

An aerial photograph of a cityscape. On the left, a tall, modern building with a grid-like facade of windows and balconies stands out. To its right, a river flows through the city, bordered by older brick buildings. In the background, a dense urban skyline is visible under a clear sky. The text 'QUALITY CONTROL MANAGEMENT' is overlaid in a large, dark blue serif font.

QUALITY CONTROL MANAGEMENT

Brick Slip Best Practice Manual

DOMIS

Alsecco Ecomin 400 External Thermal Insulation Composite System

Ecomin 400 delivers A2 fire classification

Benefits

Fire protection Class A-2

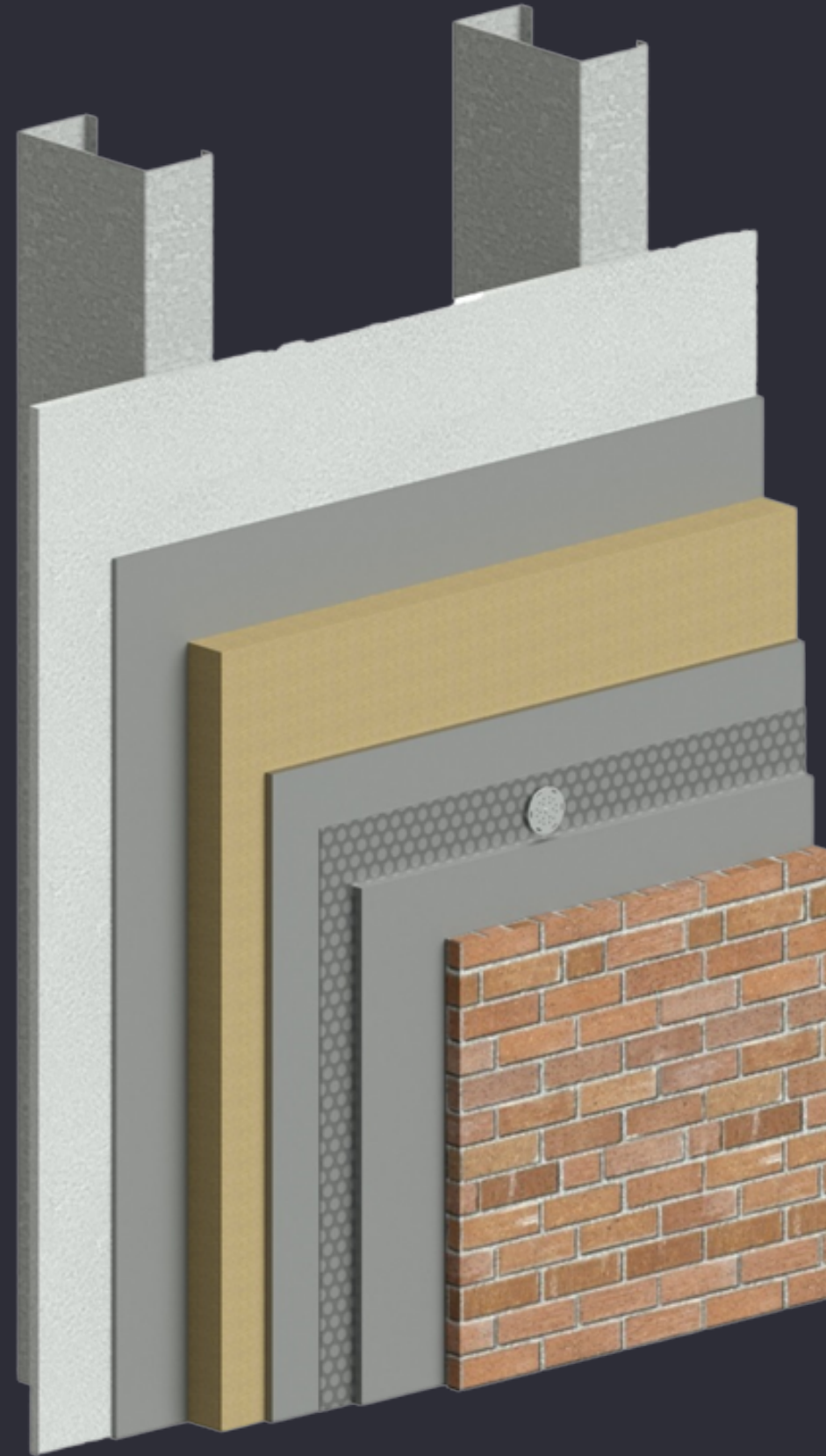
Premium High Density mineral wool insulation

