

Technical Supplement

Australia April 2020

External cladding over Masonry Walls with Scyon™ Cavity Trim

EXTERIORS - CUSTOM DESIGN

IMPORTANT NOTES

For specification, installation and warranty terms of Scyon™ Cavity Trim, ensure that you have the current technical information and guides. If in doubt, or you need more information, visit www.jameshardie.com.au or Ask James Hardie™ on 13 11 03.

INTRODUCTION

This technical supplement assists in the installation of James Hardie® external cladding over an existing structural masonry (block wall or brick wall) using Scyon™ Cavity Trim in a residential application considered under the wind loading classifications of AS4055. This supplement must be read in conjunction with the relevant and current James Hardie® installation manual.

A range of James Hardie® external cladding products can be installed to Scyon™ Cavity Trim over solid or extruded brickwork or blockwork masonry. Refer to Table 1 for James Hardie products certified for this application. The Scyon™ Cavity Trim is designed to be installed vertically over the masonry wall and to replicate a stud frame. HardieWrap weather barrier or suitable building membrane must be installed in front of the brick wall and behind the Scyon™ Cavity Trim.



TABLE 1: JAMES HARDIE PRODUCTS FASTENING DESIGN TABLE

James Hardie Products External Cladding	Fasteners to Fix JH Cladding to Scyon™ Cavity Trim	Max Wind Classification to AS4055
PrimeLine™ Weatherboards Heritage and Chamfer	2.8 x 25mm FC Clout Nails	N4/C2
PrimeLine™ Weatherboards Newport and Summit	2.8 x 25mm FC Clout Nails	N4/C2
EasyLap™ Panel	25mm DA brad nails	N3/C1
Scyon™ Linea™ Weatherboard	2.8 x 30mm FC Clout Nails	N4/C2
Scyon™ Axon™ Cladding	25mm DA brad nails	N3/C1
Scyon™ Stria™ Cladding 405mm (Face Fix)	2 x 32mm DA brad nails	N3/C1
	3 x 32mm DA brad nails	N3/C2
Scyon™ Stria™ Cladding 325mm and 255mm (Conceal Fix)	2.8 x 25mm FC Clout Nails	N2
HardieFlex™ 6mm and PanelClad®	25mm FC Clout Nails	N4/C2

TABLE 2: DESIGN CONFIGURATION FOR FIXING SCYON™ CAVITY TRIM OVER MASONRY WALLS

Wind Classifications to AS4055	Scyon Cavity Trim Max Spacing (mm)	Max Scyon Cavity Trim Anchor Spacing (mm)
N1, N2, N3, C1	600	600
N4, C2	450	600
N5, N6, C3, C4	300	450

SCYON™ CAVITY TRIM INSTALLATION STEPS

STEP 1: INSPECT MASONRY WALL

A thorough inspection of the masonry substrate must be undertaken by a structural engineer to ensure that the wall is suitable as a substrate for fixing the cladding.

Factors to consider and address include but are not limited to:

- Cracking or movement issues in the brick substrate or foundations.
- Moisture penetration and/or leaking through the block work and openings.
- There should be a 6mm control joints in the masonry wall as deemed by the Building Code of Australia (NCC).
- A structural engineer must determine whether the substrate is adequate to hold the proposed anchors, support the Scyon Cavity Trim and the James Hardie cladding loads.
- Windows and other openings may need to be removed and refitted to coincide with new wall configurations. (Refer to window manufacturer for suitable trim and flashing products)
- Is there adequate ground clearance for the external cladding? James Hardie external cladding must have a minimum 150mm clearance to the earth on the exterior of the building or in accordance with local building codes if greater than 150mm is required.
- Maintain a minimum 50mm clearance between James Hardie external cladding and roofs, decks, paths, steps, and driveways. Adjacent finished grade must slope away from the building in accordance with local building codes, typically a minimum slope of 50mm minimum over the first metre.
- Do not install external cladding such that it may remain in contact with standing water.

Note : Greater clearance may be required in order to comply with termite protection provisions. See below for more information.

