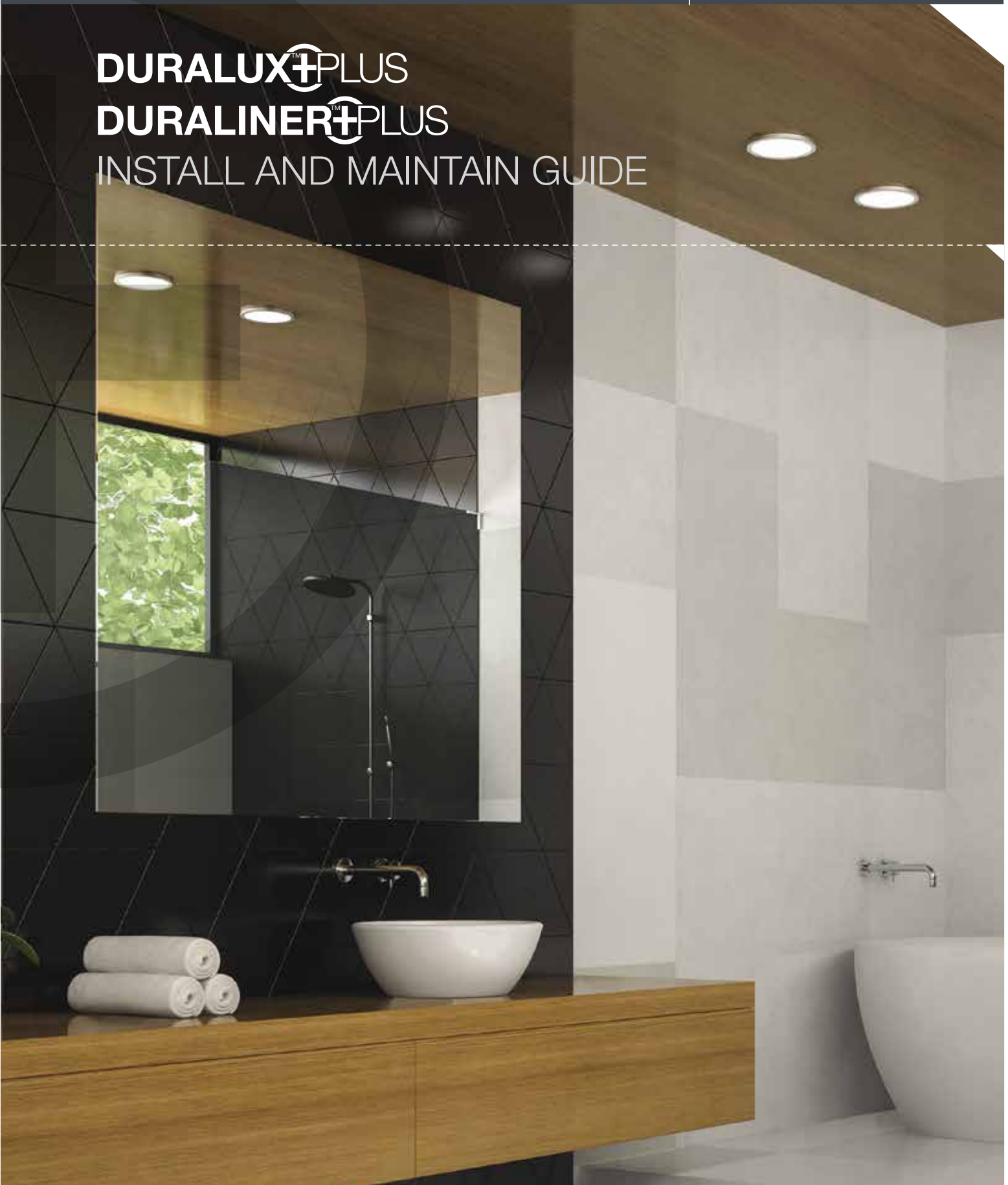


# **DURALUX<sup>TM</sup> PLUS** **DURALINER<sup>TM</sup> PLUS** INSTALL AND MAINTAIN GUIDE



## INTRODUCING INNOVA™

INNOVA™ IS A RANGE OF FACADE AND FLOORING PRODUCTS WHICH GIVE A NEW DIMENSION TO THE FIBRE CEMENT RANGE. THE PRODUCTS WITHIN THE INNOVA RANGE HAVE BEEN DESIGNED TO INSPIRE YOU TO CREATE A NEW INNOVATIVE AND DYNAMIC FACADE OR FLOORING SYSTEM.



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## GENERAL

### PURPOSE OF DOCUMENT

This guide will help correctly design, specify and install Duralux™ Plus and Duraliner™ Plus board.

### IMPORTANT DOCUMENTS

This document must be read in conjunction with:

- / Duralux Plus™ and Duraliner Plus™ board pass™
- / Innova Fibre Cement (NZ) warranty
- / Innova Fibre Cement (NZ) maintenance guide
- / Innova Fibre Cement sheets material data sheet

### SKILLS REQUIRED

This guide is suitable for use by licensed building practitioners (or deemed practitioners) licensed to the relevant class.

### FOR MORE HELP

Technical assistance is available at: 0800 424 234

### CERTIFICATIONS & APPROVALS HELD BY BCG

ISO 9001:2008, license agreement number QEC2955/13

## DURALUX™ PLUS AND DURALINER™ PLUS BOARD

### DESCRIPTION

Innova Fibre Cement is an Australian-owned manufacturer of fibre cement and plasterboard products, with manufacturing facilities in Perth and distribution centres throughout Australia and New Zealand.

Innova fibre cement board is a general-purpose fibre cement building board, manufactured from Portland cement, finely ground silica, cellulose fibre and water. It is cured in a high-pressure steam autoclave to create a durable, dimensionally stable product.

#### Innova fibre cement board is available as:

- / Duraliner™ Plus
- / Duralux™ Plus

#### Duralux™ Plus and Duraliner™ Plus can be used in a variety of uses:

- / Interior wall and ceiling linings including wet areas
- / Exterior soffits and eaves where there will be no direct impact from the weather.

#### It can be used in a variety of applications:

- / Fire-rated
- / Wet area
- / Substrate for ceramic tiles.

Duralux™ Plus is manufactured with a square edge and in the following dimensions.

### PLANK SIZES AND WEIGHT-TABLE 1

| THICKNESS<br>mm | WEIGHT<br>kg/m <sup>2</sup><br>(at emc) | WIDTH<br>mm | LENGTH mm |      |      |      |
|-----------------|-----------------------------------------|-------------|-----------|------|------|------|
|                 |                                         |             | 2400      | 2700 | 3000 | 3600 |
| 6               | 8.9                                     | 1200        | x         |      | x    | x    |
| 9               | 13.2                                    | 1200        | x         | x    | x    |      |

Duraliner™ Plus is manufactured with factory machined recesses on the two long sides and one end for flush jointing making it particularly suited for wet area use. It comes in the following dimensions.

### PLANK SIZES AND WEIGHT-TABLE 2

| THICKNESS<br>mm | WEIGHT<br>kg/m <sup>2</sup><br>(at emc) | WIDTH<br>mm | LENGTH mm |      |      |      |
|-----------------|-----------------------------------------|-------------|-----------|------|------|------|
|                 |                                         |             | 2400      | 2700 | 3000 | 3600 |
| 6               | 8.9                                     | 900         | x         |      |      |      |
|                 |                                         | 1200        | x         | x    | x    | x    |
| 9               | 13.2                                    | 1200        | x         | x    | x    | x    |
| 12*             | 17.9                                    | 1200        |           |      | x    |      |

\*Ordered ex factory - allow 6-8 weeks lead time.

### SCOPE OF USE AND LIMITATIONS

For scope and limitations refer to Duralux™ Plus and Duraliner Plus™ board pass™.





## DESIGN STEPS

**SCOPE OF USE**

Innova fibre cement board is suitable for use as:

- / A lining for internal walls
- / A lining for ceilings including exposed beam ceilings
- / A soffit cladding or cladding for other external applications with no direct impact from the weather
- / A lining for wet areas (Duraliner™ Plus is recommended)
- / A substrate for ceramic tiles.

**SPECIFY DESIGN OF PRIMARY STRUCTURE**

Innova fibre cement board is suitable for use with both timber and steel framing.

**The primary structure must:**

- / Be designed in accordance with NZS 3604:201, section 2, for timber framing
- / Be designed in accordance with NASH Standard for Residential and Low-rise Steel Framing for steel framing
- / Have studs at maximum 600 mm centres for 6 mm, 9 mm and 12 mm sheets
- / With noggins spaced at a maximum of 1200 mm centres.

Where the primary structure is existing, the designer and installer should ensure themselves that it is suitable for the intended building work.

Duraliner™ Plus can also be used where the substrate is a brick or masonry construction.

**SPECIFY FIXINGS****All uses**

Specify fixings. For fixing table refer to page 6.

Specify fixing details. For details refer to general fixing details on page 10.

**Internal Wall Lining**

Adhesive fixing may be used for timber framed walls where wall is to be untiled. For details refer to general fixing details on page 11.

**Substrate For Ceramic Tiles**

Duraliner™ or Duralux™ sheets used as a substrate for ceramic wall tiles must be fixed to the framing with either screws or nails. Adhesive fixing of sheets is not acceptable for tiled applications. Framing must support all sheet edges.

Appropriate support angles, determined by a structural engineer, is recommended for tiles exceeding 18 mm in thickness.

Maximum tile thicknesses are:

| SHEET THICKNESS (MM) | MAXIMUM TILE THICKNESS (MM) |                        |
|----------------------|-----------------------------|------------------------|
|                      | Studs at 600mm centres      | Studs at 450mm centres |
| 6                    | 9                           | 13                     |
| 9                    | 13                          | 18                     |
| 12                   | 18                          | >25                    |

For the layout and fixing of wall tiles follow the tile manufacturer's instructions and adhere the tiles with a flexible tile adhesive.

**Cover for brick or masonry substrate**

For details refer to brick and masonry dry clad details on page 14.

**JOINTING REQUIREMENTS****All uses**

If a continuous run of sheeting exceeds 4.2 m for tiled areas, or 6 m for untiled areas, then it must be broken with a control joint. Refer to relief and control joint details on page 15.

**Soffit cladding**

Innova fibre cement board is suitable for use as a clad soffit, however, it is recommended that Duralux™ Plus is used to avoid the risk of flush joint cracking due to thermal variation.

Duraliner™ Plus can be flushed with exterior base and topping compounds. However, this system must incorporate control joints. While this system achieves a seamless appearance, apart from the control joints, it is not recommended in applications where higher levels of thermal variation are likely to occur in the space immediately above the soffit.

Refer to expressed joint details on page 16.

**The designer must:**

- / Consider how the engineered frame provides for imposed wind load, control joints, thermal movement and ventilation
- / Ensure there is a minimum space of 1 m above the soffit
- / Specify a means to ventilate the space to minimize heat build-up, for example by installing ventilation slots cut in the perimeter of the sheet, installing thermal vents in the sheet or installing roof whirly birds
- / Specify roof installation
- / Consider orientation and prolonged exposure to extreme radiant heat in summer as this can cause localised heat build-up and excessive thermal movement
- / Specify a furring channel and a minimum 35 mm bearing area. Channel is to be fixed with a suitable rigid fixing system such as a clip or suspension system.
- / Ensure control joints are reduced to 3.6 m i.e. two flushed joints between control joints to better cater for thermal movement and or use expressed joints. Expressed joints can be used in corrosion zones A to D as defined in NZS3604:2011, but not within areas of zone D that are closer than 300 m of the coast, or in areas where microclimatic conditions apply.
- / Specify fixings in accordance with Table 20 of E2/AS1
- / Specify a quality paint system, comprising a suitable primer and two top coats.

