

IN ACCORDANCE WITH NCC VOLUME 2 (SECTION P3.10.1), THIS PRODUCT SATISFIES PERFORMANCE REQUIREMENT P2.1.1 FOR CONSTRUCTION IN A HIGH WIND AREA

**SPECIFICATION: SCYON™ STRIA™ CLADDING**  
 This data sheet covers the use of Scyon™ Stria™ cladding in residential façade applications over a seasoned timber wall frame and must be read in conjunction with current James Hardie literature for the product, namely "Scyon Stria Cladding: Installation Instructions" (currently dated February 2013).  
 Stock width 325mm to give 300mm effective cover;  
 Stock width 405mm to give 380mm effective cover;

**FRAMING**  
 Install boards to timber stud framing as shown in Figure 1 with maximum stud spacing taken from Tables 1 & 2 or 3.

**TABLE 1: CONCEALED FIXING OPTIONS**  
 (Fastened as per Figure 2 through underlap only)

AS 4055 Wind Classification	General Areas of Walls (mm)		Within 1200mm of Building Edges (mm)	
	Max Design Pressure (kPa)	Max Stud Spacing (mm)	Max Design Pressure (kPa)	Max Stud Spacing (mm)
C1	-0.98	600	-1.95	600

Note: Bottom and top boards must be fixed with either NL 50 SS Brad nails at 150mm centres or 50mm FC nails @ 300mm centres.

**TABLE 2: FACE FIXING OPTIONS**  
 (Fastened as per Figure 3)

AS 4055 Wind Classification	General Areas of Walls (mm)		Within 1200mm of Building Edges (mm)	
	Max Design Pressure (kPa)	Max Stud Spacing (mm)	Max Design Pressure (kPa)	Max Stud Spacing (mm)
C1	-0.98	600	-1.95	600
C2	-1.45	600	-2.90	450
C3 & C4	-2.88	450	-5.77	300**

\*\*For C3 & C4 two or three fixings are required per board for 325mm and 405mm widths respectively.  
 Note: Top board to be fixed at 300mm centres for C1 and C2 and at 150mm for C3 and C4.

**Framing – Timber**  
 Use of timber framing (minimum 70 x 35mm studs) must be in accordance with AS 1684.3: 2010 "Residential timber-framed construction – Cyclonic areas" and framing manufacturer's specifications. Use seasoned timber or else unseasoned hardwood minimum F14 grade. LVL timber may be used.

**Installation of Vertical Flashing Strip:**  
 At vertical joints where the flashing strip is used, provide either double 45mm studs (see Figure 1), or double 35mm studs separated by 15mm packers or triple 35mm studs. Elsewhere, minimum stud width 35mm.

**TABLE 3: Test-Proven ULS Design Pressure Capacity**

ULS Design Pressure (kPa)	Stud Spacing (mm)
Up to 2.4	600
2.5 – 2.9	450
3.0 – 6.8	300

(with two fixings per 325mm wide board)  
 (with three fixings per 405mm wide board)

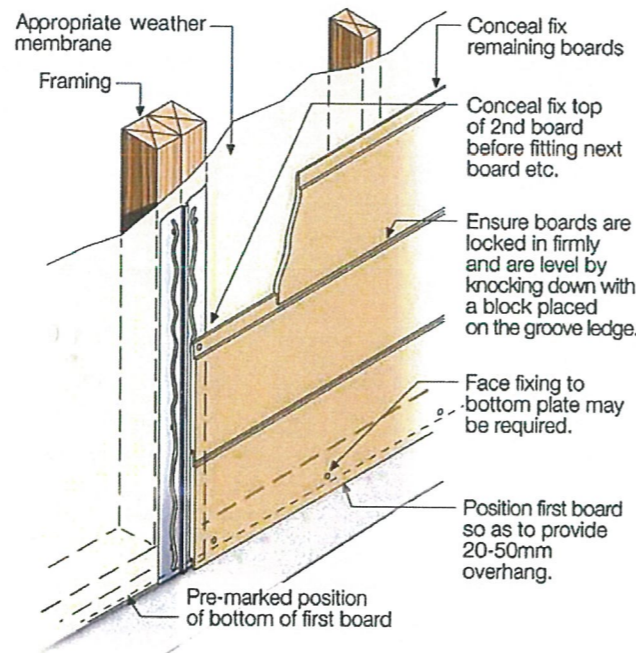
**FIXING / FASTENERS**  
 Scyon Stria cladding can be fixed by either concealed-fixing or face-fixing methods depending on the fastener type and wind classification of the building.

**Fasteners - Timber Framing – Hand Nailing:**  
 For concealed nailing, use 40mm minimum Class 3 fibre cement nails on the underlap in accordance with Table 1 and Figure 2.

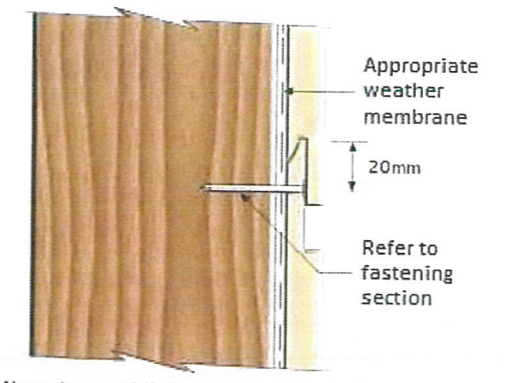
For face fixing, use 50mm minimum Class 3 fibre cement nails in accordance with Table 2 and Figure 3.

