smartfit®
WINDOW TECHNOLOGY

Window Installation Guide

CODEMARK™

Certificate Number
CMA-CM40120

BRANZ Appraised
Appraisal No.868 [2014]

altus
WINDOWS

Contents

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Introduction

This guide details the preparation, sequence and methods of installation of the Smartfit window and door system into buildings.
This document should be read in conjunction with BRANZ appraisal No. 868 (2014) and CodeMark™ certificate (cert no CMA-CM40120), which are included in this guide.

Product Description.

The Smartfit Window and Door installation system is a variant of the Altus Pacific suite. While the internal components are common to the Altus Pacific Suite, the external frame comprises of specially designed extruded aluminium sections and reinforced nylon injection moulded components, pre assembled to form an integral, weatherproofed window or door ready for installation in prescribed cavity wall cladding situations. The window and door units are manufactured in approved production facilities.

The Smartfit Window and Door system enables windows and doors to be attached to buildings and made weathertight using methods that differ from conventional detailing as outlined in NZBC Acceptable solution E2/AS1 Third Edition, Amendment 6 and the WANZ guide to Window Installation. The window or door is delivered to site ready for installation as a pre finished assembly complete with integral head and jamb flashings and sill support bar. The Smartfit window and door system incorporates integral drainage mechanisms to receive, manage and discharge water safely from the installation to the exterior of the building. The window or door trim openings need no special preparation prior to installing units other than folding the building wall underlay inwards.

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Introduction

The Smartfit installation System can be used with following cladding types on a drained and ventilated cavity only*;

a. Masonry Veneer with 40 to 50mm cavity
b. Stucco, and similar proprietary systems
c. Horizontal Bevelback Timber weatherboards
d. Horizontal rebated Bevelback Timber weatherboards
e. Horizontal Rusticated weatherboards
f. Fibre Cement weatherboards
g. Proprietary Fibre Cement weatherboard systems
h. Flat sheet type claddings (FC sheet and Plywood)
i. E.I.F.S, and similar proprietary systems
j. Aerated Autoclaved Concrete Panel systems (AAC)*
k. Other cladding systems covered by a valid BRANZ appraisal that specify a nominal 20mm (minimum 18mm) drained and vented cavity; or systems covered by a valid Codemark Product Certificate that specify a nominal 20mm (minimum 18mm) drained and vented cavity.
l. Other cladding types not covered by the above are on application - Please contact Altus.

*May also be used in AAC panel systems that are closed cavity.

The Smartfit window or door frame outer facing is set at a fixed distance from the wall framing.
Thinner cladding types will leave a larger gap to finish between cladding face and window facing.
This can be overcome by selecting a larger cavity size than 20mm.
Cavities larger than 20mm nominal (excluding masonry veneer) are outside the scope of the BRANZ appraisal and Codemark certification.
Larger cavity sizes or variations away from the Smartfit detailing must be approved by the BCA prior to construction.

The Smartfit system can be used with any wall framing dimension depth and any thickness or type of rigid air barrier.

Special requirements

1. Wall Framing must at least protrude over slab edge
2. Windows and doors are installed prior to any cladding fixing
3. Wall underlay's must be either BRANZ appraised or CodeMark™ certified and be used within the limitations as stated by the manufacturer.
4. Flashing tapes must be Smartfit branded tapes as supplied by the joinery manufacturer.

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Introduction

Features of the system

The Smartfit system improves weathertightness by reducing complexity and risk and simplifies the installation of windows and doors into buildings. The key feature of the Smartfit system is the relocation of the weatherline and airseal around windows and doors out to the wall underlay line, or outer framing line. Current practice as described in E2 AS1 shows the weatherline reaching all the way back to the internal wall lining, which consequently requires the building framing in this area to be protected by waterproof tapes in case of window or installation failure. The relocation of the weatherline and airseal line is possible by moving the at risk parts of the window or door frame out into the cavity and cladding space. This places less emphasis on window and door frame joints having to perform faultlessly over their lifetime and eliminates the need for any protective taping measures in the trim opening and air seals back at the internal wall lining line. The window or door trim space around the reveal now becomes part of the internal wall space rather than an external weathering area.
Other benefits of the Smartfit system are improved productivity on the building site and less materials required during installation. The window or door comes as a complete ready to install package with no loose parts requiring separate fitting at the building site. The window or door is simply lifted into the opening and fixed. The installation is then completed by taping the joinery unit to the wall underlay to create a continuation of the wall underlay weatherline. Subsequent cladding can then be applied around the unit without the need for complex cladding cuts and critical sealing details around flashings.

The Smartfit installation system improves the current situation and better addresses adjacent wall system weathertightness failure with water management features at all points of the connection between a window and the cladding.
The Smartfit installation system is closely aligned with E2 AS1in terms of how windows connect to claddings and how failure water from the installation or other areas is managed. Each Smartfit detail can trace a clear path back to the equivalent E2 AS1 detail but with the Smartfit advantages added.

Key Features;

- No flexible flashing tapes required within the window or door trim opening.
- Sill support bar is inclusive in the window or door sill ensuring total and permanent support.
- Head flashing, head flashing end dams and cavity closer are inclusive in the window or door head.
- Jamb flashings are inclusive in the window and door jambs.
- Sill corner soakers and drainage blocks are inclusive with and solid fixed to window or door frames.
- No cladding saw cuts are required around head flashing horns.
- No P.E.F rod and expanding foam or sealant air seals required between reveal and trim opening.
- Less reveal packing and fixing.
- Window is taped directly to outside face of building wall underlay with Smartfit flashing tape.
- Window to wall framing trim gaps are not critically sized and can be insulated.
- Window and door frames are square cut for joint strength.
- Windows and some door frames reside over cavity space.
- Simplification removes quality and material issues and the subsequent long term risk.

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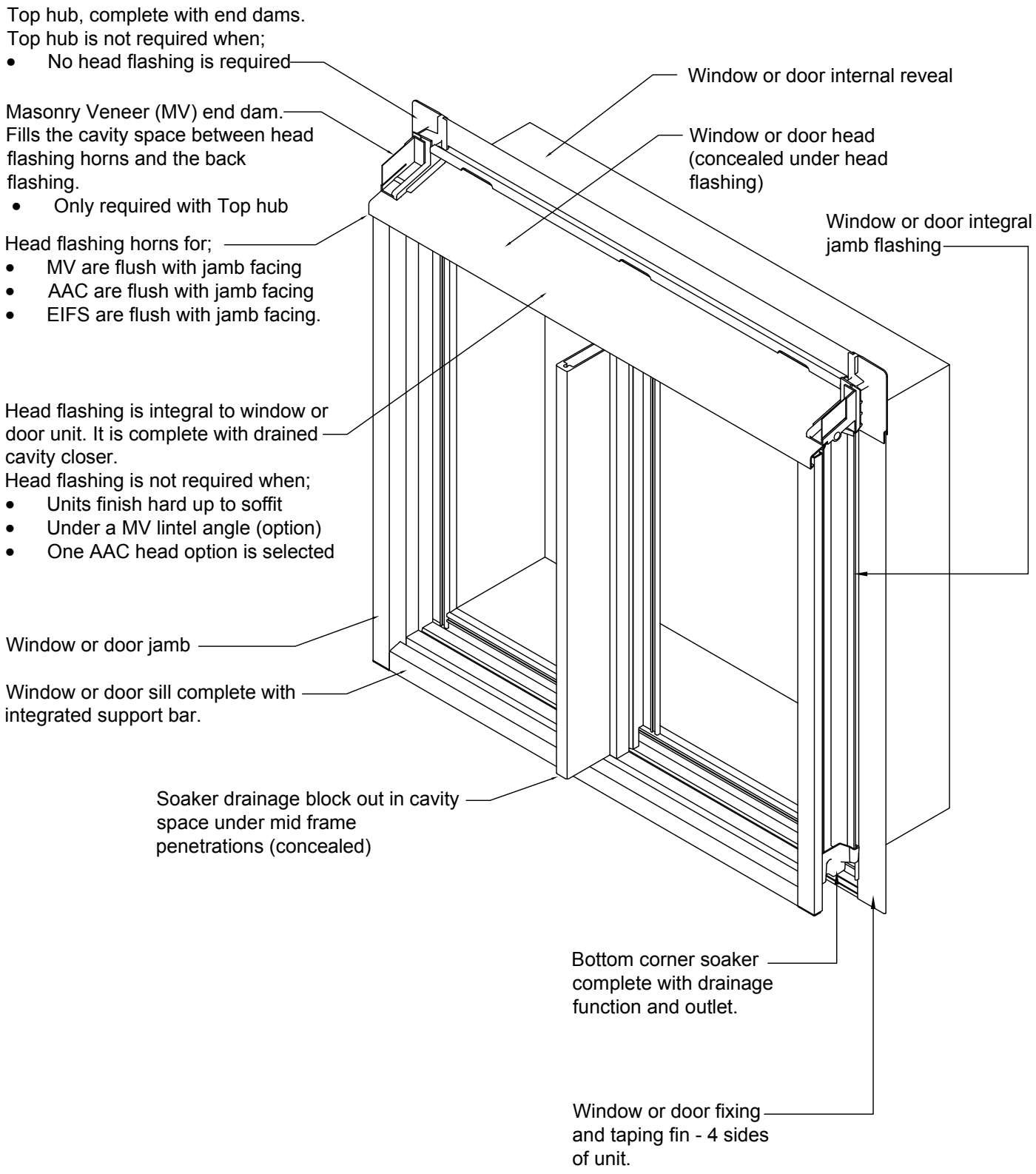
Smartfit Window Installation

altus Updated: N/A Scale: NTS REV: -

System Components;

- Masonry veneer (MV)
- Aerated concrete panels (AAC)
- E.I.F.S



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Smartfit Window Installation

altus Updated: N/A Scale: NTS REV: -

System Components;

- Weatherboard - horizontal bevelback
- Weatherboard - horizontal rebated bevelback
- Weatherboard - horizontal rusticated
- Fibre cement weatherboards
- Horizontal profiled metal
- Fibre cement sheet
- Plywood sheet
- Stucco
- Scyon Linea weatherboard

Top hub. Complete with end dams.
Top hub is not required when;
- No head flashing is required.

Scriber cap. Adjustable. Fills the space between head flashing horns and face of cladding. Two sizes (depths).

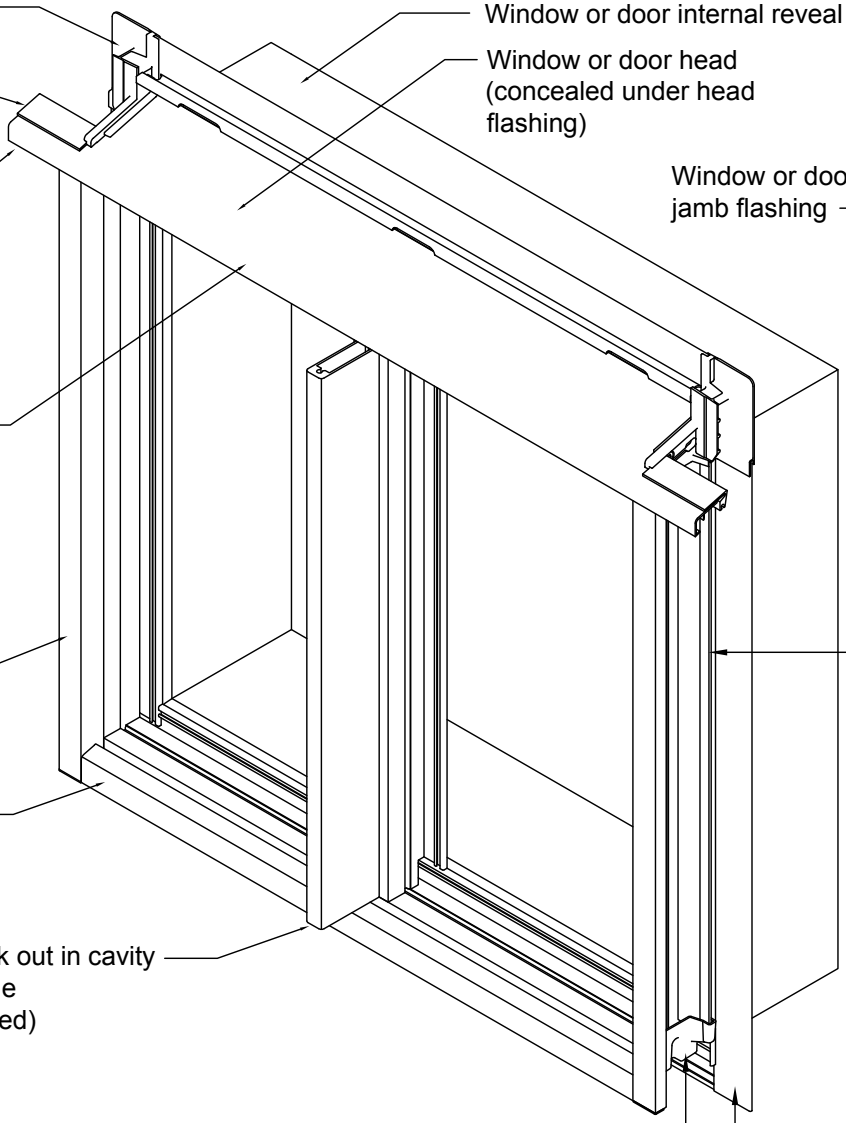
Head flashing horns wrap around the front of the cladding a specified distance.

Head flashing is integral to window or door unit. It is complete with drained cavity closer.
Head flashing is not required when;
- Units finish hard up to soffit

Window or door jamb

Window or door sill complete with integrated support bar.

Soaker drainage block out in cavity space under mid frame penetrations (concealed)



Window or door internal reveal

Window or door head (concealed under head flashing)

Window or door integral jamb flashing

Bottom corner soaker complete with drainage function and outlet.

Window or door fixing and taping flange - 4 sides of unit.

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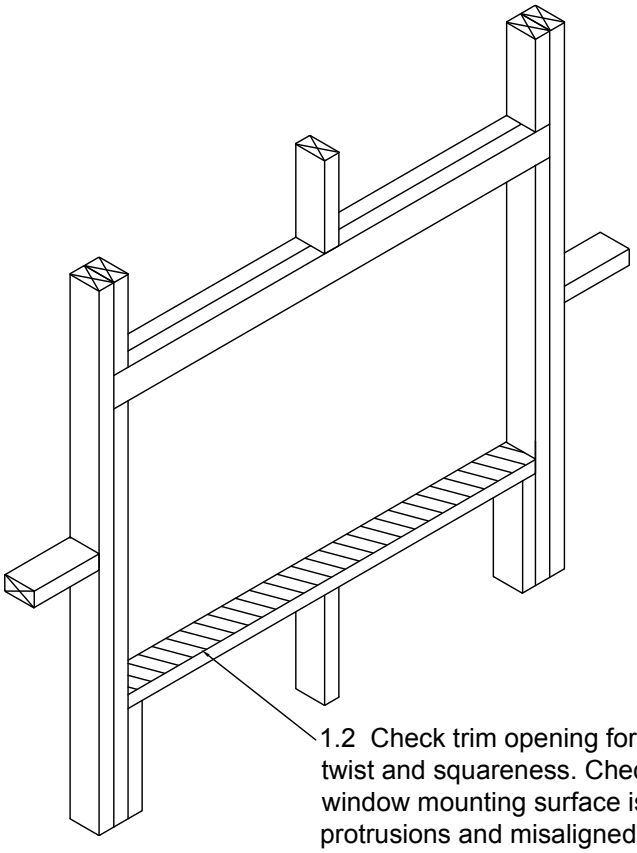
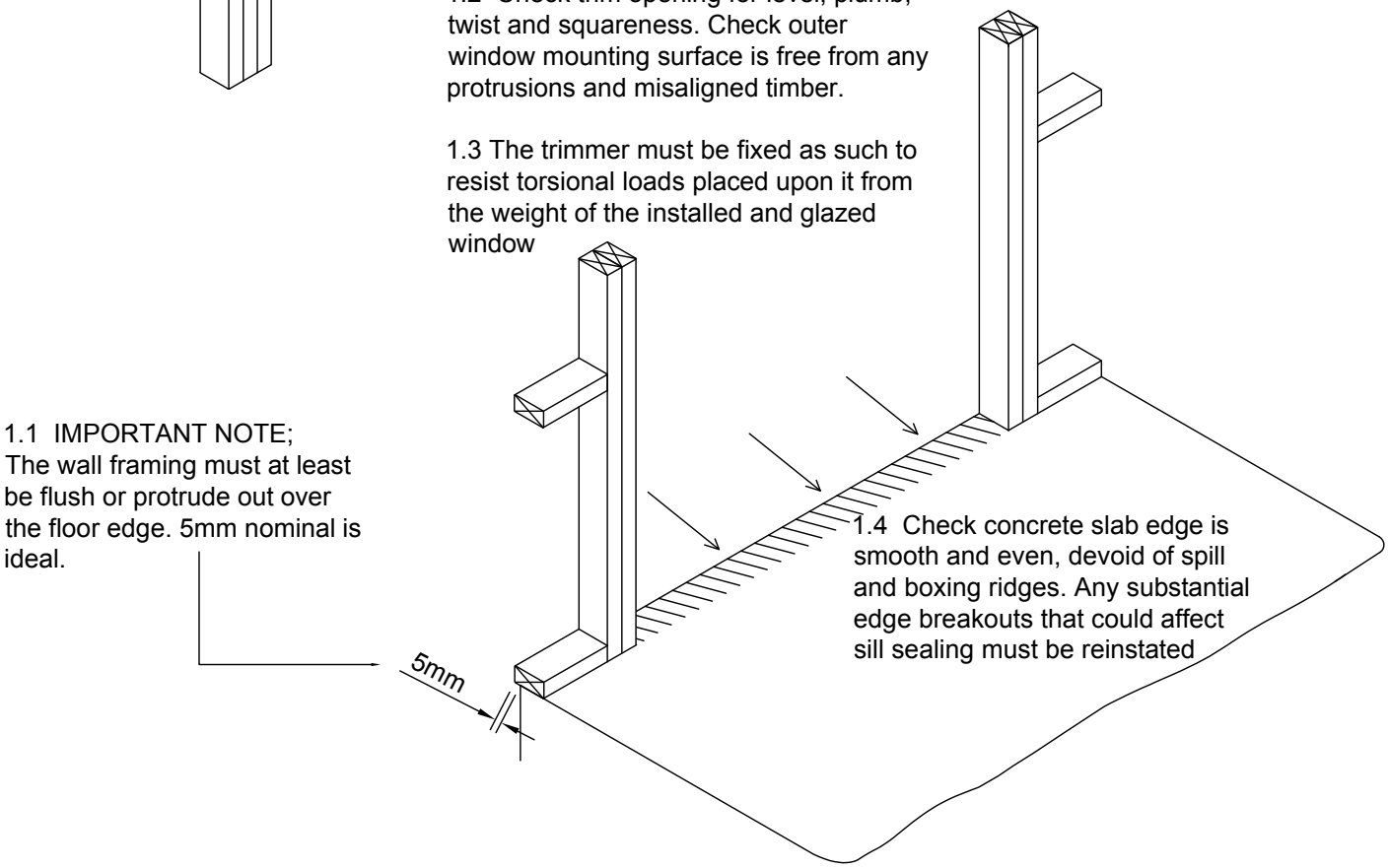
STEP 1 - Preliminary check of trim opening



1.2 Check trim opening for level, plumb, twist and squareness. Check outer window mounting surface is free from any protrusions and misaligned timber.

1.3 The trimmer must be fixed as such to resist torsional loads placed upon it from the weight of the installed and glazed window

1.1 IMPORTANT NOTE;
The wall framing must at least be flush or protrude out over the floor edge. 5mm nominal is ideal.



1.4 Check concrete slab edge is smooth and even, devoid of spill and boxing ridges. Any substantial edge breakouts that could affect sill sealing must be reinstated

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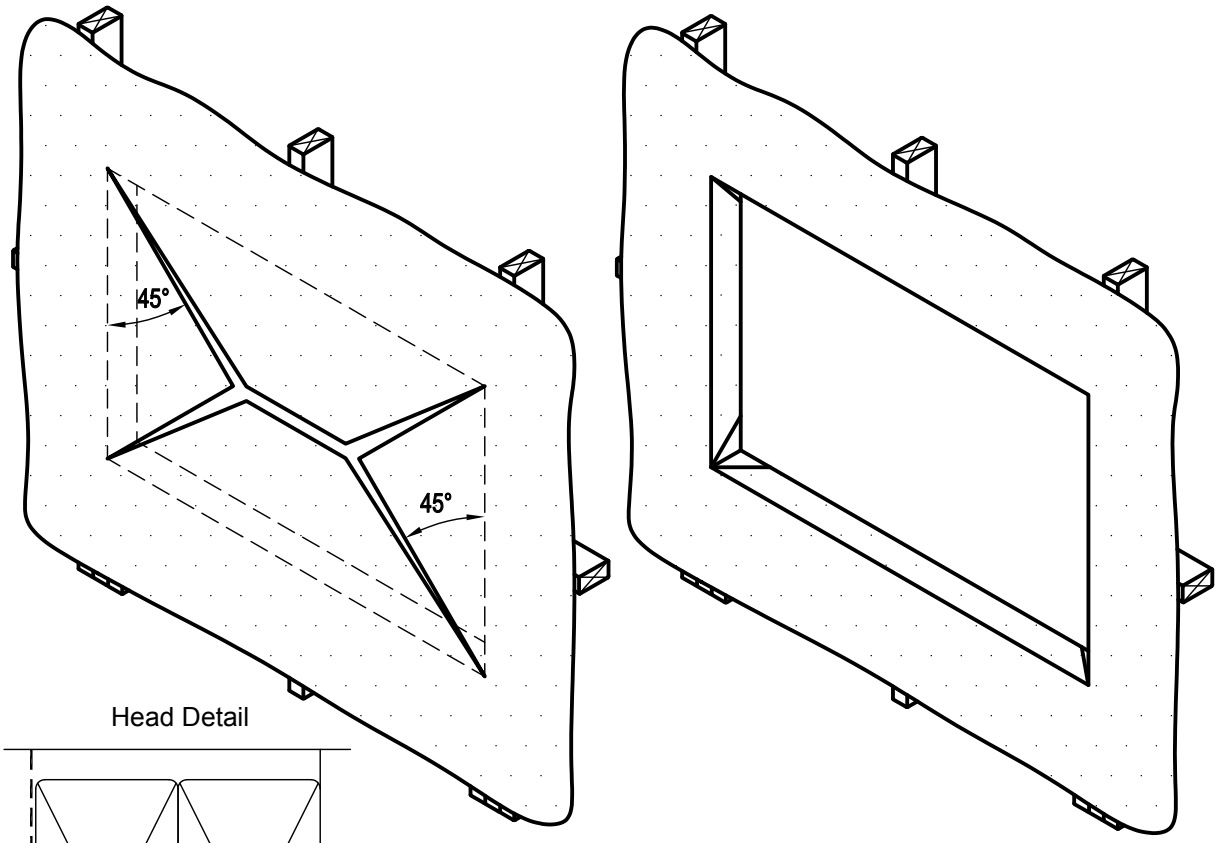
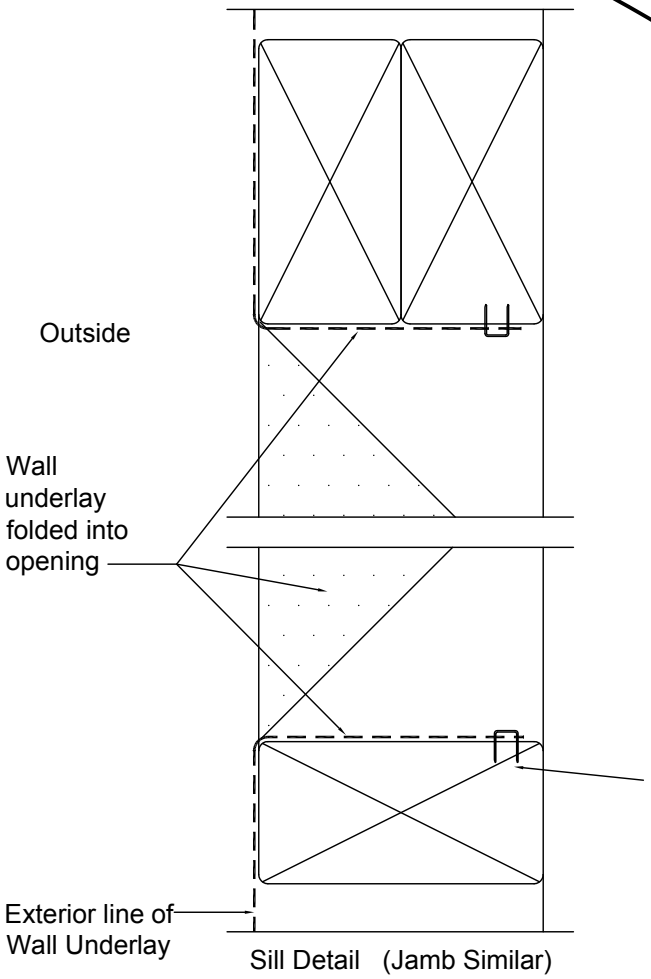
STEP 2 - Wall underlay preparation



Head Detail



Sill Detail (Jamb Similar)

2.1 Cut the wall underlay at 45° away from each corner.
2.2 Fold flaps tightly into opening and secure on all sides.
2.3 Trim off excess after fixing.

The Smartfit window and door system can be used with rigid air barriers (RAB). The reveal depth is altered to suit and fixing screw length should be adjusted accordingly. No sill taping of the trim opening is required if using a RAB

External sheet bracing to wall framing must leave an even mounting surface for the window or door to seat properly on all sides. This may require the sheet brace to run past window openings or stop sufficiently short to allow for fin fixing and taping to occur.

Fix the wall underlay to framing using approved fixings

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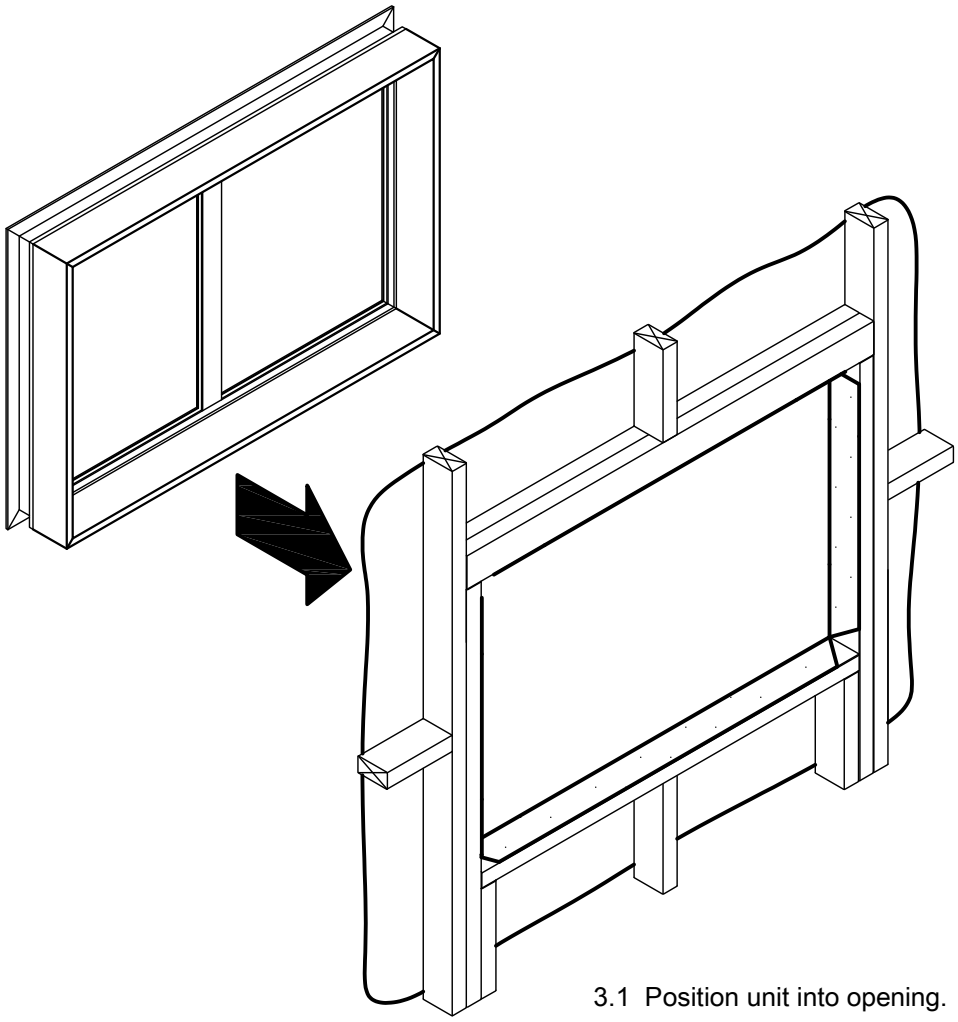
STEP 3 - Position unit in opening



3.1 Position unit into opening.

3.2 Push outer fixing flange hard against the framing ensuring it is evenly seated and devoid of twist. Minor shimming under outer fixing fin is permissible to eliminate twist or to position window accurately to the reveal wall board groove or architrave.

3.4 Use full depth rectangular packers between framing and reveal to level the unit if required. If the floor or trimmer is straight and level, the window or door may sit hard down.

3.5 Diagonally measure to check for square and pack reveals if required.

3.6 Fix off unit as described in Step 4

3.7 Remove any packers from head reveal area

3.8 Cladding fixing starts after window install.

Note; The remaining trim gap dimension between reveal and framing is not important.