Consideration of these aspects of the design does not guarantee cracking of flushed joints will not occur.

**SPECIFY WET AREA LINING DETAILS, WHERE APPLICABLE****Shower recess**

Where Innova fibre cement board is to be used in conjunction with a preformed shower base or full in situ waterproof membrane it can be used with timber flooring, panel flooring, compressed fibre cement flooring, or concrete slab.

Where Innova fibre cement board is to be used in conjunction with a perimeter flashing only, the flooring must be compressed fibre cement or concrete slab. Refer to wet area details on page 20.

**Bath and basin fixtures**

Refer to wet area details on page 21.

## DESIGN AND SPECIFICATION

### SPECIFY FINISHES

Specify the type of paint to be applied.

### Ceiling applications

Care needs to be taken with lighting conditions for ceiling installations particularly when a low angle of incidence (critical lighting) is used. Refer to AS/NZS 2589:2007 for a guide to framing and finishing requirements under various lighting conditions and further details on six levels of finish. It is recommended designers give consideration to the level of finish required and eliminate potential problems due to critical lighting conditions through the use of:

- / Matt or textured surface finishes
- / Light fittings that are set into the ceiling (eliminating incident light)
- / Shades or diffusers with light fittings
- / Hanging light fittings positioned well below the ceiling.

### DOCUMENTATION

Ensure the building consent plans and specifications clearly define:

- / Fixings – type and installation
- / Relevant details.

The installer will be relying on these documents, along with this guide, to install **Innova** fibre cement board correctly and in accordance with the building consent (where applicable).

## DESIGN TOOLS - FIXING TABLE

| FRAMING TYPE              | FIBRE CEMENT BOARD                                                    | FIXING REQUIREMENT                                                                                                                                                                                             |
|---------------------------|-----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Timber                    | 6 mm Duraliner™ Plus<br>9 mm Duraliner™ Plus                          | 30 x 2.8 mm galvanised clouts, with<br>6 mm minimum head diameter, or<br>8 x 30 mm Wafer Head Screws                                                                                                           |
| Timber                    | 12 mm Duraliner™ Plus                                                 | 40 x 2.8 mm galvanised clouts, with<br>6 mm minimum head diameter, or<br>8 x 40 mm Wafer Head Screws                                                                                                           |
| Lightweight steel         | 6 mm Duraliner™ Plus<br>9 mm Duraliner™ Plus<br>12 mm Duraliner™ Plus | No.8 x 20 mm countersunk screws                                                                                                                                                                                |
| 0.8-1.6 mm BMT steel      | 6 mm Duraliner™ Plus                                                  | Minimum No.8 x 20 mm self-drilling<br>countersunk screws                                                                                                                                                       |
| 0.8-1.6 mm BMT steel      | 9 mm Duraliner™ Plus<br>12 mm Duraliner™ Plus                         | Minimum No.8 x 30 mm self-drilling<br>countersunk screws                                                                                                                                                       |
| Timber                    | 6 mm Duralux™ Plus<br><br>12 mm Duralux™ Plus                         | 40 x 2.8 mm galvanised clouts, with<br>6 mm minimum head diameter or<br>8 x 30 mm Wafer Head Screws<br><br>40 x 2.8 mm galvanised clouts, with<br>6 mm minimum head diameter or<br>8 x 40 mm Wafer Head Screws |
| Lightweight steel         | 6 mm Duralux™ Plus<br>12 mm Duralux™ Plus                             | No.8 x 20 mm countersunk screws                                                                                                                                                                                |
| Maximum 0.7 mm BMT steel  | 6 mm Duralux™ Plus<br>12 mm Duralux™ Plus                             | Buildex fibre zip                                                                                                                                                                                              |
| Maximum 1.15 mm BMT steel | 6 mm Duralux™ Plus<br>12 mm Duralux™ Plus                             | Buildex self-drilling countersunk tek screws                                                                                                                                                                   |

All screws/fasteners to be a minimum of Class 3 (galvanised).

## PRE-INSTALLATION

### HEALTH AND SAFETY



Take all necessary steps to ensure your safety and the safety of others

- / Clear the work area of any obstructions before work starts.
- / Ensure adequate ventilation or mechanical dust extraction when cutting or drilling
- / Ensure the boards are well supported when cutting and nailing
- / Use appropriate safety equipment, clothing and footwear
- / Use all tools in accordance with relevant instruction manuals
- / Plan and monitor a safe approach for working at height

For further information refer to:

- / WorkSafe Small Construction Sites, The Absolutely Essential Health and Safety Toolkit, July 2018.
- / WorkSafe Health and Safety at Work, Quick Reference Guide, December 2016.

These documents are available at [www.worksafe.govt.nz](http://www.worksafe.govt.nz).

### STORAGE AND HANDLING

Correct handling and storage of Innova fibre cement board sheets is critical for best performance, ease of use and warranty adherence.

Innova fibre cement board sheets must be stacked flat, up to the ground and supported on equally spaced level gluts at a maximum of 300 mm.

The sheets must be kept dry, preferably by being stored inside a building. When stored outdoors, sheets must be protected from the weather. Ensure that there is sufficient air flow to avoid condensation. Avoid storing over standing water or vegetation. Care should be taken to avoid damage to the end, edges and surfaces.

Sheets must be dry prior to being fixed and painted. Sheets must be carried on edge. Take care to avoid damage to panels edges and surfaces, especially during installation.

## INSTALLATION

### KEY DOCUMENTS

- / Building consent plans and specifications
- / This guide

### CHECK AND PREPARE PRIMARY STRUCTURE

The substrate must be straight, true to ensure a straight finish to the wall.

Vertical studs must be at maximum 600 mm centres for 6 mm, 9 mm and 1200 mm sheets, Horizontal nog/dwang spacings must be spaced at maximum 1200 mm centres.

### Timber structure

For a timber structure, framing must be in accordance with NZS 3604:2011, section 2, and within the framing tolerances of Table 2.1.

### Steel structure

For a steel structure, framing must be in accordance with NASH Standard for Residential and Low-rise Steel Framing for steel framing.

For lightweight steel, framing must be no greater than 1.6 mm in thickness. If Innova fibre cement board is to be direct fixed, the framing must be installed to provide some flexibility to accommodate differential moisture and thermal movement of the board.

For rigid steel framing, minimum 40 mm timber or lightweight steel battens must be installed. Battens supporting sheet joints must have a minimum actual face width of 45 mm.

### CHECK MOISTURE CONTENT OF TIMBER FRAMING

Innova fibre cement board sheets must not be fixed to wet framing.

It is strongly recommended that kiln dried timber is used for framing. If sheets are fixed to 'wet' framing problems may occur at a later date due to excessive timber shrinkage.

### DETERMINE SHEET LAYOUT

Innova fibre cement board sheets may be fixed vertically or horizontally. Framing must support all sheet joints. Refer to general fixing details on pages 12-13.

### CUT SHEETS

Innova fibre cement board sheets may be cut to size on site. If using power tools for cutting, drilling or sanding they must be fitted with appropriate dust collection devices or wear an approved dust mask. Work should always be carried out in a well-ventilated location. Suitable cutting methods are:

- / **DURABLADE** – 180 mm diameter.  
This unique cutting blade is ideal for cutting fibre cement. It can be fitted to a 185 mm circular saw. Ensure safe practices when using.
- / **NOTCHING** - cut the two sides with a handsaw or guillotine, score along the back edge then snap upwards to remove the notch
- / **DRILLING** - sheets can be drilled using normal high-speed drill bits. Do not use the drill's hammer function. For small round holes such as tap penetrations, the use of a holesaw is recommended
- / **PENETRATIONS** - penetrations can be made by drilling a series of small holes around the perimeter of the cut out. Tap waste piece from the sheet face with a hammer. Support the underside of the opening to avoid damage. Clean rough edges with a rasp. Large rectangular openings are formed by deeply scoring the perimeter of the opening with a 'score and snap' knife. Next, form a hole in the centre of the opening (see method above) then saw cut from the hole to the corners of the opening. Snap out the four triangular segments. Clean rough edges with a rasp

## INSTALLATION

### DETERMINE INSTALLATION REQUIREMENTS

Determine the fixing method by reference to the building consent documentation, or if the installation is not subject to a building consent, either using fastenings or adhesive as appropriate.

Refer also to jointing instructions for all installations, and depending on use, refer to ceramic tile substrate instructions, dry clad masonry wall instructions, soffit cladding instructions, and wet area instructions, as appropriate.

### GENERAL FIXING INSTRUCTIONS

#### Fastenings

Sheets must not be joined off the framing i.e., joins must be aligned with studs and noggs.

Do not place fixings closer than 12 mm from sheet edges, or closer than 50 mm from the sheet corners.

When sheets are fixed adjacent to a floor, leave a 6 mm gap between the bottom of the sheets and the floor.

Where the wall is untiled, fix at 300 mm centres in the body of the sheet and at 200 mm along the sheet edges. Where the wall is to be tiled, fix at 200 mm centres in the body of the sheet and at 150 mm along the sheet edges. Do not bridge sheet joint with tiles.

Sheet fixing must commence at the centre of the sheet and work out to the edges to prevent 'druminess'. The sheet must be held firmly against the framing when fixing to ensure breakout does not occur on the back.

Do not overdrive nails. When using nail guns, if variability occurs, the gun should be set to under drive and the nails tapped home with a hammer.

#### Adhesive

Adhesive fixing must not be used where the wall is to be finished with wall tiles. Where the wall is to be tiled, nail or screw fasteners must be used.

Daubs of adhesive are to be applied to the studs at a maximum of 250 mm centres. The daubs of adhesive are to be approximately 25 mm diameter.

Nail or screw fasteners are still required at 200 mm centres on the sheet ends and 600 mm along edges. These are concealed within the flush finishing.

Innova fibre cement board sheets must be pressed onto the adhesive until it sits flat. Temporary blocking or props must support the centre of the sheet until the adhesive is dry (normally 24 hours).

Adhesive daubs must never coincide with fasteners. Adhesive fixing must not be used in fire rated construction. Refer to general fixing details on page 11.

### JOINTING INSTRUCTIONS

#### Control joints

If a continuous run of sheeting exceeds 4.2 m for tiled areas, or 6 m for untiled areas, then it must be broken with a control joint. For tiled areas the control joint must carry through the framing,

sheeting and tiling.

For untiled areas use of a Rondo – P35 or P45 control joint.

Refer to Figure 13.

Allow a 15 mm gap between the fibre cement board sheets. Locate the control joint centrally in the gap and fix the flanges of the control joint at a maximum of 150 mm centres.

Refer to tiled relief and control joint details on page 15.

To reduce the incidence of cracks appearing in the jointing, flush jointed sheets should be cut in, 200 mm minimum, around window and door openings. Refer to general layout details on page 16.

#### Relief joints

If a sheet joint must coincide with the corner of an opening, a relief joint should be installed to control cracking. Refer to tiled relief and control joint details on page 15.

