

# CDS PRE-FINISHED WALLING



FC:502

EXTERNAL CLADDING AND INTERNAL FEATURE WALL LININGS

JUNE 2011

The Cemintel Designer Series™ (CDS) pre-finished walling system combines a modern contemporary appearance with the time and effort saving of a pre-finished panel, and a fast, easy to use installation system to deliver outstanding exterior cladding and interior feature wall solutions for lightweight stud framed residential applications.

**cemintel**<sup>TM</sup>  
fibre cement systems

**designer**<sup>TM</sup>  
SERIES

**CSR**

## CONTENTS

Description	2
Applications	2
Advantages	2
System Overview	3
Components	4 – 7
Design Considerations	8 – 11
Builder's Installation Checklist	12
Framing & Panel Set-Out	13 – 14
Panel Preparation & Handling	15
Installation Procedure	16 – 21
Sealing Joints & Finishing	22
Installation Details	23 – 31
Health & Safety, Guarantee & Contact Details	32

## DESCRIPTION

The Cemintel Designer Series™ (CDS) pre-finished walling system combines a contemporary appearance with a simple installation system to deliver outstanding cladding and feature wall solutions for residential buildings.

Cemintel Designer Series™ (CDS) panels are pre-finished using a durable multi-layer process, eliminating the need for on-site coating. Panels are tongue and groove profiled along top and bottom edges (long horizontal edges), and fit neatly together to form a waterproof joint. Vertical aligned joints are formed at the ends of the panels and are sealant filled.

The CDS system features a ventilated and drained cavity which is a proven and highly effective method of weatherproofing buildings. The CDS system requires little change to Australian building practices and accepts industry standard aluminium and timber framed windows.

The Cemintel Designer Series™ (CDS) system has been issued with a CodeMark™ Certificate of Conformity. For current certificate information, please refer to [www.global-mark.com.au](http://www.global-mark.com.au).

## APPLICATIONS

The Cemintel Designer Series™ (CDS) pre-finished walling system may be used for timber framed buildings of up to two storeys that meet the geometric limits of AS4055.

It is ideal as an external wall cladding for new homes with either slab-on-ground or elevated timber/concrete floor construction, including duplex and townhouse construction, extensions and upper storey additions, and applications where residential construction techniques are appropriate. It is also easily integrated with other external materials such as Hebel PowerPanel™, Cemintel™ fibre cement and PGH brick veneer finishes.

The CDS system is also ideal for creating feature walls for internal applications.

## ADVANTAGES

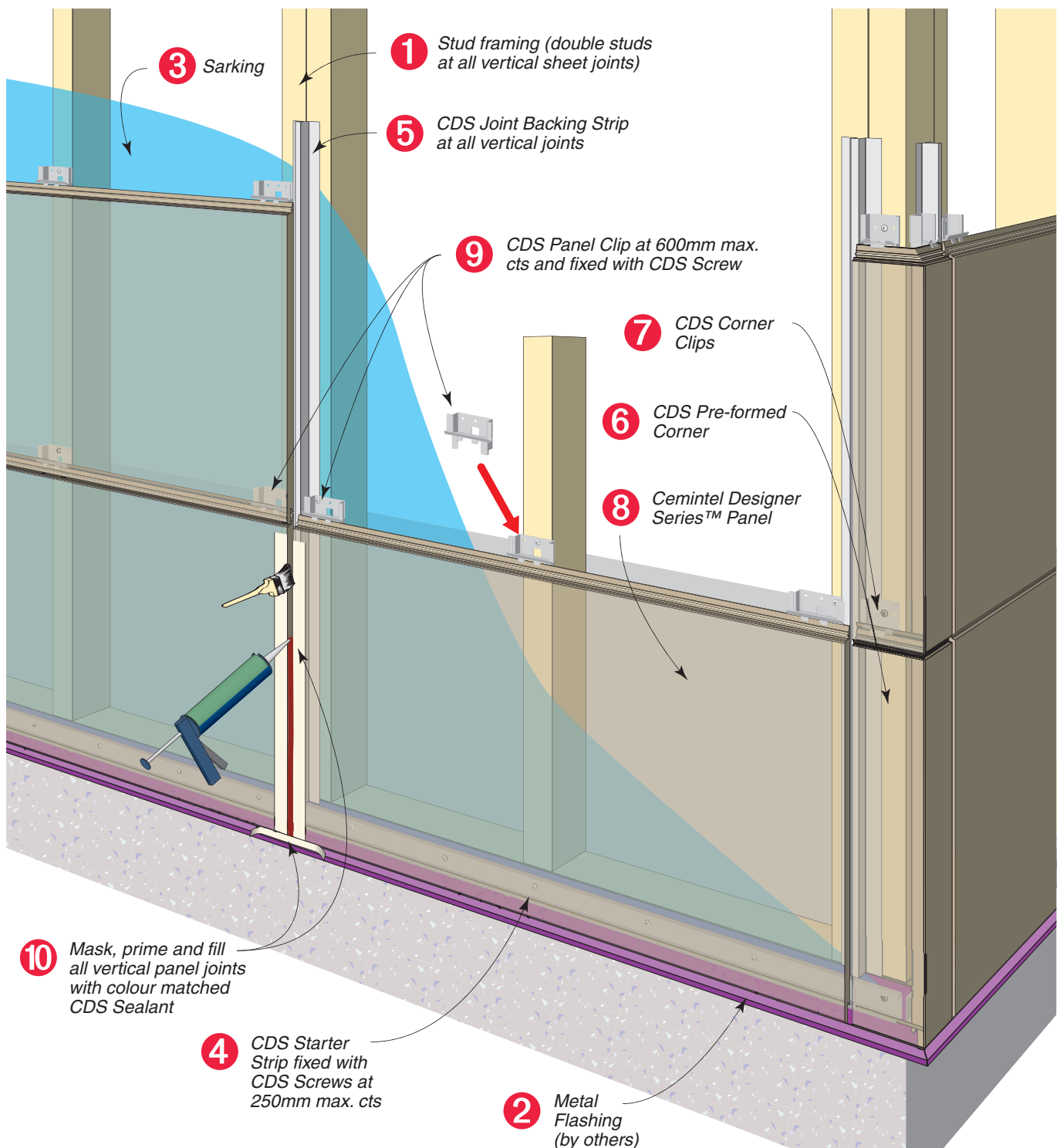
Cemintel Designer Series™ (CDS) pre-finished walling system features include:

- An ultra-modern contemporary appearance to deliver individual differentiation in building designs.
- Pre-finished panels speed up the construction process, reduce on-site labour, reduce supervision requirements and trade coordination delays.
- Pre-finished panels provide quality factory checked finishes to deliver higher customer satisfaction and reduce call backs.
- Extensive range of smooth, textured and profiled surface finishes in attractive colour tones to meet today's customer tastes.
- Compatible with cost effective, industry standard lightweight stud wall construction.
- Suitable for integration with industry standard window and door frames.
- Has simple components and construction techniques to ensure fast and easy assembly.
- Results in an attractive sealed joint finish.
- Pre-fabricated external corner profiles assist quick and easy installation and produce a high quality finish. No additional reinforcing required to corners.

# SYSTEM OVERVIEW

## INSTALLATION FEATURES

- CDS Panels have complementary tongue and groove profiles along the horizontal edges with an in-built flexible sealing strip.
- CDS Panel Clips fit over the lower panel tongue, and accept and retain the groove of the upper panel providing weathertight invisible fixing.
- The CDS Pre-formed External Corners are easy to install using CDS Corner Clips, and provide an attractive matching finish.
- Pre-finished CDS Panels mean virtually no finishing work required. Simply fill all vertical joints with colour matched sealant and finish off with the matching touch-up kits.





# COMPONENTS

## CEMINTEL DESIGNER SERIES™ PRE-FINISHED PANELS

Cemintel Designer Series™ panel is a cement-bonded fibrous wood particle panel that is pressed with the required surface texture and cut to length. The long horizontal edges of the panels are machined with complementary tongue and groove profiles and a sealing strip bonded onto the tongue. Multiple finishing coats are applied to the exterior surface, producing a ready to install and highly durable pre-finished panel. Supplied in a pack of 2 panels. Refer to Table 1 for finishes and order numbers.

## MATERIAL PROPERTIES

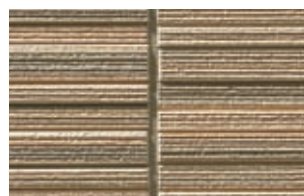
### Manufacturing Tolerances

Specification	Size
Thickness (nominal)	16 ±1.2 mm
Mass (nominal)	18.86 kg/m <sup>2</sup>
Panel Length	3030 ±1 mm
Effective Cover (width nominal)	455 ±1 mm
Overall Width (nominal)	470 ±1mm
Diagonals (difference max.)	±2 mm

## COLOURS AND STYLES

Cemintel Designer Series™ pre-finished panels are available in the following range of modern styles, colours and textures. There is also a range of colour matched accessories, including Preformed External Corner profiles, Joint Sealant and Touch-up Paint kits to speed installation and enhance the project finish and appearance.

**i-Cube – Zircon**



**Slimline – Slate**



**i-Cube – Quartz**



**Woodgrain – Maple**



**i-Cube – Onyx**



**Woodgrain – Oak**



**Textured – Ebony**



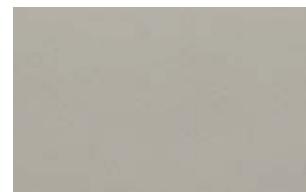
**Smooth – Cream**



**Textured – Alpine**



**Smooth – Mocha**



**Textured – Sandstone**



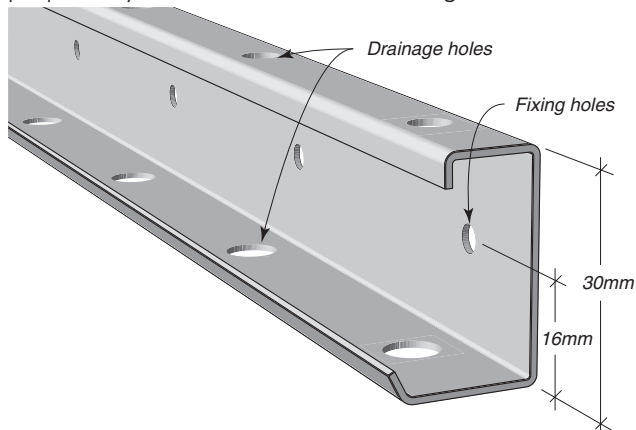
**Table 1: CDS Panel & Colour Matched Accessory  
Ordering Details**

Product Description & Colour	Cemintel™ Order N°				
	Panel (Pack of 2)	Pre-formed Corner (Pack of 6)	Touch-up Paint Set (Primary Kit)	Touch-up Paint Set (Secondary Kit)	Joint Sealant (10 x 320ml Tubes)
i-Cube – Zircon	105308	105316	105345	105352	105256
i-Cube – Quartz	105306	105315	105344	105351	105255
i-Cube – Onyx	105307	105317	105346	105353	105257
Textured – Ebony	105303	105312	105341	105348	105323
Textured – Alpine	105304	105313	105342	105349	105324
Textured – Sandstone	105302	105311	105260	105347	105322
Slimline – Slate	105305	105314	105343	105350	105254
Woodgrain – Maple	105566	105581	105585	105587	105583
Woodgrain – Oak	105567	105582	105586	105588	105584
Smooth – Cream	105290	105309	105258	N/A	105299
Smooth – Mocha	105301	105310	105259	N/A	105300



## CDS STARTER STRIP

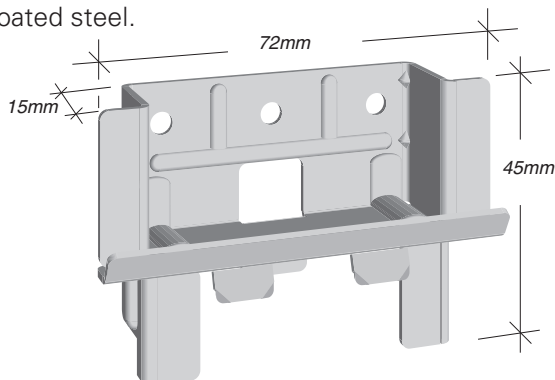
Steel profile used at the base to locate the first row of panels. Manufactured from 1.2 BMT steel with proprietary corrosion resistant coating.



Order N°	Pack Quantity	Length
105363	10	3030mm

## CDS PANEL CLIP

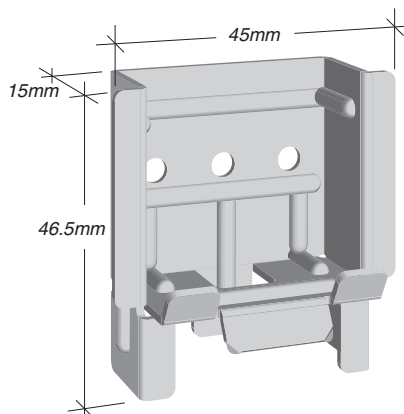
CDS Panels Clips are fixed to the framing to retain the top and bottom horizontal edges of panels. Manufactured from proprietary corrosion resistant coated steel.



Order N°	Quantity
105364	50

## CDS CORNER CLIP

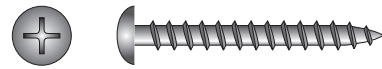
Clips are fixed to the framing to retain the top and bottom edges of CDS Pre-formed External Corner. Manufactured from proprietary corrosion resistant coated steel.



Order N°	Pack Quantity
105365	24

## CDS SCREW

For fixing CDS Starter Strip, CDS Clips and other components to timber framing. Stainless steel 410 grade and clear coated. Length 35mm.



Order N°	Description	Pack Quantity
105366	For timber frame.	500

## CDS NAILS

For fixing CDS Panels at soffit line and other locations where required. Ribbed shank, flat head, stainless steel 304 grade, 75mm length.



Order N°	Quantity
105298	230

## CDS PRE-FORMED EXTERNAL CORNER

The CDS Pre-formed External Corner is manufactured in designs and colours to match the available panels. Provides a strong, attractive and weathertight finish for external corners. Internal 70 x 70mm. Cover nom. 86 x 86 x 455mm.



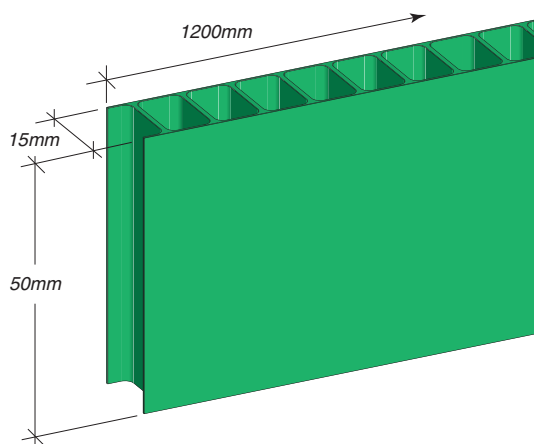
Order N°	Pack Quantity
See Table on Page 4	6

## SARKING & INSULATION

Please refer to detailed information in the Design Considerations section of this publication.

## CDS SPACER

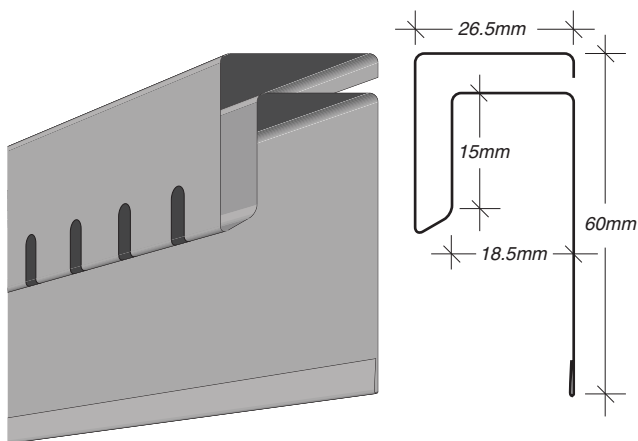
For packing between framing and panels at eaves and other locations wherever face nailing is required. Manufactured in extruded plastic. Size 15 x 50 x 1200mm.



Order N°	Pack Quantity
105362	50

## CDS EAVES TRIM

The CDS Eaves Trim is manufactured in complementary colours to provide a neat and attractive finish at eaves/soffit line. Powder coat finish on 0.35mm BMT proprietary corrosion resistant coated steel. Length 3030mm.

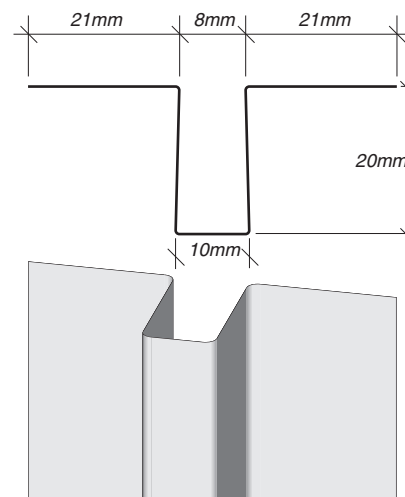


Order N°	Colour	Pack Quantity
105356	Charcoal	5
105357	Pearl	5
105358	Silver	5

## CDS JOINT BACKING STRIP – DOUBLE FLANGE

Used at vertical joints to fill cavity and provide a backing for sealant. Manufactured in 0.3mm BMT proprietary corrosion resistant coated steel.

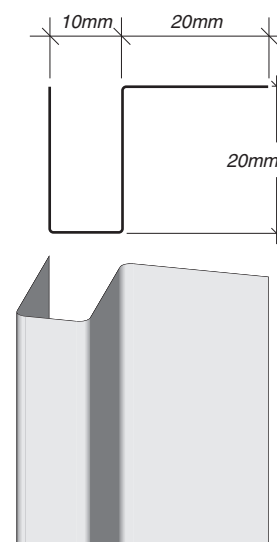
Length 3030mm.



Order N°	Pack Quantity
105359	10

## CDS JOINT BACKING STRIP – SINGLE FLANGE

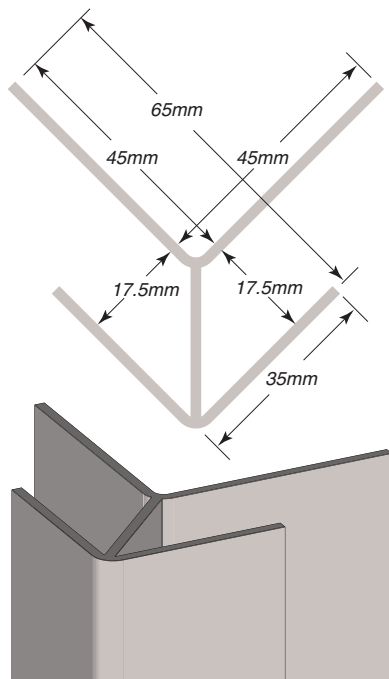
Used at vertical internal corner joints and at openings to fill cavity and provide a backing for sealant. Manufactured in 0.3mm BMT proprietary corrosion resistant coated steel. Length 2000mm.