Ideal for low and high rise installations

Available in a vast range of colour options



REACTION TO FIRE DIN EN 13501-1
A2-s1,d0



Alsecco Ecomin 400 External Thermal Insulation Composite System

Ecomin 400 Steel Frame Systems



Sub Primer P - Primer



Armatop MP - Adhesive



Mineral Wool – High Density
Insulation Board



Sub Primer HT - Sub Primer



Sub Primer HT - Sub Primer

Ecomin 400 Clay
Components

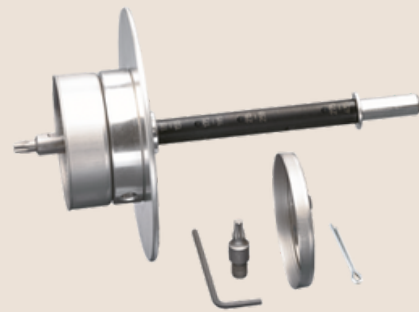
Ecomin 400 Clay-Fixings



Mechanical Anchor Fixing

For solid substrates
(Size dependant on insulation thickness)

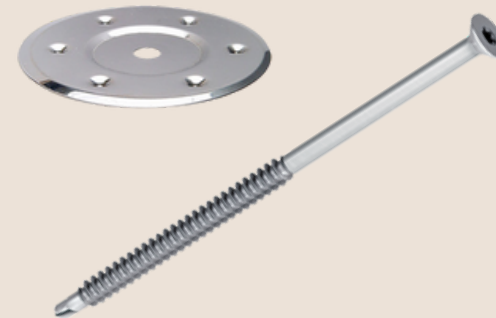
STRU 2g



STRU 2g Tool

To counter
sink fixings

STRU 2g

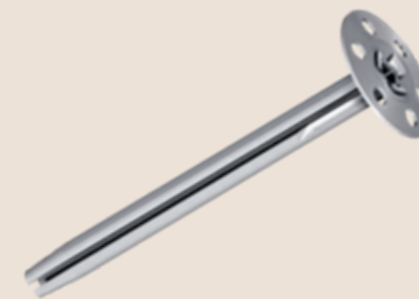


Fire Fixing

For min 12mm cement
particle board

**JT3 ST-2-6.0 &
DMT Washer**

(Size dependant on board thickness)
(Only needed above 2nd Storey)

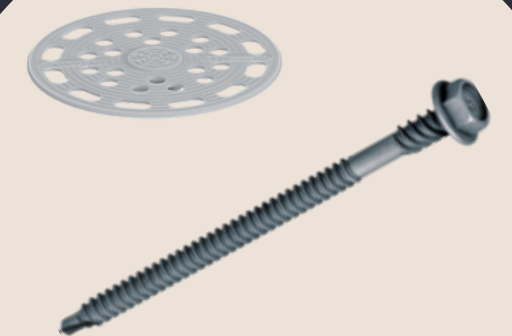


Fire Fixing

For solid substrates

FF DMH

(Size dependant on board thickness)
(Only needed above 2nd Storey)



Mechanical Anchor Fixing

For min 12mm
cement particle
board

**SW8R 4.8 &
SBV Washer**

(Size dependant on insulation thickness)

Ecomin 400 Clay-Components



Mesh K



Armatop A

Basecoat



Fugenmörtel A

Joint Mortar



Panzer Mesh

For high impact.