STEP 2: MOISTURE MANAGEMENT

It is the responsibility of the designer or specifier to identify moisture related risks associated with any particular building design. Wall construction design must effectively manage moisture, accounting for both the interior and exterior environments of the building, particularly in buildings that have a higher risk of wind driven rain penetration or that are artificially heated or cooled.

In addition all wall openings, penetrations, junctions, connections, window sills, heads and jambs must incorporate appropriate flashing and waterproofing. Materials, components and their installation that are used to manage moisture in framed wall construction must, at a minimum, comply with the requirements of relevant standards and the BCA.

Install HardieWrap™ Weather Barrier over the face of the brick wall. 3M™ 9472 Adhesive Transfer Tape may be used to adhere the HardieWrap™ temporarily to the brick wall. Adhesive tape can be placed every 200mm centres vertically and 800mm centres horizontally. Cut the tape into 200mm strips and place every 200mm centres vertically and 800mm centres horizontally.



VAPOUR PERMEABLE MEMBRANE

Vapour permeable membrane must be installed under the Scyon Cavity Trim directly to the masonry wall in accordance with the AS/NZS 4200.2 'Pliable building membranes and underlays - Installation' and the manufacturer's specifications.

Vapour permeable membrane must have the following properties with AS/NZS 4200.1:

- Vapour barrier - low or medium
- Water barrier - high

The function of the vapour permeable membrane is to prevent moisture ingress by acting as a 'drainage plane' whilst enabling water vapour buildup from inside the frame to escape.

STEP 3: TREATMENT AROUND OPENINGS

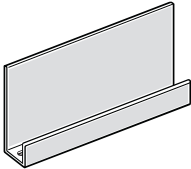
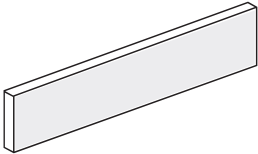
HardieWrap™ weather barrier must be cut around openings to allow new wall configurations. Existing openings such as windows may be removed and refitted after cladding. Alternatively, openings can be left and then finished with appropriate head/sill/jamb flashing. Refer to window manufacturer for suitable products.



STEP 4: CAVITY VENT STRIP FOR WEATHERBOARDS

Install James Hardie® 18mm PVC Cavity Vent Strip using Hilti Floor Pin Nail X-C22 P8 TH or as appropriate at 200mm max centres. Ensure that ground clearance of 150mm min to earth and 50mm to hard surfaces is maintained.

NOTE: Cavity vent strip not suitable for sheet cladding. All sheet edges to be supported. See step 5 for further details.

	<p>James Hardie™ 18mm PVC Cavity Vent Strip. 3,000mm Long</p> <p>A perforated PVC extrusion used at the bottom of walls behind Scyon™ Matrix™ cladding. 25 per pack. Part No. 305555</p>
	<p>Scyon™ Cavity Trim. 2,450mm Long</p> <p>Designed to be installed vertically and to replicate a stud frame layout and create a wall cavity</p>

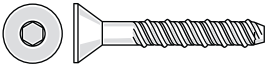
STEP 5: SCYON™ CAVITY TRIM INSTALLATION

Batten and fastener spacings are specified in Table 2 of this document. Scyon™ Cavity Trim must be installed laid flat in a vertical orientation to allow for drainage of cavity. All sheet edges must be supported. Install horizontal battens graded with a 5 degree fall and 10mm gaps for drainage.

Drill clearance holes into the Scyon™ Cavity Trim using a 7mm countersunk masonry drill.

Mark the positions of the fixing points into the masonry and drill clearance holes into the masonry using a 6.5mm masonry drill.

Fix battens to masonry at maximum spacing given in Table 2 using screw bolt as specified below.

	<p>POWERS Blue-Tip Screw-Bolt™</p> <p>Countersunk 6.5mm x 75mm Zinc Yellow. (Part No: BTCSK06575)</p>
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STEP 6: JAMES HARDIE EXTERNAL CLADDING INSTALLATION

Individual product fastener recommendations and wind load specifications is outlined in Table 1 of this document. Tables are to be read in conjunction with latest installation manual of individual products.