Cemintel™ Cladding systems utilise various board and panel products to provide attractive and durable building façades. Ensuring the weather tightness of these systems is the result of ongoing research, testing and development. This guide outlines the general methods for construction of Ventilated and Drained Cavity Framing for Cemintel™ Façade Systems.
INTRODUCTION

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 chosen Cemintel™ Cladding System is suitable for the particular requirements of any given project.

CSR Cemintel™ recommends that a comprehensive risk assessment of the building weatherproofing be conducted prior to selection of the installation system. Assessment should be based on current NCC Weatherproofing Verification methods. Refer to “WEATHERPROOFING” in this guide for detailed information.

CLADDING SYSTEM TYPES

A cladding system essentially covers the exterior walls of a building and is a key component in providing weather resistance, acoustic, thermal and fire resisting properties. A fundamental requirement of a cladding system is that water does not leak through it into the building, and there are a number of system options available to achieve this:

Ventilated and Drained Cavity

A ventilated and drained cavity or “Rainscreen” is an open jointed, rear-ventilated (vented primarily at the head and base) cladding system. These systems reduce the risk of moisture entering the cavity by means of pressure equalisation. Any water which does enter will be effectively drained away, or evaporate due to the constant airflow throughout the cavity.

Direct Fix System with Face Sealing

In many Australian residential applications, cladding is fixed directly to the frame. A degree of sealing is required at joints and gaps to prevent water ingress. Although not as effective as ventilated and drained cavity systems, direct fix systems can be an effective means of weatherproofing low risk buildings, i.e., in low rise buildings in low wind pressure areas.

Unique System

A unique system uses methods or a combination of methods of achieving weatherproofing other than described above.
OVERVIEW

- Structural framing is constructed to industry standard format in either timber or steel.
- Battens are fixed to the face of studs. Cemintel™ cavity systems are designed for 18-20mm thickness battens.
- Cladding is fixed through battens to structural framing. (Some products may be fixed to structural battens).
- A Cemintel™ J-track is used at the base of battens to provide air flow, drainage and vermin protection.
- Ventilation is also required at the top of walls, and this may be provided by use a Cemintel™ Eaves Trim or by leaving a minimum 5mm gap between the top of the cladding and soffit sheets, and between the cladding face and any dress mouldings.
- Corners, joints, junctions, penetrations (window and door openings), etc., require various treatments to suit the chosen cladding. Typical details are provided in this guide.

VENTILATED & DRAINED CAVITY SYSTEMS

Typical Wall & Ventilation Path

Typical Ventilated Head – Eaves with Cemintel Trim

Typical Ventilated & Drained Base
INSTALLATION SYSTEM REQUIREMENTS
Clause P2.2.2 of the 2015 National Construction Code (NCC) includes a test method to verify that a cladding system meets stipulated weatherproofing requirements. Cemintel cavity systems have been independently certified by AECOM that they meet the performance requirements of the NCC based on tests carried out to the NCC method for cavity systems, in Wind Categories up to N5/C3 (max. 2.96kPa).

Direct fixed cladding may be appropriate for some buildings. Refer to relevant literature and BCA requirements.

CEMINTEL CAVITY SYSTEMS
CSR Cemintel™ offers a diverse range of cladding systems with a range of installation options. Please refer to Table 1 and Table 2 for an overview of the alternative cavity systems currently available.

WEATHERPROOFING
The control of water ingress to a building is the responsibility of the building designer. All framing, sarking, flashings, damp proof courses and sealants must be installed in accordance with this manual, the relevant product manufacturer’s instructions, applicable standards and building codes.

The selection of the appropriate installation system is based on many factors, but particular attention must be paid to weatherproofing to ensure adequate long-term performance. Therefore an assessment based on NCC Weatherproofing Risk Factors should be undertaken prior to selection of the installation system. Refer to Table 3.

Cavity systems are the best method for weather proofing walls and should be considered for high risk designs. Table 3 is a method used by the BCA to determine a building’s risk. A score of 13 – 20 is considered to be a high risk design.

### Table 1: Cemintel™ Cavity Systems with Timber Stud Framing

<table>
<thead>
<tr>
<th>Cemintel™ Product</th>
<th>Timber Stud Framing</th>
<th>Batten Type</th>
<th>Fixing of Cladding</th>
<th>Maximum Wind Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headland™ Weatherboards</td>
<td>18-20mm non-structural</td>
<td>Paslode 60mm Nails into stud framing</td>
<td>N5/C3</td>
<td></td>
</tr>
<tr>
<td>Scarborough™ Weatherboards</td>
<td>18-20mm non-structural</td>
<td>Paslode 60mm Nails into stud framing</td>
<td>N5/C3</td>
<td></td>
</tr>
<tr>
<td>Plank</td>
<td>18-20mm non-structural</td>
<td>Paslode 60mm Nails into stud framing</td>
<td>N5/C3</td>
<td></td>
</tr>
<tr>
<td>Endeavour™ Weatherboards</td>
<td>18-20mm non-structural</td>
<td>Paslode 60mm Nails into stud framing</td>
<td>N5/C3</td>
<td></td>
</tr>
<tr>
<td>Aspect™</td>
<td>18-20mm non-structural</td>
<td>Paslode 60mm Nails into stud framing</td>
<td>N5/C3</td>
<td></td>
</tr>
<tr>
<td>Edge™</td>
<td>18-20mm non-structural</td>
<td>Paslode 60mm Nails into stud framing</td>
<td>N5/C3</td>
<td></td>
</tr>
<tr>
<td>Mosaic™</td>
<td>Cemintel™ FC</td>
<td>25mm Brad Nails into battens</td>
<td>N5/C3</td>
<td></td>
</tr>
<tr>
<td>Cladding Sheet</td>
<td>18-20mm non-structural</td>
<td>Paslode 60mm Nails into stud framing</td>
<td>N5/C3</td>
<td></td>
</tr>
<tr>
<td>Texture System (Texture Base Sheet)</td>
<td>18-20mm non-structural</td>
<td>Paslode 60mm Nails into stud framing</td>
<td>N5/C3</td>
<td></td>
</tr>
</tbody>
</table>

### Table 2: Cemintel™ Cavity Systems with Steel Stud Framing

<table>
<thead>
<tr>
<th>Cemintel™ Product</th>
<th>Steel Stud Framing</th>
<th>Batten Type</th>
<th>Fixing of Cladding</th>
<th>Maximum Wind Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Headland™ Weatherboards</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Scarborough™ Weatherboards</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Plank</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Endeavour™ Weatherboards</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Aspect™</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Edge™</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Mosaic™ Cemintel™ FC over thermal break</td>
<td>25mm Brad Nails into battens</td>
<td>N5/C3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cladding Sheet</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
<tr>
<td>Texture System (Texture Base Sheet)</td>
<td>N/A</td>
<td>–</td>
<td>–</td>
<td></td>
</tr>
</tbody>
</table>
### Table 3: Weatherproofing Risk Factors (NCC 2015 BCA Vol 2, Table V2.2.1)

<table>
<thead>
<tr>
<th>Risk Factor</th>
<th>Category</th>
<th>Risk Severity</th>
<th>Risk Score</th>
<th>My Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wind Region</td>
<td>Region A (AS/NZS 1170.2)</td>
<td>Low to Medium</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Region B (AS/NZS 1170.2)</td>
<td>High</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Region C (AS/NZS 1170.2)</td>
<td>Very High</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Region D (AS/NZS 1170.2)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number Of Storeys</td>
<td>One storey</td>
<td>Low</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two storeys in part</td>
<td>Medium</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Two storeys</td>
<td>High</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>More than two storeys</td>
<td>Very High</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Roof/Wall Junctions</td>
<td>Roof-to-wall junctions fully protected</td>
<td>Low</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roof-to-wall junctions partially exposed</td>
<td>Medium</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roof-to-wall junctions fully exposed</td>
<td>High</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Roof elements finishing within the boundaries formed by the external walls</td>
<td>Very High</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Eaves Width</td>
<td>Greater than 600 mm for single storey</td>
<td>Low</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>greater than 600 mm for two storey</td>
<td>Medium</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>101-450 mm for single storey; or</td>
<td>High</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>greater than 600 mm for above two storey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-100 mm for single storey; or</td>
<td>Very High</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td></td>
<td>less than 600 mm for above two storey</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Envelope Complexity</td>
<td>Simple shape with single cladding type</td>
<td>Low</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complex shape with no more than two cladding types</td>
<td>Medium</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Complex shape with more than two cladding types</td>
<td>High</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td></td>
<td>As for high risk but with fully exposed roof-to-wall junctions</td>
<td>Very High</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>Decks, Porches And Balconies</td>
<td>None; or</td>
<td>Low</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td></td>
<td>timber slat deck or porch at ground level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fully covered in plan view by roof; or</td>
<td>Medium</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>timber slat deck attached at first or second floor level</td>
<td>High</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Balcony exposed in plan view at first floor level; or</td>
<td>Very High</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td></td>
<td>balcony cantilevered at first floor level</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Balcony exposed in plan view at second floor level or above; or</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>balcony cantilevered at second floor level or above</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Notes:**
1. Eaves width is measured horizontally from the external face of any wall cladding to the outer edge of any overhang, including fascia and external gutters.
2. Barriers to prevent falling and parapets are considered as 0 mm eaves.

**FRAMING**

Cemintel cladding products can be fixed to timber or steel framing with studs at 600mm maximum centres and a minimum face width of 35mm.