#### Express joints

Expressed joints in soffit areas must be sealed with polyurethane in corrosion zone C and D as defined in NZS 3604:2011.

#### Flush joints

Duraliner™ Plus edges to be jointed must be recessed. Before jointing sheets that have been cut on site, or the un-recessed end of Duraliner™ Plus sheets must be recessed. The recess should be a nominal 40 mm wide by 1.5 mm deep. The Hitachi 'Easy Bevel' (Model EB100) is specifically designed for this purpose. The recessed surfaces must be sealed using a PVA or Acrylic sealant, such as Cemstick, Lokcrete or Bondcrete.

#### For wet areas:

- / Evenly fill all recessed joints and both sides of any corners with Exterior and Wet Area Basecoat. Firmly bed perforated paper tape into Exterior and Wet Area Base Coat ensuring all air bubbles are removed.
- / Apply a skim coat of Exterior and Wet Area Base Coat over embedded paper tape ensuring the paper tape is completely covered. Cover all fastener heads with exterior base and topping compounds.
- / Apply a skim coat of Exterior and Wet Area Base Coat to the edges of the fibre Cement sheets at sheet junctions with shower bases and baths, feathering out the Exterior and Wet Area Base Coat onto the board. Allow 24 hours to dry before tiling.

#### For areas outside of wet areas such as adjoining bathroom walls:

- / Fill the recess evenly with bedding/base cement. For flat joints and internal corners install a perforated paper tape over the centre of the join. Self-adhesive tape is not to be used. Always use a perforated paper tape. Additional bedding cement is then applied to cover the paper tape and the joint edges feathered out to produce a joint that is approximately 100 mm wide (50 mm each side of the sheet edges).
- / Internal corners should be prepared and flushed. Refer to flush jointing details on page 19.
- / For external corners, an external angle bead should be fitted prior to filling. Paper tape is not used for external corners. Refer to flush jointing details on page 19.
- / Apply a layer of bedding cement over all fastener heads.
- / After allowing for the first coat to dry, apply a second coat of bedding cement. This coat should overlap the first coat by about 40 mm each side (total width 180 mm) and be feathered out to produce an unobtrusive joint. Apply a second layer of bedding cement to all fastener heads.
- / For untiled areas only, after the bedding cement has dried thoroughly, a layer of topping cement can be applied. This layer should overlap the preceding layer by 45 mm to 50 mm each side of the joint and be feathered out to produce an unobtrusive finish.
- / Allow 24 hours for the topping cement to dry. Sand to match the finish of the Duraliner™ Plus
- / Topping Compound must not be used on top of Basecoat that is to be tiled. Refer to flush jointing details on page 18.



## INSTALLATION

### DRY CLAD MASONRY WALL INSTRUCTIONS

Refer to dry clad masonry details on page 14. Timber or steel battens and furrings, or furring channel and clip systems can be used with brick masonry or concrete substrates. Plastic nails can be used with standard density AAC block walls (550 kg/m<sup>3</sup>). For higher density walls, a furring channel system should be used.

#### For battens/furrings:

- / Timber battens should have a minimum thickness of 40 mm to allow adequate nail penetration and holding. Timber battens that support sheet joints should have a minimum face width of 45 mm. All other battens should have a minimum face width of 35 mm.
- / Steel battens/furrings that support sheet joints should have a minimum face width of 38 mm. All other steel battens/furrings should have a minimum face width of 30mm.
- / Vertical battens must be provided at a maximum of 600 mm centres to suit sheet joints.
- / The battens should be packed to correct any misalignment or unevenness in the base wall.
- / Fix the battens to the base wall using suitable masonry nails or wall anchors.
- / Sheet ends to be joined centrally over a batten or furring channel. For untiled walls fix at a maximum of 200 mm centres on sheet ends and at 300 mm maximum centres in the body of the sheet.
- / For tiled walls, fixings are to be at a maximum of 200 mm centres on the sheet ends and also in the body of the sheet. Where the wall is to be tiled, it is recommended that noggings be installed under all sheet joints to alleviate any sheet deflection upon impact.
- / Control joints should be installed to coincide with any movement control (expansion) joints in the structure, at the junction of any dissimilar base wall type or construction and to break any continuous run sheets greater than 4.2 m for tiled applications or 6m for untiled applications.

#### For plastic nails:

- / The base wall should be flat and true (maximum variation must not exceed 15 mm).
- / Sheets may be installed horizontally or vertically.
- / Using an 8 mm hole punch, indent the Duraliner™ Plus lining at all fastening points to locate and assist penetration of the plastic nails.
- / Install the Duraliner™ Plus sheets and fix by hammering the plastic nails flush with the sheet surface. The plastic nails must not be installed closer than 50 mm to sheet corners or closer than 15 mm to sheet edges.

### SOFFIT CLADDING INSTRUCTIONS

Where Innova fibre cement board is used as a soffit cladding, install sheets to furring channel and ensure a minimum 35 mm bearing area. The furring channel must be fixed by the specified rigid fixing clip or suspension system.

Orient sheets at right angles to the furring channel.

Do not fix sheets directly to the underside of the roof framing or structure above.

### WET AREA INSTRUCTIONS

Refer to Acceptable Solution E3/AS1 for waterproofing of wet areas in residential buildings.

When used in wet areas, Duralux™ Plus to be fitted vertically with no joins.

### Shower recess

Refer to wet area details on page 20.

#### For a preformed shower base

- / The inside edge of the shower base up-stand must fit in behind the Duraliner™ Plus without distorting it. To achieve this the studs and bottom plate can be notched out, maximum 20 mm, or alternatively battens can be used to set the Duraliner™ Plus clear of the framing.
- / A PVC angle or waterproof lining (membrane) should be fixed in the internal corner behind the Duraliner™ Plus. This angle must project inside the shower base up-stand. It should start 6 mm above the shower base rim and extend to a minimum height of 1800 mm. Both flanges of the angles should be nailed to the framing at a maximum 600 mm centres.
- / The Duraliner™ Plus must project inside the vertical lip of the shower base up-stand. A 6 mm gap must be left between the Duraliner™ Plus and the shower base rim. This gap must be filled with a bead of mould resisting flexible sealant.
- / The Duraliner™ Plus must be flush jointed.
- / Ceramic wall tiles must be installed over the Duraliner™ Plus. The wall tiles must finish 6 mm above the shower base rim. This gap must be filled with a mould resisting flexible sealant.

#### For a waterproof membrane:

- / The waterproof lining must be installed to the manufacturer's specification.
- / The waterproof lining must extend 150 mm up the walls or 25 mm above any hobs (whichever is greatest).
- / Internal corners in the shower recess must be sealed to a height of 1800 mm minimum with the waterproof lining or an equivalent treatment.
- / The shower base must have a minimum fall of 1:60 to a floor waste drain.
- / The Duraliner™ Plus sheets must be flush jointed and tiled over.

#### For a perimeter flashing:

- / The flashing may be preformed PVC angles or a waterproof flashing strip.
- / The flashing should extend 80 mm min up the wall and 50 mm minimum across the floor. The corner detail must be waterproof.
- / The flashing must be bonded to the floor with a two-part flexible epoxy resin designed for this application.
- / The flashing must not be bonded to the Duraliner™ Plus wall sheets.
- / An additional nogging must be installed so that the bottom fixing of the Duraliner™ Plus sheet is above the flashing.
- / Internal corners of the shower recess must be sealed with a bonded PVC angle or flashing to a minimum height to 1800 mm.
- / The shower base must have a minimum fall of 1:60 to a floor waste drain.

### Bath and basin fixtures

Refer to wet area details on page 21.

#### For fixtures:

- / The Duraliner™ Plus should be cut out to leave a 6 mm gap all around the fixture. This gap should be filled with a mould resistant flexible sealant.
- / Innova recommends using a hole saw to make a neat cut out for fittings such as taps, shower roses, etc.
- / Additional framing must be installed as required to properly support all fixtures.

## FINISHING

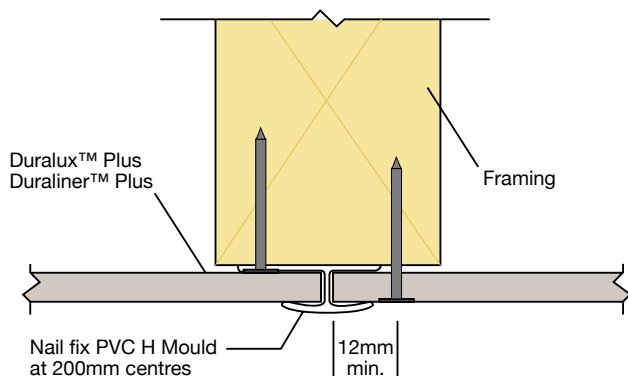
### PAINTING

- / Follow paint manufacturer's recommendations for application. Innova fibre cement board should be painted with at least three coats of paint.
- / Where Innova fibre cement board is used as a soffit cladding, a quality exterior grade paint system must be used, comprising a suitable sealer and two topcoats

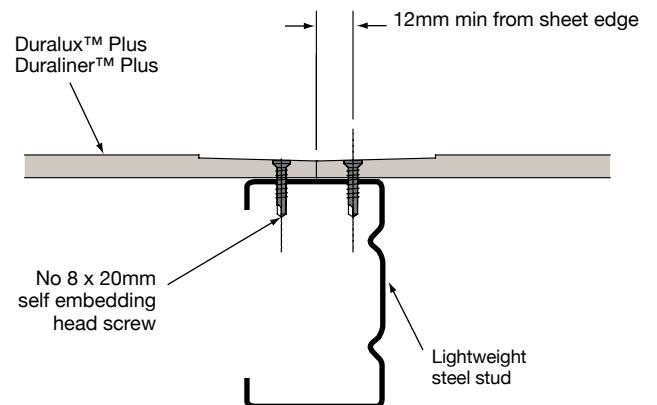
### QUALITY CHECK

On completion, visually inspect the installation of the sheets to ensure sheets are correctly installed and all requirements are met. The building owner should be advised of all maintenance requirements.

