surface. Refer to "SCREW HEAD COVERING FOR COUNTERSUNK SCREWS" on page 15.

FIG 14: Fixing of Mosaic Panels – Off-stud Battens shown

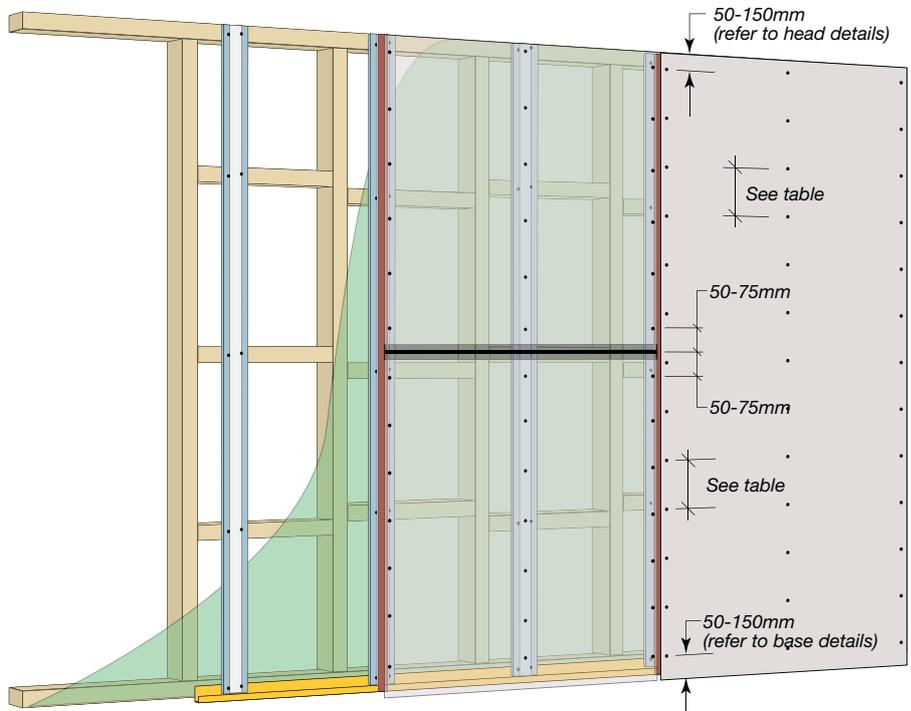


Table 7: Maximum Fastener Spacing for Fixing Cemintel Mosaic Panel to Battens

Batten Spacing (mm)	Wind Category	General Zone ①		Corner Zones ②	
		C25 Brad Nails	Screws Type 17 8-15 x 30mm	C25 Brad Nails	Screws Type 17 8-15 x 30mm
		Maximum Fixing Spacing (mm)			
600	N1	300	300	200	300
	N2	300	300	150	200
	N3/C1	200	300	N/A	N/A
	N4/C2	150	200	N/A	N/A
450	N1	300	300	300	300
	N2	300	300	200	300
	N3/C1	200	300	150	200
	N4/C2	200	300	100	150
	N5/C3	100	200	N/A	N/A
300	N1	300	300	300	300
	N2	300	300	300	300
	N3/C1	300	300	200	300
	N4/C2	200	300	150	200
	N5/C3	200	300	N/A	150

① GENERAL ZONE – Wall areas greater than 1200mm from an External Building Corner.  
 ② CORNER ZONE – Wall areas less than 1200mm from an External Building Corner.