Studs at vertical sheet/board joints often require a wider minimum face fixing width to provide adequate edge distances for fixings. In these cases, double studs, trimmers and/or wider battens must be provided behind vertical sheet joints. Refer to appropriate construction details for your chosen product.

As a minimum requirement, framing shall be in accordance with the following applicable standards:

- AS/NZS4600 – Cold-formed steel structures.
- AS3623 – Domestic metal framing.
- AS4055 – Wind loads for housing.
- The Building Code of Australia (BCA).

**Timber Framing**

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

**Steel Framing**

The design and construction of the steel frames should be considered in conjunction with the advice from the manufacturer. In highly corrosive environments, appropriate measures should be taken to protect the frame from corrosion. Steel framing must be a minimum 0.55mm BMT to a maximum 1.6mm BMT. Do not fix Cemintel cladding to thicker cold rolled members or to hot rolled steel.
BATTENS

Cemintel drained cavity systems have been designed to suit battens 18 to 20mm thick. They are to have a minimum 35mm face width and are to be fixed to studs at appropriate centres.

Wider battens or side-by-side battens may be required behind vertical sheet/board joints in some cases. Refer to appropriate construction details.

The Cemintel™ Fibre Cement cavity batten should be used where a structural grade batten is required and where additional durability is preferred. Timber with a minimum H3 protective treatment may be used in non-structural applications. For steel framing, the Cemintel™ batten is used over a thermal break. Refer to Table 1, Table 2 and Table 4.

Battens for cladding support are to be fixed vertically to stud framing. Where additional backing is required for flashings etc, a short spacer batten may be used and must be fixed with a minimum fall of 5° to the horizontal to allow drainage of any moisture.

Table 4: Maximum Fastener Spacing for Fixing Structural Battens to Timber or Steel Framing – On-stud Fixing

<table>
<thead>
<tr>
<th>Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Cemintel™ Batten (Fibre Cement)</th>
<th>Timber Framing</th>
<th>Steel Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Nails (2 x 2.8x50)</td>
<td>Screw (8G-10x50)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>0.5 BMT</td>
<td>0.75 BMT</td>
</tr>
<tr>
<td>600</td>
<td>N1</td>
<td>650</td>
<td>650</td>
<td>650</td>
</tr>
<tr>
<td></td>
<td>N2</td>
<td>550</td>
<td>650</td>
<td>650</td>
</tr>
<tr>
<td></td>
<td>N3/C1</td>
<td>400</td>
<td>450</td>
<td>450</td>
</tr>
<tr>
<td></td>
<td>N4/C2</td>
<td>350</td>
<td>300</td>
<td>300</td>
</tr>
<tr>
<td></td>
<td>N5/C3</td>
<td>300</td>
<td>200</td>
<td>200</td>
</tr>
<tr>
<td>450</td>
<td>N1</td>
<td>700</td>
<td>700</td>
<td>700</td>
</tr>
<tr>
<td></td>
<td>N2</td>
<td>650</td>
<td>650</td>
<td>650</td>
</tr>
<tr>
<td></td>
<td>N3/C1</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>N4/C2</td>
<td>400</td>
<td>400</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>N5/C3</td>
<td>350</td>
<td>250</td>
<td>250</td>
</tr>
<tr>
<td>300</td>
<td>N1</td>
<td>800</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>N2</td>
<td>800</td>
<td>800</td>
<td>800</td>
</tr>
<tr>
<td></td>
<td>N3/C1</td>
<td>600</td>
<td>600</td>
<td>600</td>
</tr>
<tr>
<td></td>
<td>N4/C2</td>
<td>500</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>N5/C3</td>
<td>400</td>
<td>400</td>
<td>400</td>
</tr>
</tbody>
</table>
THERMAL BREAK – STEEL FRAMING
A thermal break is required where Cemintel™ cladding is fixed directly to steel framing of walls enclosing habitable or usable spaces. For detailed information refer to the BCA.

The thermal break is applied to the face of the frame to meet the deemed to satisfy requirements of the BCA. The thermal break is used to ensure that the thermal performance of the wall is comparable to that of a timber framed wall. For systems with timber battens 20mm or thicker, no additional thermal break is required.

WIND LOADING
Cemintel™ cladding is suitable for buildings within the geometric limits of AS4055 – Wind Loads for Housing. These limits include a roof height less than 8.5m, eaves height less than 6m, and a building width less than 16m. Cemintel™ cladding is also suitable for buildings outside this code in non-cyclone areas.

For appropriate stud spacing and board fixing specifications, refer to the relevant Cemintel installation guide for your chosen product. It is the responsibility of the building designer to determine the wind classifications of the building and the suitability of the system.

LIMITATIONS
Cemintel™ claddings are unsuitable for the following applications: non-vertical framing (e.g. parapet capping); water features; chimney cladding; exposure to temperatures over 50°C; contact with standing snow or ice. Other restrictions may exist, please refer to appropriate product installation guides.

STRUCTURAL BRACING
Cemintel™ cladding is 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 Cemintel™ cladding must be sheeted to maintain a uniform fixing plane. Note that window set-out will be affected.

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

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

Additional vertical control joints may be required in the some cladding systems such as Cemintel Texture System. Please refer to the details in the relevant product installation guide.

For two storey construction, a horizontal control joint should be provided at the upper floor level unless specifically stated to the contrary in the relevant product installation guide. Frame shrinkage also requires consideration by the building designer in all cases.

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 : Termite management, and your local building authorities for more information about the requirements for the design of a suitable termite management system.

SERVICES
Cemintel™ cladding systems will accommodate services that are run through the framing. Any notches or holes formed must be considered in the framing design.

PENETRATIONS
Penetrations in the Cemintel™ cladding must be neatly cut using appropriate tools such as a saw, drill or hole saw. Penetrations should be prepared with a clearance of 5mm all around and the gap must be fully sealed with Sealant.
WALL WRAP/SARKING SELECTION

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

- **Condensation Risk:** This is a complex problem and can occur under a variety of conditions (not just in cold and tropical climates) so selection of the right wall wrap/sarking needs to consider the local climate, building use and orientation, material R-Value of the insulation, as well as the degree and location of ventilation.

- **Weather Barrier:** Weather loads can produce lower air pressures within buildings than on the outside, forcing water through small gaps in the building envelope around penetrations and joints, even at low wind speeds.

Careful selection of a wall wrap/sarking with the appropriate level of vapour permeability or vapour resistance is one key factor in reducing condensation risk. Table 5 provides guidance on recommended wall wrap/sarking selection. Key selection characteristics for a suitable wall wrap/sarking are as follows:

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

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

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.

Refer to relevant Cemintel Installation Guides and/or The Gyprock Red Book for thermal performance values.

COLD CLIMATES

In cold climates where condensation in the wall cavity is possible, a vapour barrier is also recommended between any internal linings and the framing.

Cemintel™ cladding is not designed to be in contact with snow or ice build-up, such as is experienced in alpine areas subject to snowdrifts. When used in freeze/thaw conditions, Cemintel™ cladding must be painted prior to exposure to freezing conditions.

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

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

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

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

3. Vertical laps (including corners) should overlap by one stud spacing minimum and should be staggered between adjacent layers.

4. Upper layers should overlap lower layers by 150mm minimum to ensure that water is always shed towards the outside of the membrane and building.

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

6. Wrap the tabs around the framing.

7. Fix sarking to the rear of the framing with staples at 300mm maximum centres.

8. Apply Enviroseal ProctorWrap tape to the corners of openings.

9. Wipe tape over the frame edge onto the face of the wall wrap.

Horizontal flashings such as at the head of doors and windows, horizontal storey junctions and at the wall base (when used) must be taped to the sarking to ensure water is always shed towards the outside.
INTERNAL LININGS

Internal linings are to be designed for the applicable pressures calculated in accordance with AS4055. For Gyprock Standard Plasterboard linings, the arrangements in Table 6 may be used. Sheet fixing details are to be in accordance with GYP547 Gyprock Residential Installation Guide. For other lining materials, consult the manufacturer.

Table 6: Internal Lining Design

<table>
<thead>
<tr>
<th>Wind Category</th>
<th>Internal Pressure (kPa)</th>
<th>Lining</th>
<th>Sheet Orientation</th>
</tr>
</thead>
<tbody>
<tr>
<td>N1, N2, N3</td>
<td>0.45</td>
<td>10mm Gyprock SP*</td>
<td>Horizontal or Vertical</td>
</tr>
<tr>
<td>N4, N5, N6, C1</td>
<td>1.33</td>
<td>10mm Gyprock SP*</td>
<td>Horizontal</td>
</tr>
<tr>
<td>C2, C3</td>
<td>2.30</td>
<td>13mm Gyprock SP*</td>
<td>Horizontal</td>
</tr>
<tr>
<td>C4</td>
<td>3.11</td>
<td>2 x 10mm Gyprock SP*</td>
<td>Horizontal</td>
</tr>
</tbody>
</table>

* Gyprock SP = Gyprock Standard Plasterboard

CORROSIVITY CATEGORIES/COASTAL AREAS

Corrosivity categories are as described in AS4312 - Atmospheric corrosivity zones in Australia. The code has methods for determining categories as well as maps and tables of major population centres. It is recommended that the building designer assess the site in accordance with the standard and local conditions.

The following is a summary of the BCA description.

C1: Very Low
Generally inside buildings, semi-sheltered locations away from marine or industrial influence, and some alpine regions.

