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

This data sheet covers the use of 6mm HardieFlex™ and 6mm Versilux® sheet in residential eaves and soffit lining applications over light-gauge steel or timber framing and must be read in conjunction with current James Hardie product literature: "Eaves & Soffit Technical Specification". Sheets must be coated in accordance with product literature.

FRAMING & SHEET INSTALLATION

Install sheets to steel or timber battening as shown in Figures 1, 2 and 3 and in accordance with the batten and fastener spacing given in **Table 1 or Table 2** depending on the wind load classification or design pressure.

Framing width at sheet joints must be a minimum of 42mm for timber and 38mm for steel. Where the battens at sheet joints are less than this, provide double 35mm wide battens at sheet joints. Ensure that double battens are fastened together and flush at the outside face.

All intermediate support battens must be a minimum of 64 x 35mm deep for metal framing and 70 x 35mm for timber.

Framing – Steel

The steel frame must be in accordance with AS 3623: 1993 "Domestic Metal Framing". Studs and battens shall be rolled steel sections not exceeding 2.0mm in thickness.

Framing – Timber:

Use of timber framing must be in accordance with AS 1684:2010 "Residential timber-framed construction" and framing manufacturer's specifications. Use seasoned timber or use unseasoned hardwood minimum F14 grade. LVL timber may be used.

Jointing:

HardieFlex and Versilux sheets are normally jointed with a PVC straight joint mould, although butt joints may also be used. Sheet joints must coincide with the centre line of the ceiling batten or framing member.

Support at Fascia & Walls:

Note [1]: In the absence of a grooved fascia board, provide the first batten within 150mm of the fascia. If fascia groove is used to provide support, then maximum span to first batten shall be 300mm in all cases and the maximum batten spacing thereafter as per Tables 1 & 2.

Note [2]: All longitudinal sheet edges (other than cantilever ends of 150mm permitted against walls or non-grooved fascias) and joints must be supported by framing. PVC jointer strips should be used to support the transverse sheet edges in preference to butt joints.

TABLE 1: Max Batten & Fastener Spacing for Wind Pressure

AS 4055 Wind Load Class	General Areas Of Building			Within 1200mm of Building Edges		
	ULS Pressure (kPa)	Batten (mm)	Fasten (mm)	ULS Pressure (kPa)	Batten (mm)	Fasten (mm)
C1	-0.98 +1.05	600	200	-1.95	450	200
C2	-1.45 +1.56	450	200	-2.90	450	150
C3	-2.11 +2.30	450	200	-4.27	300	150
C4	-2.88 +3.11	300	200	-5.77	300	100

TABLE 2: Test-Proven ULS Design Pressure Capacity

Batten Spacing (mm)	Fastener Spacing (mm)	ULS Pressure (kPa)
600	200	1.3
450	200	2.3
450	150	3.2
300	200	3.6
300	150	4.3
300	100	6.0

FIXING / FASTENERS

All fixings and fastener to be minimum Class 3 finish. Use the following fasteners or approved equivalent fasteners:

Fasteners - Steel Framing:

Use 30mm Buildex FibreZIP® screws or 32mm HardieDrive® screws.

Fasteners - Timber Framing:

Use a 2.8 x 30mm galvanised fibre cement nail.

DETAILS & OTHER MATTERS

More extensive construction details and jointing details are provided in current James Hardie literature for HardieFlex and Versilux cladding. Refer also to the Warranty in that literature.

For further details on matters such as an appropriate weather barrier, a thermal break, flashing, system accessories and finishing, refer to current James Hardie technical literature for HardieFlex and Versilux cladding, the BCA or relevant Australian Standards.

