

# 4256HM JAMES HARDIE MONOLITHIC 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 fibre cement flush finish cladding:

- James Hardie Monotek<sup>®</sup> Sheet for textured coating systems
- James Hardie Hardiebacker<sup>™</sup> Substrate for plaster systems
- James Hardie Villaboard<sup>®</sup> Soffit Lining
- James Hardie selected soffit lining

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

*Where the cladding manufacturer prepares bracing schedules for their products, these lists should be used in preference to preparing your own bracing schedules. Include them either in the specification or on the drawings. This approach ensures the industry becomes familiar with one set of terminology for bracing elements.*

*While flush jointing is included here, cross-reference to either painting section/s or to 6731 DECORATIVE COATINGS, when joint finishing is being applied as part of an exterior coating system.*

## 1.1 RELATED WORK

Refer to ~ for ~.

Refer to 4282 SOLID PLASTER for stucco plaster finish to Hardiebacker<sup>™</sup> Substrate sheets

Refer to painting section/s for protective painting finish to Monotek<sup>®</sup> Sheet and stucco plaster

*Include cross references to other sections where these contain related work. 4171HR JAMES HARDIE RIGID AIR BARRIERS for James Hardie HomeRAB<sup>™</sup> PreClad<sup>™</sup> Lining and RAB<sup>™</sup> Board for pre-cladding. In Standard a related section may be 6731 DECORATIVE COATINGS for protective finish to Monotek<sup>®</sup> Sheet.*

## Documents

## 1.2 DOCUMENTS

Refer to the general section 1232 INTERPRETATION & DEFINITIONS for abbreviations and definitions used throughout the specification.

- NZBC E2/AS1 External moisture
- 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 449 Keeping water out - Timber-framed walls
- BRANZ BU 519 Fasteners selection
- BRANZ BU 467 Principles of flashing design
- BRANZ publication Selecting wall claddings
- BRANZ publication Good texture-coated fibre cement practice

## 1.3 MANUFACTURER/SUPPLIER DOCUMENTS

James Hardie documents relating to this part of the work:

- Monotek<sup>®</sup> Sheet technical specification
- Hardiebacker<sup>™</sup> Substrate technical specification
- Eaves and Soffit Linings installation manual
- BRANZ Appraisal 466 - Monotek<sup>®</sup> Sheet - 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<sup>™</sup> on 0800 808 868.

*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:

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:*

### 1.5 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**

### 1.6 NO SUBSTITUTIONS

Substitutions are not permitted to any specified system, or associated components and products.

### 1.7 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.*

### 1.8 PERFORMANCE, WIND

For James Hardie Hardiebacker™ Substrate 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.

For James Hardie Monotek® Sheet the design wind pressures are up to 2.5kPa ULS. James Hardie Technical Specifications are suitable for these conditions.

*2.5kPa ULS is greater than Very High Wind Speed in [NZS 3604](#).*

*Do not use this clause for greater than the conditions above or specific design tall buildings.*

*Delete this clause if using the SPECIFIC DESIGN, WIND clause below.*

- 1.9 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 Technical Specifications do not go beyond Very High Wind Zones for Hardiebacker™ Substrate or 2.5kPa for Monotek® Sheet. Ensure all specific design details related to James Hardie Monotek® Sheet 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 in instead of wraps, for among other things, earlier enclosure, bracing, for high wind pressures ( above 1.5kPa) 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. 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 MONOTEK SHEET  
James Hardie Monotek® Sheet, resistant to damage from water and moisture, manufactured from treated cellulose fibre, Portland cement, sand and water and cured by high pressure autoclaving manufactured to AS/NZS 2908.2.
- 2.6 HARDIEBACKER SUBSTRATE SHEET  
James Hardie Hardiebacker™ Substrate, 4.5mm thick manufactured from treated cellulose fibre, Portland cement, sand and water and cured by high pressure autoclaving manufactured to AS/NZS 2908.2.
- 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 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 GALVANIZED NAILS

Hot-dip galvanized HardieFlex™ nails:  
60mm x 3.15mm diameter or 40mm x 2.8mm diameter.  
*Select galvanized or stainless steel depending on exposure conditions.*

