MASTERWALL

X-SERIES

BAL 29, lightweight, reinforced, external insulating wall system

TECHNICAL DOCUMENT:

SYSTEM INSTALLATION & CONSTRUCTION DETAILS

BATTEN FIXED SYSTEM

MASTERWALL AUSTRALIA PTY LTD. 18-20 Cyber Loop, Dandenong South, Victoria, Australia
EMAIL. sales@masterwall.com.au **WEB.** masterwall.com.au **NATIONAL ENQUIRIES.** (03) 9799 6565 **FAX.** (03) 8740 2180

H GRADE POLYSTYRENE :
To form cavity (applied over Masterwall Breather Wrap).

DEFLECTION BATTEN:

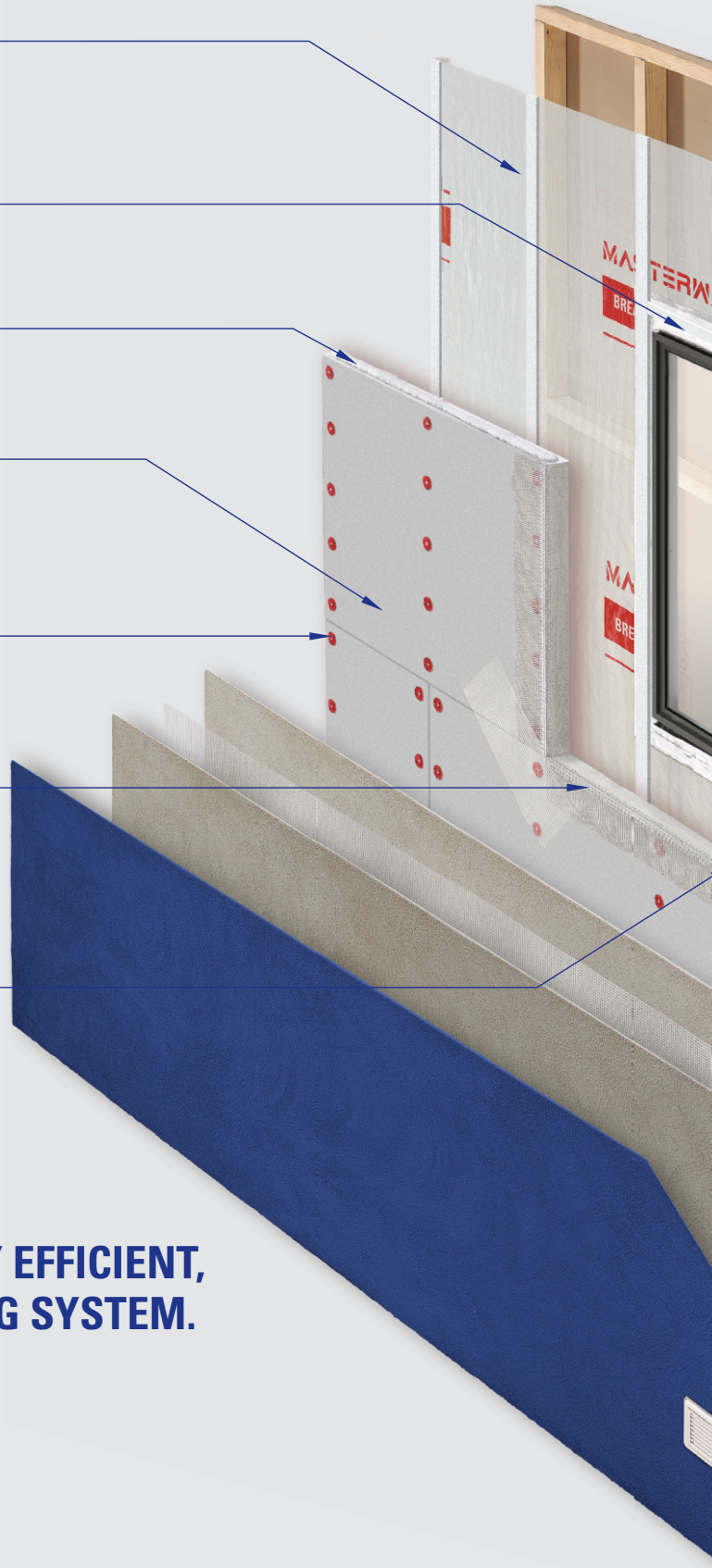
POLYURETHANE FOAM SEALANT:
100% flexibility ensures integrity and weatherproofing of joints.

X -SERIES PANELS:
M grade polystyrene, light weight, designed to move with the frame (Thicknesses: 50/75/100/125mm R 1.8/2.5/3.1/3.8).

FIXINGS:
Pre-assembled 50mm button and class 3 screw sets provide the right fix for every situation.

ALLOY EXTERNAL CORNERS:
With integrated reinforcing mesh for strength.

NO NEED FOR POST FORM REVEALS:
No need to double frame to achieve brick like reveals.



X-SERIES SYSTEM - A WEATHER-TIGHT, ENERGY EFFICIENT, INSULATED WALL CLADDING SYSTEM.

FRAMED CONSTRUCTION. BATTEN FIXED.

TIMBER OR METAL STUD FRAME.

INTERNAL PLASTERBOARD LINING.

MASTERWALL BREATHER WRAP:
A superior translucent breather type paper which provides a high performance vapor control.

H GRADE POLYSTYRENE:
Vertical battens, attached to stud frame over Flashing Tape.

ALUMINIUM OR TIMBER WINDOW.

MASTERWALL SELF ADHERING FLASHING TAPE:
A high performance flashing system uniquely formulated for Masterwall.

POLYURETHANE FOAM SEALANT:
All cavities around penetrations filled with polyurethane sealant.

RENDER PROCESS:
M-TEX modified polymer render system including full fiberglass mesh with added reinforcing at 45° to corners of all openings.

SYSTEM SPECIFICATION

X-SERIES BATTEN FIXED SYSTEM

EXPLODED VIEW DIAGRAM

INTRODUCTION

PROPERTIES

INSTALLATION

SYSTEM SPECIFICATION

INSTALLATION - Continued

Masterwall X-Series complies with the BCA 2019 provisions and State or Territory variation(s).

Refer to **masterwall.com.au/downloads** to view the complete Certificate of Conformity.

CodeMark Australia | CertMark International

Certificate CM40242 Rev2

CONSTRUCTION DETAILS

CONSTRUCTION DETAILS

INTRODUCTION

Description

X-Series Batten Fixed system incorporates a cavity between the Breather Wrap and **X-Series** polystyrene panel to allow potential water engress to drain from behind the cladding, thus reducing the possibility of water damage to the frame. **X-Series** is an external lightweight insulating wall panel, mechanically fixed to the outer face of the building. The panels are completed by the application of an approved modified polymer render, trims, sealants, opening flashings and decorative and waterproof coatings.

Traditional sand/cement render is not suitable on the **X-Series** panels.

X-Series panel is a Medium (M) Grade expanded polystyrene (EPS) panel, that provides a rigid and thermally stable substrate for the render system applied to the face, ensuring high crack resistance and longevity in its performance to the decorative coatings that are applied to it.

EPS (and the combination of EPS and acrylic render) has a 60-year history of use in Europe and North America. **X-Series** complies with the Performance Solution as an external wall to NCC 2019, BCA Volumes 1 and 2.

Application

X-Series polystyrene panel is appropriate for use on timber and steel-framed residential and commercial buildings.

The lightweight panels are convenient to install and add minimum weight to the structure.

The product's thermal insulation properties contribute to the energy efficiency of the building.
The ability to accept a range of approved acrylic render and decorative finishes allows a variety of aesthetic styles to be achieved, including traditional, heritage and modern.

The large panels are speedily installed, providing early enclosure and weatherproofing – assisting the achievement of early lock-up stage.

Composition

Panel: Medium (M) Grade expanded polystyrene (EPS) with included flame retardant. Grey in appearance.

Manufacture

The panels are manufactured locally from Australian and imported materials.

! As water ingression into timber frame can cause significant movement and thus risk cracking the external render, total frame protection from weather ingression should be implemented prior to the installation of the **X-Series Batten Fixed** system. If for any reason, moisture is apparent in the timber frame after installation, this should be allowed to dry out thoroughly prior to the application of render.

! It is recommended that the installation of internal linings to all external walls should be completed prior to the start of the render process of the **X-Series Batten Fixed** system. If installing internal linings after the completion of external render, use screw fixings only, as hammering nails will crack external render.

Sizes & Thicknesses

Standard panel size: 2400mm x 1200mm

Nominal thickness: 50mm, 75mm, 100mm, 125mm

Area: 2.88m^2

Mass:

Thickness	50mm	75mm	100mm	125mm
kg/m2	1	1.5	2	2.5
Total sheet kg	2.9	4.3	5.7	7.2

If other thicknesses are required, please consult Masterwall Australia.

Manufacturing Tolerances

Length: 2400mm ± 10mm

Width: 1200mm ± 5mm

Thickness: ± 1.0mm

Density

20kg/m^3 (polystyrene only)

Water Vapour Transmission

520 ug/m2s (AS2498.5)

Panel Fire Performance AS/NZS 1530.3

a. Ingnitability = 0
b. Spread of flame = 0
c. Heat evolved = 0
d. Smoke developed = 4

Colour & Packaging

The panel is grey in colour and branded **X-Series**

Warranty - 7 years

Masterwall Australia Pty Ltd warrants that its products are free from defects in materials and workmanship for a period of 7 years from the date of purchase. For a full description of the Warranty refer to the Masterwall Australia website (http://www.masterwall.com.au).

Limitation of Liability

Except as provided for in the warranty above, **Masterwall Australia Pty Ltd** is not liable for any direct, indirect or consequential loss which any user suffers, incurs or is liable for in connection with the supply of **Masterwall Australia Pty Ltd's** products, including without limitation, direct, indirect or consequential loss arising from third party claims occasioned by defects in products.

PROPERTIES

Thermal Performance

X-Series Batten Fixed

Panel Thickness	Material R-value	Total R-value (Winter)	Total R-value (Summer)	Total R-value (Winter)	Total R-value (Summer)
		Timber Framing		Steel Framing	
50mm	1.3	2.0	1.9	2.0	1.9
75mm	2.0	2.7	2.6	2.6	2.5
100mm	2.6	3.4	3.2	3.3	3.1
125mm	3.3	4.1	3.8	4.0	3.8

The complete system R rating including **X-Series** panel, cavity, breather wrap, stud frame cavity and 10mm plasterboard. Full system 'calculation of thermal performance' available upon request.

As significant variations occur in both thickness and/or number of layers applied (as well as the types of approved acrylic render used on external walls), an R Rating is not applied to the completed render finish.

As the **X-Series** batten fix system is designed for moisture management and drainage, the breather frame wrap cannot be removed from within the system, and its airtight installation is integral to the thermal performance of the complete system.

Bushfire Attack Level (BAL A-29)

The **X-Series Batten Fixed** system achieves BAL A-29 when installed in accordance with this manual, including the M-TEX render system by Masterwall.

Only the M-TEX render system is certified to BAL A-29, and each of the specific products must be used. For M-TEX system brief, refer to page 16 'Render' and consult Masterwall for spec and data sheets.

Impact Resistance

When correctly installed, **X-Series** panels offer similar resistance to impact and damage as other common non-metallic sheet materials. In addition to this feature, the panels will not shatter or fracture beyond the area of impact. Minor damage will be partly corrected by the self-recovery properties of the EPS.

Weatherproofing

The **X-Series Batten Fixed** system provides a weatherproof facade with drainage cavity to the building having been tested to comply with the Verification Method FV1 in Volume 1 of the NCC and V2.2.1 of Volume 2. Full reports available on request.

Substrates

Timber framing must comply with:
AS 1684 - National Timber Framing Code.

Metal framing must comply with:
AS 3623 - Domestic metal framing.

Structural bracing is to be integral to the wall frame system.

X-Series Batten Fixed system does not contribute to the structural integrity of the framing.

The control factors for installation of X-Series panels are:

Support Spacing: 450mm framing - 50mm
450mm & 600mm framing - 75, 100 & 125mm

Building Classes: 1 to 10

Wind Loadings: N1 to N4 (classes 1 & 10). Up to 300 kPa (classes 2-9)

H Grade Polystyrene Battens

Cavity to be formed using H Grade Polystyrene to a depth of 25mm. Width will be determined by matching width of framing used as a minimum. Battens to be tacked in place using galvanised clouts/screws or double sided adhesive tape if desired. All battens should only be placed vertically to allow for free drainage of ingress water.

Trims and Starter Channels

Mesh reinforced alloy corner trims are preferred and are to be applied to all external corners/openings. Galvanised or stainless steel trims are not recommended.

Starter channels are to have drainage holes located beneath the drainage cavity and should not be larger than 3mm, to comply with Bushfire standard AS 3959, 5.4.3.

Flashing Tape

Flexible adhesive backed Aluminium **Masterwall** Flashing Tape typically used around windows, doors and underneath control joints as a high quality adhesive flashing system.

Joint Sealant

A flexible urethane foam sealant should be applied to all butt joints - see pages 23 & 24.

Starter channels with drainage holes are to be used on all exposed bottom edges of panels.

Screw Fixings

Class (3) screws, 10 gauge fitted with a 50mm diameter **Masterwall** plastic button. Class (3) screws are specified regardless of the geographic location.

Maximum Fixing Spacing (mm) for Masterwall Polystyrene Panel, M Grade, Minimum 50mm Thickness

Design ULS Pressure (kPa) AS/NZS 1170.2)	Stud Centres 450mm
1.00	400
1.50	400
2.00	350
2.50	280
3.00	240

Maximum Fixing Spacing (mm) for Masterwall Polystyrene Panel, M Grade, Minimum 75mm Thickness

Design ULS Pressure (kPa) (AS/NZS 1170.2)	Stud Centres 450mm	600mm
1.00	400	400
1.50	400	400
2.00	400	350
2.50	390	280
3.00	330	240

NOTES:

1. The use of Masterwall Direct-To-Frame System has been validated for Serviceability Limit State Pressures up to +0.82kPa and -1.23kPa for Weatherproofing Performance.

Maximum Fixing Spacing (mm) for Masterwall Polystyrene Panel, M Grade, Minimum 50mm Thickness

	Stud Centres 450mm	
AS 4055 Wind Classification	Further than 1.2m the corners	Within 1.2m of the corners
N1	400	400
N2	400	400
N3	400	367
N4	400	248

Maximum Fixing Spacing (mm) for Masterwall Polystyrene Panel, M Grade, Minimum 75mm Thickness

	Stud Centres 450mm		Stud Centres 600mm	
AS 4055 Wind Classification	Further than 1.2m the corners	Within 1.2m of the corners	Further than 1.2m the corners	Within 1.2m of the corners
N1	400	400	400	400
N2	400	400	400	400
N3	400	400	400	367
N4	400	330	400	248

The screws are selected to suit either timber framing or steel framing, and are available in the following lengths.

Length	Type	Gauge	Relevant Panel Thickness	
75mm	Chip	10	50mm	Self Driller
75mm	Chip	10	50mm	Needle Point
100mm	Bugle	10	75mm	Self Driller
100mm	Bugle	10	75mm	Needle Point
130mm	Bugle	10	100mm	Needle Point
150mm	Bugle	10	125mm	Needle Point

- Timber Frame - Screw lengths should always be a minimum of 25mm longer than the thickness of the panel specified.
- Steel Frame - Screw lengths should always be a minimum of 15mm longer than the thickness of the panel specified.

INSTALLATION

Breather Frame Wrap

Masterwall Australia recommends use of **Masterwall** Breather Frame Wrap or similar.
Note: Under no circumstances should a non-breathable paper be used behind **X-Series** panels. Breather Frame Wrap is to be fixed directly to the stud frame with cavity battens placed on top.

Layout

X-Series panels may be laid either vertically or horizontally (for either frame or masonry substrates) according to the best fit for the 2400mm x 1200mm sheet - horizontal, staggered joint layout is always the preferred option.

If the wall height is less than or equal to 2400mm, then practicality may dictate that the **X-Series** panel be laid vertically - but horizontal layout is the preferred option. If using this option all vertical joints must be either back blocked or fixed to a double stud to fully support edge of panel.

If the wall height is greater than 2400mm, then the panels should always be laid horizontally, in a brickwork or stretcher bond pattern, with each 1200mm vertical joint staggered up through the height of the wall.
A horizontal layout is the preferred option.

Supporting Framework

Edges of the X-Series panels may require support on studs, noggings or other intermediate blocking.

X-Series panels may be cantilevered or projected beyond supports by the same distance as a given panel's thickness.

Fixed-back blocking techniques are mandatory. Full-stud width (min 90mm) support is required. Back blocking timber must be MGP 10 or greater. Merchant grade is not permitted. Adhesive fixed back blocking is not permitted.

Supports to intermediate joints are required, as shown in this table.

Panel Thickness	50mm		75mm		100mm		125mm	
Joint Orientation	V	H	V	H	V	H	V	H
Studs 450 crs	✔	✘	✔	✘	✔	✘	✔	✘
Studs 600 crs			✔	✘	✔	✘	✔	✘

(V = Vertical) (H = Horizontal)

Supports/blocking are required to all edges around openings.

Cutting

(a) Masonry Blade: For 50mm, 75mm, 100mm &125mm **X-Series** panels, a diamond-tipped masonry blade is the most accurate, time-efficient and clean way to cut/trim panels (see MSDS).

(b) Hand Saw: A fine-tooth saw is also an efficient way of cutting the **X-Series** panel.

X-Series panels should be accurately cut to size to produce close butt joints between panels.

Health & Safety

Use of personal protective equipment (face masks and safety goggles) is recommended. The fine dust created by mechanical cutting is hazardous, and protection is recommended, including face masks and safety goggles.
Mechanical cutting should be performed in well-ventilated spaces. Power tools can be fitted with effective dust-extraction systems. Refer to **X-Series** Material Safety Data Sheet (MSDS).

Fixing To Framing

(a) Centres: X-Series panels of 75mm and thicker may be fixed to either 450mm or 600mm stud spacings, whereas 50mm panels may only be fixed to 450mm or less. Fixings are to be at a maximum 400mm centres vertically to all perimeter and intermediate supports. Fixings around perimeter of panels should be 25mm in from the edge of the panel (see Wind Load Fixing Chart page 12).

(b) Fixings: Fixing screws and buttons should be the type and suitability as set out in this guide.

(c) Appearance: When fastened correctly, the screw head and button should be slightly countersunk in a concave recess on the outer surface of the panel, and located so as to not crush the edge of the panel. The button should always retain its circular shape i.e. if the button begins to flare or fold it has been screwed too far towards the frame.

Batten Fixed System

The X-Series Batten Fixed system is designed to offer peace of mind when building higher risk designs that have the requirement of full water/moisture management incorporated into the building facade.

This may be a requirement of local building code or the personal choice of the client.

Full water/moisture management may be deemed necessary in building designs that have little protection to the elements, perhaps due to a parapet design without eaves or in high wind zones where wind-driven rain poses a higher risk of penetration behind a cladding system.

The X-Series Batten Fixed system has been design to give water unrestricted passage to drain from behind the cladding and let any excess moisture dry from the wall system, thus protecting long term damage to the timber frame.

Sealing - Joints

Prior to closing up of all joints between panels (and between panels and other building elements), a flexible urethane foam is required to the centre the gap between panels.