Order N°	Pack Quantity
105360	10

### CDS EXTERNAL CORNER TRIM

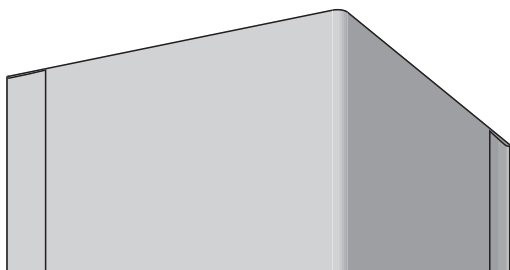
Anodised aluminium extrusion used to dress and finish external corners. Size 65 x 65 x 3030mm.



Order N°	Colour	Pack Quantity
105295	Charcoal	4
105296	Pearl	4
105297	Silver	4

### CDS INTERNAL CORNER BACKING

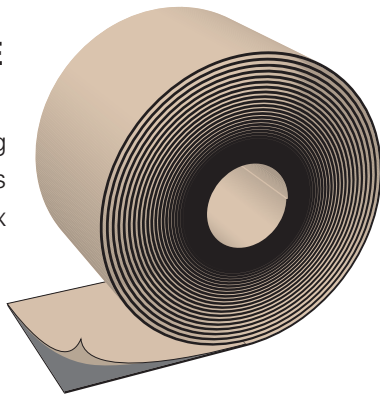
Metal angle flashing used at internal corners. Proprietary corrosion resistant coated steel. Size 50 x 50 x 3030mm.



Order N°	Pack Quantity
105355	5

### CDS DOUBLE SIDED ADHESIVE TAPE

Used to seal sarking and flashing at various locations. Size 50mm x 20m roll.



Order N°	Pack Quantity
105354	10 x 20m

### CDS JOINT SEALANT – COLOUR MATCHED

Colour matched sealant to fill all vertical joints and seal around window and door openings. Pack supplied with primer and brush.



Order N°	Pack Quantity
See Table on Page 4	10 x 310ml Tubes + 1 x 150ml Primer + 1 Brush

### CDS PANEL TOUCH-UP PAINT SET

Touch-up paint, colour matched to ensure a perfect finish. Used for nail heads, cut edges at window heads and other visible blemishes. Primary kit provides up to 3 colours suitable for the raised sections of the pattern (highlights). Secondary kit provides a colour suitable for depressed sections of the pattern (shadows where appropriate). Tins 80ml. Supplied with brush and stirring stick.



Product Description & Colour	Order N° Primary Kit	Order N° Secondary Kit
i-Cube – Zircon	105345	105352
i-Cube – Quartz	105344	105351
i-Cube – Onyx	105346	105353
Textured – Ebony	105341	105348
Textured – Alpine	105342	105349
Textured – Sandstone	105260	105347
Slimline – Slate	105343	105350
Woodgrain – Maple	105585	105587
Woodgrain – Oak	105586	105588
Smooth – Cream	105258	N/A
Smooth – Mocha	105259	N/A



# DESIGN CONSIDERATIONS

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 Designer Series™ (CDS) pre-finished walling system is suitable for the particular requirements of any given project.

The CDS system has been issued with a CodeMark™ Certificate of Conformity. For current certificate information, please refer to [www.global-mark.com.au](http://www.global-mark.com.au).

## FRAMING

The Cemintel Designer Series™ (CDS) pre-finished walling system has been evaluated for use in all Australian wind zones up to and including 'Cyclonic C3'.

The CDS system can be fixed to timber framing. As a minimum requirement, framing shall be in accordance with the following standard:

- AS1684 – Residential Timber-Framed Construction.

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 as it is prone to shrinkage and warping.

Standard framing techniques are appropriate with the addition of double studs at all vertical panel joints to allow for fixing of clips each side of joint.

## TERMITE PROTECTION

As 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.

## WALL BRACING

CDS panels are indirectly attached to the structural framing using clips and spacers. As a consequence, they are not designed to provide wall 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 CDS panels must be sheathed to maintain a uniform fixing plane. Note that window set-out will be affected.

## SERVICES

The CDS system will accommodate services that are run through the framing as per standard practice.

## PENETRATIONS

Penetrations in the CDS panels must be neatly cut using appropriate tools such as a saw, drill or hole saw. Penetrations should be prepared with a clearance of 8-10mm all around and the gap must be fully sealed with CDS Sealant.

## COASTAL AREAS

The Cemintel Designer Series™ (CDS) system may be used in some coastal areas. Corrosivity zones are detailed in AS4312, and CDS may be used in zones up to and including C4 - High. It is recommended that the building designer assess the site in accordance with the standard and local conditions.

CDS is NOT suitable for Corrosivity Zone C5 – Very High. This includes 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. It also includes aggressive industrial areas where the environment may be acidic with a pH of less than 5.

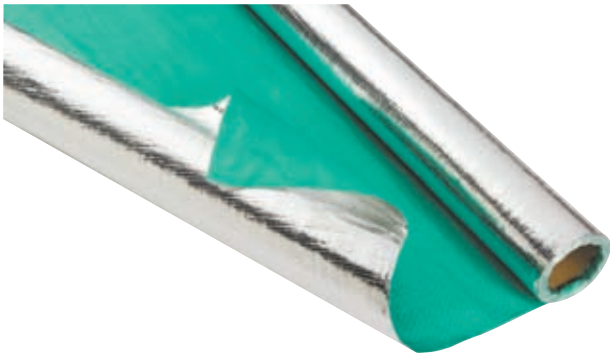
Consideration must also be given to local weather and topographical features that can cause an increase in the distance that salt spray can travel beyond the limits detailed in AS4312.

In Category C3 and above, all walls which are protected by soffits above must be washed down twice per year, to remove salt and debris build-up, particularly around window/door openings.

## SARKING

Sarking is an integral part of the CDS system. Wind forces can produce lower air pressures within buildings than on the outside, assisting to force water through gaps in the building envelope such as around penetrations and joints, even at low wind speeds. Condensation can form on surfaces inside the cavity in some conditions.

The CDS system incorporates a drained cavity, similar to brick veneer construction. This is highly effective at removing condensation and any incidental moisture from the cavity, thereby ensuring that the components within the cavity can dry out.



Condensation is a complex problem, and can occur under a variety of conditions, not just cold weather. Literature on this subject is available from CSIRO/BRANZ/ASHRAE and should be consulted when building in areas where condensation is likely to occur.

Sarking must be designed and installed in accordance with AS/NZS4200 Part 1: Materials, and Part 2: Installation. Sarking with a vapour barrier classification of Medium or Low is recommended for most climates.

Also refer to detailed information later in this Design Considerations section.

Bradford foil products are used to provide thermal insulation and moisture protection. Thermofoil 733 is a double reflective foil for high thermal rating.

For optimum insulation performance, CSR recommends taping all joints in sarking and junctions between sarking and flashings. Also refer to Installation Details.

Bradford Product	Vapour Barrier Classification	Quantity	Order N°
EnviroSeal™ Wall Wrap	Medium	1350mm x 20m roll	13462
Thermofoil 733	Medium	1350mm x 60m roll	81333

## 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 have been calculated in accordance with the methods of the BCA and are given in Table 2.



Bradford Product	Size (mm)	Quantity Batts per Pack	Order N°
Gold Wall Batts R2.1 (70mm)	1160 x 430	6	105209
Gold Wall Batts R2.1 (70mm)	1160 x 580	6	105206
Gold Wall Batts R2.5 (90mm)	1160 x 430	8	105203
Gold Wall Batts R2.5 (90mm)	1160 x 580	8	105202

**Table 2: Insulation & Sarking Selection**

CEMINTEL DESIGNER SERIES				
<ul style="list-style-type: none"> <li>Cemintel Designer Series™ walling system fixed to the outside of framing.</li> <li>Sarking as per table below.</li> <li>Insulation in framing as per table below.</li> <li>Timber Studs at 600mm maximum centres. (Minimum depth to suit insulation thickness)</li> <li>1 layer x 10mm GYPROCK Plasterboard CD to the inside of framing.</li> </ul>				
Insulation	Sarking	Winter Total Wall R-Value	Summer Total Wall R-Value	
(a) BRADFORD 70mm Gold Wall Batts R2.1	BRADFORD ENVIROSEAL Wall Wrap	2.7	2.5	
(b) BRADFORD 90mm Gold Wall Batts R2.5	BRADFORD ENVIROSEAL Wall Wrap	3.2	2.9	
(c) BRADFORD 90mm Gold Wall Batts R2.5	BRADFORD THERMOFOIL 733	3.4	3.1	

### NOTES:

Values are sourced from ICANZ Handbook ( W0311 and W0313) based on an unventilated cavity. Bright side of foil facing stud cavity.

## CONTROL JOINTS

As the CDS panels are indirectly attached to the structural framing using clips and spacers, and sealant filled vertical joints are required at the ends of all panels, i.e. at maximum 3030mm spacings (full panel length), no additional vertical control joints are required. Movement joints provided in framing should be aligned to joints in the panels.

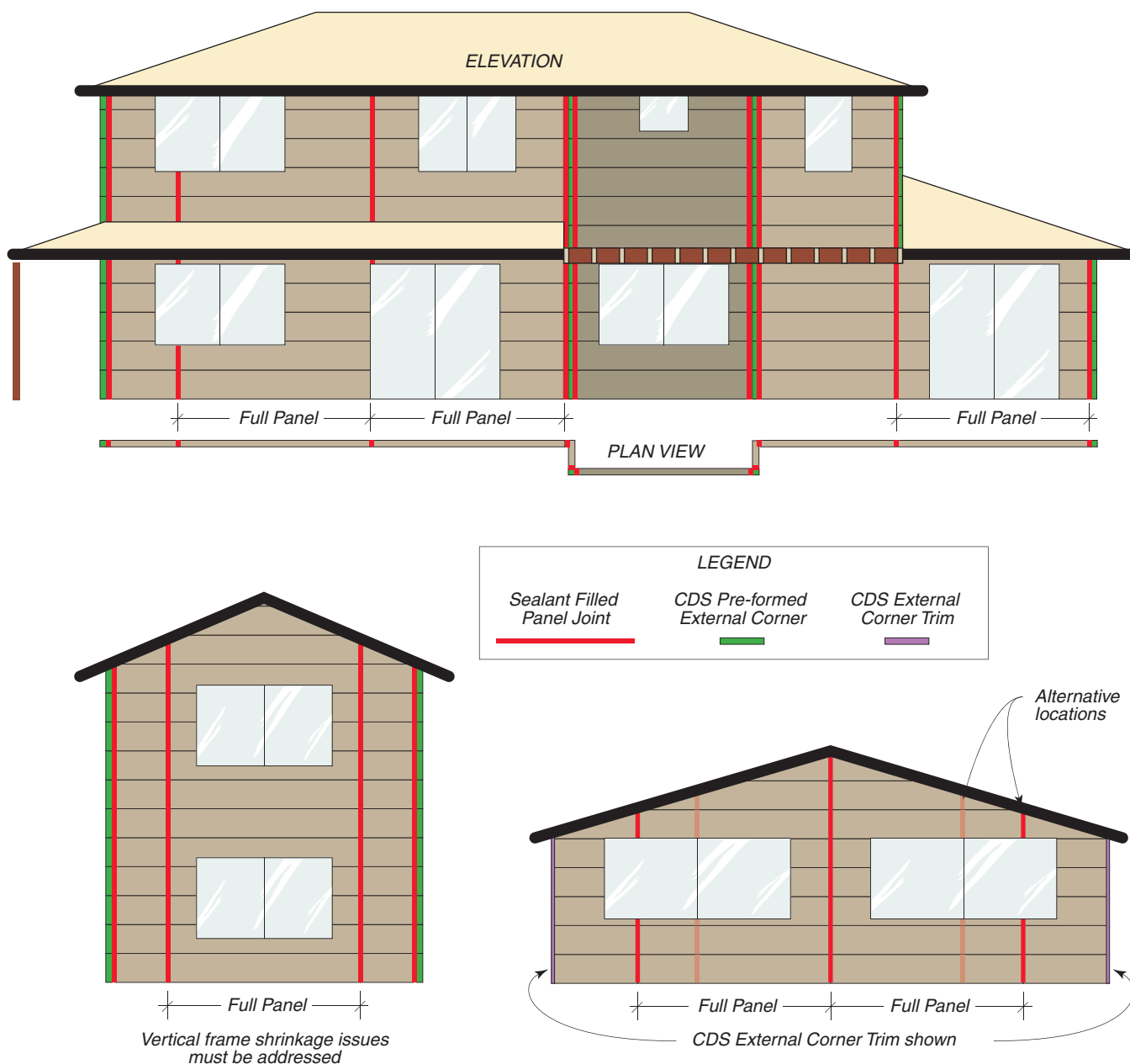
Where frame shrinkage may be a concern, CSR recommends creating a horizontal break in the panelling at first floor level by incorporating verandah or awning roofing or other design elements to create discontinuous panelling.

A control joint must also be installed when a masonry wall adjoins framed construction, and at the junction of framed additions or existing buildings, to allow for differential movement. Refer to 'Installation Details'.

## VERTICAL PANEL JOINTS

Vertical joints in panels must be aligned and extend for the full height of continuous panelling. As the joints are expressed and sealant filled, consideration to the positioning of joints is important for aesthetic reasons. The number and/or aesthetic impact of joints can be reduced by utilising changes in direction at corners for vertical joints or by using the preformed corners. Placing joints at sides of openings or above doors or full length windows can also reduce the impact of joints.

### FIG 1: Typical Layout of Vertical Panel Joints





## WINDOW SELECTION

The CDS system is designed to accept standard aluminium or timber framed windows and doors. Aluminium windows MUST NOT have sill drain holes which can direct water into the wall cavity.

The face of the CDS panels will finish 31mm (nominal) in front of the framing (and greater where sheet bracing is used).

Consideration must be given to the depth of the stud framing, the depth of the chosen window frame, and the depth of the timber reveal so as to provide the required clearance at the window jamb to accommodate the panels. Refer to typical window installation details later in this guide.

Jamb flashing is recommended in all cases.

## BUILDING RENOVATIONS

When undertaking building renovations, remove all cladding and sarking from the wall. Ensure the condition of the framing is in accordance with current AS1684 requirements. Install additional studs behind all CDS vertical joints and prepare framing, sarking and flashings as per details in this publication. Install the CDS system in accordance with all requirements in this publication.

## BUILDING ADDITIONS

When undertaking building additions, a movement control joint must be installed at the junction of the current framing and new framing. The current and new framing and cladding systems must be discontinuous at this control joint. Refer to installation details later in this publication.

## LIMITATIONS

The CDS system is unsuitable for the following applications: inclined walls; non horizontal panels: wet areas such as bathrooms and water features; chimney cladding; linings near a fireplace; non-vented parapet cladding; contact with standing snow or ice.

Do NOT apply any paint to the CDS panels other than small amounts of CDS touch-up paint where required. Do NOT apply tiles or other materials to the face of the panels.

For information relating to fire ratings and bushfire zones, please refer to the Cemintel website [www.cemintel.com.au](http://www.cemintel.com.au).

## MAINTENANCE

Regularly inspect panel surfaces and follow wash-down procedures when required. Small blemishes can be repaired using CDS Touch-up Paint.

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

Should surface deterioration occur after extended exposure to UV radiation, the surface can be washed-down and coated with a proprietary clear finish to restore surface protection.

## WASH-DOWN

When cleaning panels, 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 tongue and groove joints.

Use neutral detergent with a soft brush when removing dirty spots from a panel. When diluting the neutral detergent, follow the manufacture's instructions, and use the weakest solution possible.

# BUILDER'S INSTALLATION CHECKLIST

The CDS construction process requires coordination between the builder and the CDS System Installer. The following builder's checklist will assist in making this process run smoothly.

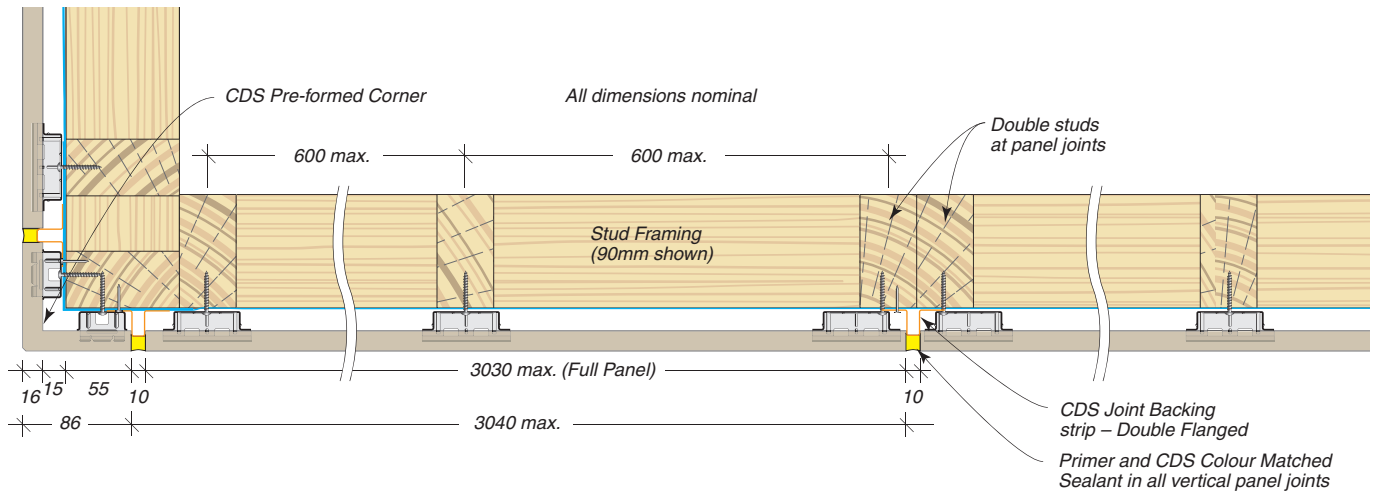
ACTION	COMPLETED
<b>PRE-CLADDING CHECKLIST</b>	
1 Confirm that double studs are appropriately located behind all vertical panel joints.	
2 Confirm that studs are appropriately located to accept preformed corners (when used).	
3 Confirm that studs are appropriately located at internal corners.	
4 Confirm framing alignment is in accordance with AS1684 tolerances and correct if necessary.	
5 Confirm any concrete that may foul the cladding line has been removed, particularly at steps in slabs and isolated columns.	
6 Confirm bracing is in place. NOTE: Where sheet bracing is used behind CDS panels, the entire area must be sheeted to maintain a uniform fixing plane.	
7 Confirm adequate ground clearance to the bottom of the CDS Panels in accordance with Australian Standards.	
8 Confirm that the sarking has been fully and correctly installed, and overlapped and taped at joints.	
9 Confirm windows are front draining type.	
10 Confirm that window placement provides the appropriate clearance for panel installation. (31mm nom. from face of frame to face of CDS Panels).	