Verlegemörtel A

Bedding Mortar

This will be used
from ground floor up to
level 1 on Victoria House

Tools & PPE

Personal Protective Equipment (PPE):

- Hardhat
- Safety boots
- Hi-vis
- Gloves
- Glasses
- Ear plugs / defenders if appropriate
- Dust masks

Tools:

- Roller / paint brush
- Electric paddle mixer
- 10mmx10mm notched trowel
- Gauging/lifting trowel
- Hawk
- Tamp/1.8 level
- Power drill
- Hammer
- Knife
- 60cm spatula
- Sponge float
- Stainless steel trowel
- Festool/band saw
- Gauge tape
- Laser level
- Finger trowel –to suit 10mm joints



Pre Planning Quality Control

Specified
100mm
insulation

Planning begins before the
material is ordered,
quotations should always be
subject to a site survey

- String line suspect elevations
for belly's in the wall and out
of plumb elevations

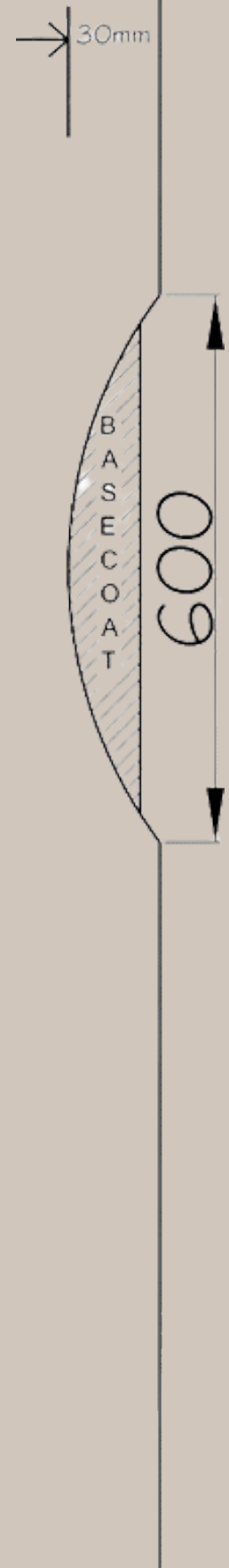
- (Bearing in mind block layers
are allowed a tolerance
of + or - 20mm)

Established whether the
customer requires a building
that is level and
plumb or an insulated systems
that reflects the structure in its
current form

Achieved 60mm
insulation in
worst area

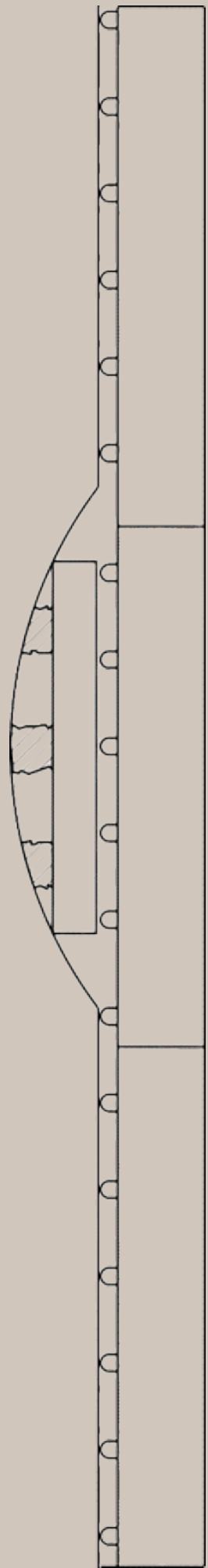
- Extra labour to notch
boards
- Reduction in efficiency
of system
- A level system may make
window reveals look
tapered and odd

Pre Planning Quality Control



- System does not require existing render to be removed Though any areas of loose, hollow or blown render must be knocked off
- This can create voids in excess of 30mm
- A hole in the substrate within the 1200x600mm board size can usually be bridged with a board
- Avoid the temptation to dub out with sand and cement mix as this will not form part of the system warranty
- Alsecco render only materials: Basecoat Alsitop LP min. 15 – max. 20mm (single layers) max. 40mm (two layers)
Drying time - approx. 1 day/mm layer thickness
Dependent on temperature, layer thickness and relative humidity
- Sockelputz LP min. 10 mm - max. 20 mm (single layers) max. 30 mm (two layers)
Drying time - approx. 1 day/mm layer thickness
Dependent on temperature, layer thickness and relative humidity
- In theory each additional 1mm adds 24hrs to the drying time as the product air dries

Always Protect fresh plaster against rain and drying out too rapidly.