This forms a mechanical seal for weatherproofing, and converts the many individual panels into a single monolithic, insulated skin.
Foam urethane sealant is therefore required to:

(a) All butt joints

(b) All external corners and butt jointed internal corners

Sealing – Openings

Prior to the application of the panel, **all** openings must be flashed from the reveal to the frame. **Masterwall Australia Pty Ltd** recommends and supplies adhesive aluminium **Masterwall** Flashing Tape for just this purpose, and is suitable for both aluminium and timber windows. This proven flashing method reduces the risk of water penetration.

Note: **X-Series** panels should not be externally sealed to window/door reveals at this point, post installation and prior to render application. Sealants should never be rendered over, as render systems, with limited movement capabilities, will restrict a sealant's ability to move according to manufacturer's specification. Sealants for openings should be applied after the render system has been applied - never before!

Sealing – Other Penetrations (including wiring, plumbing, joists, ducting)

Where possible all penetrations through the **X-Series Batten Fixed** system should be treated as per window detail using flashing tape. This is of high importance for floor and pergola joist penetrations, electrical meter boxes, ducting and the like.

It is then recommended that a 10mm minimum clearance gap be left between the **X-Series** panel and the penetration and caulked using **X-Series** flexible expanding foam urethane sealant prior to render application.

Note: Extra mesh tape is required around the penetration for added reinforcing during the render process.
Masterwall Australia Pty Ltd recommends the use of liquid sealants to windows after the rendering process has been completed. Please note that render systems are not sealants i.e. an opening cannot be sealed by the application of a render system.

Control Joints and Articulation Relief Joints

Control joints for expansion should coincide with control joints within the building structure and substrate, and should be placed at all perceived stress points or weak areas of excessive movement within the building structure. Control joints should be placed at a maximum of walls that are over 6 meters long and at all mid-floor breaks. It is recommended that panel area below windows that is less than 300mm in height should be relieved with 'Articulation Relief Joints' of the render coating, at the corners of the opening (see Finishing: page 16). Contact Masterwall Australia for further information.

Articulation relief joints of the render coating are to be formed by cutting or forming a 'V' groove into the completed base coats, only to 70% depth of the render, not into the **X-Series** panel. The applied top coats shall replicate the 'V' groove to leave a visible line.

Where control joints are part of the building construction, the joint is to be expressed in the **X-Series** panels as an open joint, free of construction urethane, and finished as for all other open edges (including external corners applied to each edge).

Panel to panel control joints should be located on double studs, which are then to be sealed with flashing tape, which is then sealed to the rear of each panel with the use of a premium quality modified liquid sealant.

All control joints should feature either Ableflex (or similar) or backer rod as the primary seal, which should be set back in the control joint a minimum of 8mm where it must be caulked by others after the render process has been completed. – See Construction Details Manual. All Control Joints should be free of render products.

Corners, Edges, Openings & Returns

All panels to external corners must be butt joined (square) to give maximum strength to the corner.

Butt joints are required to all internal corners. Foam urethane sealant is required in this butt joint.

To form a total weatherproof face, all joints and abutments require sealing with foam urethane sealant.

Masterwall Alloy External Corners should be applied to all of the following areas:

(a) All external corners

(b) All openings

(c) All bottom edges of panel where a sterter channel is not required in the detail

These trims are to be in long lengths and set accurately to be plumb, level and straight.

Skyline System

The **Skyline System** is an architectural concealed waterproofing detail for use on parapet designs, featuring clean, uninterrupted lines. The **Skyline System** is concealed by the applied render finish and eliminates the need for unsightly pressed metal capping. It is also used as a waterproofing detail for fixing blocks within the **X-Series, Masterwall** and **K-Series Systems**.

The **Skyline System** membrane is a pressure sensitive self-adhesive butyl tape, 0.75mm in thickness, containing a non-woven polyester fibre face, ready for the application of high polymer render. Able to withstand building movement, it has 35% elongation breaking limit and is serviceable from -10˚ to 100˚ Celsius.

Important Note: As the **Skyline System** is a total waterproofing detail, no fixings should ever penetrate the horizontal surface of the completed parapet. All fixings of balustrades and the like should only be mounted on the vertical wall surface only.

Render System

M-TEX render system is to be 5mm minimum depth, must be applied to entire **X-Series** system.
Embed M-TEX alkali resistant fibreglass mesh 160gsm into a 3mm minimum coat of M-TEX Pro Render, followed by a second 2mm leveling coat of M-TEX Pro Render to achieve the required thickness.

This is completed with M-TEX coloured texture of choice.

For full M-TEX specification and data sheets, please consult Masterwall.

Render System (BAL 29)

To achieve BAL 29, a minimum 6.5mm acrylic render system is applied to entire X-Series system. Alkali resistant fibreglass mesh tape is to be embedded into the first 3mm layer of acrylic render, followed by a 3mm leveling coat of acrylic render. This is completed with a minimum 1mm M-TEX coloured acrylic texture system. For render system specifications consult **Masterwall Australia**.

Storage, Handling, Protection

X-Series panels delivered to site should be stored flat and evenly supported. They should be covered or otherwise protected from damage or soiling.

If stored outside panel stacks are to be covered, a material/canvas cover should be utilized. Under no circumstances should a black plastic cover be used.

During installation, the **X-Series** panels should be handled with care to prevent edge damage or fracture.

Particular care is required during windy conditions, as unsecured panels can be severely damaged.

Continuous exposure may result in deterioration and minor fretting of exposed edges of the panel. This is to be removed prior to proceeding with finishing or sealing. As with all sheet materials, protection from impact damage is required.

The application of the approved render should, wherever possible, follow the installation of internal services, fittings and linings – when the risk of damage is minimised.

Timely application of the render will complete the wall system - and protect the panels from damage.

Repair

Panels that are fractured or severely damaged (before or after fixing) should be rejected or cut down to size for use.

Minor penetrations, edge fractures or crushed areas may be site-patched with the reinforcing mesh and an approved acrylic patching render.

Waste Management

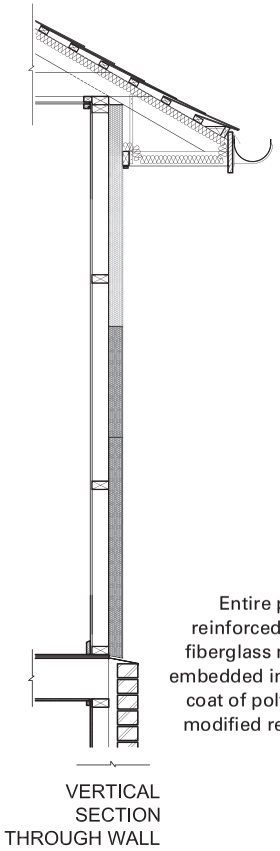
Being lightweight, the panel material is readily dispersed by the wind. To prevent a nuisance, all off-cuts and residue from cutting should be stored in tied plastic bags for removal to a place of legal disposal. Attention to detail - in particular to spacing of backblocking - will contribute to a reduction in the amount of waste and off-cut materials.

Disclaimer

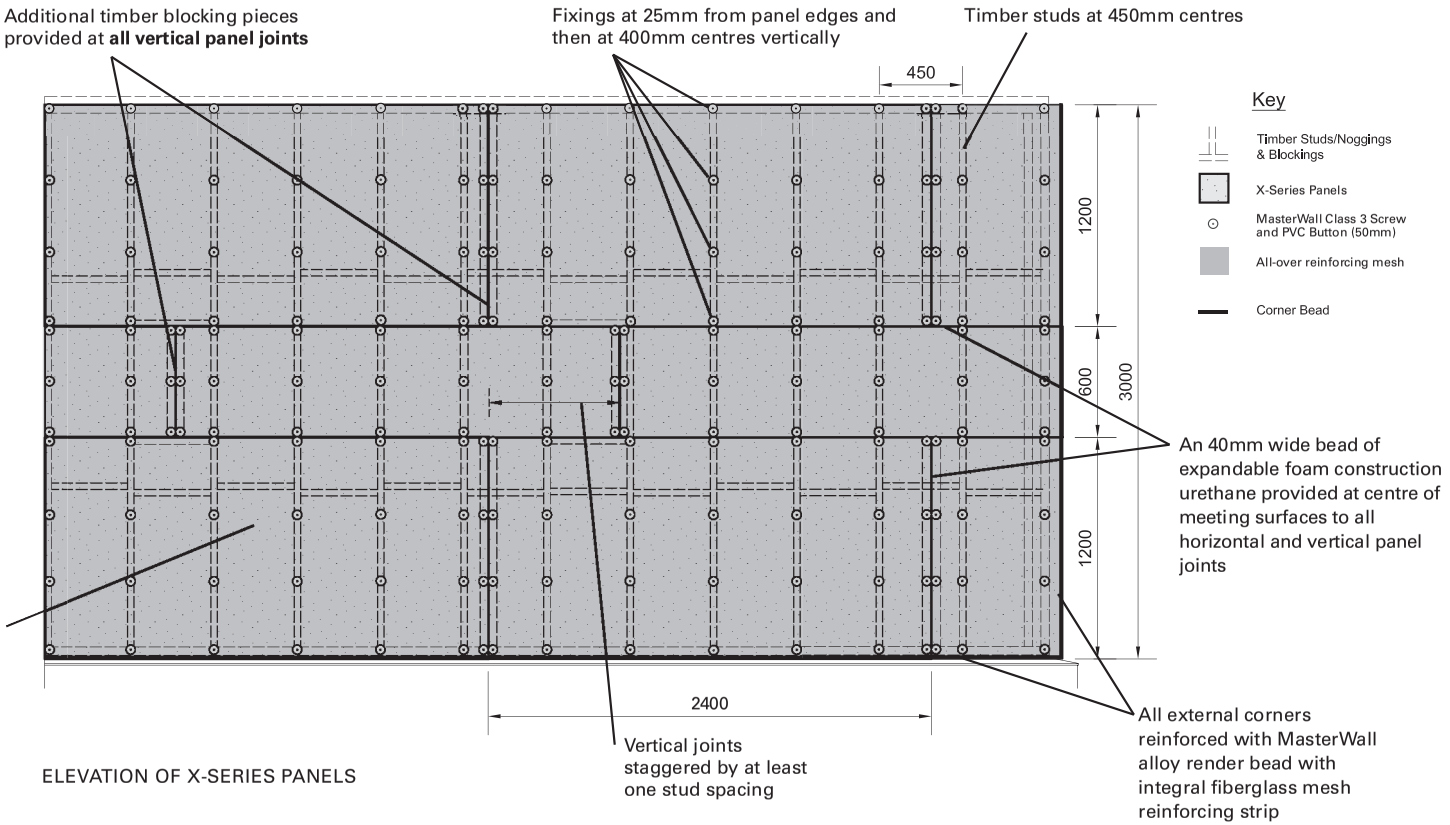
Whilst every effort has been made to ensure the information in this manual is correct at the time of printing, **Masterwall Australia Pty Ltd** reserves the right to change the specifications of all products referred to in this manual at any time. All changes made to this manual are uploaded on to our website www.Masterwall.com.au.

50, 75, 100 & 125mm X-SERIES
BATTEN FIXED SYSTEM

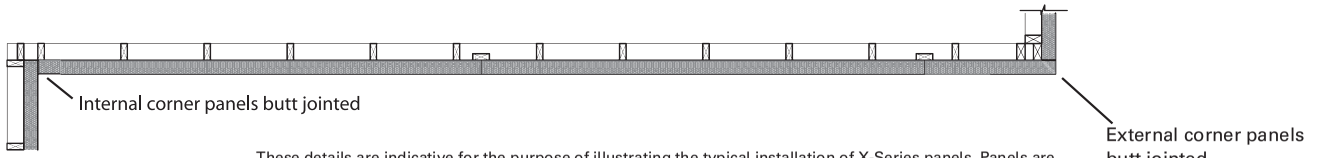
SET OUT ADVICE FOR 450 CENTRED STUD WALL:



VERTICAL SECTION THROUGH WALL



ELEVATION OF X-SERIES PANELS

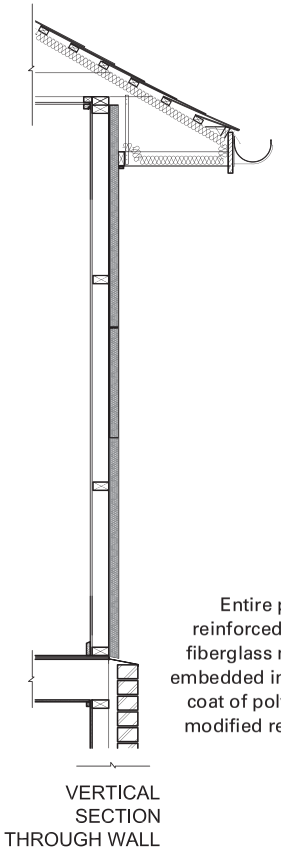


PLAN VIEW

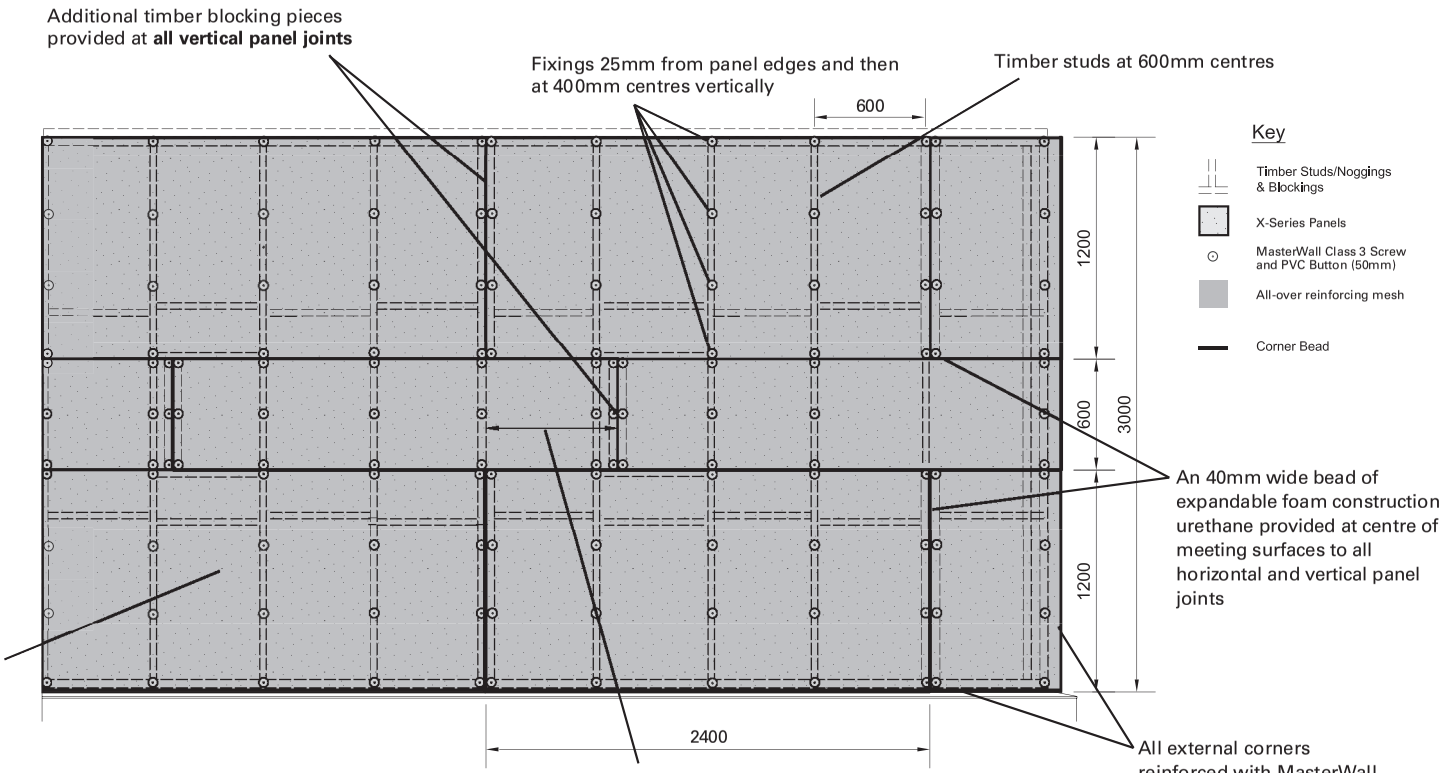
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

75, 100 & 125mm X-SERIES
BATTEN FIXED SYSTEM

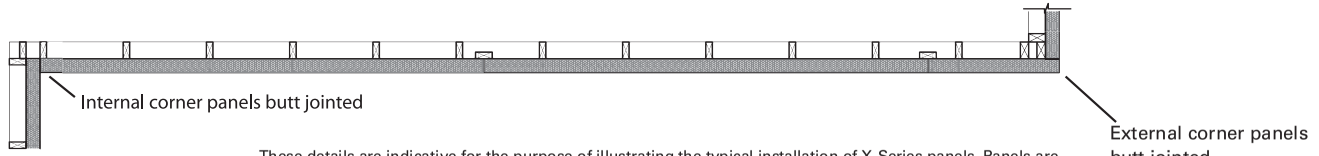
SET OUT ADVICE FOR 600 CENTRED STUD WALL:



VERTICAL SECTION THROUGH WALL



ELEVATION OF X-SERIES PANELS



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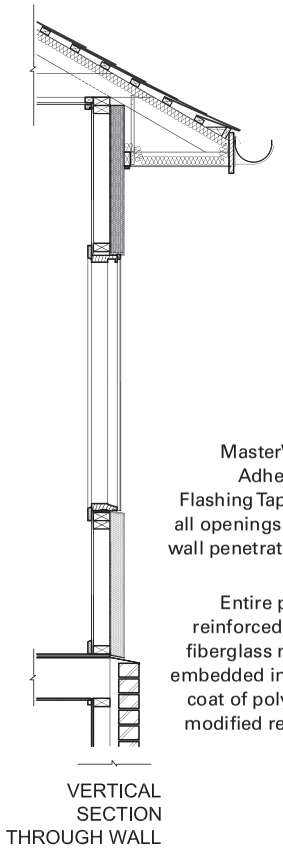
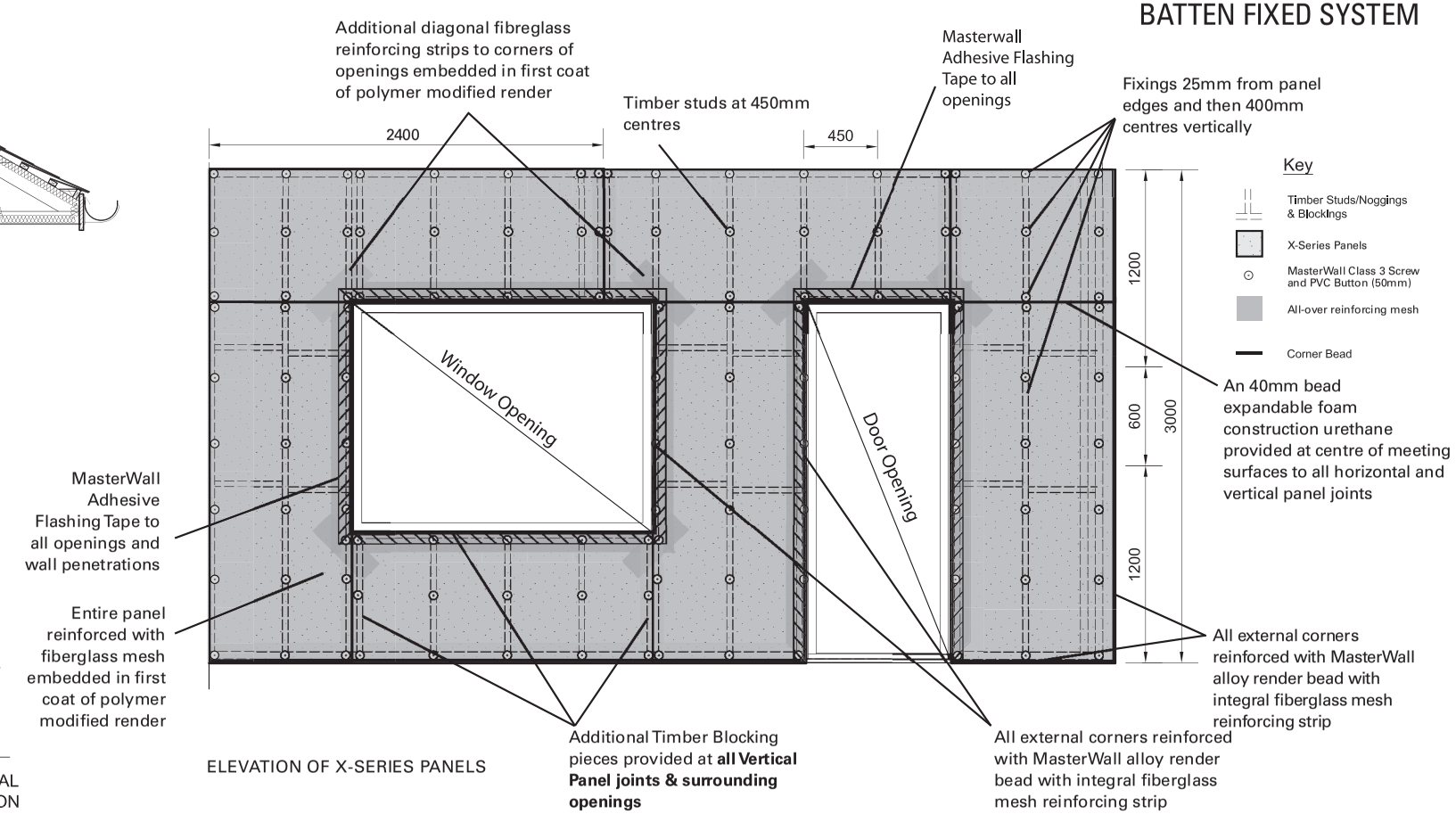
50, 75, 100 & 125mm X-SERIES
BATTEN FIXED SYSTEM