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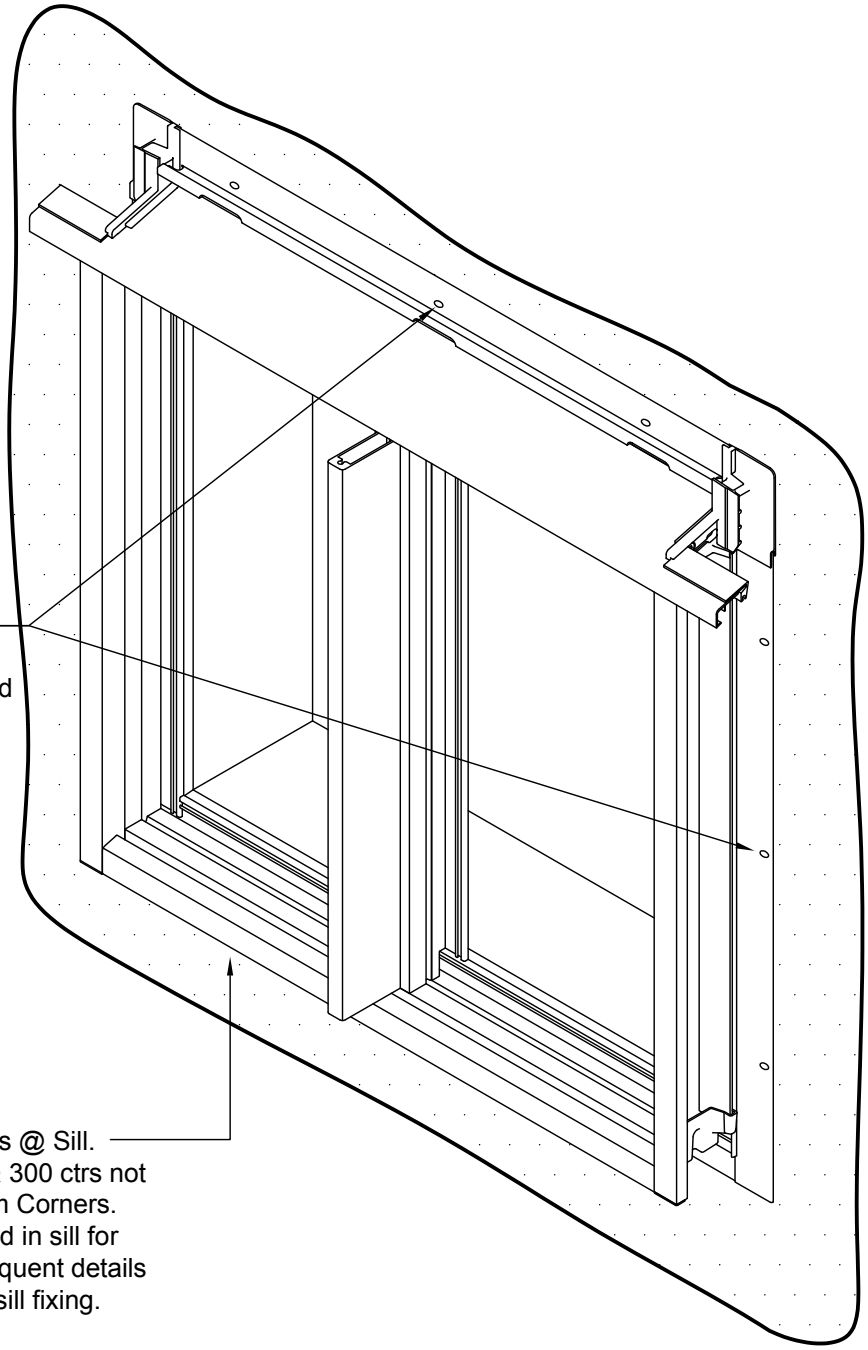
Smartfit Window Installation

STEP 4 - Fix off unit

4.1 Do not fix through any plastic parts.



4.2 Fixing requirements @ Head & Jambs through outer fin;

10g x 32 SS screws @ 300 ctrs and not more than 150mm from corners

Holes are pre machined in head and jambs for screw fixings.

4.3 Fixing requirements @ Sill.
10g x 32 SS screws @ 300 ctrs not more than 150mm from Corners.
Holes are pre machined in sill for fixings. Refer to subsequent details for timber or concrete sill fixing.

4.4 Reveal Fixing:
The reveal is not the primary means for attaching the window to the building. The frequency of reveal fixings and packers should follow good carpentry practice to prevent the reveal from being unduly flexible in service. Remove any head packers after fixing reveals.
If no head flashing is present, reveal fixings at the head are required in accordance with 4.5.
Sliding and hinged door jambs at lock points will require a positive reveal fixing. Pack between reveal and house framing and nail fix reveal to a suitable standard to resist jamb movement from potential lock loads.

4.5 Windows with head hard to soffit and no head flashing required (not shown);
Fixings: 2 off 75mm Jolt Head Nails
@ 450ctrs and not more than 150mm from each end through reveal at head only. See IN-43 for example.

Note;
Before attempting to install a Smartfit window unit, installers are advised to familiarise themselves with the Smartfit window system components shown on Dwg. No's IN-04 and IN-05.

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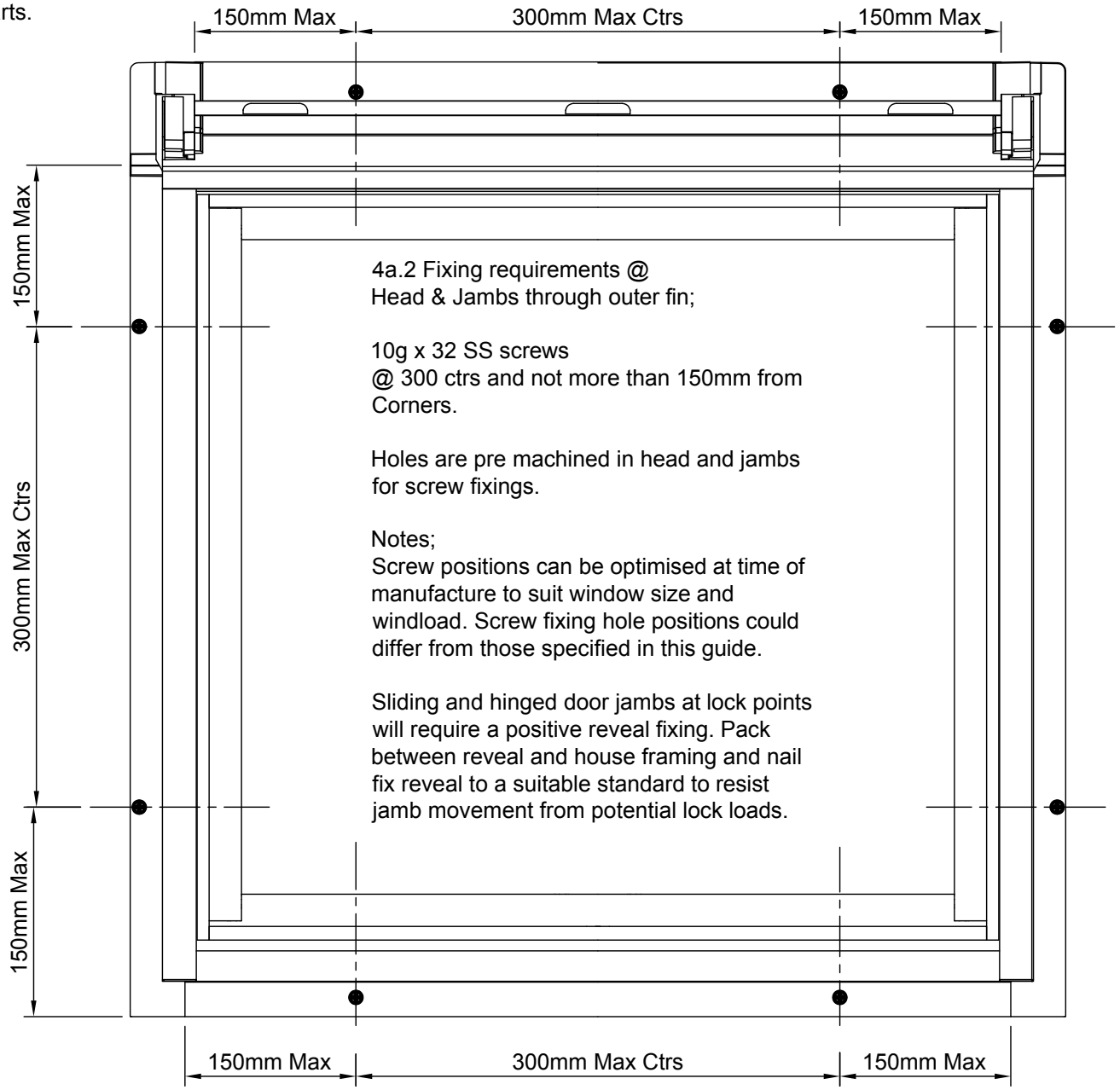
STEP 4a - Fix off unit continued

Front elevation of window

4a.1 Do not fix through any plastic parts.



4a.2 Fixing requirements @ Head & Jambs through outer fin;

10g x 32 SS screws @ 300 ctrs and not more than 150mm from Corners.

Holes are pre machined in head and jambs for screw fixings.

Notes;
Screw positions can be optimised at time of manufacture to suit window size and windload. Screw fixing hole positions could differ from those specified in this guide.

Sliding and hinged door jambs at lock points will require a positive reveal fixing. Pack between reveal and house framing and nail fix reveal to a suitable standard to resist jamb movement from potential lock loads.

4a.3 Fixing requirements @ Sill.
10g x 32 SS screws @ 300 ctrs not more than 150mm from Corners.
Holes are pre machined in sill for fixings. Refer to subsequent details for timber or concrete sill fixing.
In some case top fixing through reveal or additional fixing tag up on top of floor will be required

4a.4 Reveal Fixing:
The reveal is not the primary means for attaching the window to the building.
The frequency of reveal fixings and packers should follow good carpentry practice to prevent the reveal from being unduly flexible in service.
Remove any head packers after fixing reveals.
If no head flashing is present, reveal fixings at the head are required in accordance with 4a.5.

4a.5 Windows with head hard to soffit and no head flashing required (not shown);
Fixings: 2 off 75mm Jolt Head Nails @ 450ctrs and not more than 150mm from each end through reveal at head only. See IN-43 for example.

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Smartfit Window Installation

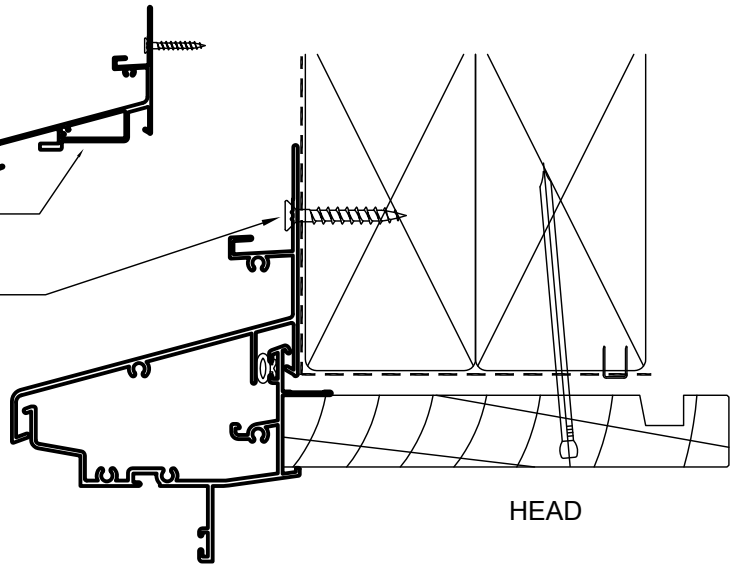
STEP 4b - Fix off unit continued

Vertical and Horizontal cross section of unit

4b.1 For windows with head hard to soffit and no head flashing present (not shown); See specific detail on Dwg. No. IN-43.

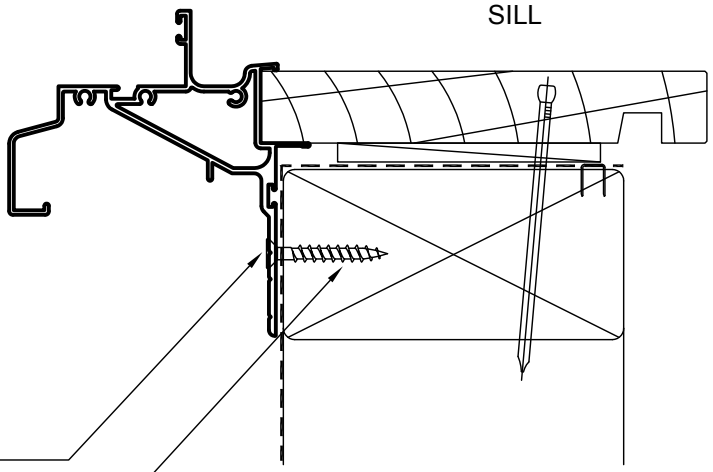
NOTE: Heavy duty head flashing (shown N.T.S) is required for Bi-fold door units. See specific detail on Dwg. no. IN-53.

4b.2 Fixing requirements @Head & Jambs;
10g x 32 SS screws @ 300 ctrs and not more than 150mm from Corners.



HEAD

SILL

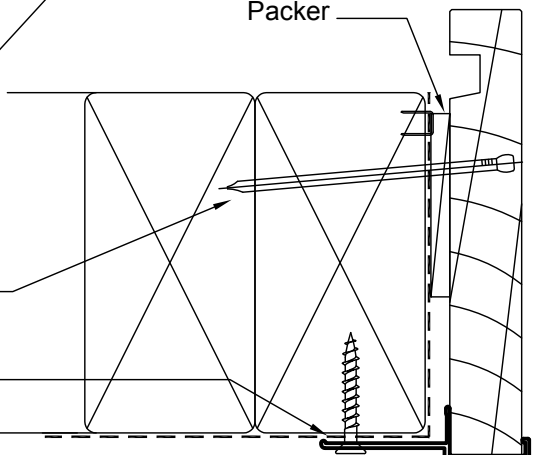


4b.3 Note: Window reveal to building framing trim clearances are not important. 5mm nominal shown all round to allow for squaring unit.

Note: Use top row of holes for fixing into timber, Use bottom row for fixing into Concrete.

4b.4 FIXING REQUIREMENTS @ Sill.
10g x 32 SS screws @ 300 ctrs not more than 150mm from Corners.

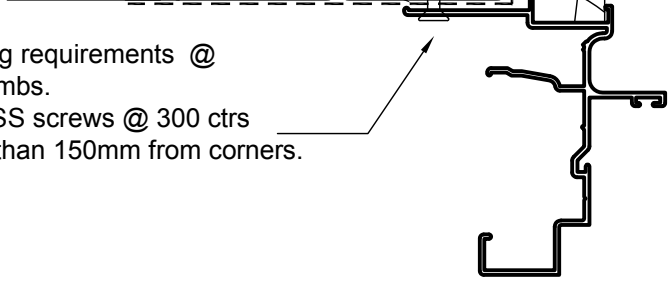
Packer



JAMB

4b.5 Reveal fixing:
*See note 4.4 on sheet IN-09

Minor shimming under outer fixing fin is permissible to eliminate twist or to position window accurately to the reveal wall board groove or architrave.



4b.6 Fixing requirements @ head & jambs.
10g x 32 SS screws @ 300 ctrs not more than 150mm from corners.

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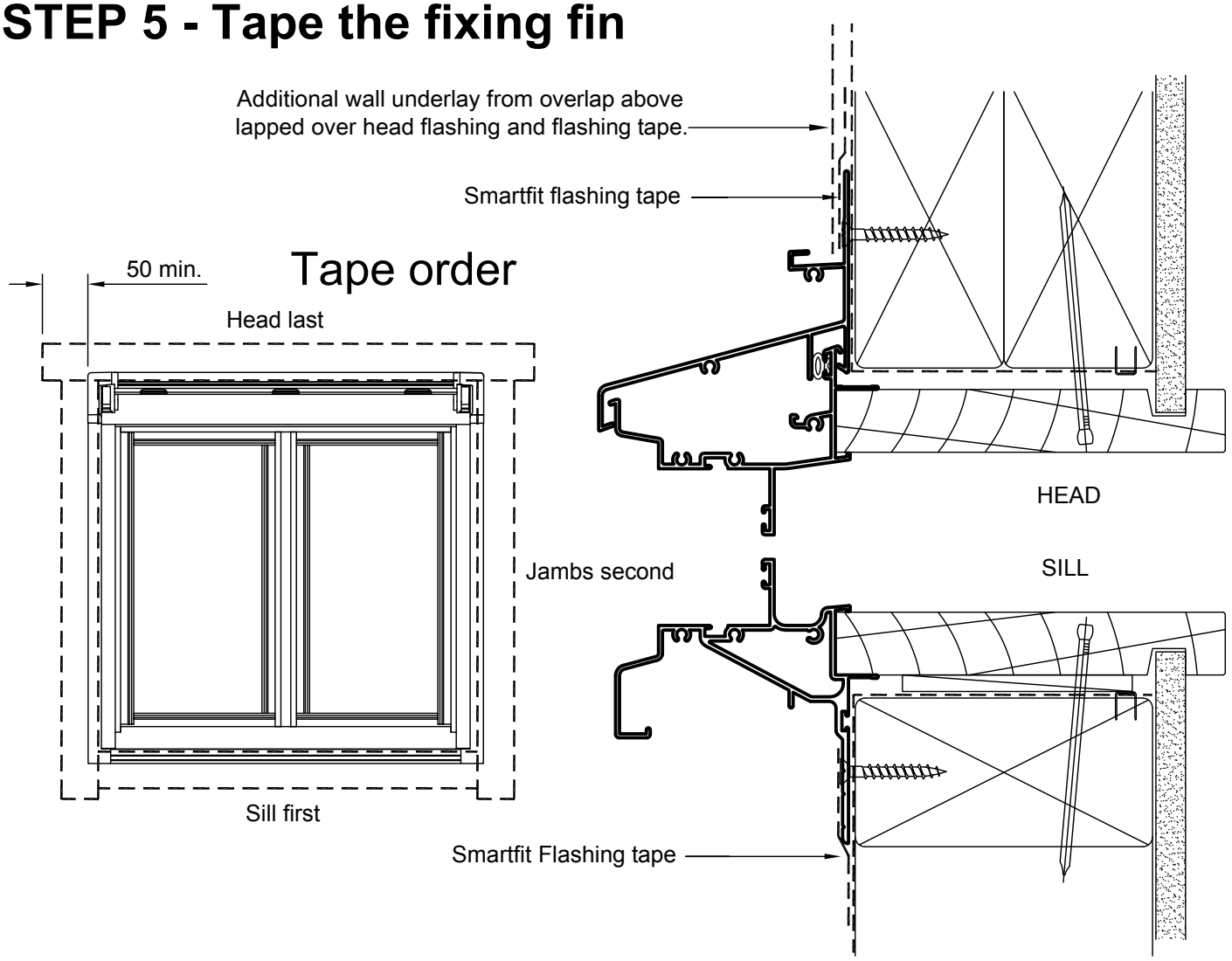
Smartfit Window Installation

STEP 5 - Tape the fixing fin



5.1 Smartfit flashing tape to be fitted before fixing the cavity battens that are adjacent to the window.

5.2 Use only Smartfit 60mm wide flashing tape.

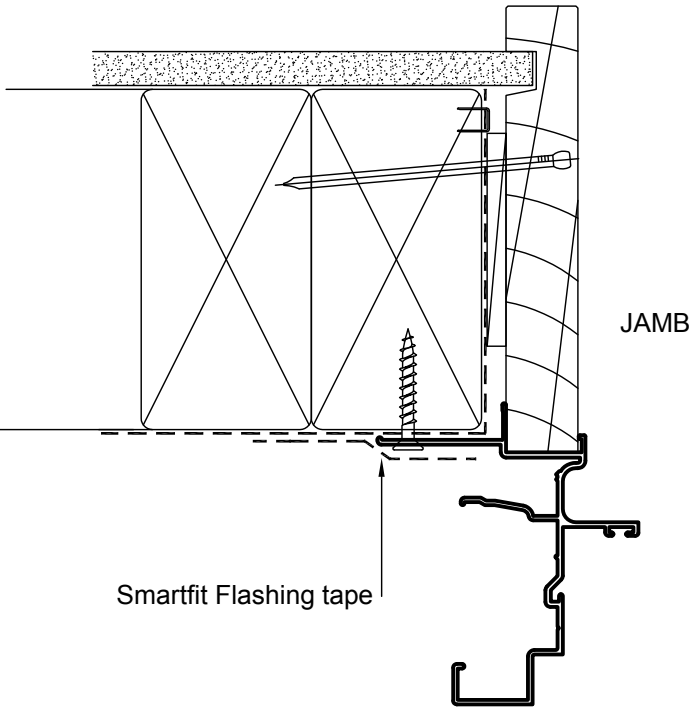
5.3 Half the tape (30mm) to cover the fixing fin and half (30mm) to cover the wall underlay. All fixings and unused fixing holes must be covered by tape (except sill fixing holes into concrete slab).

5.4 The ends of each preceding piece of tape should be fully covered by the subsequent piece.

5.5 Start at the sill - then jambs and lastly the top strip over the head flashing.

5.6 Additional wall underlay from overlap above lapped over head flashing and flashing tape.

5.7 It is permissable to fill the trim cavity between the window reveal and house framing with insulation material.



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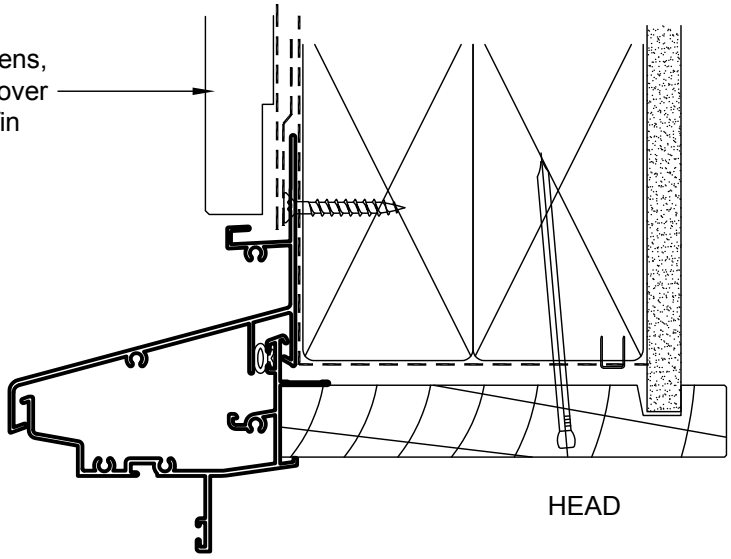
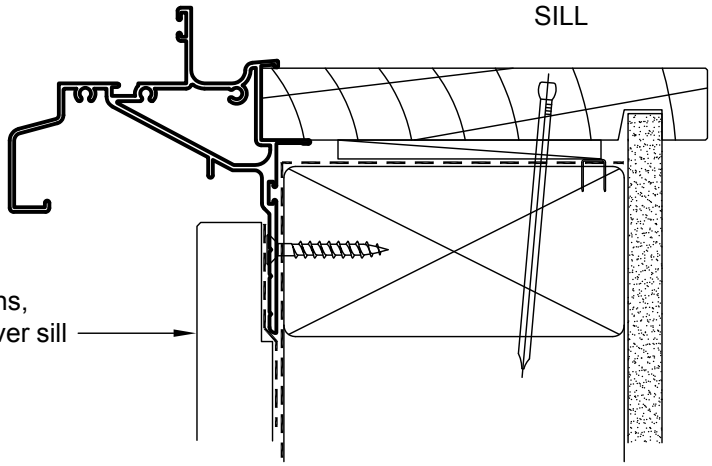
Smartfit Window Installation

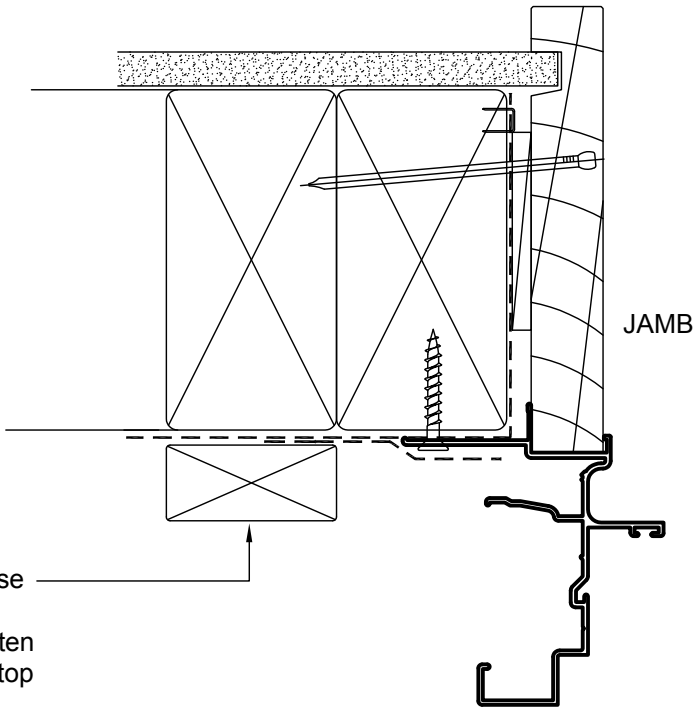
STEP 6 - Fix cavity battens (if required by cladding type)

6.2 Cavity battens, notch and run over head flashing fin





6.3 Cavity battens, notch and run over sill fixing fin



6.1 Fix cavity battens in accordance with E2/AS1 or proprietary cladding system suppliers requirements to suit cladding type

6.4 Cavity battens on outer stud or as close to the window trim opening as possible. It is possible to have a reduced cavity batten immediately adjacent to window jamb on top of fixing fin.

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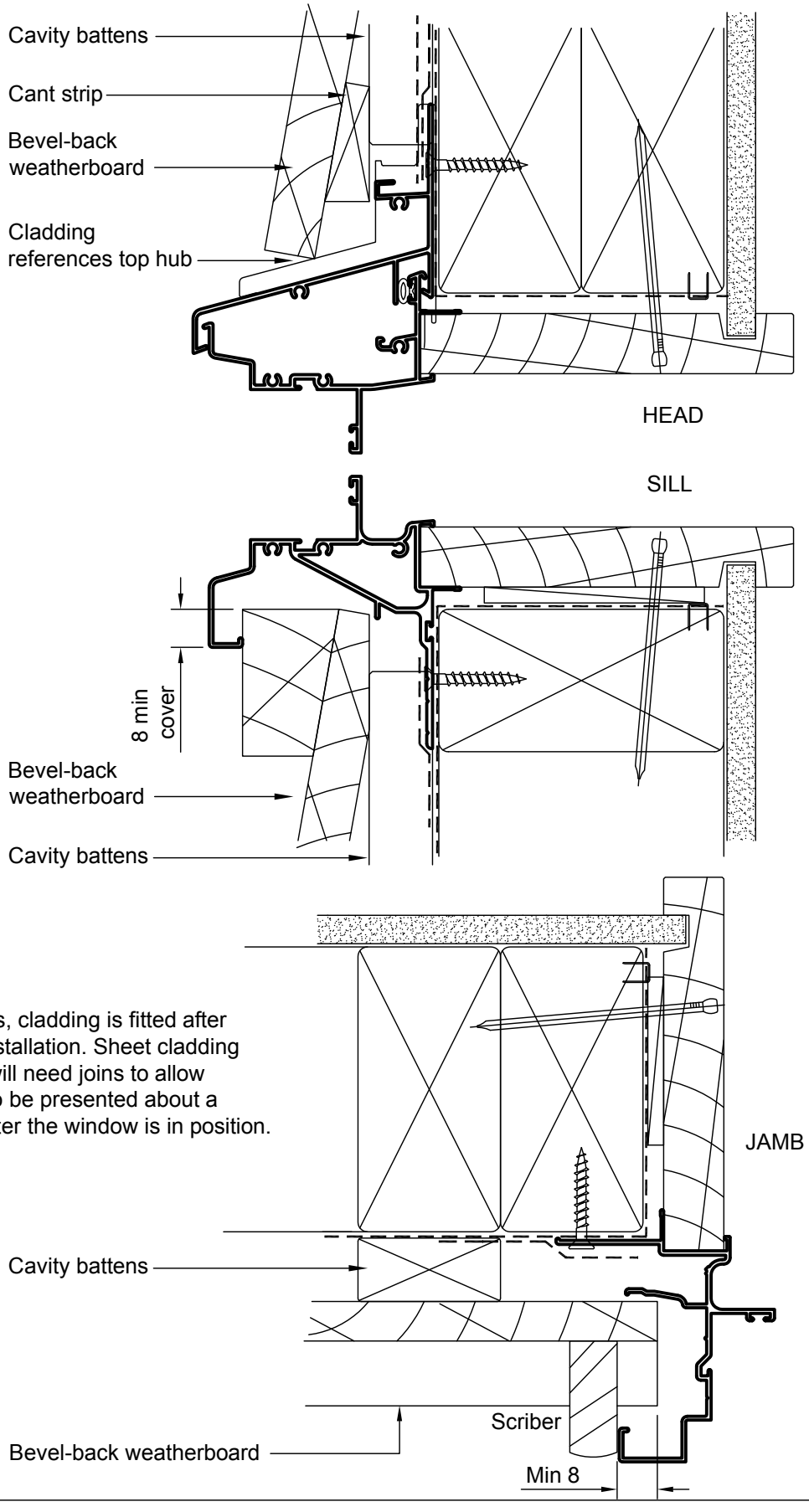
Smartfit Window Installation

STEP 7 - Fit cladding

Weatherboard shown, example



In all cases, cladding is fitted after window installation. Sheet cladding products will need joins to allow cladding to be presented about a window after the window is in position.

