ENVIRA SHIPLAP WEATHERBOARDS AND COMPONENTS ARE ENTIRELY PRODUCED IN NEW ZEALAND BY NIAGARA.

PRODUCT DETAILS
• Envira Weatherboard System is suitable as an Acceptable Solution E2/AS1 under the NZ Building Code.
• Kiln dried to between 10–14% moisture content.
• Treated to H3.1 using a new generation organic preservation system.
• Coated with factory applied new generation primer.

GRADE GUIDE
Envira Weatherboard System is produced from kiln dried radiata pine in finger jointed or dressing grade.

Finger Jointed:
- In nominal lengths 6.1m made up of clear radiata glued and joined. Treated to H3.1 and factory primed.

Dressing Grade:
- A high grade board with sound tight knots and other natural characteristics. Treated to H3.1 and factory primed. In random lengths.

Solid Clears:
- Available on request. Generally clear on all four sides apart from minor imperfections. Treated to H3.1 and factory primed. In random lengths.

Niagara produces and distributes other quality building products. View the full collection online: www.niagara.nz

Every effort has been made to ensure the information given in this booklet complies with existing building standards and recognised codes of practice at the current date of publication. No responsibility is accepted for any errors and omissions in this booklet or for any work or specifications based on this information.

Any questions?
Freephone 0800 36 78 46
www.niagara.nz
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<table>
<thead>
<tr>
<th>Description</th>
<th>Width x Thickness</th>
<th>Joint Type</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Envira Shiplap V Groove</td>
<td>142x18mm</td>
<td>Finger Jointed</td>
<td>6.1m</td>
</tr>
<tr>
<td>Envira Shiplap V Groove</td>
<td>187x18mm</td>
<td>Finger Jointed</td>
<td>6.1m</td>
</tr>
<tr>
<td>Envira Shiplap Square Groove</td>
<td>140x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Shiplap Square Groove</td>
<td>180x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Shiplap Square Groove</td>
<td>90x18mm</td>
<td>Finger Jointed</td>
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### BOX CORNERS PREFABRICATED

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<th>Length</th>
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<tr>
<td>Envira External</td>
<td>100x100mm</td>
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<td>5.4m</td>
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<tr>
<td>Envira Internal</td>
<td>100x100mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
</tbody>
</table>

### FACING BOARDS

<table>
<thead>
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<th>Width x Thickness</th>
<th>Joint Type</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Envira Facing</td>
<td>66x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Facing</td>
<td>90x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Facing</td>
<td>115x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Facing</td>
<td>138x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Facing</td>
<td>185x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Also available in 30mm</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### SCRIBER

<table>
<thead>
<tr>
<th>Description</th>
<th>Width x Thickness</th>
<th>Joint Type</th>
<th>Length</th>
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</thead>
<tbody>
<tr>
<td>Envira Scribe</td>
<td>40x10mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Scribe</td>
<td>40x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
</tbody>
</table>

### SHIPLAP ACCESSORIES

<table>
<thead>
<tr>
<th>Description</th>
<th>Width x Thickness</th>
<th>Joint Type</th>
<th>Length</th>
</tr>
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<tbody>
<tr>
<td>Envira Sill</td>
<td>90x42mm</td>
<td>Finger Jointed</td>
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<tr>
<td>Envira Sill</td>
<td>65x42mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Eaves Mould</td>
<td>40x27mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
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<tr>
<td>Envira Eaves Mould</td>
<td>18x18mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Head Trim</td>
<td>82x38mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
</tr>
<tr>
<td>Envira Door Sill Trim</td>
<td>90x19mm</td>
<td>Finger Jointed</td>
<td>5.4m</td>
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</tbody>
</table>

### BATTEN

<table>
<thead>
<tr>
<th>Description</th>
<th>Width x Thickness</th>
<th>Type</th>
<th>Length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Castellated Vented Cavity Batten</td>
<td>45x20mm</td>
<td>Solid Clear</td>
<td>Random Length</td>
</tr>
</tbody>
</table>
ENVIRA SHIPLAP
SET-OUT GUIDES
The required overlap is 25mm

PREPARATION - 480mm centre maximum nog spacing

- Nog/dwang at 480mm centres maximum

- Studs to be at 600mm centres maximum

- Envira Vertical shiplap weatherboard

- Castellated vented cavity batten

- Wall underlay

- Stud

- Nog/dwang

- Envira vertical shiplap weatherboard

- 2mm gap

- 25mm lap

- 35mm

- 25mm lap
GENERAL

1.1 Scope and general comment
These instructions are specific and can be used for buildings that fall within the scope of NZS 3604:2012 Timber Framed Buildings and E2/AS1. Buildings that have a weathertightness risk score of more than 6 as assessed in E2/AS1 section 3 will require a drained and ventilated cavity.

Niagara’s Envira Weatherboard System must be fixed to framing that is dry (<20% mc), straight and stable. Flashings as shown in the installation CAD drawings must be used.

All building sites are different and while these instructions are detailed, only those details that apply to your specific building site should be used.