C2: Low
Dry, rural areas, away from the coast or sources of pollution. Most areas of Australia at least 50 kilometres from the coast, which can extend to within one kilometre from quiet, sheltered seas. Most inland towns, such as Canberra, Ballarat, Toowoomba and Alice Springs, and suburbs of cities on sheltered bays (Brisbane, Melbourne, Hobart) that are more than one kilometre from the sea. Adelaide suburbs more than 6 kilometres from the coast in the southern suburbs, through to 3 kilometres from the coast in the northern suburbs.

C3: Medium
Coastal areas with low salinity, extended by factors such as wind, topography and vegetation. Sheltered areas such as Port Phillip Bay 50 metres from the shoreline to about one kilometre inland. Around less sheltered bays such as Adelaide to about 3 to 6 kilometres inland. Along ocean front areas with breaking surf and significant salt spray extending from about one kilometre inland to between 10 and 50 kilometres inland, depending on the strength of prevailing winds and topography. Includes much of the metropolitan areas of Wollongong, Sydney, Newcastle and the Gold Coast, most of the Yorke Peninsula South Australia, and from Victor Harbour to the Victorian border, extending between 30 and 70 kilometres inland. Urban and industrial areas with low pollution levels, and for several kilometres around large industries such as steelworks and smelters.

C4: High
Around sheltered bays up to 50 metres inland from the shoreline. Areas with rough seas and surf, extending from several hundred metres inland to about one kilometre inland and depends on winds, wave action and topography. Up to 1.5 kilometres downwind of large industrial plants.

C5: Very High
Offshore and on the beach front in regions of rough seas and surf beaches, and inland for several hundred metres, e.g. around Newcastle extending over half a kilometre from the coast. Aggressive industrial areas where the environment may be acidic with a pH of less than 5.

Table 7: Requirements for Corrosive Environments

<table>
<thead>
<tr>
<th>Corrosivity Category (AS4312)</th>
<th>Fixings (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>C1 : Very Low</td>
<td>Class 3 or Class 4 stainless steel fixings</td>
</tr>
<tr>
<td>C2 : Low</td>
<td>Class 3 or Class 4 stainless steel fixings</td>
</tr>
<tr>
<td>C3 : Medium</td>
<td>Class 3 countersunk head screws filled and finished level with Cemintel External Joint Compound or Class 4 stainless steel fixings</td>
</tr>
<tr>
<td>C4 : High</td>
<td>Not Suitable</td>
</tr>
</tbody>
</table>

WASH-DOWN

Walls are to be washed down using fresh water at least 2 times per year. When cleaning cladding, use no more than 700psi (50kg/cm2) of water pressure at 3m to 3.5m distance from the face. Water pressure should be applied downward to avoid forcing water into openings.

FLASHINGS & CAPPINGS

In general, flashings shall be designed and installed in accordance with SAA-HB39 1997 - Installation code for metal roofing and wall cladding. All flashings are supplied by others.

WINDOW SELECTION

The Cemintel™ cladding systems are designed to accept standard aluminium or timber framed windows and doors that comply with AS2047. Aluminium windows MUST NOT have sill drain holes which can direct water behind the cladding.

Consideration must be given to the total depth of the wall...
to ensure the required clearance is provided at the window jamb to accommodate the cladding. As per normal industry practice, reveal depth is usually varied to adjust the window location.

Elements that affect window/door installations include the depth of the stud framing, the thickness of internal linings, the depth and design of the chosen window frame, the depth of the timber reveal and the total depth of the cladding system. Refer to typical window installation details later in this guide.

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

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

PAINTING
All products should be painted within three months of delivery to site. CSR recommends a minimum of two coats of exterior grade acrylic paint be applied to the manufacturer’s specifications. A priming coat may also be required. Refer to paint manufacturer’s recommendations.

Where Cemintel™ cladding products are exposed to the elements for more than three months from delivery, CSR recommends the application of a priming coat before applying the decorative coatings.

All cut edges should be pre-painted with an exterior sealer (preferably prior to installation) and then finished as for the face.

Prior to the application of the external coating, wash down all walls with clean fresh water to remove salt spray build-up from boards and fixings. Boards must be allowed to dry before coating.

MAINTENANCE
The durability of Cemintel™ cladding systems can be enhanced by periodic inspection and maintenance. Inspections should include examination of the coatings, flashings, and sealants. Any cracked or damaged finish or sealants which would allow water ingress, must be repaired immediately by resealing the affected area, or by replacing the affected area. Any damaged flashings, boards or sealants must be replaced as for new work.

Regularly inspect board surfaces and follow wash-down procedures when required. Refer to requirements for Corrosivity Zones C3 and above detailed in the "Corrosivity Categories/Coastal Areas" section of this guide.

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

**NOTE:** In high corrosion zones (C4), Class 4 or Stainless Steel fasteners are required. Refer to “Coastal Areas”. Supplied by others. Some components suit only specific cladding products, and are noted in the ‘To Suit’ column.


<table>
<thead>
<tr>
<th>Product</th>
<th>Description</th>
<th>To Suit</th>
<th>Size</th>
<th>Qty</th>
<th>Order Code</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batten fixing Nails</td>
<td>Machine driven D-head, Class 3. Used for fixing battens to timber framing.</td>
<td>ALL</td>
<td>2.80 x 50mm</td>
<td>3000</td>
<td>127799</td>
</tr>
<tr>
<td>Batten fixing Screw</td>
<td>Class 3, countersunk ribbed head, phillips drive, treated pine screw. Used to fix battens to timber framing.</td>
<td>ALL</td>
<td>8G-10 x 50mm</td>
<td>1000</td>
<td>127801</td>
</tr>
<tr>
<td>Batten fixing Screw</td>
<td>Otter (SLEG+) CSK rib head, Philips drive, GAL Class 3 finish. Used to fix battens to steel framing of 0.5 to 1.0mm BMT over Thermal Break.</td>
<td>M</td>
<td>10G x 40mm</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td>Cemintel™ FC Batten</td>
<td>Advanced lightweight fibre cement structural grade batten. Battens are fixed to structural framing to create a 19mm deep drained cavity system.</td>
<td>ALL</td>
<td>19 x 70mm x 2700mm</td>
<td>1</td>
<td>125431</td>
</tr>
<tr>
<td>Timber H3 Batten</td>
<td>Or other suitable material. Battens are fixed to structural studs to create a drained cavity system. (Minimum 20mm required on steel framing for thermal break).</td>
<td>ALL</td>
<td>18-20mm x 35mm minimum</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td>Thermal Break</td>
<td>Extruded polystyrene strip with R = 0.22. Used with steel stud framing to achieve thermal performance.</td>
<td>ALL</td>
<td>6.4mm x 38mm x 15.3m</td>
<td>3 bundles x 10 strips in each</td>
<td>129333</td>
</tr>
<tr>
<td>Cladding Nails</td>
<td>Machine Driven Brad Nails, Class 3, Hot Dipped Galvanised (HDG) or Stainless Steel (S/S). Used for fixing Cemintel™ cladding products to timber stud framing over 18/20mm battens.</td>
<td>ALL</td>
<td>60mm</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paslode 60 x 2.5 HDG</td>
<td>ALL</td>
<td>60mm</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paslode 60 x 2.7 Screw HDG Dome 15°</td>
<td>ALL</td>
<td>60mm</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paslode 60 x 2.7 Ring HDG Dome 15°</td>
<td>ALL</td>
<td>60mm</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paslode 60 x 2.7 Screw S/S Dome 15°</td>
<td>ALL</td>
<td>60mm</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Paslode 60 x 2.7 Ring S/S Dome 15°</td>
<td>ALL</td>
<td>60mm</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td>Cladding Nails</td>
<td>C25 machine driven Brad nails, Class 3 or Stainless Steel. Used for fixing some products to Cemintel™ FC Batten.</td>
<td>M</td>
<td>16G x 25mm</td>
<td>Supplied by others</td>
<td></td>
</tr>
<tr>
<td>J-Track (Batten Closer)</td>
<td>PVC extrusion fitted at base of battens to provide drainage, air flow and vermin proofing.</td>
<td>ALL</td>
<td>19 x 19 x 70mm x 3000mm</td>
<td>1</td>
<td>134845</td>
</tr>
<tr>
<td>Cemintel™ Eaves Trim</td>
<td>Provides an attractive finish at eaves junction and provides cavity ventilation. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Suits all products up to 16mm thickness. Colour – White.</td>
<td>ALL</td>
<td>60 x 26mm x 3030mm</td>
<td>1</td>
<td>134451</td>
</tr>
<tr>
<td>Product</td>
<td>Description</td>
<td>To Suit</td>
<td>Size</td>
<td>Qty</td>
<td>Order Code</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
<td>------------------</td>
<td>-----------------------</td>
<td>-----</td>
<td>------------</td>
</tr>
<tr>
<td>•</td>
<td>Cemintel™ Eaves Trim External Corner – Provides an attractive joint at eaves trim corner. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Colour – White.</td>
<td>ALL</td>
<td>100 x 100mm</td>
<td>1</td>
<td>134426</td>
</tr>
<tr>
<td>•</td>
<td>Cemintel™ Eaves Trim Internal Corner – Provides an attractive joint at eaves trim corner. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Colour – White.</td>
<td>ALL</td>
<td>150 x 150mm</td>
<td>1</td>
<td>134429</td>
</tr>
<tr>
<td>•</td>
<td>Cemintel™ Soffit Trim – Provides an attractive finish at soffit edge as well as cavity ventilation and cavity closure below battens. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Colour – White.</td>
<td>ALL</td>
<td>66 x 18mm x 2000mmL</td>
<td>1</td>
<td>134452</td>
</tr>
<tr>
<td>•</td>
<td>Cemintel™ Soffit Trim External Corner – Provides an attractive joint at soffit trim corner. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Colour – White.</td>
<td>ALL</td>
<td>76.5 x 76.5mm</td>
<td>1</td>
<td>134426</td>
</tr>
<tr>
<td>•</td>
<td>Cemintel™ Soffit Trim Internal Corner – Provides an attractive joint at soffit trim corner. Powder coat finish on 0.35mm BMT steel with Galvalume AZ150 corrosion resistant coating. Colour – White.</td>
<td>ALL</td>
<td>91.5 x 91.5mm</td>
<td>1</td>
<td>134429</td>
</tr>
<tr>
<td>•</td>
<td>Backing Rod – Used to enable correct filling of some joints with sealant. Also used as an air seal at window openings and construction junctions. The diameter of backing rod must be appropriate for the width of the gap being filled.</td>
<td>ALL</td>
<td>10mm dia. x 50m roll</td>
<td>1</td>
<td>11177</td>
</tr>
<tr>
<td>•</td>
<td>Sealant Bond Breaker Tape – Used behind board joints made on framing. Tape is applied to the face of sarking or batten and joints are filled with sealant. Tesa Multiform Tape N°7492, polyethylene closed cell foam tape. Self adhesive back.</td>
<td>ALL</td>
<td>48 x 3mm x 25m</td>
<td>1</td>
<td>13172</td>
</tr>
<tr>
<td>•</td>
<td>Self Adhesive Foam Backing Tape – Used as a backing behind board joints in stepped board systems to fill gaps at the back of boards and assist with joint filling. Self adhesive back.</td>
<td>HPS</td>
<td>30 x 10mm x 9.1m</td>
<td>1</td>
<td>134783</td>
</tr>
<tr>
<td>•</td>
<td>Sealant/Adhesive – Sikaflex® 11FC. To be used where specified, i.e., at all board end joints, at corners and control joints. Paintable. Apply to manufacturer’s specifications.</td>
<td>ALL</td>
<td>310 ml tube</td>
<td>1 x Grey</td>
<td>39378</td>
</tr>
<tr>
<td>•</td>
<td>Flexible Sealant – Sikaflex®-PRO polyurethane sealant for gaps around windows, doors and other penetrations. Paintable. Apply to manufacturer’s specifications.</td>
<td>ALL</td>
<td>310 ml tube</td>
<td>1 x Grey</td>
<td>11378</td>
</tr>
<tr>
<td>•</td>
<td></td>
<td></td>
<td></td>
<td>1 x Black</td>
<td>39488</td>
</tr>
<tr>
<td>•</td>
<td>Sealant Primer – Sika® Primer-3 N. Should be applied to surfaces prior to sealant to improve the long-term performance of joints. Apply to manufacturer’s specifications.</td>
<td>ALL</td>
<td>250 ml</td>
<td>1</td>
<td>115227</td>
</tr>
</tbody>
</table>
FIRE RATED EXTERNAL WALL SYSTEMS