ACTION	COMPLETED
11 Confirm all window and door flashings are correctly installed.	
12 Confirm chosen eaves soffit detail and installation has been completed correctly.	
13 Confirm adequate structural support for fixtures such as pergolas and decks has been provided. No loads may be carried by the cladding.	
14 Confirm membranes and flashings for deck areas have been installed in accordance with manufacturer's specifications.	
15 Arrange for a pre-cladding inspection by the appropriate local building authority.	
<b>POST-CLADDING CHECKLIST</b>	
1 Confirm all vertical joints have been neatly filled with approved sealant.	
2 Confirm all visible nail heads have been covered with appropriate CDS Touch-up Paint.	
3 Confirm sealant has been applied to gaps at window jambs and sills.	
4 Confirm all exposed cut edges, such as at window heads, have been protected with two coats of CDS Touch-up Paint.	

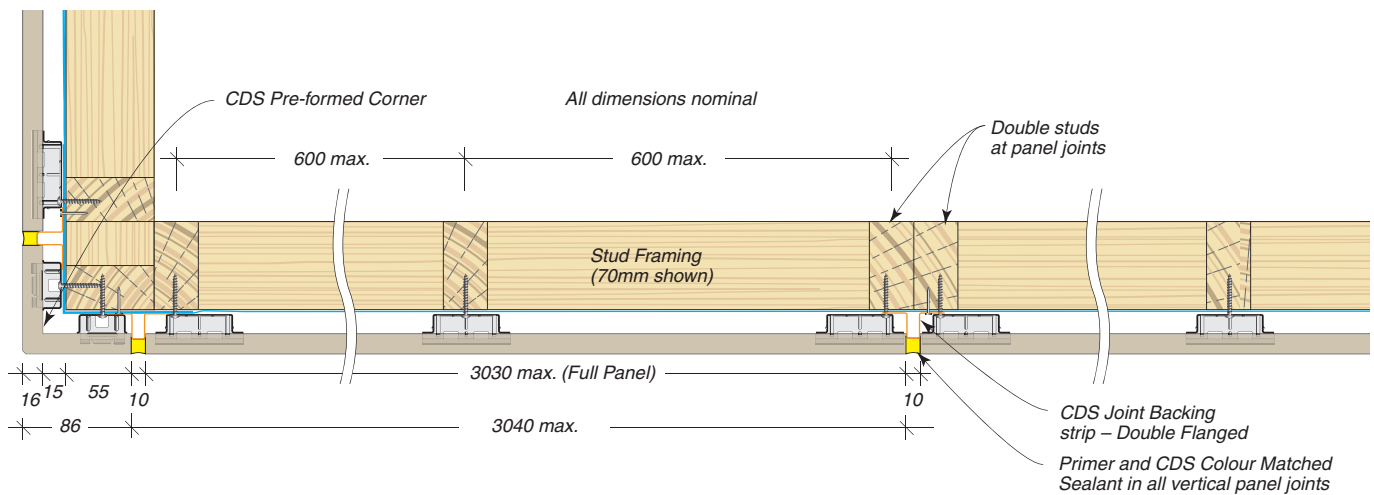
# FRAMING & PANEL SET-OUT

All framing tolerances must be in accordance with AS1684.

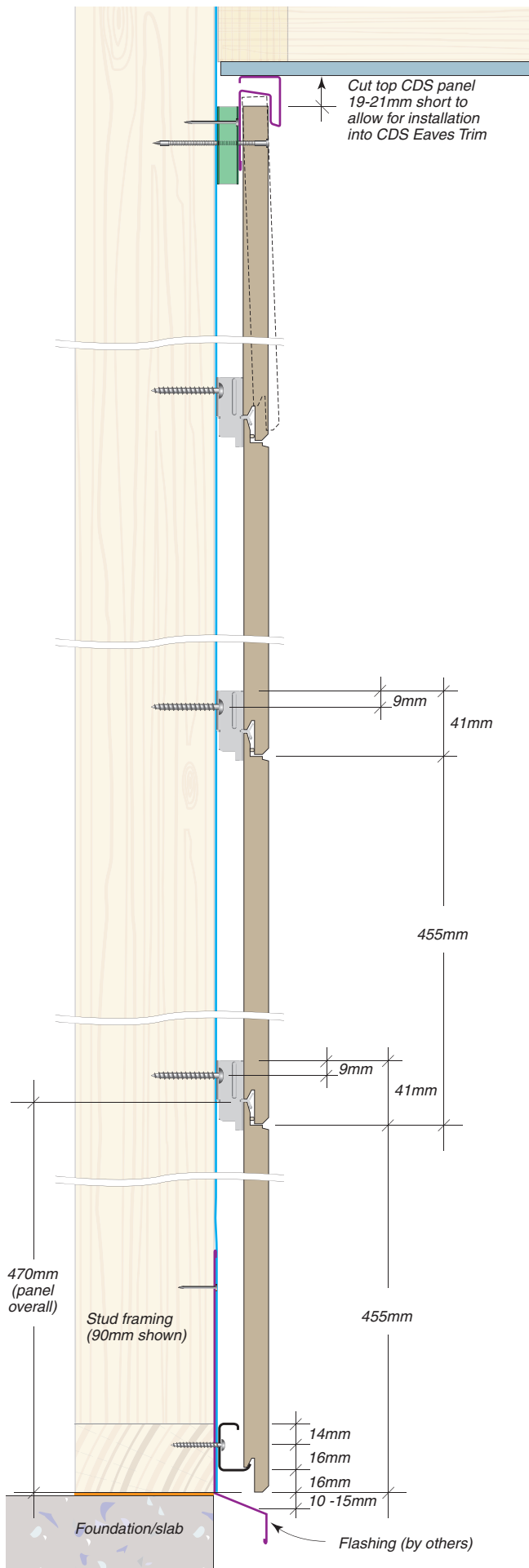
**FIG 2: Typical Framing Set-Out with 90mm Framing and CDS Pre-formed Corners – Plan View**



**FIG 3: Typical Framing Set-Out with 70mm Framing and CDS Pre-formed Corners – Plan View**

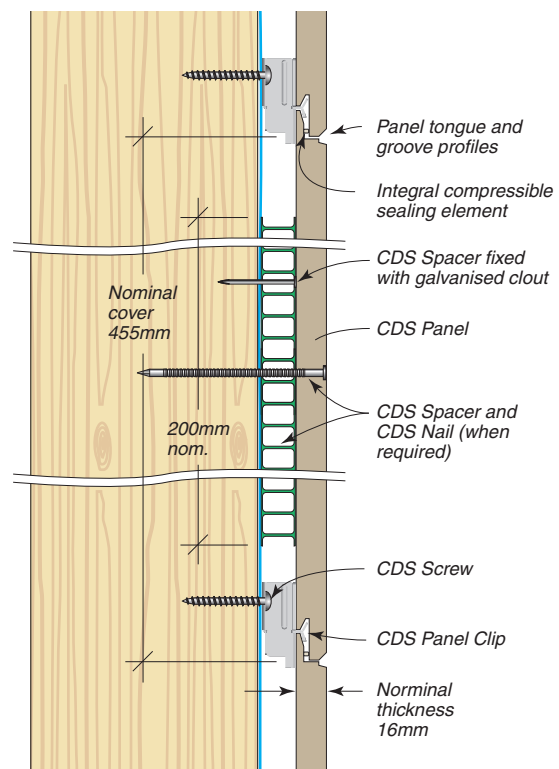




**FIG 4: Typical CDS System Cross Section – Elevation****Table 3: CDS Panel Height Coverage Calculator**

CDS Panel Rows	Coverage Height (mm nominal)
19	8645
18	8490
17	7735
16	7280
15	6825
14	6370
13	5915
12	5460
11	5005
10	4550
9	4095
8	3640
7	3185
6	2730
5	2275
4	1820
3	1365
2	910
1	455

CDS Panel = 455mm nominal height coverage per row.

**FIG 5: Typical CDS System Cross Sectional Detail where Face Nailing is required – Elevation**

# PANEL PREPARATION & HANDLING

## HANDLING & STORAGE

CDS Panels are pre-finished, and must be treated with care. During handling, avoid damage to edges, ends and surfaces.

All CDS Panels must be stacked flat, clear of the ground, and supported at 300mm maximum centres on a level platform.

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.

Panels must be carried on edge.

Panels must be dry prior to fixing and prior to joint sealing.

## 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 two coats of appropriate CDS Touch-up Paint prior to panel installation.

## FACE NAILING PANELS

At nailing points, all panels must be supported by a CDS Spacer Strip of 200mm minimum length. Panels must be pre-drilled to accept nails. Use a 2.5mm timber drill bit, and drill from the front. Nail heads should finish flush with the panel surface. All visible nail heads should be neatly covered with CDS Colour Matched Paint used sparingly. Do NOT use sealant on nail heads.

## PENETRATIONS

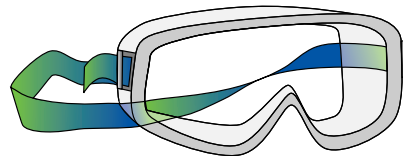
Penetrations in CDS Panels may be cut or drilled prior to installation. Cut from the back or drill from the front. Cut penetrations oversize by 8–10mm all around. Mask, prime and fill cut edges with sealant in accordance with recommended method and products.

## BEVELLED EDGES

The top edge of panels at window sill level may require bevelling. CSR recommends using the FESTO DSC-AGP 125 Diamond Blade Cutting & Grinding Tool.

## SAFETY

When cutting, drilling or grinding CDS Panel 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.



## 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.



FESTO TS 55 EBQ Plunge Cut Saw with guide rail



FESTO DSC-AGP 125  
Diamond Blade Cutting &  
Grinding Tool

Product	Order N°
FESTO TS 55 EBQ Plunge Cut Saw with 1400mm Guide Rail	107231
FESTO Diamond Tipped Blade for TS55 (for cutting CDS Panel, fibre cement sheet, etc.)	107224
FESTO DSC-AGP 125 Diamond Cutting System	107207

# INSTALLATION PROCEDURE

## INSTALLATION OVERVIEW

Install base flashing and screw fix to framing.

Install sarking to AS/NZS4200 Part 2: Installation.

CDS Starter Strip is used at the base of the first row.

CDS Joint Backing Strip is fixed to the framing at the vertical joint location.

CDS Panels are installed horizontally with the lowest row being installed first onto the starter strip and hard against the backing strip.

CDS Panel Clips are placed over the top edge tongue of the panel and screw fixed to framing at centres in accordance with Table 3.

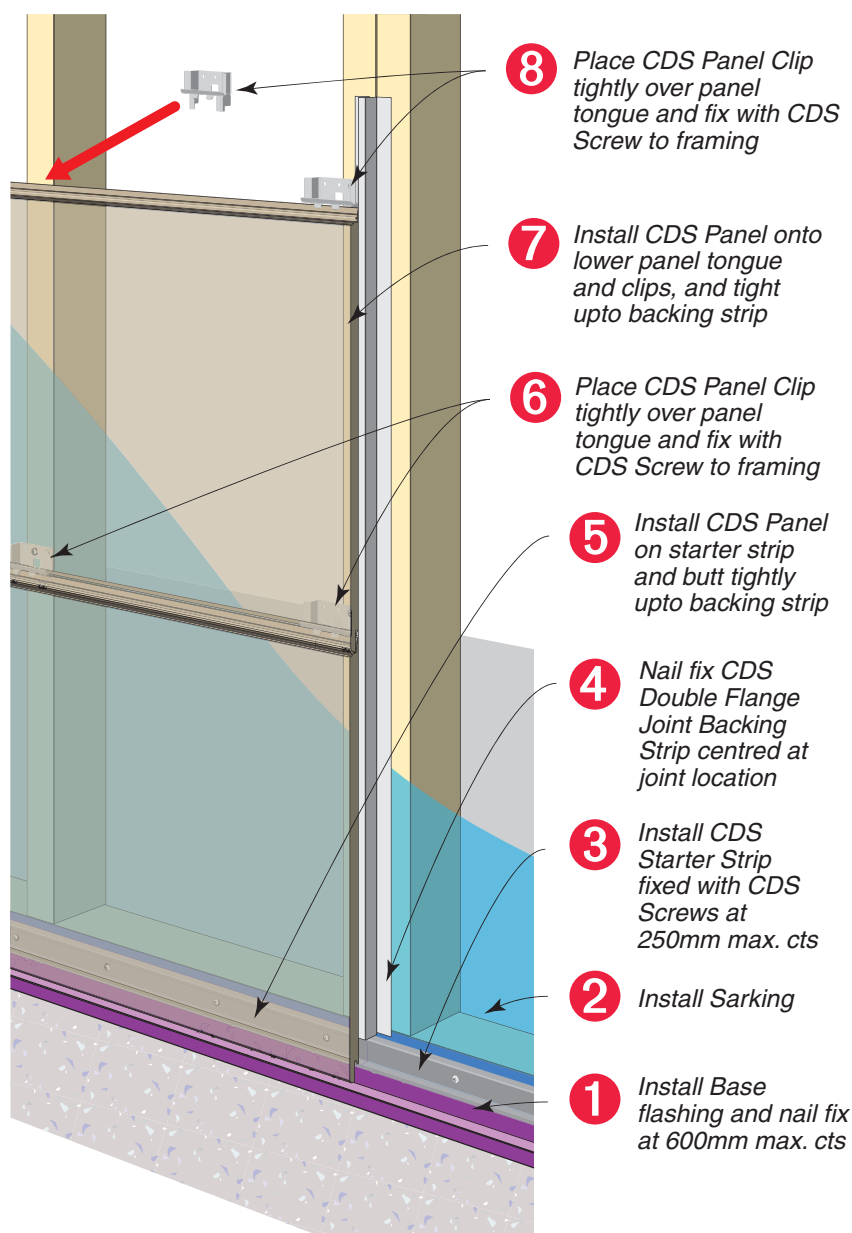
At the soffit line, face nailing is required. Refer to detailed information on this topic later in this publication.

Depending on the installation, face nailing may also be required around openings. Refer to detailed information on this topic later in this publication.

Depending on the Wind Classification, additional face nailing may be required within corner zones in accordance with Table 3. Refer to details later in this publication

At all face nailing locations, a CDS Spacer is required behind the panel.

**FIG 6: Installation Overview of Panels with Clips**



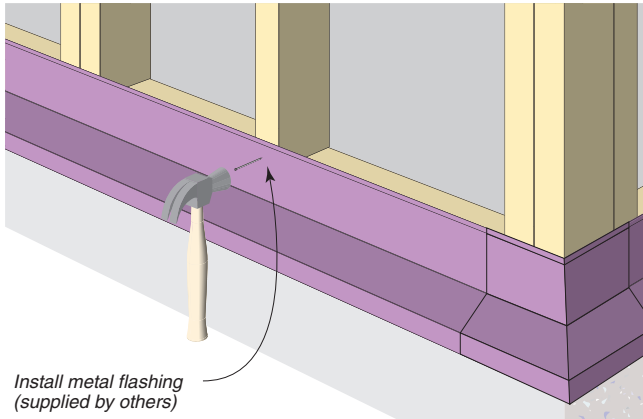
**Table 3: CDS Fixing Requirements Based on Wind Classification**

Wind Classification (AS4055)	Minimum Fixing Requirements Fixings more than 1200mm from corner	Minimum Fixing Requirements Fixings within 1200mm of corner
N1	CDS Clip @ 600	CDS Clip @ 600
N2	CDS Clip @ 600	CDS Clip @ 600
N3	CDS Clip @ 600	CDS Clip @ 600 + Face Nail
N4	CDS Clip @ 600 + Face Nail	CDS Clip @ 600 + Face Nail
N5	CDS Clip @ 600 + Face Nail	CDS Clip @ 600 + Face Nail
N6	CDS Clip @ 600 + Face Nail	CDS Clip @ 600 + 2 x Face Nail
C1	CDS Clip @ 600	CDS Clip @ 600
C2	CDS Clip @ 600	CDS Clip @ 600 + Face Nail
C3	CDS Clip @ 600 + Face Nail	CDS Clip @ 600 + 2 x Face Nail



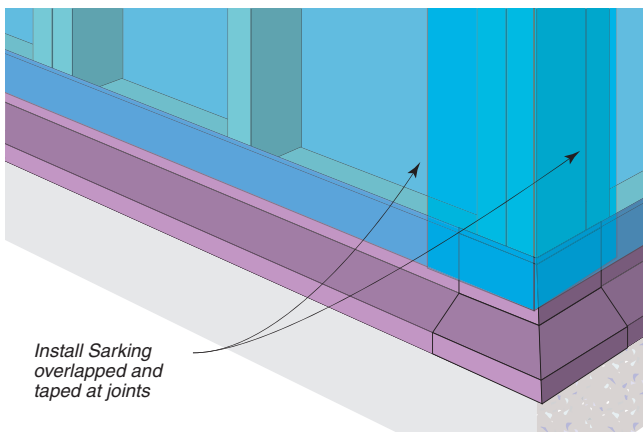
## STEP 1 – BASE FLASHING

Install metal base flashing and window head flashing and fix with galvanised clouts to framing at 600mm maximum centres. Ensure there will be 10-15mm clearance to bottom of panels.



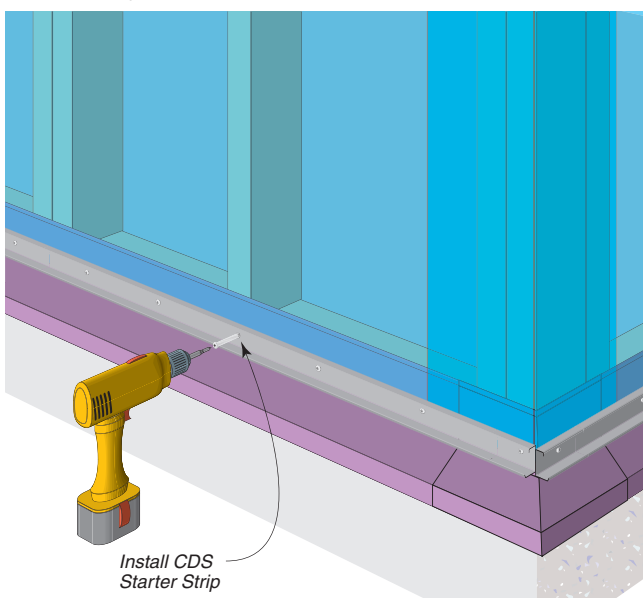
## STEP 2 – SARKING

Install sarking, overlap and tape at joints.