When used in combination, timber framed windows and timber cladding are not covered by E2/AS1 and application for an alternative solution to New Zealand Building Code Clause E2 must be made to the Building Consent Authority.

1.2 Storage
Correct storage of Envira Weatherboard System components prior to installation is critical. Store as follows:
- In a dry well ventilated area
- On a flat surface supported every meter along the length of the product
- Clear of the ground by at least 150mm
- Protected from the elements including direct sunlight and rain
- If rising damp is likely, place a moisture barrier under the stack
- Use inside storage where available.

1.3 Handling
Unload Envira Weatherboard System products carefully from truck by hand or use a mechanical lifting device. Never drag boards across the ground. To avoid bending, always carry individual boards on their edge. During handling (cutting, installation etc.) care should be taken to avoid damaging the surface of the board.

1.4 Keep dry
Envira Weatherboard System products are made from kiln dried timber. Timber is hydroscopic and it will absorb moisture in a damp environment and release it in a dry environment. Primers will not stop moisture uptake. If timber absorbs moisture prior to installation, some dimensional swelling may occur, this will disappear when the timber returns to its original moisture content.

If product shows signs of dimensional swelling, allow time for it to dry and return to the manufactured dimensions before installation.

1.5 Wall underlay
Use only underlays that meet the requirements of E2/AS1 Table 23. Underlays are a secondary protective barrier against weathering and must be installed in accordance with E2/AS1 section 9.1.7.

1.6 Flashings
Refer to NZS 3604 section 4 and E2/AS1 Table 20 for durability requirements and E2/AS1 section 9 for flashing design and fabrication details. As recommended in E2/AS1, window and door suppliers are responsible for head flashings. A layer of kraft paper is required between the flashing and timber framing where the timber has been treated with a copper-based treatment. Check the flashing manufacturer’s recommendations in all cases.

1.7 Sealants
All sealants must be suitable for exterior use and while they will assist with providing weathertightness at laps and joints they must not be relied on to provide total protection.

1.8 Air seals
Air seals are a barrier that prevent air flowing through the cladding or circulating within the cavity, from entering the building. Air seals are required where a hole or penetration through the external cladding occurs - windows, doors, pipes, meter boxes etc. See E2/AS1 for complete building air seal requirements.

A backing rod of a suitable diameter must be installed in the gap between the window/door reveal, meter box or pipe and the opening frame prior to applying the sealant. Take care not to over fill the space with sealant.

Backing rods and sealants must be used in accordance with the manufacturer’s instructions. See E2/AS1 for details.

1.9 Building preparation
NZS 3604 sets out the requirements that timber framing must meet including sizing, spacings, straightness (Table 2.1) and moisture content. All framing must meet these requirements before installation of Envira Weatherboard System can begin.

Ensure all openings are framed out with the correct clearance between the trimmed opening and the window/door/meter box frame.

1.10 Wall cladding cavities
If the weathertightness risk score is higher than 6 a drained and ventilated cavity will be required between the underlay and Envira shiplap weatherboards.

If a cavity is required, structurally fix Envira treated vented cavity battens to the framing in accordance with BRANZ Bulletin 475. Cavity construction, including flashing and vermin proofing, must be in accordance with the requirements as set out in E2/AS1 and NZS 4229.

Envira shiplap weatherboard measurement table

<table>
<thead>
<tr>
<th>Size</th>
<th>Profile</th>
<th>Grade</th>
<th>Cover</th>
<th>Lap</th>
<th>Length</th>
<th>Lm/m²</th>
</tr>
</thead>
<tbody>
<tr>
<td>142 x 18</td>
<td>Shiplap V Groove</td>
<td>Finger Jointed</td>
<td>117mm</td>
<td>25mm</td>
<td>6.1m</td>
<td>8.54</td>
</tr>
<tr>
<td>180 x 18</td>
<td>Shiplap V Groove</td>
<td>Finger Jointed</td>
<td>155mm</td>
<td>25mm</td>
<td>6.1m</td>
<td>6.45</td>
</tr>
<tr>
<td>140 x 18</td>
<td>Shiplap Square Groove</td>
<td>Finger Jointed</td>
<td>115mm</td>
<td>25mm</td>
<td>5.4m</td>
<td>8.69</td>
</tr>
<tr>
<td>180 x 18</td>
<td>Shiplap Square Groove</td>
<td>Finger Jointed</td>
<td>155mm</td>
<td>25mm</td>
<td>5.4m</td>
<td>6.45</td>
</tr>
<tr>
<td>90 x 18</td>
<td>Shiplap Square Groove</td>
<td>Finger Jointed</td>
<td>65mm</td>
<td>25mm</td>
<td>5.4m</td>
<td>15.38</td>
</tr>
</tbody>
</table>
Section 2 | Shiplap Installation

INSTALLATION

2.1 Envira shiplap weatherboard fixing method

2.1.1 Position Envira shiplap weatherboard ensuring there is a minimum 50mm overlap below the bottom plate or bearer.

2.1.2 Each Envira shiplap weatherboard will be fixed with one nail per board on every nog/dwang at 480mm maximum centres 35mm from the side of the lap.