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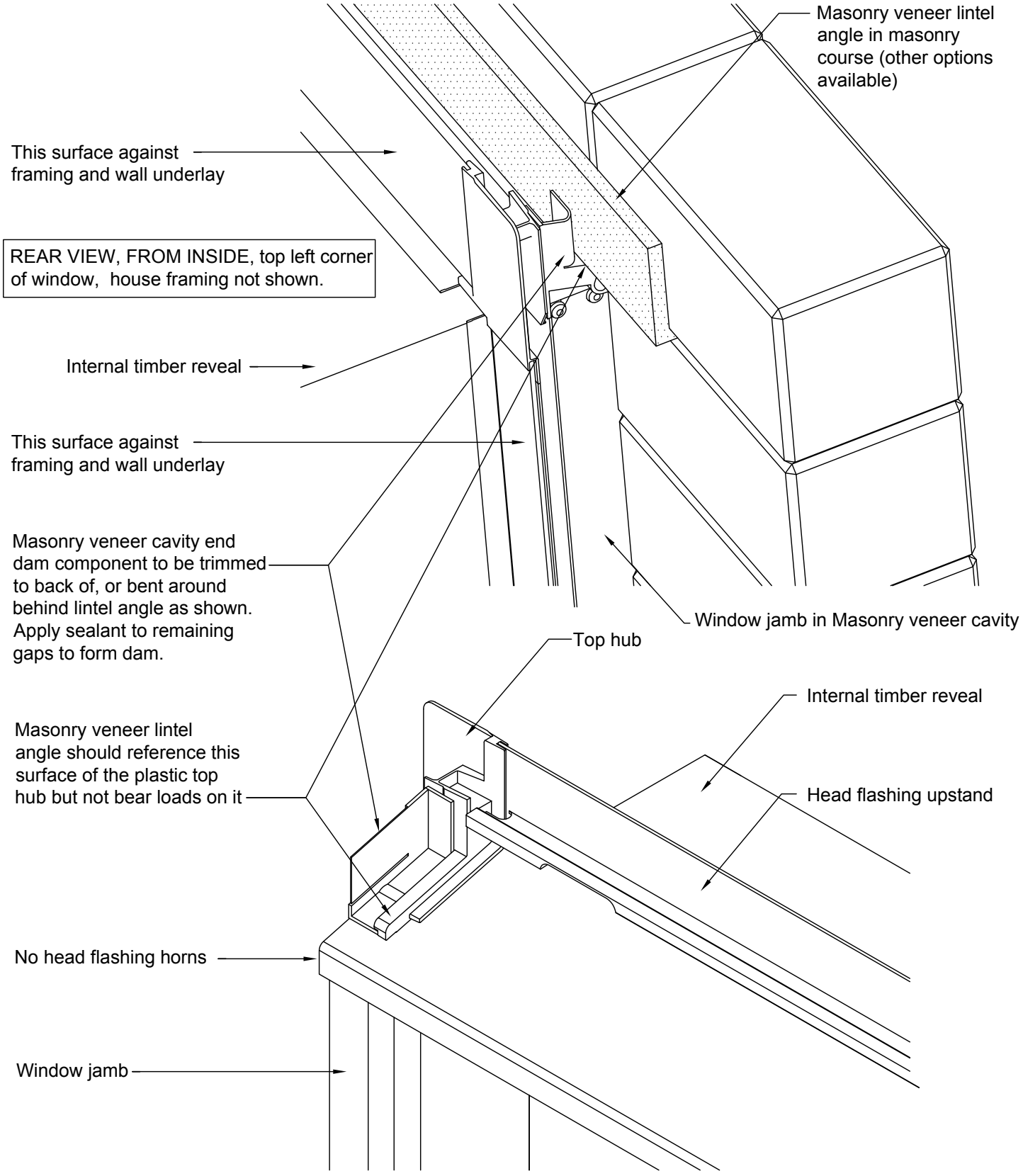
Smartfit Window Installation

STEP 7a - Fit cladding

Masonry veneer above window shown, example



FRONT VIEW, FROM OUTSIDE, top left corner of window, cladding and framing not shown

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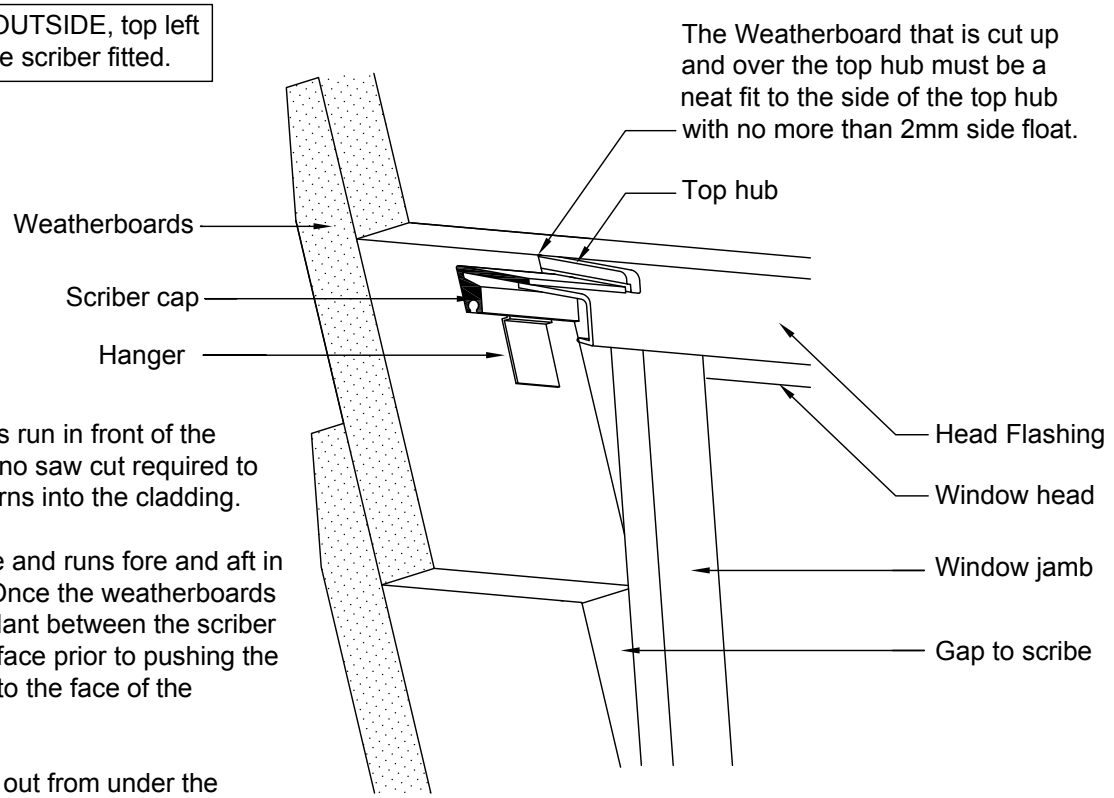
STEP 7b - Fit cladding

Weatherboard shown, example

FRONT VIEW, FROM OUTSIDE, top left corner of window, before scriber fitted.

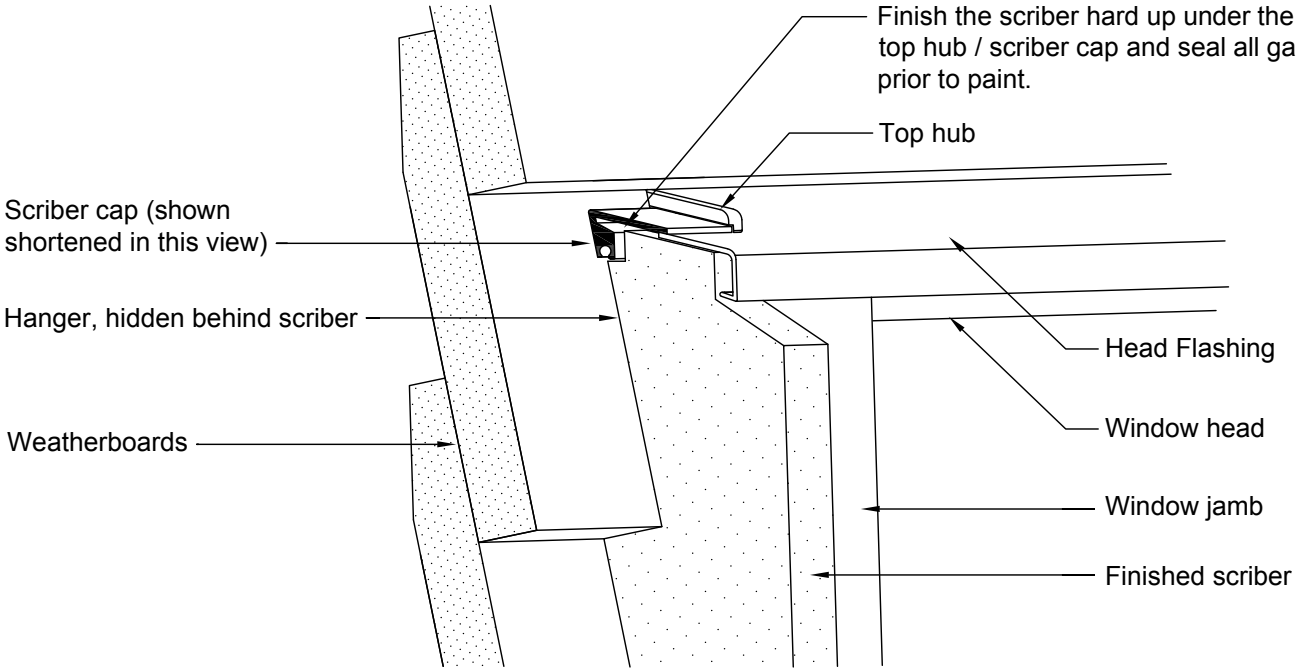


The head flashing horns run in front of the cladding face. There is no saw cut required to let the head flashing horns into the cladding.

The scriber cap is loose and runs fore and aft in a track in the top hub. Once the weatherboards are installed, apply sealant between the scriber cap and weatherboard face prior to pushing the scriber cap home hard to the face of the weatherboard.

A small hanger coming out from under the scriber cap will rest on the face of the weatherboard. The finished scriber will trap this hanger in position. It is possible to trim this hanger back so as not to protrude out the side of the finished scriber.

FRONT VIEW, FROM OUTSIDE, top left corner of window, after scriber fitted



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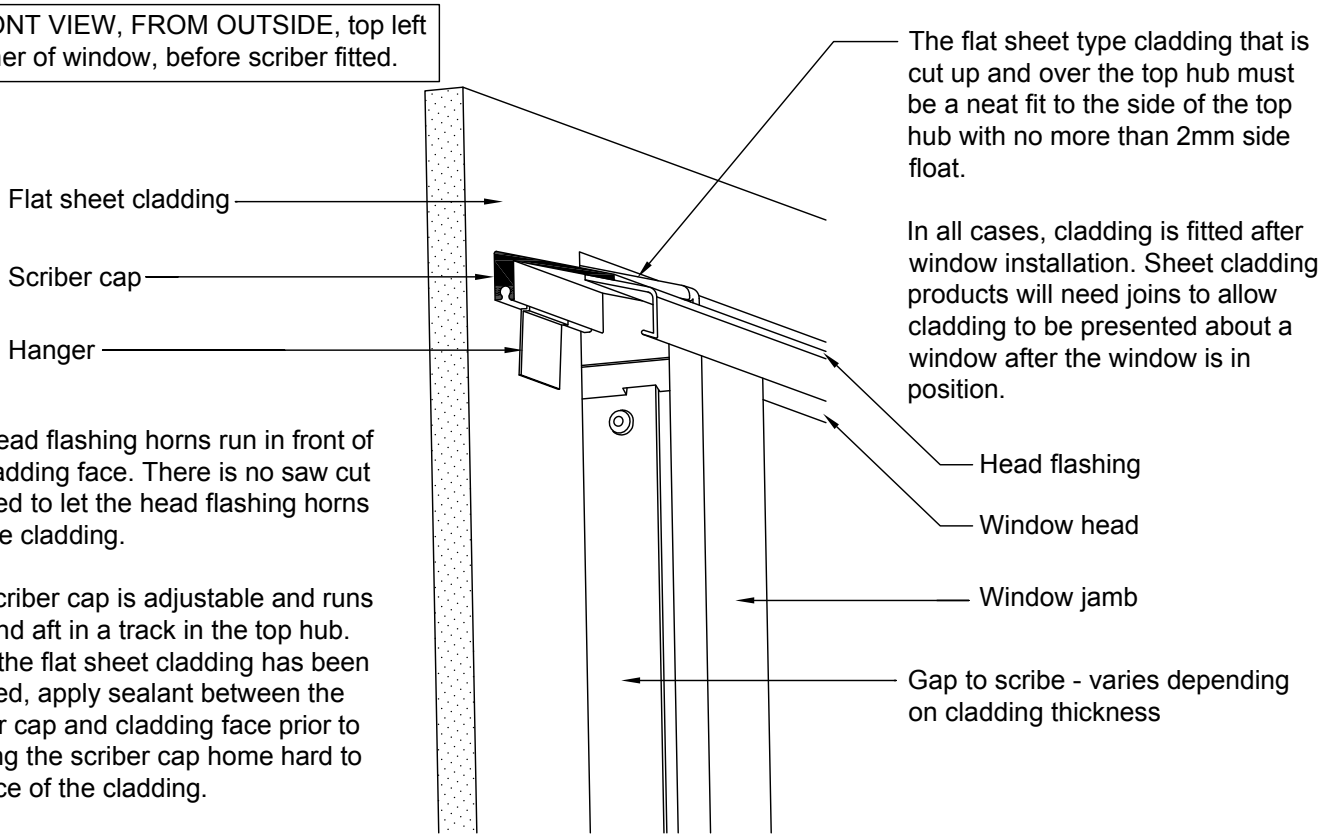
STEP 7c - Fit cladding

Flat sheet types shown, example

FRONT VIEW, FROM OUTSIDE, top left corner of window, before scriber fitted.

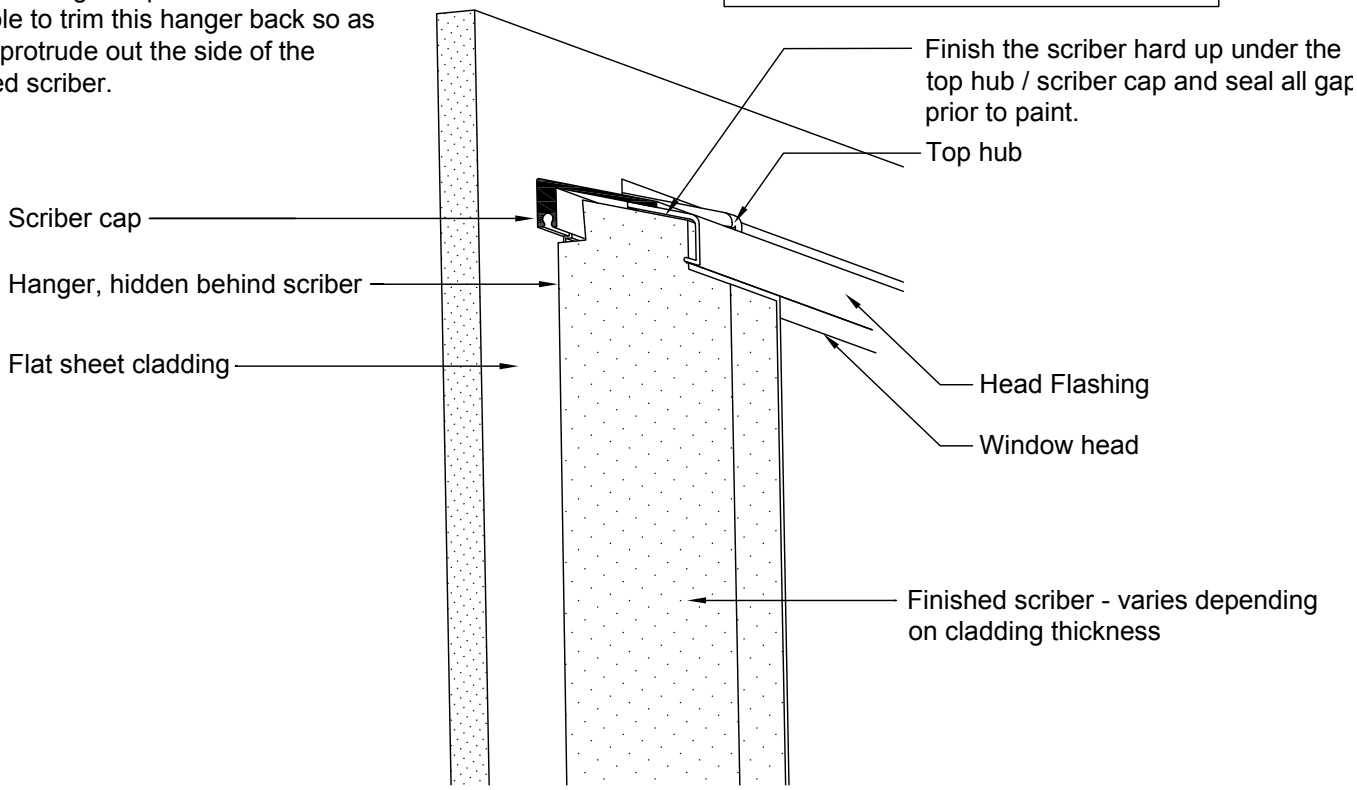


The head flashing horns run in front of the cladding face. There is no saw cut required to let the head flashing horns into the cladding.

The scriber cap is adjustable and runs fore and aft in a track in the top hub. Once the flat sheet cladding has been installed, apply sealant between the scriber cap and cladding face prior to pushing the scriber cap home hard to the face of the cladding.

A small hanger coming out from under the scriber cap will rest on the face of the cladding. The finished scriber will trap this hanger in position. It is possible to trim this hanger back so as not to protrude out the side of the finished scriber.

FRONT VIEW, FROM OUTSIDE, top left corner of window, after scriber fitted



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Head flashings and end treatments

There are three categories of claddings that will define the need for a head flashing and the end treatment of the head flashing;

See Dwg. No's. 19, 20, 21 for Types A, B and C

There are many more methods available for joining claddings to Smartfit windows that are not detailed in this guide.

Please contact Altus for any requirements outside of the details shown.

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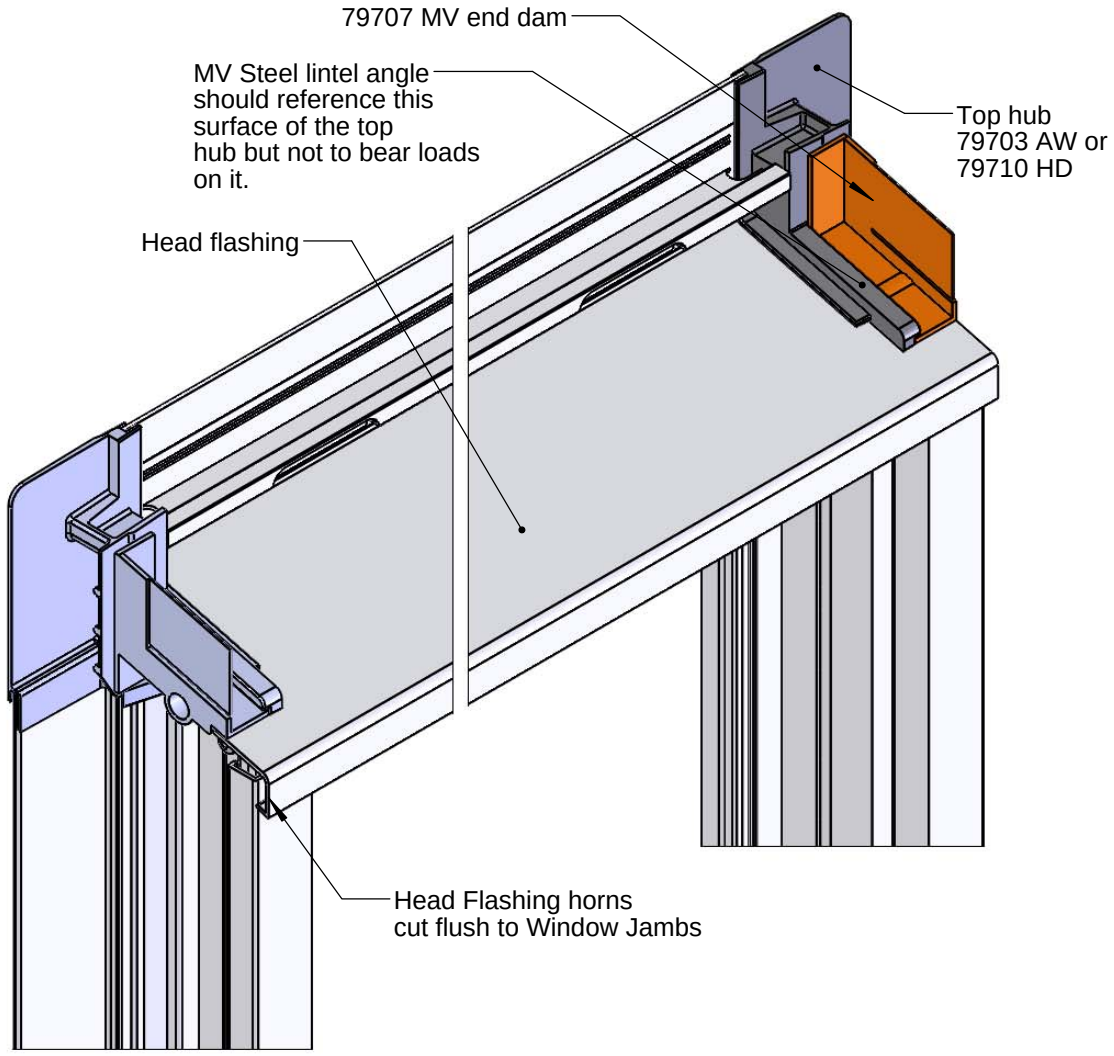
Head flashings and end treatments - TYPE A

Type A.
- Masonry veneer beside window with other cladding type on battens above the window.
- Bevel back weatherboards with additional wide facings top and sides and applied weatherhead above top facing
- Hebel aerated concrete panels.
- E.I.F.S. (Generic)- Proprietary systems may require different head flashing end treatment. Contact cladding manufacturer
- Rockcote Integra with Smartfit head flashing.

- A Smartfit head flashing is required.
- The head flashing horns will be flush with the window jambs.
- The top hub will have masonry veneer end dams fitted.



REV: -

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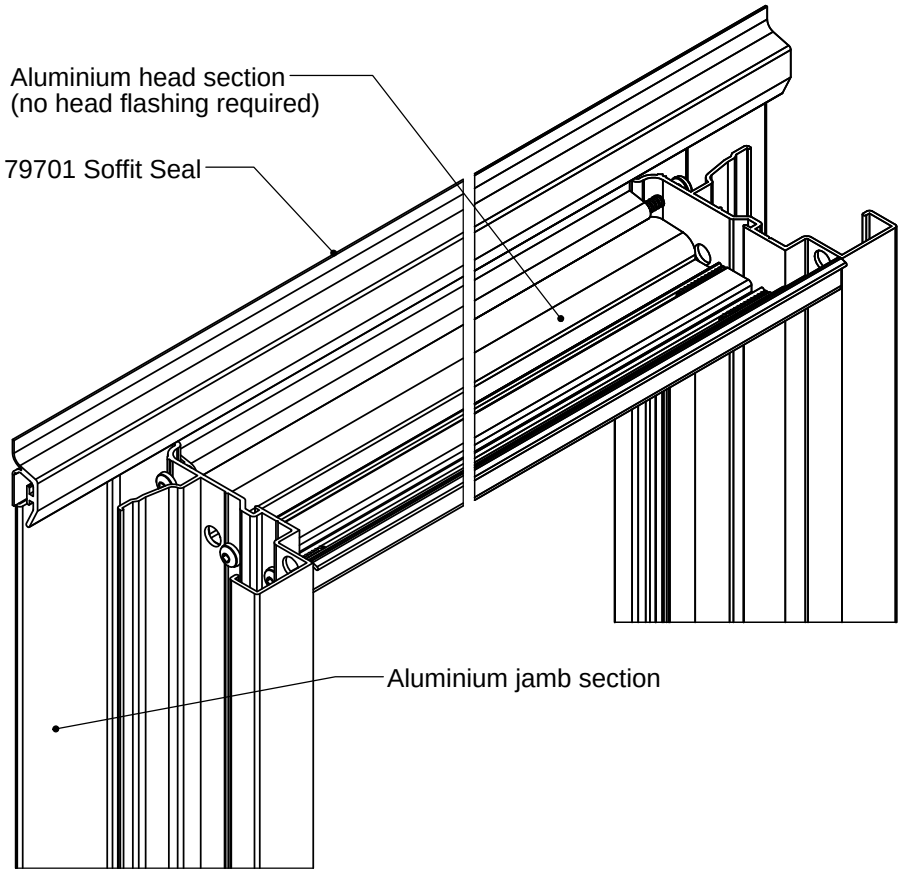
Head flashings and end treatments - TYPE B

Type B.
- Masonry veneer with masonry veneer beside and above window on steel lintel angle.
- Windows hard to soffit for all cladding types.
- Scyon Linea weatherboard option - additional facings with separate head flashing above.
- Rockcote Integra with no head flashing.

- No Smartfit head flashing or top hub is required.
- Inclusive soffit bar is an additional option instead of applying suitable trim (by others) to finish the gap between window head and construction above (soffit, lintel angle etc.)



There is a further 'hard to soffit' option for pre-fabricated wall construction.
See IN-45, IN-46 and IN-47.

REV: -

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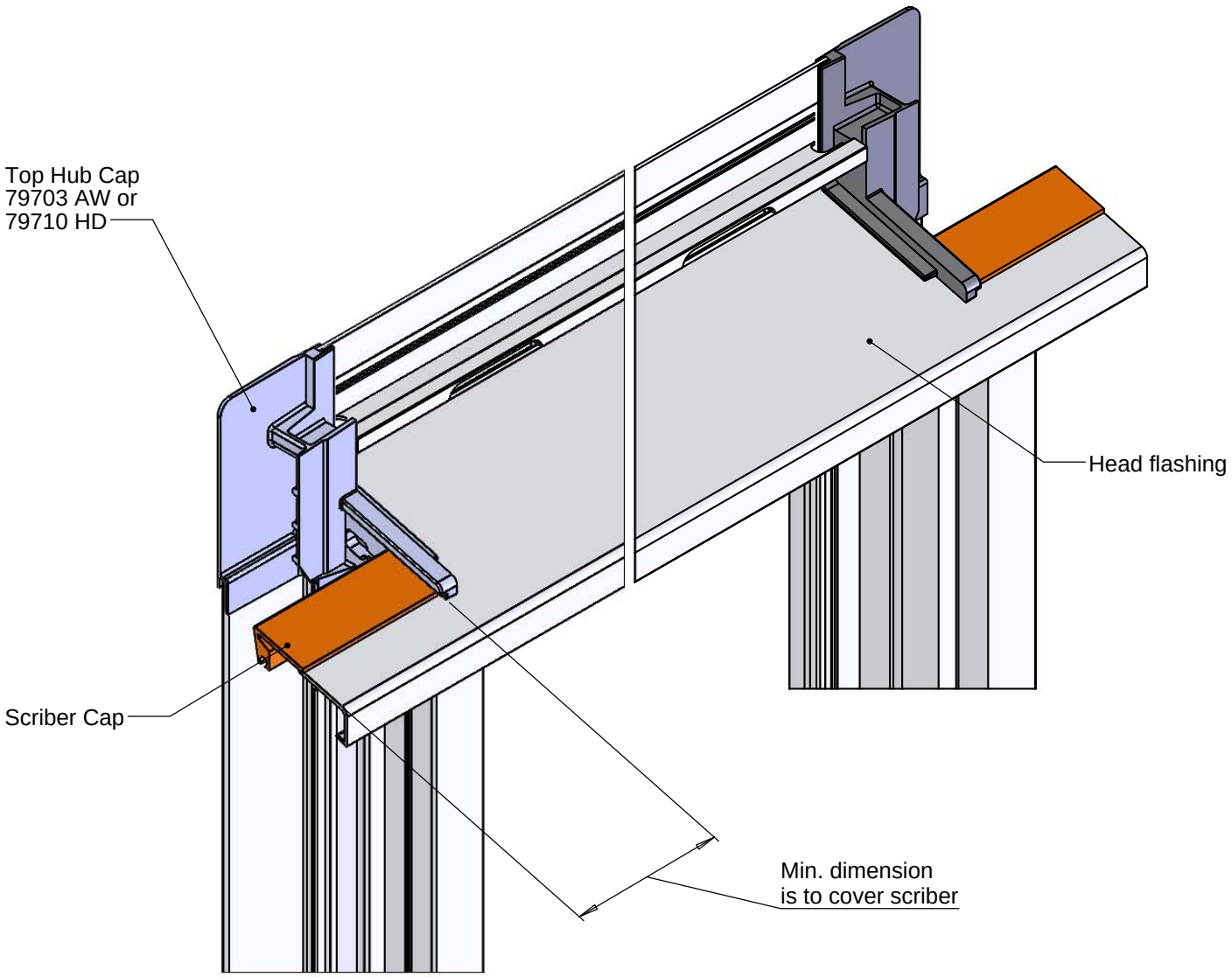
Head flashings and end treatments - TYPE C

Type C.
- Weather boards of all types.
- Flat sheet claddings of all types.
- Horizontal profiled metal.
- Stucco.
- Scyon Linea weatherboard option - no additional facings.

- ASmartfit head flashing is required complete with top hubs, scriber caps and head flashing horns of a predetermined length.