**BUSHFIRE RESISTANT WALLS**

In accordance with AS3959, Cemintel™ cladding products are suitable as an external wall lining for buildings in bushfire zones. Refer to Table 8 for product suitability.

Bushfire zone walls also require specific treatments such as mesh coverings at wall head, base, all gaps, eaves and junctions with roofs, etc., to ensure appropriate fire and ember resistance. Refer to the BCA and AS3959 for additional requirements and further details.


**FIRE RATED EXTERNAL WALL SYSTEMS**

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

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

Cemintel™ systems are available to achieve various FRLs. Refer to Table 8, Table 9, Table 10 and FIG 2. For additional assistance, contact CSR DesignLINK.

For more detailed fire system information, please refer to Gyprock publication, GYP500 – The Red Book™ Fire & Acoustic Design Guide.

Refer to the BCA for additional requirements and further details.

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**Table 8: Cemintel™ Bushfire & Fire Rated External Wall Systems Specifications**

<table>
<thead>
<tr>
<th>Cemintel™ Product</th>
<th>Bushfire Zone Walls</th>
<th>Fire Rated External Wall Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>System Specifications</td>
<td>Cladding Fixed Over Sarking and Battens + 1 x 10mm Gyprock Standard Plasterboard to internal face</td>
</tr>
<tr>
<td>Thickness (mm nom.)</td>
<td>Bushfire Attack Level (BAL max.)</td>
<td>FRL</td>
</tr>
<tr>
<td>Scarborough™ Weatherboard</td>
<td>12</td>
<td>BAL–40</td>
</tr>
<tr>
<td>Headland™ Weatherboard</td>
<td>10</td>
<td>BAL–LOW</td>
</tr>
<tr>
<td>Endeavour™ Weatherboard</td>
<td>10</td>
<td>BAL–LOW</td>
</tr>
<tr>
<td>Plank</td>
<td>7.5</td>
<td>BAL–29</td>
</tr>
<tr>
<td>Aspect™</td>
<td>12</td>
<td>BAL–40</td>
</tr>
<tr>
<td>Edge™</td>
<td>9</td>
<td>BAL–29</td>
</tr>
<tr>
<td>Mosaic™</td>
<td>8</td>
<td>BAL–29</td>
</tr>
<tr>
<td>Cladding Sheet</td>
<td>6</td>
<td>BAL–29</td>
</tr>
<tr>
<td>Texture System (Texture Base Sheet)</td>
<td>7.5</td>
<td>BAL–29</td>
</tr>
<tr>
<td>Rendaline™</td>
<td>8</td>
<td>BAL–29</td>
</tr>
<tr>
<td>Designer Series™</td>
<td>16</td>
<td>BAL–40</td>
</tr>
<tr>
<td>Expresswall™</td>
<td>9</td>
<td>BAL–40</td>
</tr>
</tbody>
</table>

**NOTE:** BAL–FZ walls must have a minimum setback distance of 10 m from classified vegetation. Also refer to local building regulations.

---

BAL–FZ ⚫ 30/30/30 (from outside only) 60/60/60 (from outside only) 90/90/90 (from outside only)

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FIRE RATED WALL INSTALLATION

In addition to the standard structural framing, fire rated systems require battens to be fixed to the face of studs in accordance with the details for Drained Cavity Systems provided in this guide.

It is important to maintain the ventilation at the head and base of walls, but also to reduce the risk of ember penetration. All joints in the external surface material of walls shall be covered, sealed, overlapped, backed or butt-jointed to prevent gaps greater than 3mm. Vents in external walls shall be screened with a mesh with a maximum aperture of 2mm, made of corrosion-resistant steel or bronze, except where they are less than 3mm.

Refer to the BCA and AS3959 for additional requirements and further details.
Table 9: Fire Rated External Wall Systems – Any Cemintel Cladding on Any Battens – Timber Framing

<table>
<thead>
<tr>
<th>SYSTEM SPECIFICATION</th>
<th>TYPICAL LAYOUT (CSR 900a shown)</th>
<th>ACOUSTIC OPINION PKA-055</th>
</tr>
</thead>
</table>

- Any Cemintel external cladding material on any battens.
- Sarking.
- Lining material as per system table to external side of studs.
- Timber or Steel studs at 600mm maximum centres.
- Cavity insulation as per system table.
- Lining material as per system table to internal side.

NOTES:
*ACR = Axial Capacity Reduction. (Refer to Notes).
Acoustic performance valid for 35mm wide timber studs or 0.80 BMT steel studs at 600mm centres.

### TIMBER FRAMING

<table>
<thead>
<tr>
<th>FRL Report/Opinion</th>
<th>SYSTEM Nº</th>
<th>WALL LININGS</th>
<th>STUD DEPTH mm</th>
<th>90</th>
<th>THERMAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>30/30/30 from outside only FAR 2303</td>
<td>CSR 906</td>
<td><strong>EXTERNAL WALL SIDE</strong>&lt;br&gt;• 1 x 16mm GYPROCK FYRCHÈK MR plasterboard.&lt;br&gt;<strong>INTERNAL WALL SIDE</strong>&lt;br&gt;• 1 x 6mm CeminSeal™ Wallboard.</td>
<td>CAVITY INFILL (Refer to Bradford Insulation)&lt;br&gt;(a) Nil</td>
<td>35</td>
<td>Rw 1.0&lt;br&gt;Rt(wn) 0.9&lt;br&gt;Rt(sum) 0.9</td>
</tr>
<tr>
<td>60/60/60* from outside only FAR 2303 * ACR Group 2</td>
<td>CSR 900</td>
<td><strong>EXTERNAL WALL SIDE</strong>&lt;br&gt;• 1 x 16mm Gyprock Fyrchek MR plasterboard.&lt;br&gt;<strong>INTERNAL WALL SIDE</strong>&lt;br&gt;• 1 x 10mm Gyprock Standard Plasterboard.</td>
<td>(a) Nil</td>
<td>36</td>
<td>Rw 0.7&lt;br&gt;Rt(wn) 0.7&lt;br&gt;Rt(sum) 0.7</td>
</tr>
<tr>
<td>90/90/90 from outside only FAR 2303</td>
<td>CSR 907</td>
<td><strong>EXTERNAL WALL SIDE</strong>&lt;br&gt;• 2 x 13mm Gyprock Fyrchek MR plasterboard.&lt;br&gt;<strong>INTERNAL WALL SIDE</strong>&lt;br&gt;• 1 x 10mm Gyprock Standard Plasterboard.</td>
<td>(a) Nil</td>
<td>38</td>
<td>Rw 0.8&lt;br&gt;Rt(wn) 0.7&lt;br&gt;Rt(sum) 0.7</td>
</tr>
</tbody>
</table>