2.1.3 Studs to be at 600mm centres maximum and nog / dwangs to be at 480mm centres maximum.

2.1.4 Single point nailing will allow the board to expand and contract as equilibrium moisture content occurs.

2.1.5 Fixings are to be located 35mm from the side of the lap penetrating 35mm into the framing or structural vented batten.

• Fixings driven through the wall underlay to be in accordance with table 24 E2/AS1.
• Fixings shall be hand driven. Nail gun only to be used in conjunction with non-marking attachment to avoid damage to the board surface.
• Pre-drilling is recommended near end of the boards to avoid splitting
• Nail placement to be 35mm from the side of the lap.
• Weatherboard lap to be 25mm with a minimum 2mm expansion gap between boards.
• All nail holes and cut ends should be immediately sealed using Envira Quick Dry End Seal, or suitable exterior primer.

Fix Batten
Castellated vented cavity batten to be fixed to the frame horizontally at 400mm centres maximum using 60x2.8mm Jolt Head (JH) hot-dipped galvanised or stainless steel annular grooved nail in accordance with BRANZ Bulletin 475. Cavity construction including flashing and vermin proofing, must be in accordance with the requirements as set out in E2/AS1 and NZS 4229.

Cavity Closure
Cavity base closure (vermin proofing). All diameter holes or slots to comply with NZBC acceptable solution E2/AS1 paragraph 9.1.8.3

2.2 Joins
Avoid joining Envira weatherboards whenever possible but if joining is unavoidable, only use 45 degree scarf joints directly over studs or Envira structural battens.

Face the overlapping board away from the prevailing weather direction using one fixing through the overlapping board (pre-drill the hole). Re-prime the cut ends with two coats of a premium quality timber primer, allowing to dry between coats.

Hand nailing is recommended as nail guns can cause damage to the surface of the board. If a nail gun is used a non-marking attachment should be used to avoid damage to the board surface. Prime then fill with an exterior grade wood filler immediately after nailing.

2.3 External box corner
Using 50 x 2.5mm JH hot-dipped galvanized or annular grooved stainless steel nails, fix the Envira two piece prefabricated external box corner over the Envira shiplap weatherboards. Use two nails at each fixing point. There must be a minimum 50mm cover on both faces of the corner.

Fixings must be located at batten centre line 480 centres. For nails near the ends of the corner boards pre-drill the nail holes.

Fit a EnviraScribe over the weatherboards against the corner boards. Pre-drill holes and using 60 x 2.8mm (40 x 18 scriber) or 50 x 2.5mm (40 x 10 scriber) JH hot-dipped galvanized or annular grooved stainless steel nails, fix the scriber firmly against the box corner. Nail at 450mm centres.

Re-prime the cut ends with two coats of a premium quality timber primer, allowing to dry between coats.

Nails must be hand driven and punched below the surface to allow for filling. Prime then fill with an exterior grade wood filler immediately after nailing.

2.4 Internal box corner
Internal corners, direct or cavity, must have a flashing behind the cladding that provides a minimum 50mm cover to both faces of the corner. Refer to E2/AS1 for full details. Using 50 x 2.5mm JH hot-dipped galvanized or annular grooved stainless steel nails, fix the Envira two piece prefabricated internal box corner over the Envira shiplap weatherboards. Use two nails at each fixing point. The Envira internal box corner provides 100mm cover on both faces of the corner.

Fixings must be located at batten centre lines 480 centres. Use two nails at each fixing point. For nails near the ends of the corner boards pre-drill the nail holes.

Fit a precut EnviraScribe over the weatherboards. Pre-drill holes and using 60 x 2.8mm (40 x 18) or 50 x 2.5mm (40 x 10) JH hot-dipped galvanized or annular grooved stainless steel nails, fix the EnviraScribe firmly against the box corner. Nail at 450mm centres.

Re-prime the cut ends with two coats of a premium quality timber primer, allowing to dry between coats.

Nails must be hand driven and punched below the surface to allow for filling. Prime then fill with an exterior grade wood filler immediately after nailing.

2.5 Aluminium window and door jambs
Window and door openings are a high weathertightness risk area and require particular attention to ensure weathertightness is achieved. All window and door openings must be constructed and trimmed in accordance with E2/AS1. All flashings, air seals, underlay and flexible flashing tapes must be in place.

For flashing details refer to NZS 3604 section 4 and E2/AS1 table 20 for durability requirements and E2/AS1 for flashing design and fabrication details.

As recommended in E2/AS1, window and door suppliers are responsible for head flashings.

The following instructions apply to aluminium windows and doors as set out in E2/AS1 9.1.10 - 9.1.10.8.

All windows must comply with NZS 4211 including consideration of the building location.

The aluminum facing flange must overlap the cladding (Envira weatherboard) by at least 10mm for jambs and at least 8mm for sills.

Fit firmly against the flange either an EnviraScribe or an Envira facing board and EnviraScribe combination. Pre-drill holes in the scriber and fix using 60 x 2.8mm JH hot-dipped galvanized or annular grooved stainless steel nails. Nail at 450mm centres.