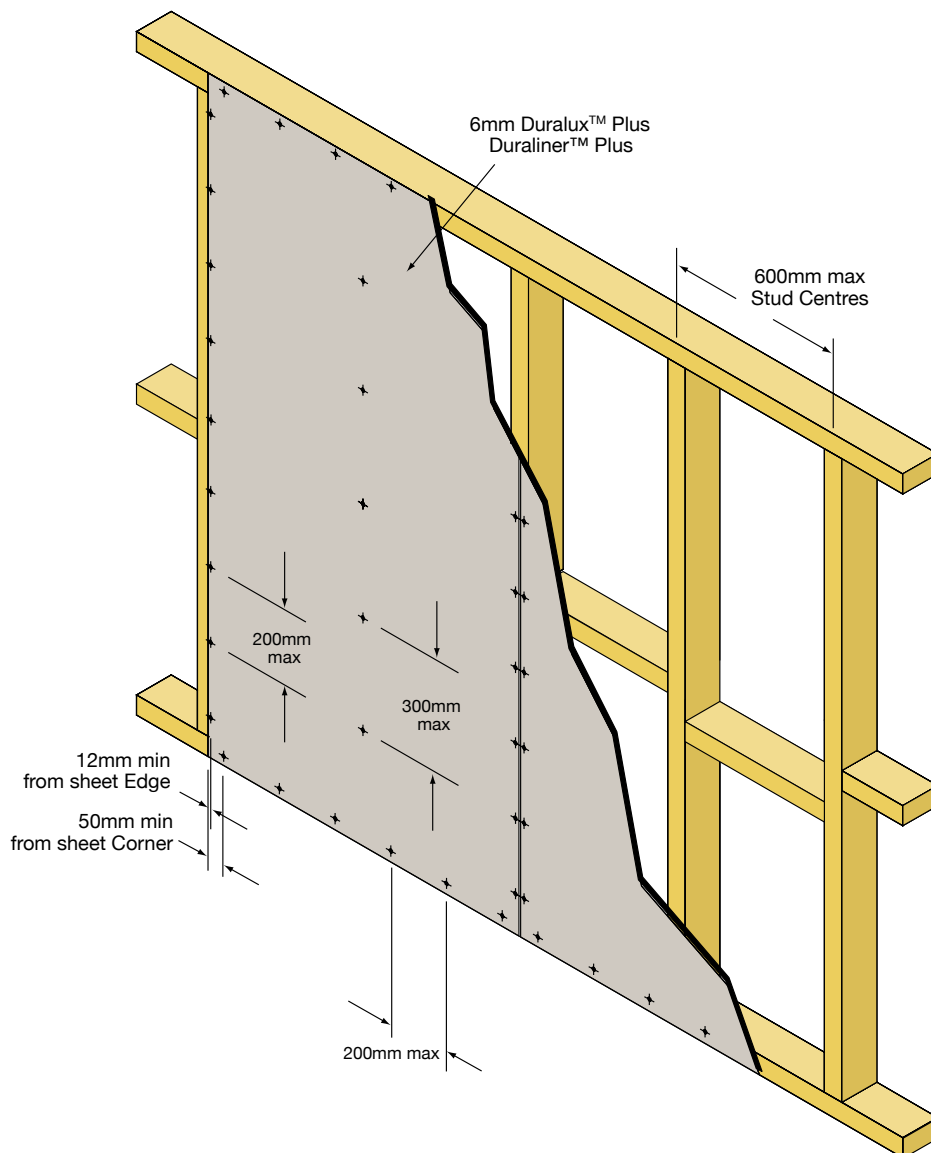
**FIGURE 1**  
SHEET JOINTS TIMBER FRAMING



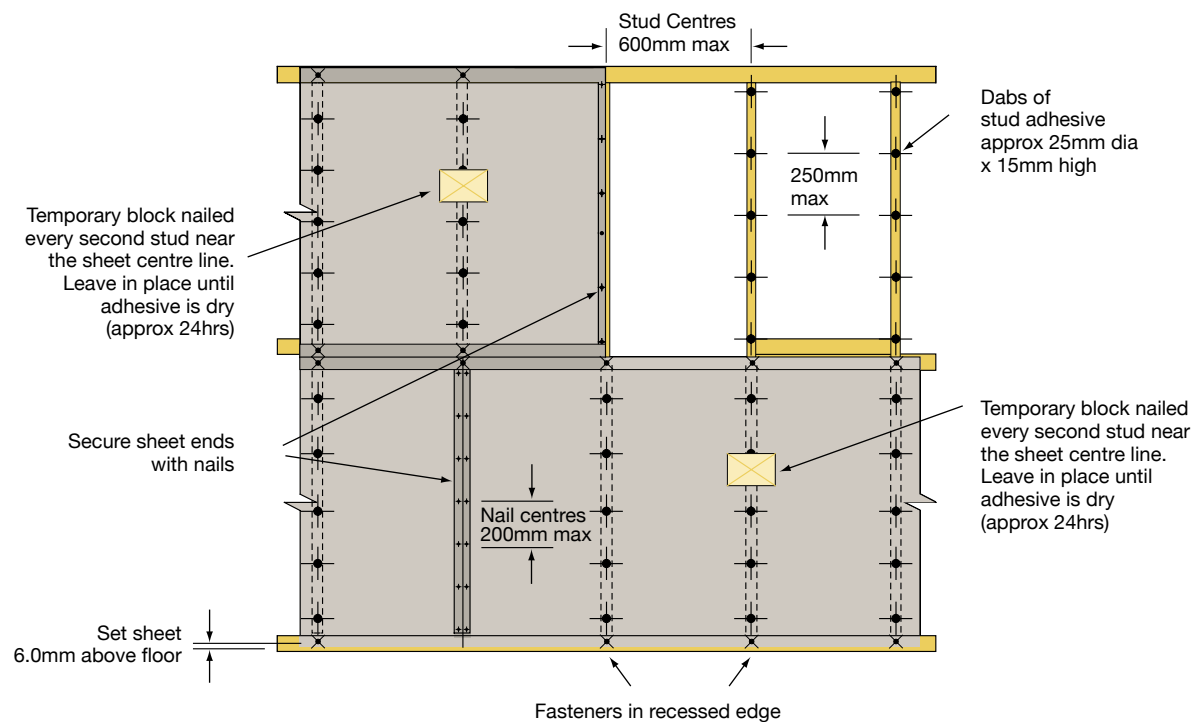
**FIGURE 2**  
SHEET JOINT LIGHTWEIGHT STEEL FRAMING