NOTES: *ACR Group 2 Timber Studs: 90 x 45mm = 0%; 90 x 35mm = 10%; 70 x 45 = 25%; 70 x 35mm = 35%.
Table 10: Fire Rated External Wall Systems – Any Cemintel Cladding on Any Battens – Steel Framing

<table>
<thead>
<tr>
<th>SYSTEM SPECIFICATION</th>
<th>TYPICAL LAYOUT (CSR 121a shown)</th>
<th>ACOUSTIC OPINION</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STEEL FRAMING</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FRL Report/Opinion</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>SYSTEM Nº</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>WALL LININGS</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>STUD DEPTH mm</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>THERMAL</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>CAVITY INFILL</strong></td>
<td>R_w</td>
<td>R_t(w,w)</td>
</tr>
<tr>
<td>(Refer to Bradford Insulation)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### CSR 118

**EXTERNAL SIDE OF STUD**
- 1 x 13mm GYPROC K Fyrcheck MR plasterboard.

**INTERNAL SIDE**
- 1 x 10mm GYPROC K Plasterboard CD.

- **(a)** Nil
- **(b)** 75 Gold Batts™ 1.5
- **(c)** 70 Soundscreen™ 2.0

**TYPICAL WALL THICKNESS mm** (based on 18mm depth batten) 132

### CSR 121

**EXTERNAL SIDE OF STUD**
- 1 x 16mm Gyproc Fyrcheck MR plasterboard.

**INTERNAL SIDE**
- 1 x 10mm Gyproc Standard Plasterboard.

- **(a)** Nil
- **(b)** 75 Gold Batts™ 1.5
- **(c)** 70 Soundscreen™ 2.0

**TYPICAL WALL THICKNESS mm** (based on 18mm depth batten) 132

### CSR 119

**EXTERNAL SIDE OF STUD**
- 2 x 13mm Gyproc Fyrcheck MR plasterboard.

**INTERNAL SIDE**
- 1 x 10mm Gyproc Standard Plasterboard.

- **(a)** Nil
- **(b)** 75 Gold Batts™ 1.5
- **(c)** 70 Soundscreen™ 2.0

**TYPICAL WALL THICKNESS mm** (based on 18mm depth batten) 142

NOTES:
- Acoustic performance valid for studs of 0.80 BMT.
- *ACR = Axial Capacity Reduction.
GENERIC INSTALLATION DETAILS OF CEMINTEL STEPPED & OVERLAPPED WEATHERBOARDS – HEADLAND™, PLANK & SCARBOROUGH™

Table 11: Fixing Requirements for Cemintel Headland™ Weatherboard to Structural Framing through Any Batten

NOTE: ✓ = fixing by the methods shown in FIG 3 is permitted.

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Timber Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General Zone 1</td>
</tr>
<tr>
<td></td>
<td>Fixings Arrangement as per FIG 3</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>N1</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>N2</td>
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<tr>
<td></td>
<td>N3/C1</td>
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<tr>
<td></td>
<td>N4/C2</td>
<td>–</td>
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<tr>
<td></td>
<td>N5/C3</td>
<td>–</td>
</tr>
<tr>
<td>450</td>
<td>N1</td>
<td>✓</td>
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<tr>
<td></td>
<td>N2</td>
<td>✓</td>
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<tr>
<td></td>
<td>N3/C1</td>
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<td>N5/C3</td>
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<tr>
<td>300</td>
<td>N1</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>N2</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>N3/C1</td>
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<tr>
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<td>N4/C2</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>N5/C3</td>
<td>✓</td>
</tr>
</tbody>
</table>

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

FIG 3: Fixing Headland™ – Timber Frame

60mm flat head nails by hand
through tongue (drive to board face)

12mm

Fix each board in concealed groove at top

Table 12: Fixing Requirements for Cemintel™ Plank to Structural Framing through Any Batten

NOTE: ✓ = fixing by the methods shown in FIG 4 is permitted.

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Timber Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General Zone 1</td>
</tr>
<tr>
<td></td>
<td>Fixings Arrangement as per FIG 4</td>
<td></td>
</tr>
<tr>
<td>600</td>
<td>N1</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>N2</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>N3/C1</td>
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</tr>
<tr>
<td></td>
<td>N4/C2</td>
<td>✓</td>
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<tr>
<td></td>
<td>N5/C3</td>
<td>–</td>
</tr>
<tr>
<td>450</td>
<td>N1</td>
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</tr>
<tr>
<td></td>
<td>N2</td>
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</tr>
<tr>
<td></td>
<td>N3/C1</td>
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<td>N4/C2</td>
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<tr>
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<td>N5/C3</td>
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<tr>
<td>300</td>
<td>N1</td>
<td>✓</td>
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<tr>
<td></td>
<td>N2</td>
<td>✓</td>
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<tr>
<td></td>
<td>N3/C1</td>
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<tr>
<td></td>
<td>N4/C2</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>N5/C3</td>
<td>–</td>
</tr>
</tbody>
</table>

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

FIG 4: Fixing Cemintel™ Plank – Timber Frame

60mm flat head nails through both boards (drive to board face)

12mm

25mm min. lap

Stud framing
Table 13: Fixing Requirements for Scarborough™ Weatherboard to Structural Framing through Any Batten

NOTE: ✓ = fixing by the methods shown in FIG 5 is permitted.

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Timber Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General Zone</td>
</tr>
<tr>
<td></td>
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<tr>
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<td>✓</td>
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<td>✓</td>
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<td></td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

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

FIG 5: Fixing Scarborough™ Weatherboard – Timber Frame

FIG 6: Base – Timber Frame

FIG 7: Vertical Joint with Trimmer or Double Studs – Timber Framing
**TYPICAL HEAD/SOFFIT DETAILS – HEADLAND/PLANK/SCARBOROUGH**

**FIG 8: Head – Eaves with Timber Trim**

- Eaves framing
- Soffit lining
- 5mm min. air gap
- Ventilation flow
- Cemintel Headland™ weatherboard
- Cemintel™ Batten
- Sarking

**FIG 9: Head – Eaves with Cemintel Eaves Trim**

- Eaves framing
- Soffit lining
- Ventilation flow
- Cemintel Headland™ weatherboard
- Cemintel™ Batten
- Sarking

**FIG 10: Soffit – With Cemintel Soffit Trim**

- Sarking
- Cemintel Headland™ Weatherboard
- Cemintel™ Batten
- J-Track
- Ventilation flow
- Soffit trim over sarking and taped
- Trim cladding to suit

**TYPICAL CORNER DETAILS – HEADLAND/PLANK/SCARBOROUGH**

**FIG 11: External Corner with Aluminium Profile**

- Stud framing
- Aluminium External Corner
- 20-50mm
- Sarking
- Cemintel Headland™ Weatherboard
- Cemintel™ Batten
- 0-3mm gap

**FIG 12: External Corner with Two-piece Aluminium Corner**

- Stud framing
- Sarking
- Cemintel Headland™ Weatherboard
- Two-piece Aluminium Corner
- Install outer piece only after all corner sheets are installed. Snap off lugs to suit cladding thickness

**FIG 13: External Corner with Timber Stop**

- Stud framing
- Sarking
- Cemintel Headland™ Weatherboard
- Timber stop
- 20-50mm
- 0-3mm gap
TYPICAL JUNCTION DETAILS – HEADLAND/PLANK/SCARBOROUGH

FIG 14: Internal Corner with Aluminium Profile

Sarking
Cemintel™ Batten
Cemintel Headland™
Aluminium Internal Corner Profile fixed to framing

20-50mm

FIG 15: Internal Corner with Two-piece Aluminium Corner

Sarking
Cemintel™ Batten
Cemintel Headland™ Weatherboard
Two-piece aluminium Corner (Install outer piece only after all corner sheets are installed. Snap off lugs to suit cladding thickness)

FIG 16: Internal Corner with Timber Moulding

Sarking
Cemintel™ Batten
Cemintel Headland™ Weatherboard
0-3mm gap
External grade timber trim

FIG 17: Obtuse Angle Corner

Sarking
Metal flashing (by others)
Bond Breaker Tape
Optional timber trim to suit angle
Gap filled with sealant
Foam tape

FIG 18: Junction of Weatherboard with Alternative Fibre Cement Cladding

10mm Gyprock plasterboard
15-20mm gap with Rondo P35 Control Joint
Air Seal
Gap and packing

FIG 19: Junction of Weatherboard with Offset or In-line Masonry Wall

Gyprock plasterboard
15-20mm gap with Rondo P35 Control Joint
Air Seal
Dampcourse
6mm gap and packing
**TYPICAL JUNCTION DETAILS – HEADLAND/PLANK/SCARBOROUGH**

**FIG 20: Second Storey Junction with Hebel Panels, Brick Veneer or Masonry Wall – Cantilevered Framing**

CAUTION: Vertical shrinkage of framing must be addressed

- Stud framing
- Sarking
- Cemintel™ Headland™ Weatherboard
- Cemintel™ Batten
- Flashing taped to sarking
- Packing Strip
- J-Track
- 10-15mm drainage gap
- Continuous bead of sealant
- Metal Flashing by others
- Hebel Panel, PGH Bricks or masonry wall