## STEP-BY-STEP INSTALLATION PROCEDURE

FIG 15: Installation Procedure – Vertical Joints

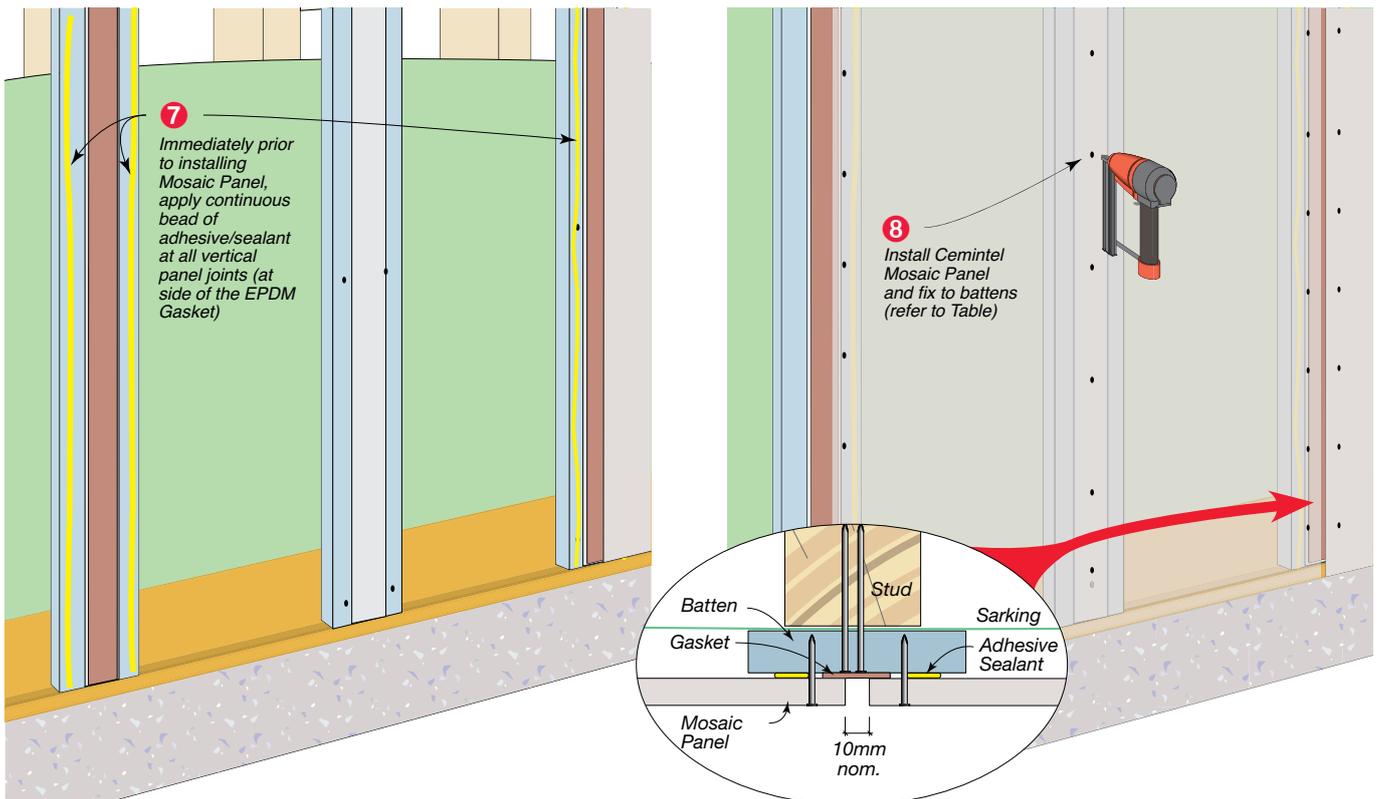
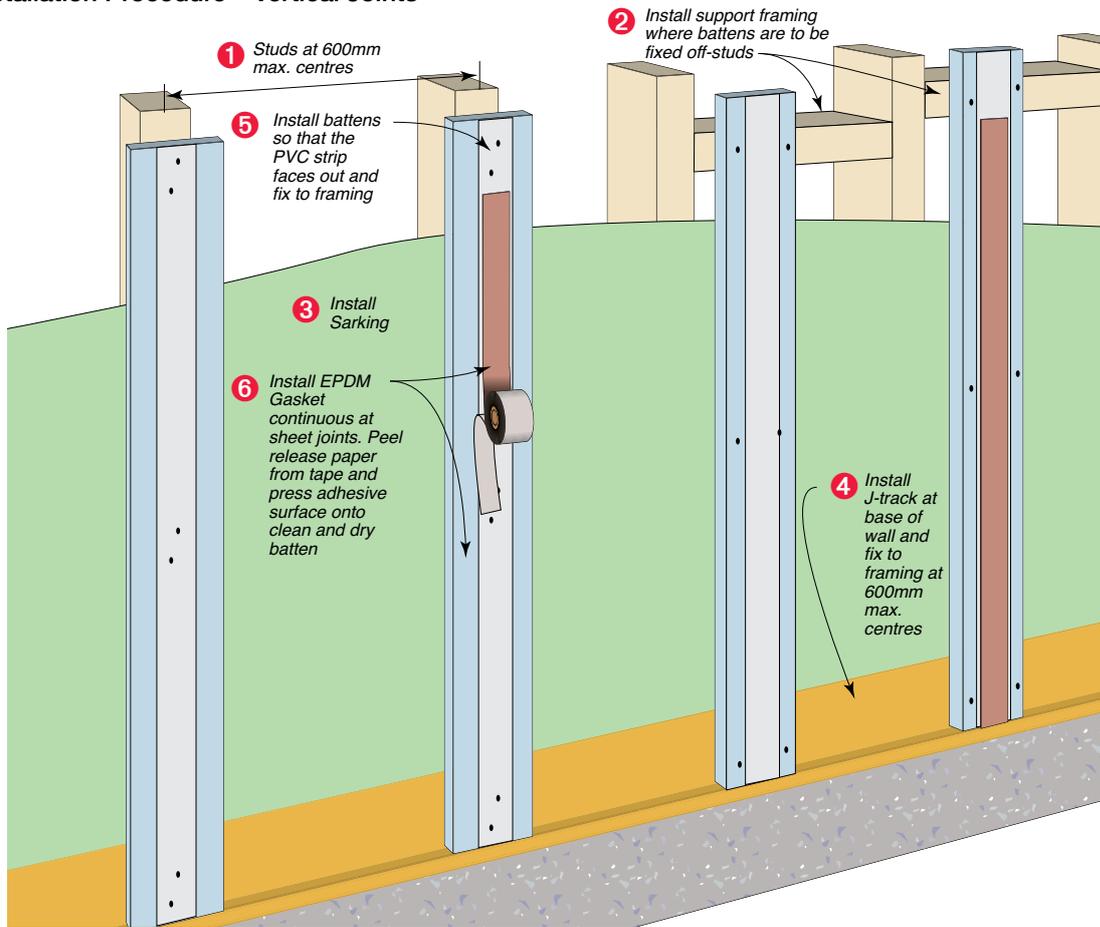
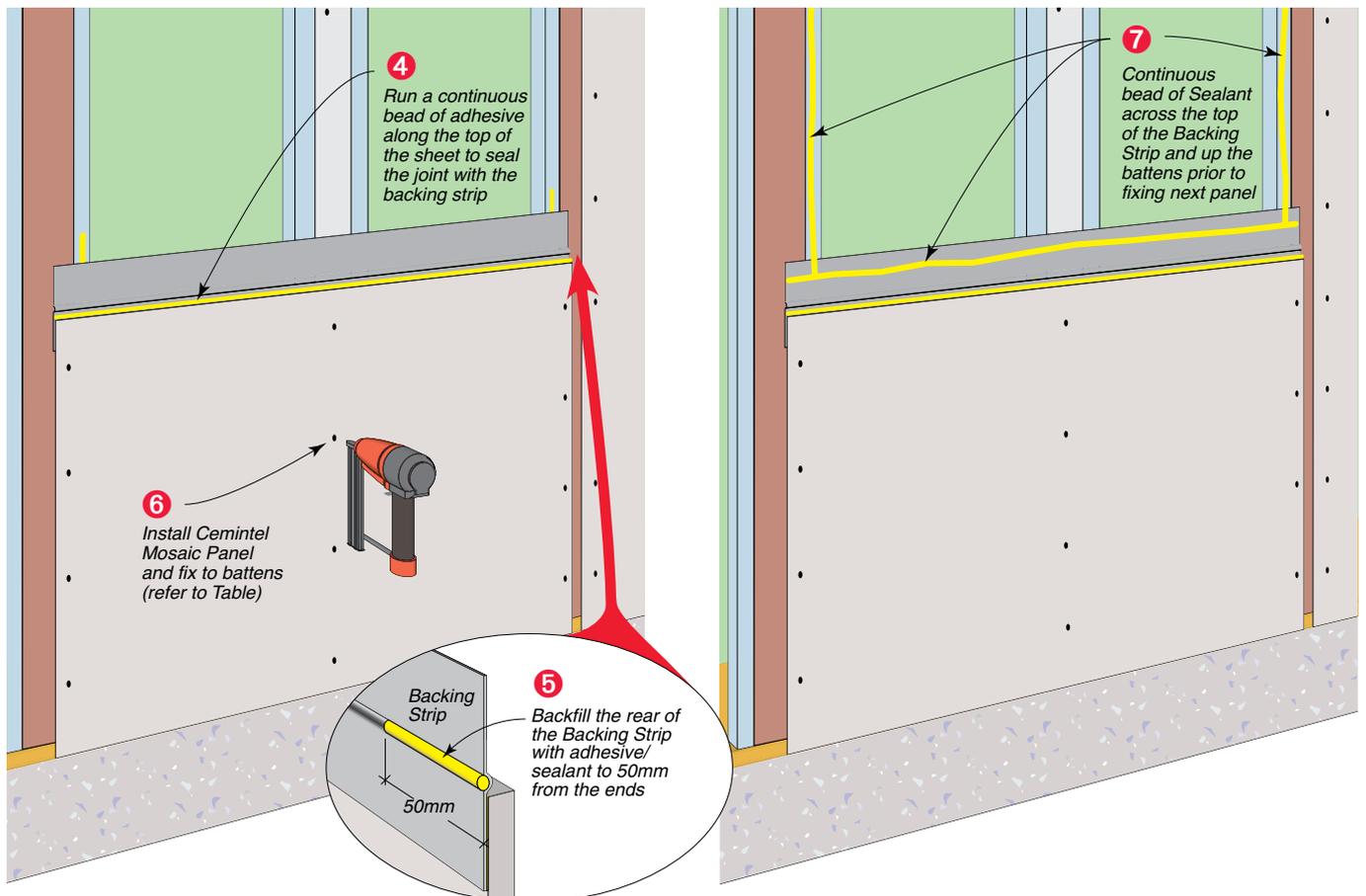
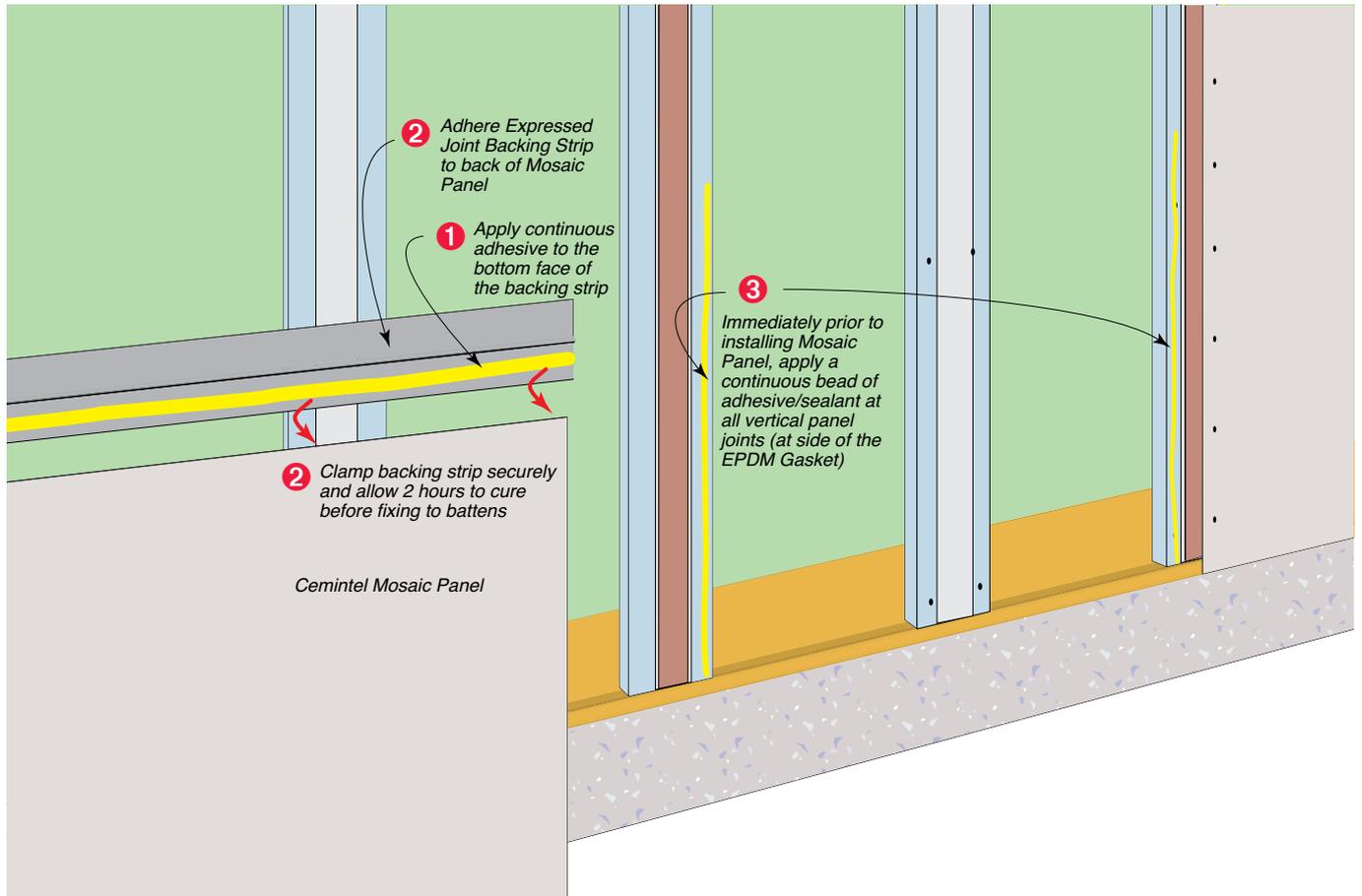