## 2.11 STAINLESS STEEL NAILS

316 stainless steel HardieFlex™ nails:  
60mm x 3.15mm diameter or 40mm x 2.8mm diameter.  
*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 SEALING STRIPS

Inseal® 3259, 1.5mm thick black compressible medium density closed cell foam tape.  
Inseal® 3109, 10mm x 19mm  
Polypropylene DPC  
Butyl rubber flashing tape 50mm x 1mm

## 2.14 SEALANT

Silaflex AT-Facade sealant or similar. Refer to the sheet manufacturer's technical literature for selection and use requirements.

## 3. EXECUTION

### Conditions

#### 3.1 GENERAL

Keep sheets dry and under cover whilst in storage or during the installation. Framing moisture must not exceed the requirements of [NZS 3602](#) prior to sheet installation. Keep framing dry once sheet fixing commences.

#### 3.2 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.

#### 3.3 HANDLING

Avoid distortion and contact with potentially damaging surfaces. Do not drag sheets across each other, or across other materials. Protect edges, corner and surface finish from damage.

- 3.4 SUBSTRATE  
Do not commence work until the substrate is of the standard required by the sheet manufacturer 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 - Monotek® Sheet**

- 3.5 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.*
- 3.6 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 over 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.*
- 3.7 SHEET LAYOUT  
Check framing layout to facilitate the construction of control joints prior to sheet installation.
- All sheet edges must be supported by the framing.
  - All sheets must be fixed vertically.
- 3.8 GENERAL  
The Monotek® Sheets are supplied with 2 recessed edges. When the sheets are cut on site to suit the site requirements, the sheet edge cut on site must be recessed for flush jointing. Control joints are formed with square sheet edges.
- 3.9 SEAL CUT EDGES  
Seal site cut sheet edges prior to installation. Seal sheet edges around window and door openings, meter boxes and at other penetrations.
- 3.10 FASTENER - SIZE & LAYOUT  
Fix Monotek® Sheets to framing using the fixings as specified below and in accordance with the following:
- Nails must have a minimum clearance of 12mm from sheet edges and a minimum of 75mm vertically and 150mm horizontally from sheet corners.
  - The sheets must have a gap of 1-2mm at all flush finished joints.
  - Nails must finish flush with the sheet surface.

- 3.11 SHEET FIXING  
 Direct fixed to frame: 40mm x 2.8mm HardieFlex™ nails  
 Fix Sheet at 150mm centres at all sheet edges as well as all intermediate framing.  
 Cavity construction: 60mm x 3.15mm HardieFlex™ nails  
 Fix sheet at 200mm centres at all studs. Fix sheet at 150mm centres at top plate and bottom plate.  
*Modify to suit wind pressures. Special fixing arrangements are required for bracing and fire-resistance rated wall systems. For more information Ask James Hardie™ on 0800 808 868.*

- 3.12 GUN NAILING  
 Monotek® Sheet can be fixed using nail guns. The gun nails used must have a full round head to provide the required holding power. The length and gauge of nails must at a minimum be as specified in the James Hardie Monotek® Sheet technical specification.  
*Check with nail gun manufacturer for more information. Note: Do not use D Head nails. Do not use gun nailing for bracing applications.*

#### **Application - particular installations**

- 3.13 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.

- 3.14 BRACING SYSTEM  
 Fix sheets in accordance with 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**

- 3.15 RIGID AIR BARRIER  
 Refer to 4171HR JAMES HARDIE RIGID AIR BARRIERS.  
*Delete this clause if not required..*

- 3.16 FIX BUILDING WRAP  
 Refer to 4161 WRAPS, UNDERLAYS AND DPC.  
*Delete this clause if not required..*

- 3.17 FLUSH JOINTS  
 Monotek® Sheets must have a gap of 1 - 2mm when joining them together for the flush joints.
- Flush joint Monotek® Sheets with a proprietary flush jointing plaster system.
  - Where a flush horizontal joint and a vertical control joint coincide on the wall, the vertical control joint must extend to full height of the wall.
  - Do not locate flush joints on the corners of openings or at other high stress locations. Set flush joint off from the corners of opening by 200mm minimum.
  - Do not locate flush joints along floor joists.
  - For direct fixed applications use a flashing tape, 50mm x 1.0mm butyl rubber or polypropylene DPC under the flush joint.
- Jointing and cladding systems must comply with EM4 and meet the requirements of the NZBC acceptable solution E2/AS1.*

- 3.18 CONTROL JOINTS  
 Control joints are required as detailed below. Flush finish joints are not control joints. Control joints are necessary to accommodate the minimal differential movement between framing and sheets due to normal cyclic changes in the environment.