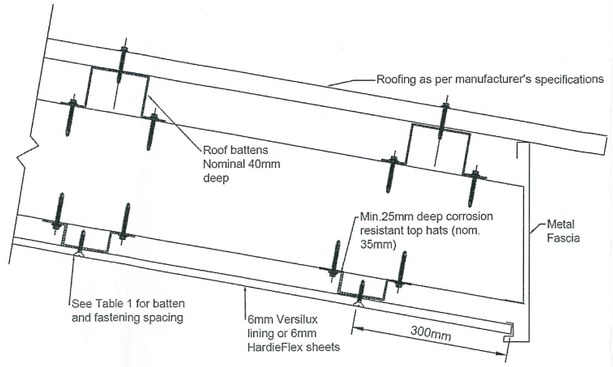

Figure 1: Soffit / Eaves w Metal Facia

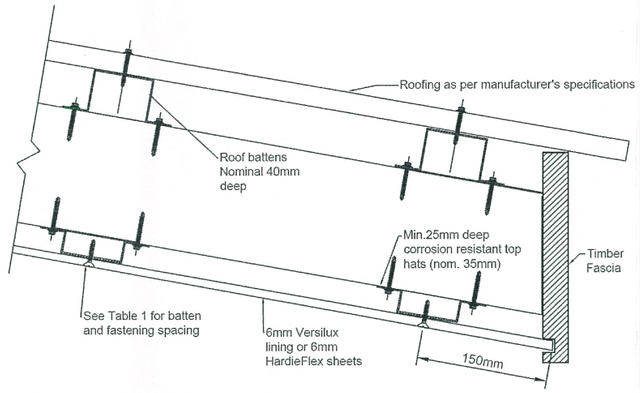

Figure 2: Soffit / Eaves w Timber Facia

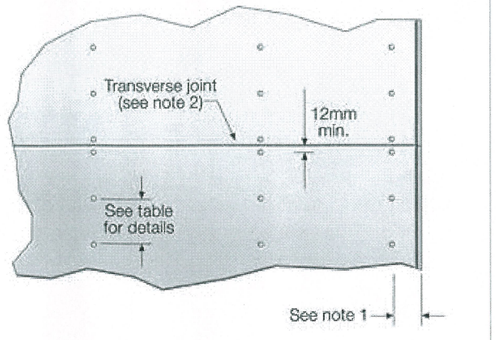

Figure 3: Plan View of Eaves / Soffit Layout

Product Name:

RAKED EAVES & SOFFIT LINING WITH HARDIEFLEX™ & VERSILUX® SHEET

Product Description:

6mm External Cladding for Eaves & Soffit

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 Building Code of Australia (BCA) and other applicable regulations and standards.

[2] Wind Loading

The cladding sheet must be fastened to the frame in accordance with **Table 1** for the different wind classifications, which are taken from AS 4055: 2006 "Wind Loads for Housing". The effective design wind speeds are given in Table 2.1 of AS 4055.

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

Limitations:

[1] HardieFlex and Versilux soffit lining sheets are designed as external cladding for residential use only. This cladding has been designed for external pressure and suction loadings only. The designer must ensure that no internal pressure or suction arises from within the enclosed roof spaces otherwise an internal lining is required.

[2] To use Table 1, the design must comply with the geometric limits given at Clause 1.2 of AS 4055: 2006 (eg max eaves height = 6m and max building width = 16m), except as varied by the design engineer.

[3] Fastening: All fasteners specified must be driven flush. Do not fix fasteners closer than 12mm from panel edges, or closer than 50mm from sheet corners.

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 Advice Note dated 31 July 2010 "Addendum to the June 1995 Submission on the Derivation of Design Tables for External Cladding Systems in the Northern Territory".

[2] James Hardie Submission dated 30 June 1995 "Derivation of Proposed Design Tables for Eaves & Soffit Linings & External Cladding Systems for Use in the Darwin Deemed-to-Comply Manual", which includes uniform load testing reports by Karl Danenbergsons dated 13 April 1995 and Clayton Frick dated 30 June 1995.

[3] James Hardie letters dated 7 August 1996 to the NT Building Advisory Services Branch and Colless & O'Neill Pty Ltd regarding the outcome of testing cyclic versus static loading.

[4] Cyclone Structural Testing Station Report No.TS 471 dated 23 July 1996 "Static and Cyclic Uniform Loading of Hardiflex Cladding".

*Design Engineers Certification

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Accepted for Inclusion

DTCM ref: M/278/01

Chairman's Signature:

Chairman's Name: STEVEN J BURGH.

Date of Approval: 30/07/2015

Expiry Date: 30/07/2020