

# 4231HW 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.*

## 1.1 RELATED WORK

Refer to ~ for ~.

Refer to painting section/s for the protective coating required to meet the NZBC durability requirements.

*Include cross references to other sections where these contain related work. These may include; 4231HF JAMES HARDIE FACADE CLADDING for Titan® Facade Panel and ExoTec® Facade Panel rainscreen, 4231HA JAMES HARDIE AXON™ PANEL CLADDING for James Hardie Axon™ Panel cladding, 4256HM JAMES HARDIE MONOLITHIC CLADDING for Monotek® Sheet and Hardiebacker™ Substrate. 4171HR JAMES HARDIE RIGID AIR BARRIERS for James Hardie HomeRAB™ PreClad™ Lining and RAB™ Board for pre-cladding*

## Documents

## 1.2 DOCUMENTS

Refer to the general section 1233 REFERENCED DOCUMENTS. The following documents are specifically referred to in this section:

NZBC E2/AS1	External moisture
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

*Delete from the DOCUMENTS clause any document not cited. List any additional cited documents. The following are related documents and if referred to in the work section need to be added to the list of DOCUMENTS.*

BRANZ BU 353	Ground clearances
BRANZ BU 393	Powder-actuated and mechanically powered fasteners
BRANZ BU 407	Walls on exposed sites
BRANZ BU 439	Condensation risk in walls
BRANZ BU 449	Keeping water out - Timber-framed walls
BRANZ BU 519	Fasteners selection
BRANZ BU 460	Internal moisture control
BRANZ BU 467	Principles of flashing design
BRANZ publication	Selecting wall claddings

## 1.3 MANUFACTURER/SUPPLIER DOCUMENTS

James Hardie documents relating to this part of the work:

- Linea™ Weatherboard technical specification
- James Hardie Weatherboards technical specification
- Eaves and Soffit Linings installation manual
- [BRANZ Appraisal 446](#) - Linea™ Weatherboard
- [BRANZ Appraisal 447](#) - Linea™ Weatherboard - Cavity Construction

Manufacturer/supplier contact details

Company: James Hardie New Zealand Limited  
Web: [www.jameshardie.co.nz](http://www.jameshardie.co.nz)  
Telephone: Ask James Hardie™ on 0800 808 868

The BRANZ appraisal is available at [www.branz.co.nz](http://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.*

## **Warranties**

- 1.4 **WARRANTY - MANUFACTURER/SUPPLIER**  
Provide a material manufacturer/supplier warranty:  
25 years: For **Linea™ Weatherboard** product (refer to James Hardie™ product warranty)  
15 year: For accessories supplied by James Hardie (refer to James Hardie™ product warranty)  
From: Date of purchase

- Provide this warranty on the manufacturer's standard form.

Refer to the general section 1237 WARRANTIES for additional requirements.

*Modify or expand the clause to suit project requirements.*

- 1.5 **WARRANTY - MANUFACTURER/SUPPLIER**  
Provide a material manufacturer/supplier warranty:  
15 years: For James Hardie™ ~.  
(refer to James Hardie™ product warranty)  
*Insert product selected, this may include; Axon™ Panel cladding, Villaboard® Soffit Lining, ExoTec® Facade Panel, Titan® Facade Panel, HardieFlex™ Sheet cladding, James Hardie™ Weatherboard cladding, Monotek® Sheet, Hardiebacker™ Substrate, Villaboard® Lining, HardieGroove™ Lining. Refer to James Hardie™ product warranty for details.*  
15 year: For accessories supplied by James Hardie (refer to James Hardie™ product warranty)  
From: Date of purchase

- Provide this warranty on the manufacturer's standard form.

Refer to the general section 1237 WARRANTIES for additional requirements.

*Modify or expand the clause to suit project requirements, options include:*

- 1.6 **WARRANTY - MANUFACTURER/SUPPLIER**  
Provide a material manufacturer/supplier warranty:  
15 years: For **Silkline® Soffit Lining / Eclipsa® Eaves Lining** base sheet (refer to James Hardie™ product warranty)  
10 years: For coating on **Silkline® Soffit Lining / Eclipsa® Eaves Lining** (refer to James Hardie™ product warranty)  
15 year: For accessories supplied by James Hardie (refer to James Hardie™ product warranty)  
From: Date of purchase

- Provide this warranty on the manufacturer's standard form.

Refer to the general section 1237 WARRANTIES for additional requirements.