FIG 16: Installation Procedure – Vertical and Horizontal Joints



# INSTALLATION DETAILS

FIG 17: Base – Concrete Slab Foundation

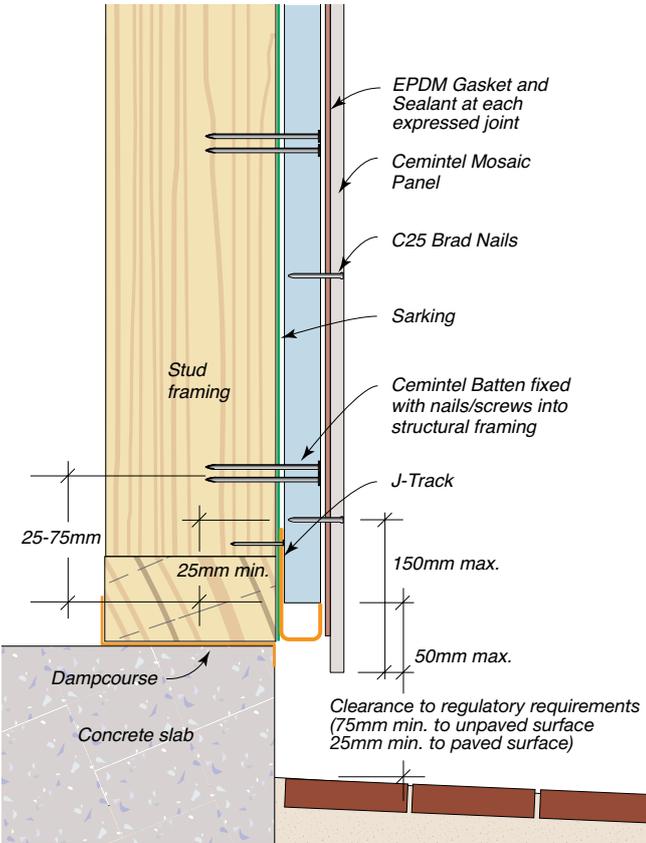


FIG 18: Base – Pier or Stub Wall Foundation

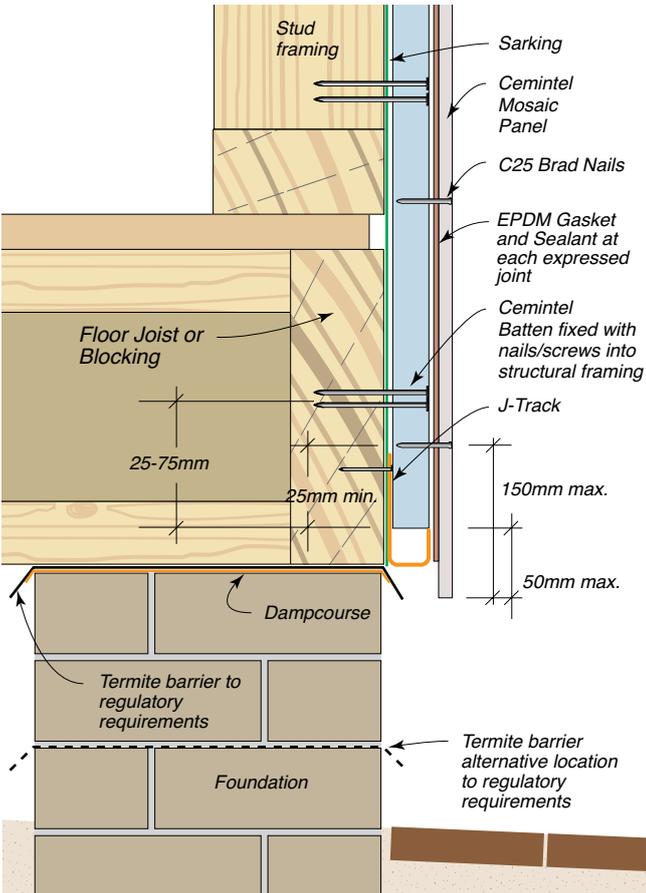


FIG 19: Second Storey Junction with Hebel Panels, Brick Veneer or Masonry Wall – Cantilevered Framing

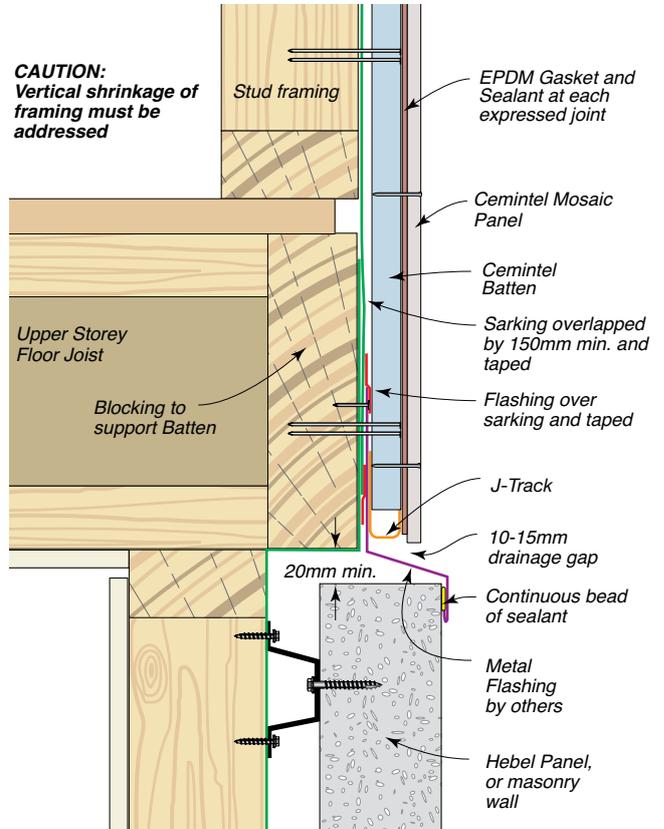


FIG 20: Second Storey Junction with Masonry, Brick Veneer or Hebel Panels In-line Framing