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Use two nails at each fixing point. For nails near the ends of the corner boards pre-drill the nail holes.

Direct fixed and cavity fixed cladding applications must have a sill tray flashing a minimum of the full width of the opening.

Re-prime the cut ends with two coats of a premium quality timber primer, allowing to dry between coats.

Nails must be hand driven and punched below the surface to allow for filling. Prime then fill with an exterior grade wood filler immediately after nailing.

Fit air seals around all window and door openings as specified.

2.6 Aluminium window and door sills
The Envira Weatherboard System requires a full width sill tray for direct fixed windows and doors, which meets the requirements of E2/AS1. If an Envira sill (plant on) is to be used, ensure the positioning of the sill does not compromise the sill flashing detail or function. The sill tray must extend at least 8mm behind the line of the aluminium frame.

In a cavity fix application, all doors and windows with a trim opening wider than 600mm require an appropriate sill support bar conforming to EM6, paragraph 9.1.10.5

2.7 Aluminium window and door heads
Direct and cavity fixed aluminium windows and doors require a flashing that meets the requirements of E2/AS1. The flashing must be fitted behind the cladding with a 5mm gap between the bottom edge of the cladding and the horizontal surface of the flashing. If an Envira Head Trim is to be used there must be a 5mm gap between the bottom edge of the head trim and the horizontal surface of the flashing.

2.8 Timber window and door openings
When used in combination, timber framed windows and timber cladding are not covered by E2/AS1 and application for an Alternative Solution to New Zealand Building Code Clause E2 must be made to the Building Consent Authority. Timber window and door installations must include facings boards and scribes when used in combination with the Envira Weatherboard System.
## Section 3 | Nailing

### 3.1 Nail selection

Selection of proper nails is important. Use Jolt Head (JH) hot-dipped galvanised or stainless steel annular grooved, for fixing either directly into framing or structural batten.

Do not use plain or electroplated nails. Hot dipped galvanising must meet the requirements of AS/NZS 4680:2006.

### 3.2 Shiplap nailing schedule

<table>
<thead>
<tr>
<th>Timber size (mm)</th>
<th>Envira component</th>
<th>Recommended minimum nail size</th>
<th>Nail position</th>
<th>Section</th>
</tr>
</thead>
<tbody>
<tr>
<td>142 x 18 / 180 x 18</td>
<td>Shiplap direct fixed weatherboard</td>
<td>65 x 3.15</td>
<td>Single on every nog 35mm from the side of the lap</td>
<td>2.1</td>
</tr>
<tr>
<td>90 x 18 / 142 x 18 / 180 x 18</td>
<td>Shiplap cavity fixed weatherboard</td>
<td>75 x 3.15</td>
<td>Single on every nog 35mm from the side of the lap</td>
<td>2.1</td>
</tr>
<tr>
<td>100 x 100</td>
<td>External and internal box corners</td>
<td>50 x 2.50</td>
<td></td>
<td>2.3, 2.4, 2.5</td>
</tr>
<tr>
<td>40 x 10</td>
<td>EnviraScribe</td>
<td>50 x 2.50</td>
<td></td>
<td>2.3, 2.4, 2.5</td>
</tr>
<tr>
<td>40 x 18</td>
<td>EnviraScribe</td>
<td>50 x 2.50</td>
<td></td>
<td>2.3, 2.4, 2.5</td>
</tr>
<tr>
<td>90 x 42 / 65 x 42</td>
<td>Sills</td>
<td>75 x 3.15</td>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td>40 x 27 / 18 x 18</td>
<td>Eaves mould</td>
<td>60 x 2.80</td>
<td></td>
<td>2.1</td>
</tr>
<tr>
<td>82 x 38</td>
<td>Head trim</td>
<td>60 x 2.80</td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td>50 x 19</td>
<td>Door sill trim</td>
<td>50 x 2.50</td>
<td></td>
<td>1.10</td>
</tr>
<tr>
<td>45 x 20</td>
<td>Castellated vented batten</td>
<td>60 x 2.80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Timber size (mm)**

<table>
<thead>
<tr>
<th>Envira component</th>
<th>Recommended minimum nail size</th>
<th>Nail position</th>
<th>Section</th>
</tr>
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<tbody>
<tr>
<td>Shiplap direct fixed weatherboard</td>
<td>65 x 3.15</td>
<td>Single on every nog 35mm from the side of the lap</td>
<td>2.1</td>
</tr>
<tr>
<td>Shiplap cavity fixed weatherboard</td>
<td>75 x 3.15</td>
<td>Single on every nog 35mm from the side of the lap</td>
<td>2.1</td>
</tr>
<tr>
<td>External and internal box corners</td>
<td>50 x 2.50</td>
<td></td>
<td>2.3, 2.4, 2.5</td>
</tr>
<tr>
<td>EnviraScribe</td>
<td>50 x 2.50</td>
<td></td>
<td>2.3, 2.4, 2.5</td>
</tr>
<tr>
<td>EnviraScribe</td>
<td>50 x 2.50</td>
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<td>2.3, 2.4, 2.5</td>
</tr>
<tr>
<td>Sills</td>
<td>75 x 3.15</td>
<td></td>
<td>2.6</td>
</tr>
<tr>
<td>Eaves mould</td>
<td>60 x 2.80</td>
<td></td>
<td>2.1</td>
</tr>
<tr>
<td>Head trim</td>
<td>60 x 2.80</td>
<td></td>
<td>2.7</td>
</tr>
<tr>
<td>Door sill trim</td>
<td>50 x 2.50</td>
<td></td>
<td>1.10</td>
</tr>
<tr>
<td>Castellated vented batten</td>
<td>60 x 2.80</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### 3.3 Nailing guidelines

Proper application and nailing practices are essential for maximising the product performance and appearance.