*Modify, delete or expand the clause to suit project requirements, options include:*

## **Requirements**

- 1.7 **NO SUBSTITUTIONS**  
Substitutions are not permitted to any specified system, or associated components and products.
- 1.8 **MAINTENANCE REQUIREMENTS**  
Provide relevant James Hardie maintenance requirements at completion of the work.  
*Refer to James Hardie Technical Specification for maintenance guidance:*

## **Performance**

*The next two mutually exclusive clauses, set the wind design parameters which have been used, which in turn affect the use of James Hardie standard details. Delete the clause which does not apply.*

- 1.9 PERFORMANCE, WIND  
The design wind pressures are to [NZS 3604](#), up to and including Very High Wind Zone. James Hardie Technical Specifications are suitable for these conditions.  
*Do not use this clause for greater than Very High Wind Zones or specific design tall buildings. Delete this clause if using the SPECIFIC DESIGN, WIND clause below.*
- 1.10 SPECIFIC DESIGN, WIND  
The design wind pressures are to [AS/NZS 1170.2](#), for specific design wind zone (beyond Very High Wind Zone). Only specifically designed or approved details included in the Contract Documents can be used.  
*Do not use this clause when the building is below or within Very High Wind Zone or very high wind areas of tall buildings. James Hardie Weatherboard Technical Specifications do not go beyond Very High Wind Zones. Ensure all specific design details related to James Hardie Weatherboards are checked by James Hardie during the design stage. Modify this section to reflect their requirements. Delete this clause if using the PERFORMANCE, WIND clause above.*
- 2. PRODUCTS**
- Materials**
- 2.1 RIGID AIR BARRIERS  
Refer to section 4171HR JAMES HARDIE RIGID AIR BARRIERS.  
*Delete this clause if not required. HomeRAB™ PreClad™ Lining and RAB™ Board are used instead of wraps, for among other things, earlier enclosure, bracing, for high wind pressures where some building wraps are not suitable and to meet the requirements of NZBC E2/AS1. 9.1.4 b.*
- 2.2 BUILDING WRAP  
Refer to section 4161 WRAPS, UNDERLAYS AND DPC.  
*Delete this clause if not required. Some building wraps are only suitable to withstand low wind pressures. Check the design wind pressures for the project and make the appropriate selection.*
- 2.3 EXTERIOR CAVITY BATTENS  
Radiata pine battens, minimum 45mm wide x 18mm 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.  
*Delete if specified elsewhere. Refer to James Hardie technical specifications for further details.*
- 2.4 EXTERIOR CAVITY CLOSER/VERMIN-PROOFING  
Perforated uPVC, with upstands.  
*Vermin-proofing to NZBC E2/AS1: clause 9.1.8.3 and figure 66.*
- 2.5 LINEA™ WEATHERBOARDS  
James Hardie Linea™ Weatherboards, 16mm 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.*
- 2.6 JAMES HARDIE WEATHERBOARDS  
James Hardie Weatherboards, 7.5mm thick, pre-primed, manufactured from treated cellulose fibre, Portland cement, sand and water and cured by high pressure autoclaving, manufactured to AS/NZS 2908.2 and complying with [NZBC E2/AS1](#).  
*Refer to James Hardie technical specifications for further details.*
- 2.7 FLUSH JOINTED SOFFIT LINING  
James Hardie Villaboard® Lining 6mm and 9mm 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.*
- 2.8 SOFFIT LINING  
James Hardie 4.5mm Hardiesoffit™ Lining, HardieFlex™ Eaves Lining, Silkline® Soffit Lining Eclipsa™ Eaves Lining, HardieGroove™ Lining and 6mm HardieFlex™ 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

### 2.9 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.

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

### 2.10 SCREWS

30mm x 7 gauge stainless steel HardieDrive screws

*Refer to James Hardie technical specifications for further details.*

### 2.11 GALVANIZED NAILS

60mm x 3.15mm diameter jolt head

75mm x 3.15mm diameter jolt head

HardieFlex™ Nail 40mm x 2.8mm diameter

HardieFlex™ Nail 50mm x 2.8mm diameter

HardieFlex™ Nail 60mm x 3.15mm diameter

HardieFlex™ Nail 75mm x 3.15mm diameter

*Select galvanized or stainless steel depending on exposure conditions.*

### 2.12 STAINLESS STEEL NAILS

60mm x 3.15mm diameter jolt head 316 grade

75mm x 3.15mm diameter jolt head 316 grade

HardieFlex™ Nail 40mm x 2.8mm diameter 316 grade

HardieFlex™ Nail 50mm x 2.8mm diameter 316 grade

HardieFlex™ Nail 60mm x 3.15mm diameter 316 grade

HardieFlex™ Nail 75mm x 3.15mm diameter 316 grade

*Select galvanized or stainless steel depending on exposure conditions.*

### 2.13 SOFFIT JOINTERS AND CAPPING MOULDS

Extruded uPVC jointer, 2 way jointer, capping and scotia mould.

## Accessories

### 2.14 SEALANT

Silaflex AT-Facade sealant or similar. Refer to James Hardie technical specifications for application requirements.