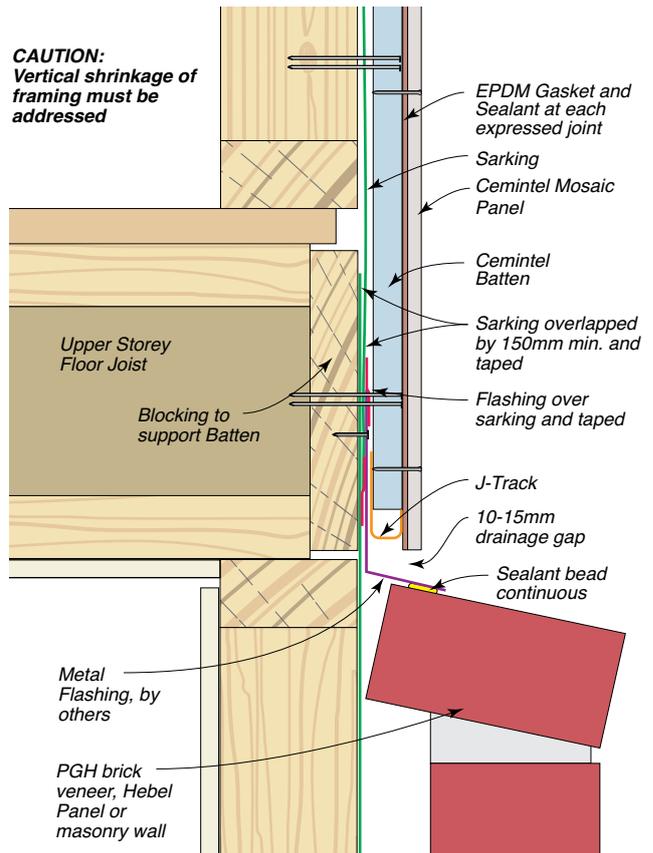


FIG 21: Second Storey Horizontal Junction

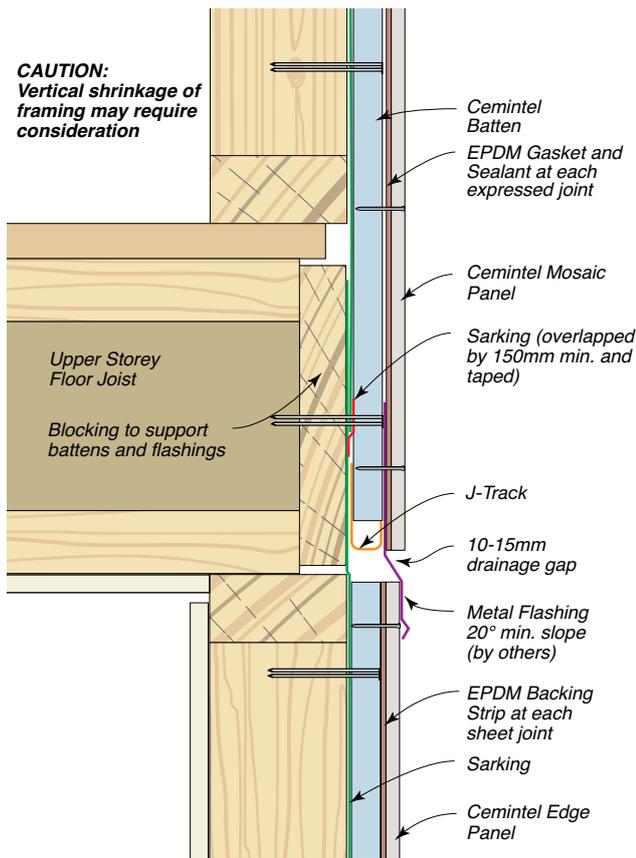


FIG 23: Junction of Mosaic Cladding with External Roofing

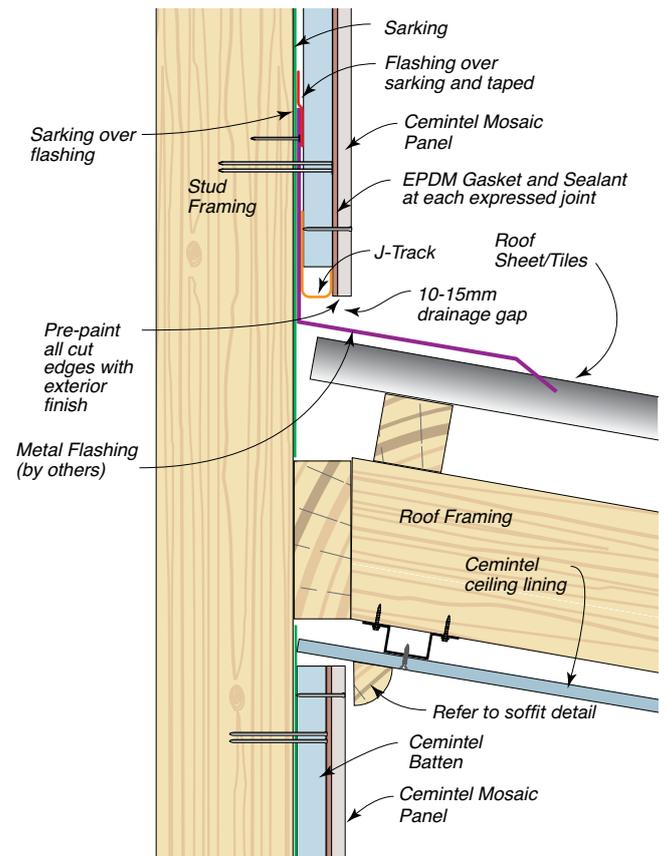


FIG 22: Junction of Mosaic Cladding with External Roofing

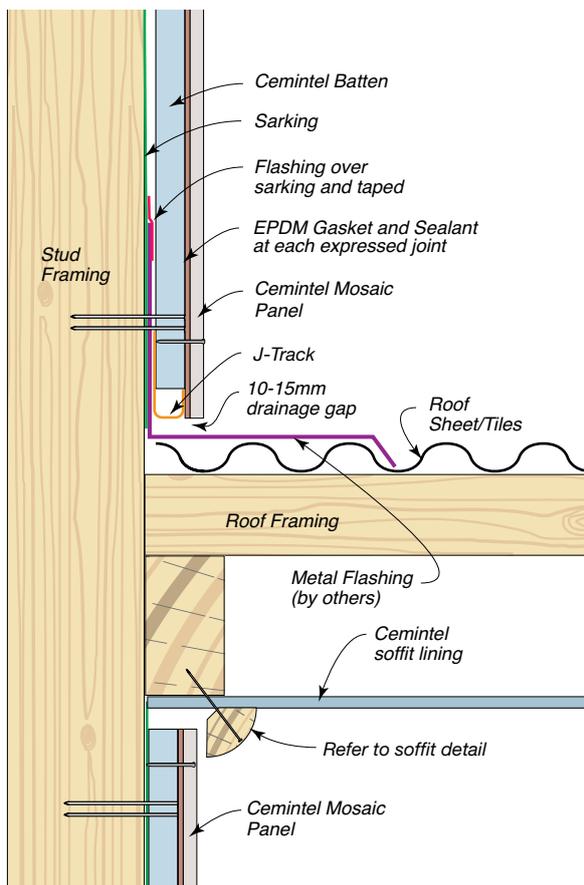


FIG 24: Horizontal Parapet Wall

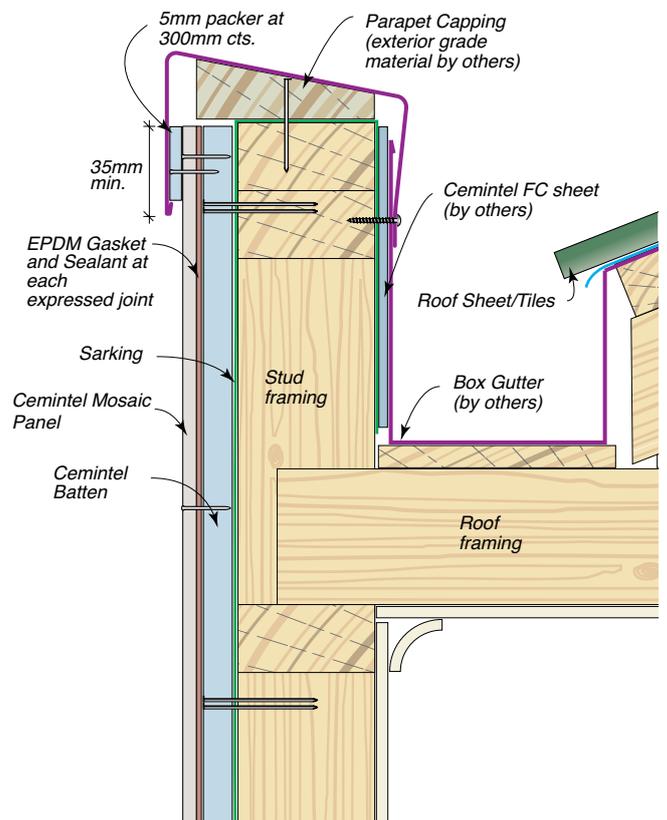


FIG 25: Head – Eaves with Cemintel Trim

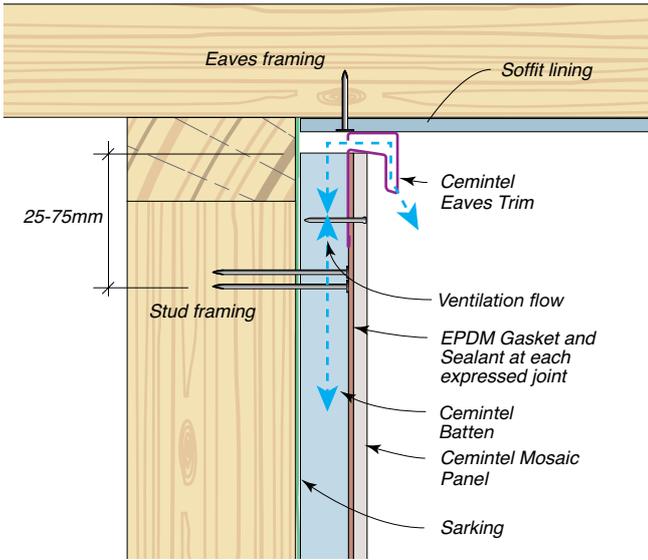


FIG 26: Head – Eaves with Timber Trim

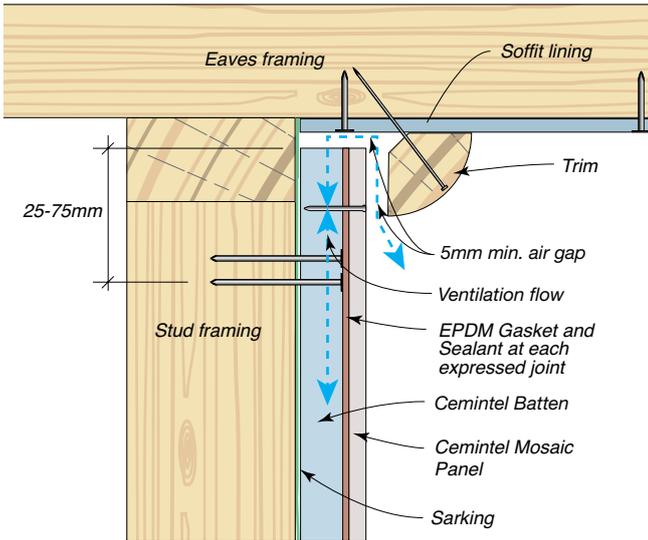


FIG 27: Soffit – With Cemintel Soffit Trim

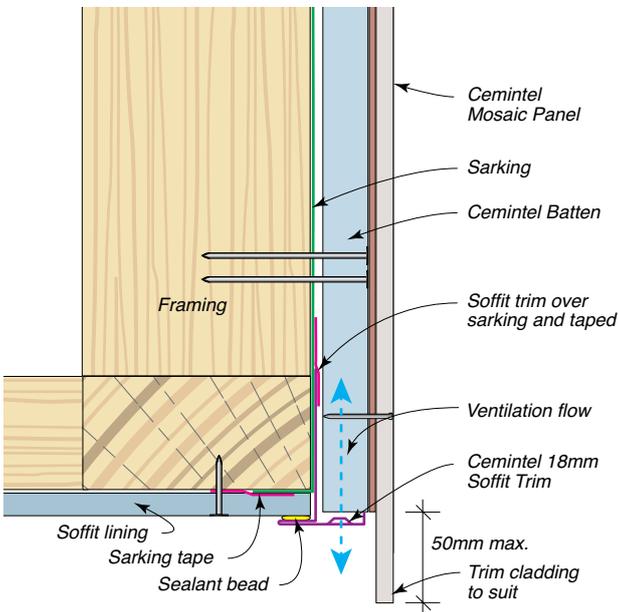


FIG 28: Vertical Panel Joint – Brad Nail Fixing

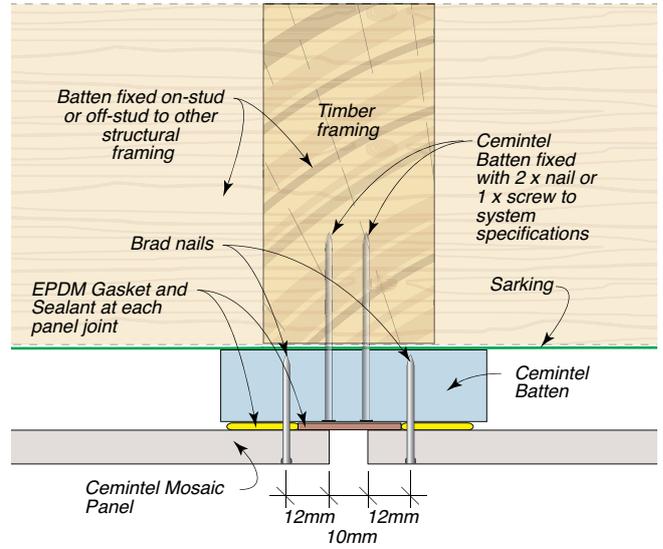