All nailing should be over studs with at least 35mm penetration into the frame.

Nailing should be such that it does not restrict normal seasonal movement, so do not nail through overlapping pieces.

**Hand nailing is recommended** as nail guns can cause damage to the surface of the board. If a nail gun is used a non-marking attachment should be used to avoid damage to the board surface.

Nails are to be countersunk (punched) by 2mm and must primed immediately then filled to avoid moisture uptake around the nail head*.

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**Pre-drilling near the ends is recommended** as a precaution to avoid the possibility of end splitting. We recommend the use of scarf joints.

Butt joints can be used without an expansion gap, but these must be flashed. Joints should be staggered up the wall. Scarf joints should face away from the prevailing winds.

*Prime all nail holes with a suitable premium exterior wood primer then fill with an exterior grade wood filler.

Sealants must not be relied upon for primary weather protection, they are used to assist with weathering at joint and laps only. All filled areas must be spot primed prior to top coating.

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Please check for updates on Niagara’s website - www.niagara.nz

Download 2D drawing files in PDF, DWG or DXF format online.

Bevel Back, Rusticated and Shiplap technical manuals are available at timber merchants or can be downloaded at www.niagara.nz/brochures
PAINTING AND MAINTENANCE

4.1 Moisture content
The primer will not protect against moisture uptake, which can result in dimensional swelling. If swelling or distortion of the timber is evident, the product must be given time to dry out and return to its equilibrium moisture content and manufactured dimensions before any top coats are applied.

4.2 Preparation
• Remove all loose material and dirt.
• Primers will not withstand extended periods exposed to the elements and may require a light sand.
• Sand and spot prime all bare patches or where the factory primer has been damaged.
• Sand smooth and spot prime all filled areas.
• Fill all nail holes with an exterior grade wood filler and seal all notches, end cuts and nail holes with a suitable primer/undercoat or end sealing product such as Envira Fast Dry End Seal.

It is the painter’s responsibility to ensure all surfaces are correctly prepared prior to painting including ensuring that the primer is well-adhered to the timber substrate and that all surfaces are in a suitable condition before top coating.

It is recommended that at a minimum the top lap of the boards are coated with top coat approximately 50mm down from the top edge. This will eliminate a primer line showing if the boards move with the seasonal change that can occur. Ideally the boards would receive a full top coat before installation.

4.3 Top coat selection
Use only a premium quality house paint that has a Light Reflective Value (LRV) of 45 or higher and a gloss level of 10 per cent or more.
Note: The higher the gloss level, the higher the durability.

Timber is a natural product and resin is a natural constituent of all timber. Timber painted in dark colours (LRV less than 45) may produce resin bleed.

4.4 Painting
All preparation and painting must be carried out in a good tradesman-like manner and to the current requirements of AS/NZS 2311 Guide to Painting of buildings and the paint manufacturer’s data sheet.

Two top coats of quality house paint should be applied within six weeks of the product being installed. If painting does not occur within six weeks of installation, sanding and repriming will be required.

Paint must be applied with the necessary equipment and experience under the appropriate environmental conditions to ensure that the potential of the paint system is maximised.

Total film build, including primer should exceed 100 Dry Micron.

Do not top coat Envira timber products that have moisture-related dimensional swelling. This will help avoid shrinkage lines that may occur in the top coat as the timber returns to its equilibrium moisture content and manufactured dimensions.

4.5 Maintenance
All new buildings will ‘settle’ and during this process the integrity of the paint system, no matter what type of substrate it has been applied to, may be compromised resulting in minor touch up work being required. If re-priming is necessary, use only a premium quality primer and the original top coat paint for touch up work.

Like washing your car, cleaning your house will help it maintain its good looks for much longer. Airborne contaminants, including salt deposits, which settle on your paint film, can attack the surface and cause premature breakdown. Annual washing of your home will help maintain the fresh appearance of your paintwork.

The presence of moss, mould and lichen will hold moisture on the surface longer, promoting further growth of these organisms and increasing the risk of damage to the coating and substrate. As with any painted surface, regular inspection and immediate repairs to areas of flaking or cracked paint are essential and will stop the entry of moisture into the substrate.