REV: -

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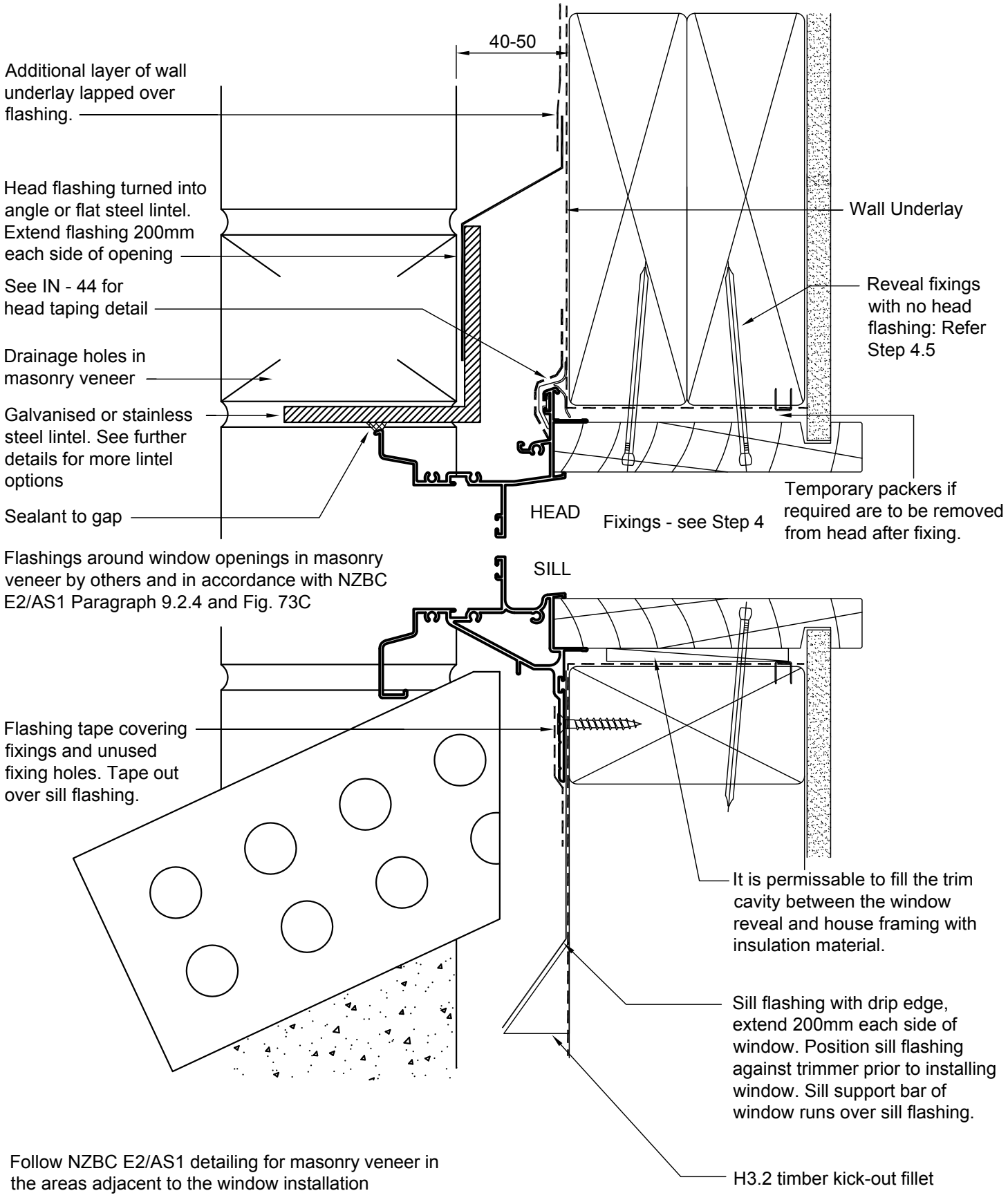
Smartfit Window Installation

Masonry veneer

Masonry veneer beside and above window, with steel lintel angle embedded in course



Follow NZBC E2/AS1 detailing for masonry veneer in the areas adjacent to the window installation

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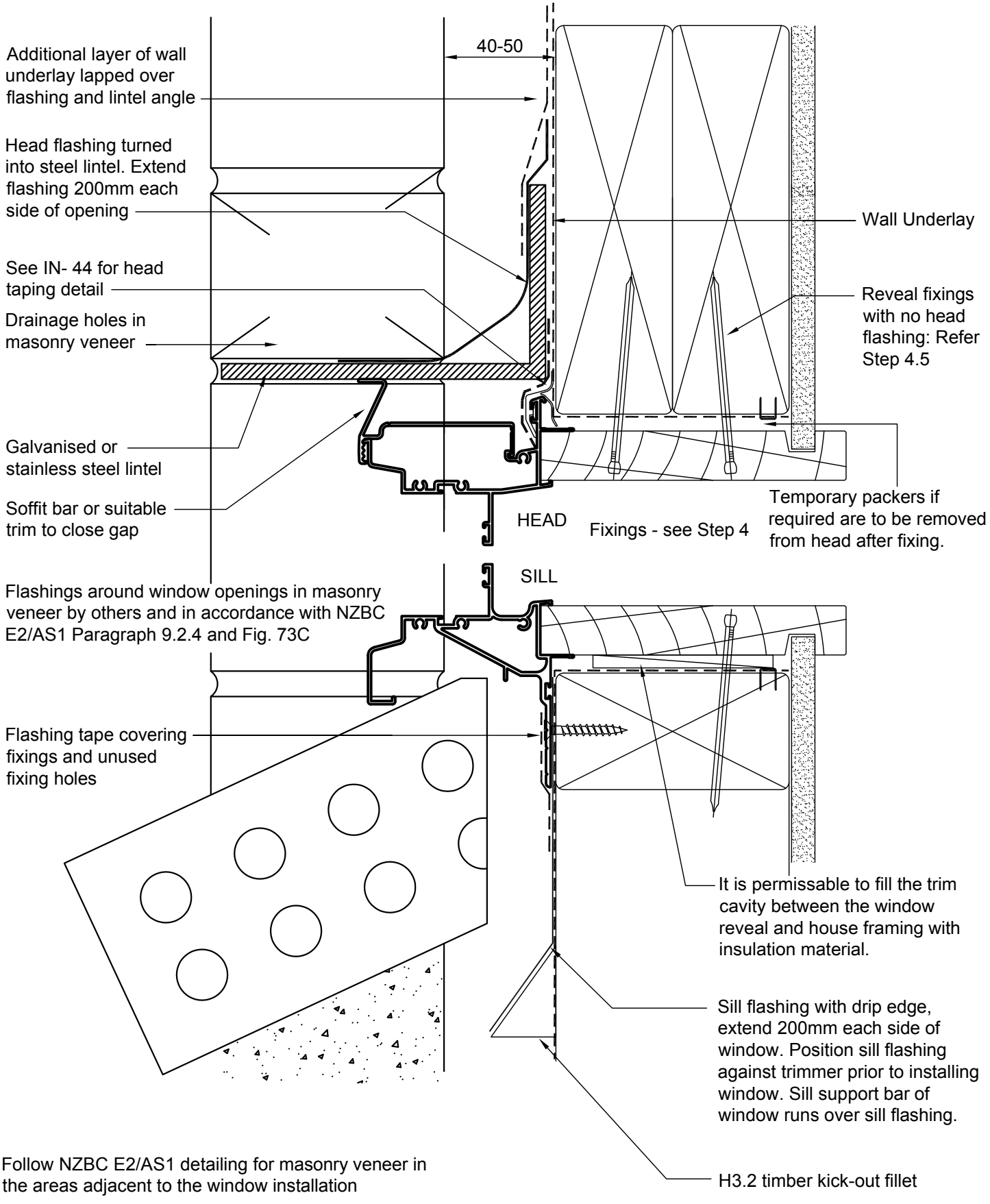
Smartfit Window Installation

altus Updated: N/A Scale: 1:2 REV: -

Masonry veneer

Masonry veneer beside and above window, with steel lintel angle fixed to timber lintel



Follow NZBC E2/AS1 detailing for masonry veneer in the areas adjacent to the window installation

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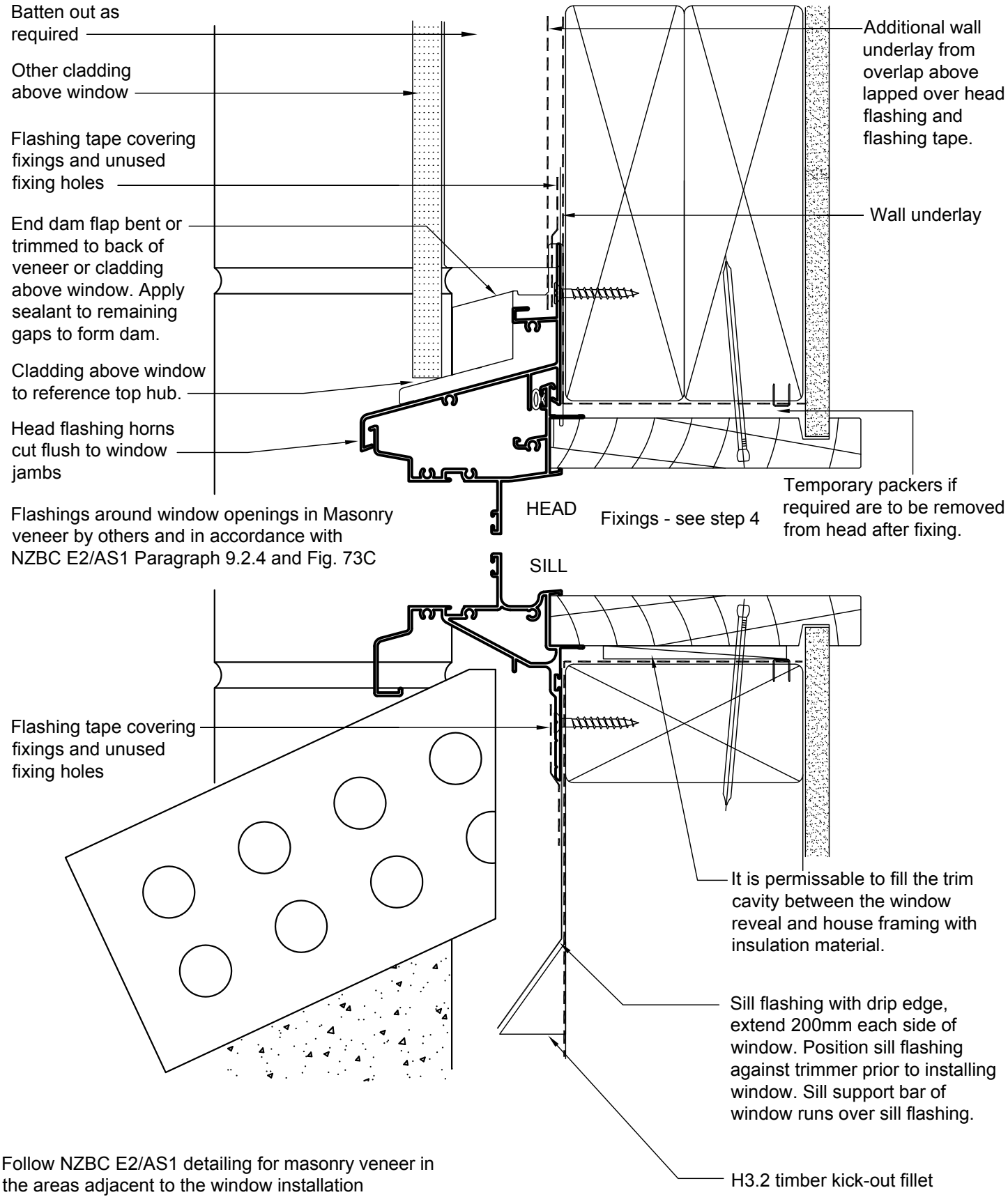
Smartfit Window Installation

Masonry veneer

Masonry veneer beside window and other cladding above window



Flashings around window openings in Masonry veneer by others and in accordance with NZBC E2/AS1 Paragraph 9.2.4 and Fig. 73C

Follow NZBC E2/AS1 detailing for masonry veneer in the areas adjacent to the window installation

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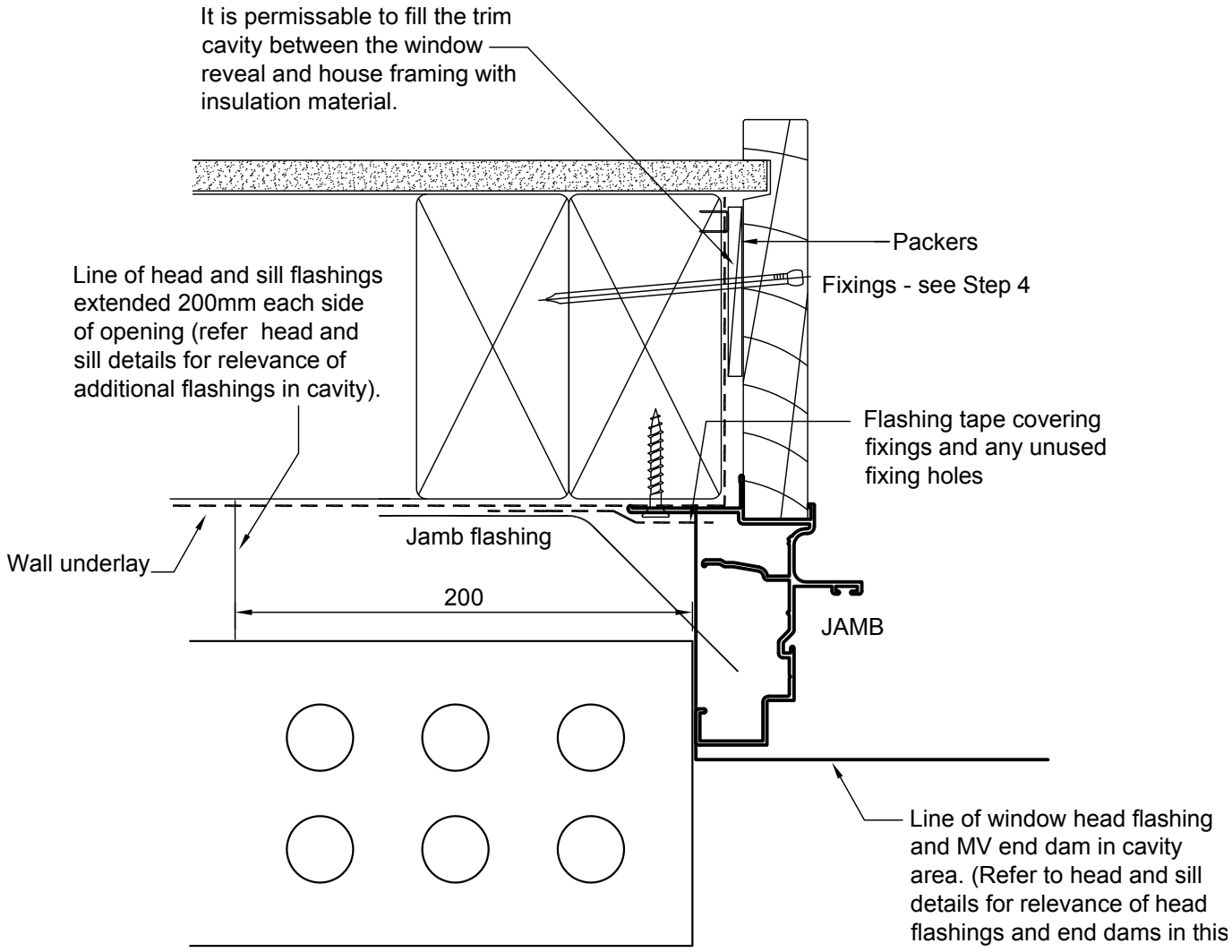
Masonry veneer continued. Common Jamb detail

Note:
Grooved reveals shown on all details for consistency only. All details may be used with architraved reveals. If specifying no reveal or returned wallboard into window frame, please consult joinery manufacturer for additional details and trim options.



Flashings around window openings in Masonry veneer by others and in accordance with NZBC E2/AS1 Paragraph 9.2.4 and Fig. 73C.

Follow NZBC E2/AS1 detailing for masonry veneer in the areas adjacent to the window installation

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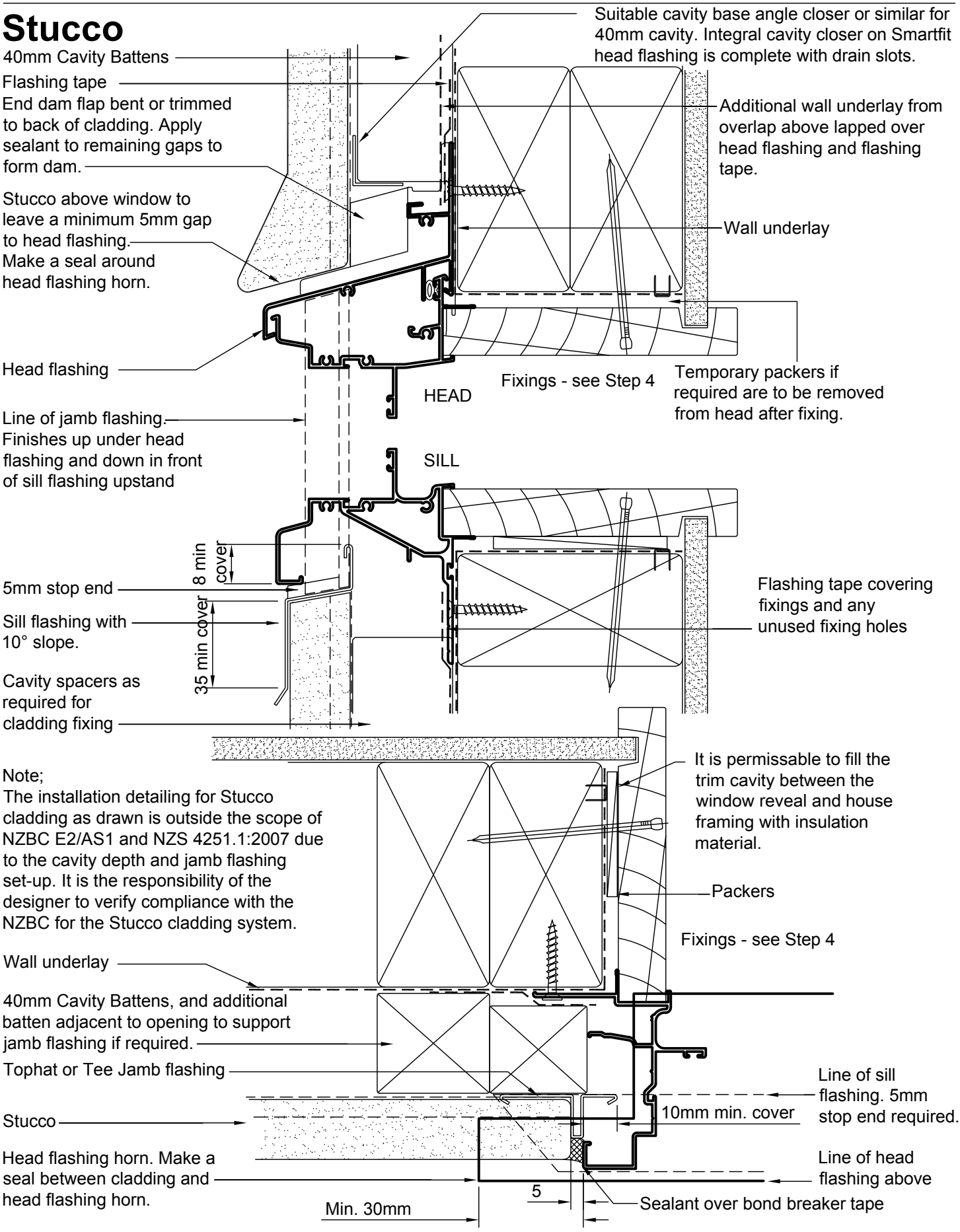
Smartfit Window Installation

altus Updated: N/A Scale: 1:2 REV: -

Stucco



Note;
The installation detailing for Stucco cladding as drawn is outside the scope of NZBC E2/AS1 and NZS 4251.1:2007 due to the cavity depth and jamb flashing set-up. It is the responsibility of the designer to verify compliance with the NZBC for the Stucco cladding system.

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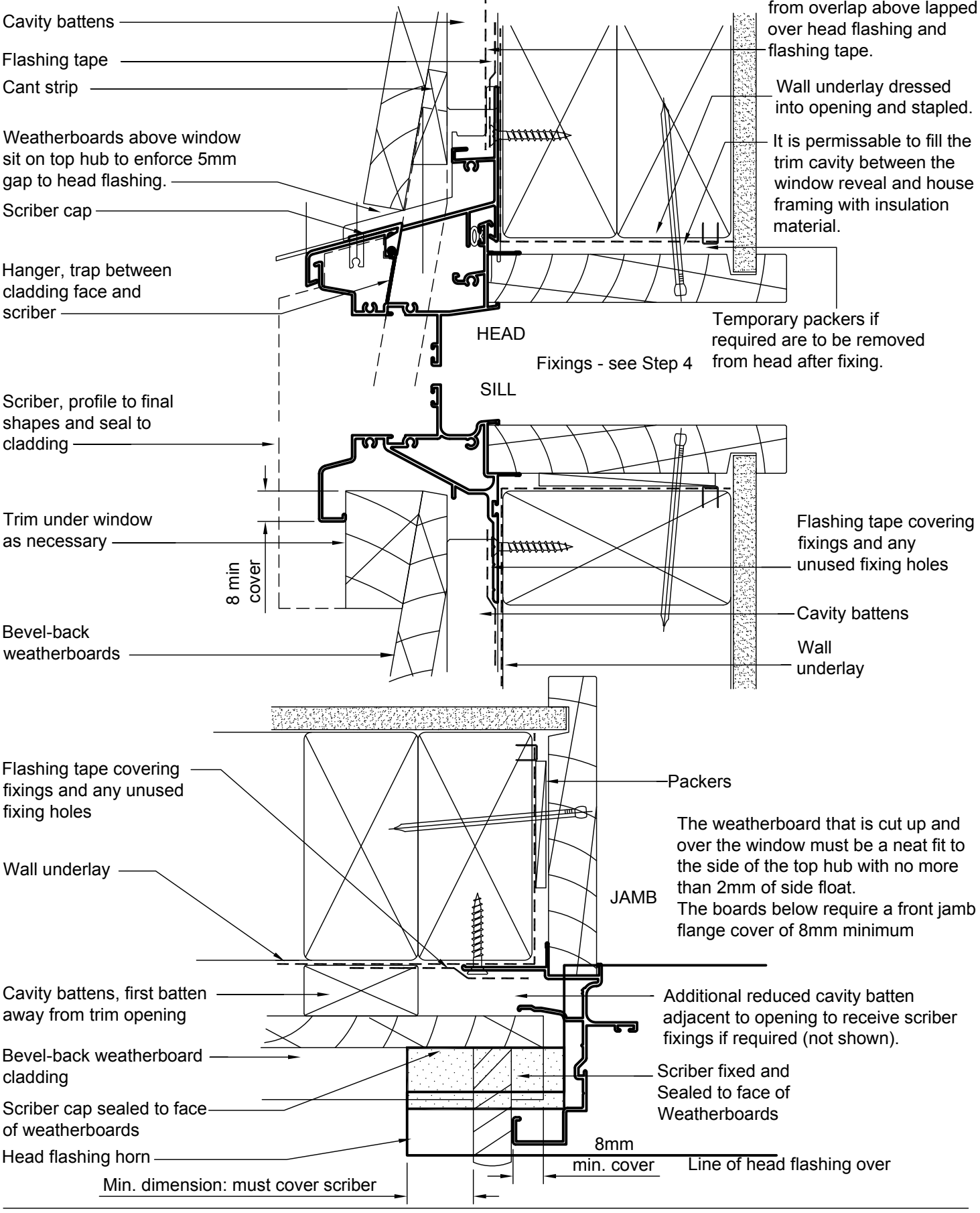
Smartfit Window Installation

Horizontal bevel-back weatherboards



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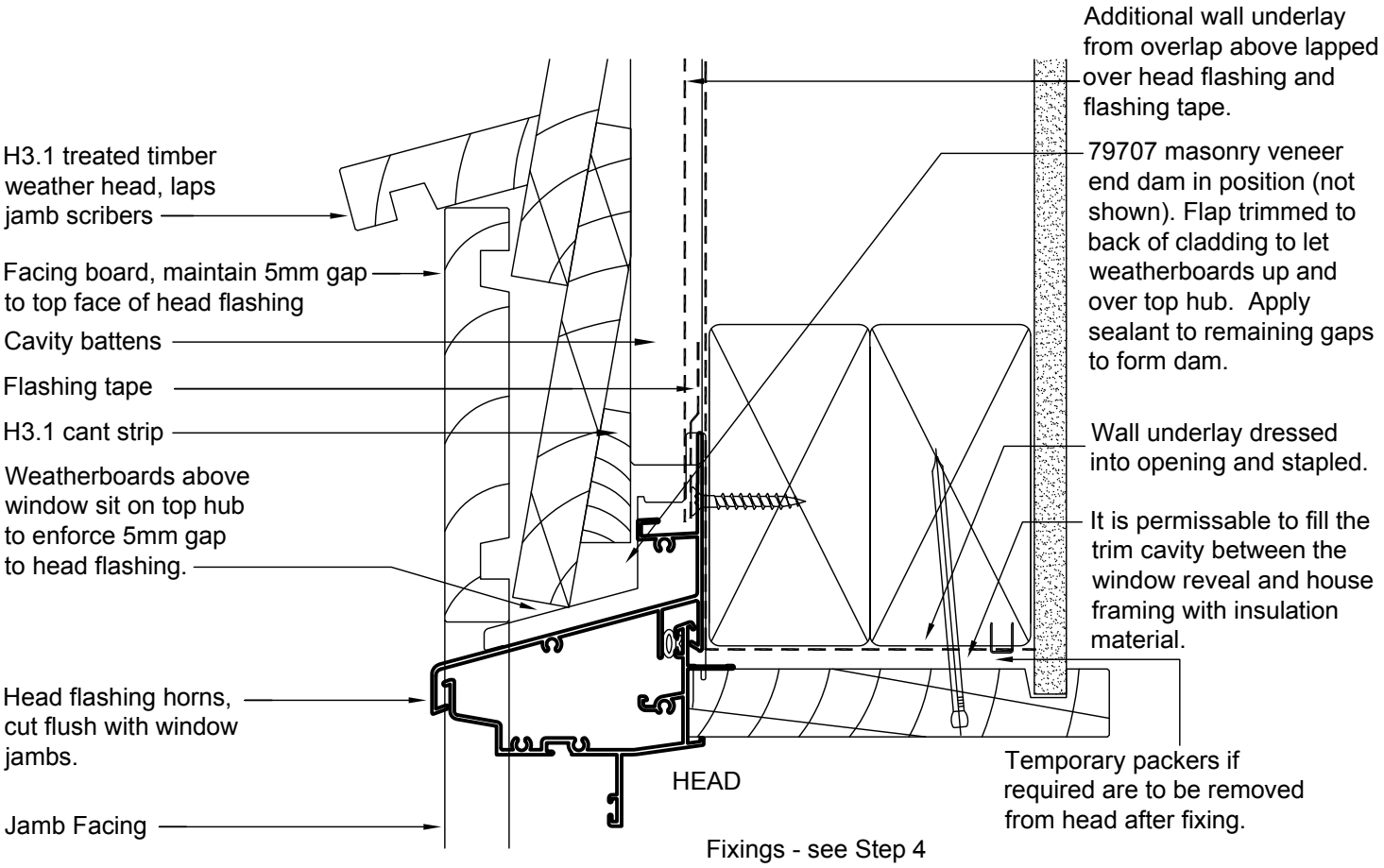
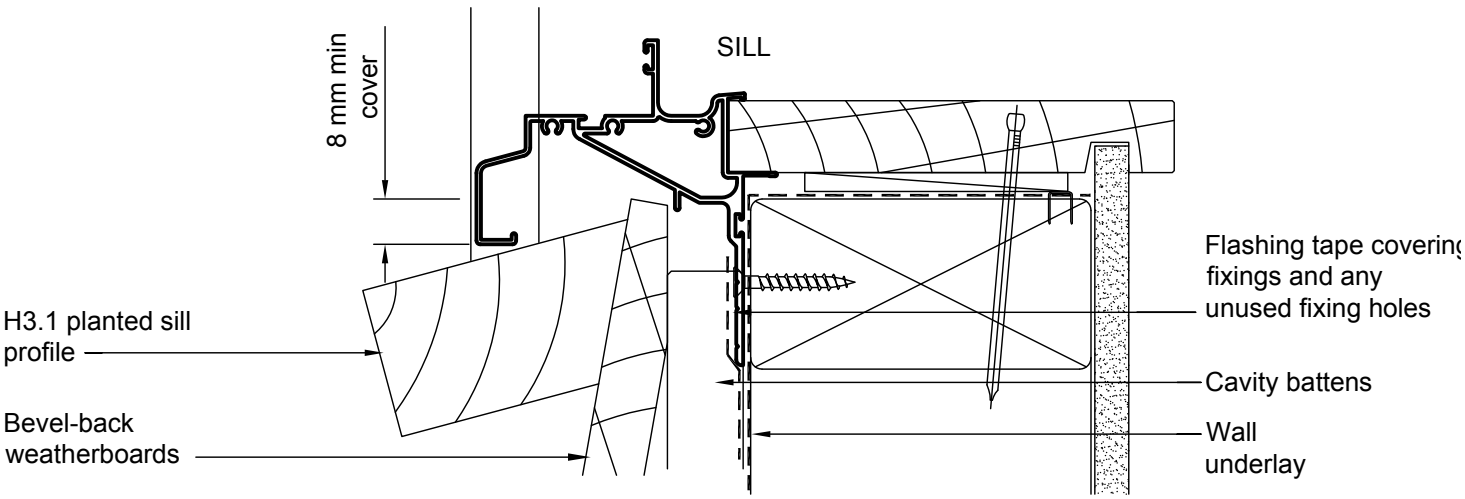
Smartfit Window Installation

Weatherboards with facings

Head and sill detail, with Smartfit head flashing





There are many other different ways to those detailed to achieve wide facings around a Smartfit window or door. Contact FWDS for more information