**FIG 21: Second Storey Junction with Masonry, Brick Veneer or Hebel Panels**

CAUTION: Vertical shrinkage of framing must be addressed

- Upper Storey Floor Joist
- Blocking to support Batten
- Sarking
- Cemintel™ Headland™ Weatherboard
- Cemintel™ Batten
- Flashing taped to sarking
- Packing Strip
- J-Track
- 10-15mm drainage gap
- Continuous bead of sealant
- Metal Flashing by others
- Hebel Panel, PGH Bricks or masonry wall

**FIG 22: Second Storey Horizontal Junction**

CAUTION: Vertical shrinkage of framing may require consideration

- Upper Storey Floor Joist
- Blocking to support battens and flashings
- Sarking
- Flashing over Sarking and taped
- Packing Strip
- J-Track
- 10-15mm drainage gap
- Metal Flashing 20° min. slope (by others)

**FIG 23: Horizontal Parapet**

- 5mm packer at each batten to produce a ventilation gap
- Parapet Capping (by others)
- Parapet Backing Board (by others)
- Roof Sheet/Tiles
- Box Gutter (by others)
- Cemintel™ Headland™ Weatherboard
- Cemintel™ Batten
- Sarking
- Flashing over Sarking and taped
- Packing Strip
- J-Track
- 10-15mm drainage gap
- Metal Flashing 20° min. slope (by others)
- Roof Framing
- Stud Framing
FIG 24: Junction of Cladding with External Roofing

- Flashing over sarking and taped
- Cut weatherboard to suit roof slope (pre-coat cut edges with exterior sealer)
- Metal Flashing (by others)
- 10-15mm drainage gap
- Fix to framing in accordance with system specification
- Cemintel Headland™ Weatherboard
- Cemintel™ Batten
- Roof Framing
- Roof Sheet/Tiles
- Metal Flashing (by others)
- Packing Strip
- J-Track
- Soffit lining
- Cemintel™ Batten
- Pre-coat all cut edges with exterior sealer
- Refer to eaves detail

FIG 25: Junction of Cladding with External Roofing

- Sarking over flashing and taped
- Pre-coat all cut edges with exterior sealer
- Stud Framing
- Roof Framing
- Soffit lining
- J-Track
- Packing Strip
- Metal Flashing (by others)
- 10-15mm drainage gap
- Fix to framing in accordance with system specification
- Cemintel Headland™ Weatherboard
- Cemintel™ Batten
- Roof Sheet/Tiles
- Cemintel™ Batten
- Cemintel Headland™ Weatherboard
- Refer to eaves detail

FIG 26: Window Detail – A&L Aluminium Sliding Window with Weatherboard Trim shown

- Flashing over sarking and taped
- Clearance to window manufacturer’s requirements
- Cemintel™ Batten
- Packing Strip
- J-Track
- 10-15mm gap
- Pre-paint cut edges
- Metal Flashing (by installer)
- Soffit lining
- Air Seal
- Adjust reveal as required
- A&L Aluminium Sliding Window Frame
- Packer (by installer)
- Sill drainage
- Fix to framing in accordance with system specification
- Cemintel™ Batten
- Flashing over sarking (by installer)
- Sarking wrapped around corners
- Air Seal
- Adjust reveal to suit
- Flashing (by window manufacturer)
- Sill weather flap (by window manufacturer)
- A&L Aluminium Sliding Window Frame
- Packer (by installer)
- Jamb
- No packing
- Sill drainage
- Clearance to window manufacturer’s requirements
- Flashing over sarking and taped
- Cemintel™ Batten
- A&L Aluminium Sliding Window Frame
FIG 27: Power Meter Box Installation
### Table 14: Fixing Requirements for Cemintel Endeavour™ Weatherboard to Structural Framing through Any Batten

**NOTE:** ✓ = fixing by the methods shown in FIG 28 is permitted.

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Timber Framing</th>
<th>Fixings Arrangement as per FIG 28</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General Zone</td>
<td>Corner Zone</td>
</tr>
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<td></td>
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<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
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<tr>
<td>600</td>
<td>N1</td>
<td>✓</td>
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</tr>
<tr>
<td></td>
<td>N2</td>
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<td>–</td>
</tr>
<tr>
<td></td>
<td>N3/C1</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td></td>
<td>N4/C2</td>
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<td>–</td>
</tr>
<tr>
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<td>N5/C3</td>
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</tr>
<tr>
<td>450</td>
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<td>✓</td>
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<tr>
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<td>N3/C1</td>
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<td>N4/C2</td>
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<tr>
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<td>N5/C3</td>
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<tr>
<td>300</td>
<td>N1</td>
<td>✓</td>
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</tr>
<tr>
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<td>N2</td>
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<td>✓</td>
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<td>N3/C1</td>
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<td>✓</td>
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<td>N4/C2</td>
<td>✓</td>
<td>✓</td>
</tr>
<tr>
<td></td>
<td>N5/C3</td>
<td>✓</td>
<td>✓</td>
</tr>
</tbody>
</table>

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

### Table 15: Fixing Requirements for Cemintel Aspect™ Weatherboard to Structural Framing through Any Batten

**NOTE:** ✓ = fixing by the methods shown in FIG 29/FIG 30/FIG 31 is permitted.

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Timber Framing</th>
<th>Fixings Arrangement as per FIG 29</th>
<th>Fixings Arrangement as per FIG 30</th>
<th>Fixings Arrangement as per FIG 31</th>
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</thead>
<tbody>
<tr>
<td></td>
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<td>General Zone</td>
<td>Corner Zone</td>
<td>General Zone</td>
<td>Corner Zone</td>
</tr>
<tr>
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<td></td>
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<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
<td>✓ ✓ ✓ ✓ ✓ ✓ ✓ ✓</td>
</tr>
<tr>
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<td>N1</td>
<td>✓</td>
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<td>N5/C3</td>
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<td>–</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>450</td>
<td>N1</td>
<td>✓</td>
<td>✓</td>
<td>✓</td>
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</tr>
<tr>
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</tr>
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<td>N5/C3</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

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

**FIG 28: Fixing Endeavour™ – Timber Frame**

- Fix through concealed tongue
- Fix at mid height of board

**FIG 29: Fixing Aspect™ – Timber Frame**

- Brad Gun Nailing

**FIG 30: Fixing Aspect™ – Timber Frame**

- Face Nailing – Hand or Gun

**FIG 31: Fixing Aspect™ – Timber Frame**

- Concealed Nailing – Hand Only
**TYPICAL HEAD, BASE & VERTICAL BOARD JOINT DETAILS – ENDEAVOUR/ASPECT**

**FIG 32: Base – Timber Frame**

- **Fix each board at the top and middle**
- **Sarking**
- **Datum**
- **Floor Joist or blocking**

**FIG 33: Vertical Joint with Trimmer or Double Stud – Timber Framing**

- **Bond breaker tape**
- **Sarking**

**FIG 34: Head – Eaves with Timber Trim**

- **Eaves framing**
- **Soffit lining**
- **Trim**
- **Ventilation flow**
- **Cemintel Endeavour™ weatherboard**
- **Cemintel™ Batten**
- **Sarking**

**FIG 35: Head – Eaves with Cemintel Trim**

- **Cemintel Eaves Trim**
- **Cemintel Endeavour™ weatherboard**
- **Cemintel™ Batten**
- **Sarking**

**FIG 36: Soffit – With Soffit Trim**

- **Framing**
- **Cemintel Endeavour™ weatherboard**
- **Soffit trim over sarking and taped**
- **Soffit Trim**
- **Soffit lining**
- **Sealant bead**
- **30-50mm**
TYPICAL CORNER DETAILS – ENDEAVOUR/ASPECT

FIG 37: External Corner with Aluminium Profile
- Aluminium External Corner fixed to framing at 600mm max centres through flanges
- 0-3mm gap
- 20-50mm

FIG 38: External Corner with Two-piece Aluminium Corner
- Sarking overlapped at corners
- Two-piece Aluminium Corner (Install outer piece only after all corner sheets are installed. Snap off lugs to suit cladding thickness)

FIG 39: External Corner with Timber Stop
- External grade timber trim
- 0-3mm gap

FIG 40: Internal Corner with Aluminium Profile

FIG 41: Internal Corner with Two-piece Aluminium Corner
- Two-piece Aluminium Corner (Install outer piece only after all corner sheets are installed. Snap off lugs to suit cladding thickness)

FIG 42: Internal Corner with Timber Moulding
- External grade timber trim
FIG 43: Obtuse Angle Corner

FIG 44: Junction of Weatherboard with Alternative Fibre Cement Cladding

FIG 45: Junction of Weatherboard with Offset or In-line Masonry Wall

FIG 46: Second Storey Junction with Hebel Panels, Brick Veneer or Masonry Wall – Cantilevered Framing

FIG 47: Second Storey Junction with Masonry, Brick Veneer or Hebel Panels
FIG 48: Second Storey Horizontal Junction

CAUTION: Vertical shrinkage of framing may require consideration

Upper Storey Floor Joist
Blocking to support battens and flashings

CAUTION: Vertical shrinkage of framing may require consideration

CAUTION: Vertical shrinkage of framing may require consideration

Upper Storey Floor Joist
Blocking to support battens and flashings

FIG 49: Horizontal Parapet

5mm packer at each batten to produce a ventilation gap

Parapet Capping (by others)

20mm min.