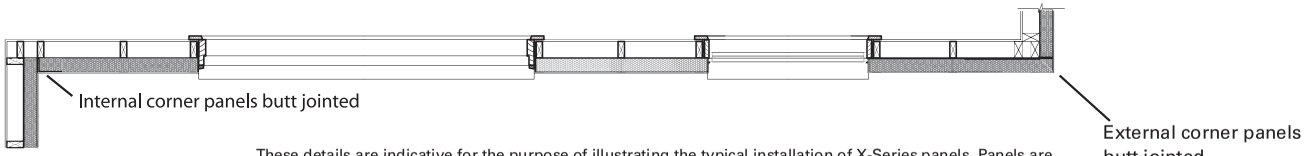
SET OUT ADVICE FOR OPENINGS:



VERTICAL SECTION THROUGH WALL



ELEVATION OF X-SERIES PANELS



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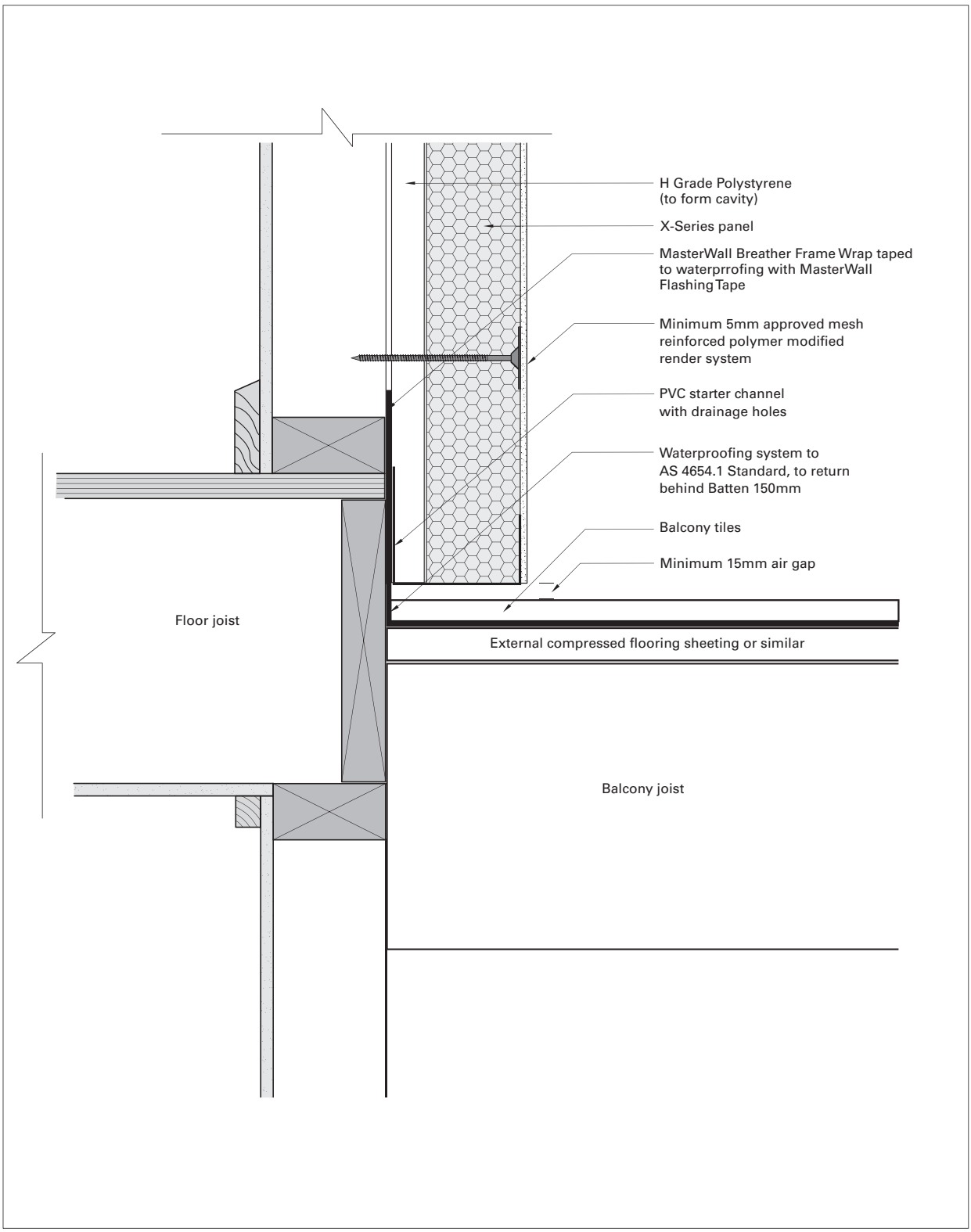


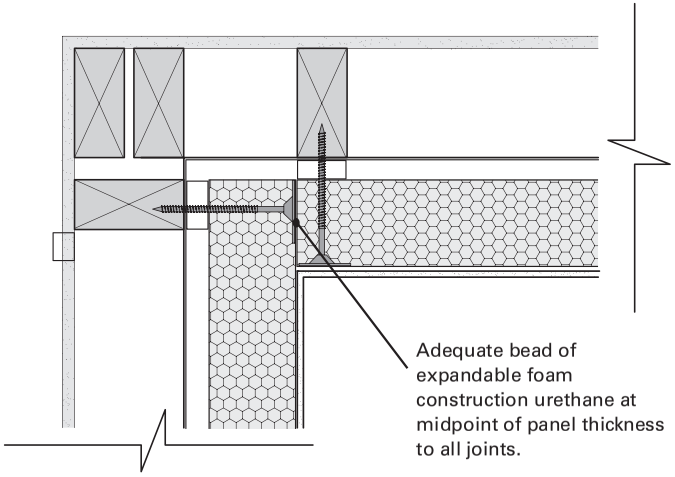
X-SERIES PANEL - BATTEN FIXED SYSTEM:

BALCONY SOLID FLOOR JUNCTION

These details are indicative for the purpose of illustrating the typical installation of MasterWall panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

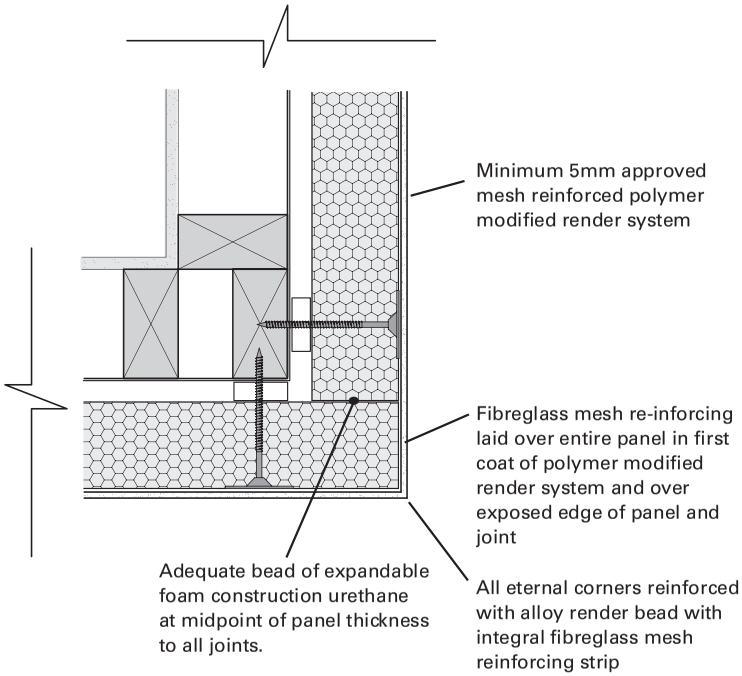
50, 75, 100 & 125mm X-SERIES
BATTEN FIXED SYSTEM

TYPICAL CORNER JOINTS:



X-SERIES Panels Butt Jointed

INTERNAL CORNER - PLAN VIEW



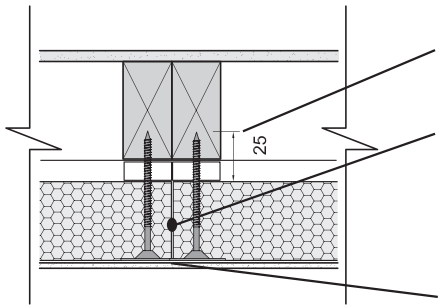
X-SERIES Panels Butt Jointed

EXTERNAL CORNER - PLAN VIEW

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

50, 75,100 & 125mm X-SERIES
BATTEN FIXED SYSTEM

TYPICAL JOINTS BETWEEN PANELS:



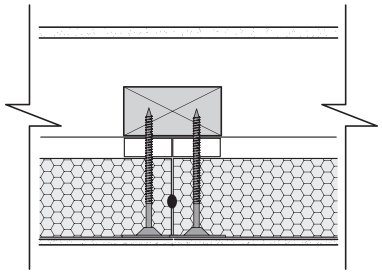
Vertical joint at stud. Double stud required.

NOTES FOR ALL FIGURES

Screw fixing must be 25mm into timber frame.

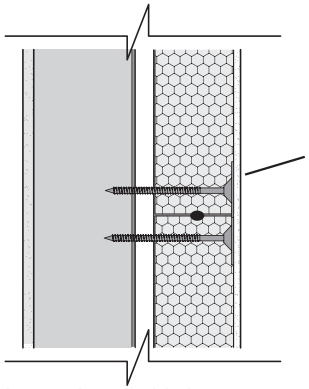
Adequate bead of expandable foam construction urethane at midpoint of panel thickness to all joints

Fibreglass mesh re-inforcing laid over entire panel in first coat of acrylic render system and over exposed edge of panel and joint



Vertical panel joints between studs.
Back blocking required fixed to frame.

VERTICAL JOINTS - PLAN VIEW



Horizontal panel joints at stud.

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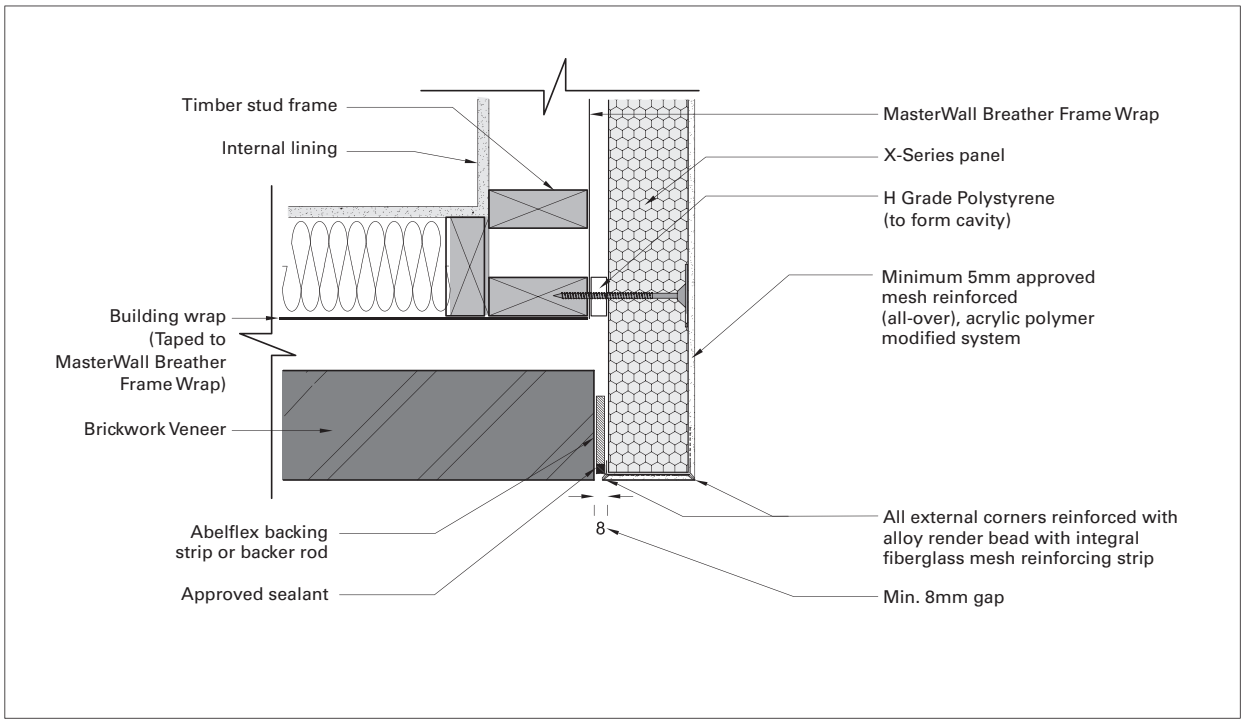
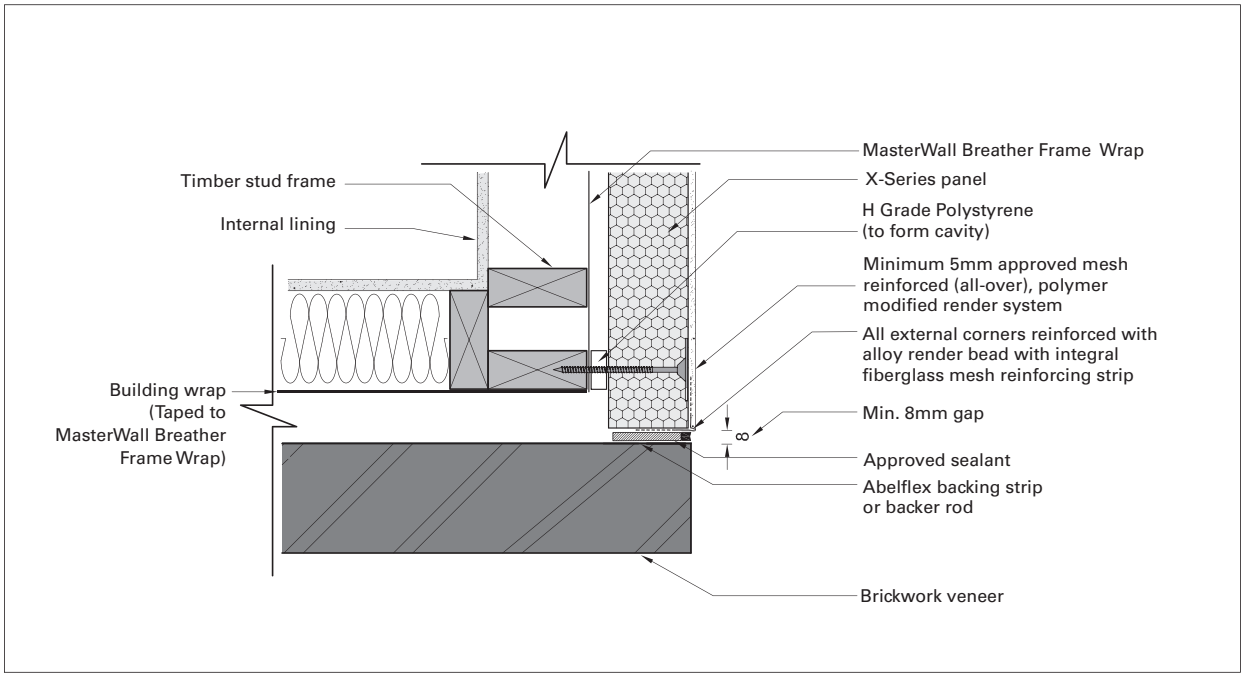
X-SERIES



X-SERIES PANEL / BRICK VENEER EXTERNAL CORNER - BATTEN FIXED SYSTEM:

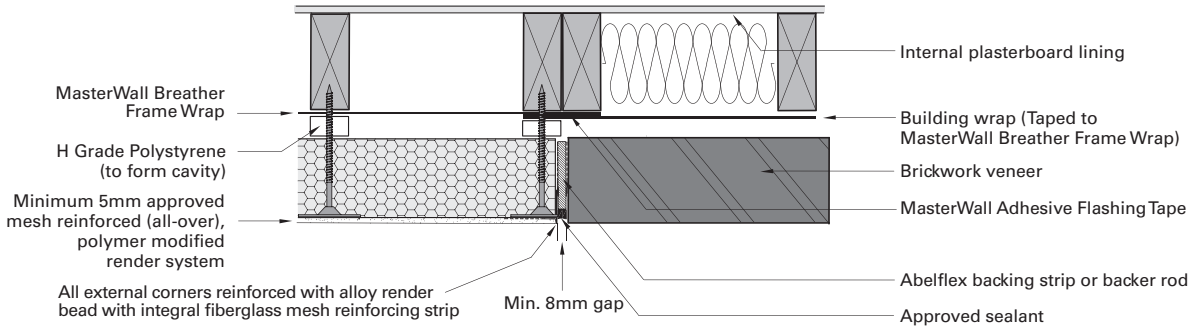
JUNCTION - 1



X-SERIES PANEL / BRICK VENEER EXTERNAL CORNER - BATTEN FIXED SYSTEM:

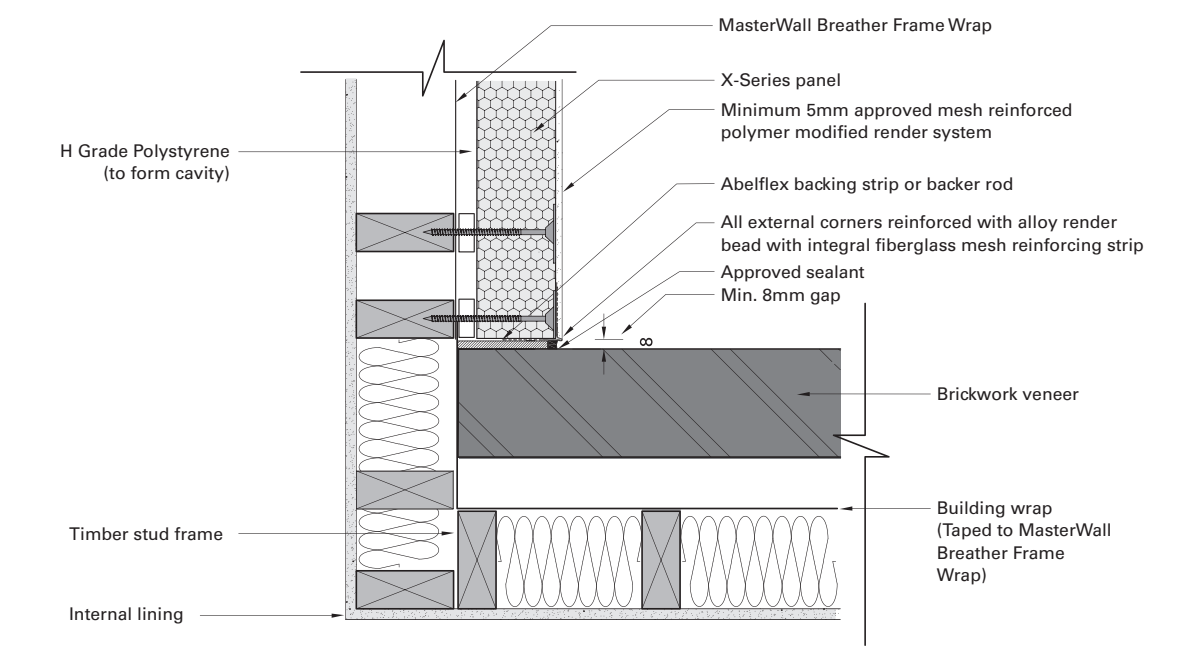
JUNCTION - 2

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL / BRICK VENEER CONTROL JOINT - BATTEN FIXED SYSTEM:

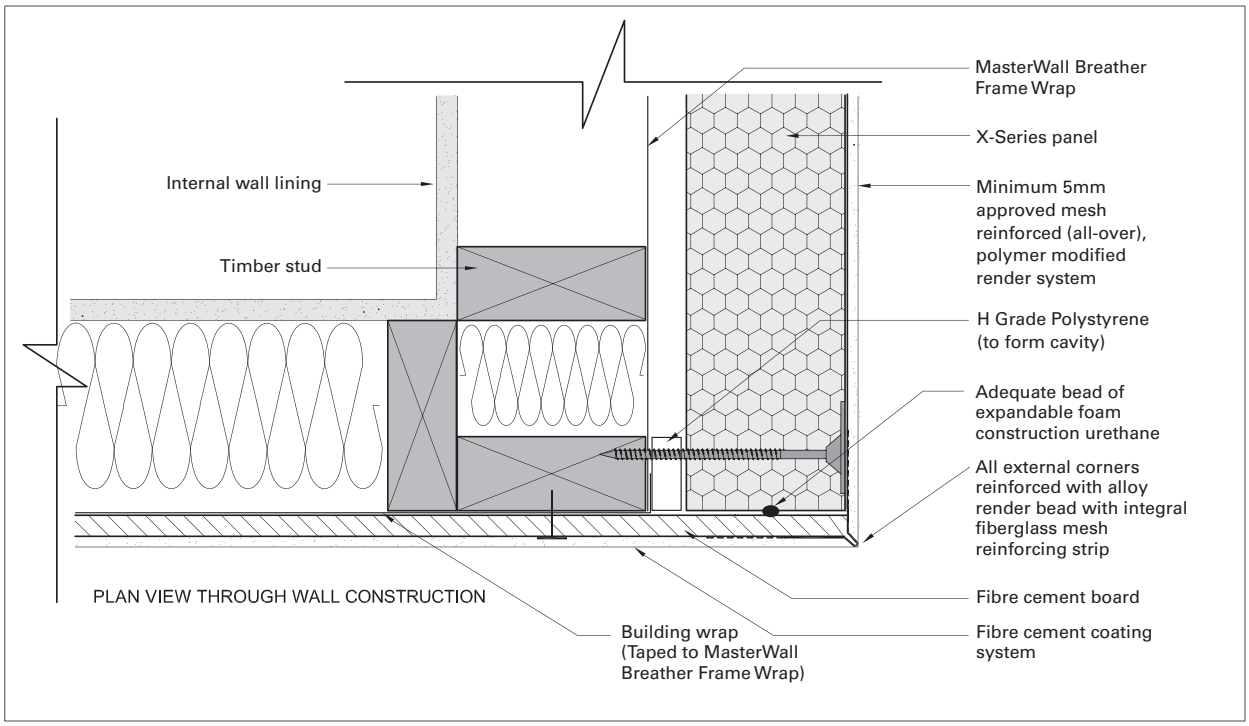
JUNCTION - 3



X-SERIES PANEL / BRICK VENEER INTERNAL CORNER - BATTEN FIXED SYSTEM:

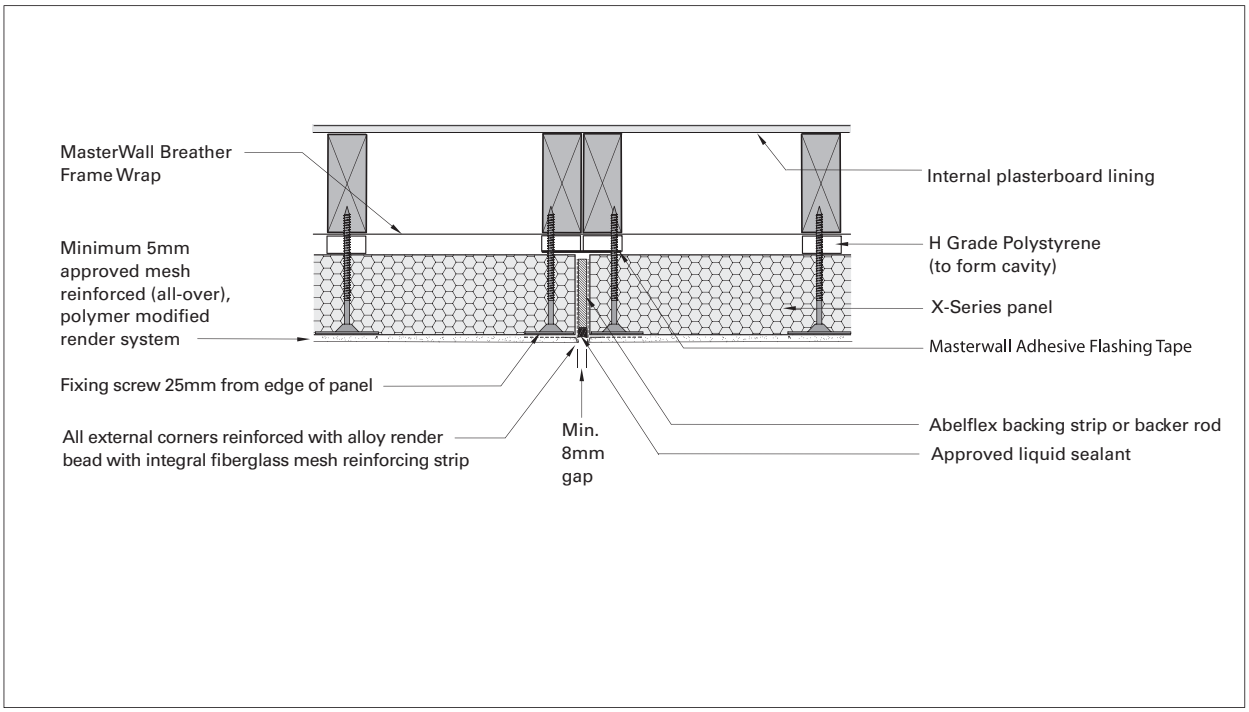
JUNCTION - 4

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL / FIBRE CEMENT BOARD - BATTEN FIXED SYSTEM:

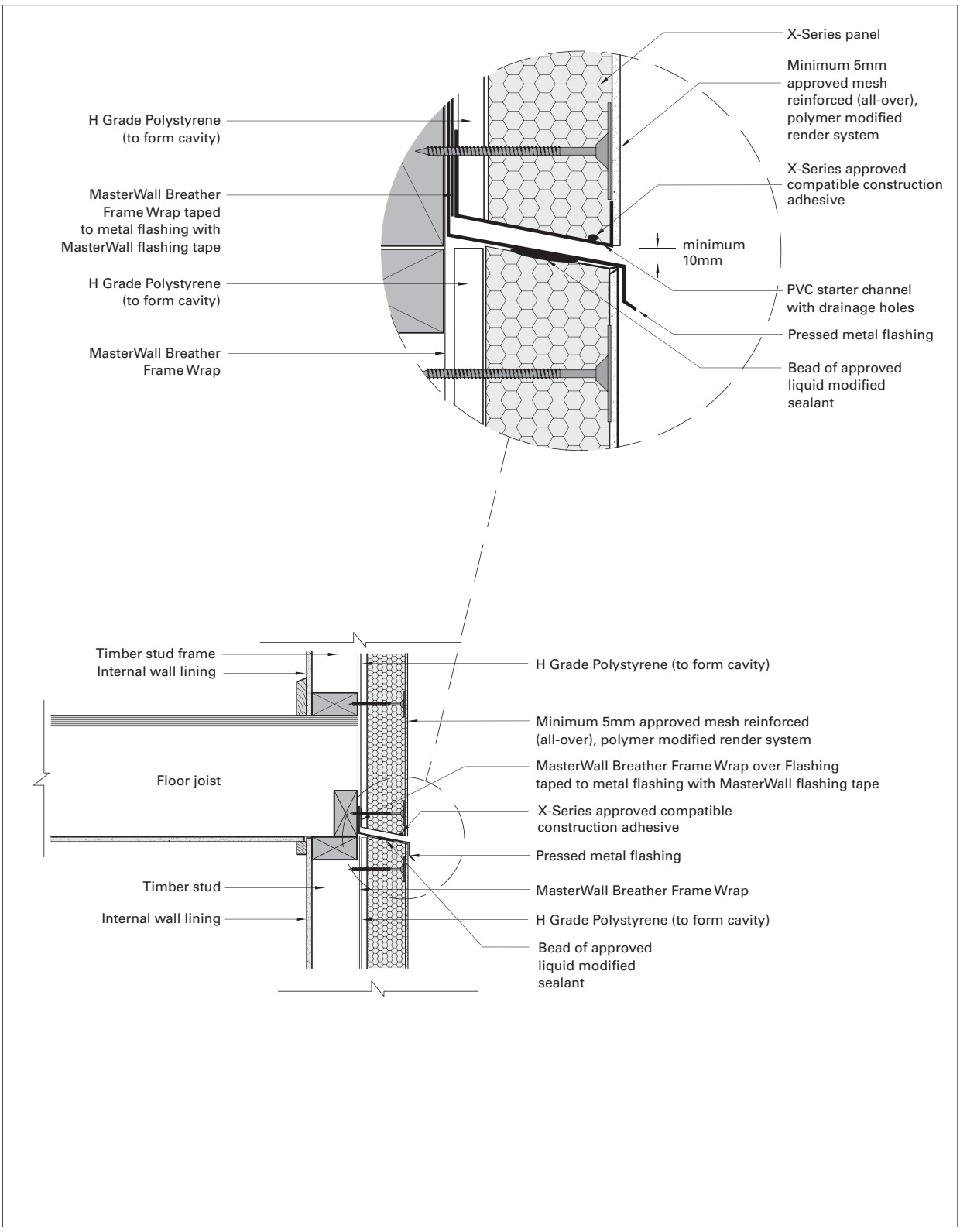
JUNCTION



X-SERIES PANEL / X-SERIES PANEL - BATTEN FIXED SYSTEM:

CONSTRUCTION CONTROL JOINT

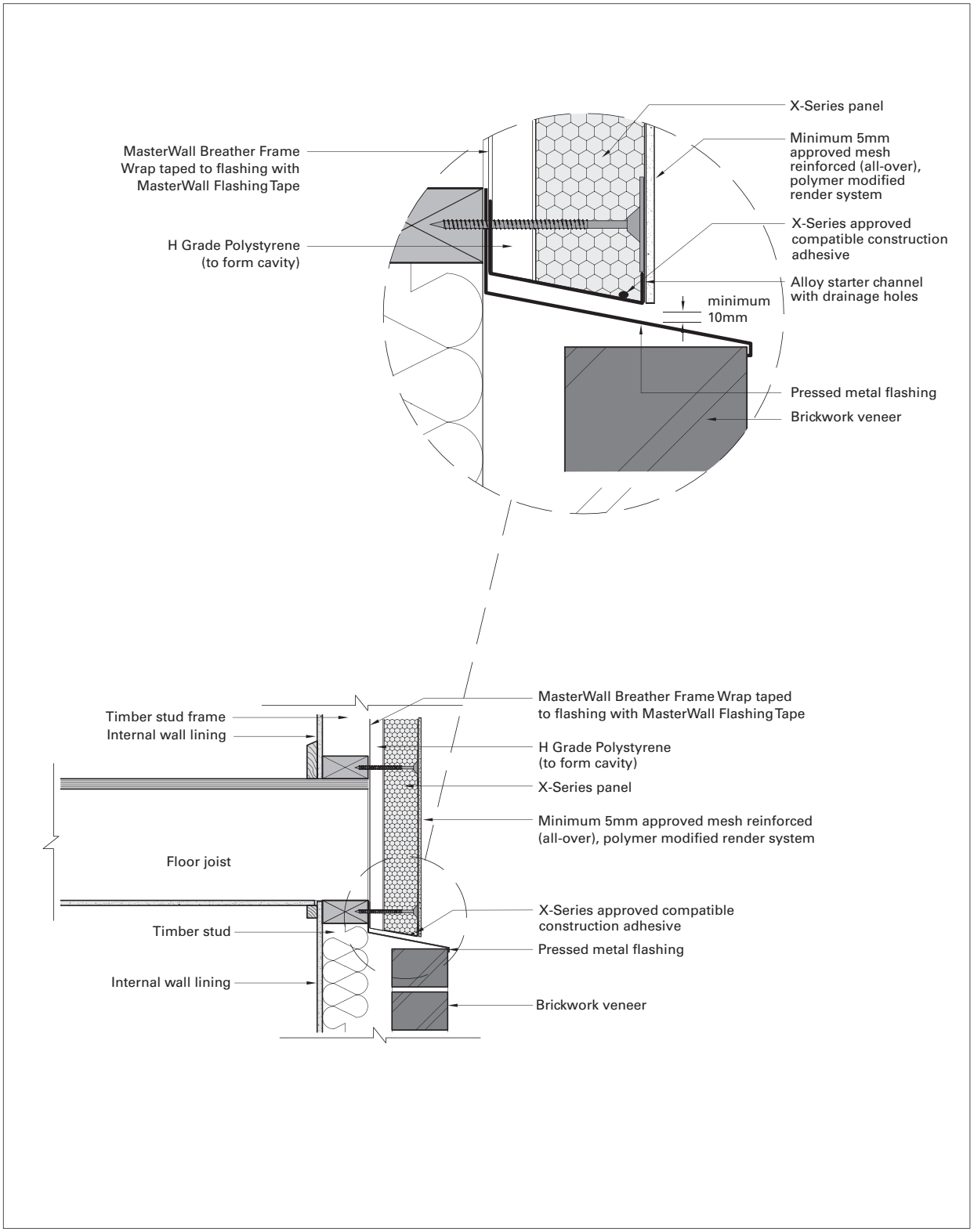
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL / X-SERIES PANEL - BATTEN FIXED SYSTEM:

CONSTRUCTION CONTROL JOINT - MID FLOOR BREAK

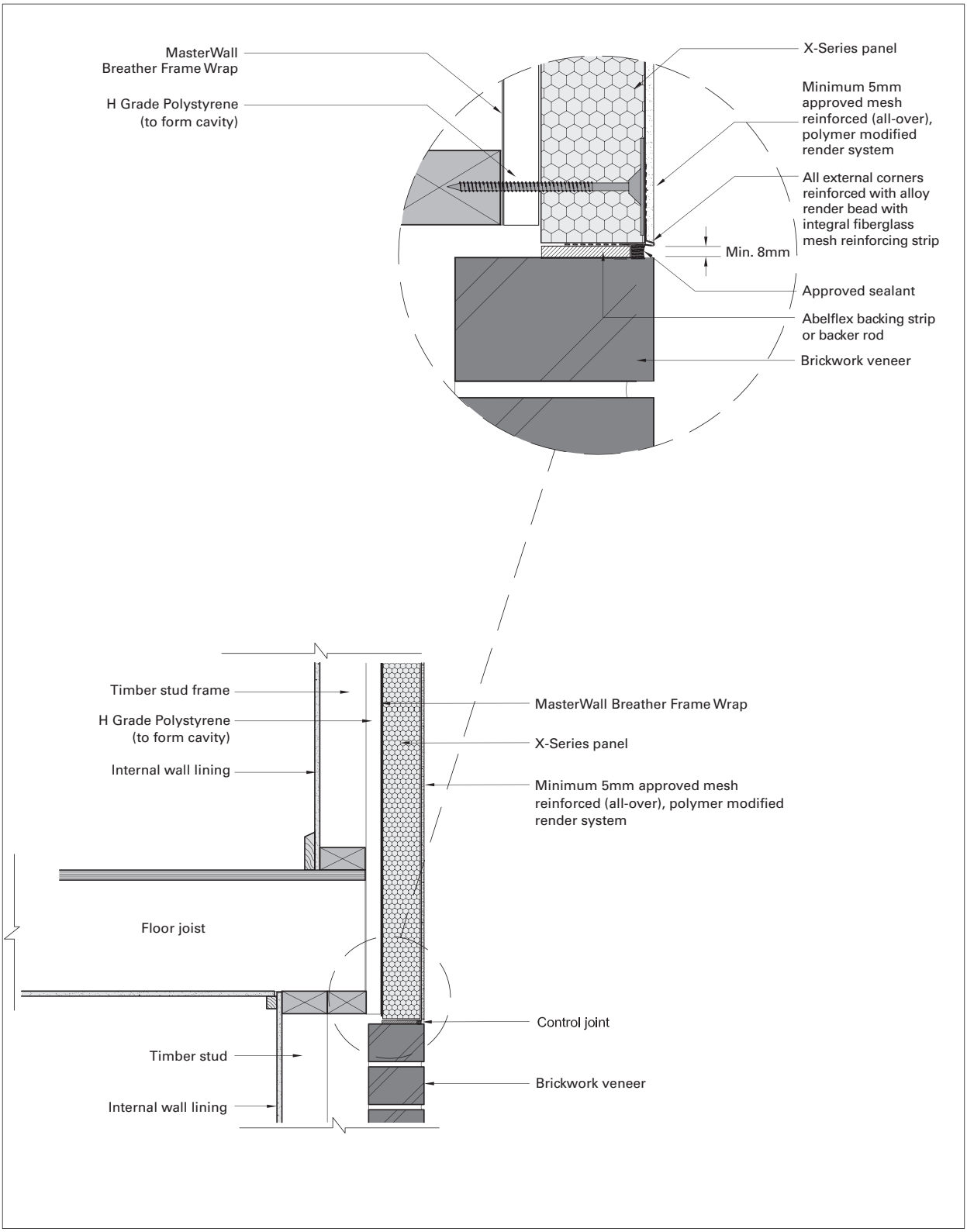
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL / BRICK VENEER - BATTEN FIXED SYSTEM:

JUNCTION - FIRST FLOOR LEVEL STEP OUT

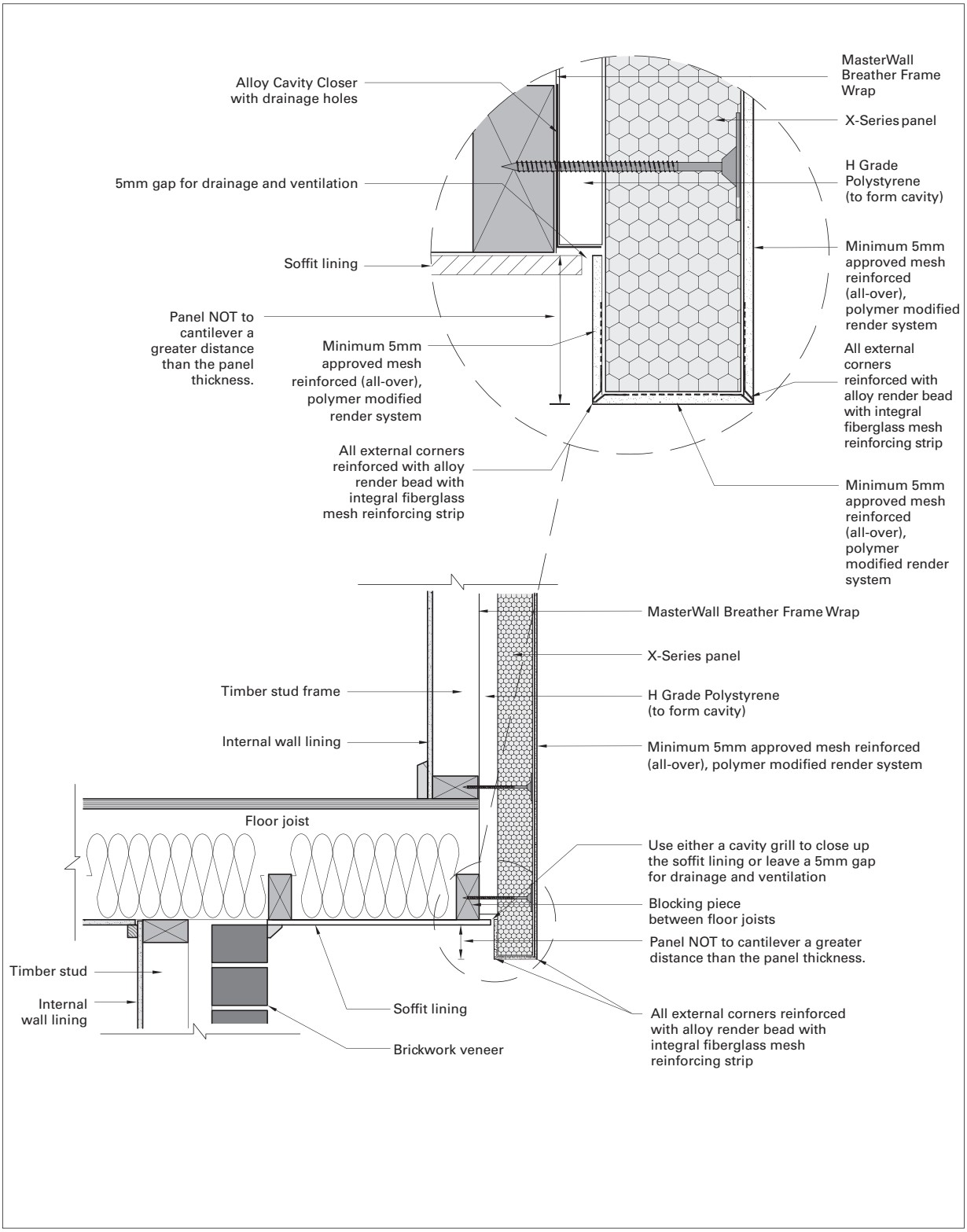
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL / BRICK VENEER JUNCTION - BATTEN FIXED SYSTEM:

FIRST FLOOR LEVEL FLUSH JOINT

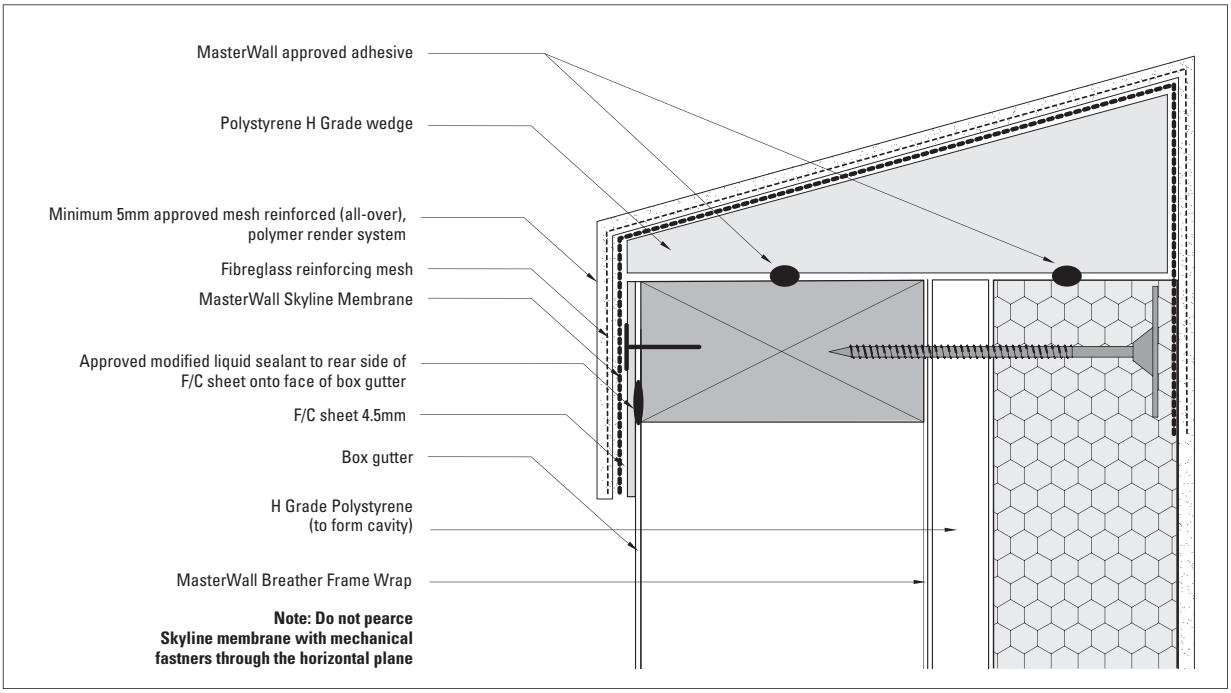
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL - BATTEN FIXED SYSTEM:

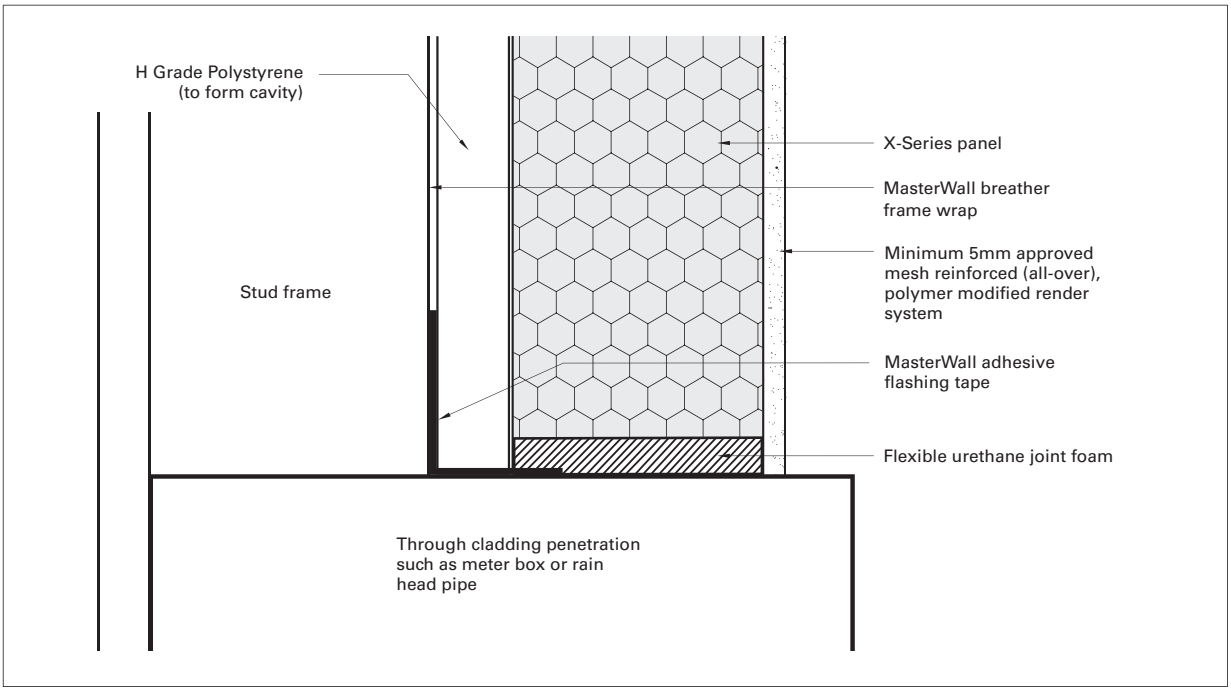
OVERHANGING FIRST FLOOR LEVEL

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL - BATTEN FIXED SYSTEM:

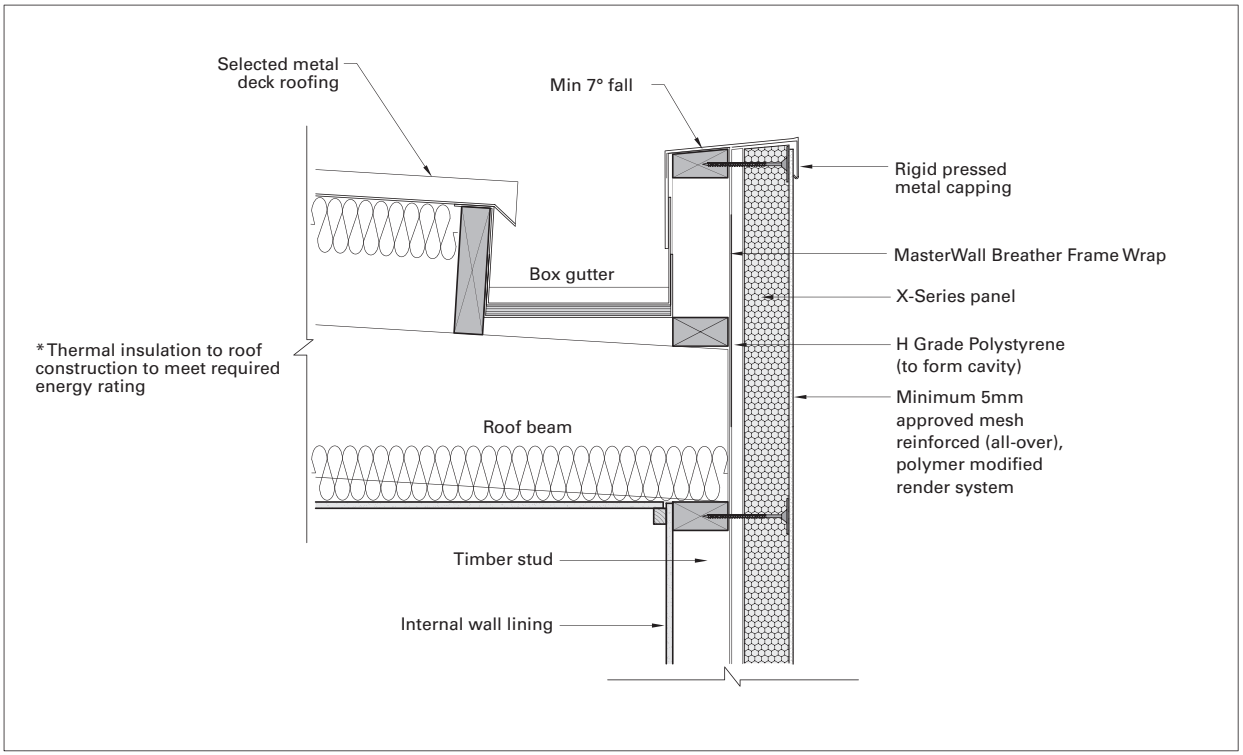
RENDERED PARAPET WALL WITH SKYLINE SYSTEM WATER PROOFING



X-SERIES PANEL - BATTEN FIXED SYSTEM:

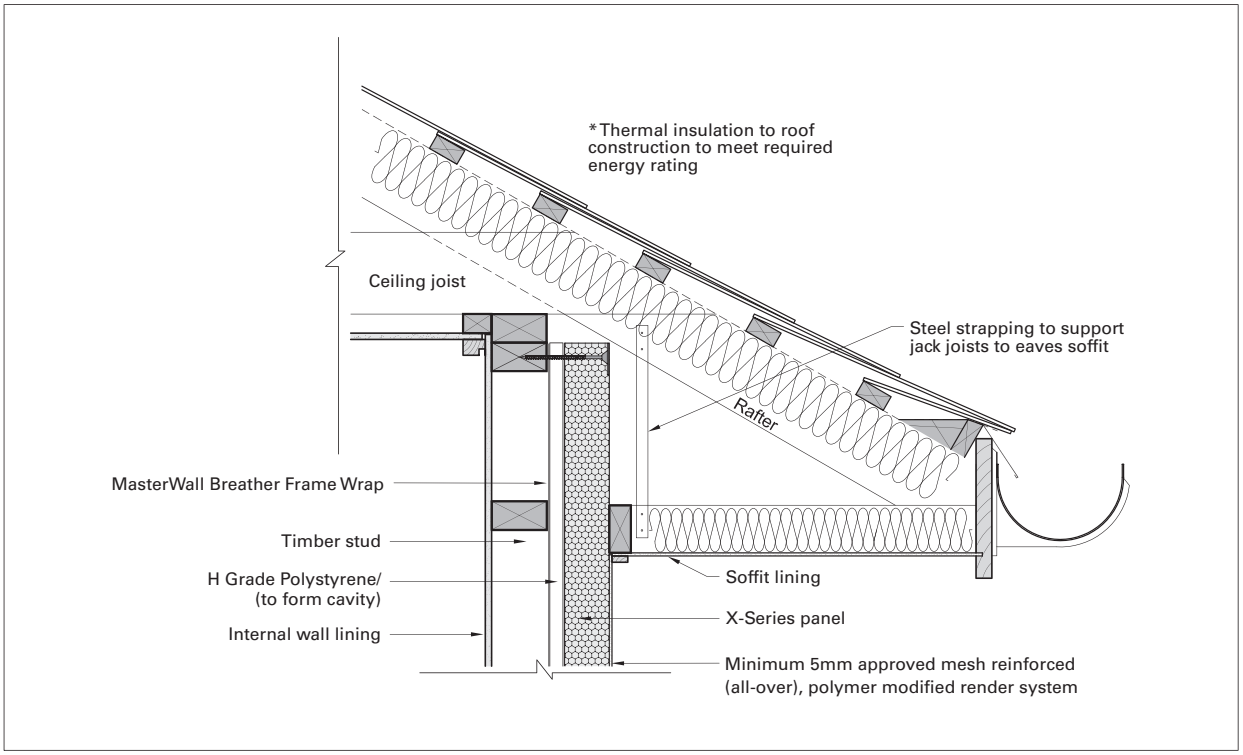
PANEL PENETRATION

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL / ROOF JUNCTION:

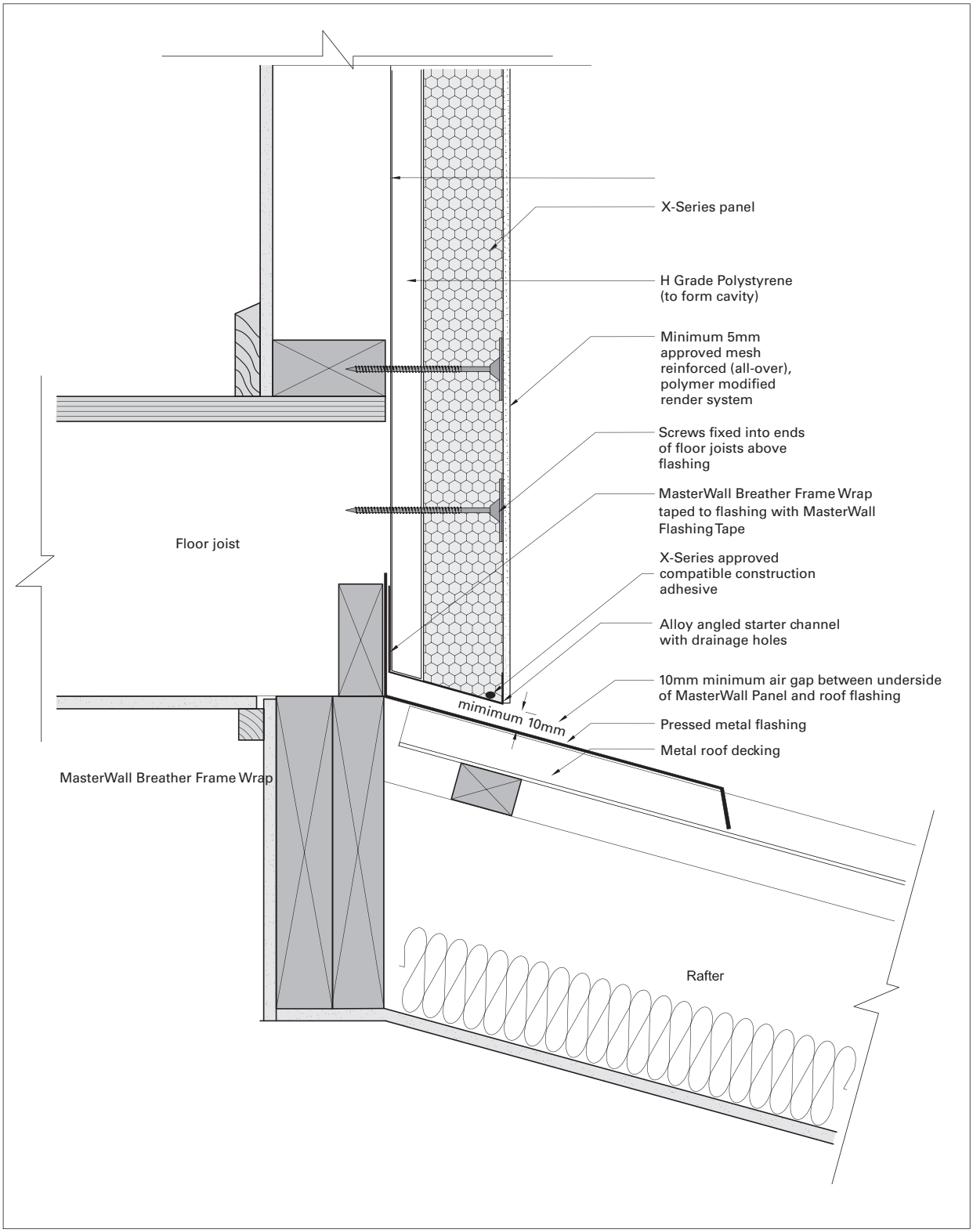
PARAPET WALL



X-SERIES PANEL / ROOF JUNCTION - BATTEN FIXED SYSTEM:

PITCHED ROOF WITH SOFFIT LINING

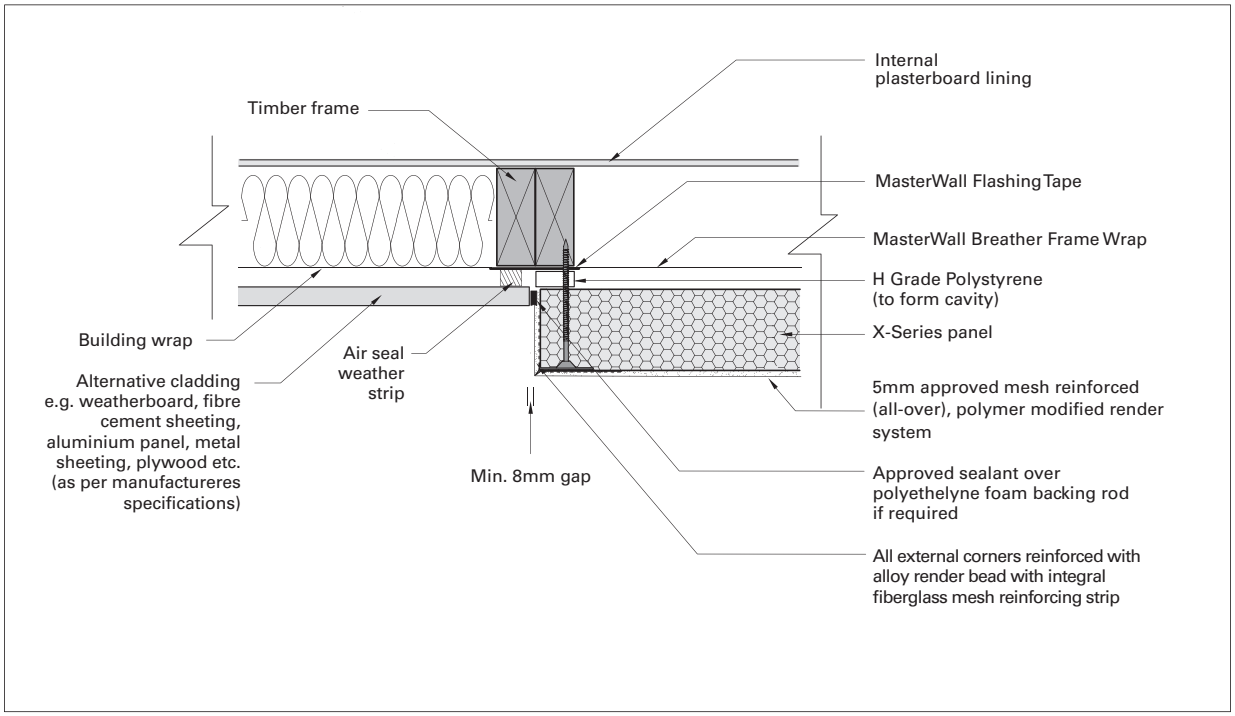
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



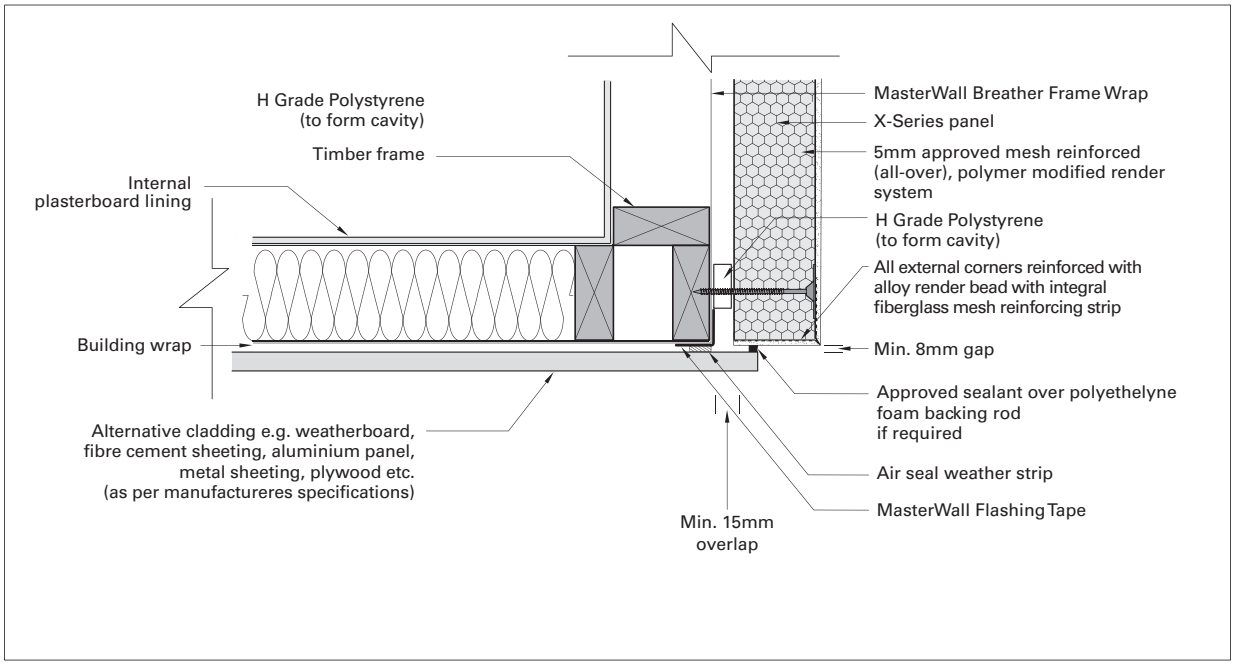
X-SERIES PANEL - BATTEN FIXED SYSTEM:

LOWER ROOF JUNCTION - REAR FLASHED

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

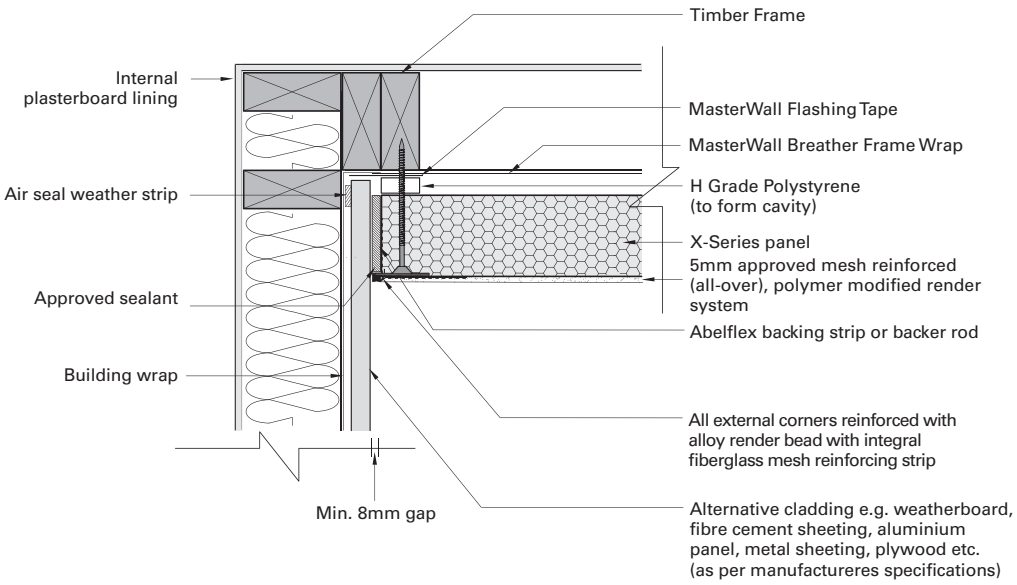


X-SERIES PANEL - BATTEN FIXED SYSTEM:
UNIVERSAL JUNCTION

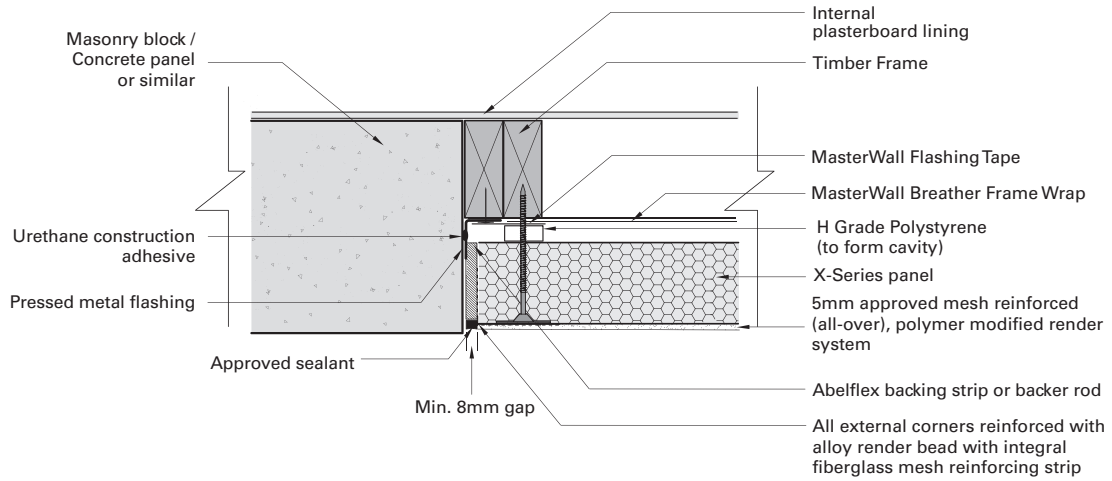


X-SERIES PANEL / EXTERNAL CORNER - BATTEN FIXED SYSTEM:
UNIVERSAL JUNCTION

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

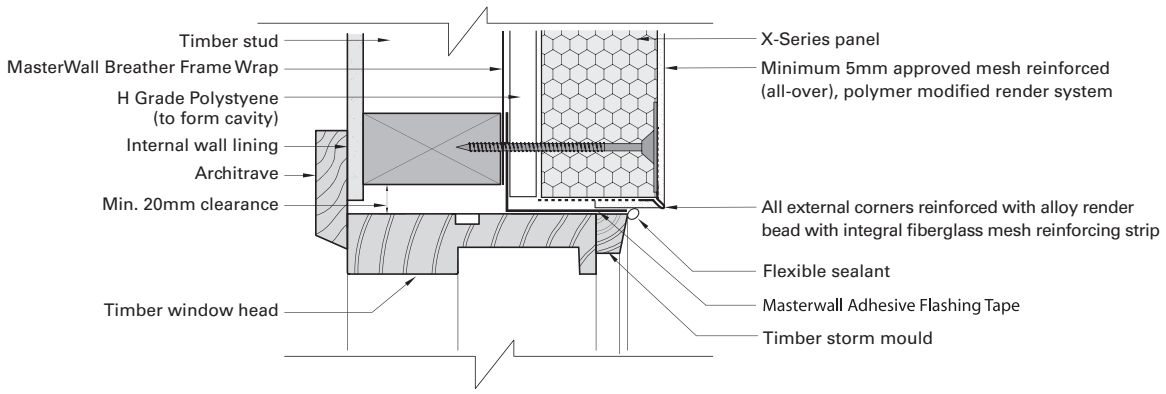


X-SERIES PANEL / INTERNAL CORNER - BATTEN FIXED SYSTEM:
UNIVERSAL JUNCTION



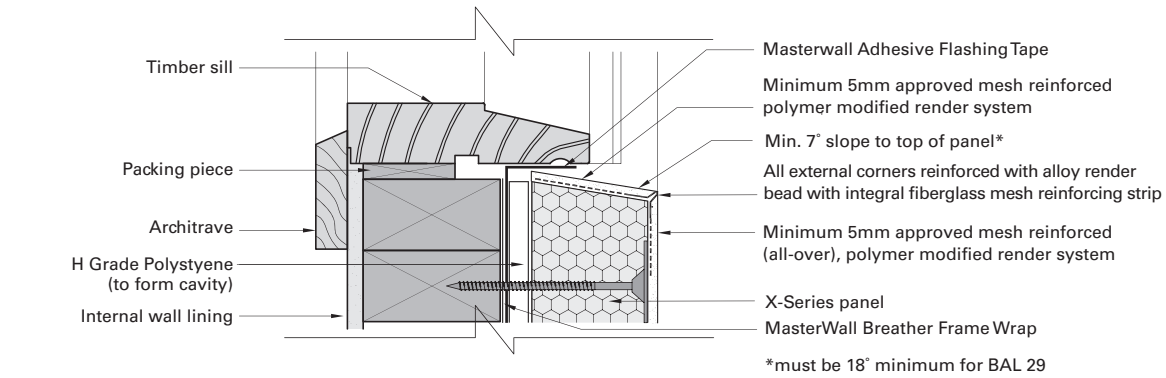
X-SERIES PANEL / SOLID MASONRY - BATTEN FIXED SYSTEM:
UNIVERSAL JUNCTION

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



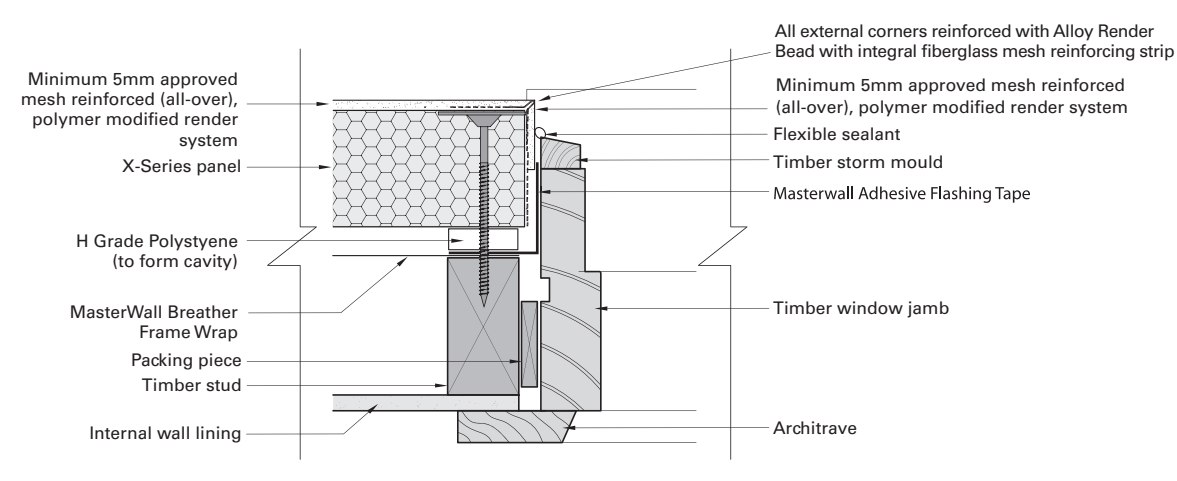
X-SERIES PANEL / TIMBER WINDOW - BATTEN FIXED SYSTEM:

TYPICAL HEAD DETAIL



X-SERIES PANEL / TIMBER WINDOW - BATTEN FIXED SYSTEM:

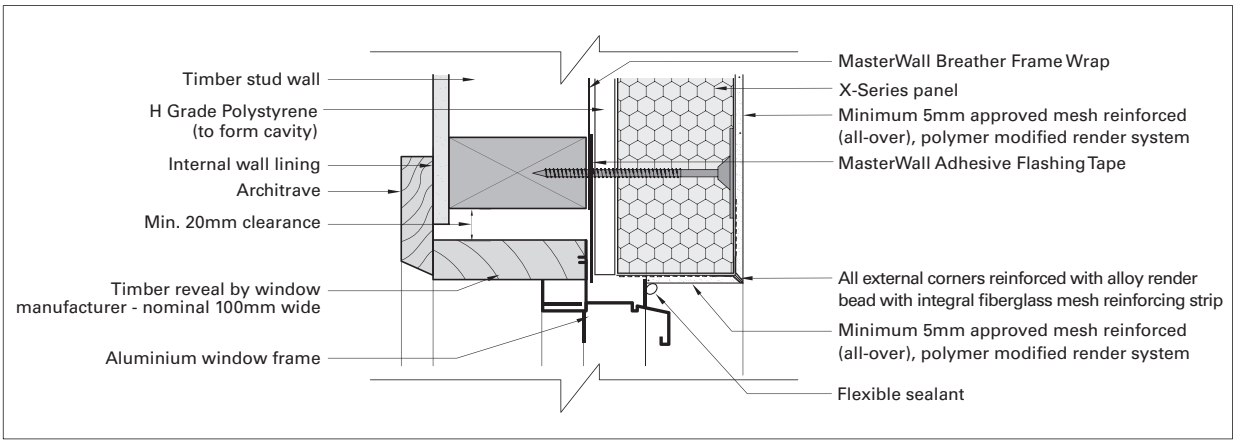
TYPICAL SILL DETAIL



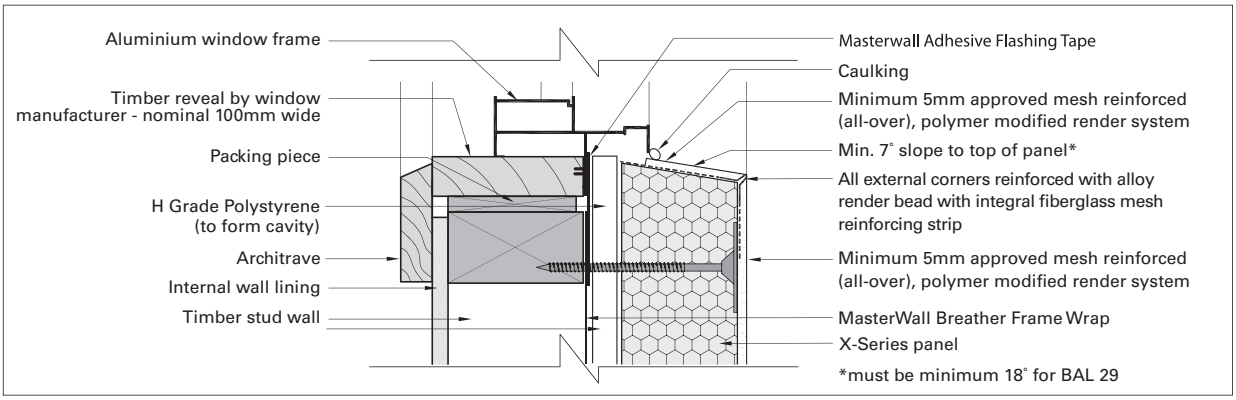
X-SERIES PANEL / TIMBER WINDOW - BATTEN FIXED SYSTEM:

TYPICAL SIDE JAMB DETAIL

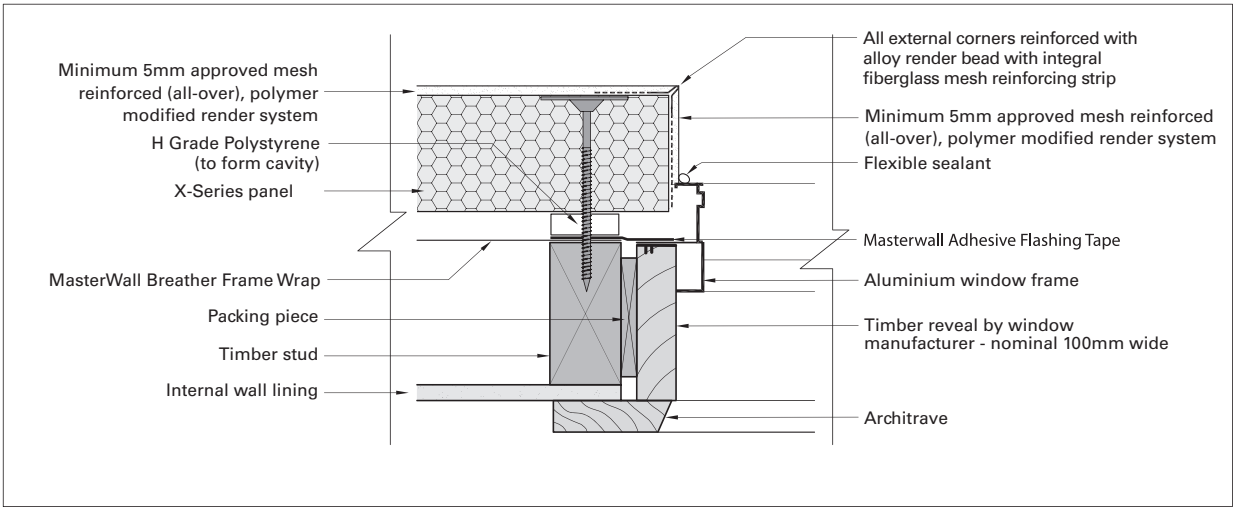
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL / ALUMINIUM WINDOW - BATTEN FIXED SYSTEM:
TYPICAL HEAD DETAIL

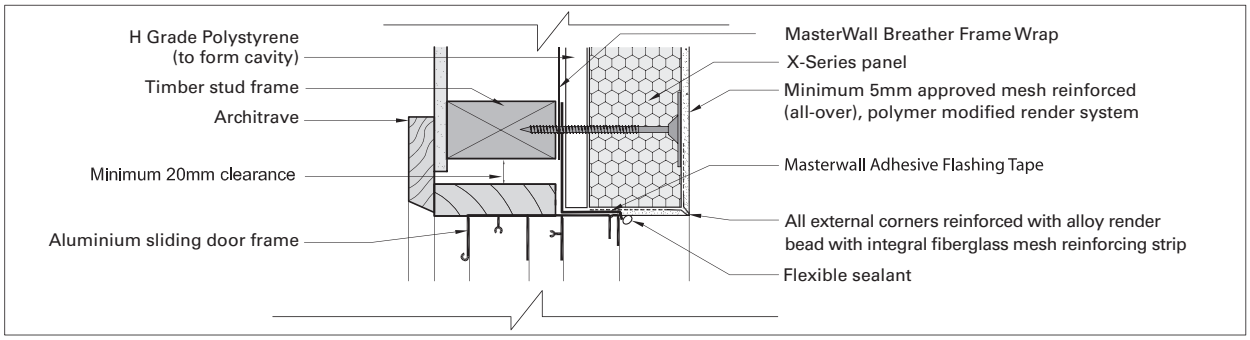


X-SERIES PANEL / ALUMINIUM WINDOW - BATTEN FIXED SYSTEM:
TYPICAL SILL DETAIL

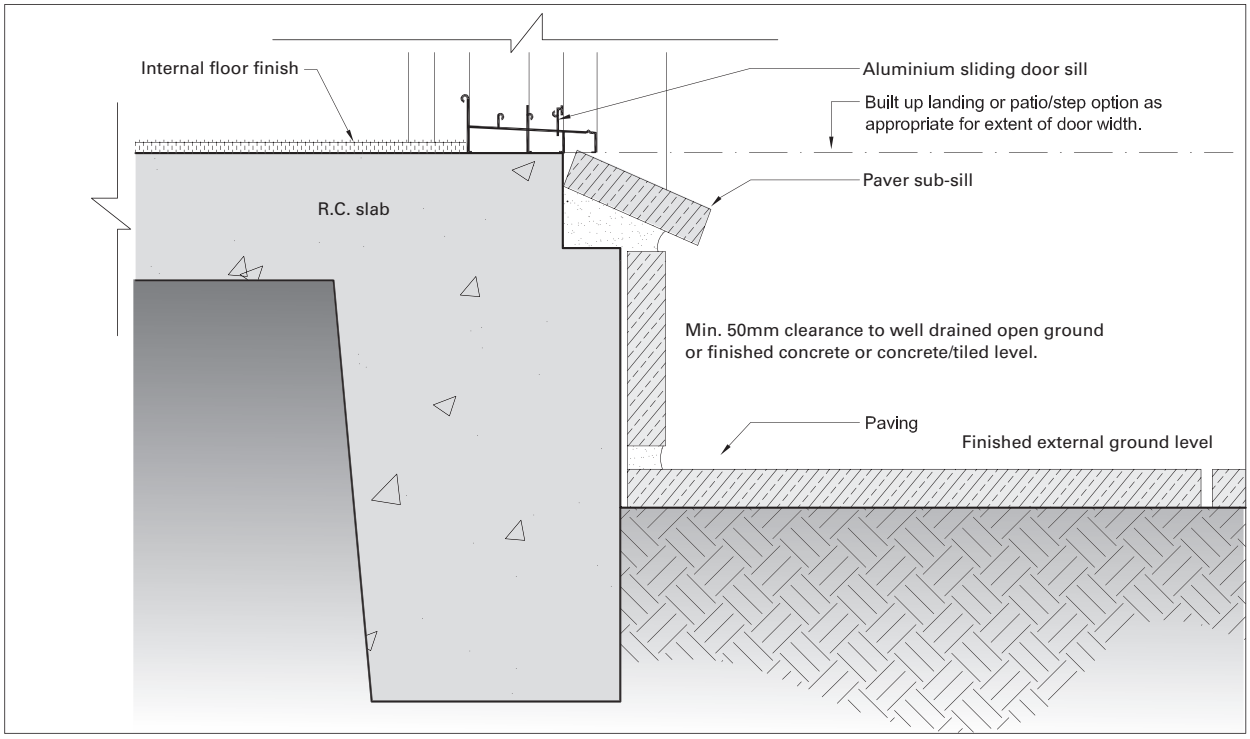


X-SERIES PANEL / ALUMINIUM WINDOW - BATTEN FIXED SYSTEM:
Note: Window system to be self draining.
TYPICAL SIDE JAMB DETAIL

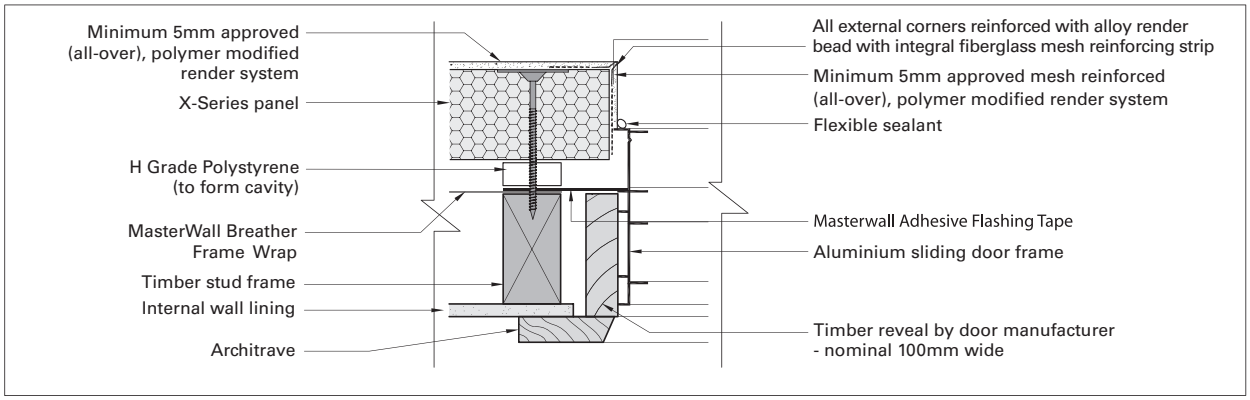
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL / ALUMINIUM SLIDING DOOR - TYPICAL HEAD DETAIL - BATTEN FIXED SYSTEM

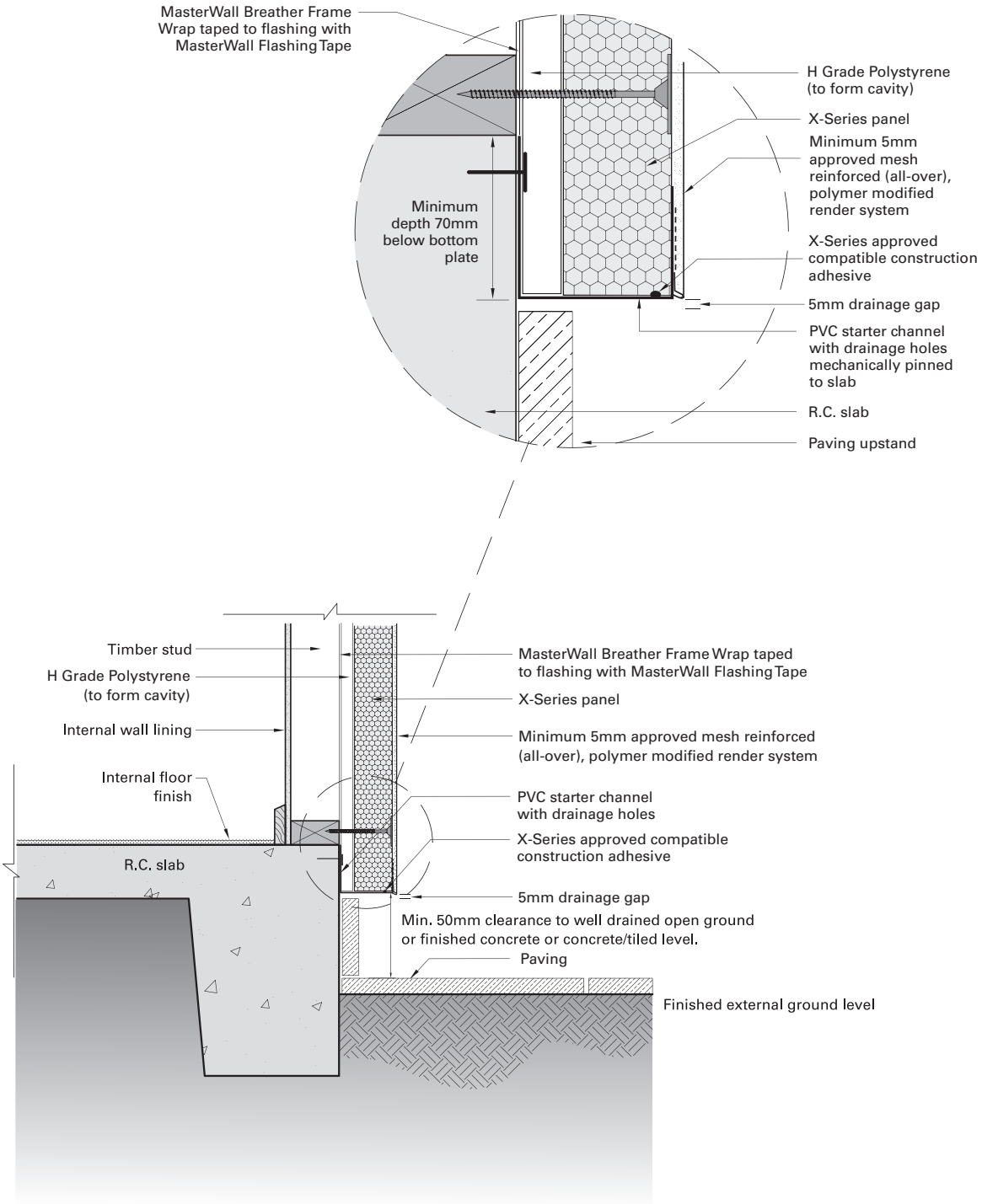


X-SERIES PANEL / ALUMINIUM SLIDING DOOR - TYPICAL SILL DETAIL - BATTEN FIXED SYSTEM



X-SERIES PANEL / ALUMINIUM SLIDING DOOR - TYPICAL JAMB DETAIL - BATTEN FIXED SYSTEM

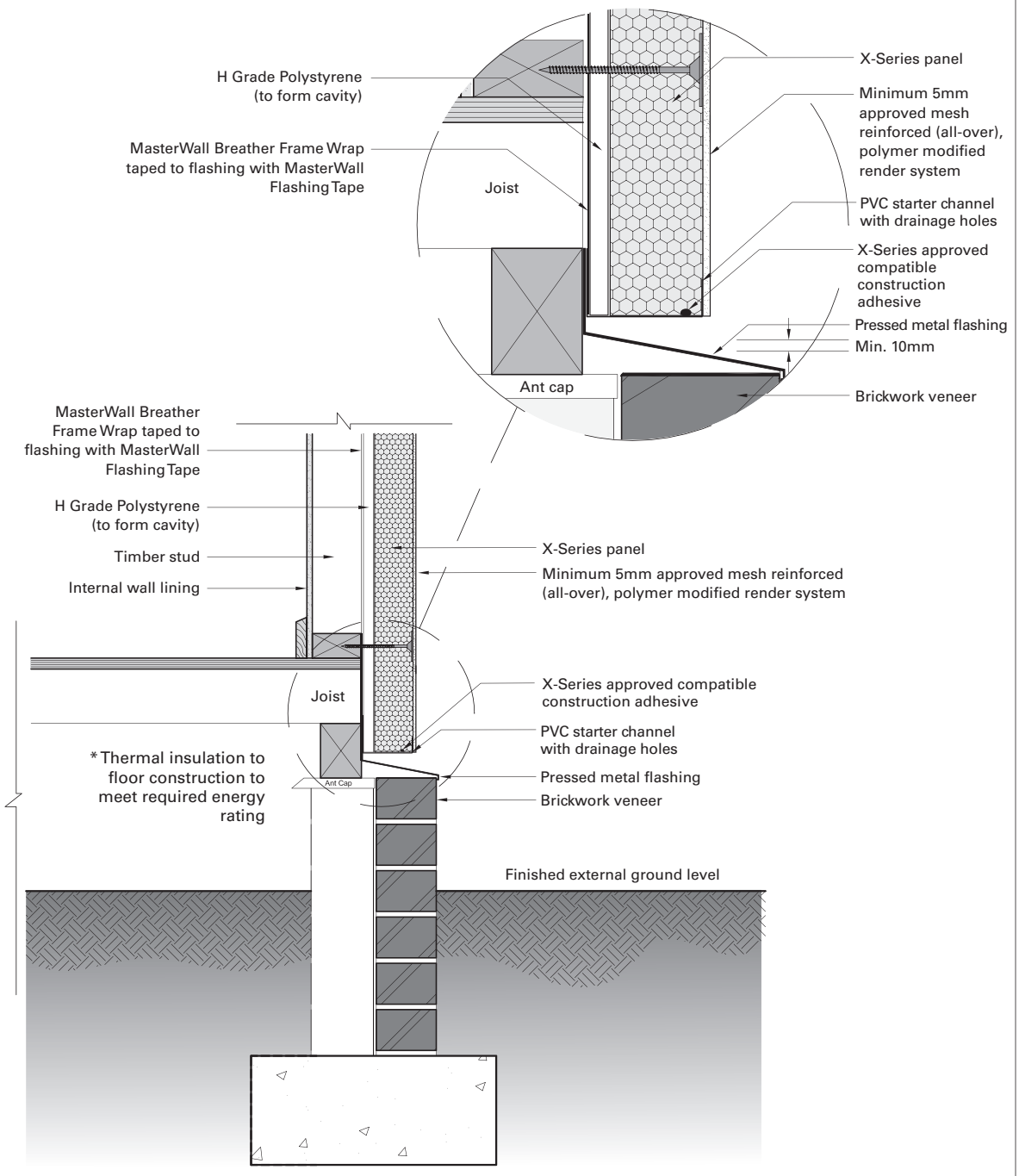
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL & GROUND SLAB JUNCTION - BATTEN FIXED SYSTEM

PROTRUDING

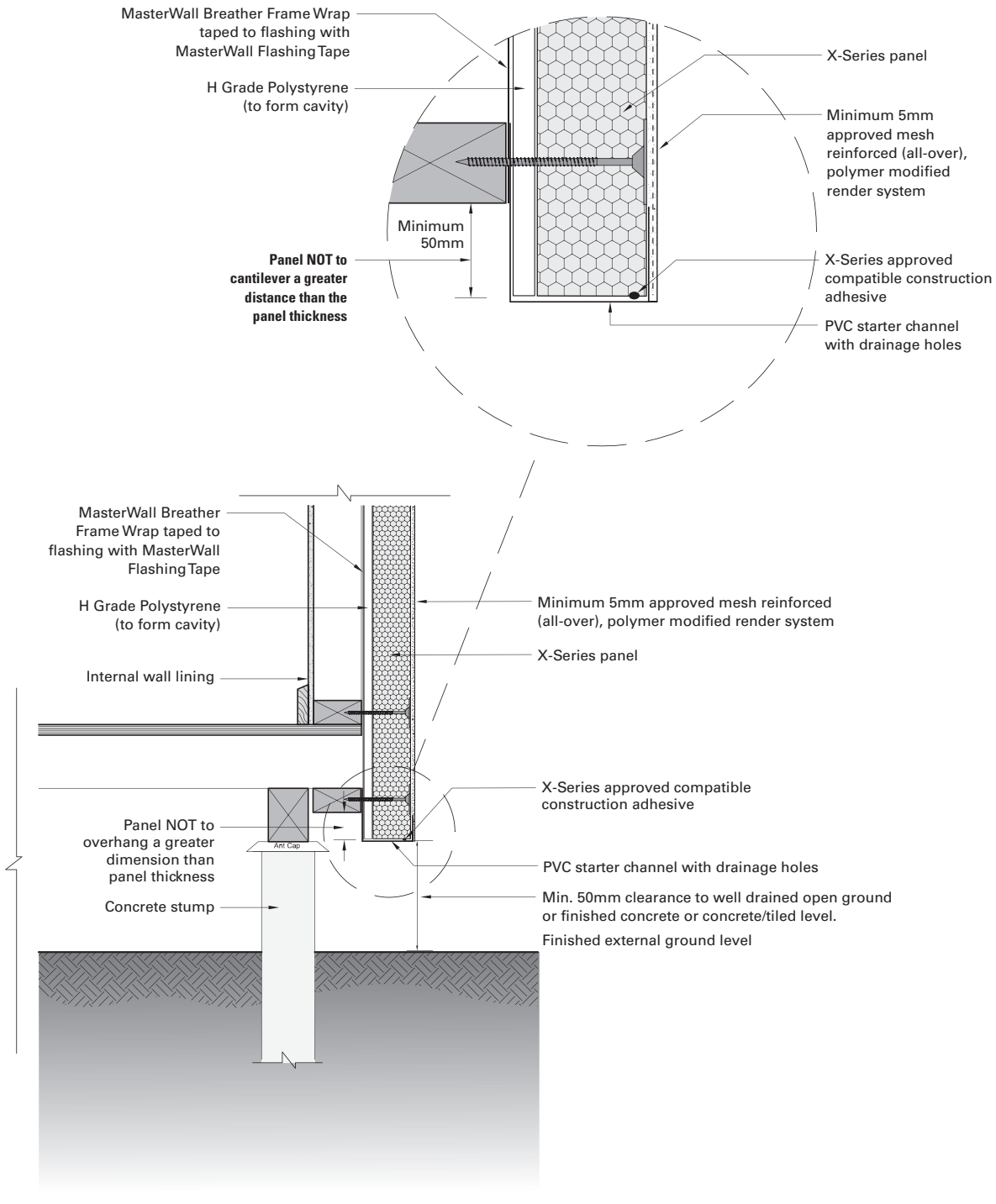
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL & BRICKWORK JUNCTION - BATTEN FIXED SYSTEM:

GROUND LEVEL

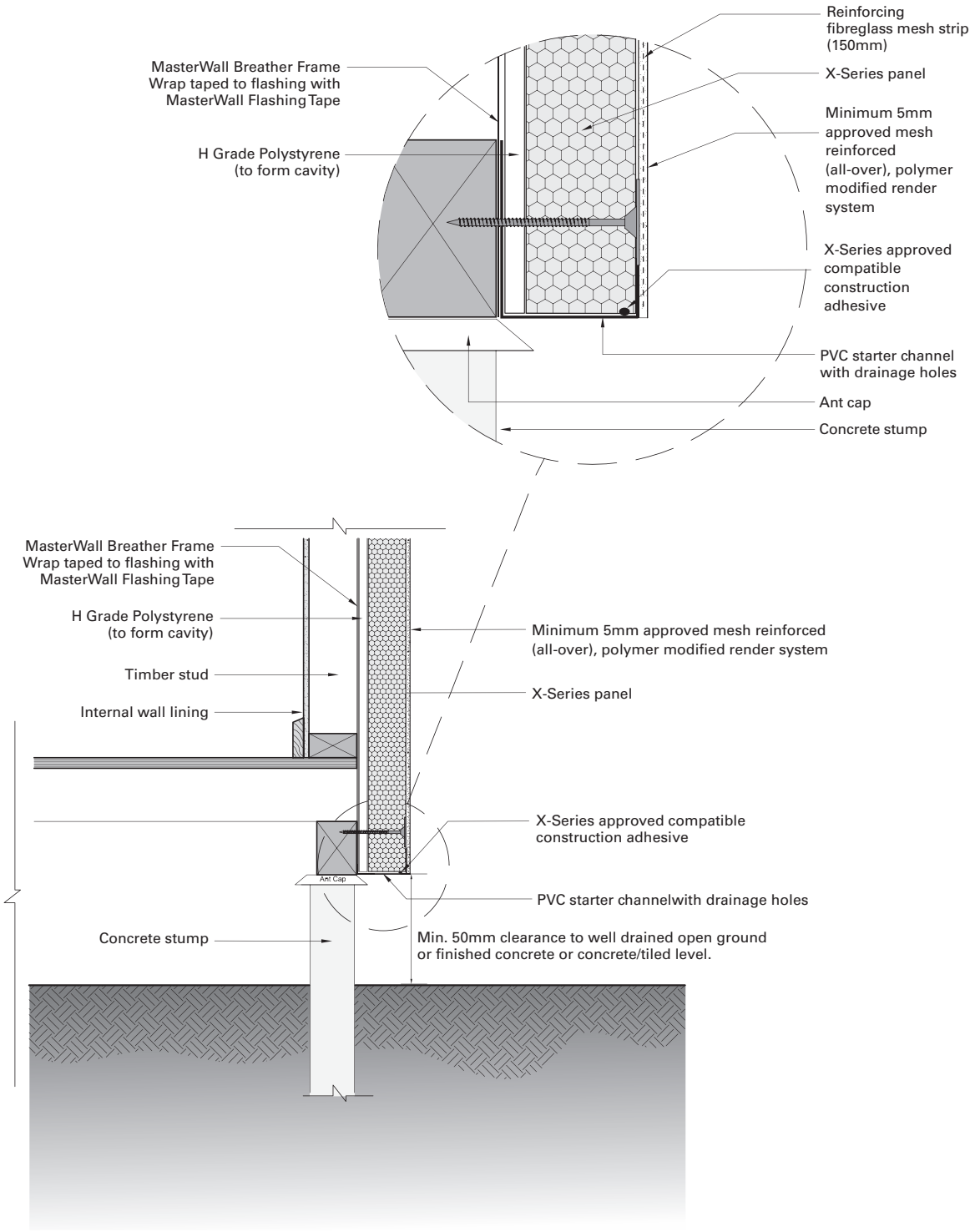
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



NOTE: Not suitable for BAL 29, as sub-floor is an open design

X-SERIES PANEL & CONCRETE STUMP CONSTRUCTION - BATTEN FIXED SYSTEM: PROTRUDING PANEL

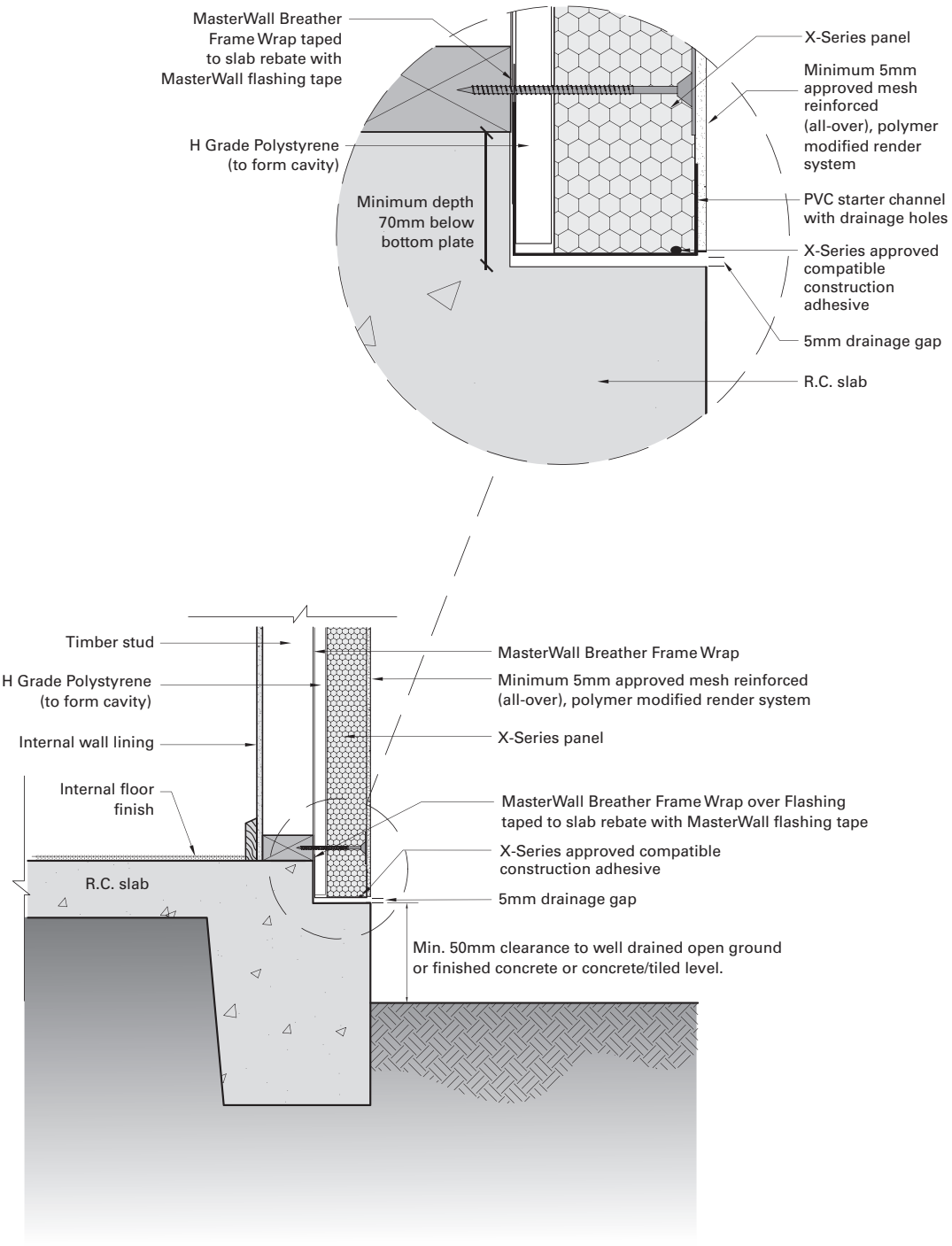
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



NOTE: Not suitable for BAL 29, as sub-floor is an open design

X-SERIES PANEL & CONCRETE STUMP CONSTRUCTION - BATTEN FIXED SYSTEM

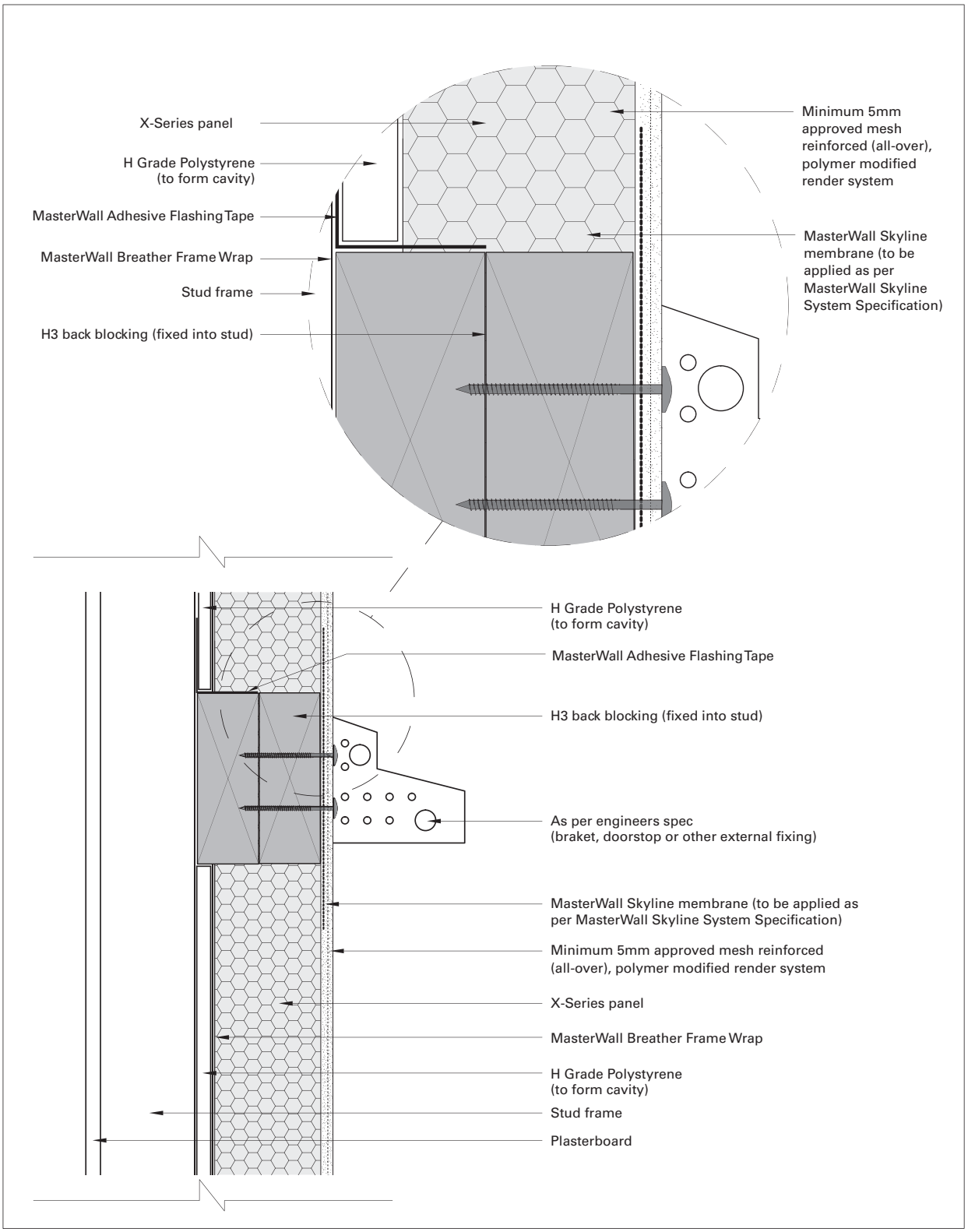
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



X-SERIES PANEL & GROUND SLAB JUNCTION - BATTEN FIXED SYSTEM

WITHIN REBATE

These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.



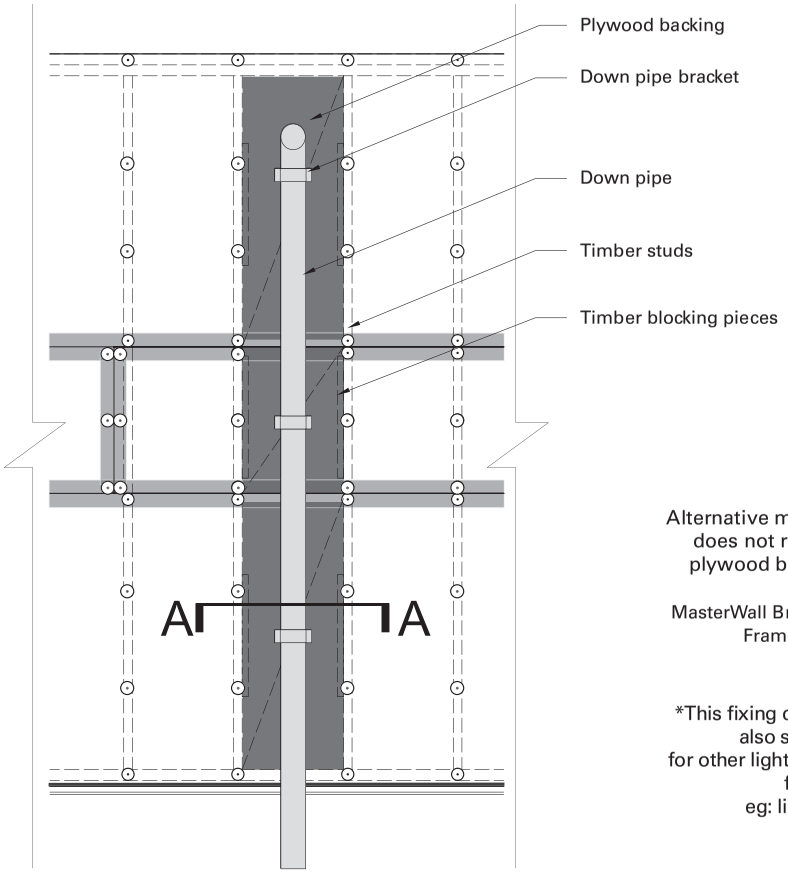
X-SERIES PANEL / EXTERNAL WALL - BATTEN FIXED SYSTEM:

EXTERNAL SUPPORT WITH SKYLINE SYSTEM WATER PROOFING

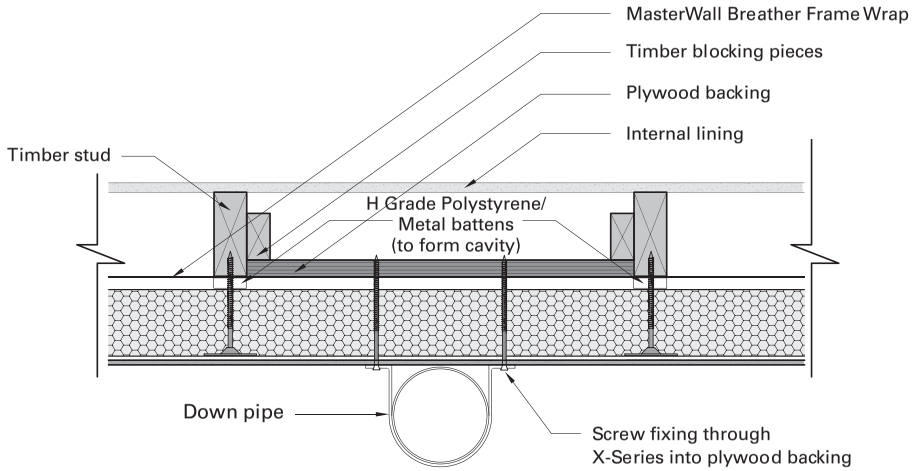
These details are indicative for the purpose of illustrating the typical installation of X-Series panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

TYPICAL FIXING SUPPORT FOR DOWN PIPE:

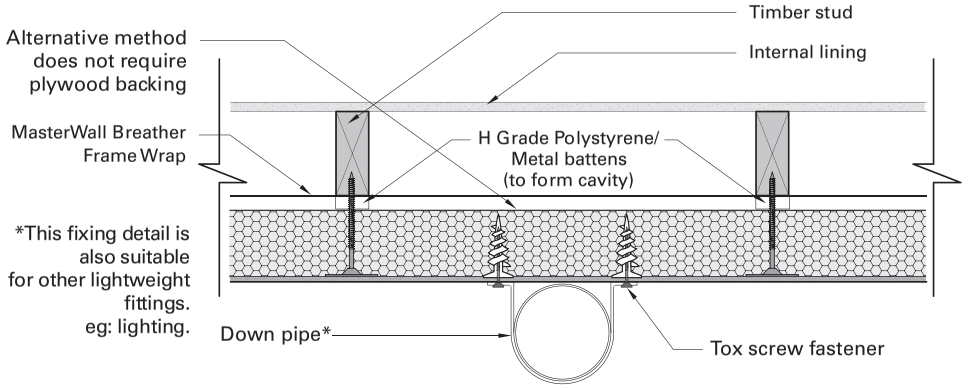
50, 75, 100 & 125mm X-SERIES - BATTEN FIXED SYSTEM



DOWN PIPE - ELEVATION VIEW



DOWN PIPE - SECTION VIEW A`A



DOWN PIPE - ALTERNATIVE USING TOX SCREW FASTNERS

These details are indicative for the purpose of illustrating the typical installation of X-Series Panels. Panels are to be installed strictly in accordance with the specifications detailed in the forward section of this manual. Substrate construction to be in accordance with the Building Regulations & Statutory Requirements.

X-SERIES

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SYSTEM CHECKLIST:

PRODUCT	DESCRIPTION	SIZES	COVERAGE	✓
X-Series Panel	Polystyrene Panel	50mm, 75mm, 100mm & 125mm	1.2m x 2.4m (2.88m²)	
Masterwall Fixings	Screw Button Sets 100 p/box	75mm, 100mm, 130mm	30 per panel	
Masterwall Breather Frame Wrap	Vapour Permeable Sarking	1350mm or 2700mm	82m²	
Masterwall Flashing Tape	Self Adhesive Aluminium Tape (flashing windows & doors etc)	75mm width	25m roll	
Premium Quality Modified Liquid Sealant	Premium Quality Modified Liquid Sealant (gasket sealant for flashing tape)	600ml sausage	2 per roll of flashing tape	
Expandable Elastic Foam	Expandable Urethane Flexible Foam (joint sealant)	700ml can	65m² of X-Series Panel	
PVC Starter Channel with drainage holes	U Channel for bottom of panel (on ground floor)	75mm, 100mm & 125mm	3.0m lengths	
Ableflex	Foam strip for rebated slab detail & expansion joints	75mm width	25m roll	
H Grade Polystyrene	Vertical battens attached to timber/metal studs to form cavity	To suit	At each vertical stud and at all openings	

NOTES:

TECHNICAL ADVICE / DESIGN

Masterwall Australia supports all of its products and systems with a comprehensive Technical Advisory Service for specifiers, stockists and contractors.

This includes a software-powered service designed to give fast, accurate technical advice. Simply phone the Masterwall Australia Technical Service Department with your project specifications. Calculations can be carried out to provide a Condensation (Dew Point) Risk Analysis, and/or a Total Wall (RT) System Thermal Value so that the correct insulation thicknesses can be determined for any given project.

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MASTERWALL

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