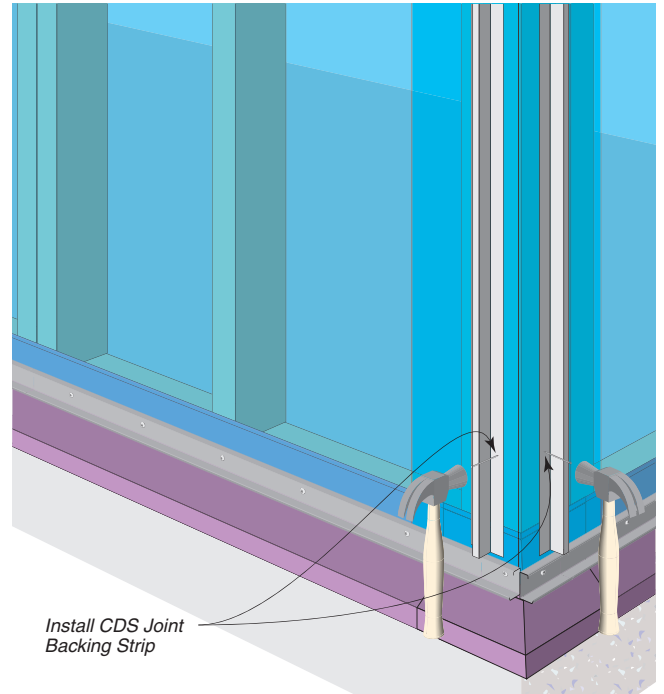
## STEP 3 – CDS STARTER STRIP

Install CDS Starter Strip, level and fix to framing at 250mm maximum centres with CDS Screws. Ensure there will be 10-15mm clearance between flashing and bottom of panels.



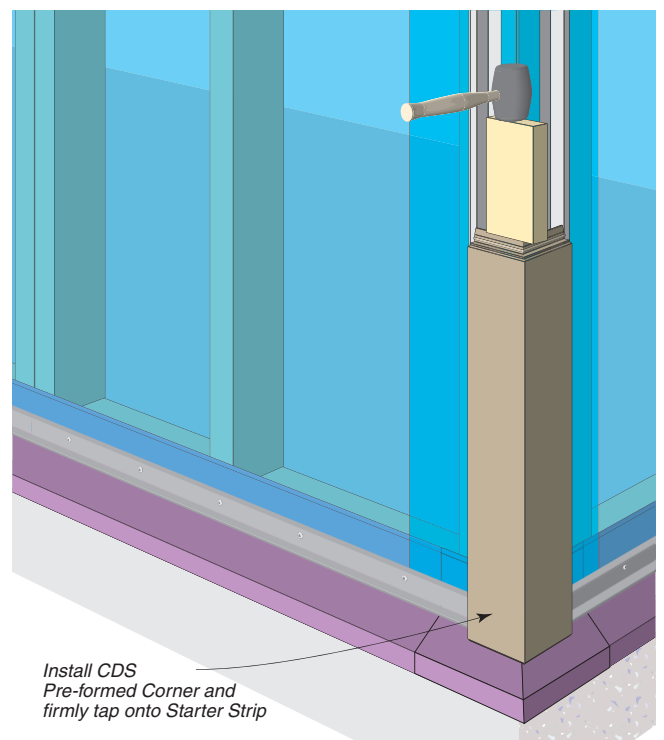
## STEP 4 – CDS JOINT BACKING STRIP

Accurately set-out CDS Joint Backing Strip – Double Flanged at first corner. Fix to framing near base with galvanised clout through one flange. Temporarily hold in place to allow vertical alignment as installation proceeds.



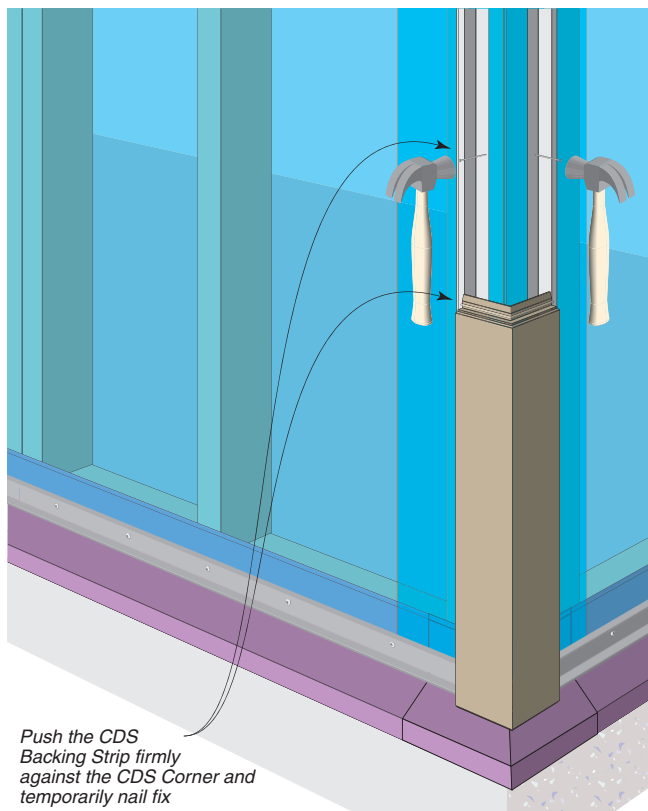
## STEP 5 – CDS PRE-FORMED CORNER

Install CDS Pre-formed Corner on CDS Starter Strip. Firmly tap corner onto the CDS Starter Strip. Confirm there is 10-15mm clearance between bottom of corner and base flashing.

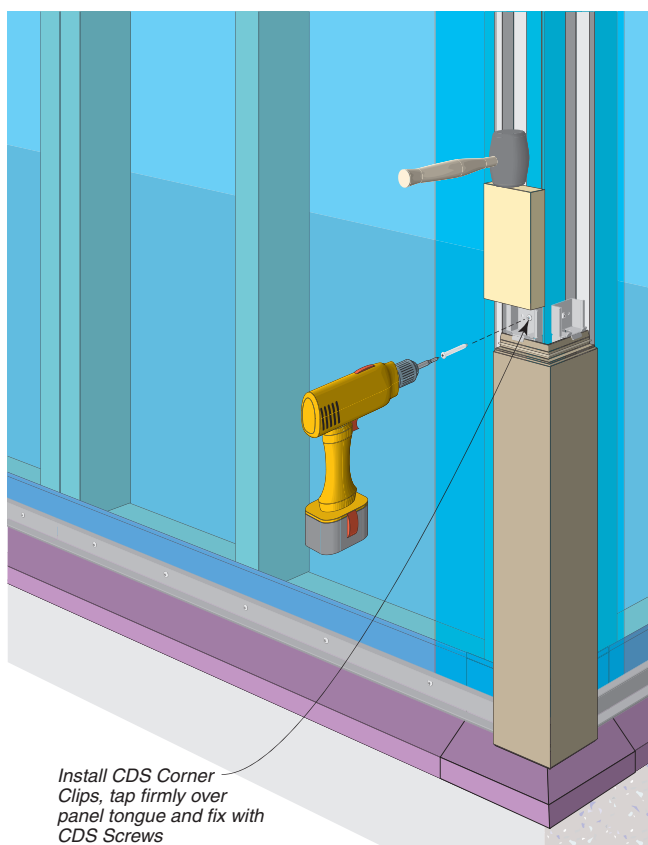


**STEP 6 – ADJUST JOINT BACKING STRIP**

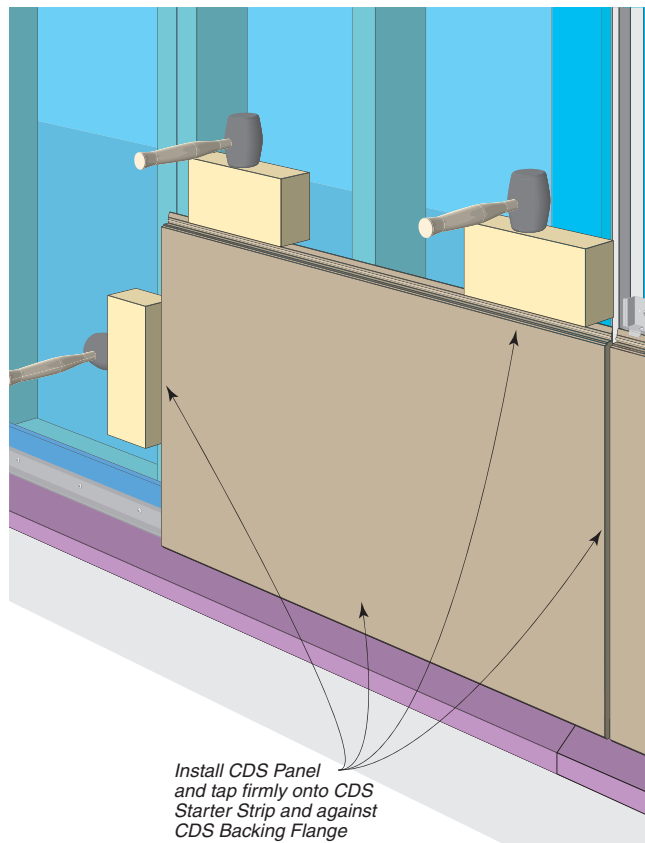
Push the CDS Backing Strip firmly against the CDS Corner, check vertical alignment and temporarily fix with a galvanised clout through one flange above the corner.

**STEP 7 – CDS CORNER CLIPS**

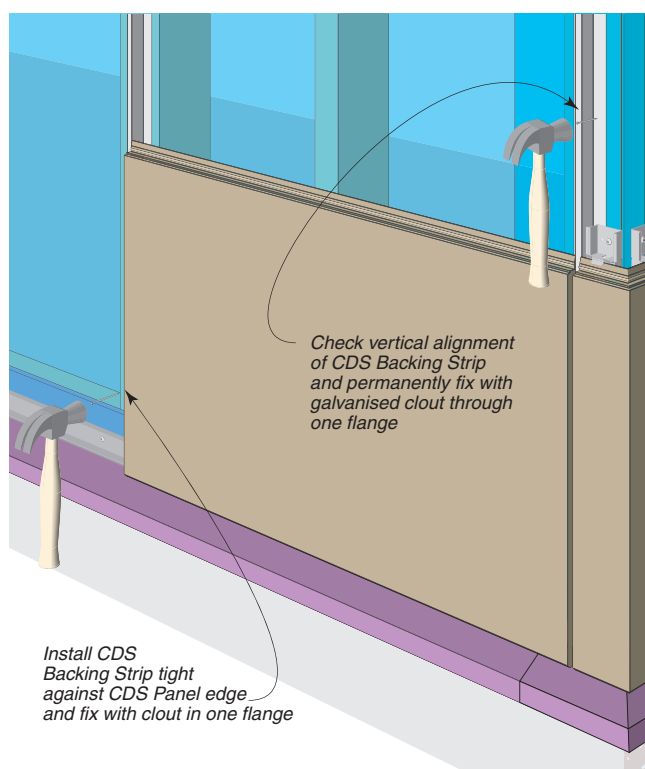
Install CDS Corner Clips over panel tongue and firmly tap into place. Fix clips with CDS Screw.

**STEP 8 – CDS PANEL**

Install CDS Panel onto starter strip, firmly tap into place and temporarily hold in place.

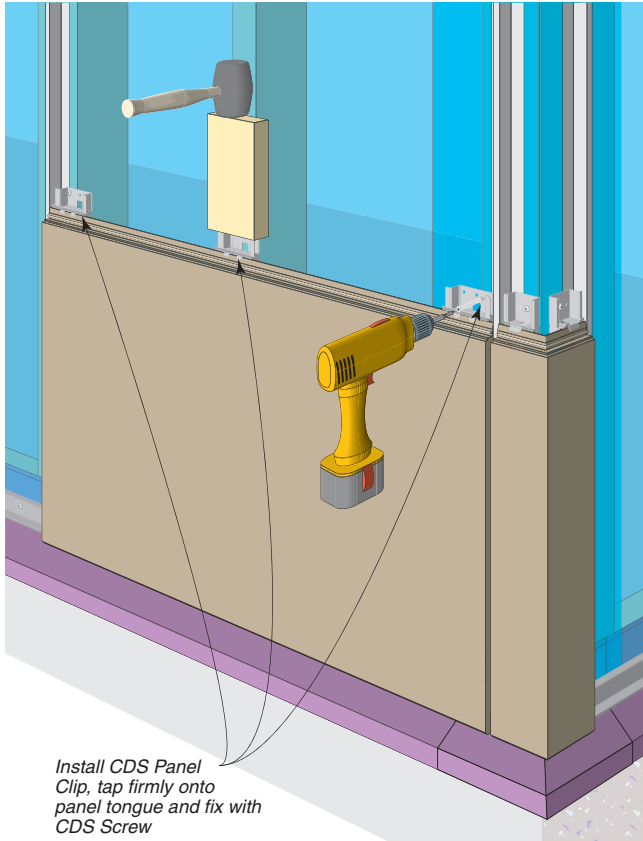
**STEP 9 – CDS JOINT BACKING STRIP**

Install CDS Backing Strip tight against CDS Panel edge and fix with galvanised clout in one flange at the base. Check vertical alignment and temporarily hold in place. After installing adjacent panel, permanently fix Backing Strip.

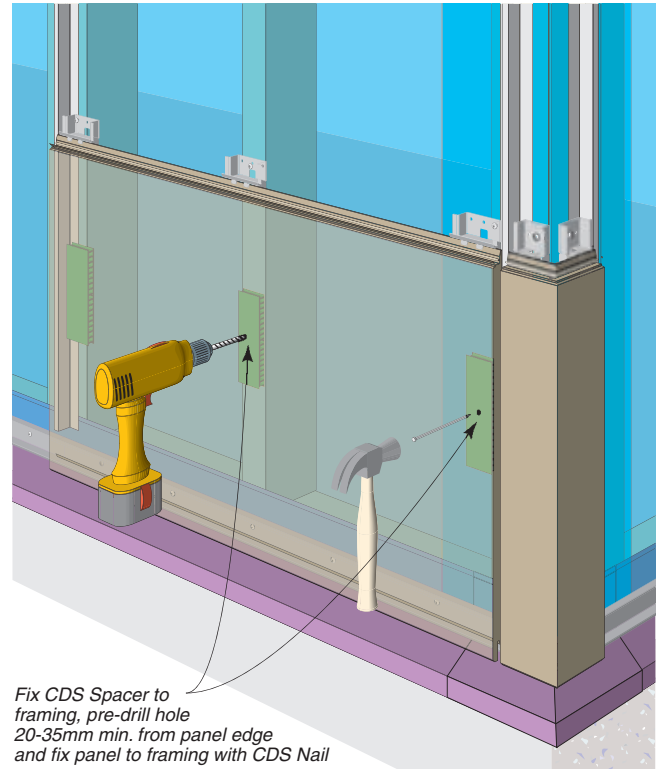


**STEP 10 – CDS PANEL CLIPS**

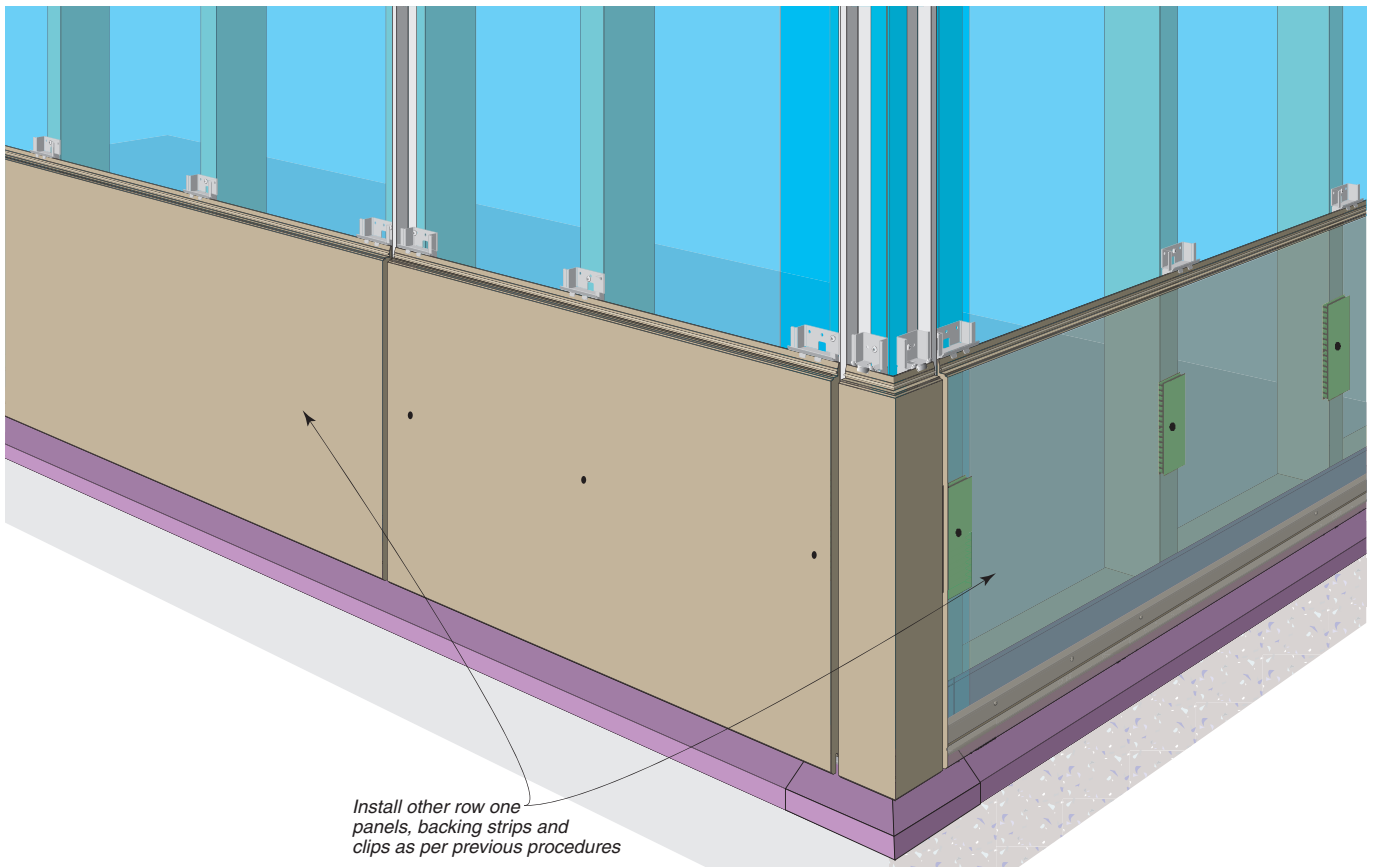
Install CDS Panel Clips at 600mm max. centres over tongue, tap firmly into place and fix with CDS Screw.