Particular attention should be paid to areas of high weathertightness risk such as around windows and doors, checking that flashings and sealants are in good condition and performing as required. Repair immediately if the building weathertightness has been compromised.
Shiplap Cavity Fix **Foundation Timber**

6001 2D:

- Internal Lining
- Timber Framing
- Floor Lining
- Building Wrap to Lap Over Cavity Closure
- Envira Shiplap Weatherboard in Selected Profile
- Timber Joist
- 20mm Castellated Cavity Batten
- Cavity Closure Strip

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**Shiplap Cavity Fix**

**Foundation Concrete**

**6002 2D:**

- Vertical Framing
- Internal Lining
- Building Underlay
- Envira Shiplap Weatherboard in Selected Profile
- Concrete Slab
- OPC
- 20mm Castellated Cavity Batten
- Cavity Closure

**Shiplap Cavity Fix**

**Door Sill**

**6003 2D:**

- Aluminium Door
- Continuous Air Seal Sealant Over Backing Rod
- Timber Packer
- Door Support as Required by Window Manufacturer
- Floor Lining
- Timber Joist
- Flexible Flashing Tape Continuous Along Sill, 10mm Min. Up Each Jamb and 50mm Onto Face of Underlay
- Envira Shiplap Weatherboard in Selected Profile
- Building Wrap to Lap Over Cavity Closure
- 20mm Castellated Cavity Batten
- Cavity Closure Strip

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Shiplap Cavity Fix **Door Jamb**

**6004 2D:**

- **INTERNAL LINING**
- **CONTINUOUS AIR SEAL**
- **SEALANT OVER BACKING ROD**
- **WALL UNDERLAY TURNED INTO FRAMING REVEALS AND TAPED AT JOINTS**
- **ARCHITRAVE OR SLIMLINE DETAIL**
- **PACKER**
- **LINE OF HEAD FLASHING ABOVE**
- **SELECTED ALUMINIUM DOOR JOINERY**
- **ENVIRA SHIPLAP WEATHERBOARD IN SELECTED PROFILE**
- **20mm CASTELLATED CAVITY BATTENS**
- **CAVITY CLOSER**
- **5mm MIN CAPILLARY GAP**
- **10mm MIN COVER**
- **ADDITIONAL WALL UNDERLAY OR FLASHING TAPE LAPPED OVER FLASHING**
- **DOWNTURN ON FLASHING OVER - FOLDED TO FIT TIGHT AGAINST ALUMINIUM HEAD FACING**
- **STOP END TO HEAD FLASHING**
- **VERTICAL FRAMING**
- **CASTELLATED CAVITY BATTEN**
- **HEAD FLASHING MUST HAVE 35mm UPSTAND**
- **INTERNAL LINING**
- **ARCHITRAVE OR SLIMLINE DETAIL**
- **CONTINUOUS AIR SEAL SEALANT OVER BACKING ROD**
- **WALL UNDERLAY TURNED INTO FRAMING REVEALS AND TAPED AT JOINTS**

**6005 2D:**

- **ENVIRA SHIPLAP WEATHERBOARD IN SELECTED PROFILE**
- **ADDITIONAL WALL UNDERLAY OR FLASHING TAPE LAPPED OVER FLASHING**
- **CASTELLATED CAVITY BATTEN**
- **CAVITY CLOSER**
- **SEAL HEAD FLASHING TO JOINERY HEAD FLANGE FOR VERY HIGH WIND ZONES**
- **35mm UPSTAND**
- **VERTICAL FRAMING**
- **ARCHITRAVE OR SLIMLINE DETAIL**
- **CONTINUOUS AIR SEAL SEALANT OVER BACKING ROD**
- **WALL UNDERLAY TURNED INTO FRAMING REVEALS AND TAPED AT JOINTS**

**DATE:** 01/08/2019

Check for updates and download 2D files in PDF, DWG or DXF format at www.niagara.nz

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Shiplap Cavity Fix Window Sill (Sill Support Bar)

**6006 A 2D :**

- Flexible Flashing Tape
- Continuous Over Sill
- Architrave or Slimline Detail
- Internal Lining
- Timber Packers
- Building Wrap Dressed into Opening
- Vertical Framing

Sill Support Bar

20mm Castellated Cavity Battens

EnVira Shiplap Weatherboard in Selected Profile

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Shiplap Cavity Fix Window Jamb

**6007 2D :**

- Continous Air Seal
- Sealant Over Backing Rod
- Wall Underlay Turned into Framing Reveal and Taped at Joints
- Architrave or Slimline Detail
- Packers
- Line of Head Flashing Above

Selected Aluminium Joinery

20mm Castellated Cavity Battens

EnVira Shiplap Weatherboard in Selected Profile

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Shiplap Cavity Fix Window Head - Option A

6008 A 2D:

- **Lintel**
- **Castellated Cavity Batten**
- **Envira Shiplap Weatherboard in Selected Profile**
- **Cavity Closer**
- **Aluminium Head Flashing with Stop Ends and 15 Degree Slope**
- **Cover of Head Flashing to Facing**
- **Envira Facing Board to 70mm H3.1 Packer to Suit**
- **70x35 H3.1 Timber Packer Fixed with 15 x 3.15mm Jolt Head Nails Pre-Drill with 3mm Drill Before Fixing**
- **Selected Double Glazed Aluminium Window**
- **WALL UNDERLAY TURNED INTO FRAMING REVEAL AND TAPE AT CORNERS**