FIG 29: Vertical Panel Joint – Screw Fixing

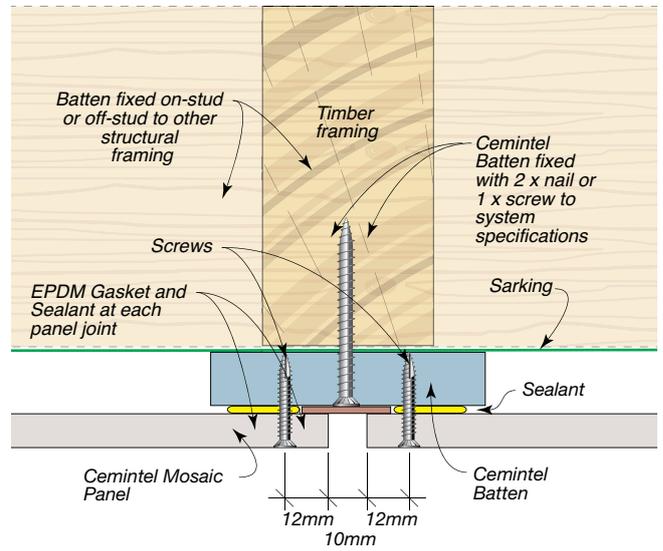


FIG 30: Horizontal joint

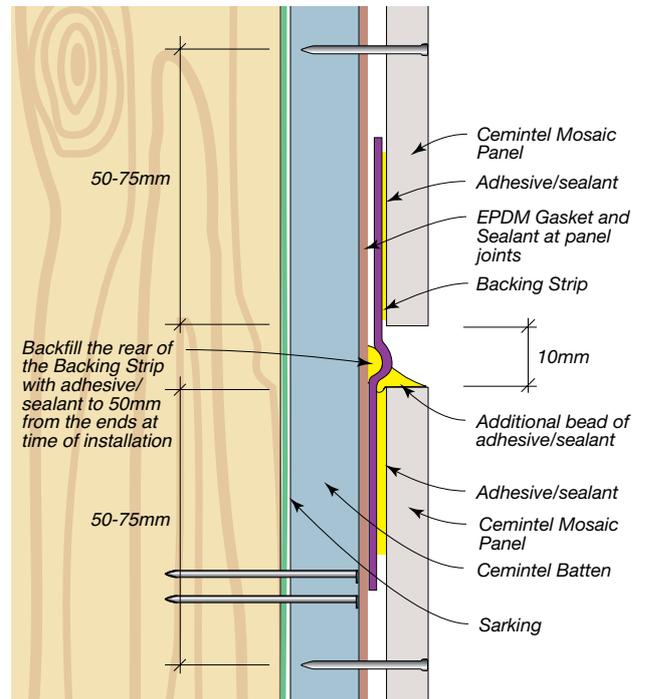


FIG 31: Internal Corner

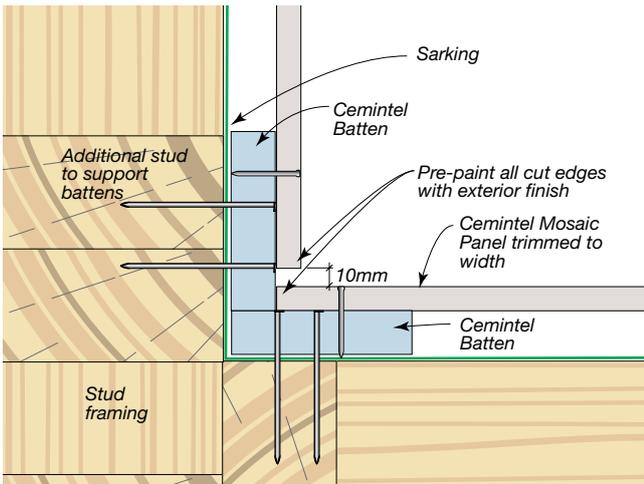


FIG 32: External Corner

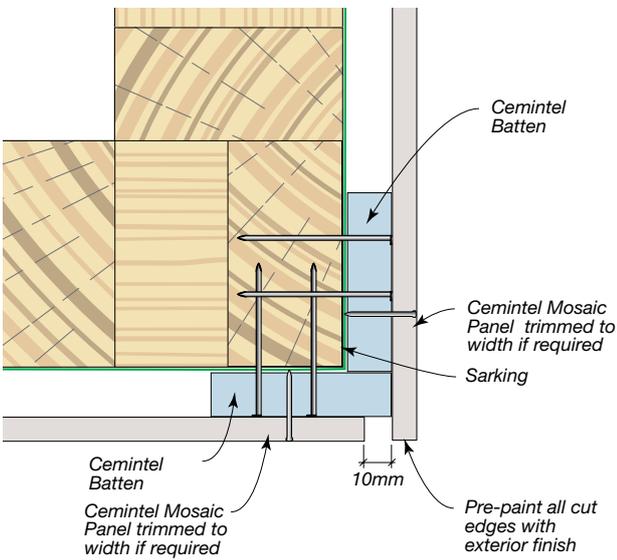


FIG 33: Obtuse Angle Corner Detail – With Metal Flashing – Plan View

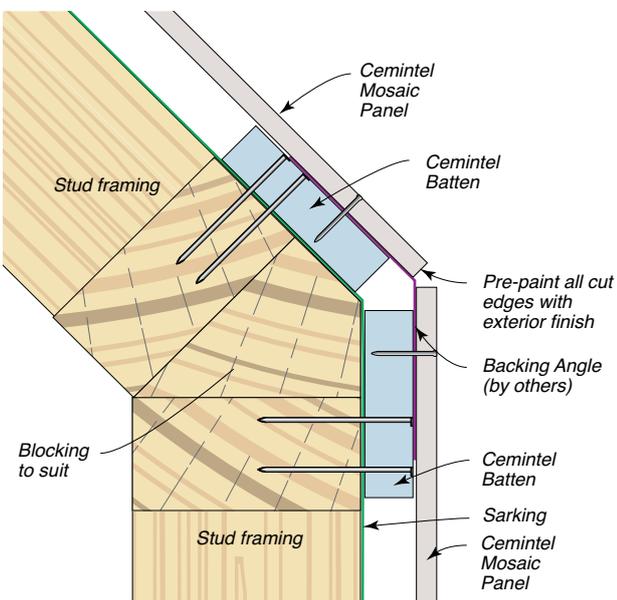


FIG 34: Junction of Mosaic Cladding System with Offset Masonry Wall – Plan View

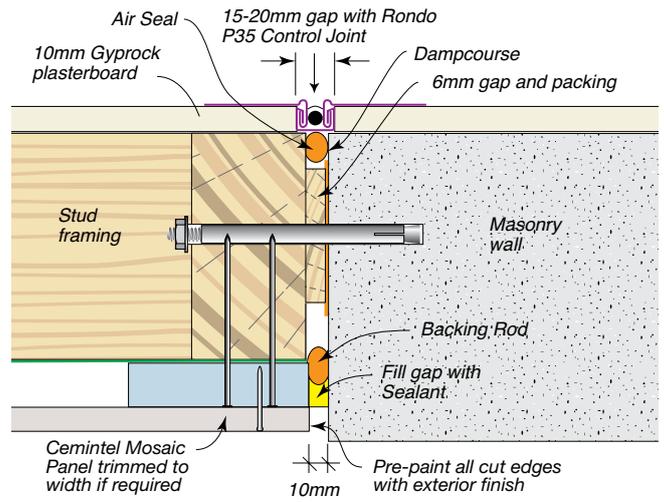
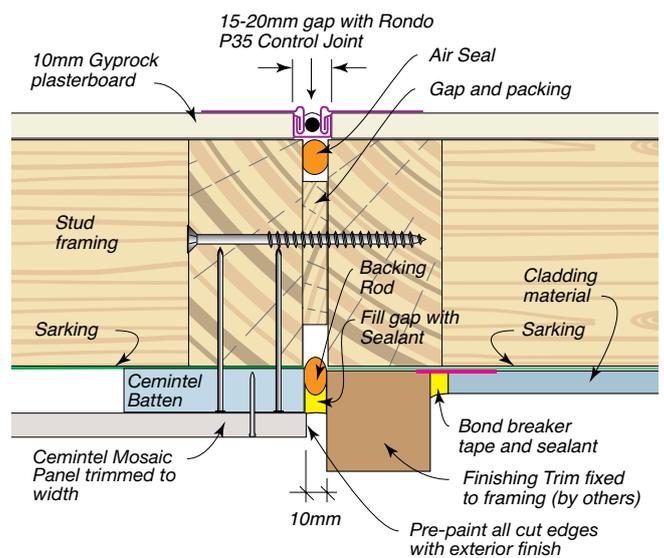


FIG 35: Junction of Mosaic Cladding System with Alternative Fibre Cement Cladding – Plan View



### WINDOW INSTALLATION

FIG 36: Window Detail – Trend Quantum XP Aluminium Sliding Window with Weatherboard Reveal Clip E482