**STEP 11 – FACE NAILING CDS PANEL**

When face nailing is required (refer to Table 3), fix a 200mm length of CDS Spacer to the framing with a galvanised clout at each face nailing point, pre-drill panel 20 – 35mm min. from edges and fix with CDS nail.

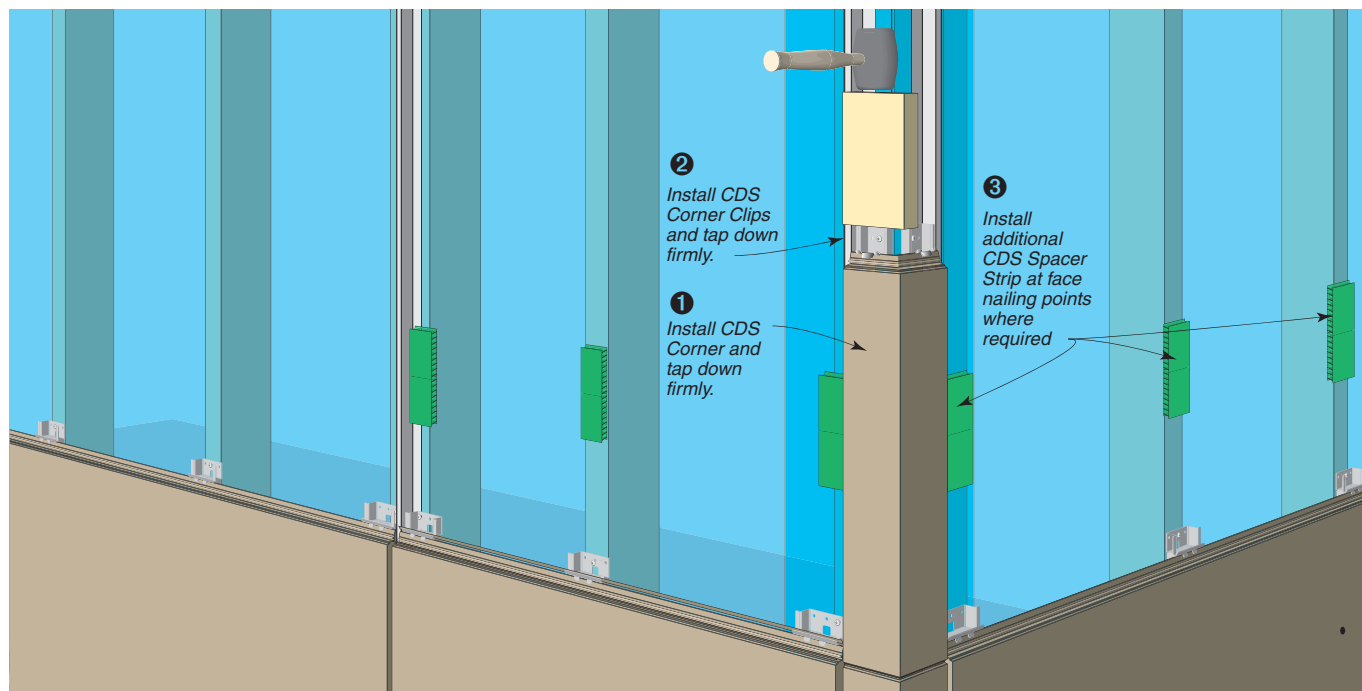
**STEP 12 – COMPLETE ROW ONE INSTALLATION**

Working away from the corner, install adjoining row one CDS Panels, Backing Strips and Panel Clips as per previous procedures.



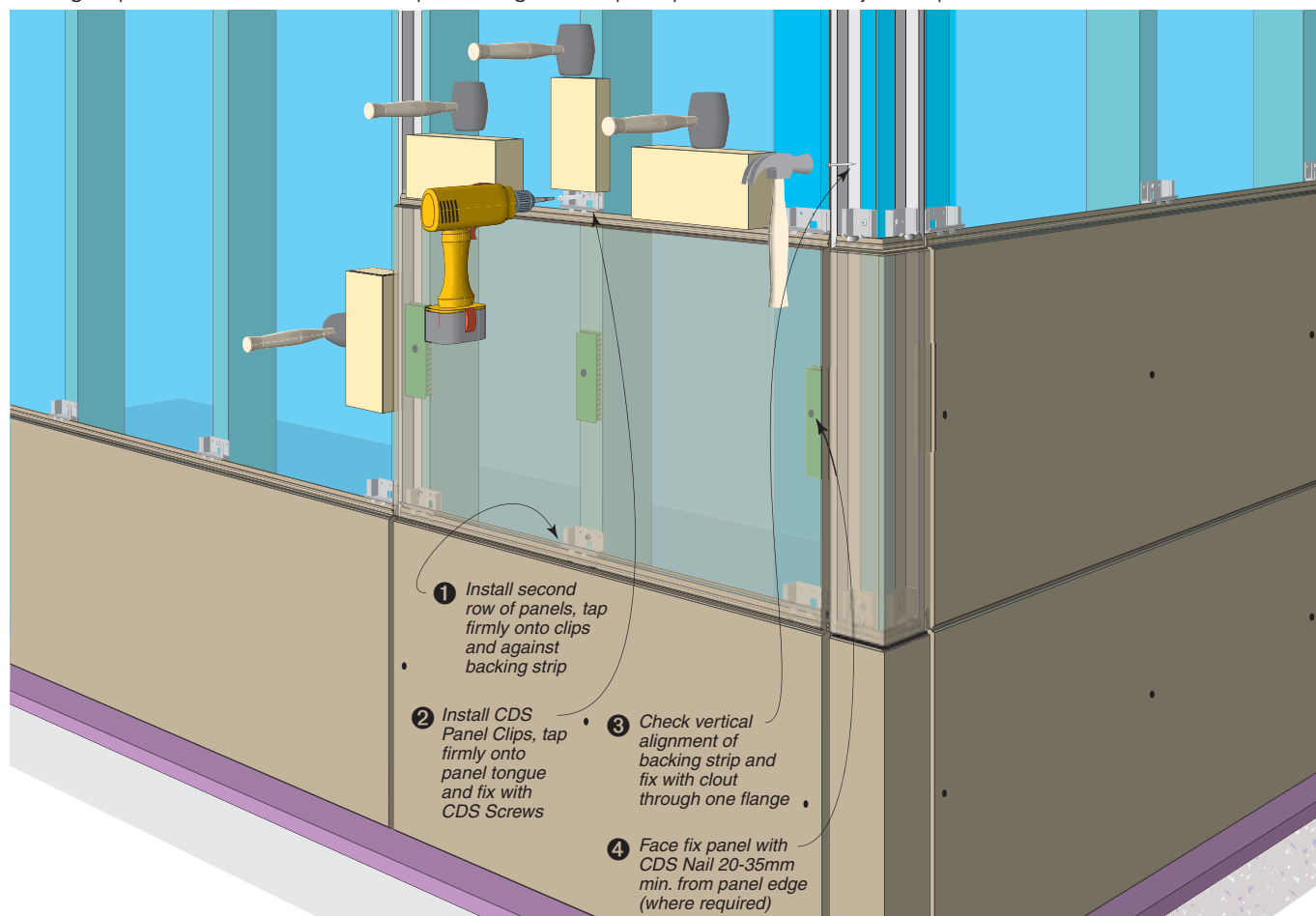
## STEP 13 – SECOND ROW CORNER

❶ Install CDS Preformed Corner onto lower clips and tap firmly into place. ❷ Install upper CDS Corner Clips, tap firmly into place and fix with a CDS Screw. ❸ Install CDS Spacer Strip at face nailing points (where required).



## STEP 14 – SECOND ROW PANELS

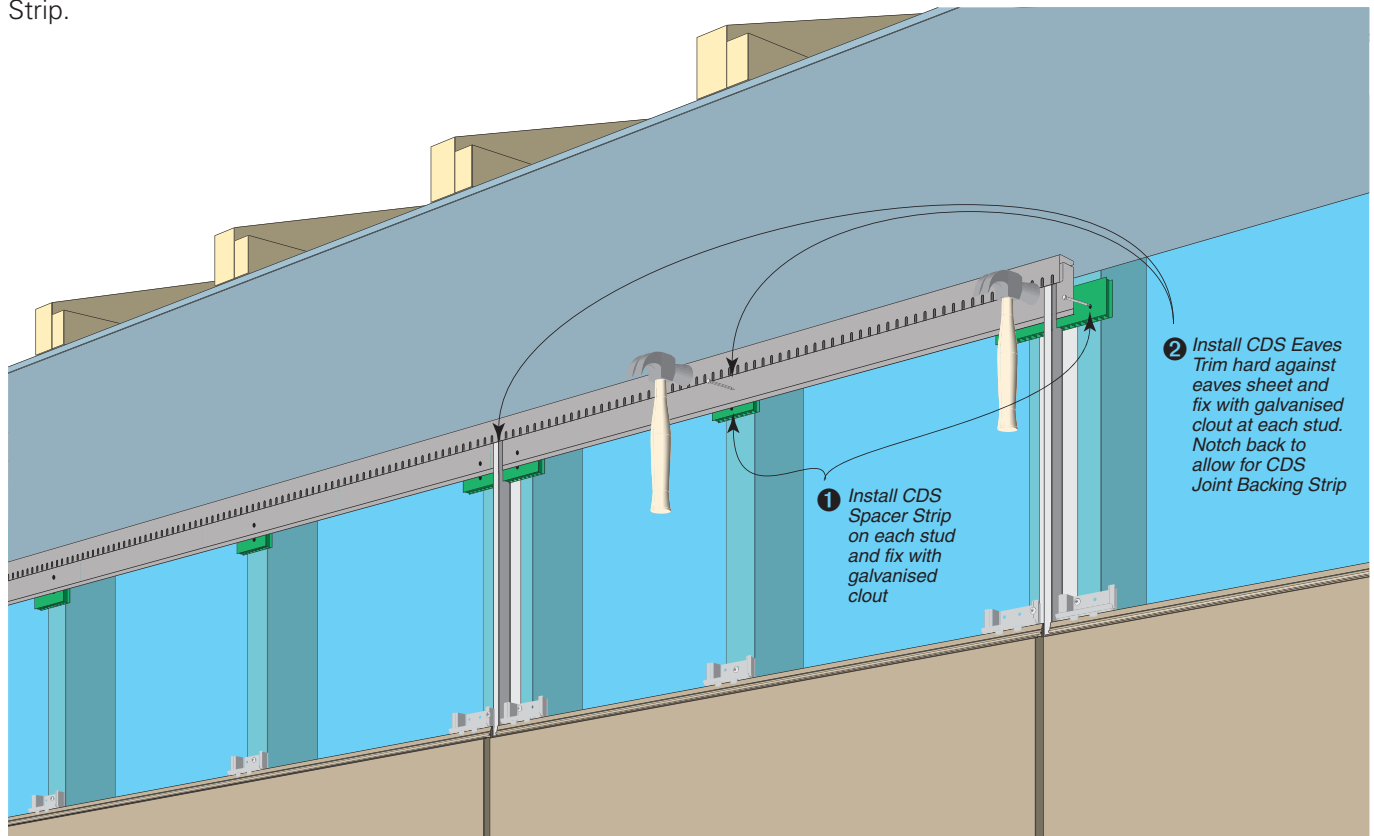
❶ Install CDS Panel onto Panel Clips and panel tongue below, firmly tap into place. ❷ Install CDS Panel Clips over tongue, tap firmly into place and fix with CDS Screw. ❸ Check vertical alignment of CDS Backing Strip and fix with galvanised clout through one flange. ❹ Where face nailing is required, pre-drill through panel and fix with CDS Nail through spacer at 20 – 35mm from panel edge. ❺ Repeat procedure for adjacent panels and additional rows.



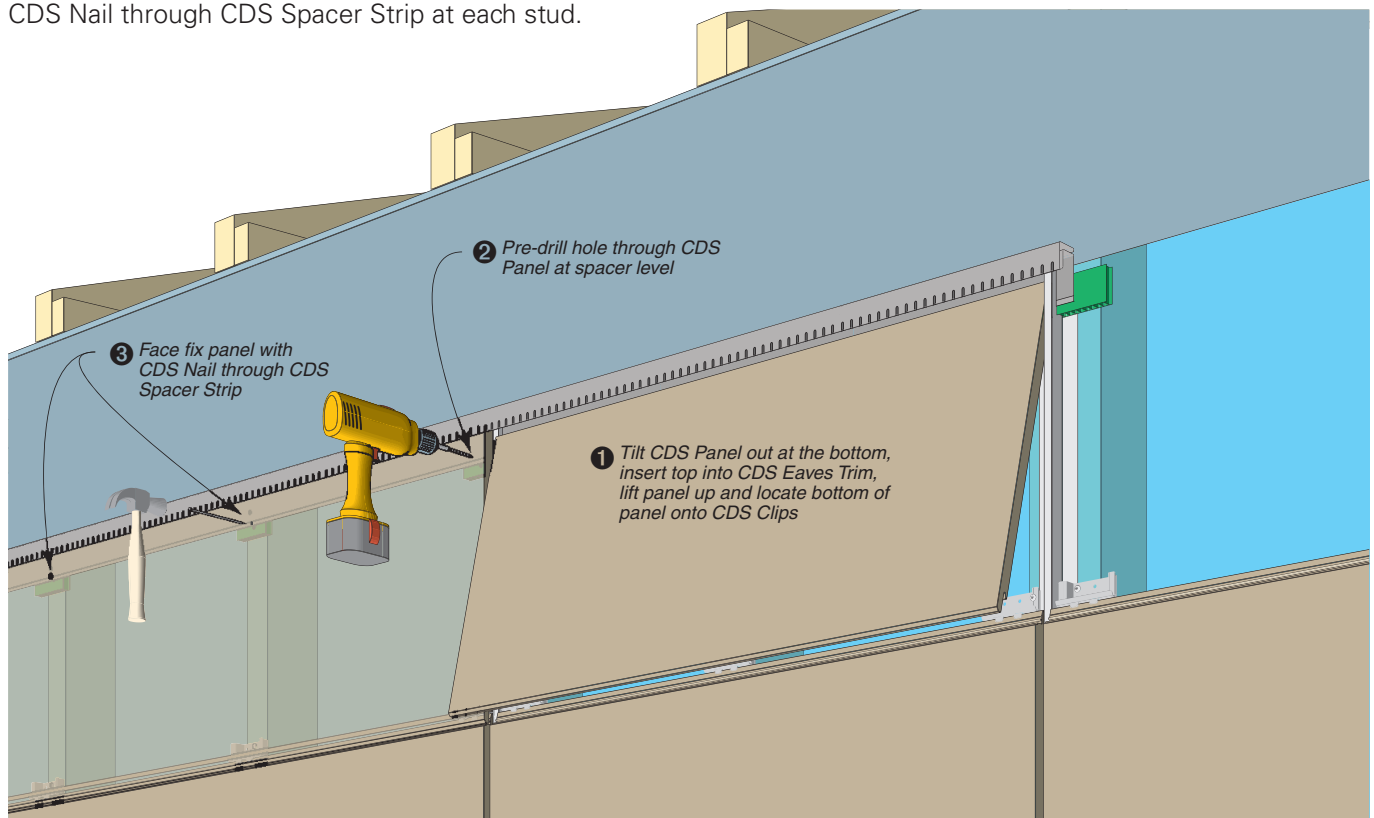


**STEP 15 – PREPARATION AT SOFFIT** (Also refer to Installation Details – Soffit Junction illustrations).

❶ Install CDS Spacer Strip on each stud and fix with galvanised clout. ❷ Install CDS Eaves Trim hard against eaves sheet and fix with galvanised clout at each stud. Notch the back of the eaves trim to allow for the CDS Joint Backing Strip.

**STEP 16 – PANEL INSTALLATION AT SOFFIT** (Also refer to Installation Details – Soffit Junction illustrations).

❶ Tilt CDS Panel out at the bottom, insert top into CDS Eaves Trim, lift panel up and locate bottom of panel onto CDS Clips. ❷ Pre-drill holes through CDS Panel at spacer level and 20 – 35mm from panel edge. ❸ Face fix panel with CDS Nail through CDS Spacer Strip at each stud.



# SEALING JOINTS & FINISHING

## SEALING VERTICAL PANEL JOINTS

All vertical panel joints must be primed and filled with CDS Colour Matched CDS Sealant after installation. Panels must be completely dry before applying primer and sealant.

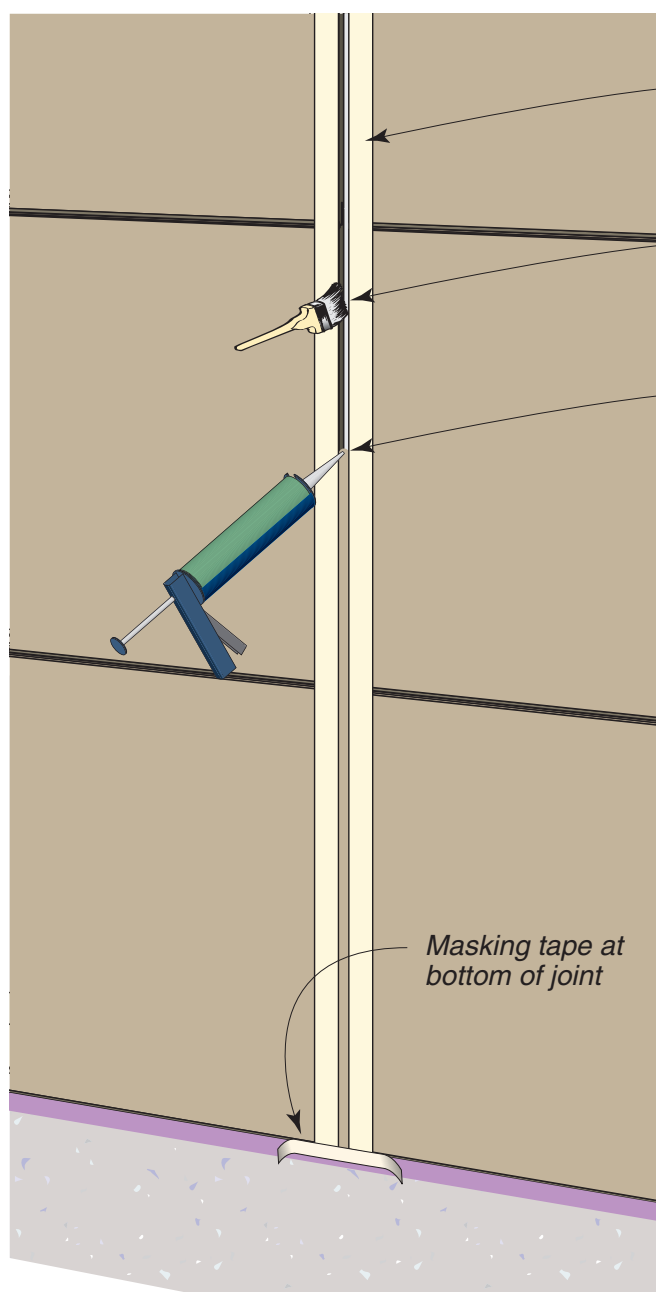
Correct and full application of CDS Primer to both ends of the panels is critical to successful sealant performance. Primer must be allowed to dry fully before installing sealant.