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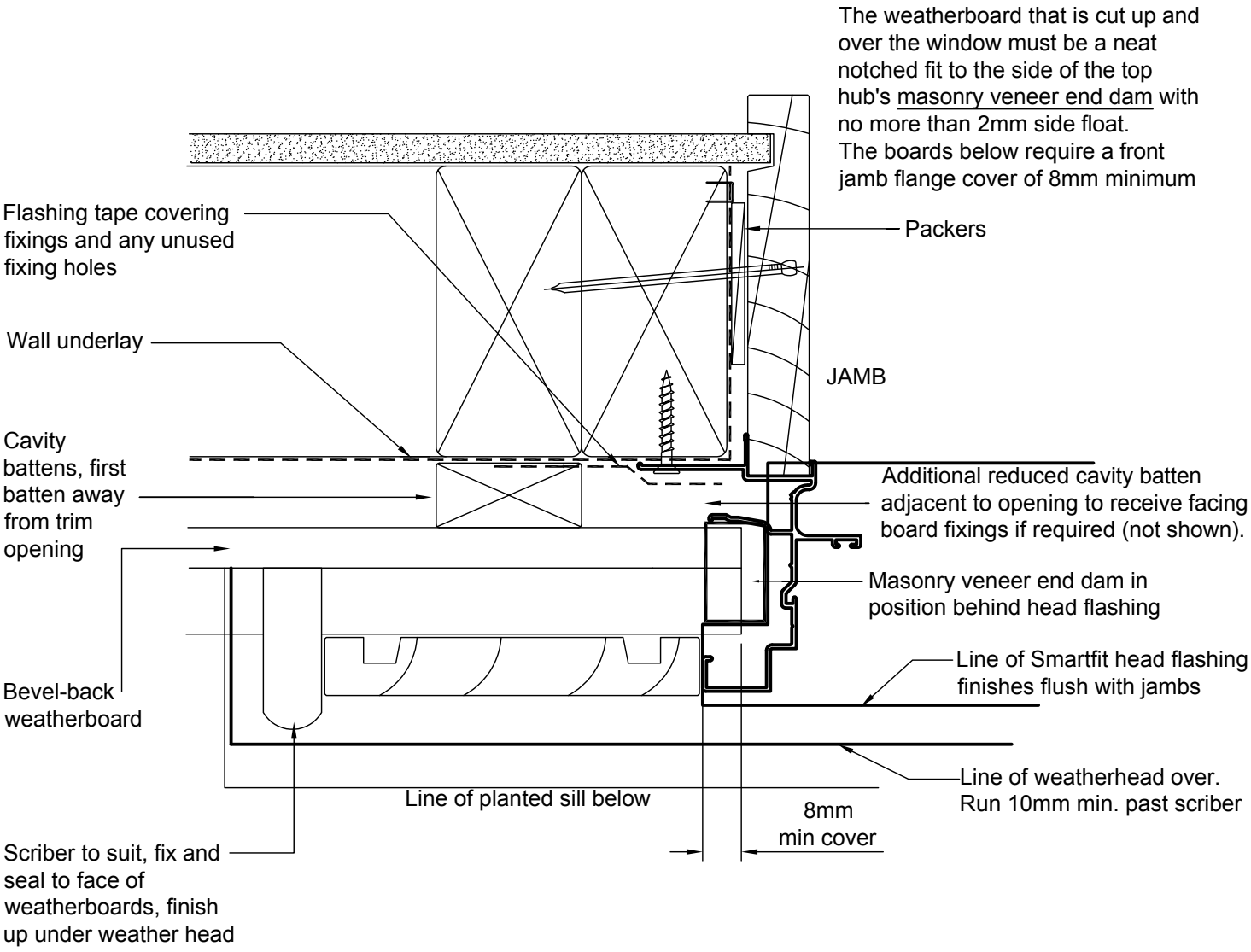
Weatherboards with facings

Jamb Detail, with Smartfit head flashing above



There are many other different ways to those detailed to achieve wide facings around a Smartfit window or door. Contact FWDS for more information

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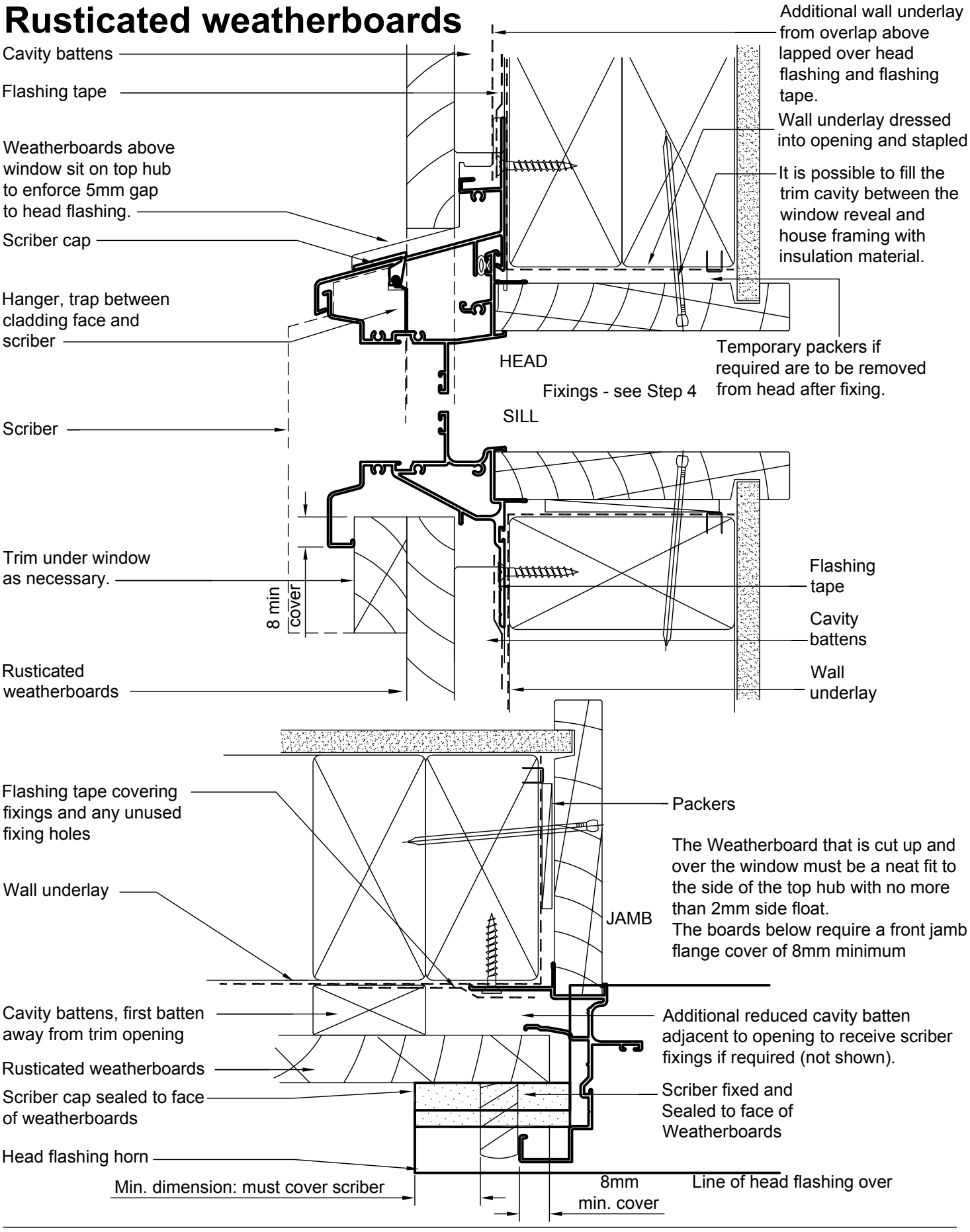
Smartfit Window Installation

Rusticated weatherboards



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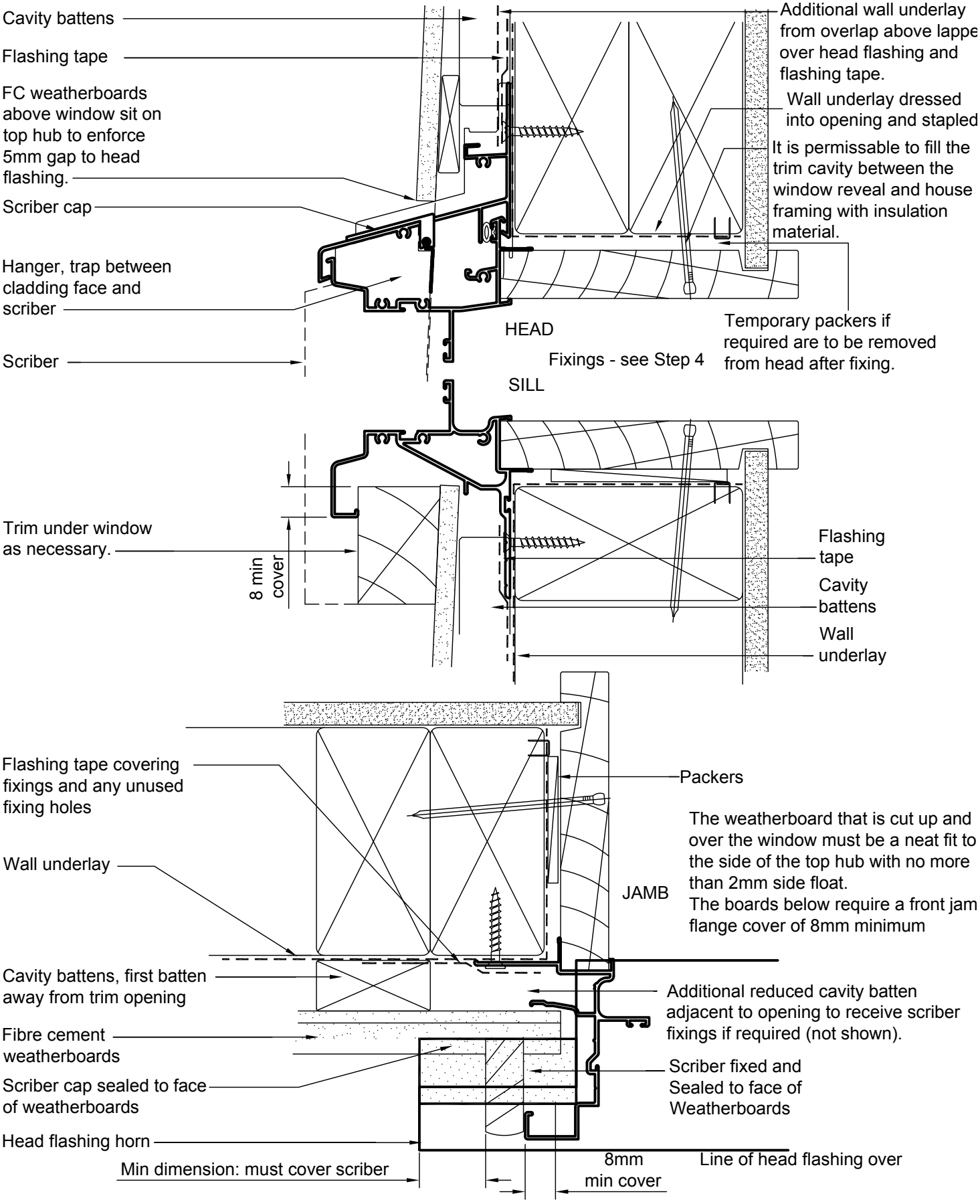
Smartfit Window Installation

Fibre cement weatherboards



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Smartfit Window Installation

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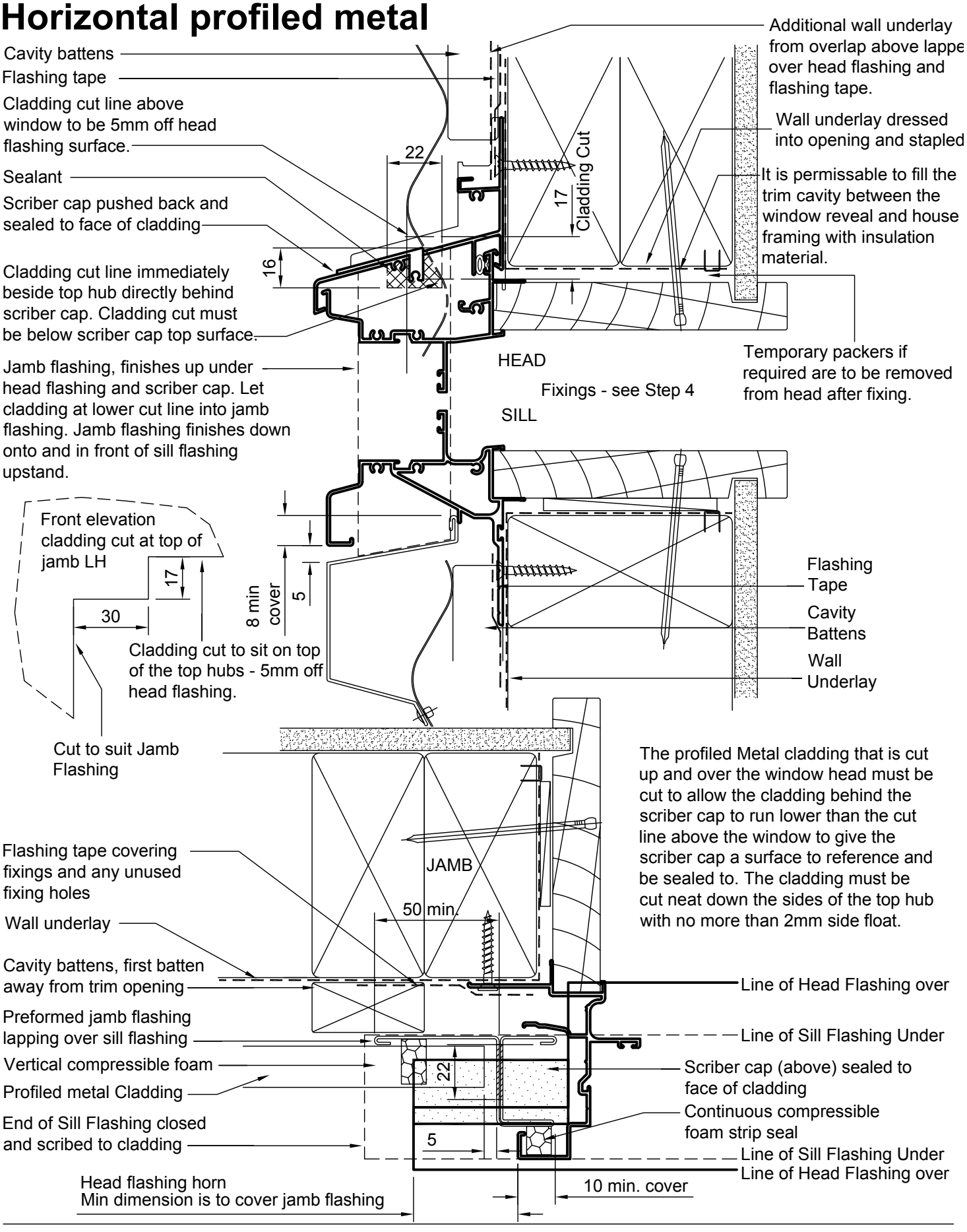
Horizontal profiled metal



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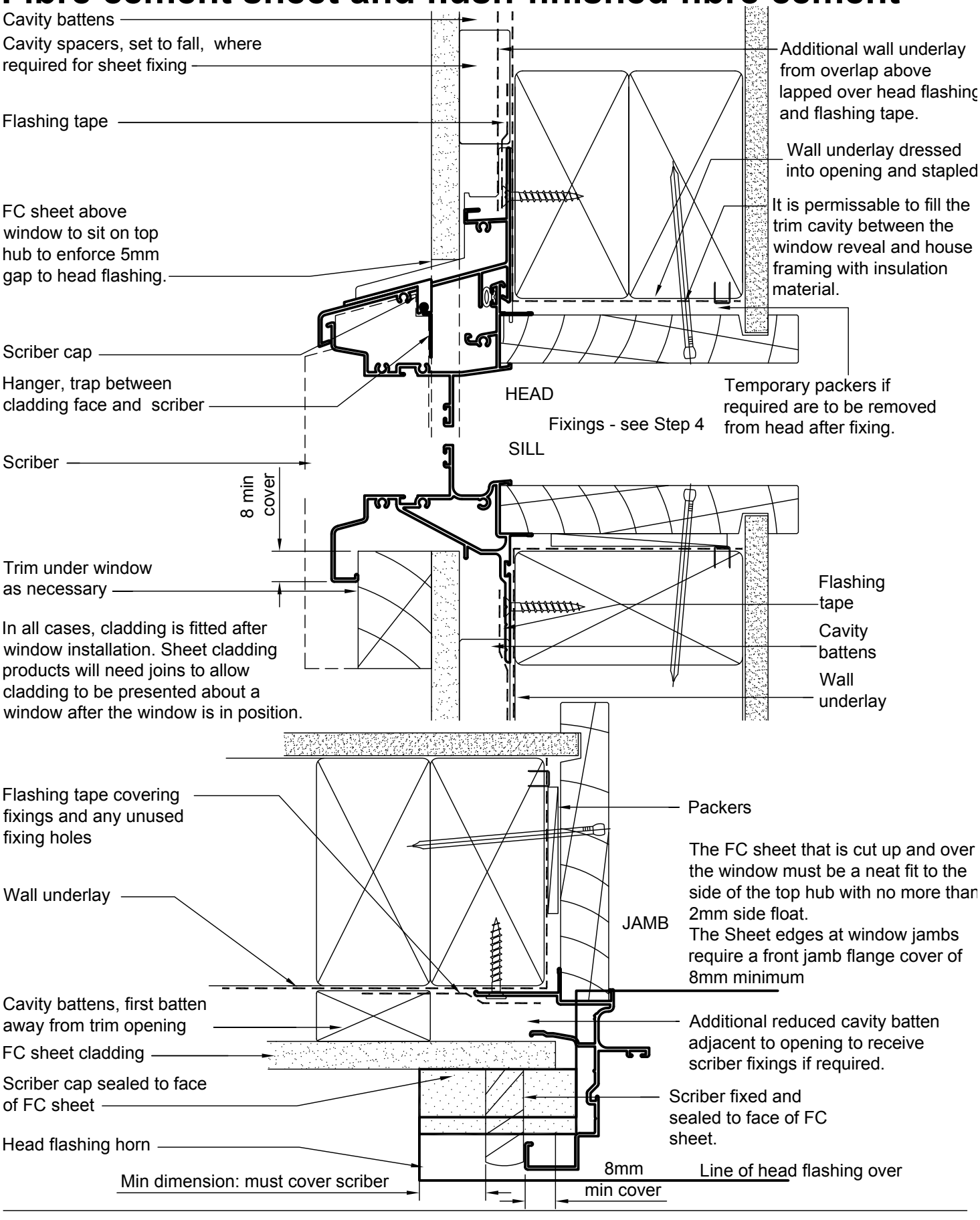
Smartfit Window Installation

Fibre cement sheet and flush-finished fibre cement



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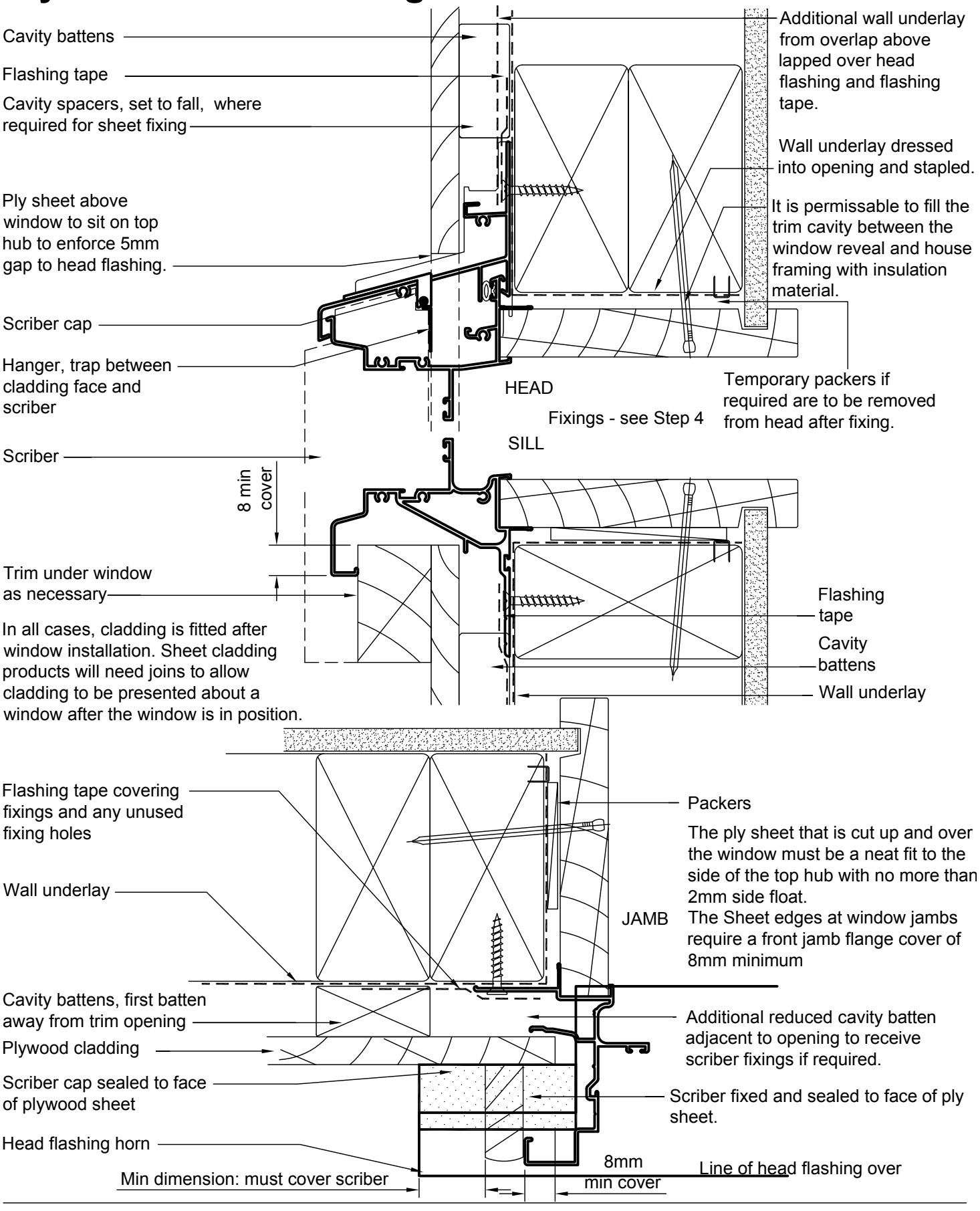
Smartfit Window Installation

Plywood sheet cladding



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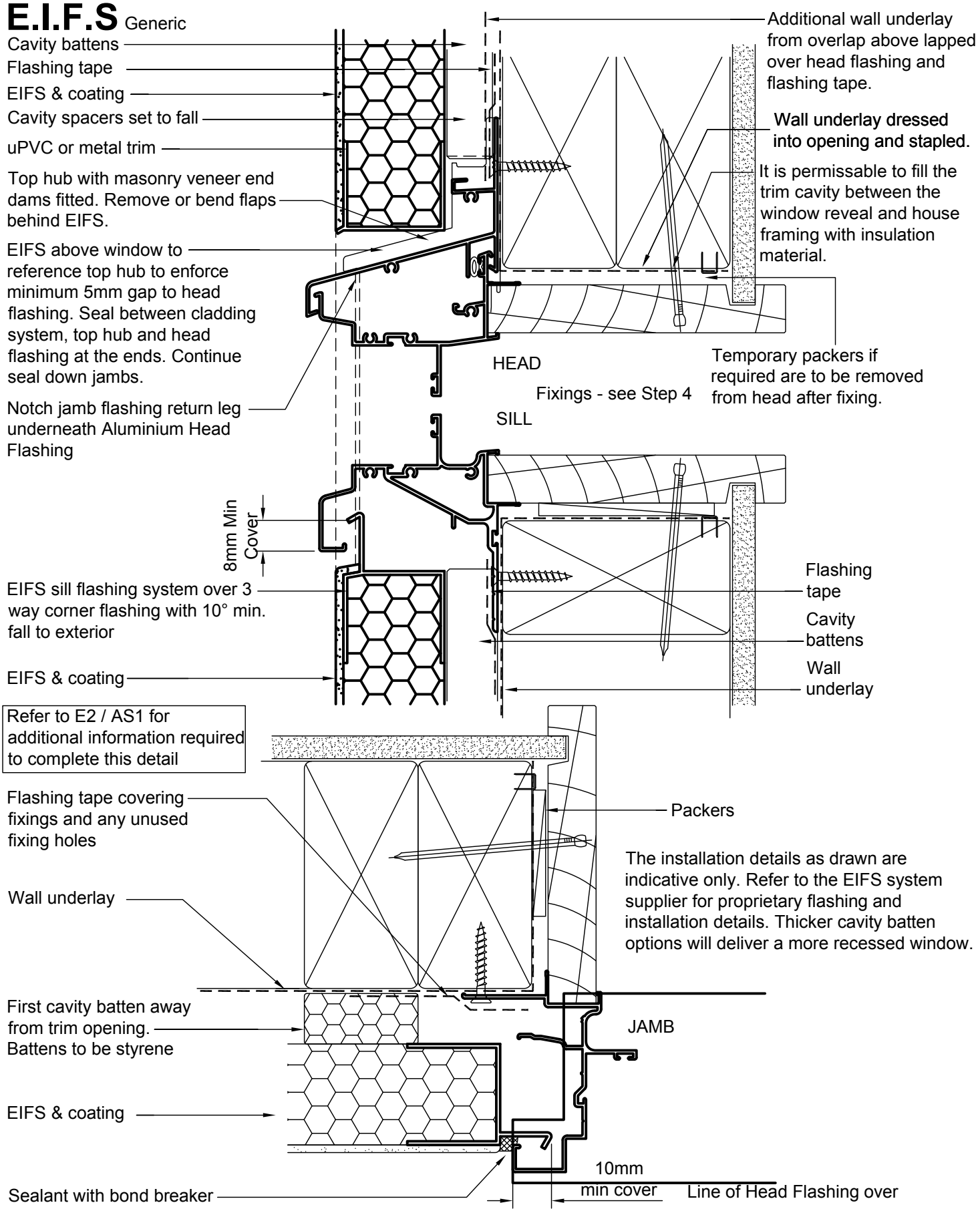
Smartfit Window Installation

altus Updated: N/A Scale: 1:2 REV: -

E.I.F.S Generic



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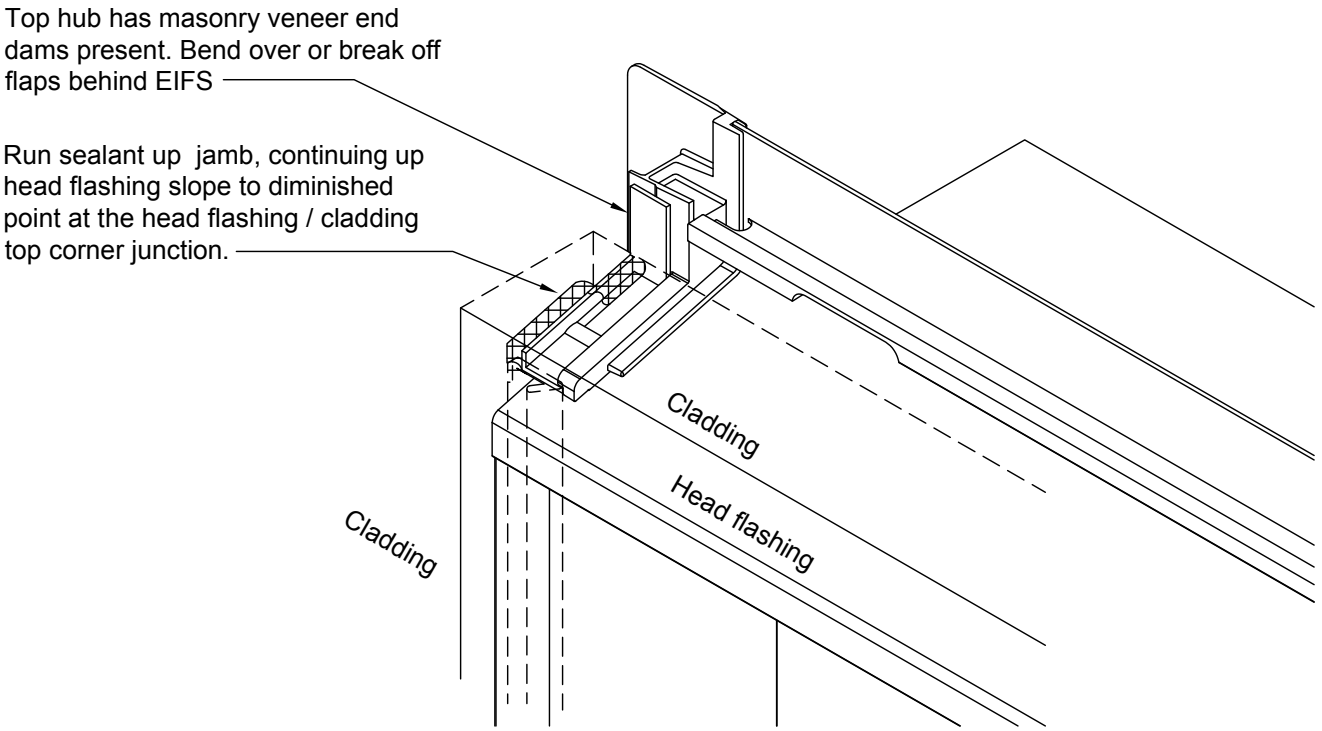
E.I.F.S Top corner sealing detail