Vertical: 5.4 metre centres maximum and at all internal corners. (standard detail is a control joint)  
 Horizontal: At all floor joist locations (Standard details are control joints); and 5.4 metre centres maximum.

(Full height, continuous studs noggled at flush joint)

3.19 VERTICAL CONTROL JOINT  
Provide vertical control joints at a maximum spacing of 5.4 metres from other control joints, the edge of the cladding, expansion joints or internal and external corners. Vertical control joints may occur at the edge of window or door openings. Vertical control joints may be staggered across horizontal control joints.

3.20 HORIZONTAL CONTROL JOINT  
At floor joist level, in addition to the movements outlined above, provide horizontal control joints to accommodate the movement resulting from timber joist shrinkage. Horizontal control joints must be provided at all solid timber floor joists. Elsewhere horizontal control joints are required at a maximum spacing of 5.4 metres where the studs are running full height.

*Provide expansion joints to accommodate structural movement. They are generally only required for larger commercial buildings, and such buildings are outside the scope of this literature. Appropriate joint design shall be undertaken for the application.*

3.21 OPENINGS  
Flash openings in the cladding to prevent moisture ingress in to the wall. Do not locate horizontal and vertical flush joints along the sides of windows and doors. Locate these minimum of 200mm from the corner of an opening or change in the height of the wall when required.

### **Finishing**

3.22 PREPARATION FOR FINISHING  
Keep Monotek<sup>®</sup> Sheets dry and free from dirt before jointing and texture coating. Monotek<sup>®</sup> Sheets must be texture coated within 90 days of installation.  
*Protective texture coating of Monotek<sup>®</sup> Sheet is required in order to meet the durability requirements of the New Zealand Building Code. All sealants must be demonstrated to meet the relevant requirements of the NZBC. Jointing and cladding systems must comply with EM4 and meet the requirements of the NZBC acceptable solution E2/AS1.*

3.23 SEALANTS  
Check with sealant manufacturer prior to coating over sealants that sealants are compatible with coating system  
*All sealants must be demonstrated to meet the relevant requirements of the NZBC. Application and use of sealants must comply with manufacturer's instructions and be compatible with texture coating. Some sealant manufacturers do not recommend coating over their product.*

3.24 JOINTING & TEXTURE COATING  
Refer to SELECTIONS for coating.  
*The light reflectance value (LVR) for coatings used with Monotek<sup>®</sup> Sheet cladding must be 40% minimum or higher. Jointing and cladding systems must comply with EM4 and meet the requirements of the NZBC acceptable solution E2/AS1.*

### **Application - Hardiebacker<sup>™</sup> Substrate**

3.25 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.*

### 3.26 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 over 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.*

### 3.27 SHEET LAYOUT

- Support all sheet edges by the framing.
- Fix Hardiebacker™ Substrate vertically.

### 3.28 BRACING SYSTEM

Fix sheets in accordance with James Hardie Bracing Design Manual.

*Refer to James Hardie technical data for further information and guidance. Refer also to any bracing schedules or drawings.*

### 3.29 VERTICAL SHEET JOINT

Provide 2mm gap between Hardiebacker™ Substrate sheets at vertical sheet joints, or internal and external corners.

### 3.30 STUCCO VERTICAL CONTROL JOINT

Provide control joints to take up any shrinkage or movement of the stucco plaster finish. Refer Hardiebacker™ Substrate technical specification, Figure 6, Vertical stucco control joint

Provide a vertical control joint at a maximum of 4 metres to [NZS 4251.1](#) clause 2.1.9

Control joints:

- At all internal and external corners the mesh and plaster is to be continuous around the corners, control joints are not required.
- Locate control joints at 4 metre maximum from the corners.
- Control joints may be located in the vicinity of window or door opening.
- Position the control joints so they are hidden by the building features where possible.
- Vertical sheet joints do not need to coincide with plaster control joints.

