

4201HW JAMES HARDIE WEATHERBOARD CLADDING

Masterspec sections must be customised to suit the project being specified, by removing irrelevant information and adding project-specific information and selections.

1. GENERAL

This section relates to the supply and fixing of the following fibre cement products:

- James Hardie Linea[®] Weatherboard cladding
- James Hardie Weatherboard cladding
- James Hardie Villaboard[®] soffit lining
- James Hardie selected soffit lining

Modify or extend the above description to suit the project being specified.

Documents

1.1 DOCUMENTS REFERRED TO

Documents referred to in this section are:

NZBC E2/AS1	External moisture, 9.0 Wall claddings
NZBC E2/VM1	Weathertightness
AS/NZS 1170.2	Structural design actions - Wind actions
AS/NZS 2908.2	Cellulose-cement products - Flat sheet
NZS 3602	Timber and wood-based products for use in building
NZS 3604	Timber framed buildings
NZS 4203	General structural design and design loadings for buildings

Documents listed above and cited in the clauses that follow are part of this specification. However, this specification takes precedence in the event of it being at variance with the cited document.

Delete from the DOCUMENTS clause any document not cited. List any additional cited documents.

RELATED DOCUMENTS:

Refer to the following related documents when preparing this section:

- BRANZ Bulletin 353 Ground clearances*
- BRANZ Bulletin 393 Powder-actuated and mechanically powered fasteners*
- BRANZ Bulletin 407 Walls on exposed sites*
- BRANZ Bulletin 424 Measuring moisture on building sites*
- BRANZ Bulletin 439 Condensation risk in walls*
- BRANZ Bulletin 448 Domestic flashing installation*
- BRANZ Bulletin 449 Keeping water out – Timber-framed walls*
- BRANZ Bulletin 453 Fasteners selection*
- BRANZ Bulletin 460 Internal moisture control*
- BRANZ Bulletin 467 Principles of flashing design*
- BRANZ publication Selecting wall claddings*

1.2 MANUFACTURER'S DOCUMENTS

James Hardie documents relating to work in this section are:

- Linea[®] Weatherboard technical specification
- James Hardie Weatherboards technical specification
- Eaves and Soffit Linings installation manual
- BRANZ Appraisal certificate No. 446 (2005) Linea[®] Weatherboard
- BRANZ Appraisal certificate No. 447 (2005) Linea[®] Weatherboard cavity construction

Copies of the above literature are available at

Web: www.jameshardie.co.nz
Telephone: Ask James Hardie™ on 0800 808 868

The BRANZ appraisal is available at www.branz.co.nz.

It is important to ensure that all personnel on site have access to accurate, up to date technical information on the many products, materials and equipment used on a project. In most cases individual products are not used in isolation, but form part of a building process. Also a particular manufacturer's and/or supplier's requirements for handling, storage, preparation, installation, finishing and protection of their product can vary from what might be considered the norm. Access to technical information can help overcome this potential problem.

Requirements

- 1.3 NO SUBSTITUTIONS
Substitutions are not permitted to any specified system, or associated components and products.

Performance

Note that in using the next clause you are setting a standard of performance for the contractor to meet. Specifiers should therefore consider adding some means of confirming (say by testing or certification) that the performance criteria will be or have been met.

- 1.4 FIXINGS, WIND
Design and use the fixings appropriate for the wind zone (R) and topographical classification (T) of this site and building height; as required by James Hardie technical specification and the wind loads on various wall areas as given by NZS 4203 or AS/NZS 1170.
Modify this clause depending on whether NZS 3604 AS/NZS 1170 or NZS 4203 is being used as a design basis for the project.