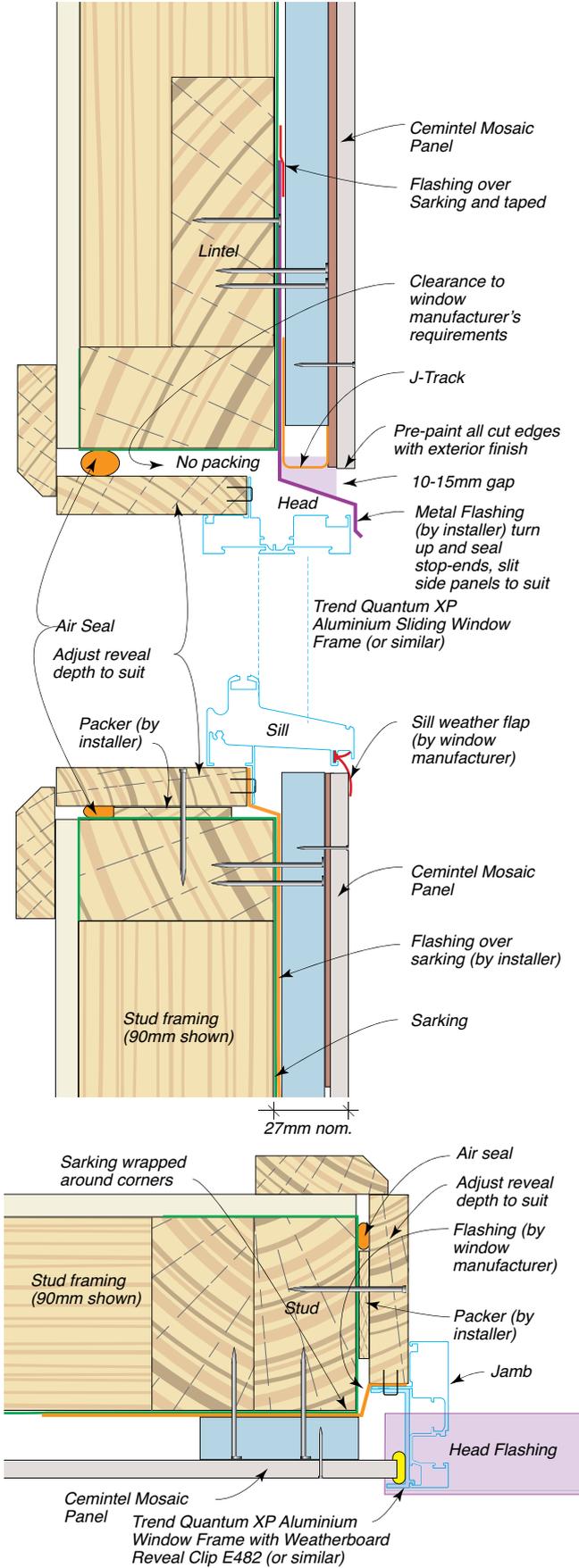


FIG 37: Window Detail – A&L Awning Window with Weatherboard Trim

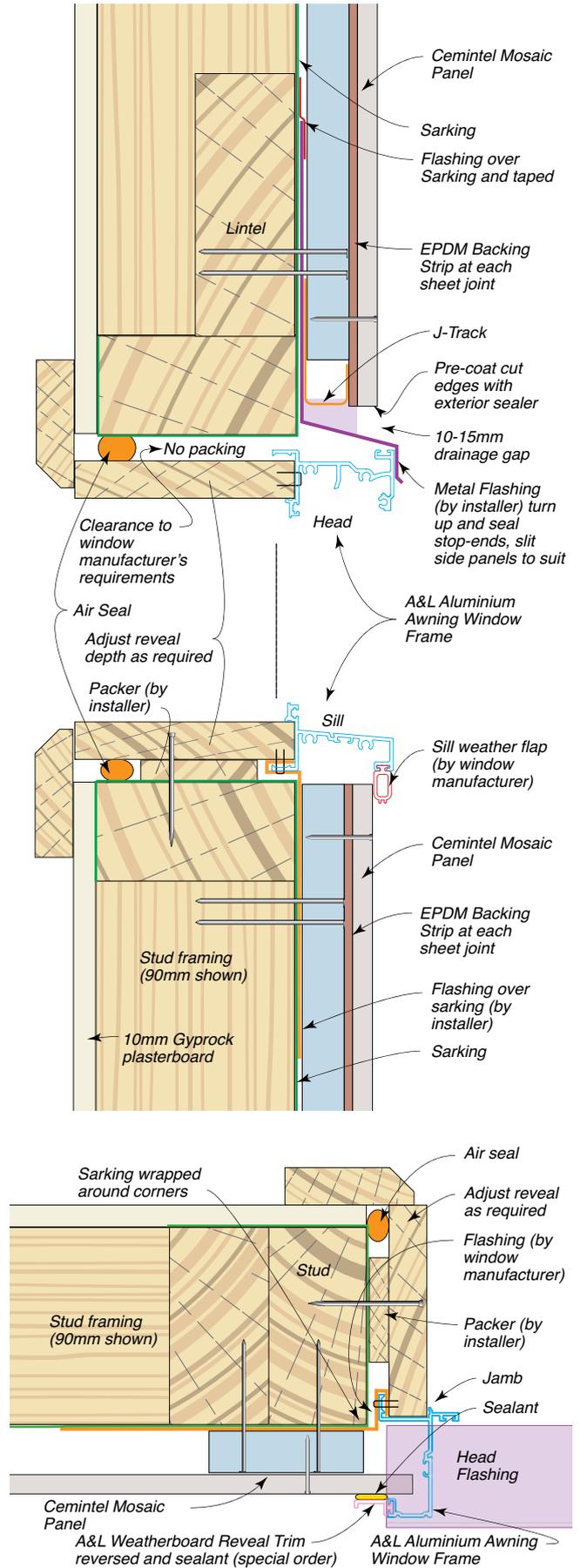


FIG 38: Window Detail – A&L Aluminium Sliding Window with Cladding Trim

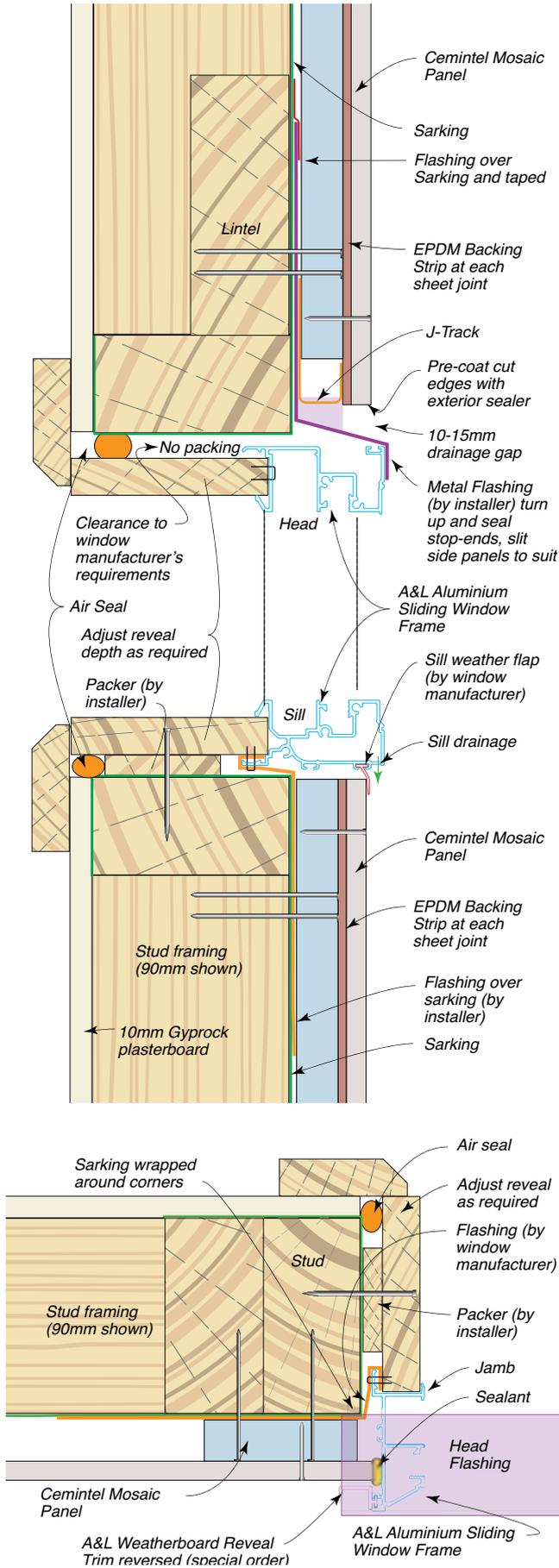
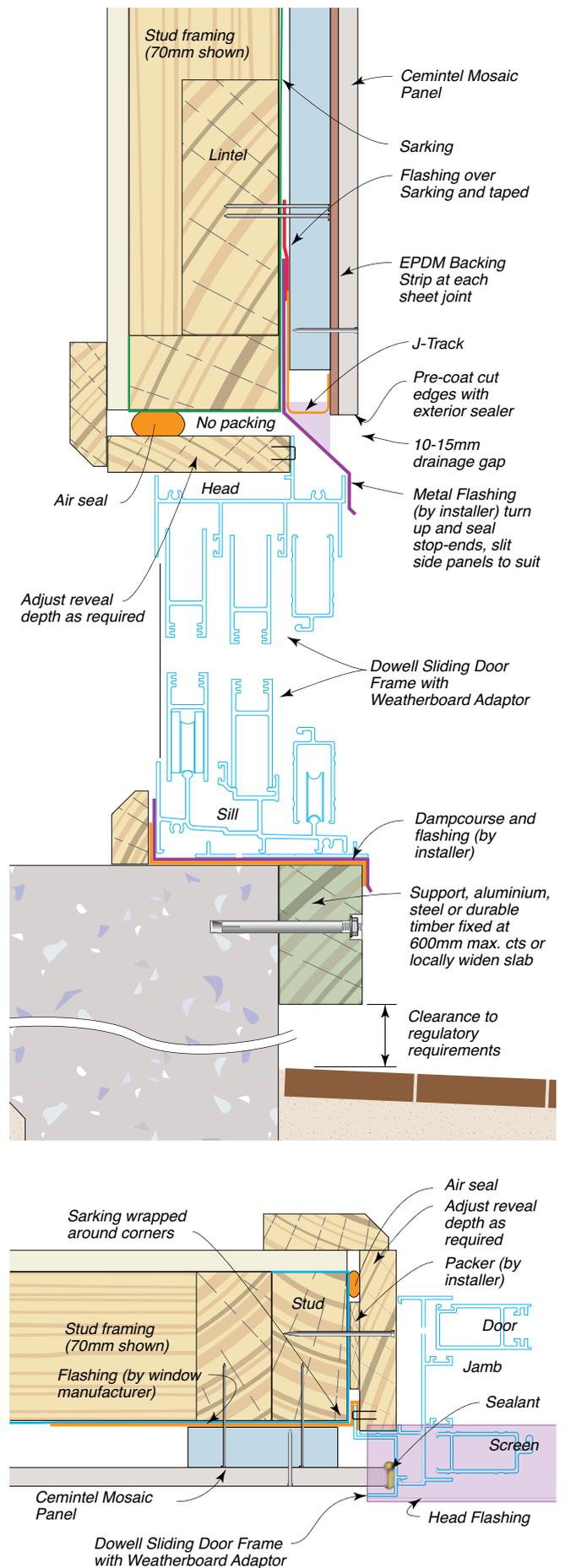