Parapet Backing Board (by others)

Roof Sheet/Tiles

FIG 50: Junction of Cladding with External Roofing

Flash over sarking and taped

5mm min. air gap

Cemintel Endeavour™ Weatherboard

Cemintel™ Batten

Fix to framing in accordance with system specification

Cemintel Fibre Cement ceiling sheet

Refer to soffit detail

FIG 51: Junction of Cladding with External Roofing

Flash over sarking and taped

5mm min. air gap

Cemintel Endeavour™ Weatherboard

Cemintel™ Batten

Fix to framing in accordance with system specification

Cemintel Fibre Cement ceiling sheet

Refer to soffit detail
FIG 52: Window Detail – A&L Aluminium Sliding Window with Weatherboard Trim shown
FIG 53: Power Meter Box Installation

- Cemintel Endeavour™ Weatherboard
- Cemintel™ batten
- Flashing over sarking and taped
- Flashing over angle iron and fixed
- Steel angle riveted to meter box and sealed
- Additional Cemintel™ batten and trimmer
- Flashing fixed to steel angle
- Steel angle fixed to meter box, fill gap with sealant
- Additional trimmer or stud and batten
- 10-15mm drainage gap
- Sarking folded and fixed to frame, taped at corners
- Sarking
- Meter box
- Air seal
- Steel angle
- Sealant
- Meter box
- Cemintel Endeavour™ Weatherboard
- Stud framing
- Air seal
- Cemintel Endeavour™ Weatherboard
- Backing rod and sealant
# Generic Installation Details of Cemintel Sheet Cladding Products – Cladding Sheet, Edge™, Mosaic™ & Texture System

## Table 16: Fixing Requirements for Cemintel Edge™ Cladding on 18-20mm Batten

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Timber Framing</th>
<th>General Zone</th>
<th>Corner Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Fixings Arrangement as per FIG 54</td>
<td>Maximum Fastener Spacing (mm)</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>N1</td>
<td>300</td>
<td>–</td>
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<tr>
<td>600</td>
<td></td>
<td>N2</td>
<td>300</td>
<td>–</td>
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<tr>
<td></td>
<td></td>
<td>N3/C1</td>
<td>300</td>
<td>–</td>
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<tr>
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<td>N4/C2</td>
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<td>N5/C3</td>
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<tr>
<td>400</td>
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<td>N1</td>
<td>300</td>
<td>300</td>
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<td>N2</td>
<td>300</td>
<td>300</td>
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<td>N3/C1</td>
<td>300</td>
<td>260</td>
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<td></td>
<td></td>
<td>N4/C2</td>
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<td>N5/C3</td>
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<td>N1</td>
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<td>N2</td>
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<td>N3/C1</td>
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<td></td>
<td>N4/C2</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>N5/C3</td>
<td>300</td>
<td>175</td>
</tr>
</tbody>
</table>

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

## Table 17: Fixing Requirements for Cemintel 6mm Cladding Sheet on 18-20mm Batten

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Timber Framing</th>
<th>General Zone</th>
<th>Corner Zone</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Fixings Arrangement as per FIG 55</td>
<td>Maximum Fastener Spacing (mm)</td>
<td></td>
</tr>
<tr>
<td>400/450</td>
<td></td>
<td>N1</td>
<td>300</td>
<td>300</td>
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<tr>
<td></td>
<td></td>
<td>N2</td>
<td>300</td>
<td>300</td>
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<tr>
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<td></td>
<td>N3/C1</td>
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<td></td>
<td>N4/C2</td>
<td>–</td>
<td>–</td>
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<tr>
<td></td>
<td></td>
<td>N5/C3</td>
<td>–</td>
<td>–</td>
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<tr>
<td>300</td>
<td></td>
<td>N1</td>
<td>300</td>
<td>300</td>
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<td></td>
<td>N2</td>
<td>300</td>
<td>300</td>
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<tr>
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<td></td>
<td>N3/C1</td>
<td>300</td>
<td>300</td>
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<tr>
<td></td>
<td></td>
<td>N4/C2</td>
<td>300</td>
<td>260</td>
</tr>
<tr>
<td></td>
<td></td>
<td>N5/C3</td>
<td>300</td>
<td>–</td>
</tr>
</tbody>
</table>

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

## FIG 54: Fixing & Base – Timber Frame – Edge™

- **60mm nails into structural framing (finished level with surface)**
- **Batten**
- **Cemintel Edge™ Cladding sheet**
- **EPDM Backing Strip at each sheet join**

## FIG 55: Base – Timber Frame – Cladding Sheet & Texture System

- **60mm nails into structural framing (finished level with surface)**
- **Batten**
- **Cemintel Cladding Sheet**
- **Sarking**

- **Floor Joist or blocking**
- **J-Track 50mm max.**
- **50mm max.**
### Table 18: Fixing Requirements for Cemintel Mosaic™ Cladding to Cemintel FC Batten

NOTES: Battens must be Cemintel™ FC Batten fixed in accordance with Table 4 on page 6.

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>C25 Brad Nail Fixing</th>
<th>Screws 8-15 x 30mm Type 17</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General Zone 1</td>
<td>Corner Zone 2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fixings Arrangement as per FIG 56 or FIG 57</td>
<td>Fixings Arrangement as per FIG 56 or FIG 57</td>
</tr>
<tr>
<td>600</td>
<td>N1</td>
<td>300</td>
<td>200</td>
</tr>
<tr>
<td></td>
<td>N2</td>
<td>300</td>
<td>150</td>
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<tr>
<td></td>
<td>N3/C1</td>
<td>200</td>
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<tr>
<td></td>
<td>N4/C2</td>
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<td>N5/C3</td>
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<tr>
<td>450</td>
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<td></td>
<td>N4/C2</td>
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<td>N5/C3</td>
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<td>N3/C1</td>
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<tr>
<td></td>
<td>N5/C3</td>
<td>200</td>
<td>–</td>
</tr>
</tbody>
</table>

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

---

**FIG 56: Fixing & Base – Timber Frame – Mosaic™**

- Cemintel™ Batten fixed with 60mm nails into structural framing
- EPDM Backing Strip at each sheet join
- Cemintel Mosaic™ Cladding Sheet
- J-Track 50mm max.
- C25 Brad Nails or 8-15 x 30mm Type 17 Screws into battens

**FIG 57: Fixing & Base – Steel Frame – Mosaic™**

- Cemintel™ Batten fixed to framing with 40mm CSK head, self drilling screw
- EPDM Backing Strip at each sheet join
- Cemintel Mosaic™ Cladding Sheet
- C25 Brad Nails or 8-15 x 30mm Type 17 Screws into battens
- Thermal Break
- Sarking
- 50mm max.
- Solid 50mm max.
Table 19: Fixing Requirements for Cemintel Texture Base Sheet to Timber Framing with 18-20mm Batten

<table>
<thead>
<tr>
<th>Stud &amp; Batten Spacing (mm)</th>
<th>Wind Category</th>
<th>Timber Framing</th>
<th>Wind Category</th>
<th>Timber Framing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>General Zone 1</td>
<td>Corner Zone 2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Fixings Arrangement as per FIG 58</td>
<td>Fixings Arrangement as per FIG 58</td>
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<tr>
<td></td>
<td></td>
<td>Maximum Fastener Spacing (mm)</td>
<td>Maximum Fastener Spacing (mm)</td>
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</tr>
<tr>
<td>600</td>
<td>N1</td>
<td>300</td>
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<td></td>
<td>N2</td>
<td>300</td>
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<tr>
<td></td>
<td>N3/C1</td>
<td>300</td>
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<td>N4/C2</td>
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<td>N5/C3</td>
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<tr>
<td>400/450</td>
<td>N1</td>
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<td>N2</td>
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<td>N3/C1</td>
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<td>N4/C2</td>
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<td>N5/C3</td>
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<td>N1</td>
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<td>N3/C1</td>
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<tr>
<td></td>
<td>N4/C2</td>
<td>300</td>
<td>260</td>
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</tr>
<tr>
<td></td>
<td>N5/C3</td>
<td>300</td>
<td>175</td>
<td></td>
</tr>
</tbody>
</table>

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

FIG 58: Fixing & Base – Timber Frame – Texture System

- 60mm nails into structural framing (finished level with surface)
- Batten
- Cemintel Texture System
- Sarking
- J-Track

50mm max.
50mm max.
TYPICAL HEAD DETAILS – EDGE/MOSAIC/CLADDING SHEET/TEXTURE SYSTEM

FIG 59: Head – Eaves with Timber Trim

FIG 60: Head – Eaves with Cemintel Trim

FIG 61: Soffit – With Soffit Trim
**TYPICAL VERTICAL SHEET JOINT DETAILS – EDGE/MOSAIC/CLADDING SHEET/TEXTURE SYSTEM**

**FIG 62: Vertical Joint – Timber Framing – Edge™ Cladding only**

- Stud
- 3mm dia. bead of approved sealant
- Sarking
- Batten
- 1 x 45mm width or 2 x 35mm width
- Self Adhesive Gasket

**FIG 63: Vertical Joint – Timber Framing – Mosaic™ Cladding only**

- Timber framing
- Brad nails
- Self Adhesive Gasket
- Sarking
- Cemintel Batten
- Cemintel Mosaic Panel
- 12mm
- 10mm

**FIG 64: Vertical Joint – Steel Framing – Mosaic™ Cladding only**

- Stud
- Thermal Break
- Sarking
- Cemintel Mosaic Cladding Sheet
- 12mm
- 12mm

**FIG 65: Vertical Joint – Timber Framing – Cladding Sheet only**

- Fix PVC H-Mould
- Fix sheet edge (finish level with face)
- Sarking
- 12mm min.