2. PRODUCTS

Materials

- 2.1 BUILDING WRAP
Waterproof, breather type to NZBC E2/AS1, Table 23: Properties of roof underlays and building wraps.
Modify this clause depending on whether a building wrap or a rigid air barrier is being used.
- 2.2 EXTERIOR CAVITY BATTENS
Radiata pine battens, minimum 45 mm wide x 18 mm thick, H3.1 treated, height to match timber framing studs. To NZS 3602, Table 1, reference 1D.10, Requirements for wood-based building components to achieve a 50-year durability performance.
Refer to James Hardie technical specifications for further details.
- 2.3 EXTERIOR CAVITY VERMIN-PROOFING
Perforated uPVC, with upstands.
Vermin-proofing to NZBC E2/AS1: clause 9.1.8.3 and figure 66.
- 2.4 LINEA[®] WEATHERBOARDS
James Hardie Linea[®] Weatherboards, 16 mm thick, pre-primed, manufactured from a reduced density cellulose fibre cement formulation and cured by high pressure autoclaving, manufactured to AS/NZS 2908.2, tested to NZBC E2/VM1 for weathertightness and complying with the NZBC.
Refer to James Hardie technical specifications for further details.
- 2.5 JAMES HARDIE WEATHERBOARDS
James Hardie Weatherboards, pre-primed, manufactured to AS/NZS 2908.2 and complying with NZBC E2/AS1.
Refer to James Hardie technical specifications for further details.
- 2.6 FLUSH JOINTED SOFFIT LINING
James Hardie Villaboard[®] Lining 6 mm and 9 mm thick manufactured from treated cellulose fibre, Portland cement, sand and water, cured by high pressure autoclaving and manufactured to AS/NZS 2908.2.
Refer to Eaves and Soffit Linings installation manual for further details.
- 2.7 SOFFIT LINING
James Hardie 4.5 mm Hardisoffit[®] Lining, HardiFlex[®] Eaves Lining, Silkline[®] Soffit Lining Eclipsa[™] Eaves Lining and 6mm HardiFlex[®] Lining soffit manufactured from treated cellulose fibre, Portland cement, sand and water and cured by high pressure autoclaving manufactured to AS/NZS 2908.2.
Refer to Eaves and Soffit Linings installation manual for further details.

Components

- 2.8 FASTENER TYPE
Fasteners to minimum durability requirements of the NZBC. Refer to NZS 3604, section 4 Durability, for requirements for fixing's material to be used in relation to the exposure conditions.

Exposure conditions & nail selection prescribed by NZS 3604, section 4, table 4.3 Steel items such as nails and screws used for framing and cladding.

Sea Spray Zones*	Zone 1 outside sea spray zone and Zones 2 - 4 & Geothermal hot spots	Bracing - All zones
Grade 316 Stainless	Hot-dipped galvanized or 316 stainless	Grade 316 Stainless

* Zone 1 areas where local knowledge dictates that increased durability is required, appropriate selection shall be made

Refer to NZBC E2/AS1, Table 20, Material selection, and Table 21, Compatibility of materials in contact, for selection of suitable fixing materials and their compatibility with other materials.

- 2.9 SCREWS
40 mm x 9 gauge stainless steel fascia screws
30 mm x 7 gauge stainless steel HardiDrive screws
Refer to James Hardie technical specifications for further details.

- 2.10 GALVANIZED NAILS
60 mm x 3.15 mm diameter jolt head
75 mm x 3.15 mm diameter jolt head
HardiFlex[®] Nail 40 mm x 2.8 mm diameter
HardiFlex[®] Nail 50 mm x 2.8 mm diameter
HardiFlex[®] Nail 60 mm x 3.15 mm diameter
HardiFlex[®] Nail 75 mm x 3.15 mm diameter
Select galvanized or stainless steel depending on exposure conditions.

- 2.11 STAINLESS STEEL NAILS
60 mm x 3.15 mm diameter jolt head 316 grade
75 mm x 3.15 mm diameter jolt head 316 grade
HardiFlex[®] Nail 40 mm x 2.8 mm diameter 316 grade
HardiFlex[®] Nail 50 mm x 2.8 mm diameter 316 grade
HardiFlex[®] Nail 60 mm x 3.15 mm diameter x 6.8 mm minimum head diameter, 316 grade
HardiFlex[®] Nail 75 mm x 3.15 mm diameter x 6.8 mm minimum head diameter, 316 grade
Select galvanized or stainless steel depending on exposure conditions.