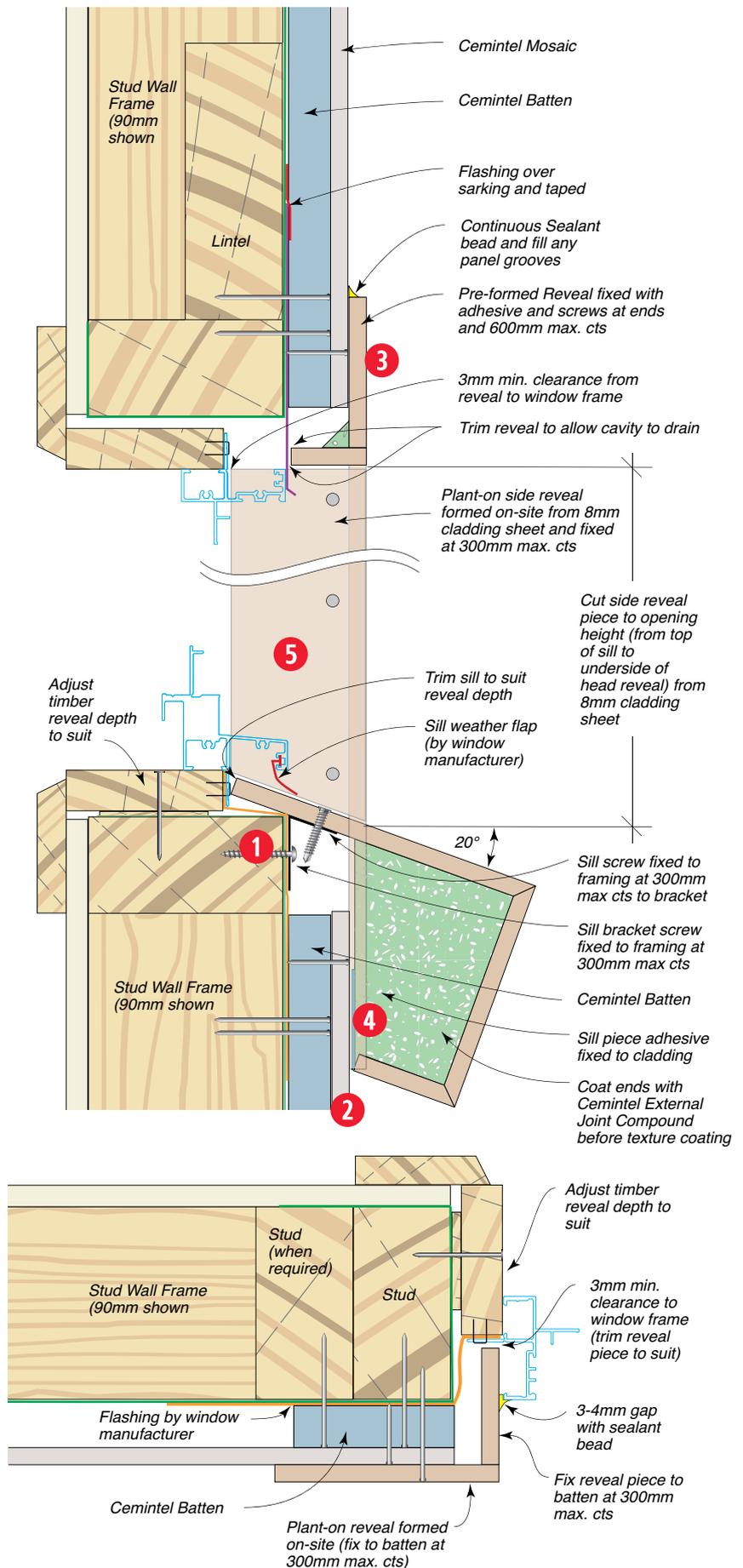
FIG 39: Dowell Sliding Door Installation – 70mm Framing and 85mm Reveal Shown



## PRE-FORMED SILL & REVEAL INSTALLATION

- 1 Where a pre-formed Sill profile is used, a sill bracket is required. Cut the sill bracket to the opening width less 40mm. Bracket may be installed in two pieces where necessary. Position the sill bracket to support the top flange of the sill profile. Fix the bracket to the framing at the ends and at 300mm maximum centres between.
- 2 Install and fix the panel below the sill.
- 3 Cut and fix the Pre-formed Head Reveal neatly between the side battens.
- 4 Cut the Sill Profile to fit neatly between the side battens. Apply a 30mm wide continuous film of recommended adhesive to the back of the sill. Screw fix the top flange of the sill to the sill bracket at the ends and at 300mm maximum centres between. Remove any excess adhesive.
- 5 Cut, install and fix the side reveal pieces.

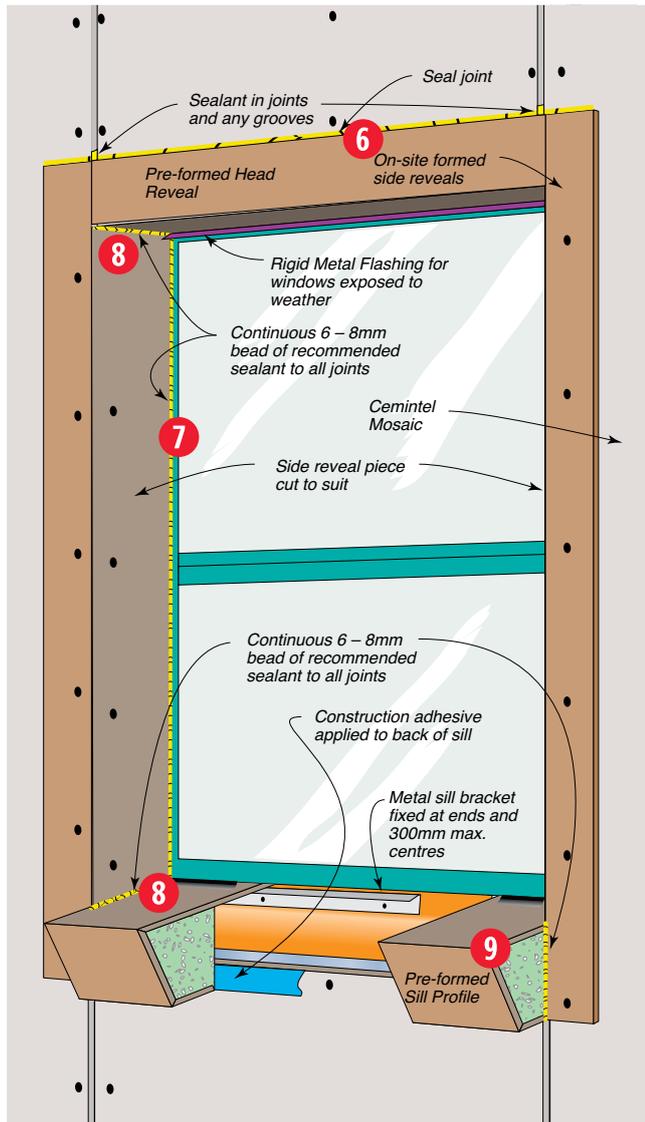
FIG 40: Installation of Cemintel Traditional Sill, Head and Side Reveals



**CAULKING** (Refer to FIG 41)

- 6 Seal the top of the head reveal to the panel, filling all grooves.
- 7 Completely seal the junctions of window/door frames with side reveals.
- 8 Seal the joints between reveals and between the sill and adjoining panels.

**FIG 41: Caulking Window Installation**



**FINISHING**

- 9 The sill and reveal sections should be finished with a high-build coating such as Cemintel Texture Coating. Refer to data sheet Cemintel Texture Coating System.