*Refer to BRANZ 'Weathertight Solution Volume 2' (2007) for further information.*

### 3.31 HORIZONTAL CONTROL JOINT

Provide horizontal control joints at floor joist levels to accommodate the movements resulting due to timber joist shrinkage or settlement.

Locate horizontal control joints at 4 metres maximum to [NZS 4251.1](#) clause 2.1.9 Control joints.

Provide a cavity drained out to the exterior after every two floor levels to [NZBC E2/AS1](#) clause 9.1.9.4 Inter-storey junctions. Use a purpose made stainless steel, powder-coated aluminium, powder-coated hot-dipped galvanized steel or hot-dipped galvanized steel 'Z' flashing to form a horizontal joint. Refer Hardiebacker™ Substrate technical specification, figure 13, Horizontal drainage joint.

Where draining to the exterior is not required the James Hardie uPVC 'h' mould is used to form a horizontal joint. Refer Hardiebacker™ Substrate technical specification, figure 14, Horizontal control joint.

*Zinc/aluminium uncoated steel is not suitable as it deteriorates in contact with Portland cement.*

### 3.32 EXPANSION JOINT

Provide expansion joints to accommodate or allow structural movements.

Provide vertical structural expansion joints at maximum 12 metres.

*They are generally required for larger commercial buildings only, and such buildings are outside the scope of this literature. Appropriate joint design shall be undertaken for this situation.*

### 3.33 FASTENER - SIZE & LAYOUT

Nail fix Hardiebacker™ Substrate to timber as follows:

- Use 60mm x 3.15mm HardieFlex™ fibre cement nails.
- Nail at 200mm centres on studs.
- Nail at 150mm centres on top plate and bottom plate.
- Drive nails minimum of 12mm from the sheet edges, and a minimum of 75mm vertically and 150mm horizontally from the sheet corners.
- Nails must finish flush with the sheet surface.

*The special fixing arrangements are required for bracing systems - For more information Ask James Hardie™ on 0800 808 868.*

### Application - soffits

### 3.34 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.*

### 3.35 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

### 3.36 REPLACE

Replace all damaged or marked elements.

### 3.37 LEAVE

Leave work to the standard required for following procedures.

### 3.38 REMOVE

Remove debris, unused materials and elements from the site.

## 4. SELECTIONS

### 4.1 CLADDING SYSTEM

Brand/type: James Hardie Monotek® Sheet

Thickness: ~mm

Fixing system: ~

Fastener type: ~

Nails: ~

Finish type: Refer to ~ for details

*Thickness options: 7.5mm, 9mm*

*Fixing systems: Direct fix, Cavity construction*

*Fastener types: Screw, Nail Stainless steel, Galvanized*

*Nail options: Direct fix 40 x 2.8mm HardieFlex™ Nails*

*Cavity fix 60 x 3.15mm HardieFlex™ Nails*

*(Modify for wind pressures, bracing or fire, Refer James Hardie.)*

### 4.2 SUBSTRATE SYSTEM

Brand/type: James Hardie Hardiebacker™ Substrate

Thickness: 4.5mm

Fixing system: Cavity construction

Fastener type: ~

Nails: 60 x 3.15mm HardieFlex™ Nails

Plaster finish: Refer to ~ for details  
*Fastener types: Stainless steel nail, Galvanized nail*

#### 4.3 CAVITY BATTENS

Timber species: Radiata pine  
Treatment: H3.1  
*Delete if specified elsewhere.*

#### 4.4 FLUSH JOINTED SOFFIT SHEETS

Brand/type: James Hardie Villaboard® Lining soffit system  
Thickness: ~mm  
Nails: 40 x 2.8mm HardieFlex™ Nails  
*Thickness options: 6mm, 9mm.*

#### 4.5 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)*

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

DRAFT