- 2.12 SOFFIT JOINTERS AND CAPPING MOULDS
Extruded PVC jointer, 2 way jointer, capping and scotia mould.

Accessories

- 2.13 SEALANT
Fosroc MS sealant or similar. Refer to James Hardie technical specifications for application requirements.

3. EXECUTION

Conditions

- 3.1 STORAGE
Take delivery of weatherboards dry and undamaged in pallets and lay horizontally on a smooth level surface. Protect edges and corners from damage and cover to keep dry until fixed.

3.2 **HANDLING**
Avoid distortion and contact with potentially damaging surfaces. Carry weatherboards in vertical position. Do not drag weatherboards across each other, or across other materials. Protect edges, corner and surface finish from damage.

3.3 **SUBSTRATE**
Do not commence work until the substrate is of the standard required by James Hardie for the specified finish; plumb, level and in true alignment. Moisture content of timber framing must not exceed the requirements specified by NZS 3602 to minimise shrinkage and movement after sheets are fixed.

Application - particular installations

3.4 **FIRE RESISTANCE RATING, FIBRE CEMENT**
Install mineral fibre insulation or glass fibre insulation fitted tightly in the timber framing cavity. Apply fire retardant building paper to the exterior face of the framing and fix fibre cement cladding and lining sheets, direct or on cavity. Refer to James Hardie Fire and Acoustic technical specification.

3.5 **BRACING SYSTEM**
Fix Linea® Weatherboards to James Hardie technical specification.
Refer to James Hardie technical data for further information and guidance. Refer also to any bracing schedules or drawings.

Application - generally

3.6 **FIX BUILDING WRAP**
Run and fix building wrap in full height rolls to wall framing, with fixing and end laps to NZS 3604 and the wrap manufacturer's requirements and with the wrap not damaged in any way.

3.7 **INSTALL CAVITY BATTENS**
Install 18 mm minimum thick cavity battens to NZBC E2/AS1: 9.0 Wall claddings, where required. Fix vertical cavity battens to wall framing studs. The battens are fixed by the cladding fixings which will penetrate the wall framing studs under the building wrap. Seal the top of the cavity and install vermin-proofing at base. Do not use horizontal cavity battens. Use cavity spacers where fixing is required between cavity battens.
Note that it is important that the openings in the vermin proofing are kept clean and unobstructed in order to maintain drainage and venting of the cavity.

3.8 **PENETRATIONS AND FLASHINGS**
Confirm that exterior wall openings have been prepared ready for the installation of all window and door frames and other penetrations through the cladding. Required preparatory work includes the following:

- Building wrap appropriately incorporated with penetration and junction flashings.
- Materials lapped in a way that water tracks down to the exterior face of the building wrap.
- Wall cladding underlay/building wrap to openings finished and dressed off ready for the installation of window and door frames and other penetrations
- Claddings neatly finished off to all sides of openings
- Installation of flashings (those required to be installed prior to installation of penetrating elements).

Refer to James Hardie technical specification for information on window details. Also refer to the Windows Association of New Zealand website (www.wanz.org.nz) for information on the WANZ WIS Window Installation System. This covers the WANZ recommendations on the preparation of window/door openings, minimum clearances between rough openings and the window/door frame, dressing of the wall wrap into the prepared opening, application of flexible flashing tape to the sill and top corners of the opening, installation of window/door frames and flashings, sealing of the window/door frame into the opening to create a pressure equalisation cavity, installation of flashings and the maintenance of appropriate clearances between the frame and the surrounding construction.