HEAD DETAIL TOP LEFT CORNER

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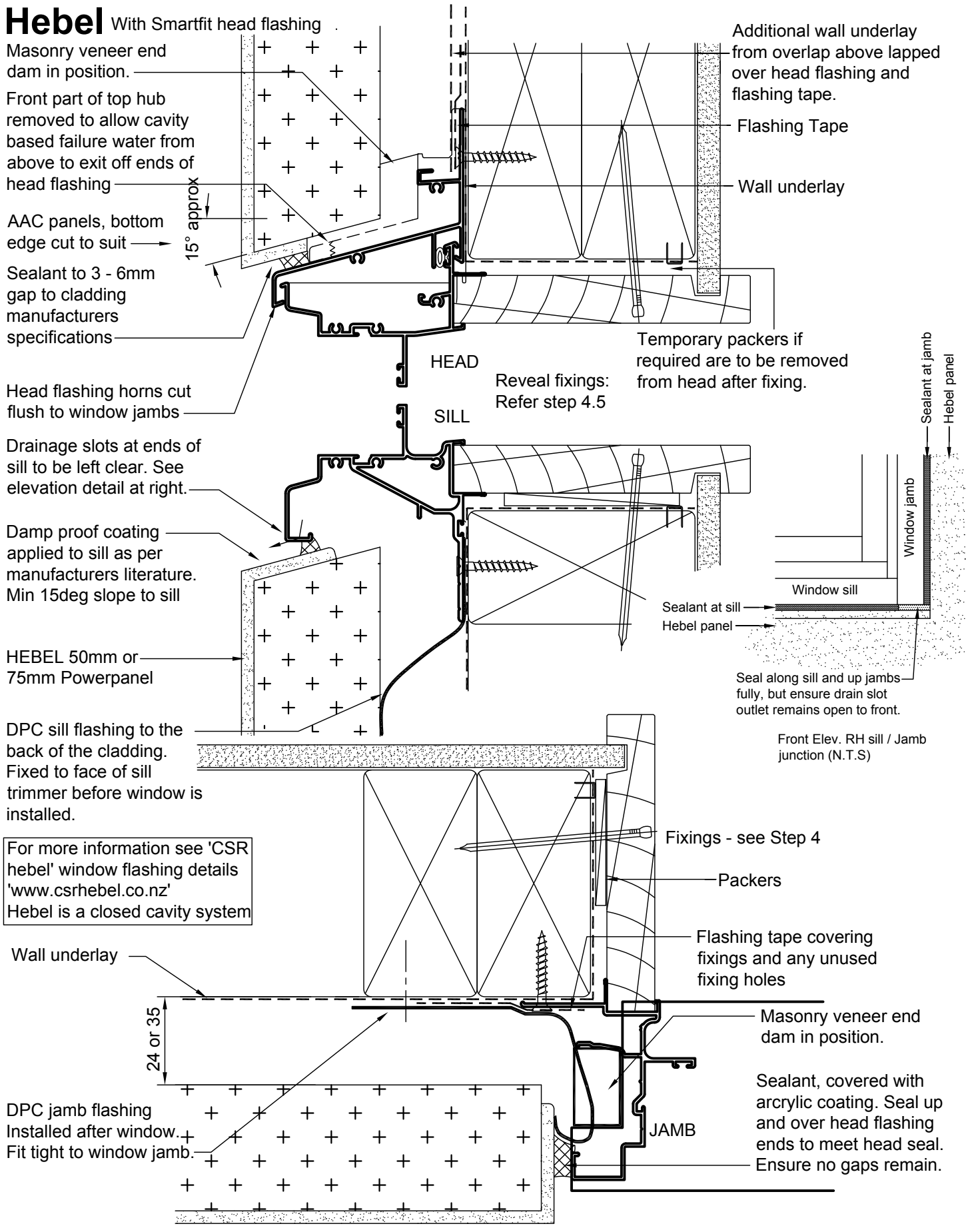
Smartfit Window Installation

altus Updated: N/A Scale: NTS REV: -

Hebel With Smartfit head flashing



For more information see 'CSR hebel' window flashing details 'www.csrhebel.co.nz'
Hebel is a closed cavity system

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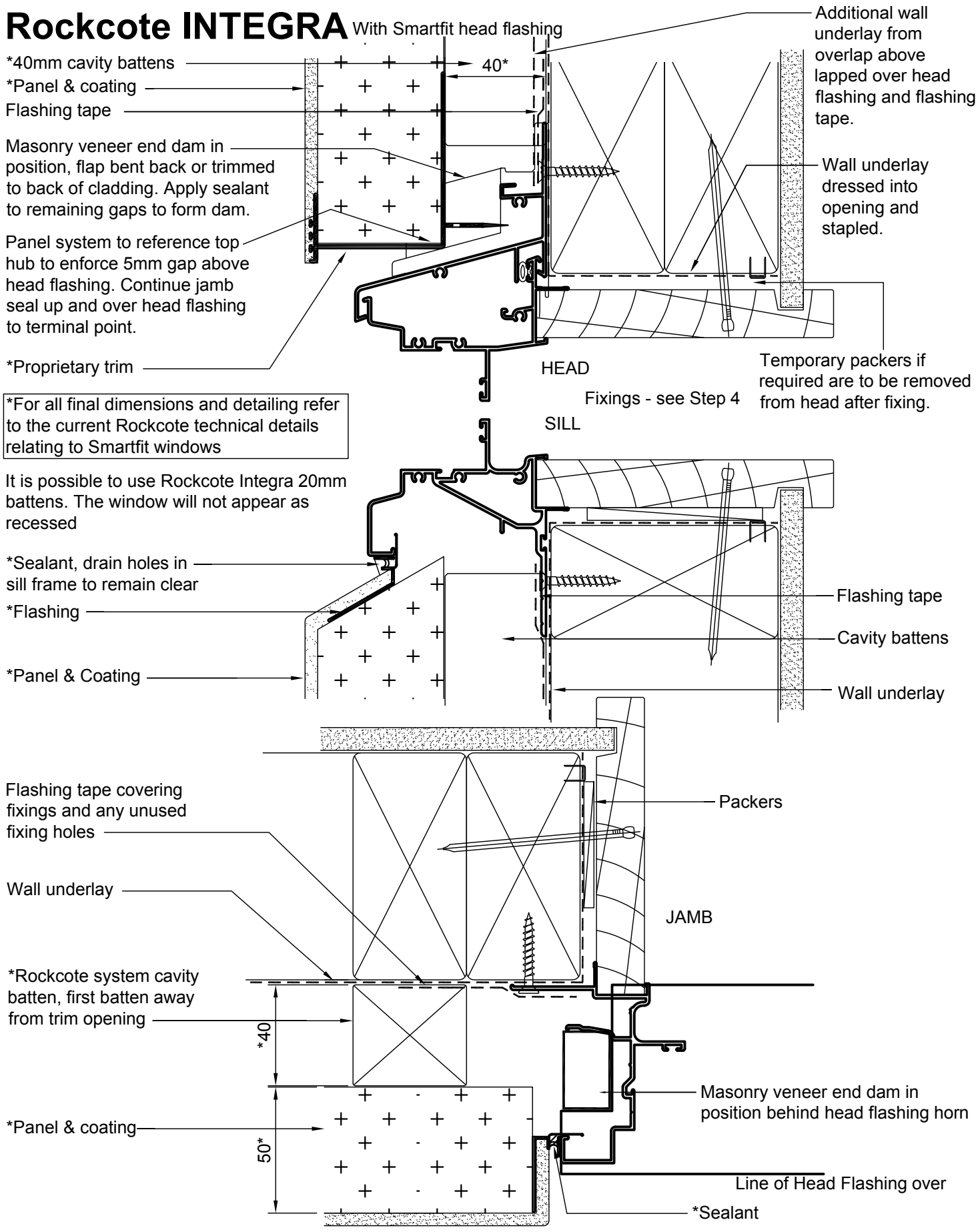
Smartfit Window Installation

altus Updated: N/A Scale: 1:2 REV: -

Rockcote INTEGRA

With Smartfit head flashing



*For all final dimensions and detailing refer to the current Rockcote technical details relating to Smartfit windows

It is possible to use Rockcote Integra 20mm battens. The window will not appear as recessed

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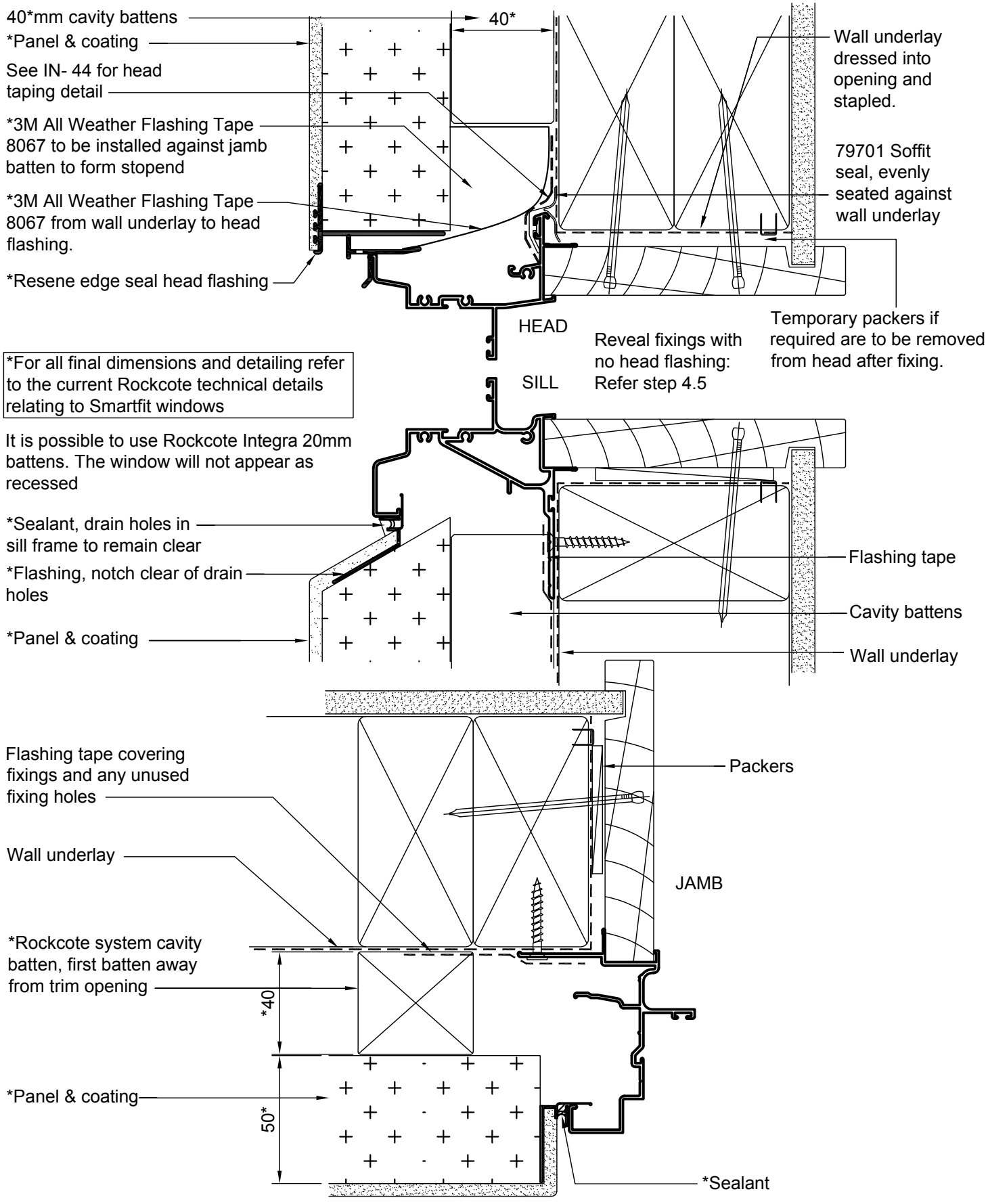
Smartfit Window Installation

altus Updated: N/A Scale: 1:2 REV: -

Rockcote INTEGRA Without Smartfit head flashing



*For all final dimensions and detailing refer to the current Rockcote technical details relating to Smartfit windows

It is possible to use Rockcote Integra 20mm battens. The window will not appear as recessed

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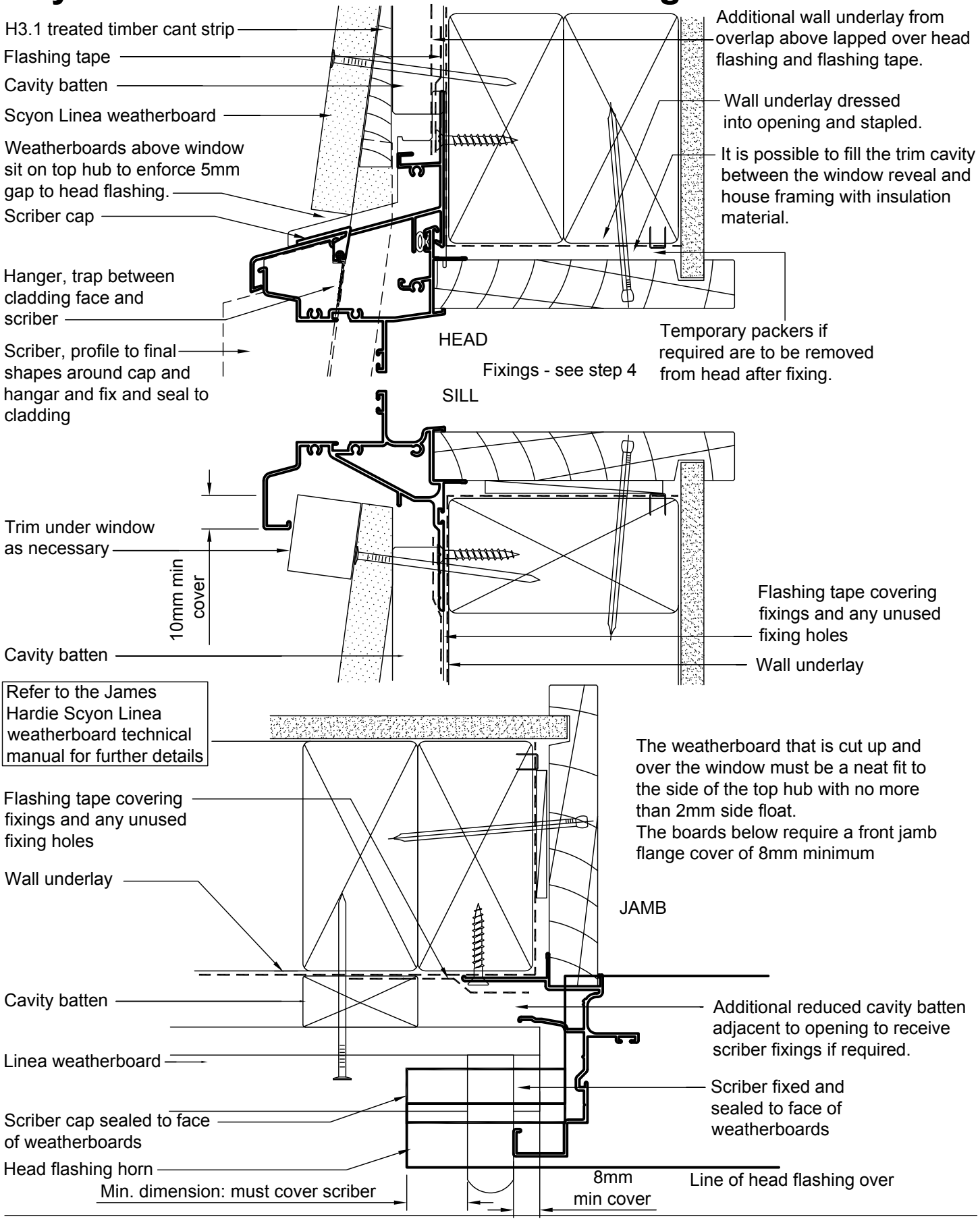
Smartfit Window Installation

Scyon Linea weatherboard - no facings



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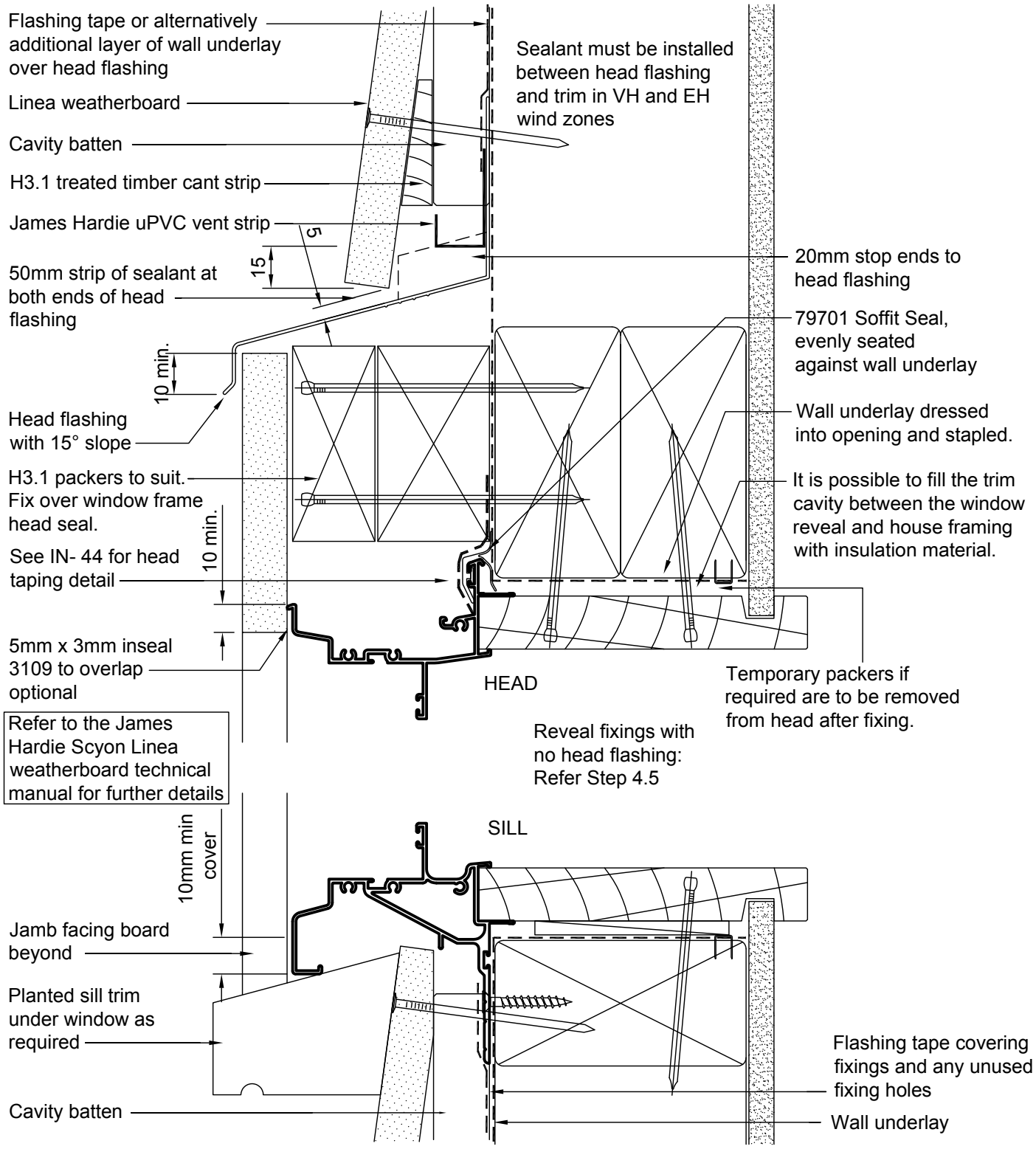
Smartfit Window Installation

Scyon Linea weatherboard - with facings

Head and sill detail



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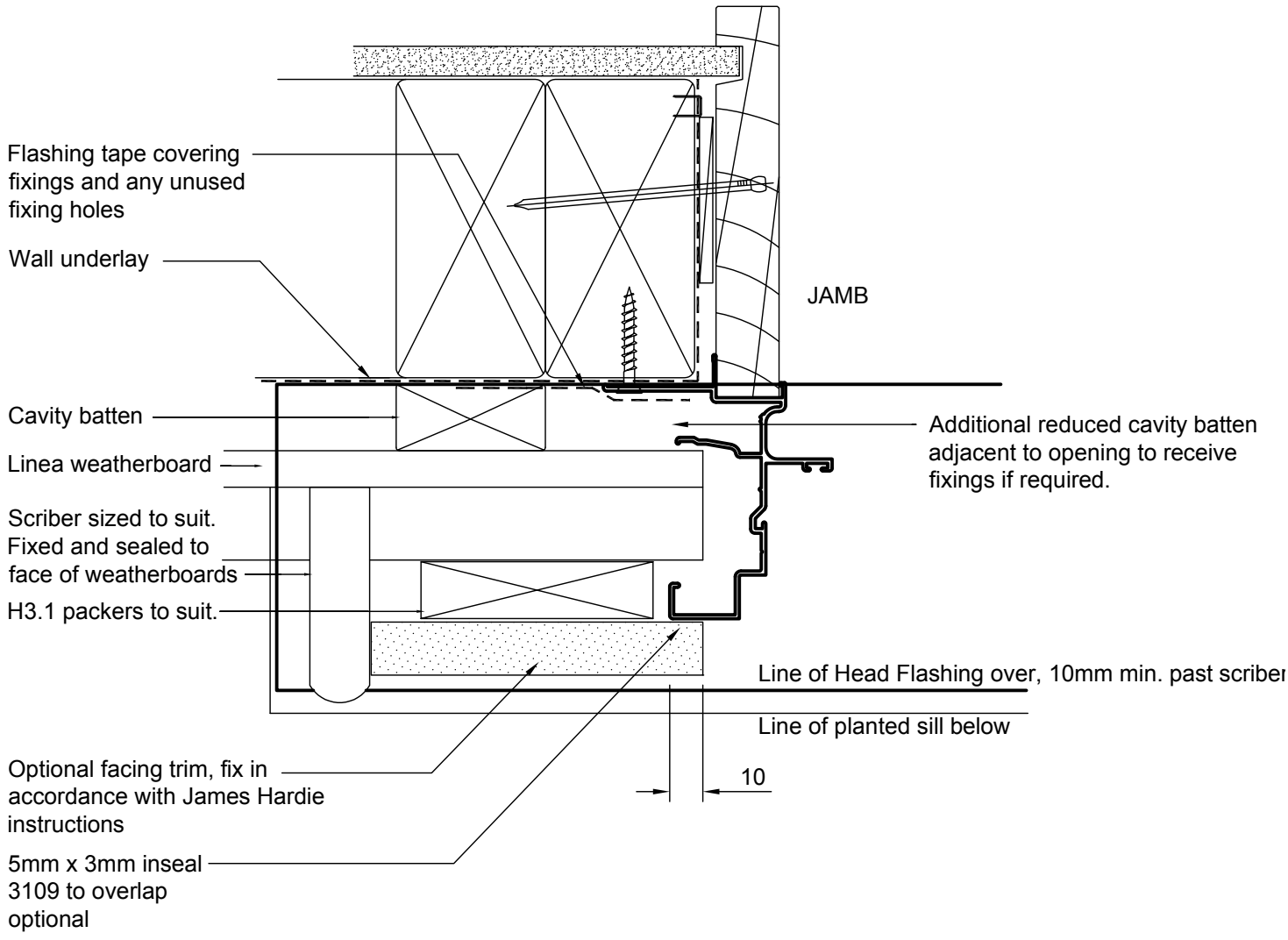
Scyon Linea weatherboard - with facings

Jamb detail

Refer to the James Hardie Scyon Linea weatherboard technical manual for further details



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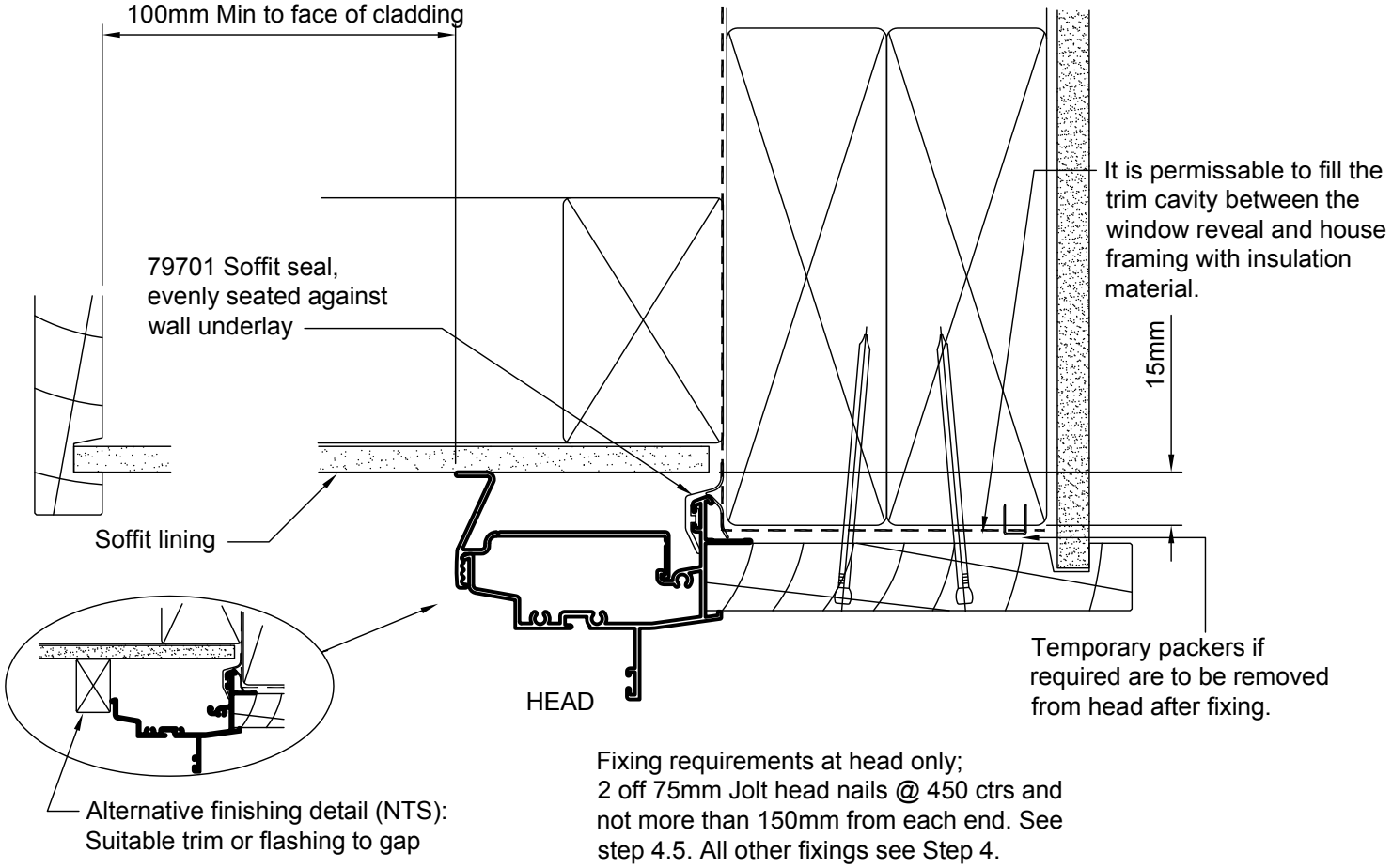
Smartfit Window Installation

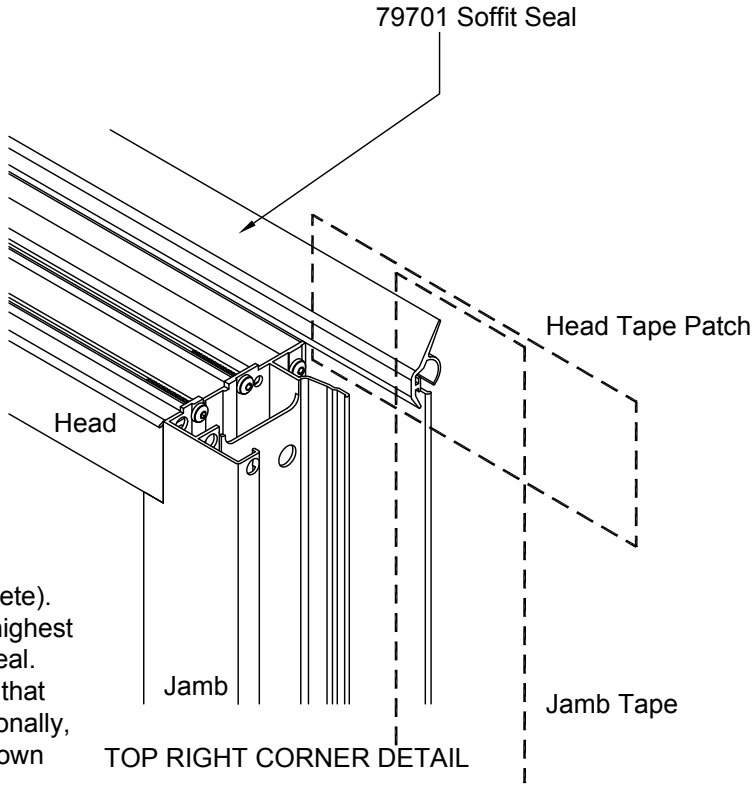
Additional Details - soffit at window / door head



Fixing requirements at head only;
2 off 75mm Jolt head nails @ 450 ctrs and not more than 150mm from each end. See step 4.5. All other fixings see Step 4.

Notes;

- No head flashing is required.
- No top hubs are required.
- No fin fixing available at head.
- No continuous tape along head (where soffit is immediately above).
- Ensure rubber soffit seal contacts wall underlay / soffit evenly.
- Remove packers at head reveal once fixed.
- Primary head fixing is through reveal.
- Fix through front fin for the other three sides of the unit.
- Soffit may be sloping (down from wall).
- Finished soffit is 15mm higher than underside of lintel (Suitable for 19, 25mm reveals). 30mm reveals require a different offset. Agree offset with joinery supplier.



TOP RIGHT CORNER DETAIL

Apply horizontal flashing tape strip to sill first (If not concrete). Run jamb flashing tape over sill strip and up jamb to the highest available point overlapping the ends of the rubber soffit seal. Then overlay a further horizontal tape patch making sure that the ends and sides of the rubber seal are covered. Additionally, this area can be further tape patched or stapled to hold down tape edges.

