

This product has been determined to satisfy NCC Performance Requirement H1P1 for structural resistance of materials and forms of construction in high wind areas

SPECIFICATION

This data sheet covers the use of 150mm and 180mm wide Linea™ weatherboard (stock length 4200mm) in residential façade applications over a light-gauge steel frame or a timber wall frame and must be read in conjunction with the current product literature "Linea™ Weatherboard Installation Guide" available from our website: <https://www.jameshardie.com.au/productrange/scyon-linea-weatherboard>

FRAMING & SHEET INSTALLATION

Install boards to steel or timber stud-frames as shown in product literature with stud spacing taken from **Table 1** or **Table 2**, **noting that cavity battens may be fixed off-stud up to a design pressure of 2.9kPa.

TABLE 1: Maximum Stud Spacing (mm) for Wind Load

AS 4055 Wind Load Class	General Areas of Building		Within 1200mm of Building Edges	
	ULS Pressure (kPa)	Stud Spacing (mm)	ULS Pressure (kPa)	Stud Spacing (mm)
C1	-0.98 +1.05	600	-1.95	600
C2	-1.45 +1.56	600	-2.90**	600 (reduce if off-stud battens**)
C3	-2.14 +2.30	600	-4.27	450
C4	-2.88 +3.11	450	-5.77	300

**Note: Cavity battens may be fixed on-stud in all cases, but fixed off-stud up to 2.9kPa (C2 classification) only with maximum batten spacing given in the cavity fixing specification below.

Timber-Framed Construction:

The same stud spacing designs may be applied equally using 40mm long Ø 2.8mm fibre-cement (FC) nails or 45 x 2.5mm coil nails for concealed fixing and 60 x 3.15mm bullet head nails for face fixing (or longer depending on thermal break).

Cavity Fixing Specification:

For **on-stud battens**, fix to timber studs with Paslode RounDrive 60 x 2.9mm gun nails and fix to steel studs with 41mm HardieDrive CSK screws or Tri-Fixx 10-12 x 100 self-drilling bugle-head screws as per **Table 2**.

For **off-stud battens**, to achieve -2.9kPa ULS capacity, maximum batten spacing shall be 450mm for (i) steel framing with a nogging spacing of max 900mm fixing with 2No 41mm HardieDrive screws per intersection and (ii) timber framing with a nogging spacing of max 800mm fixing with 1No 65 x 2.87mm DekFast ring-shank nail, but for timber framing, if the nogging spacing is increased to 900mm for 2.7m high walls, then the batten spacing must be reduced to 400mm.

Jointing:

The ends of Linea weatherboards are jointed off-stud by means of the tongue-and-groove feature (see figure on page 4 of product literature).

STRUCTURAL BRACING

Regardless of the weatherboard width, for a stud spacing of 600mm or less, and for wall heights of both 2400mm and 2700mm, the ULS racking capacity for welded steel frames and timber frames with M12 anchor rods is 5.6kN/m. If there is a James Hardie fibre-cement (JHFC) internal lining of at least 6mm thick, it increases to 6.8kN/m. Spacing of the M12 rods to be determined from AS 1684.3: 2021, but never more than 2.4m apart.

To claim this capacity, the face-fixing method must be used (i.e. the fastener must pass through both boards at the overlap as shown in **Figure 2**). The boards must be fastened to the top and bottom plates at 75mm centres as shown in the product literature.

The JHFC internal lining sheet must be fixed at 150mm centres along sheet edges and at 150mm in the field of the board if the 6.8kN/m bracing capacity is to be claimed.

Bracing capacity cannot be claimed for the cavity-fixed construction method except for any JHFC layer that is fixed directly to the wall framing.