**FIGURE 3**  
SHEET FIXING

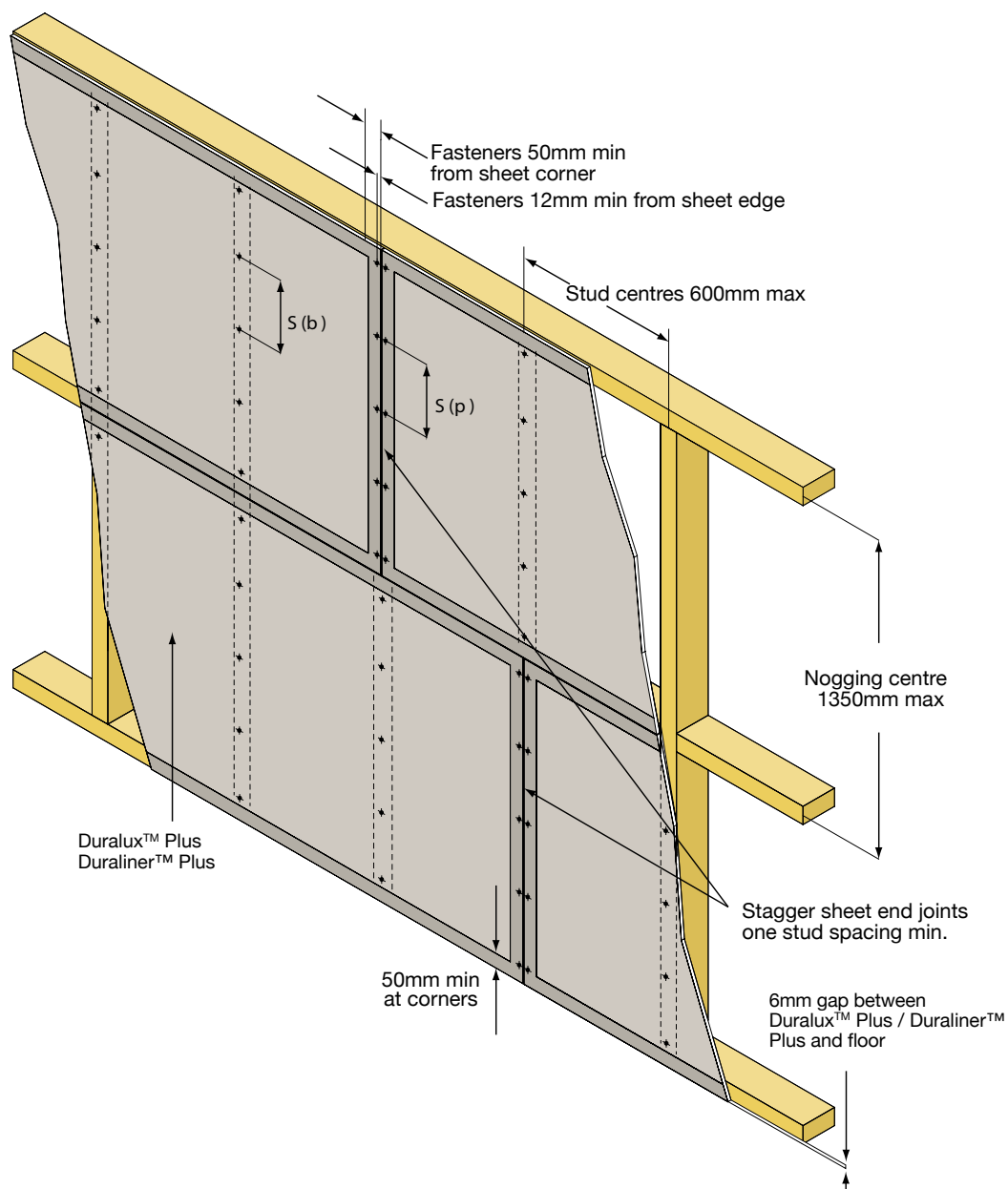


**FIGURE 4**  
ADHESIVE FIXING TIMBER FRAMING





**FIGURE 5**  
HORIZONTAL SHEET LAYOUT (UNTILED)

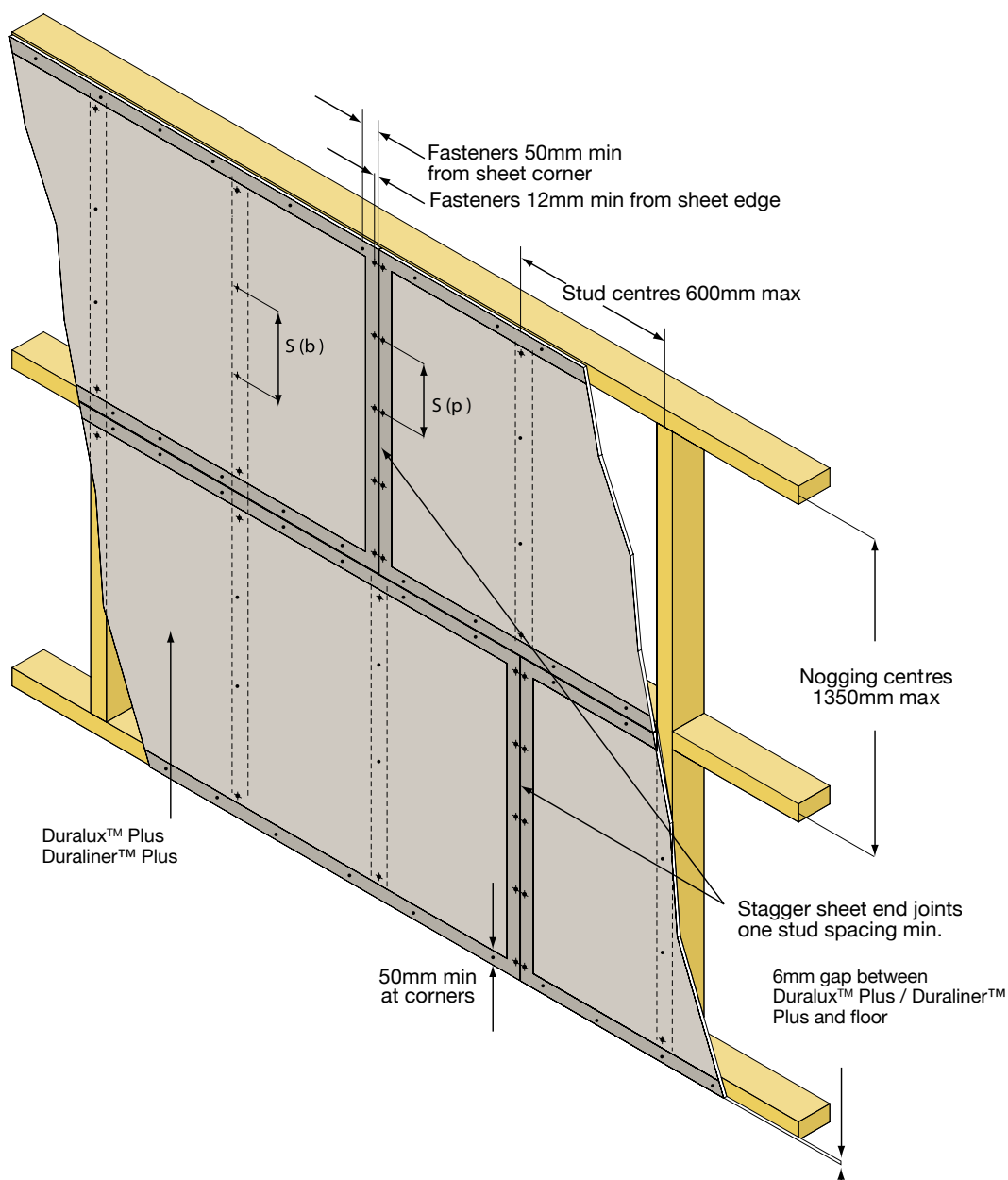


|         | FIXING CENTRES         |                   | FIX SHEETS TO FRAMING AS NOTED |          |                     |
|---------|------------------------|-------------------|--------------------------------|----------|---------------------|
|         | SHEET PERIMETER $S(p)$ | SHEET BODY $S(b)$ | STUDS                          | NOGGINGS | TOP & BOTTOM PLATES |
| UNTILED | 200MM                  | 300MM             | ✓                              | x        | x                   |

**NOTES FIGURE 5:**

Framing must support all sheet joints when fixed horizontally. Install bottom sheets first then work upwards. Set bottom sheet 6mm clear of floor. Stagger vertical joints by at least one stud (600mm typical). Do not place fixings closer than 12mm from sheet edges, or closer than 50mm from the sheet corners.

**FIGURE 6**  
HORIZONTAL SHEET LAYOUT (TILED)

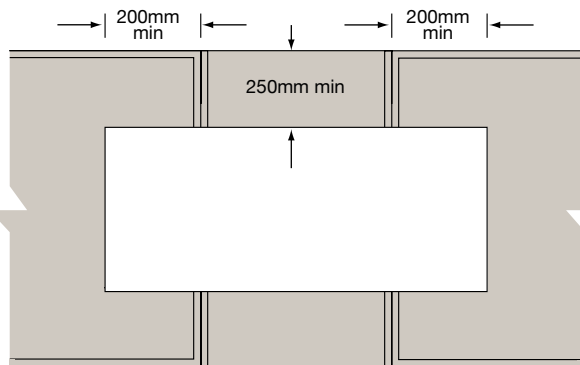


|              | FIXING CENTRES            |                      | FIX SHEETS TO FRAMING AS NOTED |          |                     |
|--------------|---------------------------|----------------------|--------------------------------|----------|---------------------|
|              | SHEET PERIMETER<br>$S(p)$ | SHEET BODY<br>$S(b)$ | STUDS                          | NOGGINGS | TOP & BOTTOM PLATES |
| <b>TILED</b> | 150MM                     | 200MM                | ✓                              | x        | ✓                   |

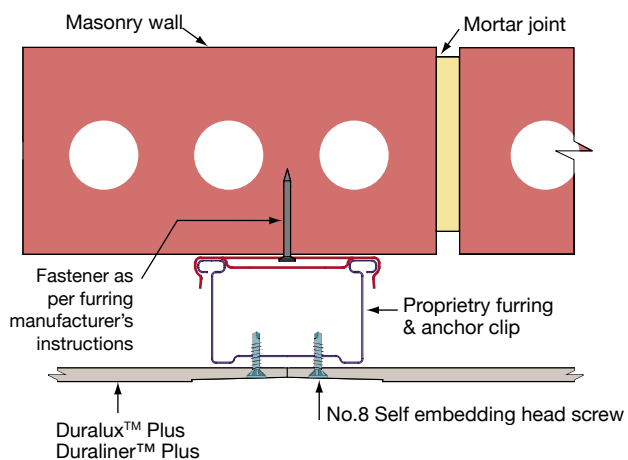
**NOTES FIGURE 6:**

Framing must support all sheet joints when fixed horizontally. Install bottom sheets first then work upwards. Set bottom sheet 6mm clear of floor. Stagger vertical joints by at least one stud (600mm typical). Do not place fixings closer than 12mm from sheet edges, or closer than 50mm from the sheet corners. Fixings must be placed at 150mm centres at all sheet edges. This includes internal and external corners.

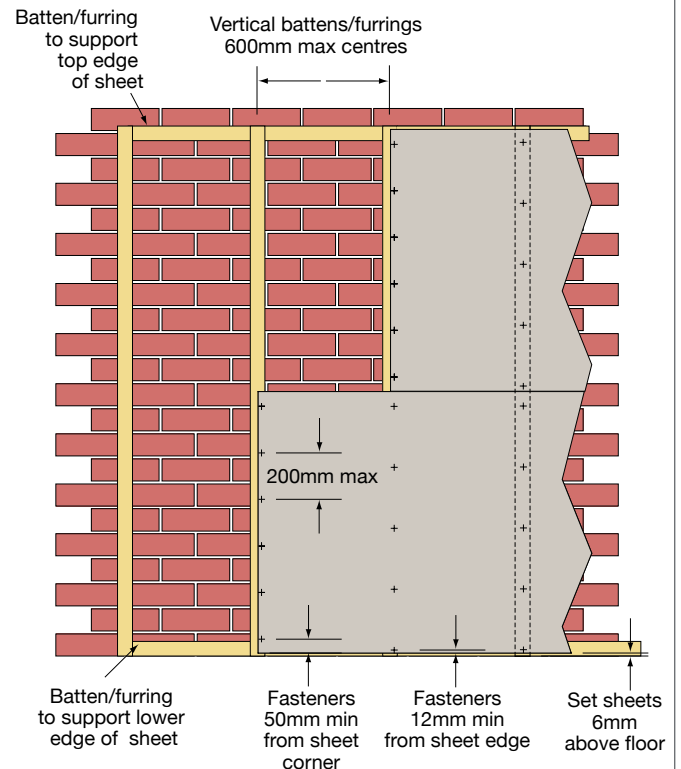
**FIGURE 7**  
WINDOW AND DOOR DETAIL



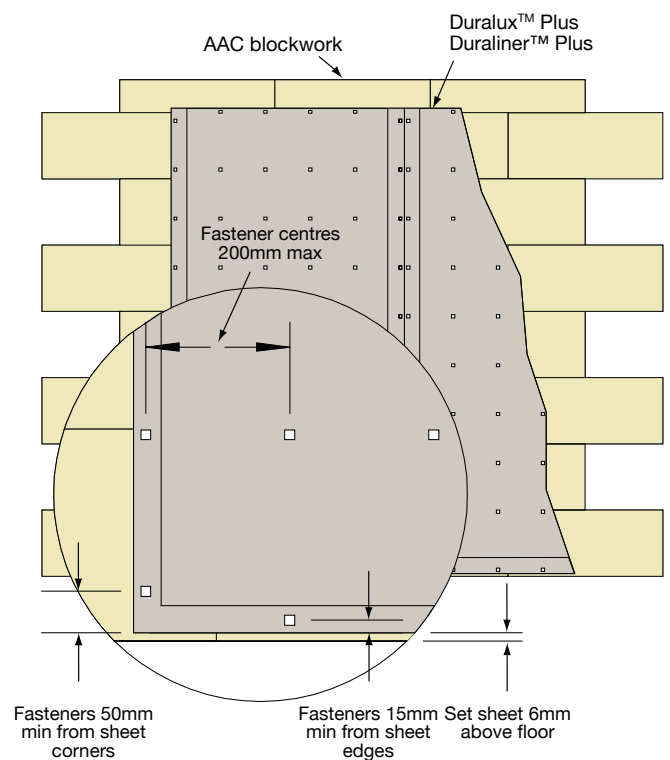
**FIGURE 8**  
MASONRY WALL WITH FURRING CHANNEL AND CLIP SYSTEM



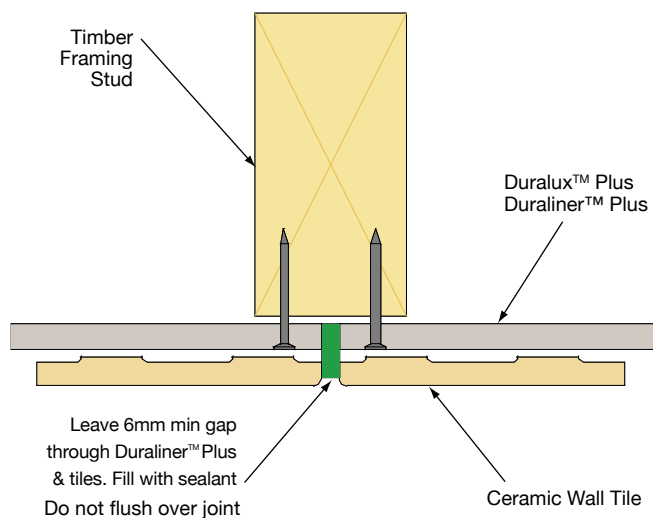
**FIGURE 9**  
MASONRY WALL WITH TIMBER OR STEEL BATTEN