Shiplap Cavity Fix Window Head

6008 2D:

- **Vertical Framing**
- **Head Flashing Must Have 35mm Upstand**
- **Internal Lining**
- **Architrave or Slimline Detail**
- **Continuous Air Seal Sealant Over Backing Rod**
- **WALL UNDERLAY TURNED INTO FRAMING REVEALS AND TAPE AT JOINTS**

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Shiplap Cavity Fix **Internal Corner**

**6011 2D:**

- **INTERNAL LINING**
- **WALL FRAMING**
- **50 x 50mm INTERNAL CORNER FLASHING**
- **WALL UNDERLAY**
- **ENVIRA SHIPLAP WEATHERBOARDS IN SELECTED PROFILE**
- **H3.1 PINUS RADIATA ENVIRA INTERNAL BOX (PRE FABRICATED) WITH 50mm MIN COVER TO WEATHERBOARDS**
- **20mm CASTELLATED CAVITY BATTENS**

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Shiplap Cavity Fix **Internal Corner - Butt Corner**

**6011 A 2D:**

- **INTERNAL LINING**
- **WALL FRAMING**
- **ENVIRA SHIPLAP WEATHERBOARDS IN SELECTED PROFILE**
- **WALL UNDERLAY**
- **50 x 50mm INTERNAL CORNER FLASHING**
- **WEATHERBOARDS TRIMMED AND BUTTED INTO EACH OTHER. SEAL WITH MS SEALANT**
- **20mm CASTELLATED CAVITY BATTENS**
Shiplap Cavity Fix Meter Box Head

Vertically framed:

- Building Wrap
- Envira Shiplap Weatherboard in selected profile
- Flexible flashing tape lapped over flashing
- 20mm castellated cavity batten
- Cavity closure strip
- Air seal over backing rod fitted over all sides of meter box
- Internal wall lining

Metal angle riveted around edge of meter box as per E2/AS1

Building wrap turned into trimmed opening with flexible flashing tape at corners

Air seal over backing rod fitted over all sides of meter box

Shiplap Cavity Fix Meter Box Sill

Horizontally framed:

- Air seal over backing rod fitted over all sides of meter box
- Timber packer as required
- Metal angle riveted around edge of meter box as per E2/AS1
- Envira Shiplap weatherboard in selected profile
- 20mm castellated cavity batten
- Flexible flashing tape continuous along sill
- 50mm min up jamb and 50mm onto face
- Building wrap turned into trimmed opening
- Vertical timber framing

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Shiplap Cavity Fix **Pipe Penetration**

**6015 2D:**

- Building Underlay
- Envira Shiplap Weatherboard in Selected Profile
- **20mm Castellated Cavity Batten**
- Flashing Tape All Round
- Sealant Over PEF Backing Rod
- Fall to Pipework for Water Run-Off
- Solid Backing Around Pipe Penetration
- Internal Lining

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Shiplap Cavity Fix **Fascia Eaves - No Soffit**

**6016 2D:**

- Selected Roofing
- Roofing Underlay
- Eaves Flashing When Required by E2/AS1
- Horizontal Continuous Solid Cavity Batten to Close Off Top of Cavity
- Envira Shiplap Weatherboard in Selected Profile
- Building Wrap
- Top Plate
- Top Plate Packer
- Internal Lining

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Shiplap Cavity Fix **Apron**

6017 2D:

- NOGGING AS REQUIRED
- ENVIRA SHIPLAP WEATHERBOARD IN SELECTED PROFILE
- BUILDING UNDERLAY
- FLEXIBLE FLASHING TAPE LAPPED OVER FLASHING
- 20mm CASTELLATED CAVITY BATTEN
- FLASHING COVER AS PER E2/AS1 TABLE 7
- SELECTED ROOFING WITH STOPEND
- ROOFING UNDERLAY
- 20mm CASTELLATED CAVITY BATTEN

Shiplap Cavity Fix **Parapet Cap**

6018 2D:

- H3.1 TIMBER PACKER TO FORM SLOPE
- ROOF UNDERLAY TO PROVIDE SEPARATION FROM METAL FLASHING AND TIMBER
- METAL CAP FLASHING WITH MIN. 5 DEGREE SLOPE
- FIXINGS THROUGH SIDES ONLY

- ENVIRA SHIPLAP WEATHERBOARD IN SELECTED PROFILE
- 20mm CASTELLATED CAVITY BATTEN
- WALL UNDERLAY EXTENDED OVER TOP OF FRAMING
Shiplap Cavity Fix Masonry Veneer - Abutting

6019 2D:

- OVER CLADDING
- 50mm RETURN
- 5mm GAP
- WALL UNDERLAY
- INTERNAL LINING
- BRICK TIE
- ENVIRA SHIPLAP WEATHERBOARDS IN SELECTED PROFILE
- 20mm CASTELLATED CAVITY BATTENS
- INTERNAL FRAMING
- DIMENSION TO SUIT MASONARY VENEER