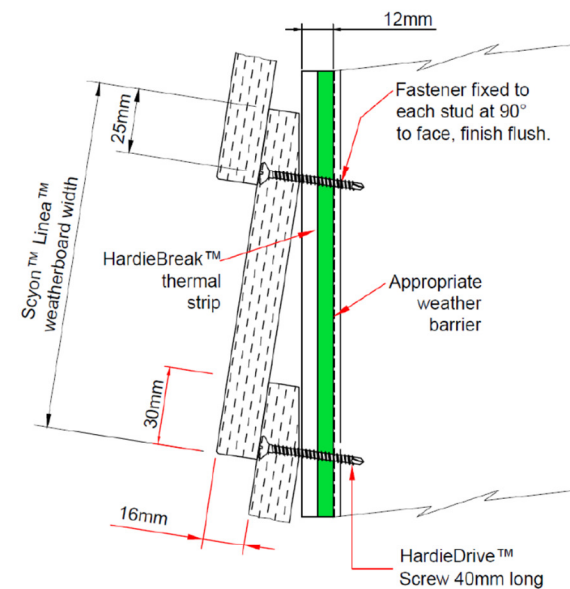


Figure 1: Concealed Fixing Detail (use when bracing capacity not required)

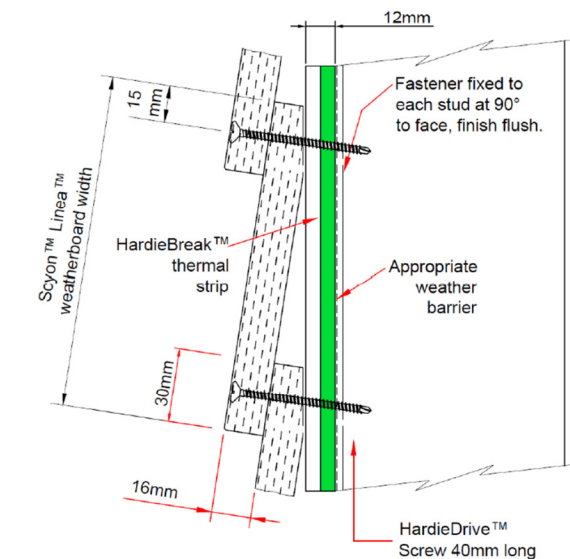


Figure 2: Face Fixing Detail (use when bracing capacity is required)

DETAILS & OTHER MATTERS

More extensive construction details and jointing details are provided in current James Hardie literature for Linea cladding available from our website. Refer also to the Warranty for the system in that literature.

For further details on matters such as an appropriate weather barrier (eg vapour permeable sarking), thermal break, flashing, system accessories and finishing, refer to current James Hardie technical literature for Linea cladding, the NCC or relevant Australian Standards.

Product Name
LINEA™ WEATHERBOARD

Product Description
16mm Pre-Primed External Wall Cladding

Manufacturer's Details
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 **Table 1** for the different wind classifications, which are taken from AS 4055: 2021 "Wind Loads for Housing". The effective design wind speeds are given in Table 2.1 of AS 4055: 2021.

For design to AS/NZS 1170.2: 2021 "Part 2: Wind Actions", the 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] Linea™ weatherboard 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 (ie an internal lining is required).**

[2] To use **Table 1**, the design must comply with geometric limits given at Clause 1.2 of AS 4055: 2021 (eg max eaves height = 6m and maximum building width = 16m), except as varied by the design engineer. When using cavity battens, they must be fixed to the framing at 200mm spacing (or at 300mm up to an ULS design pressure of 2.4kPa).

[3] Fasteners: Locate fasteners as shown in the product literature, but never less than 15mm from top / bottom edges of weatherboard. The minimum edge distance at the ends of the boards is 25mm, except for gun nailing, when it is 50mm

[4] Gun nailing must not be used for Linea bracing systems.

Accepted for inclusion in Deemed to Comply Manual

DTCM drawing number: M/459/01

Chairperson Signature:

Chairperson Name: Elisha Harris

Date of Approval: 30/04/2026 Expiry Date: 30/04/2031

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 "Technical Submission for Structural Certification of 16mm Thickness Linea Weatherboard Cladding" (Fourth Edition) dated 16 June 2025, which references various test reports.
- [2] David Beneke Consulting letter of certification 2024-36-LO-50 dated 18 June 2025.
- [3] James Hardie Test Report TS017-03 "Fastener Pull-Through Testing – Various Fastener Performance in Linea® Weatherboard" dated 25 June 2003.
- [4] BRANZ Test Reports ST0483 (uniform pressure) dated 20 February 2001 and ST0506 (racking shear) dated 29 January 2002.

Checking Engineer

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Must be an Australian registered structural engineer

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NT Registration Number: 341218 ES
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