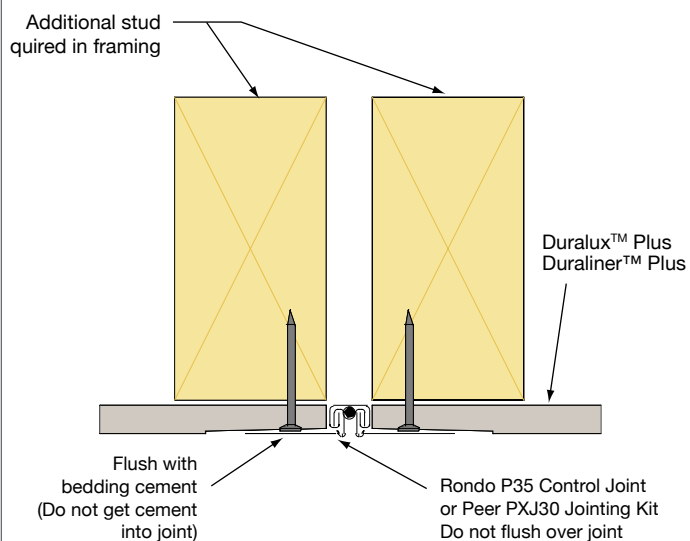
**FIGURE 10**  
AAC WITH PLASTIC NAILS



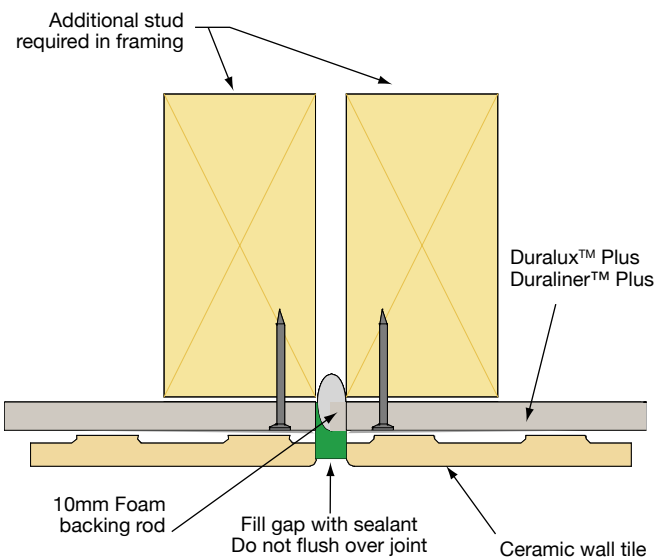
**FIGURE 11**  
RELIEF JOINT DETAIL



**FIGURE 13**  
UNTILED CONTROL JOINT

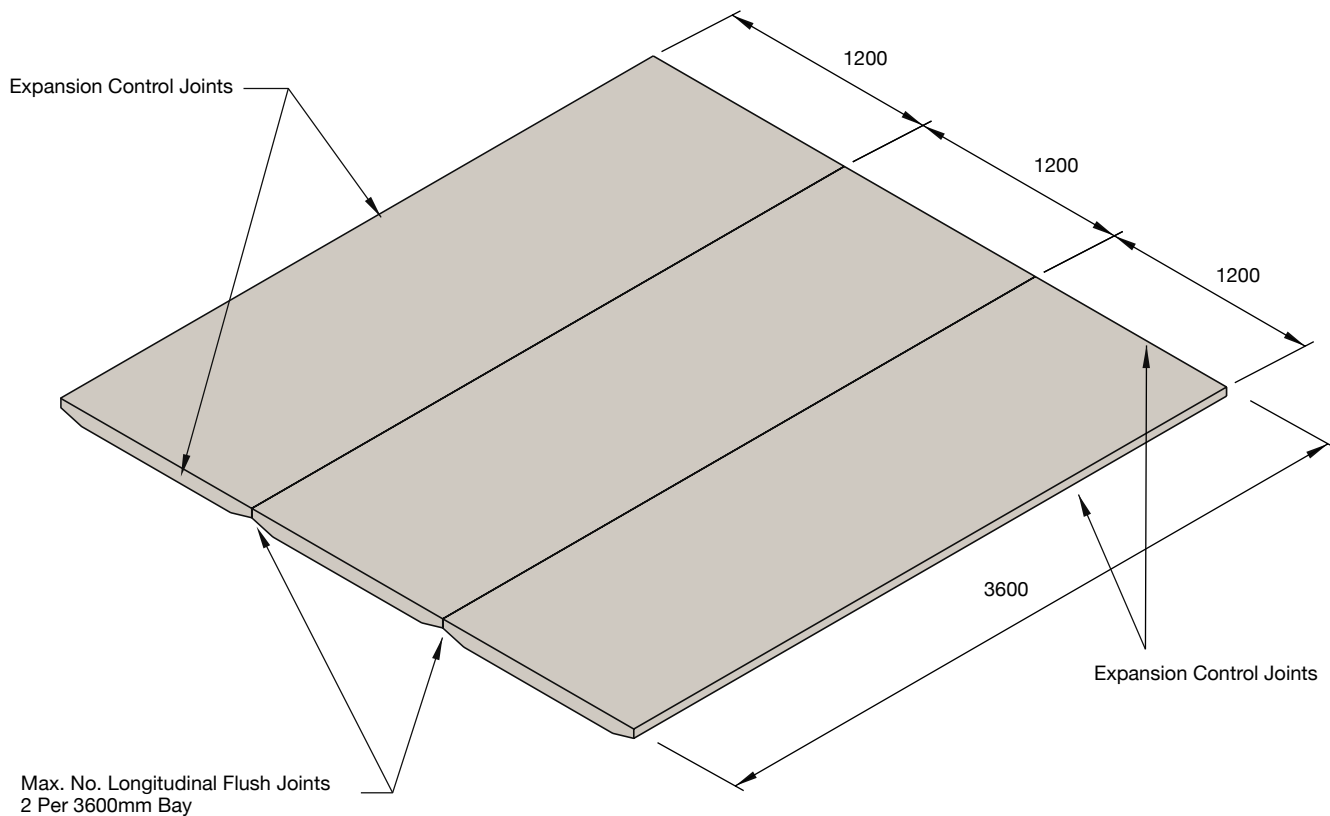


**FIGURE 12**  
TILED CONTROL JOINT

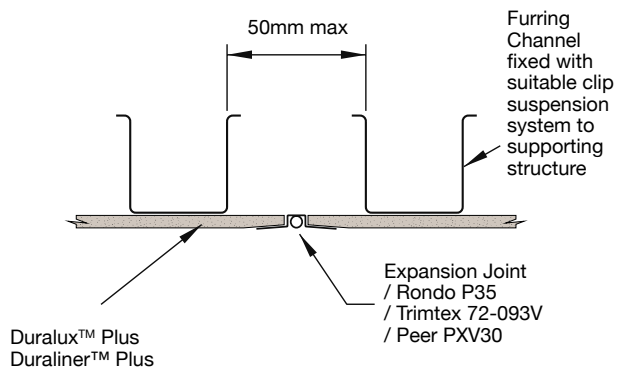




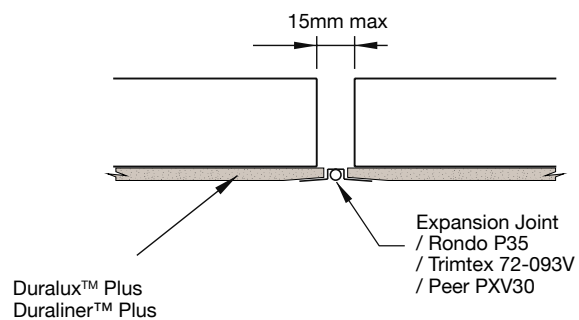
**FIGURE 14**  
MOVEMENT CONTROL JOINT LAYOUT FOR FLUSH JOINT SOFFITS



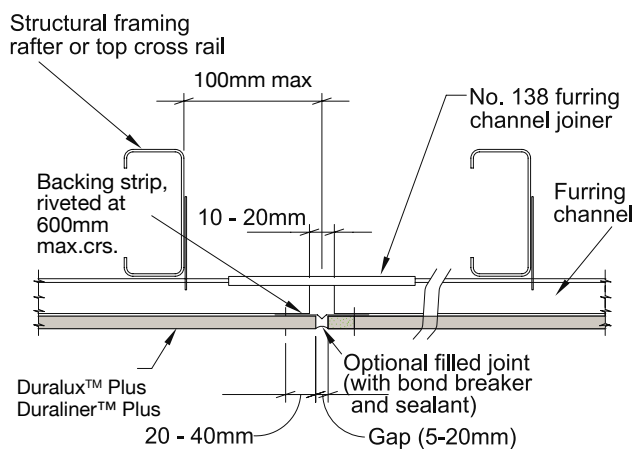
**FIGURE 15**  
CONTROL JOINT PARALLEL  
TO FURRING CHANNEL



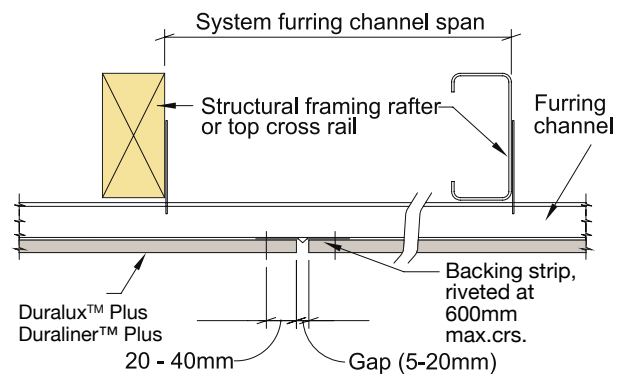
**FIGURE 16**  
CONTROL JOINT PERPENDICULAR  
TO FURRING CHANNEL



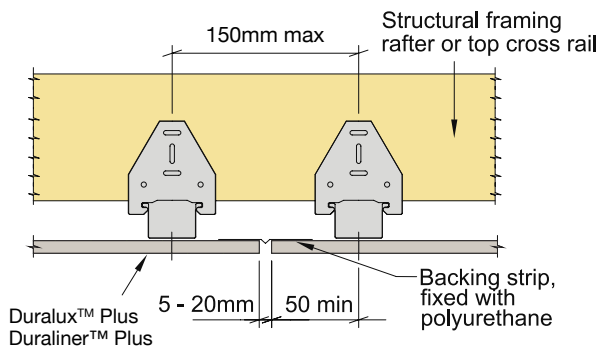
**FIGURE 17**  
STEEL WITH FURRING CHANNEL JOINER



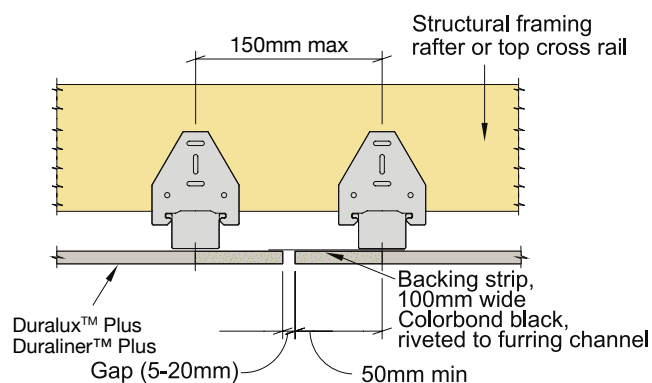
**FIGURE 19 //**  
BACKING STRIP FIXED WITH POLYURETHANE