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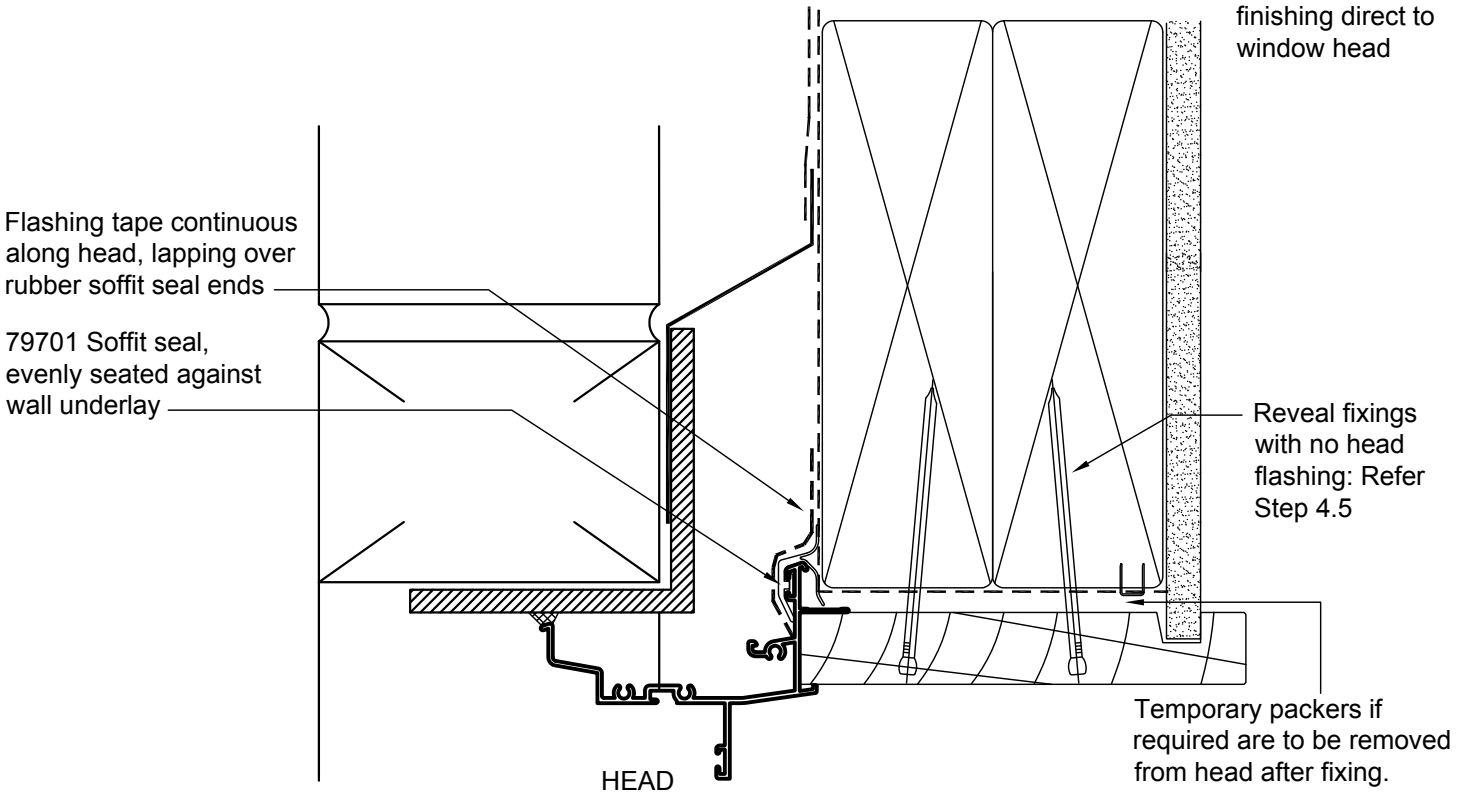
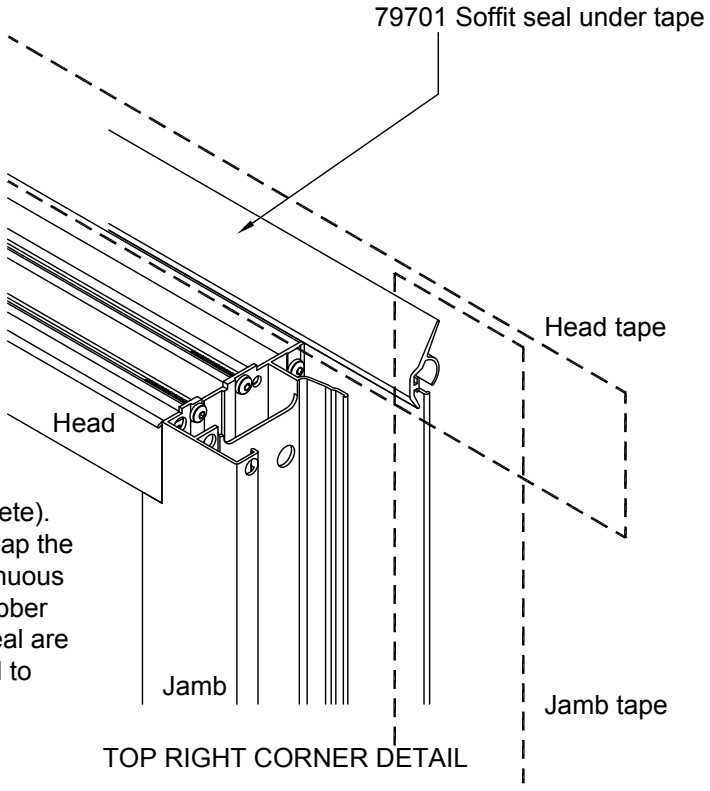
Additional Details - no Smartfit head flashing



Fixing requirements at head only;
2 off 75mm Jolt Head Nails @ 450 ctrs
and not more than 150mm from each end.
All other fixings see Step 4.

Notes;

- No head flashing is required.
- No top hubs are required.
- No fin fixing available at head.
- Tape is required along the head (where there is not a soffit immediately above).
- Ensure rubber soffit seal contacts wall underlay / soffit evenly.
- Remove packers at head reveal once fixed.
- Primary head fixing is through reveal.
- Fix through front flange for the other three sides of the unit.



TOP RIGHT CORNER DETAIL

Apply horizontal flashing tape strip to sill first (If not concrete). Run jamb flashing tape over sill strip and up jamb to overlap the ends of the rubber soffit seal.Then overlay a further continuous horizontal tape strip along the window frame head and rubber seal making sure that the ends and sides of the rubber seal are covered. Additionally, further tape patches can be applied to hold down tape edges.

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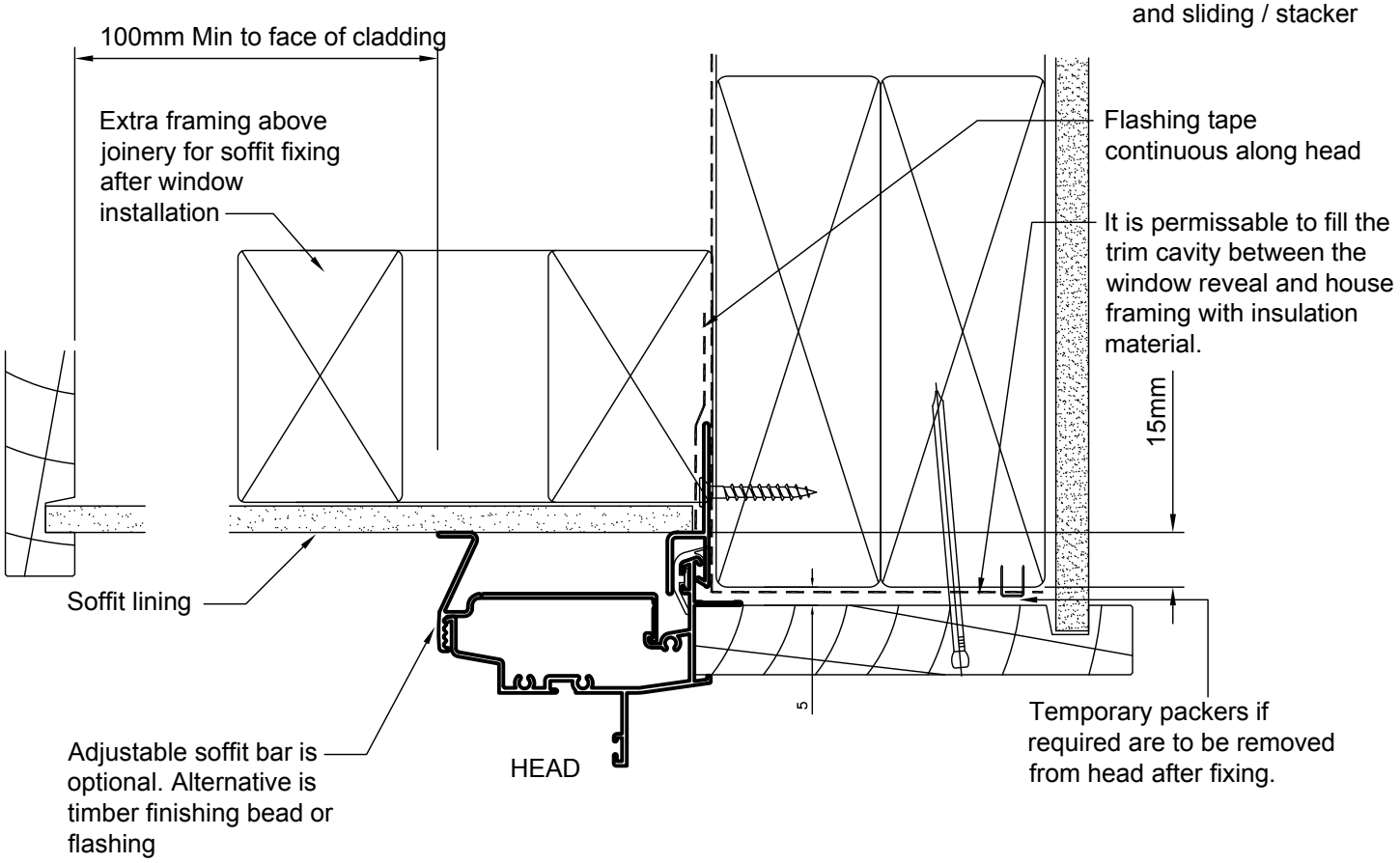
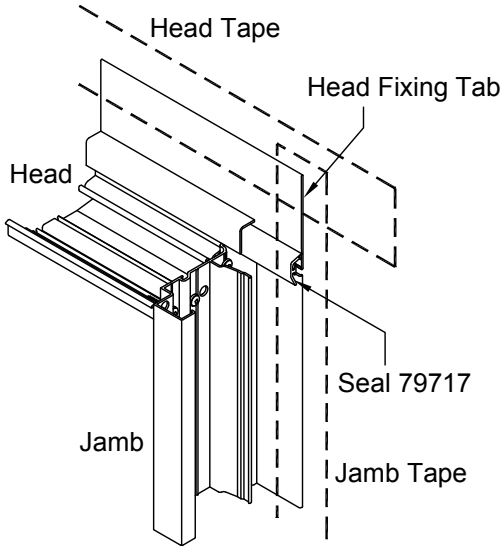
Additional Details - Soffit fitted after joinery

All frames except bifold and sliding / stacker



Apply horizontal flashing tape strip to sill first (If not concrete). Run jamb flashing tape over sill strip and up jamb to overlap the ends of the rubber seal and continue to the top of the head fixing tab.Then overlay a further continuous horizontal tape strip along the window frame head fixing tab making sure that the ends and sides of the rubber seal, head fixing tab and jamb are covered. Additionally, further tape patches can be applied to hold down tape edges.

Note;
This detail can be used when the joinery units are to finish up to a soffit but there is no soffit construction present at joinery installation time. This could occur where wall panels complete with joinery are prefabricated off site and soffit construction is added later. Full head taping of the unit is possible with this method. Apply further tape patches or wall underlay aprons above to prevent water ingress during construction time if required. The reveal fixing is no longer the primary structural fixing as described in step 4.5 and detailed in IN-43 so can be unspecified.



TOP RIGHT CORNER TAPING DETAIL

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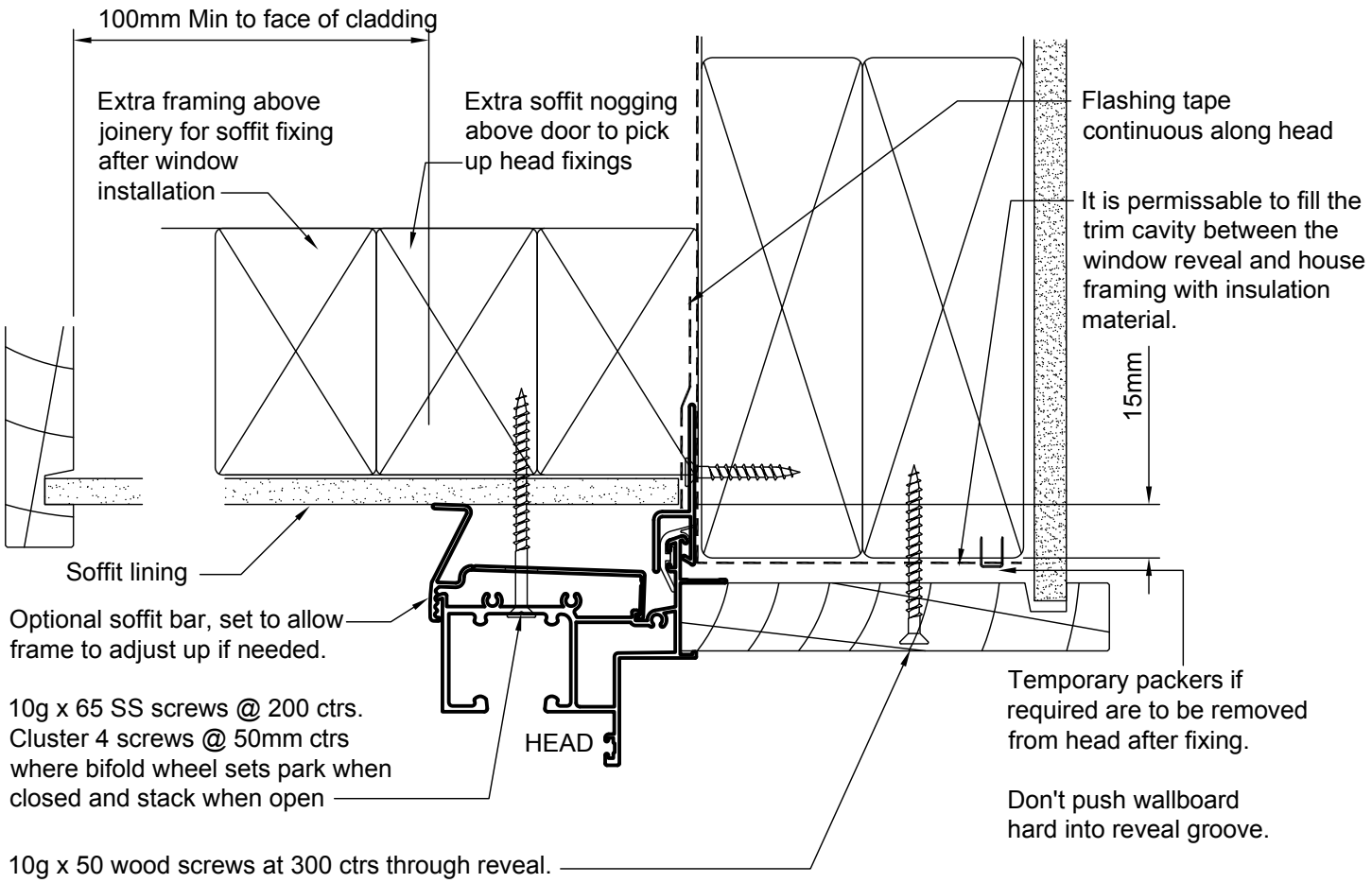
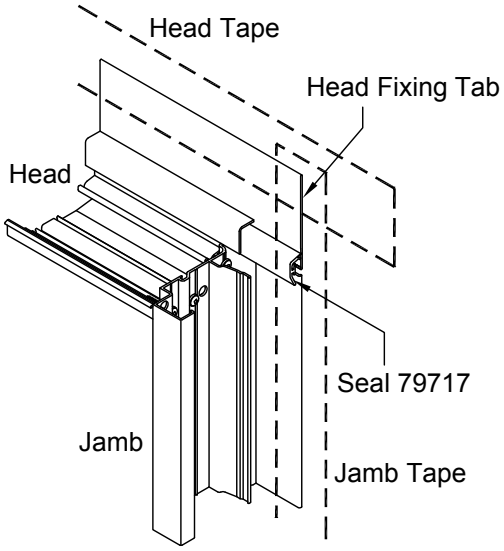
Smartfit Window Installation

Additional Details - Soffit fitted after joinery Bifold frames



Apply horizontal flashing tape strip to sill first (If not concrete). Run jamb flashing tape over sill strip and up jamb to overlap the ends of the rubber seal and continue to the top of the head fixing tab.Then overlay a further continuous horizontal tape strip along the window frame head fixing tab making sure that the ends and sides of the rubber seal, head fixing tab and jamb are covered. Additionally, further tape patches can be applied to hold down tape edges.

Note;
This detail can be used when the joinery units are to finish up to a soffit but there is no soffit construction present at joinery installation time. This could occur where wall panels complete with joinery are prefabricated off site and soffit construction is added later. Full head taping of the unit is possible with this method.



TOP RIGHT CORNER TAPING DETAIL

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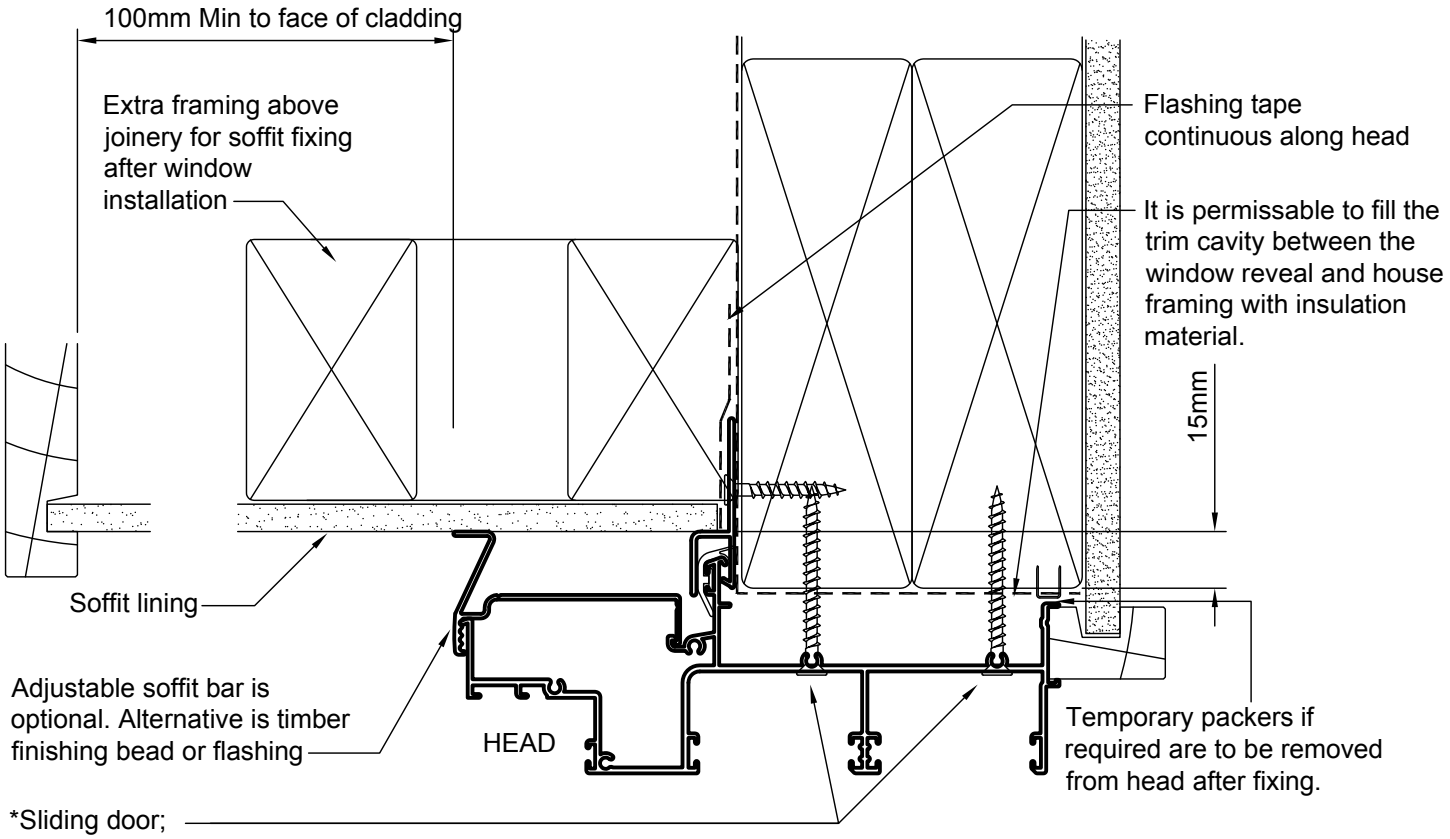
Smartfit Window Installation

Additional Details - Soffit fitted after joinery

Slider / Stacker frames

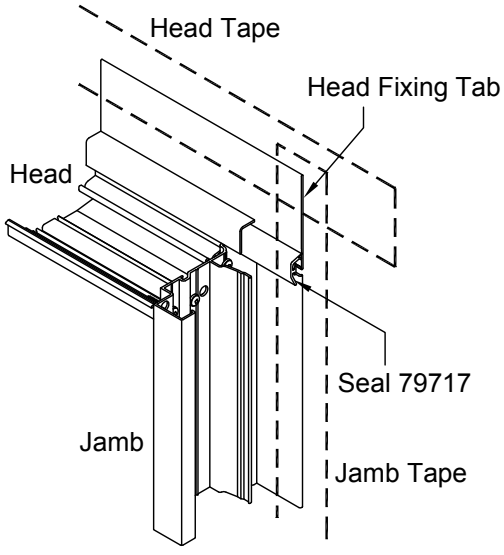


*Stacker door;
2 off, 10g x 50 wood screws @
450 ctrs through frame pockets.

Apply horizontal flashing tape strip to sill first (If not concrete). Run jamb flashing tape over sill strip and up jamb to overlap the ends of the rubber seal and continue to the top of the head fixing tab.Then overlay a further continuous horizontal tape strip along the window frame head fixing tab making sure that the ends and sides of the rubber seal, head fixing tab and jamb are covered. Additionally, further tape patches can be applied to hold down tape edges.

Note;
This detail can be used when the joinery units are to finish up to a soffit but there is no soffit construction present at joinery installation time. This could occur where wall panels complete with joinery are prefabricated off site and soffit construction is added later. Full head taping of the unit is possible with this method.

*A Sliding or Stacker door frame head will need extra head fixing if it is spanning any significant distance between mullions and jambs unsupported. A Stacker door has no available reveal fixing room so frame fixings are necessary.



TOP RIGHT CORNER TAPING DETAIL

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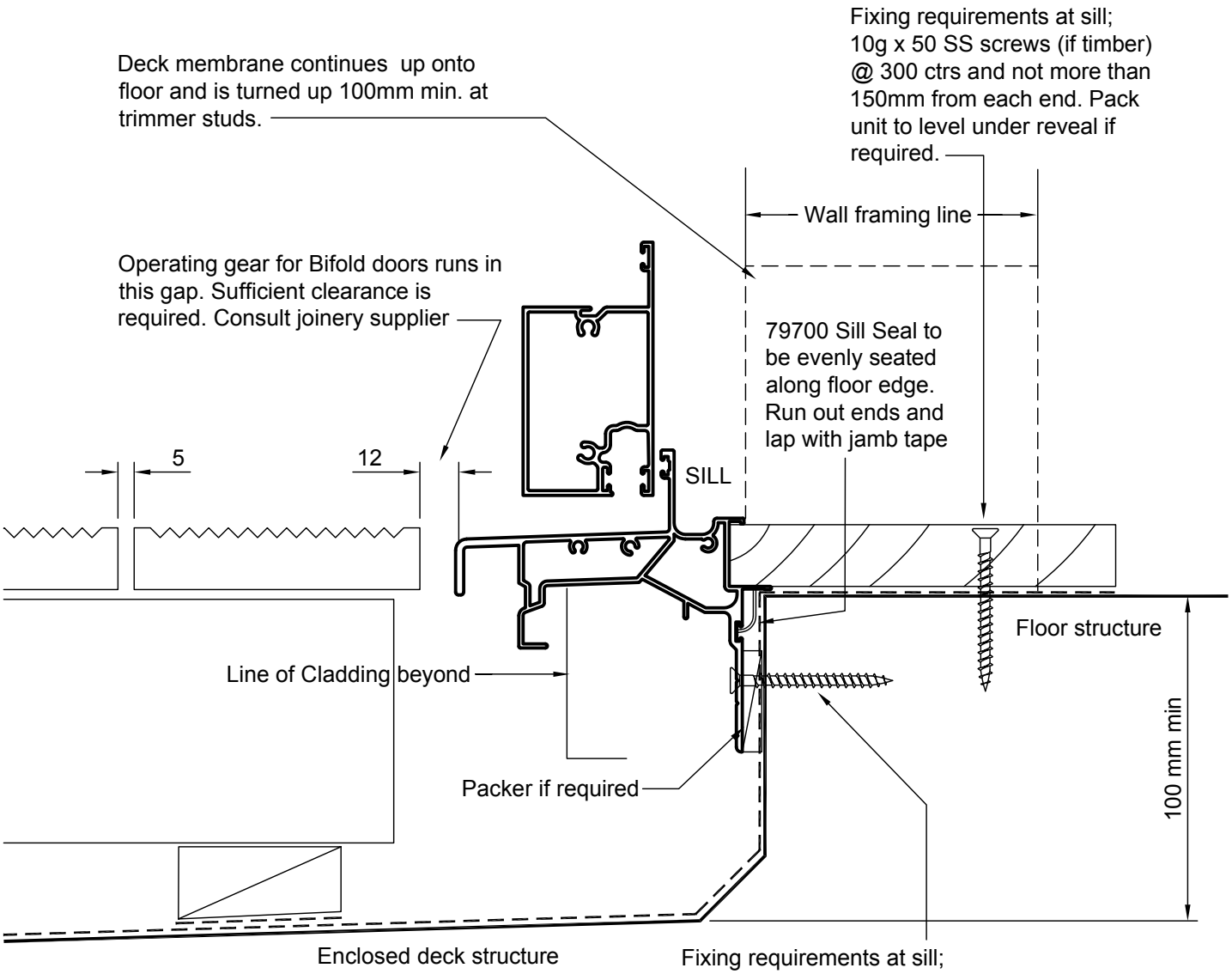
Smartfit Window Installation

Additional Details - full height unit to enclosed decks



Note;
For full height joinery units finishing to floor, the wall framing must be at least flush or protrude out beyond the floor edge.

Note;
It is not important to maintain a 5mm nominal gap between reveal and floor or framing. Provide appropriate separation between the reveal, any aluminum member and concrete.

Note;
Check concrete slab edge (if concrete floor and deck) is smooth and even, devoid of spill and boxing ridges. Any substantial edge breakouts that could affect sill sealing must be reinstated. If the rubber seal is prevented from making a suitable seal against the edge of the slab, a wet seal may be used between sill support bar vertical fin and slab edge. This includes situations where the use of a rigid air barrier effectively pushes the sill fixing fin further from the floor edge. Run the rubber sill seal out just beyond the furthermost edges of the support bar fin. Ensure the jamb flashing tapes lap the ends of the sill fin and seal. Deck membrane to be extended up under sill and sill reveal.

Details to be read in conjunction with NZBC E2/AS1, Figure 17A "Level thresholds for enclosed decks".

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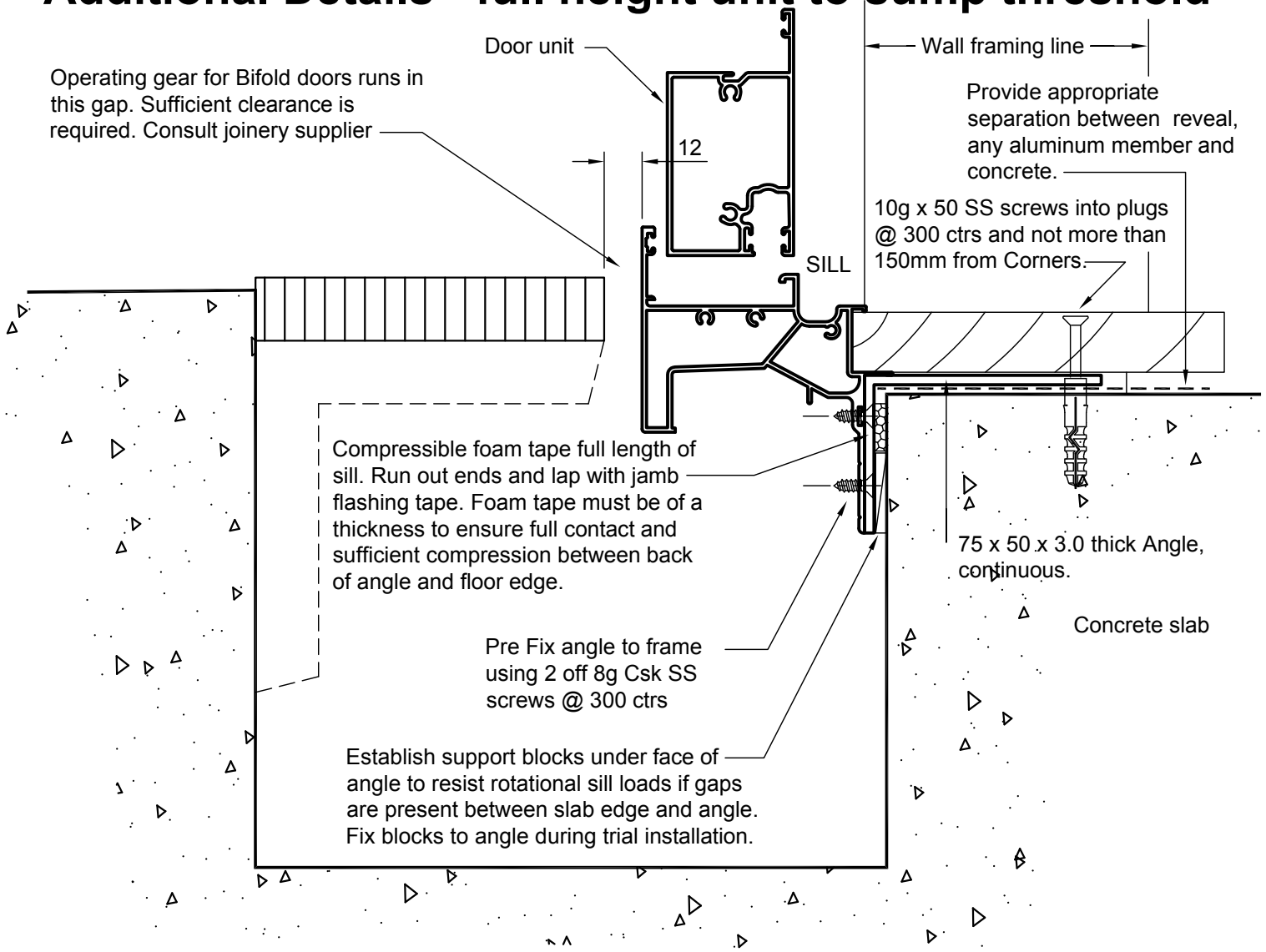
Smartfit Window Installation

Additional Details - full height unit to sump threshold



Note;
For full height joinery units finishing to floor, the wall framing must be at least flush or protrude out beyond the floor edge.