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Shiplap Cavity Fix  Cavity Fix Masonry Veneer - Below

6020 2D:

Shiplap Cavity Fix  Cavity Fix Masonry Veneer - External Corner

6021 2D:

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Shiplap Cavity Fix **Waterproof Deck - Above**

**6031 2D:**

- **Internal Lining**
- Building Underlay
- EnviRA Shiplap Weatherboard In Selected Profile
- Internal Timber Framing
- 20mm Castellated Cavity Batten
- Fall to Deck 2 Degrees Min
- Deck Waterproof Membrane
- Corner Fillet
- Cavity Base Closer

Shiplap Cavity Fix **Inter-Storey Junction**

**6033 2D:**

- **Internal Lining**
- Internal Timber Framing
- Additional Building Wrap To Overlap Cavity Closer Extended To Nearest Overlap Above
- EnviRA Shiplap Weatherboard In Selected Profile
- 20mm Castellated Cavity Batten
- Cavity Base Closer
- 35mm Z Flashing Flashing To Have Min 15 Degree Slope, 35mm Min Upstand And 35mm Min Cover Over Shiplap Weatherboards
ENVIRA WEATHERBOARD
SYSTEM WARRANTY

1. Product Warranty

1.1 Niagara Sawmilling Company Limited (Niagara) warrants for a period of 25 years from the date of purchase that its Envira Weatherboard System (Products) will be free from production defects and will be resistant to cracking, rotting and damage from borer attacks, to the extent set out in Niagara’s product literature current at the time of installation, subject always to the conditions and limits on liability below (Warranty).

1.2 The Envira Weatherboard System Technical Manuals set out the approved and recommended methods for cladding installation. To request a copy of the Envira Weatherboard System Technical Manuals, please phone toll free: 0800 36 76 46 (Monday to Friday 8am – 5pm), or email: sales@niagara.nz, or download online at www.niagara.nz

2. Conditions of Warranty

2.1 The Warranty is strictly subject to the following conditions:

2.1.1 The Products must be installed by a competent and qualified builder, strictly in accordance with:

(a) the Envira Weatherboard System Technical Manuals current at the time of installation, utilising Envira Weatherboard System components or products specified in the Envira Weatherboard System Technical Manuals; and

(b) all relevant laws and regulations.

Where the Envira Weatherboard System Technical Manuals do not provide suitable detail for installation of the Products then installation must be in accordance with best trade practice determined in consultation with the relevant local or regional council or such other appropriate organisation or authority and the designer of the building works.

2.1.2 The Products must be maintained strictly in accordance with the Envira Weatherboard System Technical Manuals. Further, all other products including coating and jointing systems applied to, or used in conjunction with, the Products must be applied, installed and maintained strictly in accordance with the relevant manufacturer’s instructions and best trade practice.

2.1.3 The building works in which the Products have been incorporated must be designed and constructed in strict compliance with all relevant provisions of the current New Zealand Building Code, regulations and standards, and the building consent relating to the building works.

2.1.4 If any remedial work undertaken in relation to the Warranty involves re-coating of the Products, the customer acknowledges and agrees that there may be slight colour differences between the original and replacement Products due to the effects of weathering and variations in materials over time.

3. Limits on Liability

3.1 Niagara will not be liable to the customer for any breach of Warranty unless the customer gives Niagara written notice of any claim for breach of Warranty within 30 days of the defect becoming reasonably apparent.

3.2 In any event, the customer’s sole remedy under the Warranty is (at Niagara’s discretion) that Niagara will either supply replacement Products, rectify the affected Products where such Products are capable of rectification, or pay for the reasonable cost of the replacement or rectification of the affected Products.

3.3 Aside from the remedy described in clause 3.2, Niagara will not be liable for any other losses or damages (whether direct or indirect) including property damage, personal injury, consequential loss, economic loss or loss of profits, whether arising under statute, contract, tort including negligence, or howsoever arising. Without limiting the foregoing, Niagara will not be liable for any claims, damages or defects arising from, or in any way attributable to:

3.3.1 poor workmanship;
3.3.2 poor design or detailing;
3.3.3 incorrect design of the structure;
3.3.4 settlement or structural movement and/or movement of materials to which the Products are attached;
3.3.5 acts of God including, but not limited to, earthquakes, cyclones, floods or other severe weather conditions or unusual climatic conditions;
3.3.6 efflorescence or performance of paint/coatings applied to the Products;
3.3.7 normal wear and tear; or
3.3.8 growth of mould, mildew, fungi, bacteria, or any organism on the surface of any Products (whether on the exposed or unexposed surfaces).

3.4 All warranties, conditions, liabilities and obligations other than those specified in this Warranty are excluded to the fullest extent permitted by law. The Warranty does not exclude or modify any legal rights a customer may have under the Consumer Guarantees Act 1993. Unless otherwise specified in writing at the time of sale, Niagara assumes no liability for the Products being fit for any particular purpose under the Building Act 2004, other legislation or at common law.