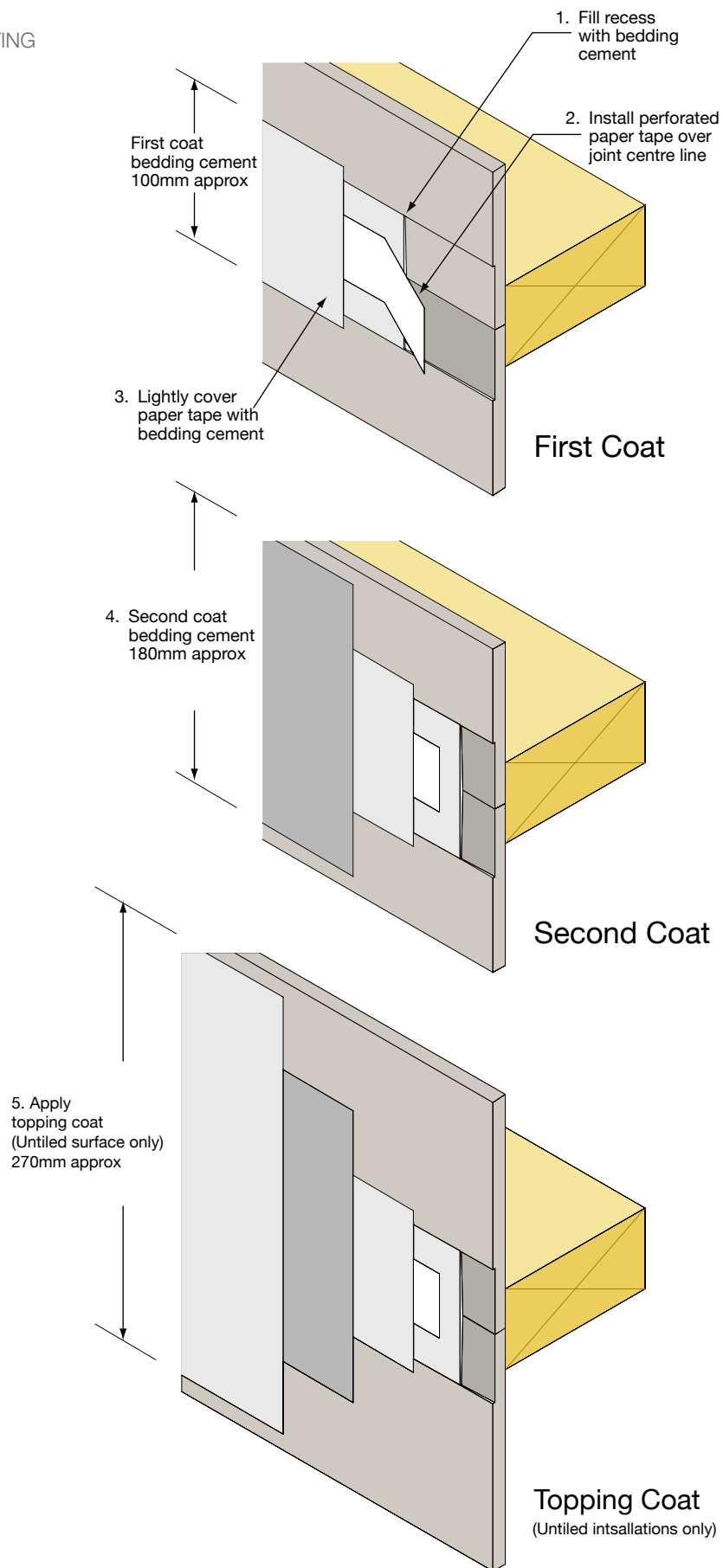
**FIGURE 18**  
STEEL AND TIMBER



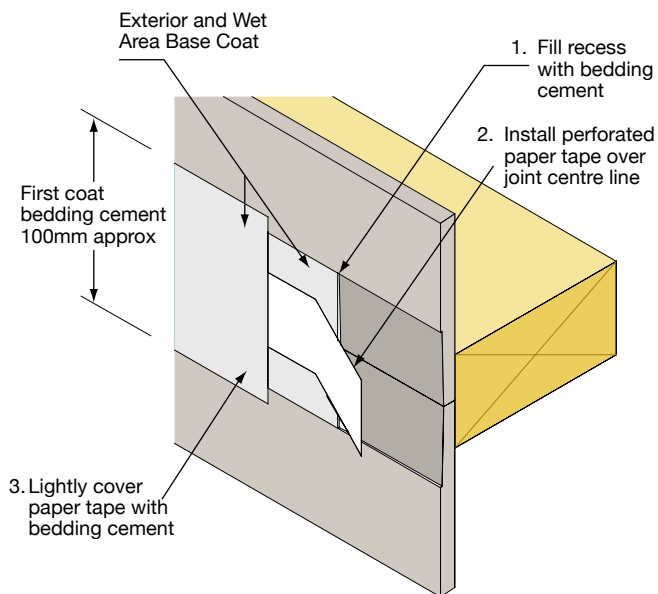
**FIGURE 20**  
BACKING STRIP RIVETED



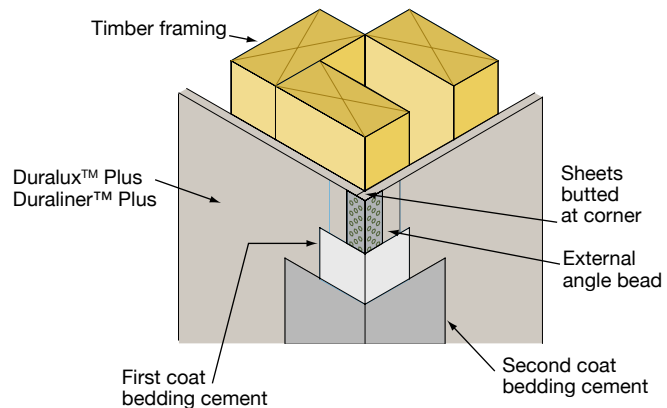
**FIGURE 21**  
FLUSH JOINTING



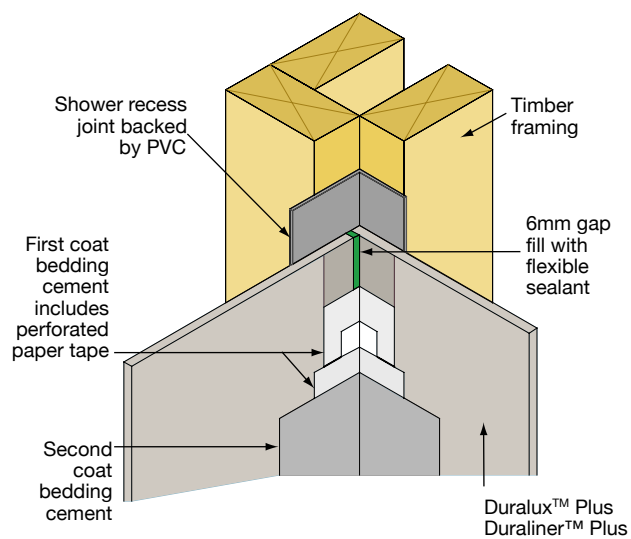
**FIGURE 22**  
WET AREA JOINTING



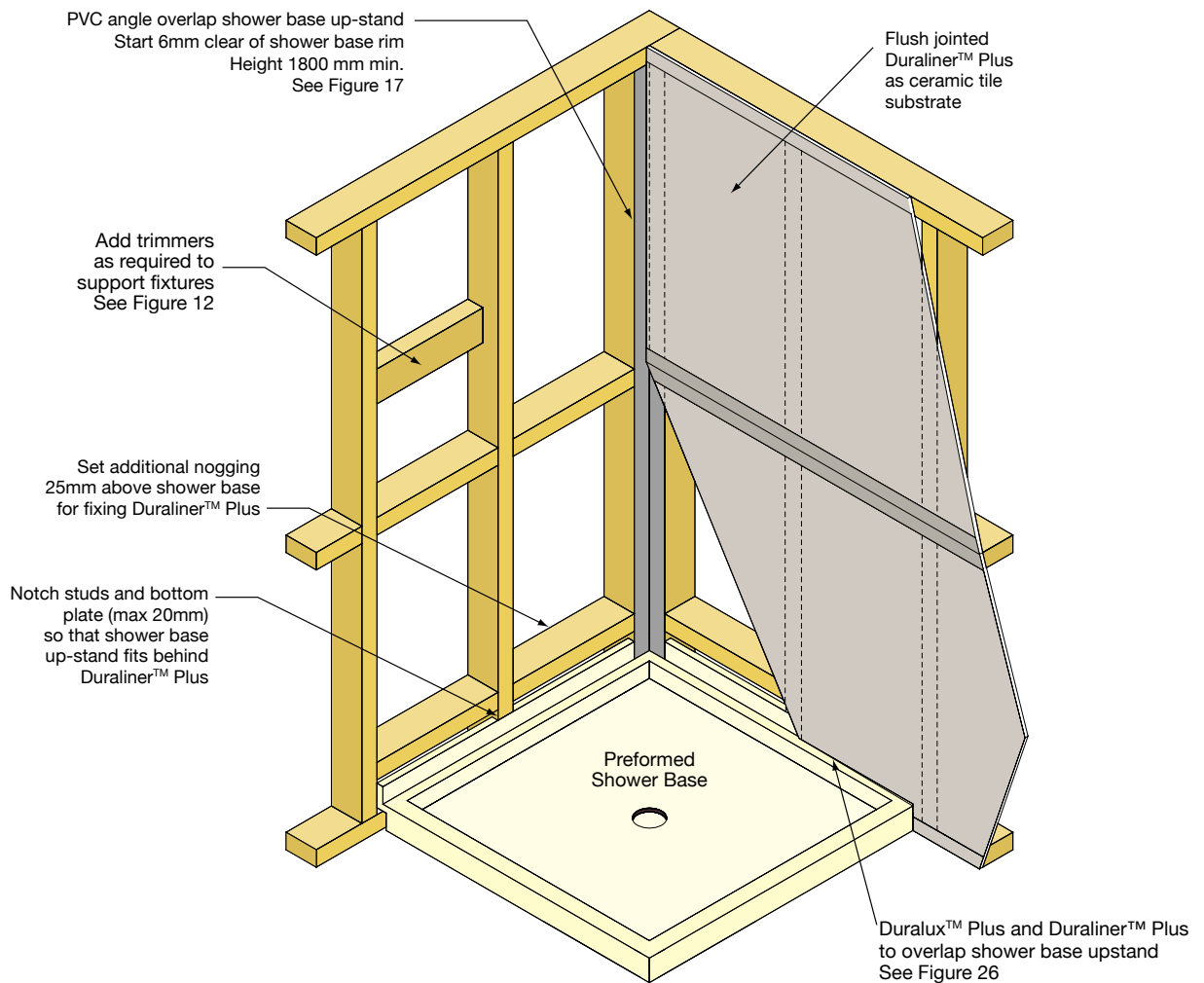
**FIGURE 24**  
FLUSH JOINTING EXTERNAL CORNER



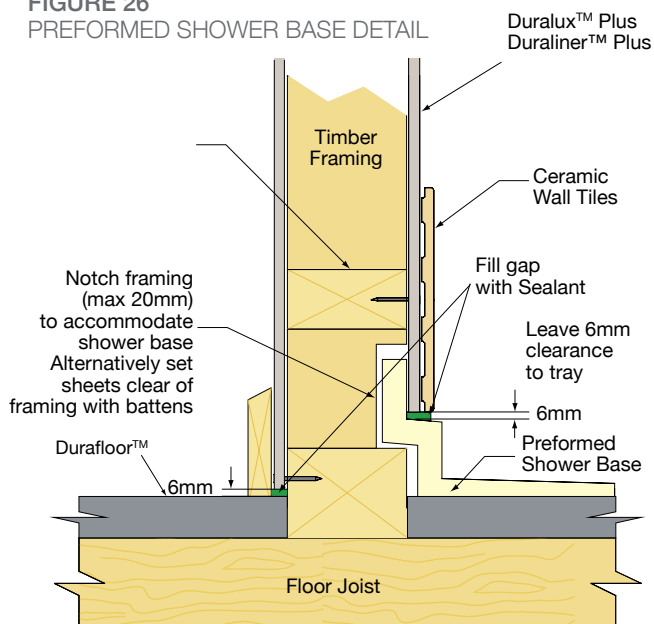
**FIGURE 23**  
FLUSH JOINTING INTERNAL CORNER