- 3.9 **INSTALL LINEA® WEATHERBOARDS**
Cut weatherboards to required lengths and fit joints off-stud using tongue and groove ends. Fit internal corners and weatherboards as per Linea® Weatherboard technical specifications. Fit and fix external corners and joint soakers as required.
- 3.10 **INSTALL FLASHINGS**
Install flashings at all wall openings, penetrations, junctions, connections, window sills, heads and jambs to NZBC E2/AS1.
- 3.11 **INSTALL JAMES HARDIE WEATHERBOARDS**
Fit concealed soaker, internal corners and fix weatherboards as per James Hardie Weatherboard technical specifications. Fit and fix external corners and joint soakers as required.
- 3.12 **INSTALL SOFFIT SHEETS**
Cut sheets dry and scribe fit to fully support all edges and joints. Nail and insert PVC fasteners to James Hardie requirements. Fit complete with jointers and capping moulds. Refer to Eaves and Soffits technical specification.
- 3.13 **INSTALL FLUSH JOINTED SOFFIT SHEETS**
Cut sheets dry, and scribe fit to fully support all edges and joints. Fit expansion joints to limit finished areas to 9 metre x 6 metres for large soffits or 7.2 metres for narrow soffits. Flush joints with James Hardie Base Coat, paper reinforcing tape and James Hardie Top Coat. Refer to Eaves and Soffit Linings installation manual.

Completion

- 3.14 **REPLACE**
Replace all damaged or marked elements.
- 3.15 **LEAVE**
Leave work to the standard required for following procedures.
- 3.16 **REMOVE**
Remove debris, unused materials and elements from the site.

4. SELECTIONS

- 4.1 **BUILDING WRAP**
Brand/type: ~
Flashing tape: ~
- 4.2 **CAVITY BATTENS**
Timber species: Radiata pine
Treatment: H3.1

Linea® Weatherboards

- 4.3 **LINEA® WEATHERBOARDS**
Brand/type: James Hardie Linea® Weatherboard
Thickness: 16 mm
Width: ~ mm
Fixing: ~
Fastener type: ~
Fixing: ~
Width options: 135 mm, 150 mm, 180 mm.
Fixing options: Direct fix construction method, Cavity construction method
Fastener options: Galvanized, Stainless steel
Fixing options: Concealed nailing, Face nailing
- 4.4 **LINEA® WEATHERBOARD CORNERS**
Type: ~
Soaker type: ~

Type options: *Boxed, Mitred, Aluminium box corner, Soaker.*
Soaker options: *Aluminium, Copper, Stainless steel*
(Copper not available for 150 mm weatherboards)

James Hardie Weatherboards

4.5 JAMES HARDIE WEATHERBOARDS

Brand/type: James Hardie ~
Thickness: ~ mm
Width: ~ mm
Fastener type: ~
Fixing: Face nail

Options:

<i>Smooth weatherboard</i>	<i>7.5 mm thick</i>	<i>Width options: 180 mm, 240 mm, 305 mm</i>
<i>Rusticated weatherboard</i>	<i>7.5 mm thick</i>	<i>Width 205 mm</i>
<i>Styleline™ weatherboard</i>	<i>7.5 mm thick</i>	<i>Width 205 mm</i>
<i>Colonial® weatherboard</i>	<i>7.5 mm thick</i>	<i>Width 205 mm</i>
<i>Frontier weatherboard</i>	<i>7.5 mm thick</i>	<i>Width options: 245 mm, 310 mm</i>
<i>Summit weatherboard</i>	<i>9 mm thick</i>	<i>Width 150 mm</i>

Fastener options: Galvanized, Stainless steel

Fixing options: Concealed nailing (Summit weatherboard only)

4.6 JAMES HARDIE WEATHERBOARD CORNERS

Type: ~
Soaker type: ~
Type options: *Boxed, Aluminium box corner, PVC box corner, Soaker.*
Soaker options: *Etched primed, Aluminium*

Soffits

4.7 FLUSH JOINTED SOFFIT SHEETS

Brand/type: James Hardie Villaboard® Lining
Thickness: ~ mm
Available in both 6 mm and 9 mm thicknesses.

4.8 SOFFIT SHEETS

Brand/type: ~
Type: ~
Jointer type: ~
Type options: *Hardisoffit™ Lining*
HardiFlex® Eaves Lining
Silkline™ Soffit Lining (prepainted)
Villaboard® Lining
Eclipsa® Eaves Lining (prepainted)
Also available in 6 mm HardiFlex® Lining.

Finishing

4.9 PAINTING

Paint system: ~
Refer to PAINTING for details