**FIG 66: Vertical Joint – Timber Framing – Texture System only**

- Stud
- Sarking
- Cemintel Texture Base Sheet recessed edge
- 12mm min.
- Texture coating system joint
TYPICAL JUNCTION DETAILS – EDGE/MOSAIC/CLADDING SHEET/TEXTURE SYSTEM

FIG 67: External Corner with Timber Moulding – Edge™
- Fill 6mm gap with SikaflexPRO™ sealant
- Cemintel Edge™ Cladding Sheet trimmed to width
- Bond breaker tape

FIG 68: External Corner with Two-piece Aluminium Corner – Edge™
- Cemintel™ Batten
- Sarking
- Cemintel Edge™ Cladding Sheet trimmed to width
- Optional timber mouldings
- Fill gap with approved sealant

FIG 69: Obtuse Angle Corner Detail – Edge™
- Metal flashing (by others)
- Cemintel Edge™ Cladding Sheet trimmed to width
- Gap filled with sealant
- Bond Breaker Tape

FIG 70: Internal Corner With Timber Moulding – Edge™
- Bond breaker tape
- Fill gap with approved sealant
- Cemintel Edge™ Cladding Sheet trimmed to width

FIG 71: Internal Corner with Two-piece Aluminium Corner – Edge™
- Cemintel Edge™ Cladding Sheet trimmed to width
- Sarking
- Cemintel™ Batten
- Two-piece Aluminium Corner (Install outer piece only after all corner sheets are installed. Snap off lugs to suit cladding thickness)

FIG 72: Internal Corner with Timber Moulding – Edge™
- Cemintel™ Batten
- Optional timber trim
- Additional stud
- Stud framing

FIG 73: Internal Corner with Two-piece Aluminium Corner – Edge™
- Cemintel™ Batten
- Additional stud
- Stud framing

Blocking to suit
FIG 72: External Corner – Mosaic™

- Cemintel™ Batten
- Cemintel Mosaic™ Panel trimmed to width if required
- Sarking
- Pre-paint all cut edges with exterior finish

FIG 73: Internal Corner – Mosaic™

- Cemintel™ Batten
- Additional stud to support battens
- Pre-paint all cut edges with exterior finish
- Cemintel Mosaic™ Panel trimmed to width
- Sarking

FIG 74: Obtuse Angle Corner – Mosaic™

- Cemintel Mosaic™ Panel
- Cemintel™ Batten
- Sarking
- Pre-paint all cut edges with exterior finish
- Backing Angle (by others)

FIG 75: Junction of Mosaic™ Cladding System with Offset Masonry Wall – Mosaic™

- Air Seal
- 15-20mm gap with Rondo P35 Control Joint
- 10mm Gyprock plasterboard
- Dampcourse
- 6mm gap and packing

FIG 76: Junction of Mosaic™ Cladding System with Alternative Fibre Cement Cladding – Mosaic™

- Air Seal
- 15-20mm gap with Rondo P35 Control Joint
- 10mm Gyprock plasterboard
- Cladding material
- Bond breaker tape and sealant
- Finishing Trim fixed to framing (by others)
- Sarking
- Pre-paint all cut edges with exterior finish

FIG 77: Control Joint with Trim-Tex Bead – Texture System only

- 20mm gap
- Stud Wall Framing
- Cemintel™ Texture Base Sheet
- Trim-Tex Control Joint Bead – notch framing to suit
- Fill gap with Flexible Sealant (optional)
- Sarking
**FIG 78: Junction of Cladding System with Alternative Fibre Cement Cladding – Edge™, Cladding Sheet & Texture System**

- Cemintel Edge™ Cladding Sheet trimmed to width
- Cladding material finishing trim fixed to framing (by others)
- Bond breaker tape and sealant
- Sarking gap and packing
- Air seal
- 15-20mm gap with Rondo P35 Control Joint
- 10mm Gyprock plasterboard
- Cemintel™ Batten
- External Bead required for Texture System
- Fill gap with Sealant

**FIG 79: Junction of Cladding System with Offset Masonry Wall – Edge™, Cladding Sheet & Texture System**

- Cemintel Edge™ Cladding Sheet trimmed to width
- Backing Rod
- Stud framing
- Masonry wall
- Sarking
- 10mm Gyprock plasterboard
- Bond breaker tape and sealant
- Finishing Trim fixed to framing (by others)
- Dampcourse
- 6mm gap and packing
- Air seal
- 15-20mm gap with Rondo P35 Control Joint
- Cemintel™ Batten
- Fill gap with Sealant

**FIG 80: External Corner – Texture System**

- Cemintel™ Texture Base Sheet
- Sarking overlapped and taped at corners
- Metal flashing (by others)
- Cemintel™ Texture Base Sheet
- Cemintel™ Batten
- Cemintel™ Batten

**FIG 81: Internal Corner – Texture System only**

- Sarking overlapped and taped at corners
- Cemintel™ Batten
- Bond breaker tape
- Fill gap with approved sealant or use flexible internal corner bead
- 3-5mm gap
- Cemintel™ Texture Base Sheet

**FIG 82: Obtuse Angle Corner Detail – Texture System only**

- Sarking overlapped and taped at corners
- Cemintel™ Texture Base Sheet
- Gap filled with sealant
- Bond Breaker Tape
- Cemintel™ Texture Base Sheet
- Cemintel™ Batten
CAUTION: Vertical shrinkage of framing must be addressed

FIG 83: Second Storey Junction with Hebel Panels, Brick Veneer or Masonry Wall – Cantilevered Framing

FIG 84: Second Storey Horizontal Junction

FIG 85: Second Storey Junction with Masonry, Brick Veneer or Hebel Panels

FIG 86: Horizontal Parapet
FIG 90: Power Meter Box Installation

- Sarking
- Cemintel Edge™ Cladding Sheet
- EPDM Backing Strip at each sheet joint
- Flashing over Sarking and taped
- Steel angle riveted to meter box and sealed
- Flashing over angle iron and fixed
- 10-15mm drainage gap
- Sarking folded and fixed to frame, taped at corners
- Steel angle fixed to meter box, fill gap with sealant
- Cemintel Edge™ Cladding Sheet
- EPDM Backing Strip at each sheet joint
- Flashing fixed to meter box
- Sealant
- Steel angle fixed to meter box, fill gap with sealant
- Additional trimmer or stud and batten
- Stud framing
- Air Seal
- Meter box
- Cemintel Edge™ Backing rod & sealant
- Batten
- Cemintel EDTM™ Cladding Sheet
CAVITY WALL CLADDING SYSTEMS

HEALTH & 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 678 068.

WARRANTY

CSR Building Products Limited (“CSR”) warrants its Cemintel cladding (“Product”) to remain free of defects in material and manufacture for up to 25 years. Cladding, TBS, Scarborough™, Headland™ & Endeavour™ Weatherboards – up to 15 years. Aspect™ – up to 10 years.

In the event of any failure of the Product caused by the direct result of a defect in the material or manufacture of the Product, CSR will at its option replace or repair, supply an equivalent product, or pay for doing one of these.

This warranty does not apply where the Product has been used in any manner not in accordance with the manufacturer’s instructions, nor the reuse of the Product after its initial installation. This includes installation and maintenance in accordance with the relevant Cemintel technical manual, current copies and instructions are available at cemintel.com.au/installation or by contacting 1300 CEMINTEL. CSR recommends that only those products, components and systems recommended by it be used and the project must be designed and constructed in strict compliance with all relevant provisions of the current Building Code of Australia, regulations and standards. All other products, including coating systems, applied to or used in conjunction with the Product must be applied or installed and maintained in accordance with the relevant manufacturer’s instructions and good trade practice. CSR will need to be satisfied that any defect in its Product is attributable to material or manufacture defect (and not another cause) before this warranty applies.

Without limiting the foregoing, CSR will not be liable for any claims, damages or defects arising from or in any way attributable to poor workmanship, poor design or detailing, settlement or structural movement and/or movement of materials to which the Product is attached, incorrect design of the structure, high levels of pollution, acts of God including but not limited to earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions, efflorescence or performance of paint/coatings applied to the Product or normal wear and tear.

Other than as expressly set out in this warranty, and the guarantees that can not 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 Product including all guarantees and warranties that may apply at law.

To the extent that it is able to do so, CSR excludes all liability for loss and damage (including consequential loss) in connection with the Product. This exclusion does not apply where the Product is sold to a consumer and is a good of a kind ordinarily acquired for personal, domestic or household use or consumption.

The following statement is provided where the Product is supplied to a buyer who is a “consumer” under the Australian Consumer Law:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure. The benefits of this warranty are in addition to other rights or remedies of the consumer under law in relation to the goods or services to which the warranty relates.

Notification of a warranty claim must be made to CSR prior to any return of the Product. Failure to allow CSR to examine an alleged faulty Product before this warranty applies.

To make a claim under this warranty, you must contact CSR on 1300 CEMINTEL, or write to one of our state offices, cemintel.com.au/contact-us. All expense of claiming the warranty will be borne by the person making the claim. CSR may require documentation supporting the claim to be provided.

Cemintel™, Scarborough™, Headland™, Endeavour™, Aspect™, Edge™, Mosaic™, and CSR™ are trademarks of CSR Limited.

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