Note;
It is not important to maintain a 5mm nominal gap between reveal and floor or framing. Provide DPC or similar separation between reveal, any aluminium member and concrete.

There is no practical sill support bar fixing available through the front of the support bar as shown in Fig 17B of NZBC E2/AS1. Use additional angle fix method as shown. Airseal is completed using single sided compressible foam seal tape behind the angle. Ensure a good seal is made.

Note;
Check concrete slab edge is smooth and even, devoid of spill and boxing ridges. Any substantial edge breakouts that could affect sill sealing must be reinstated. If the rubber seal is prevented from making a suitable seal against the edge of the slab, a wet seal may be used between sill support bar vertical fin and slab edge. This includes situations where the use of a rigid air barrier effectively pushes the sill fixing fin further from the floor edge. Run the rubber sill seal out just beyond the furthermost edges of the support bar fin. Ensure the jamb flashing tapes lap the ends of the sill fin and seal.

Details to be read in conjunction with NZBC E2/AS1, Figure 17B "Level thresholds for ground level".

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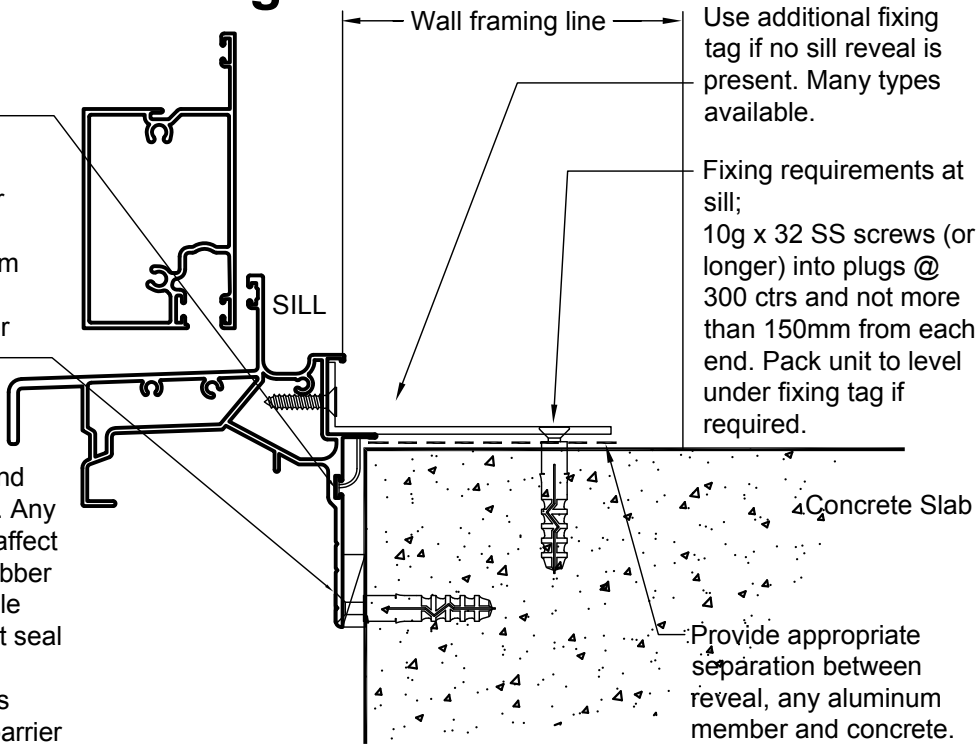
Smartfit Window Installation

Additional Details - full height unit to floor

79700 Sill Seal to be evenly seated along floor edge. Run out ends and lap with jamb tape

Fixing requirements at sill;
10g x 32 SS screws (or longer if sill bar is packed off floor edge) into plugs @ 300 ctrs and not more than 150mm from Corners
Note: Use bottom row of fixing holes for expansive type fasteners.

Note;
Check concrete slab edge is smooth and even, devoid of spill and boxing ridges. Any substantial edge breakouts that could affect sill sealing must be reinstated. If the rubber seal is prevented from making a suitable seal against the edge of the slab, a wet seal may be used between sill support bar vertical fin and slab edge. This includes situations where the use of a rigid air barrier effectively pushes the sill fixing fin further from the floor edge. Run the rubber sill seal out just beyond the furthermost edges of the support bar fin. Ensure the jamb flashing tapes lap the ends of the sill fin and seal.

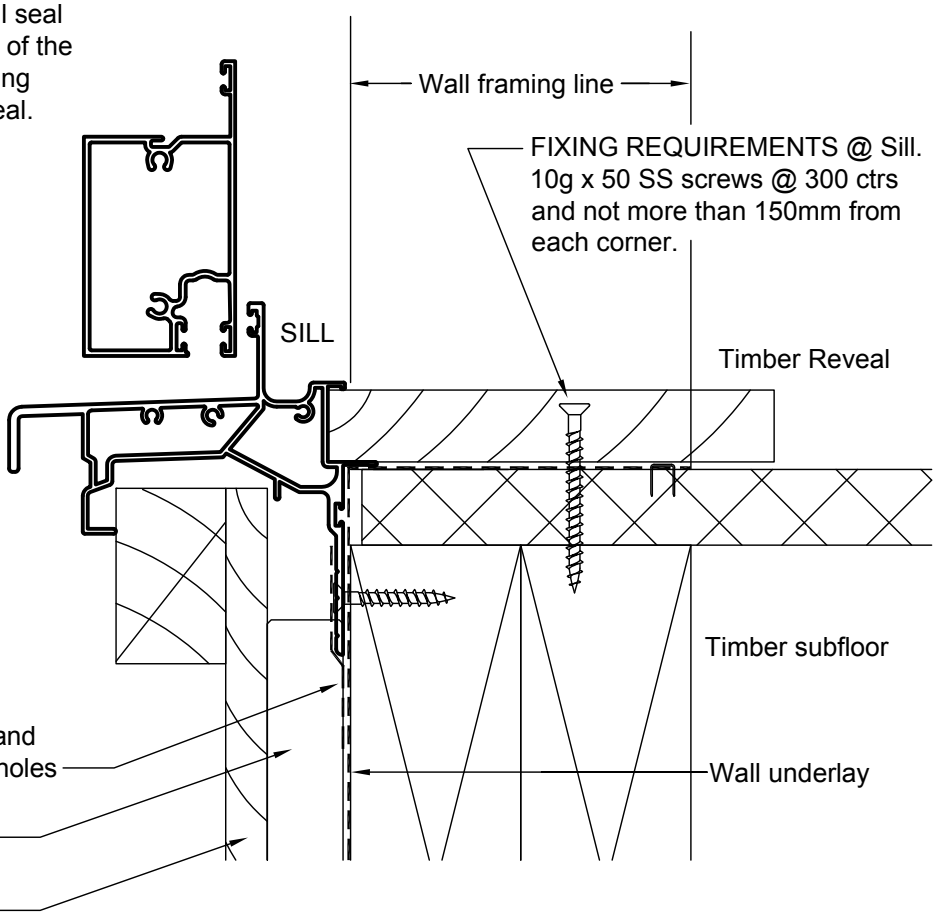


Note;
For full height joinery units finishing to slab floor, the wall framing must be at least flush or protrude out beyond the floor edge.

Note;
It is not important to maintain a 5mm nominal gap between reveal and floor or framing. Provide appropriate separation between reveal, any aluminum member and concrete.

Reveals may or may not be present.

Units may be rebated into floor edge



Details to be read in conjunction with NZBC E2/AS1, Figure 17C "Door sills for cavity construction".

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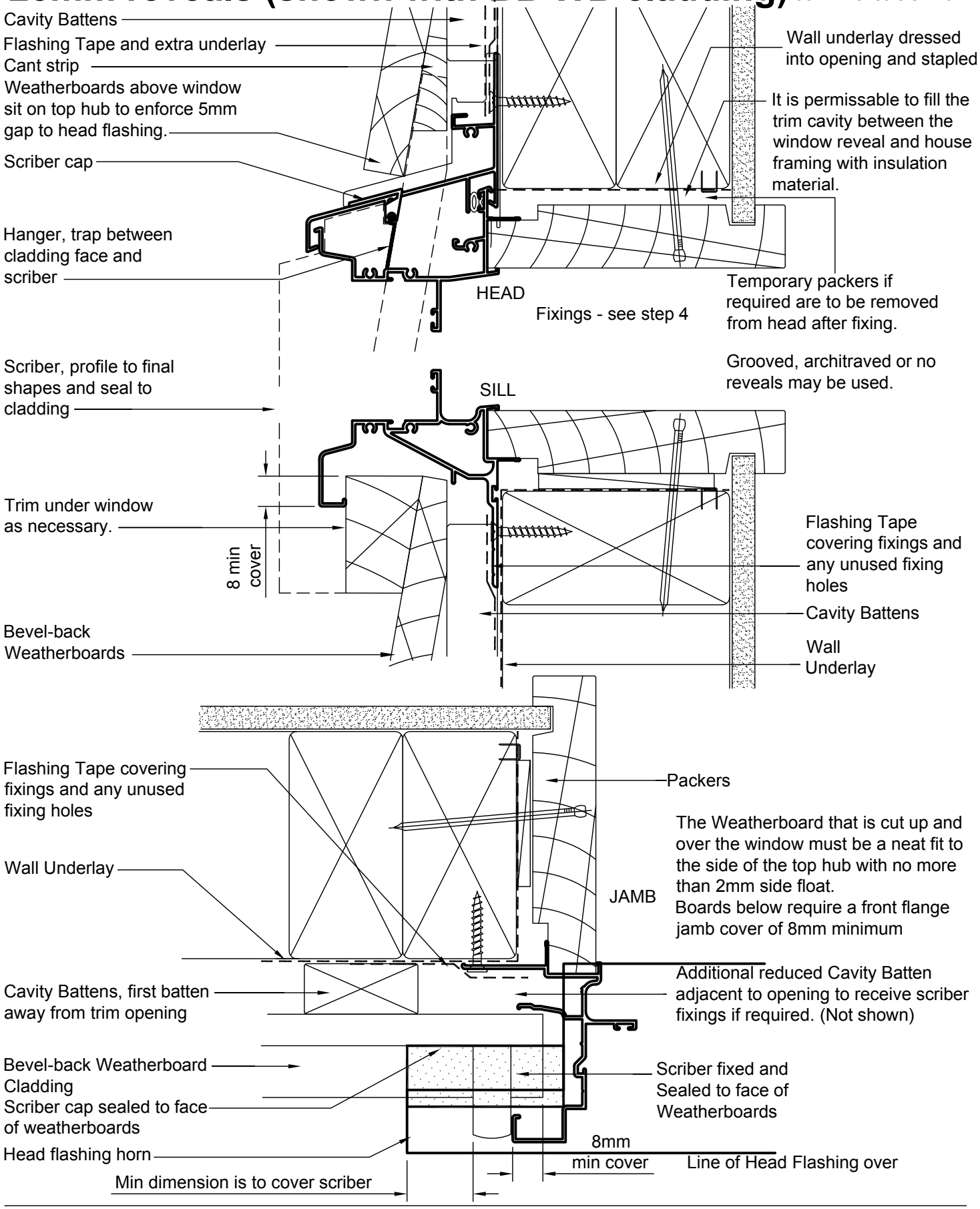
Smartfit Window Installation

altus Updated: N/A Scale: 1:2 REV: -

25mm reveals (shown with BB WB cladding)

30mm reveals similar



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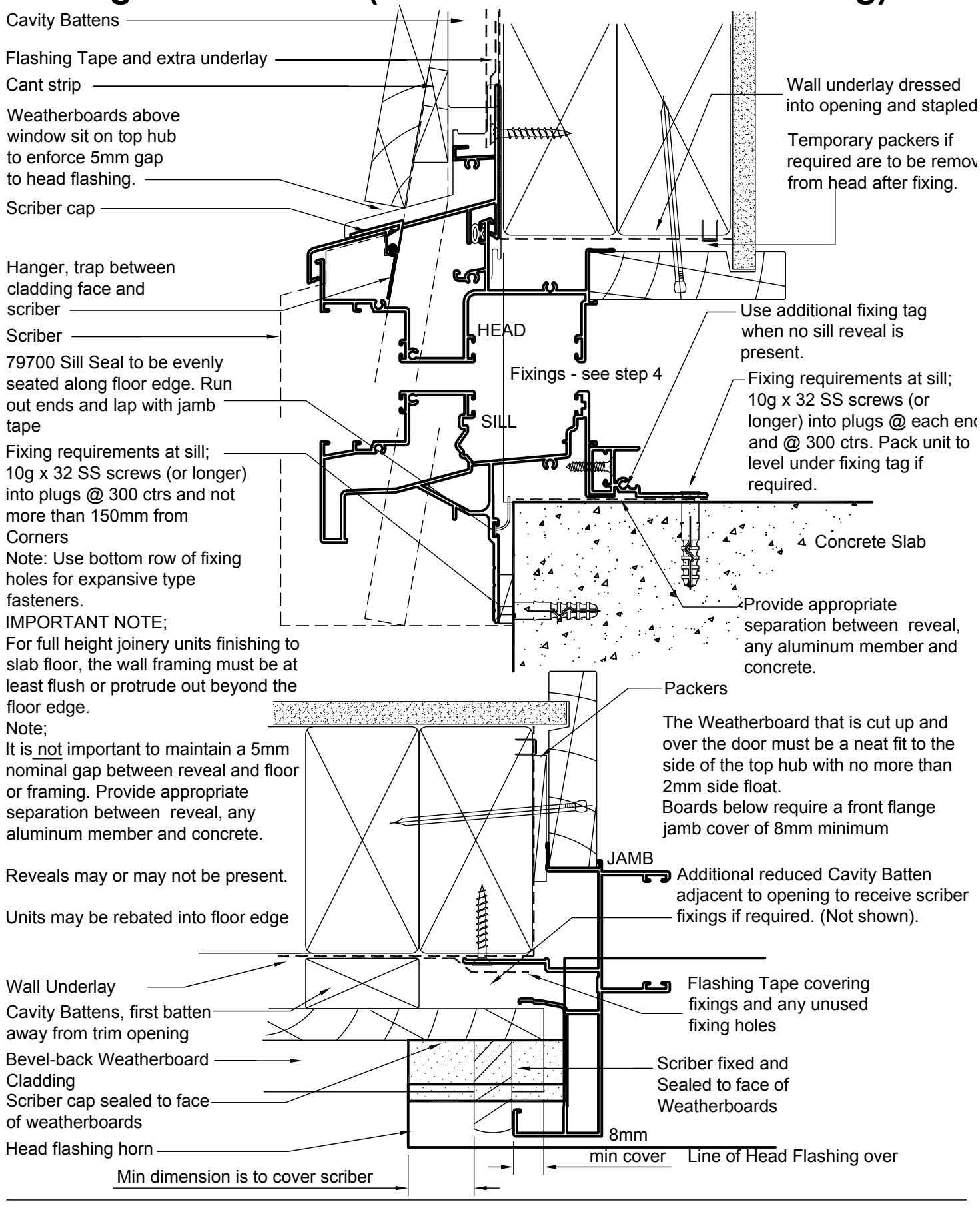
Smartfit Window Installation

Sliding door frames (shown with BB WB cladding)



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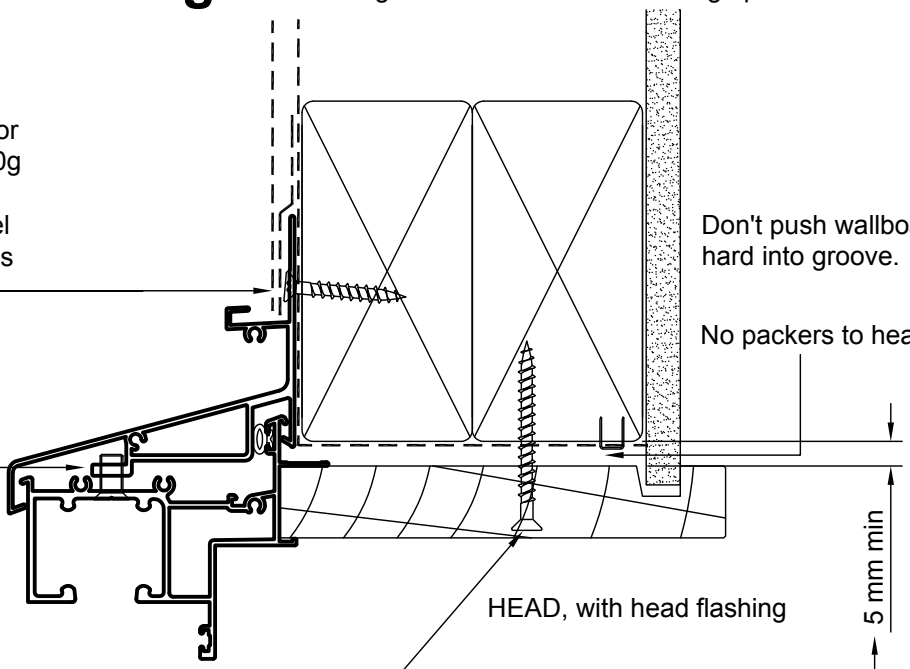
Smartfit Window Installation

Bifold frames, head fixing

Head flashing above and no head flashing options



Heavy Duty Head Flashing is required for Bi-Folds. Fix flashing to the lintel with 10g x 32 SS screws @ 200 Ctrs. Cluster 4 screws @ 50mm ctrs where bifold wheel sets park when closed and where panels stack when open

M6 Adjuster screws (supplied fitted to unit). Install unit and use adjusters if needed to raise, lower or straighten head. Range = +/- 3mm

10g x 50 wood screws at 300 ctrs through reveal. Screw can be used to adjust pitch of head assembly in tandem with front adjuster screw

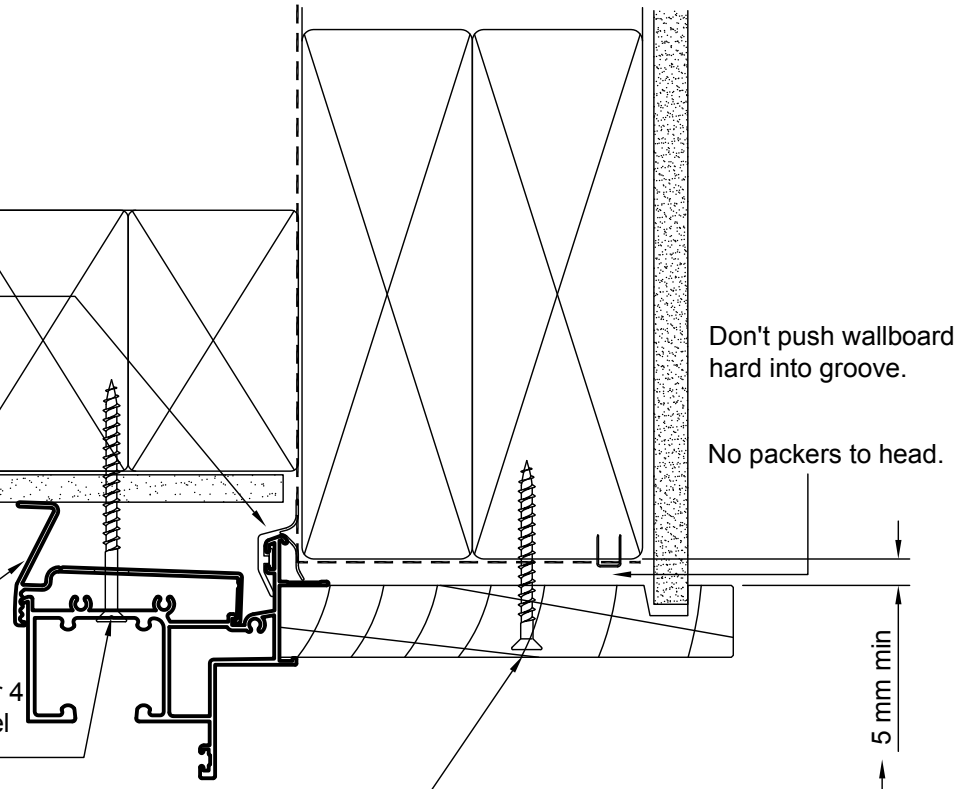
Don't push wallboard hard into groove.

No packers to head.

5 mm min

HEAD, with head flashing

Suitable clearance is required for later adjustment



79701 Soffit Seal, evenly seated against wall underlay

Extra soffit nogging above door to pick up head fixings

See IN- 43 for additional end taping detail of 79701

Soffit Lining

Optional soffit bar, set to allow frame to adjust up if needed.

10g x 65 SS screws @ 200 ctrs. Cluster 4 screws @ 50mm ctrs where bifold wheel sets park when closed and stack when open

10g x 50 wood screws at 300 ctrs through reveal. Screw can be used to adjust pitch of head assembly in tandem with front adjuster screw

Don't push wallboard hard into groove.

No packers to head.

5 mm min

Suitable clearance is required for later adjustment

HEAD, hard to Soffit or no head flashing option

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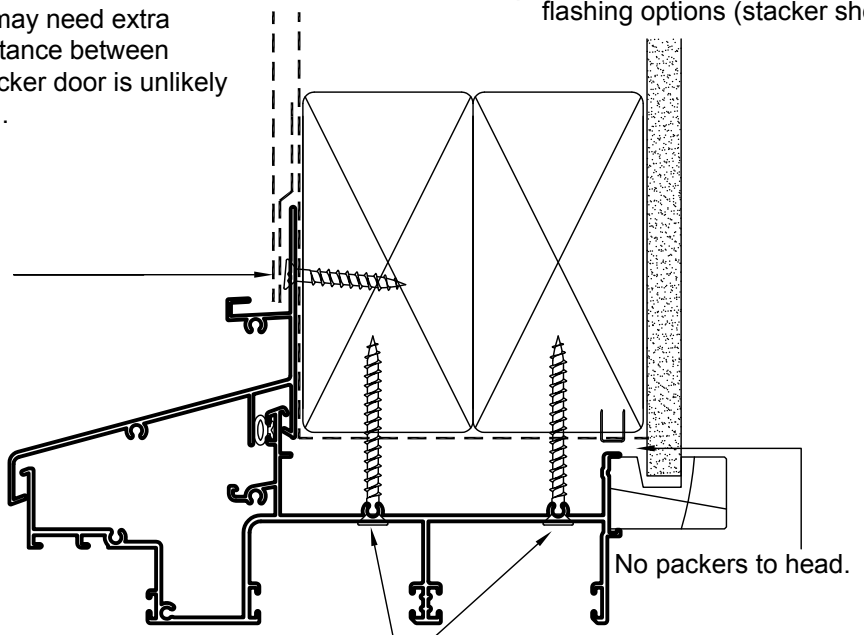
Smartfit Window Installation

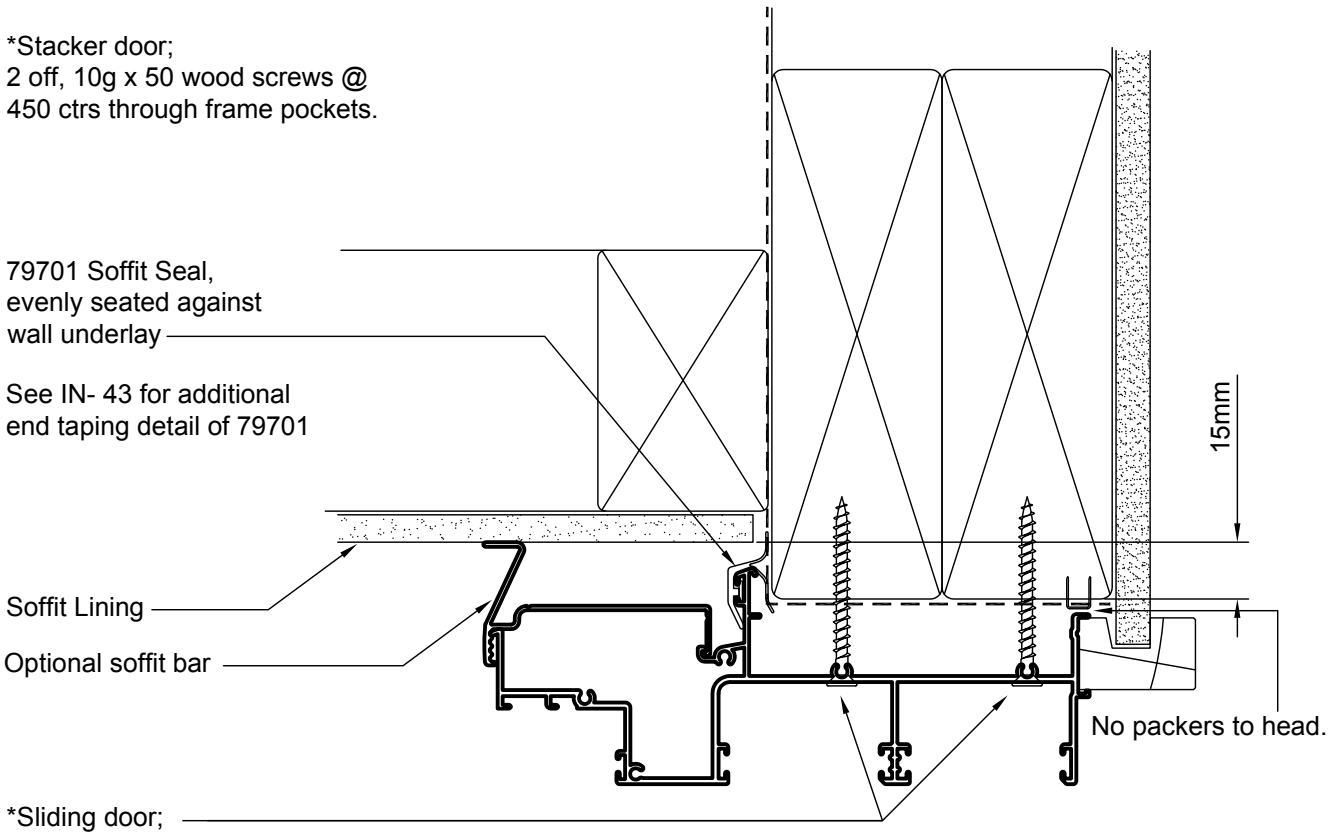
Slider and stacker frames, head fixing

*A Sliding or Stacker door frame head may need extra fixing if it is spanning any significant distance between mullions and jambs unsupported. A Stacker door is unlikely to have any available reveal fixing room.

Head flashing above and no head flashing options (stacker shown).



HEAD, with head flashing



HEAD, hard to soffit or no head flashing option

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Code Compliance - product substitution

An onsite inspection process by the BCA is required to check that what is built has been built in accordance with the consented plans.

From time to time, it is desirable to substitute the product that was approved for use in the original consent for another product that will deliver a similar outcome.

The following pages describe the steps to take when a client wishes to change from conventionally installed windows and doors to Smartfit windows and doors.

The Smartfit window and door system is installed differently to a conventional window and door system; however the end result has no material effect on construction and is fully compliant with the NZ Building Code.

A conventional window and door system installation is deemed to comply with the NZ Building Code if the installation details follow the acceptable solution as drawn in E2/AS1.

A Smartfit window and door system installation is deemed to comply with the NZ Building Code as the system has been tested in accordance with E2/VM1 and carries Codemark certification (CMA-CM 40120). In addition to Codemark, Smartfit windows and Doors have been BRANZ appraised, No. 868 (2014).

So long as there are **no changes to window or door opening sizes**, it is not necessary to apply for a formal amendment to the building consent when substituting conventional windows and doors for Smartfit windows and doors. If there are changes to the size of the opening a formal amendment will need to be applied for along with drawings showing the lintel and opening sizes.

The substitution is approved on site by the building inspector via an "Onsite application for minor variation to approved plans" form.

The process to follow is described below but could differ with each BCA:

1. The builder or owner orders, receives and installs the Smartfit joinery in accordance with the Smartfit installation guide.

2. The applicant completes the "Onsite application for minor variation to approved plans" form, which must be signed by the owner acknowledging the variation and hands the form and supporting documentation to the building inspector during the site inspection.

3. The inspector ticks the "Yes" box to confirm that the variation is minor and does not materially affect compliance.

During the early stages of the Smartfit product introduction, it would be prudent to complete step 2 **prior to** step 1 until the product and process has some familiarity with the local Building Consent Authority (BCA).

Filling out the form:

The agents name is "Fletcher Window and Door Systems". In addition, add the supplying window fabricators business name and contact details

To accompany the completed form, the supplying fabricator must include two copies of:

- The BRANZ Appraisal, No. 868 (2014)
- The Codemark certificate, CMA-CM 40120
- The relevant installation detail from the Smartfit Installation guide

The owner must complete and sign the form.

The form over page is for Auckland City. Each BCA will have a similar method. Please enquire with BCA for guidance.

REV: -

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On-site application for minor variation to approved plans – **SMARTFIT window & doors**

This application is to advise Auckland Council that the following minor variation is proposed to be undertaken on the building situated at the address listed below. It is the owner's responsibility to notify Council of any changes to the approved plans; this document once signed by the owner serves as acknowledgement. The variation must be approved by the Building Inspector before work can proceed.

Building consent N°:	
Site address:	
Agents name:	Altus Windows
Postal address:	
Agents role in project:	System Supplier / Manufacturer
Contact phone number:	

The following documents must be provided with this application form:

Two copies of SMARTFIT window technology installation details; SMARTFIT CODEMARK and BRANZ appraisal certificates must accompany this application *(must be handed to Inspector for inspection to proceed)*

No changes to the size of the windows or doors are permitted (if sizes differ, a formal amendment must be sought)

Windows / doors must be fitted into a cavity system; direct fixed installations not permitted

SMARFIT windows and doors to replace existing joinery units

Owner's name:		Date:	
Owner's signature:		By signing this statement the owner gives the agent authority to act on their behalf	

Council use only:

The variation is minor and does not materially affect compliance Yes No

Inspector's signature:		Date:	
Inspector's name:			

THIS VARIATION IS NOT APPROVED UNTIL SIGNED AND APPROVED BY A COUNCIL BUILDING INSPECTOR