Pre Planning Quality Control

Dubbing Out – Ideal Solution

- Order 20mm insulation boards
- Fill central area of the void with 20mm Board
- Board straight over the top with the system
- No delay – Waiting for materials to dry
- Reduced cost – both in labour time and material coat
- Maintaining system warranty. Extra length fixing may be required for this area

Golden Rule

- Failing to visit site prior to ordering material will lead to applicators improvising solutions with the materials they have to hand.
- Prior planning removes the human instinct to take the easy way out, which often voids the warranty along the way.

Pre Planning Quality Control

- Sub Primer P– Ready to use. Can be diluted with a max. of 20 % water
Roller applied to flat area, brush reveals etc., can also be spray applied,
Suitable for smoother surfaces.
- Hydro Tef Grund (HT) Primer- use without dilution, brush applied to EPDM
- All substrates must be free of oils, greases and loose particles. Ready to use depending on the
absorbency of the substrate, dilute the base material with water
using a max. ratio of 1:2.

Pre Planning

Hammer in fixings 6-8mm Ø every 300mm (min) with packers where necessary on uneven substrates

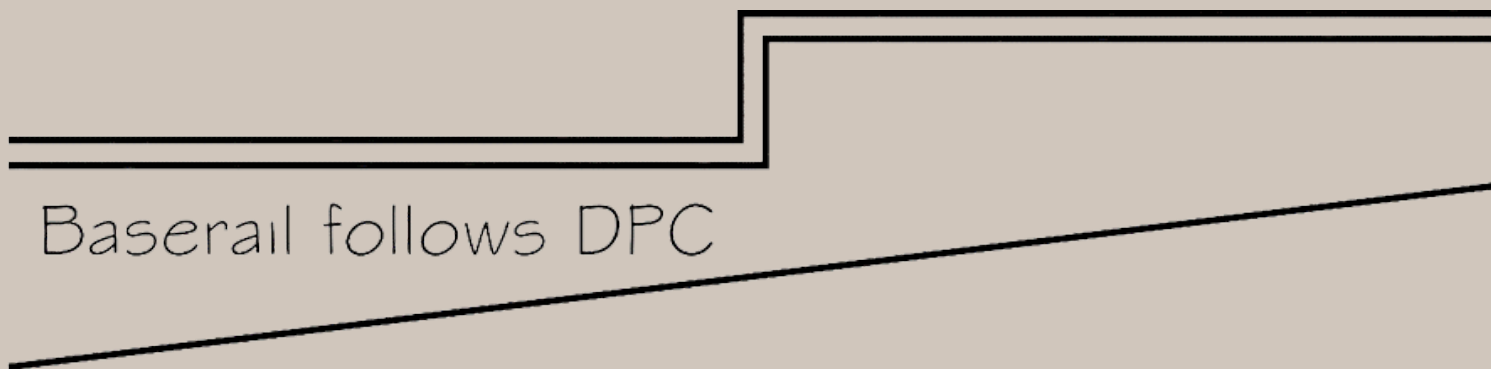
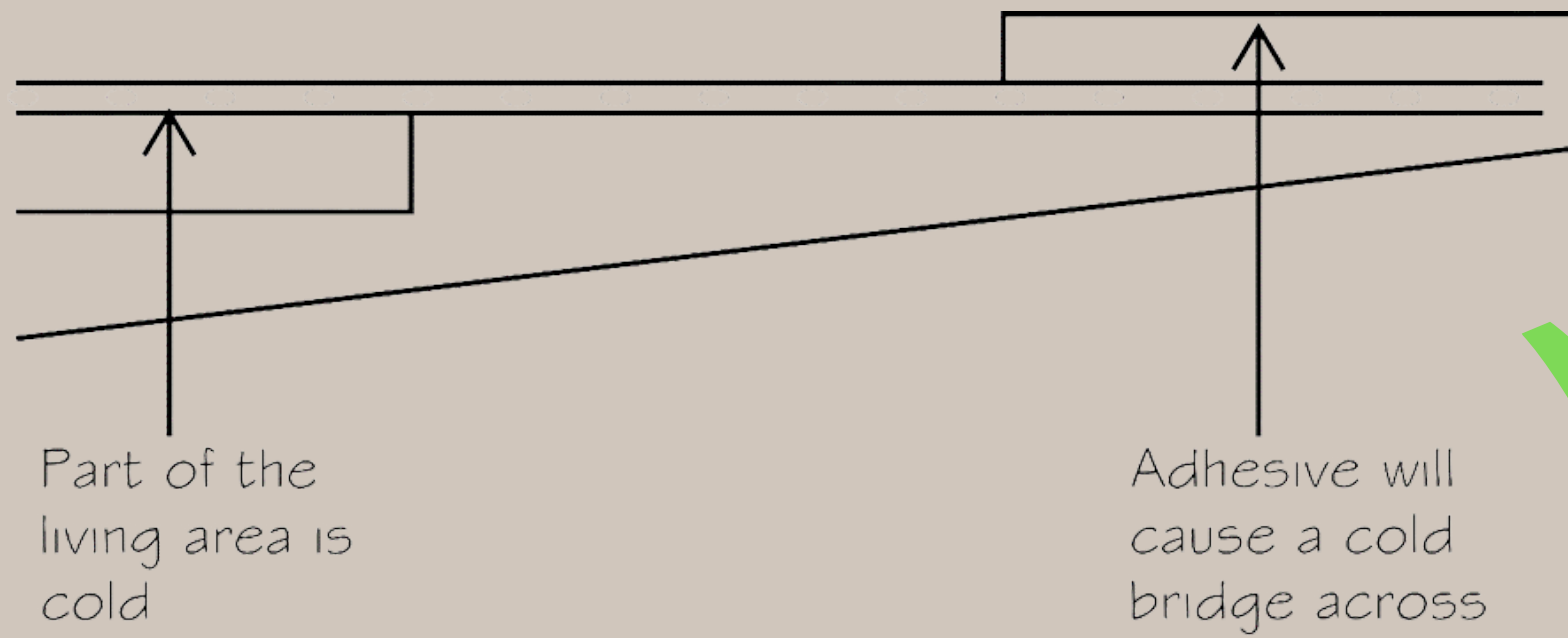


Baserail clips prevent uneven substrates causing steps in the front edge. This allows track to be accurately installed by one man.



Never overlap tracks on corners always mitre the corners either in one piece or use a clip

Pre Planning



- Never bridge the dpc, its better to follow an existing dpc than fit the rail using a sprit level



- Always use packers which fit over the fixing and therefore cannot fall out.

Boarding – Adhesively Fixed

A minimum of 50% adhesive bond should be achieved between the board and the wall

Using the notch trowel (10x10mm) only 50% of the board is capable of sticking to the wall, as we must have 50% adhesion, this method can only cope with a maximum deviation in the substrate of 8mm