## 3. EXECUTION

### Conditions

- 3.1 **STORAGE**  
Take delivery of products dry and undamaged on pallets, and keep on pallet. Protect edges and corners from damage and covered 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 project drawings for FRR system construction details and James Hardie Fire and Acoustic Design Manuals for further information.
- 3.5 **BRACING SYSTEM**  
Fix Linea™ Weatherboards to James Hardie Bracing Design Manual.  
*Refer to James Hardie technical data for further information and guidance. Refer also to any bracing schedules or drawings.*

#### **Application - generally**

- 3.6 **RIGID AIR BARRIER**  
Refer to 4171HR JAMES HARDIE RIGID AIR BARRIERS.  
*Delete this clause if not required..*
- 3.7 **FIX BUILDING WRAP**  
Refer to 4161 WRAPS, UNDERLAYS AND DPC.  
*Delete this clause if not required..*
- 3.8 **INSTALL CAVITY BATTENS**  
Install 18mm 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 cavity closer/vermin-proofing at base. Do not use horizontal cavity battens. Use cavity spacers where fixing is required between cavity battens.  
*Delete if specified elsewhere.*  
*Note that it is important that the openings in the cavity closer/vermin proofing are kept clean and unobstructed in order to maintain drainage and venting of the cavity.*
- 3.9 **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](http://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.*

- 3.10 **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.
- 3.11 **INSTALL FLASHINGS**  
Install flashings at all wall openings, penetrations, junctions, connections, window sills, heads and jambs to [NZBC E2/AS1](#).  
*Amend or delete this clause if, flashings to be installed by others or specified elsewhere.*
- 3.12 **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.
- 3.13 **INSTALL SOFFIT SHEETS**  
Cut sheets dry and ensure all edges and joints are fully supported. Nail and insert uPVC fasteners to James Hardie requirements. Fit complete with jointers and capping moulds. Refer to Eaves and Soffit Linings installation manual.  
*For narrow soffit edge support refer installation manual.*
- 3.14 **INSTALL FLUSH JOINTED SOFFIT SHEETS**  
Cut sheets dry and ensure all edges and joints are fully supported. 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 to flush width of 180mm. Refer to Eaves and Soffit Linings installation manual.  
*Control joints for skillion roofs need more consideration. Refer to Eaves and Soffit Linings installation manual.*

### **Completion**

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

## **4. SELECTIONS**

- 4.1 **CAVITY BATTENS**  
Timber species: Radiata pine  
Treatment: H3.1  
*Delete if specified elsewhere.*

### **Linea™ Weatherboards**

- 4.2 **LINEA™ WEATHERBOARDS**  
Location: ~  
Brand/type: James Hardie Linea™ Weatherboard  
Thickness: 16mm  
Width: ~mm  
Construction: ~  
Nail pattern: ~

Nail finish: ~  
 Nails ~  
 Width options: 135 mm, 150 mm, 180 mm.  
 Construction options: Direct fix, Cavity fix  
 Nail pattern options: Face nailing, Concealed nailing  
 Nail finish options: Galvanized, Stainless steel  
 Nail options

Direct fix	Concealed	40 x 2.8mm HardieFlex™ Nails
	Face nailed	60 x 3.15mm jolt head Nails
Cavity fix	Concealed	60 x 3.15mm HardieFlex™ Nails
	Face nailed	75 x 3.15mm jolt head Nails

#### 4.3 LINEA™ WEATHERBOARD CORNERS

Type: ~  
 Soaker type: ~  
 Type options: Boxed, Mitred, Aluminium box corner, Soaker.  
 Soaker options: Aluminium, Copper, Stainless steel  
 (Copper not available for 150mm or 135mm weatherboards)

### James Hardie Weatherboards

#### 4.4 JAMES HARDIE WEATHERBOARDS

Location: ~  
 Brand/type: James Hardie ~  
 Thickness: 7.5mm  
 Width: ~mm  
 Construction: ~  
 Nail pattern: Face nail  
 Nail finish: ~  
 Nails ~  
 Board options:

Smooth Weatherboard	7.5mm thick	Width options: 180mm, 240mm, 305mm
Rusticated Weatherboard	7.5mm thick	Width 205mm
Styleline™ Weatherboard	7.5mm thick	Width 205mm
Frontier Weatherboard	7.5mm thick	Width options: 245mm, 310mm

Construction options: Direct fix, Cavity fix  
 Nail finish options: Galvanized, Stainless steel  
 Nail options:

Direct fix	Face nailed	50 x 2.8mm HardieFlex™ Nails
Cavity fix	Face nailed	75 x 3.15mm HardieFlex™ Nails

#### 4.5 JAMES HARDIE WEATHERBOARD CORNERS

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

### Soffits

#### 4.6 FLUSH JOINTED SOFFIT SHEETS

Brand/type: James Hardie Villaboard® Lining  
 Thickness: ~mm  
 Nails: 40 x 2.8mm HardieFlex™ Nails  
 Available in both 6mm and 9mm thicknesses.

#### 4.7 SOFFIT SHEETS

Brand/type: James Hardie~  
 Thickness: ~mm  
 Jointer type: ~  
 Nails: ~  
 Type options:

- Hardiesoffit™ Lining
- HardieFlex™ Eaves Lining
- Silkline™ Soffit Lining (prepainted)
- Villaboard® Lining
- Eclipsa® Eaves Lining (prepainted)
- HardieGroove™ Lining

*Nail options:* Also available in 6 mm HardieFlex™ Sheet.  
40 x 2.8mm HardieFlex™ Nails  
38 x 12mm Fastfix nylon fasteners

**Finishing**

4.8

**PAINTING**

Refer to painting section/s for details.

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