**Sealant must be installed not less than 30 minutes after and not more than 6 hours after primer application.**

## TOUCH-UP

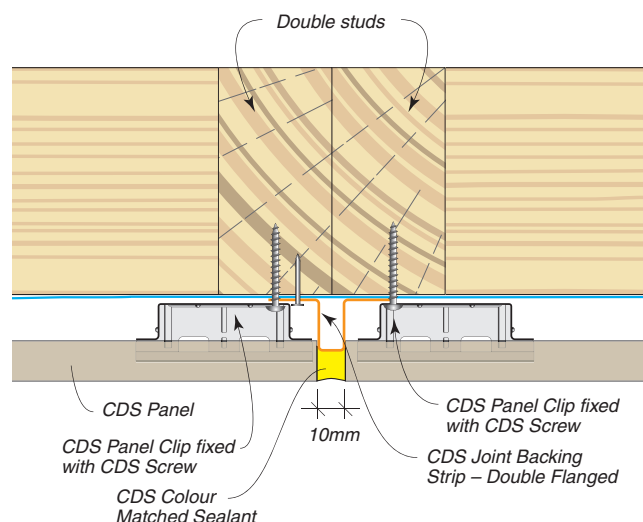
All visible nail heads must be covered with a small amount of CDS Colour Matched Touch-up Paint. Do not use sealant on nail heads.

**FIG 7: Sealant Installation in CDS Panel Vertical Joints**



- 1** Apply masking tape to each side of the joint and at the base
- 2** Apply one coat of CDS Primer liberally to ends of panels and allow to dry completely before proceeding
- 3** Fill joint with CDS Colour Matched Sealant (>30 minutes and < 6 hours after primer application. Remove masking tape slowly, within 8 hours of application
- 4** Apply a small amount of CDS Touch-up Paint to all visible nail heads

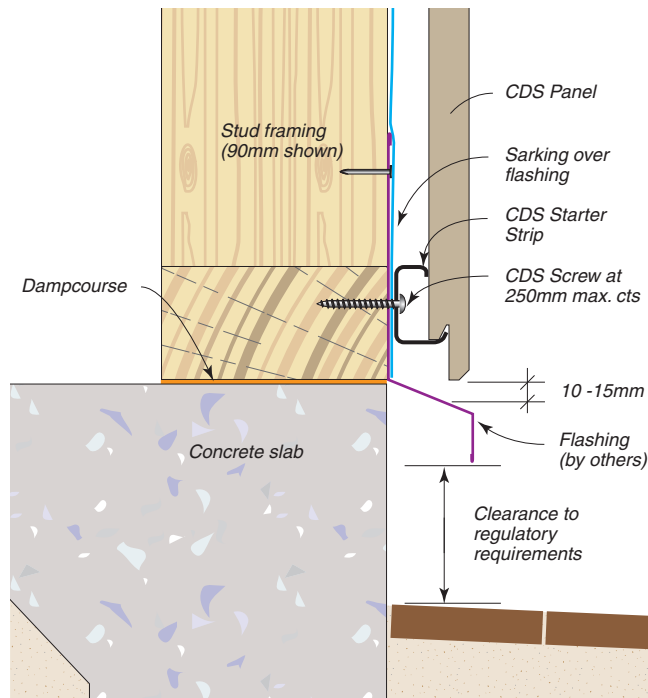
**FIG 8: Vertical Joint Detail – Plan View**



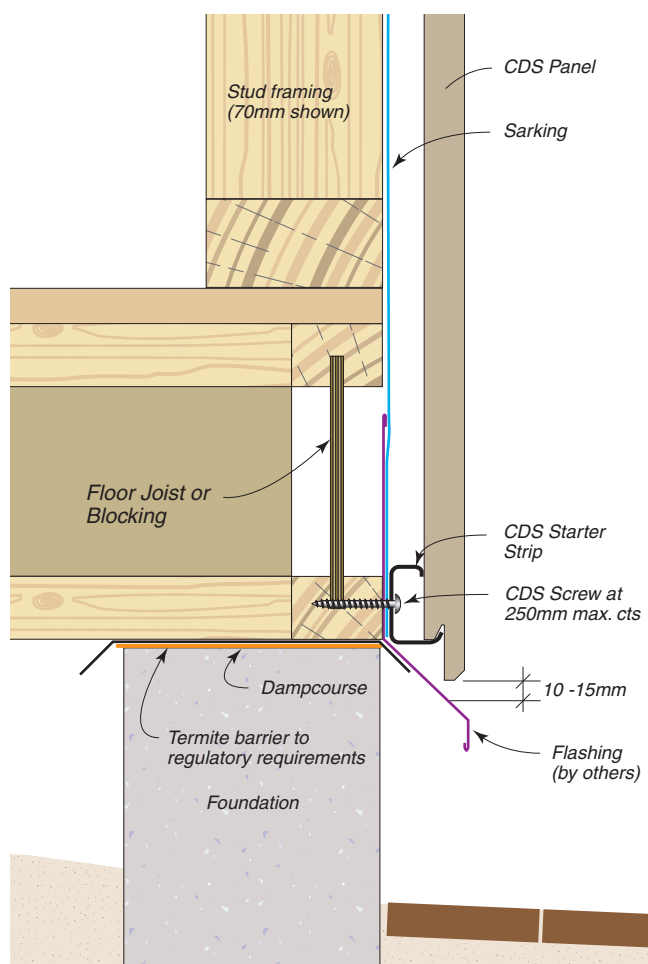
# INSTALLATION DETAILS

## BASE DETAILS

**FIG 9: Base Detail – 90mm Framing Shown**



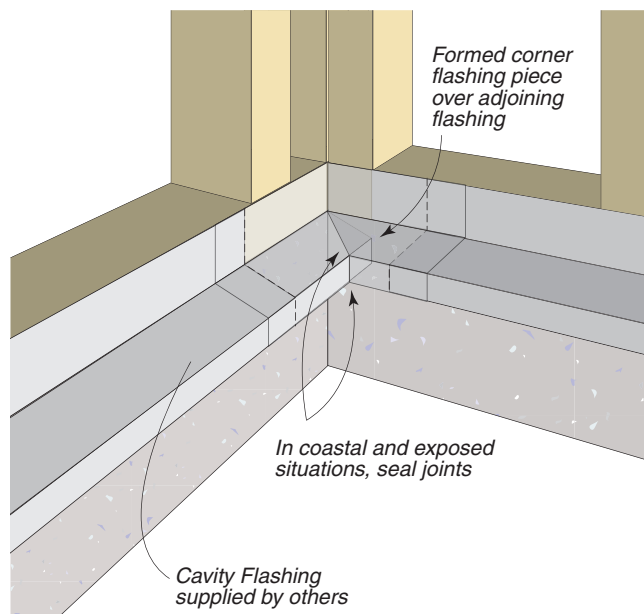
**FIG 10: Base Detail – 70mm Framing Shown**



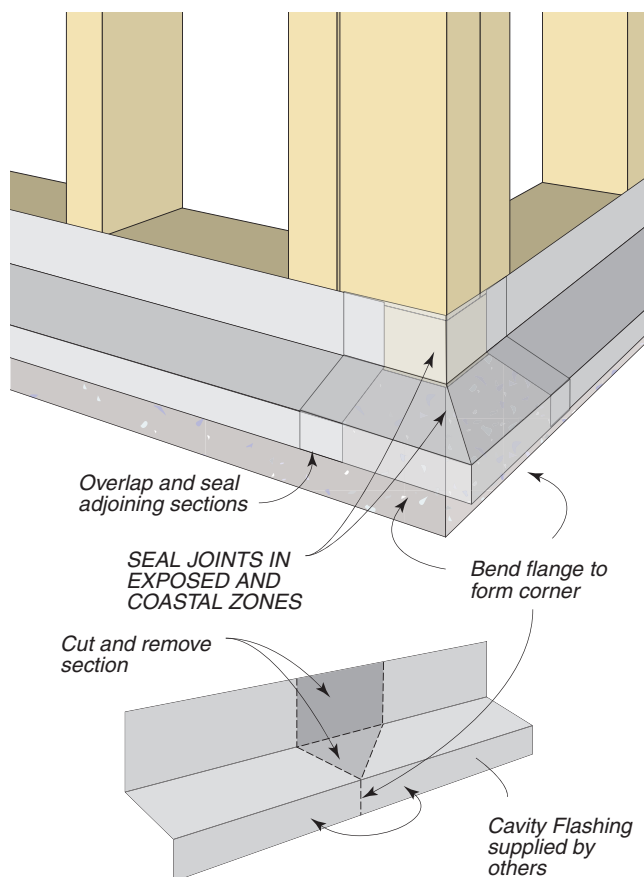
## BASE FLASHING

Base flashing is required to exclude vermin and draughts from the cavity, while allowing moisture to freely escape. At corners of the building, the flashing must be mitred and/or sealed to prevent wind and water from being driven behind the panels.

**FIG 11: Base Flashing at Internal Corner**



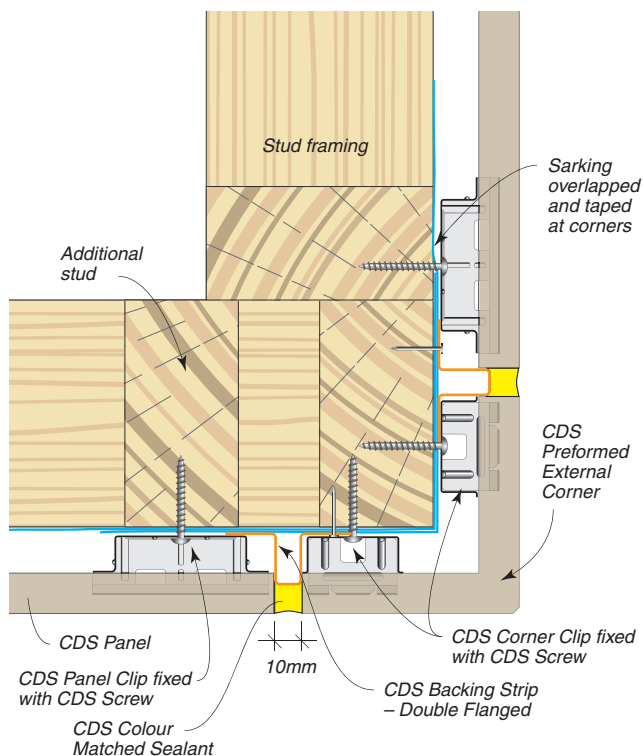
**FIG 12: Base Flashing at External Corner**



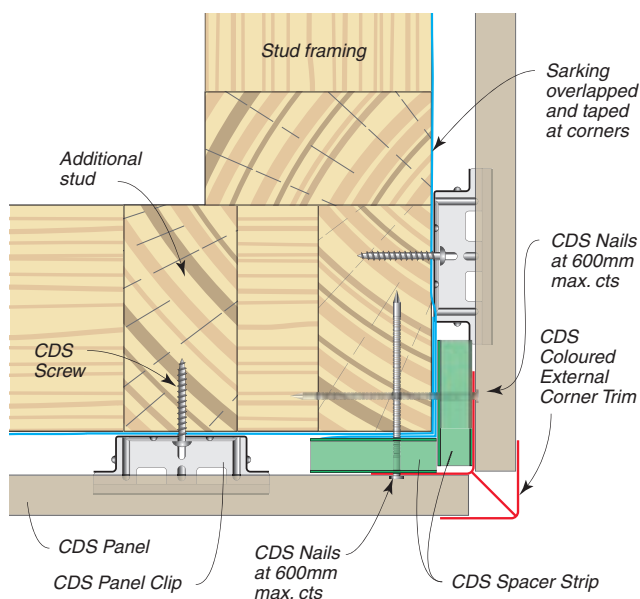
## CORNER DETAILS

Additional studs may be required at corners to allow for fixing CDS Panel Clips and other components.

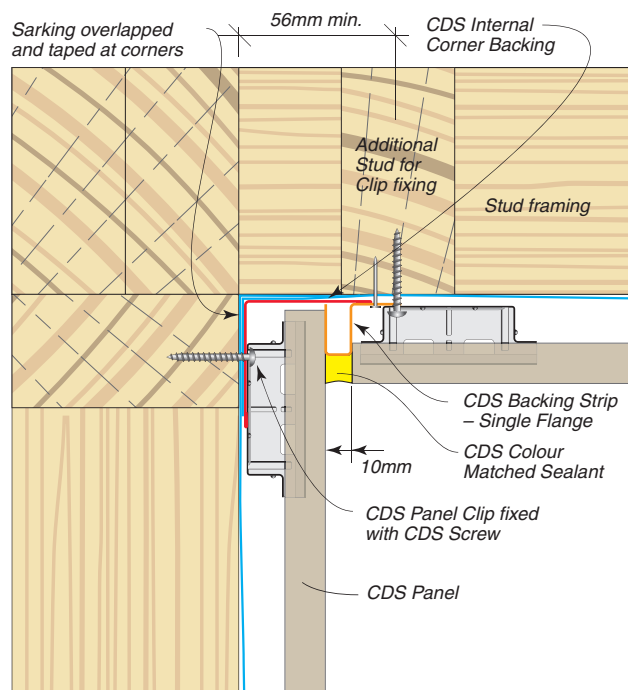
**FIG 13: External Corner Detail – With Preformed Corner – Plan View**



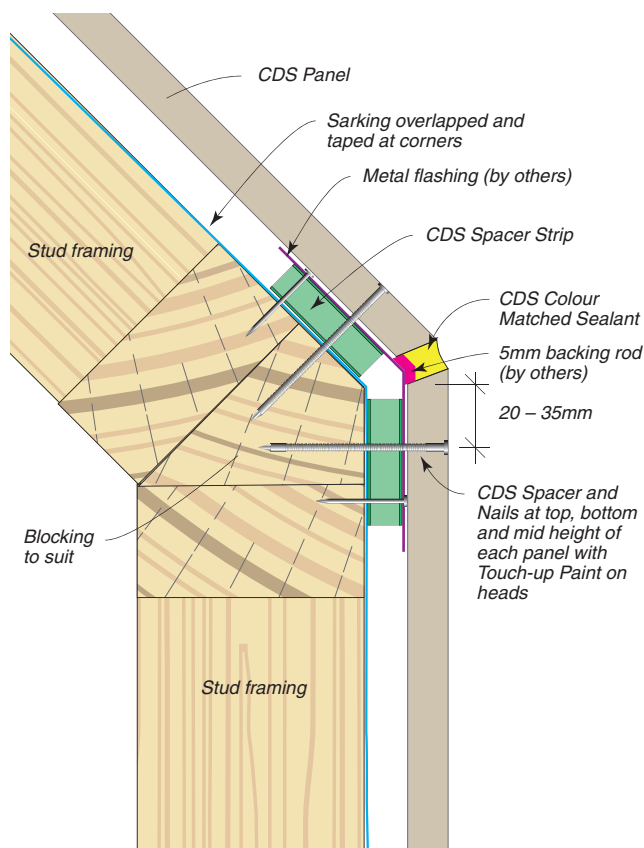
**FIG 14: External Corner Detail – With Coloured External Corner Trim – Plan View**



**FIG 15: Internal Corner Detail – With Backing Strip and Colour Matched Sealant – Plan View**



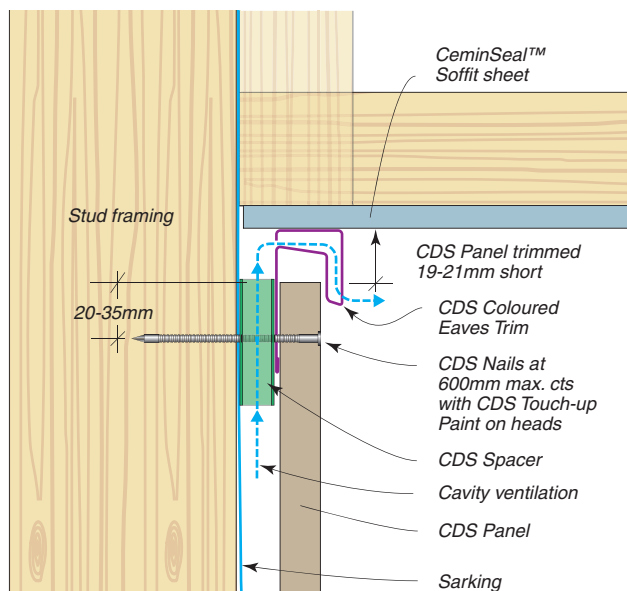
**FIG 16: Obtuse Angle Corner Detail – With Metal Flashing and Colour Matched Sealant – Plan View**



## JUNCTION DETAILS

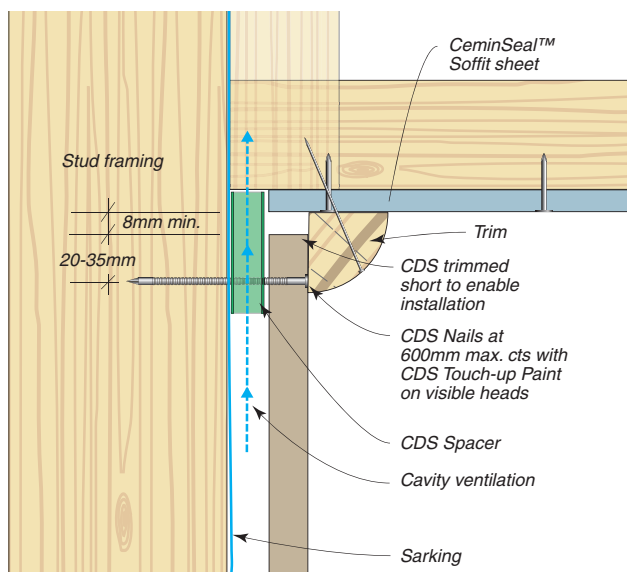
At eaves line the CDS system must be provided with cavity ventilation. CDS Panels are trimmed to appropriate height and face nailed through the CDS Spacer into the framing. Refer to the following detail options.