**Fasteners - Timber Framing – Gun Nailing:**  
 Gun-nailing is only suitable for face fixing and not for concealed fixing. Use a minimum 50mm long Class 3 coil nail or a 50mm Dekfast Type D head 2.5mm diameter nail for face fixing only.

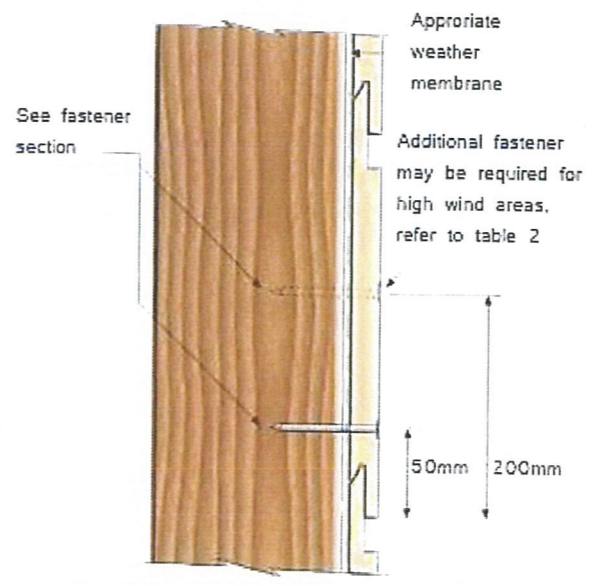
If using nail guns, the nail must be placed into the face of the board 50mm in up from the bottom edge – see Figure 3.



**NOTE**  
 Ensure each board is level and the height of each row of boards is kept the same.  
**Figure 1: Board Installation**  
 (internal lining omitted for clarity)



Note: Internal lining omitted for clarity  
**Figure 2: Concealed Fixing Detail**



Note: Internal lining omitted for clarity  
**Figure 3: Face Fixing Detail**

**DETAILS & OTHER MATTERS**  
 More extensive construction details and jointing details are provided in current James Hardie installation literature for Scyon Stria cladding. Refer also to the Warranty for the system in that literature.

**Special Framing Requirements:**  
 Additional framing is generally required at internal corners and sides of openings (refer to details in literature).

**Jointing:**  
 Scyon Stria cladding can be butt-jointed on and off stud without the use of the vertical flashing strip (refer to literature).

For further details on matters such as an appropriate weather membrane (eg "sarking"), a thermal break, flashing, system accessories and finishing, refer to current James Hardie technical literature for Scyon Stria, the NCC or relevant Australian Standards.

Product Name:  
**SCYON™ STRIA™ CLADDING**

Product Description:  
**14mm External Horizontal Groove Profile Cladding for Walls**  
**TIMBER FRAMING**

Manufacturer's Name:  
**James Hardie Australia Pty Ltd**  
 10 Colquhoun Street, Rosehill NSW 2142



**Design Criteria:**  
**[1] General**  
 All design and construction must comply with the appropriate requirements of the current National Construction Code (NCC) and other applicable regulations and standards.

**[2] Wind Loading**  
 The cladding sheet must be fastened to the frame in accordance with Tables 1 and 2 for the wind classifications, which are derived from AS 4055: 2012 "Wind Loads for Housing". The effective design wind speeds are given in Table 2.1 of AS 4055: 2012.

For design to AS/NZS 1170: 2011 Part 2 "Wind Actions", the test-proven ULS design capacity of the face-fixed system is given in Table 3 noting that an ULS material capacity reduction factor ('phi') is implicitly included and no further factoring of the design capacity is needed:

**Limitations:**  
**[1]** Scyon STRIA sheet is an external wall cladding for residential use only. This cladding has been designed for external pressure and suction loadings only. The designer must ensure that the framing is capable of resisting simultaneously the internal and external design pressures. An internal lining is required.

**[2]** To use Tables 1 and 2, the design must comply with the geometric limits given at Clause 1.2 of AS 4055: 2012 (eg max eaves height = 6m and max building width = 16m), except as varied by the design engineer.

**[3]** All fasteners specified must be driven flush.

**Accepted for Inclusion**

DTCM ref:  
 M/317/01

**Notes covering basis of DTC (relevant test reports etc):**  
 The nominated structural capacity of the system is based on the following documentation:  
**[1]** James Hardie Test Report TS062A-07 "Uniformly Distributed Load Testing of Horizontal Groove Panel (Scyon™ Stria™) in Accordance with ASTM E72-98" dated 26 October 2007 supplemented by Test Report TS031-10 dated 20 August 2010 and Test Report TS028-11 dated 3 June 2011.  
**[2]** James Hardie Advice Note "Design of Horizontal Groove Profile Cladding System to Cater for AS 4055 Wind Pressure Classifications" dated 19 November 2007.  
**[3]** James Hardie Advice Note "Scyon Stria Cladding System: Revised Design for AS 4055 Wind Classifications" dated 23 June 2011.  
**[4]** Cardno Letter "Certification of James Hardie Scyon Stria Horizontal Groove Cladding" dated 22 December 2011.

**\*Design Engineers Certification**  
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 \*registered as a structural engineer in Australia

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 \*\*registered as a structural engineer in Northern Territory

Chairman's Signature:   
 Chairman's Name: **STEVEN J STRLICHY**  
 Date of Approval: 28/11/2016  
 Expiry Date: 27/11/2021