**FIG 42: Typical Window Installation – Commercial Style Window Frame**

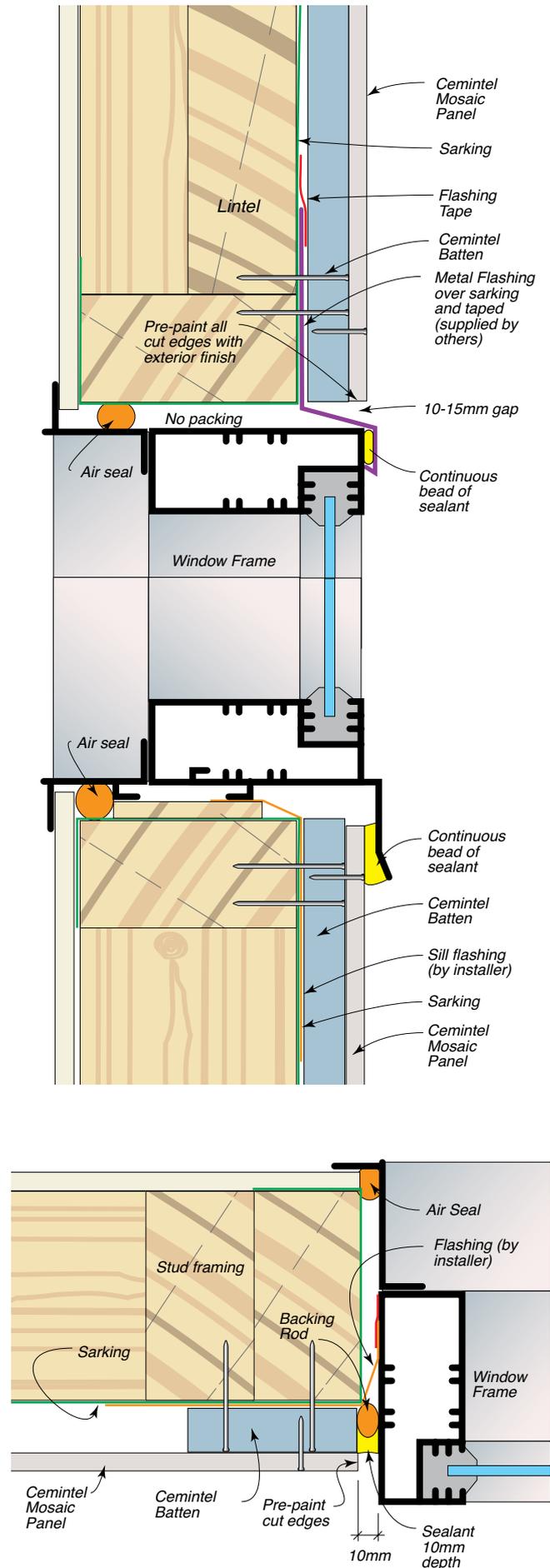


FIG 43: Power Meter Box Installation – Recessed Installation

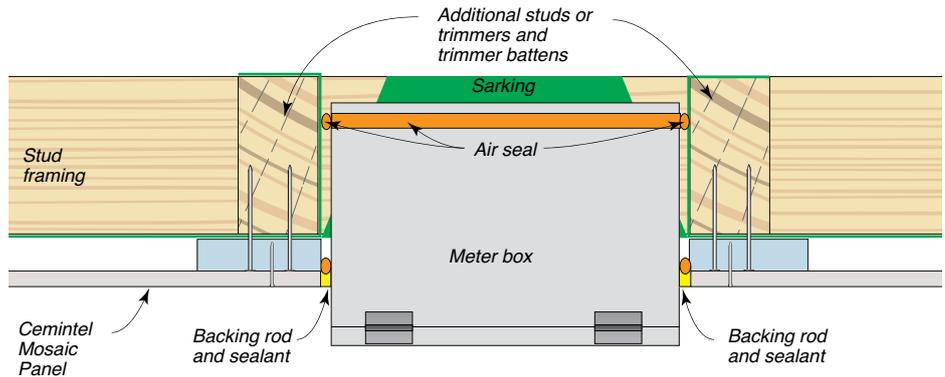
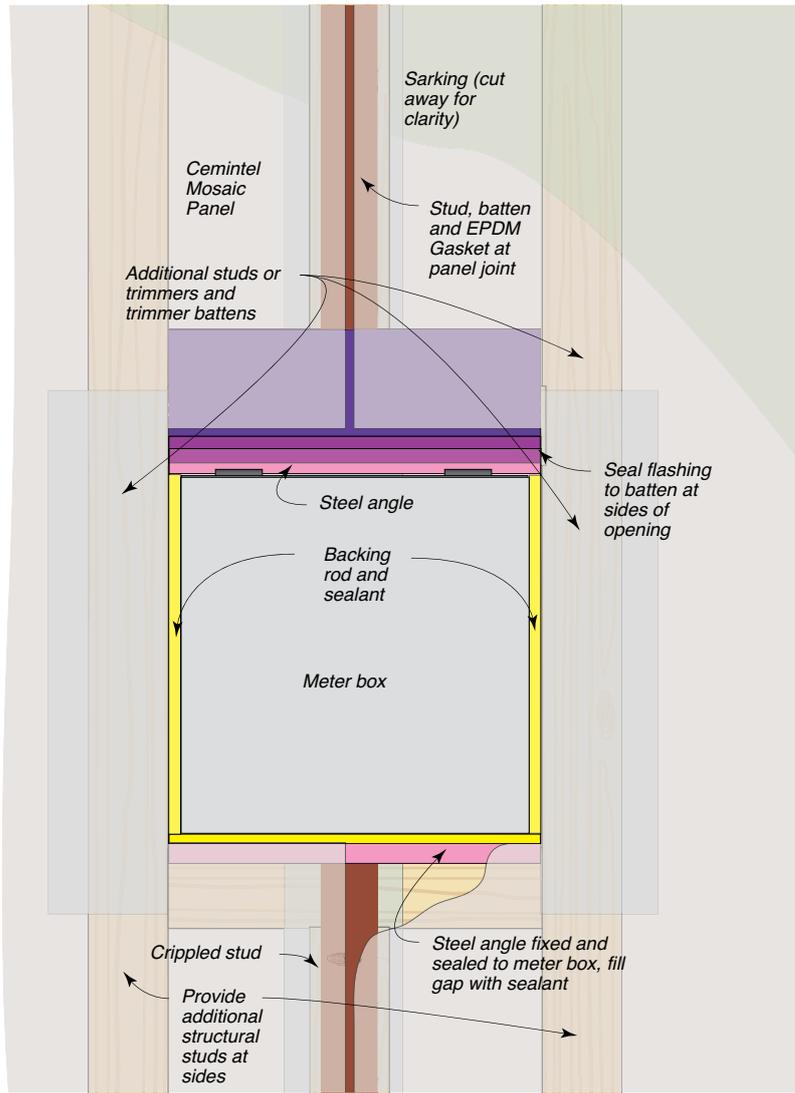
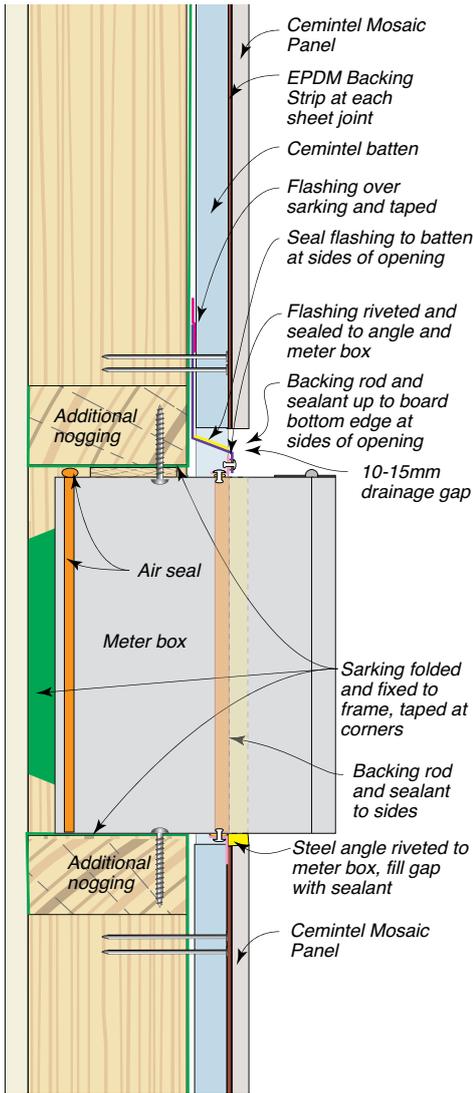
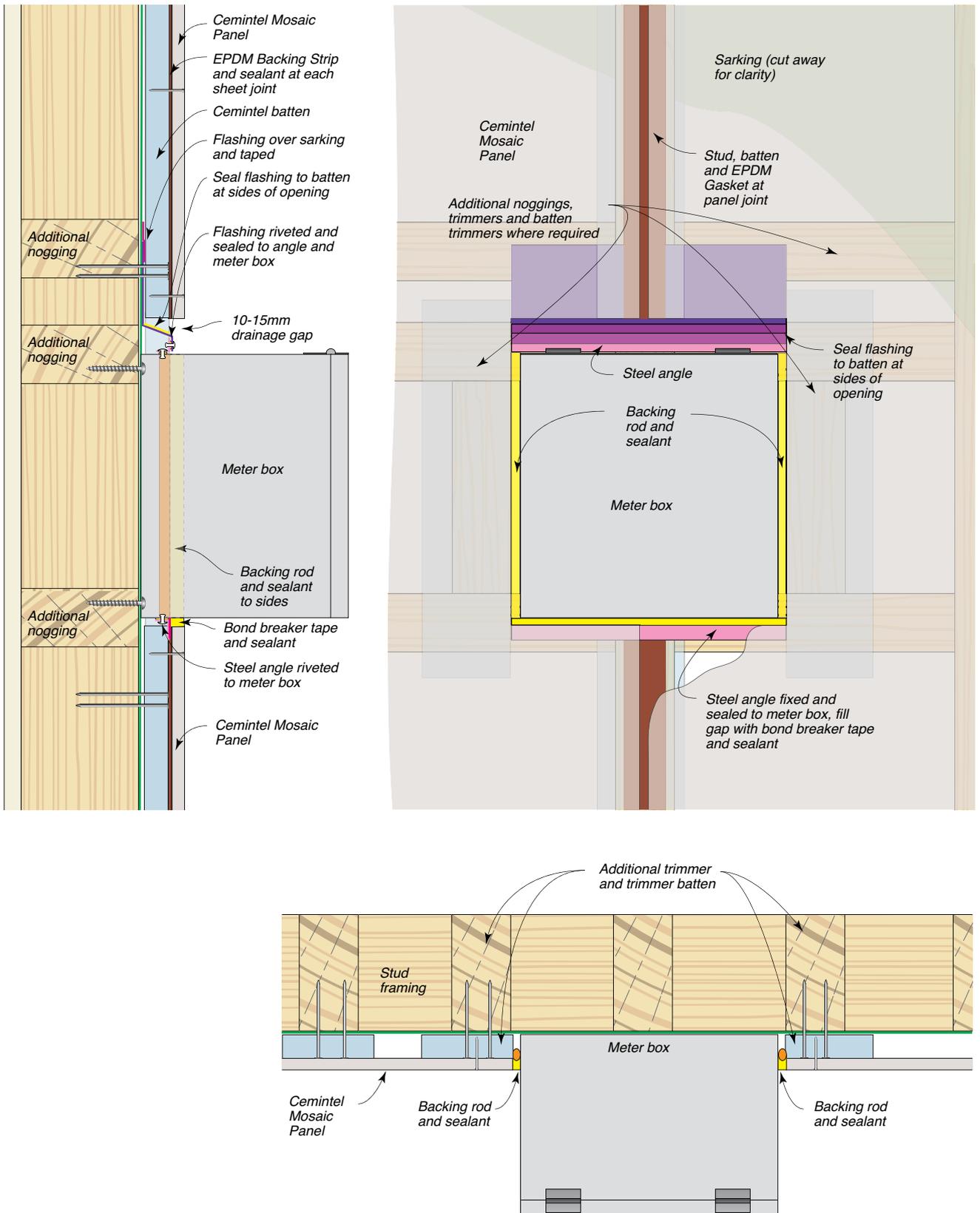


FIG 44: Power Meter Box Installation – Face Fix Installation





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## Our Offices

### **Brisbane**

768 Boundary Road  
Coopers Plains QLD 4108

### **Sydney**

376 Victoria Street  
Wetherill Park NSW 2164

### **Melbourne**

277 Whitehall Street  
Yarraville VIC 3013

### **Adelaide**

Lot 100 Sharp Court  
Mawson Lakes SA 5095

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19 Sheffield Road  
Welshpool WA 6106

### **Hobart**

11 Farley Street  
Derwent Park TAS 7009

### **Darwin**

Cnr Stuart Highway & Angliss  
Street  
Berrimah NT 0828

**cemintel.com.au**  
1300 236 468

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