**FIG 17: Soffit Detail – With CDS Coloured Eaves Trim – Elevation**

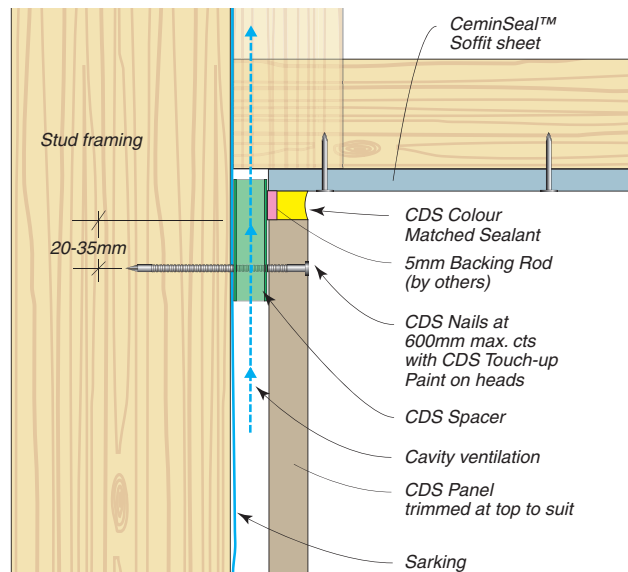


NOTE: Notch the back of CDS Coloured Eaves Trim at intersections with Joint Backing Strip

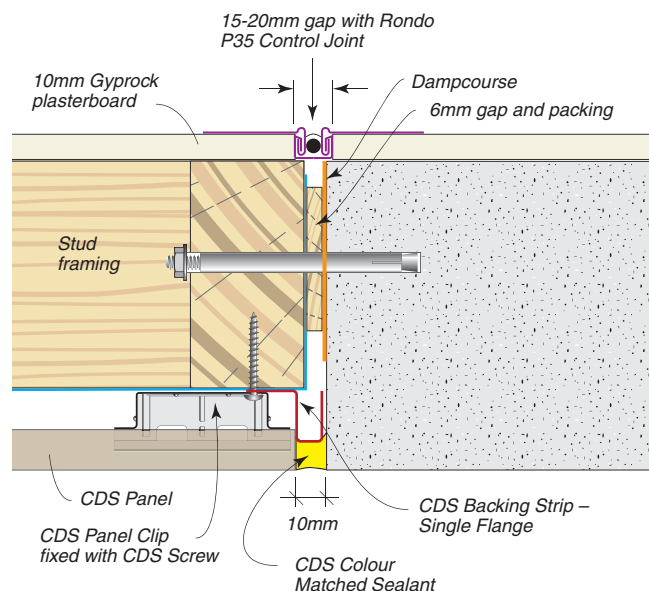
**FIG 18: Soffit Detail – With Timber Trim – Elevation**



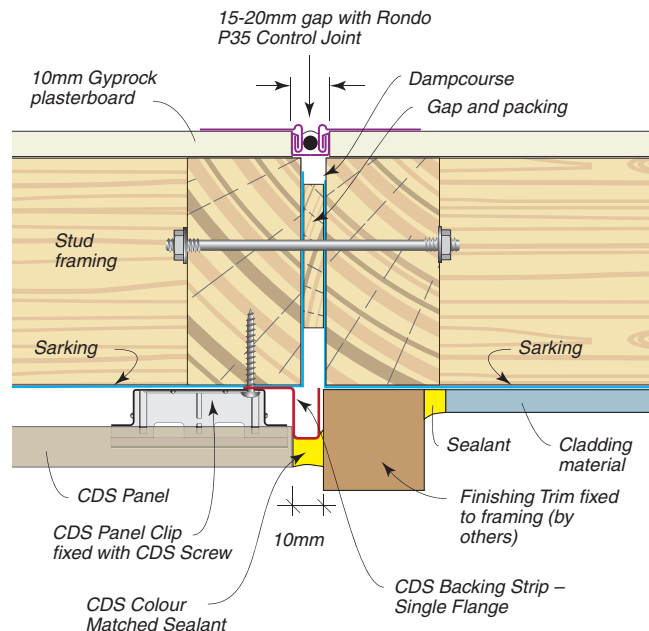
**FIG 19: Soffit Detail – With Sealant – Elevation**



**FIG 20: Junction of CDS with Masonry Wall – Plan View**

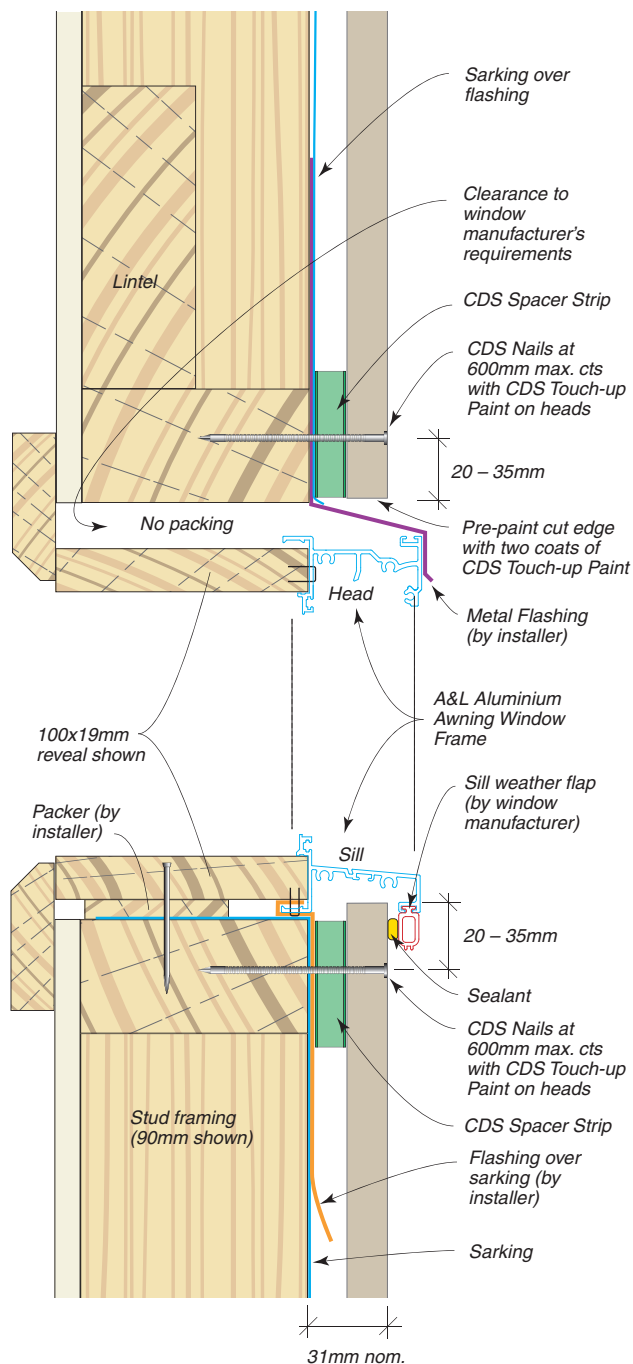
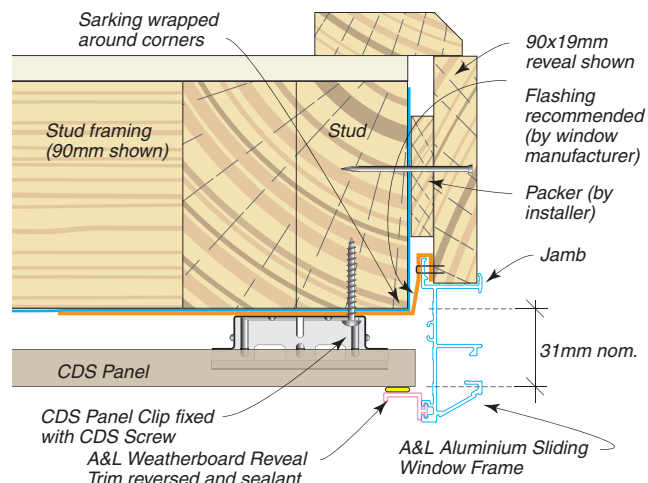
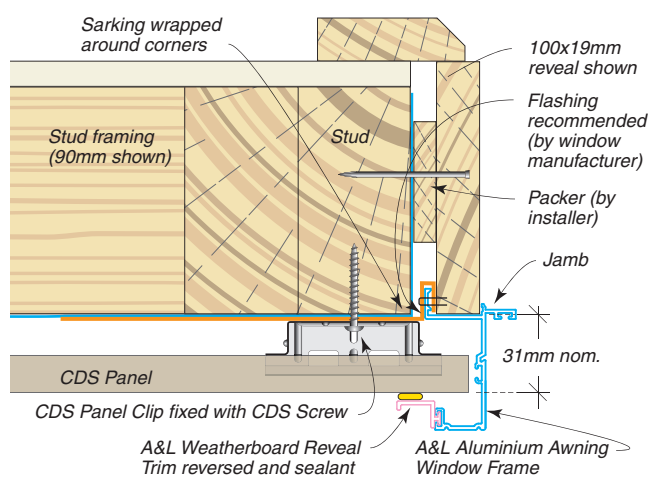
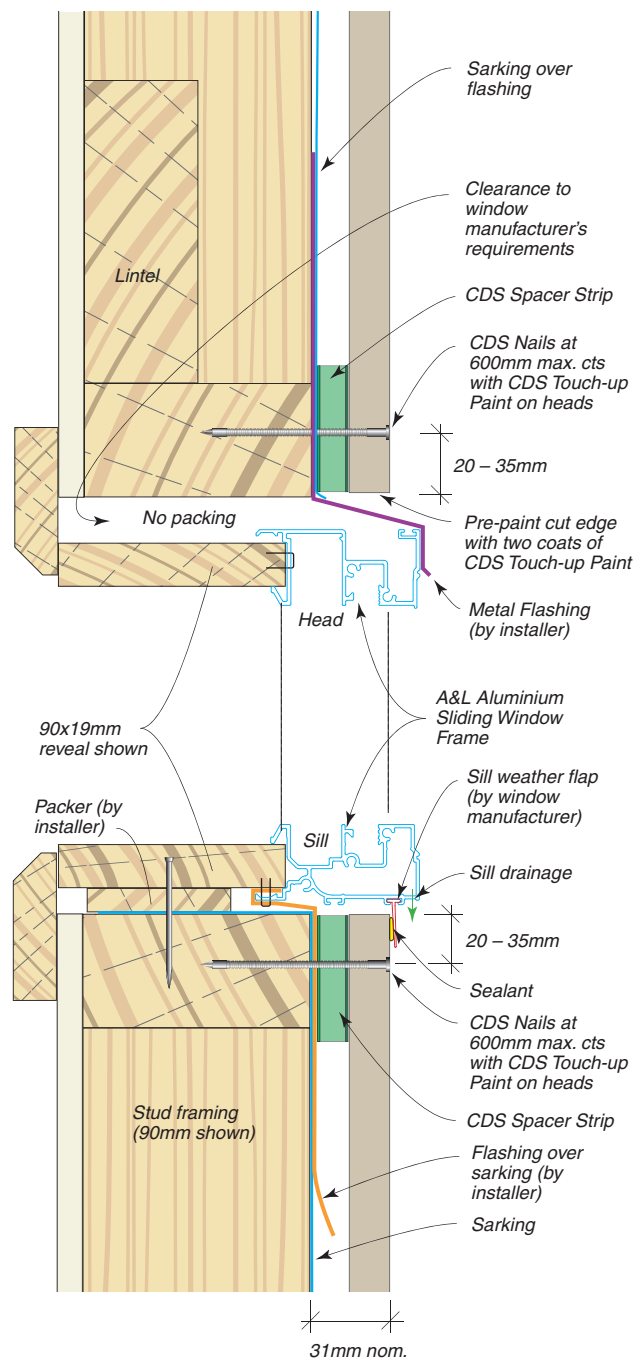


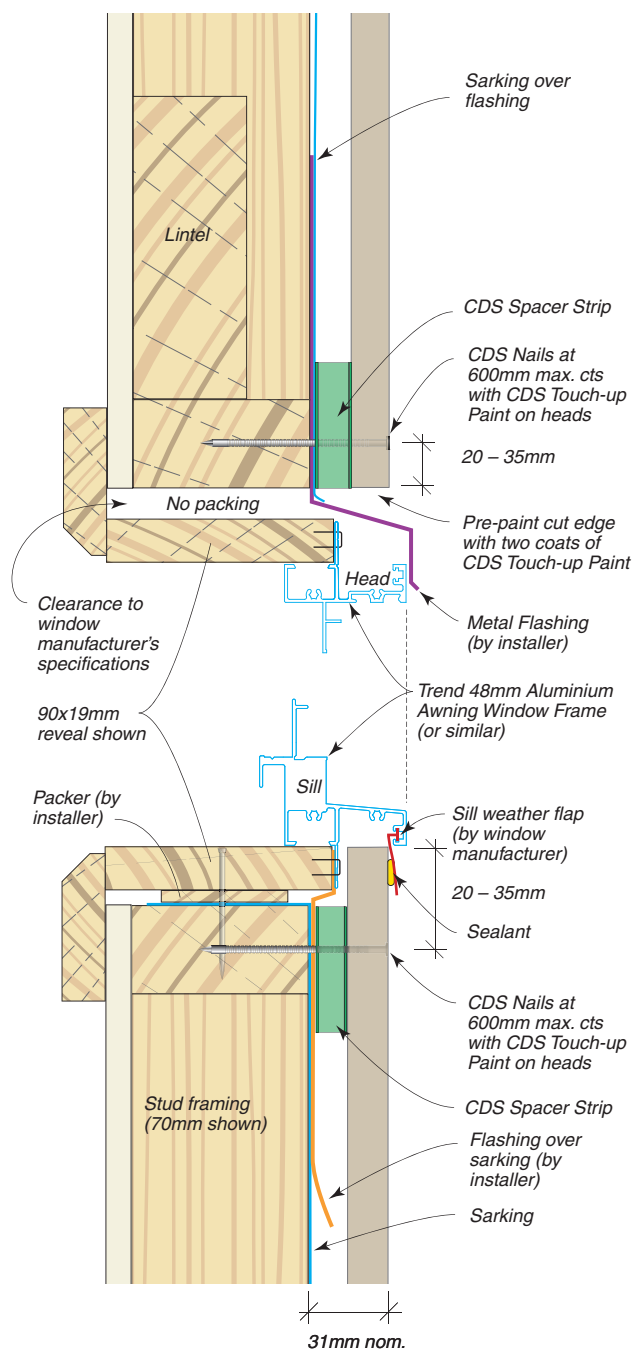
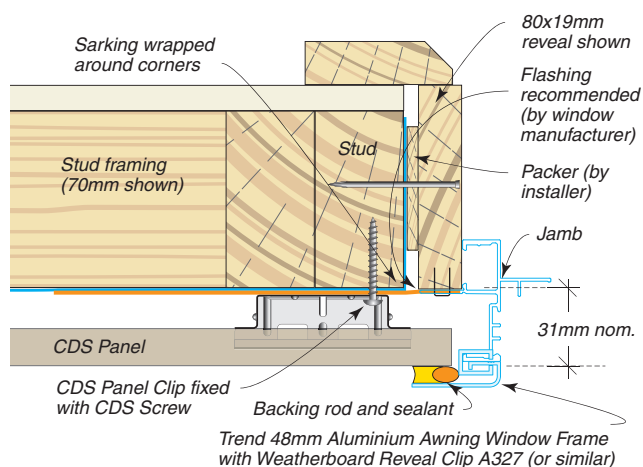
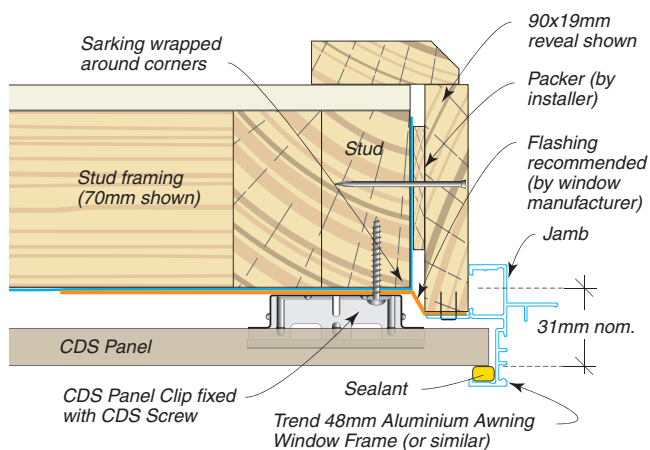
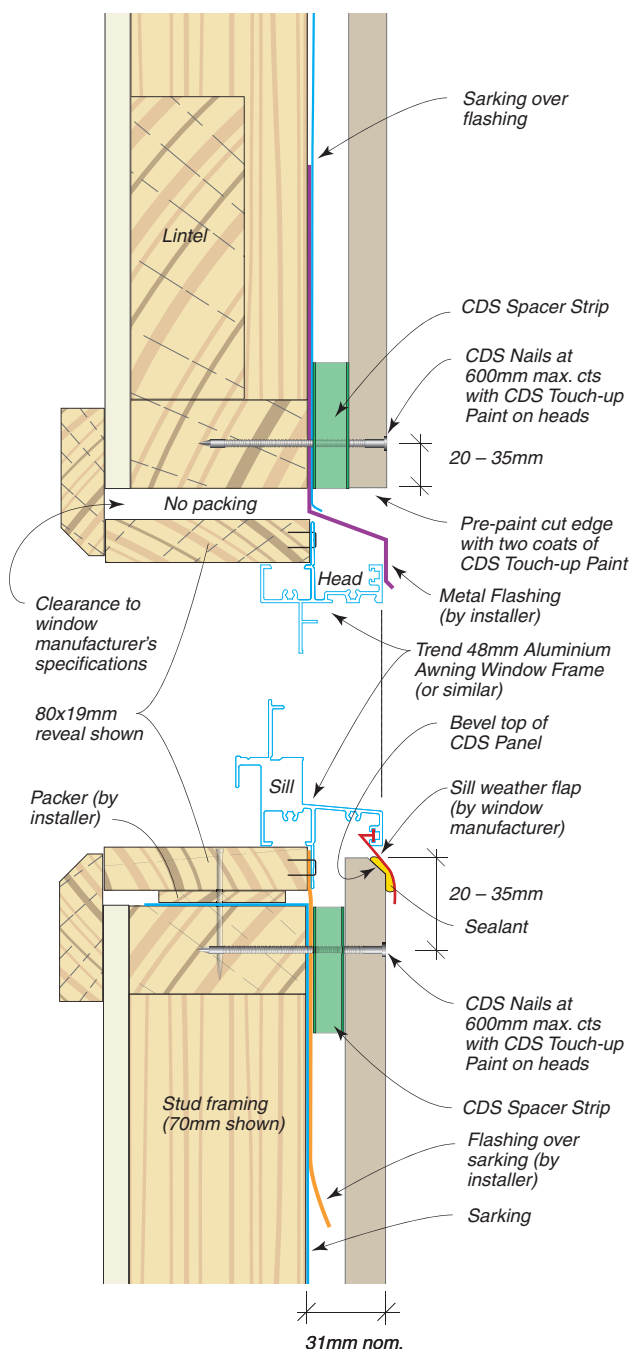
**FIG 21: Typical Detail Junction with Fibre Cement Cladding System– Plan View**