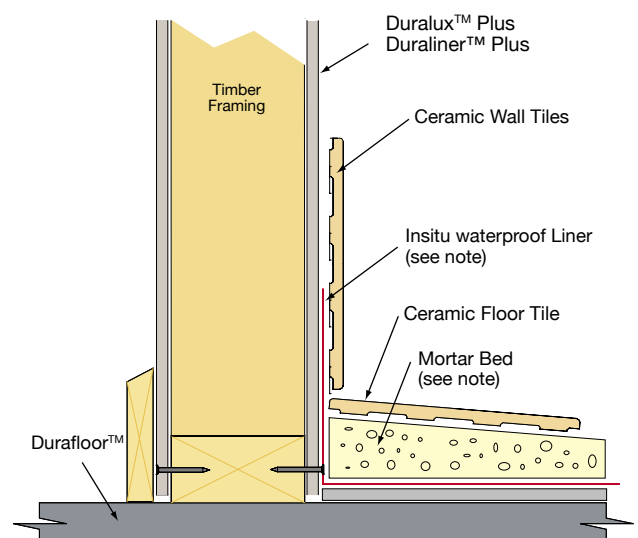
**FIGURE 25**  
SHOWER RECESS DETAIL



**FIGURE 26**  
PREFORMED SHOWER BASE DETAIL

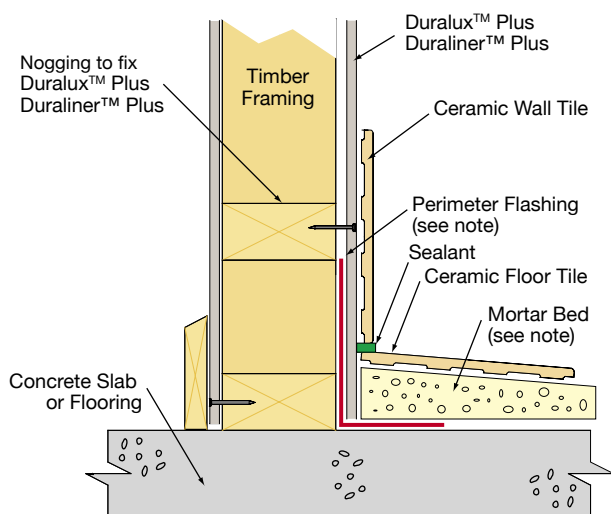


**FIGURE 27**  
INSITU WATERPROOF MEMBRANE DETAIL

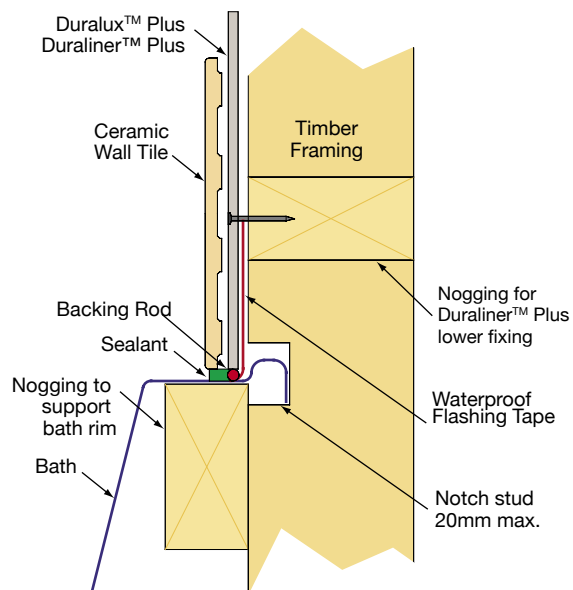




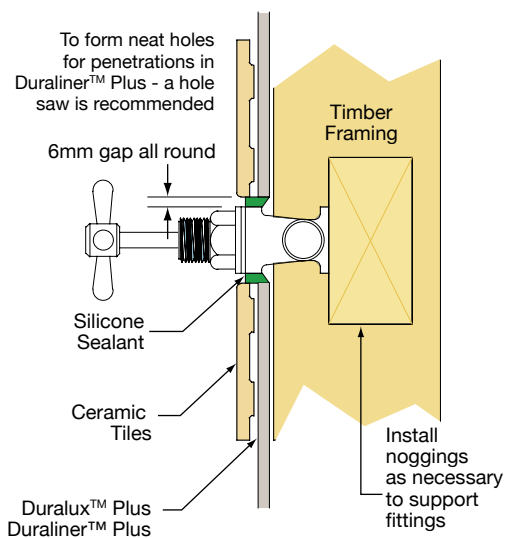
**FIGURE 28**  
PERIMETER FLASHING DETAIL



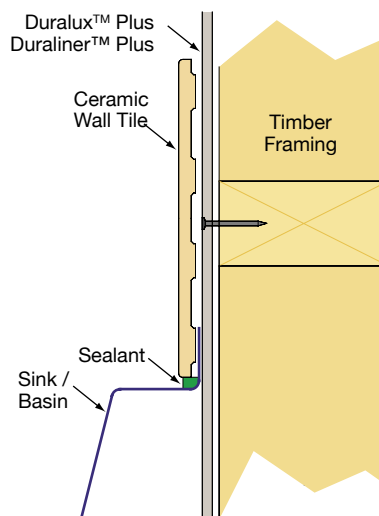
**FIGURE 30**  
BATH RIM DETAIL



**FIGURE 29**  
SEALING PREPARATION DETAIL



**FIGURE 31**  
BASIN FLANGE DETAIL



## WARRANTY

**Etex Australia Pty Ltd** NZ warrants, subject to the Conditions and Notes set out below, that its products be:

- 1) Free from defects caused by defective materials or workmanship (manufacturer); and
- 2) Resistant to rotting, fire and cracking,

For the following period from the date of purchase of each product:

- 25 years for Nuline™ Plus, Stratum™ and Duraplank™ ranges
- 15 years for Montage™
- 50 years for DurabARRIER (when used as bracing sheets)
- 15 years for all other products.

If you purchase any **Innova Fibre Cement (NZ)** product and find that it does not meet the above warranty during the relevant warranty period, **Innova Fibre Cement (NZ)** will at its option, repair or replace the product, supply equivalent replacement products or reimburse the purchase price of the product, subject to receiving a valid claim, product inspection and confirmation of the existence of a defect by **Innova Fibre Cement (NZ)**. We will bear the cost of any such repair, replacement or refund.

### CONDITIONS

- i) This warranty is non-transferable. To claim under this warranty, you must submit proof of purchase and a written claim to **Innova Fibre Cement (NZ)** at the following address:

27 Accent Drive, East Tamaki, Auckland  
Postal Address PO Box 76695, Manukau City, Auckland

- ii) The product must be installed and maintained in accordance with the relevant **Innova Fibre Cement (NZ)** literature current and available at the time of purchase. All additional products used in conjunction with the **Innova Fibre Cement** product(s), including accessories, jointing systems and coatings must be applied or installed according to the relevant manufacturer's instructions.
- iii) Claims must be submitted in writing within 30 days of the defect becoming reasonably apparent. If the defect is detected prior to installation, the claim must be submitted prior to installation.
- iv) Your sole remedy under this warranty is the repair or replacement of the product, supply of equivalent replacement product or reimbursement of the purchase price as described above. **Innova Fibre Cement (NZ)** is not liable for any damage or losses (direct or indirect) including (without limitation) any property damage or personal injury, economic loss or loss of profits, consequential loss arising in contract or negligence or howsoever arising.
- v) **Innova Fibre Cement (NZ)** is not liable for any claims, damages or defects arising from or attributed to:
  - poor workmanship, poor design or detailing of the project,
  - products not supplied by **Innova Fibre Cement (NZ)**,
  - settlement or structural movement or movement of materials to which the product is attached,
  - incorrect design of the structure,
  - acts of God, including but not limited to floods, cyclones, earthquakes or severe weather or unusual climate conditions,
  - performance of coatings or paints applied to the product,
  - normal wear and tear, growth of mould, mildew, fungi, bacteria or any other organism on the product's surface (exposed or unexposed).

Failure to comply with all relevant requirements of the current New Zealand Building Code regulations and standards in the design and construction of the project.

Please note that:

- If any remedy under this warranty involves recoating or painting of **Innova Fibre Cement (NZ)** products, there may be slight colour differences between the replacement product and the original products due to the effect weathering and variations in materials over time.
- **Innova Fibre Cement (NZ)** does not warrant any product's suitability for any purpose or ability to comply with the relevant conditions set out in the New Zealand Building Code. It is the responsibility of the building designer to ensure that the products used are suitable for the intended project and that specific design is conducted where appropriate. All warranties, conditions, liabilities and obligations other than those specified in this warranty are excluded to the fullest extent allowed by the law.
- The instructions and recommendations in **Innova Fibre Cement (NZ)** literature are based on good building practice, but are in no way an exhaustive statement of all relevant information and are subject to conditions above. **Innova Fibre Cement** has tested the performance of its products when installed in accordance with the product's technical specification, in accordance with the standards required by the New Zealand Building Code.

### DISCLAIMER

The successful performance of the relevant product depends on a number of factors outside the control of **Innova Fibre Cement (NZ)**. As such, **Innova Fibre Cement (NZ)** shall not be liable for the recommendations made in its literature and the performance of the products/systems including its suitability for any purpose or ability to comply with the relevant conditions set out in the New Zealand Building Code. It is the responsibility of the building designer to ensure that the details and recommendations provided in the relevant **Innova Fibre Cement (NZ)** installation guide are suitable for the intended project and that specific design is conducted where appropriate.

The instructions and recommendations in **Innova Fibre Cement (NZ)** literature are based on good building practice, but are in no way an exhaustive statement of all relevant information and are subject to conditions above. **Innova Fibre Cement** has tested the performance of its products when installed in accordance with the product's technical specification, in accordance with the standards required by the New Zealand Building Code. Those test results demonstrate the products compliance with the performance criteria set out by the New Zealand Building Code.



## CONTACT

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INNOVA FIBRE CEMENT  
PO BOX 76695  
MANUKAU CITY 2241

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TELEPHONE / 09 273 1457  
FREE PHONE / 0800 424234

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WWW.INNOVAFIBRECEMENT.CO.NZ

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INNOVA HAS A TEAM OF  
TECHNICAL SPECIALISTS  
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BUILDERS, DEVELOPERS AND  
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DURASHEET™ / Fibre cement sheet for exterior applications.

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DURAPLANK™ / Woodgrain and smooth fibre cement plank for  
exterior applications.

DURAGRID™ / A lightweight facade giving a modern and durable  
finish.

DURAGROOVE™ / A vertically grooved cladding.

DURASCAPE™ / A base sheet with a 5mm shiplap join.

DURALINER™ / Interior lining suitable as a substrate for tiles and  
is ideal for wet areas.

NULINE™PLUS / Weatherboard cladding system.

MONTAGE™ / A pre-finished versatile facade  
system that can be used internally and externally.

STONESHEET™ / Fibre cement stone slip substrate.

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SAFE WORKING PRACTICES - PLEASE WEAR A P1 OR P2  
MASK AND SAFETY GOGGLES (APPROVED TO AS/NZW1337  
STANDARDS) WHILST CUTTING OR INSTALLING DURAGRID™.  
DURAGRID™ CAN BE SAFELY HANDLED DURING UNLOADING  
OR STACKING WITHOUT THE USE OF THESE PRECAUTIONS.

CLEANING UP - ALWAYS WET DOWN YOUR WORK AREA WHEN  
CUTTING DURAGRID™, TO ENSURE THAT DUST IS MANAGED.  
DISPOSE OF ANY VACUUMED DUST WITH CARE AND USING  
CONTAINMENT PROCEDURES.