**FIG 26: Window Detail – A&L Aluminium Awning Window with Weatherboard Trim****FIG 27: Window Detail – A&L Aluminium Sliding Window with Weatherboard Trim**

**FIG 28: Window Detail – Trend 48mm Aluminium Awning Window****FIG 29: Window Detail – Trend 48mm Aluminium Awning Window with Weatherboard Reveal Clip A327**

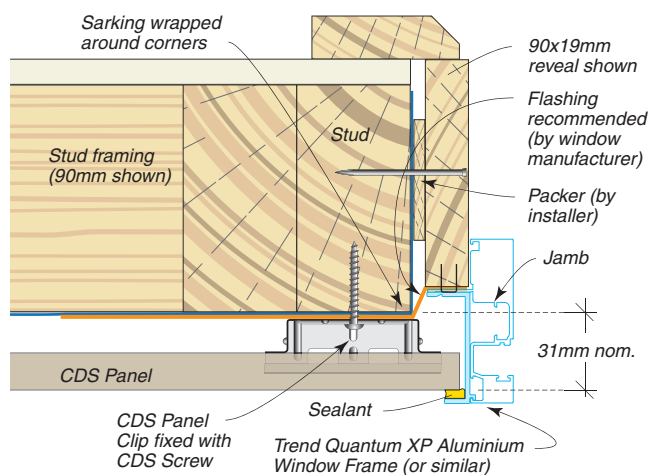
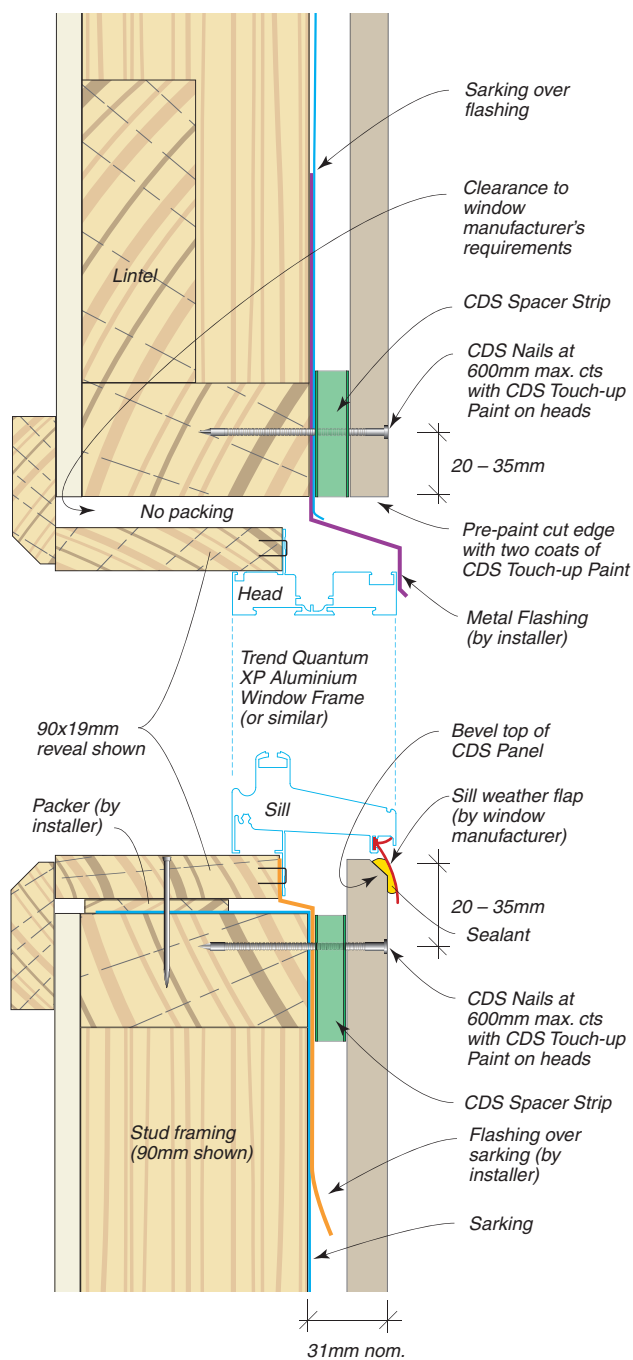
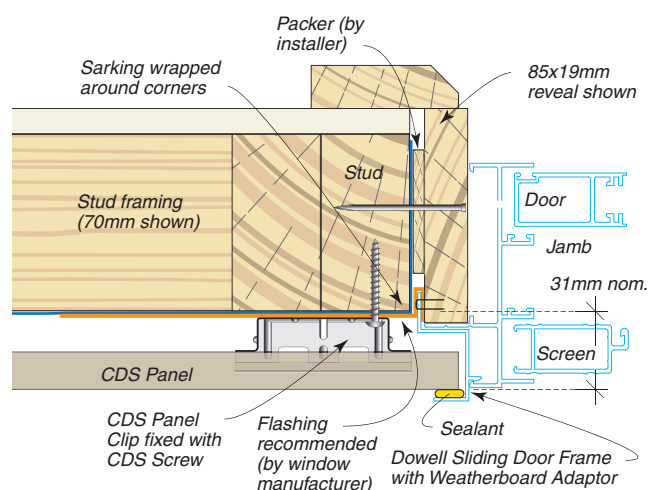
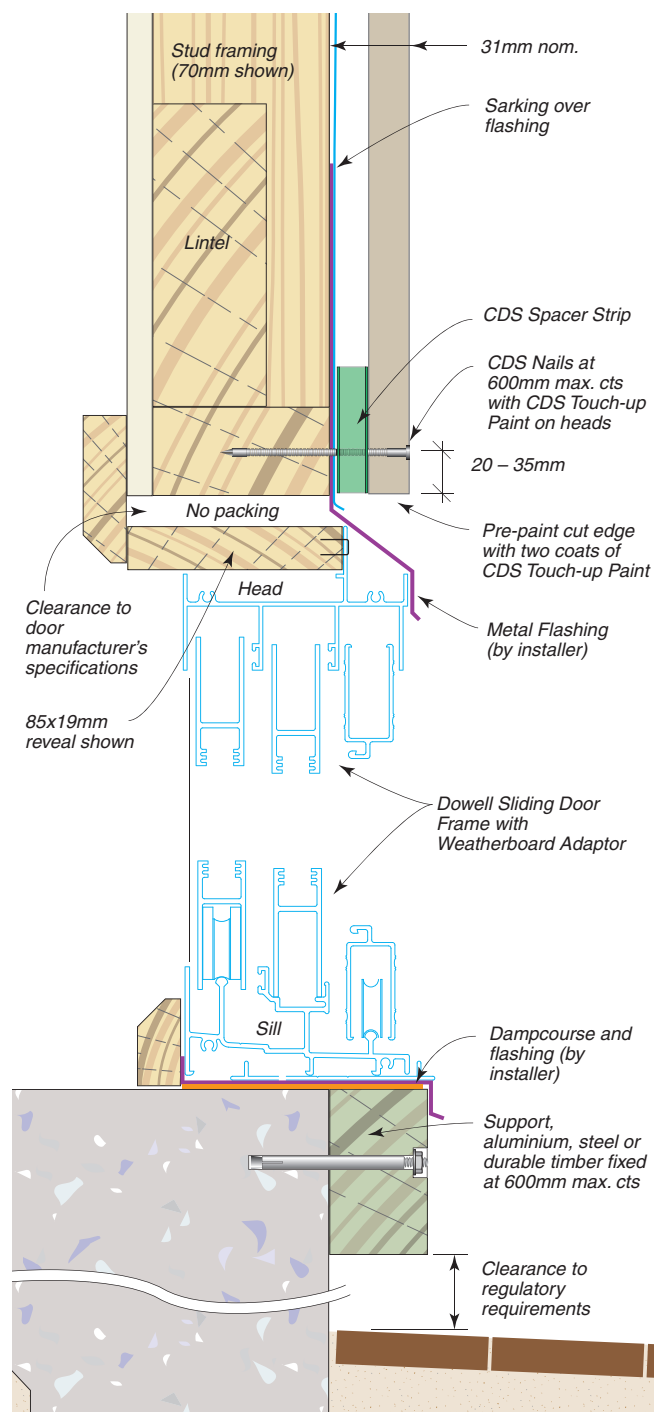
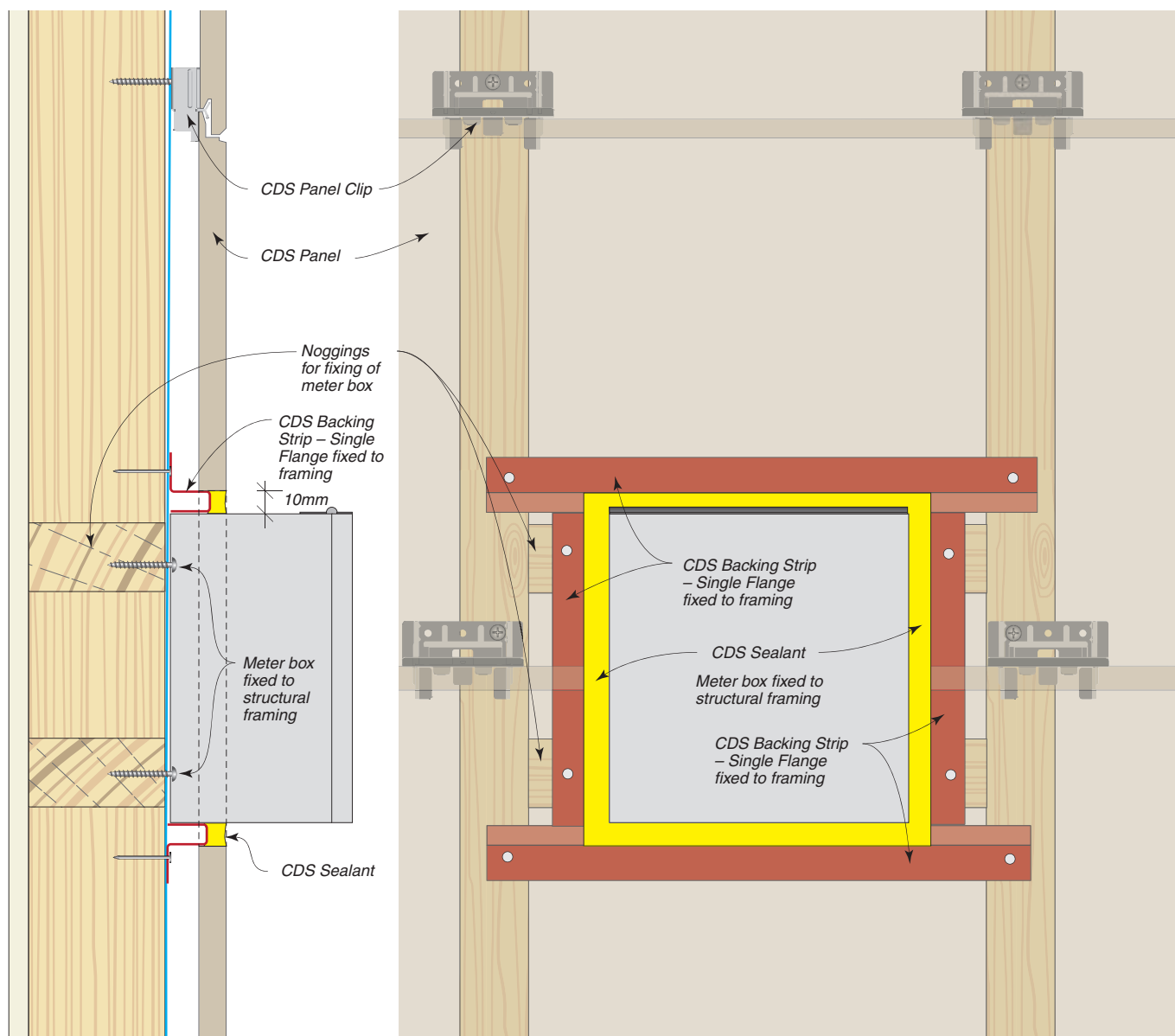
**FIG 30: Window Detail – Trend Quantum XP Aluminium Sliding Window with Weatherboard Reveal Clip E482****FIG 31: Dowell Sliding Door Installation – 70mm Framing and 85mm Reveal Shown**

FIG 32: Typical Power Meter Box Installation – Elevation

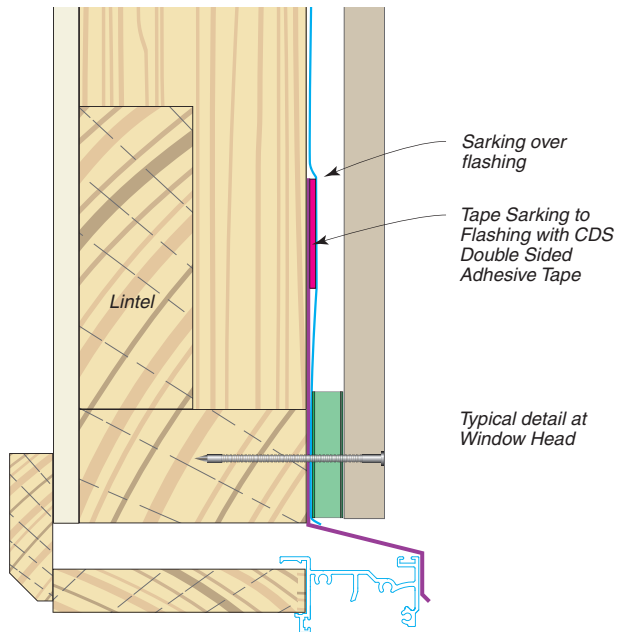




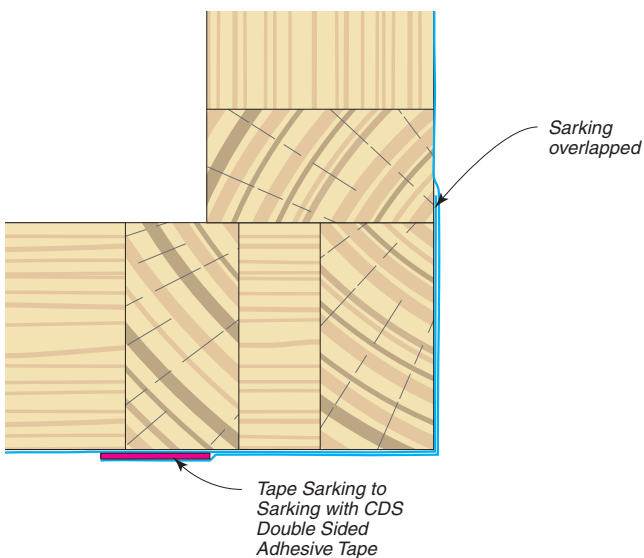
## TAPING OF SARKING AND FLASHING JUNCTIONS

For optimum insulation performance, CSR recommends taping all joints in sarking and junctions between sarking and flashings.

**FIG 33: Typical Detail for Taping of Flashing/Sarking Junctions – Elevation**



**FIG 34: Typical Detail for Taping of Sarking to Sarking at Overlap – Plan View**



## CDS PRE-FINISHED WALLING



FC:502

EXTERNAL CLADDING AND INTERNAL FEATURE WALL LININGS

JUNE 2011

CEMINTEL® FIBRE CEMENT SYSTEMS, CSR BUILDING PRODUCTS LIMITED, A.B.N. 55 008 631 356

BMS9741.0611

**cemintel™**  
fibre cement systems

[www.cemintel.com.au](http://www.cemintel.com.au)

## HEALTH &amp; SAFETY

**WARNING**

Fibre Cement products contain crystalline silica. Repeated inhalation of fibre cement dust may cause lung scarring (silicosis) or cancer. Do not breathe the dust. When cutting sheets, use the methods recommended in this brochure to minimise dust generation. If power tools are used, wear an approved dust mask (respirator). These precautions are not necessary when stacking, unloading or handling fibre cement products.

For further information and for a Material Safety Data Sheet, phone 1800 807 668.

## GUARANTEE

CSR Building Products Ltd ("CSR") warrants for 7 years from the date of purchase, that Cemintel Designer Series panels will be free of defects in materials and manufacture and that the coating will not blister, peel or flake, subject to the conditions outlined below.

For the warranty to be effective, the panels must be installed strictly in accordance with the recommended installation methods as shown in the current Cemintel Designer Series brochure at the time of construction, and CSR's recommended accessories must be used.

**Warranty Conditions**

The warranty only covers Cemintel Designer Series panels provided by CSR.

This warranty applies to defects in the manufacture or formulation of the panel, including coating. Under no circumstance will CSR be liable for defects arising from poor workmanship or defective materials not supplied by CSR.

This warranty does not cover product or coating failure caused by factors beyond the control of CSR, including extreme weather conditions.

Any warranty claim must be made within 30 days of the alleged defect becoming apparent. If a CSR product does not meet our standard, we will, at our option, replace or repair it, supply an equivalent product, or pay for doing one of these.

Other than as expressly set out in this warranty, and the warranties that cannot be excluded under The Australian Consumer Law (Schedule 2 of the Competition and Consumer Act 2010 (Cth)) (and any other law), CSR excludes all other warranties and guarantees with regard to the Cemintel Designer Series panels, including all implied warranties and guarantees.

The benefits given by this warranty are in addition to other rights and remedies of the consumer under a law in relation to the goods or services to which the warranty relates.

## CONTACT DETAILS

**Cemintel™ Fibre Cement Systems  
Sales Support**

Tel: 13 17 44 Fax: 1800 646 364

**CSR designLINK™ Technical Support Service**

Tel: 1800 621 117 Fax: 1800 069 904

Email: [designlink@csr.com.au](mailto:designlink@csr.com.au)

**New South Wales and ACT**

376 Victoria Street, Wetherill Park NSW 2164

**Queensland**

768 Boundary Road, Coopers Plains QLD 4108

**Victoria**

277 Whitehall Street, Yarraville VIC 3013

**South Australia**

Lot 100 Sharp Court, Mawson Lakes SA 5095

**Western Australia**

21 Sheffield Road, Welshpool WA 6106

**Tasmania**

PO Box 61, Glenorchy TAS 7010

**Northern Territory**

Cnr Stuart Hwy & Angliss St, Berrimah NT 0828