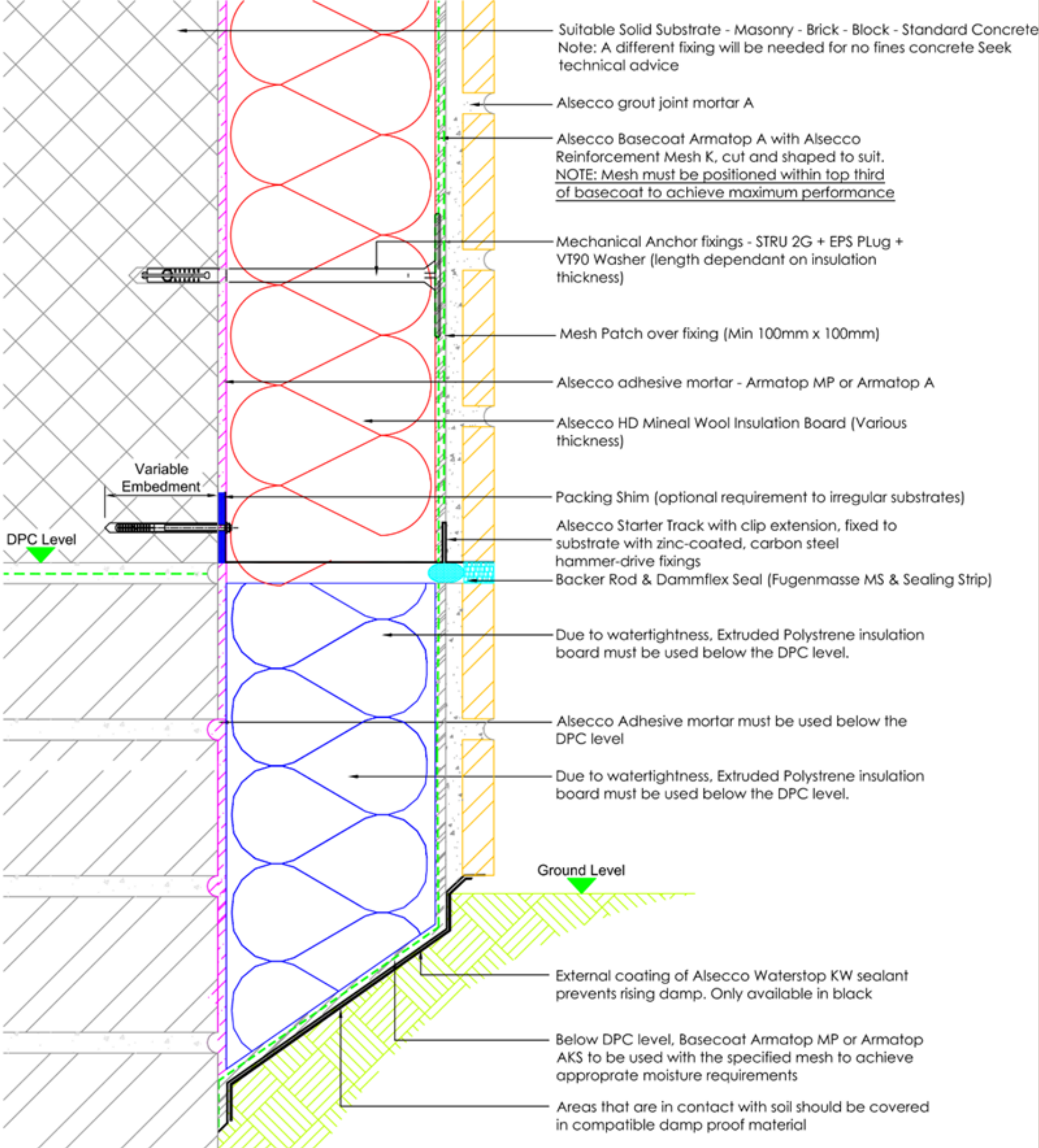
Pre Planning

The insulation board must be both adhered to the wall, and base coated with a fully waterproof system achieved by using waterflex, this will ensure that the area below DPC is completely sealed.

Insulation below base rail needs to be non-vapour permeable extruded polystyrene (XPS) or dense EPS are both suitable

Advantages- Retrofit Improves the cosmetic appearance of the system, reducing the projection to a more discreet step: Prevents any issues with damp below dpc being exaggerated by lack of air flow stabilises the base rail, removing the installer's need to cut insulation as temporary props, which are then disposed of at a cost to the contractor

Advantages – New Build Increased insulation in the slab up stand continuous weather protection of the façade down to ground level

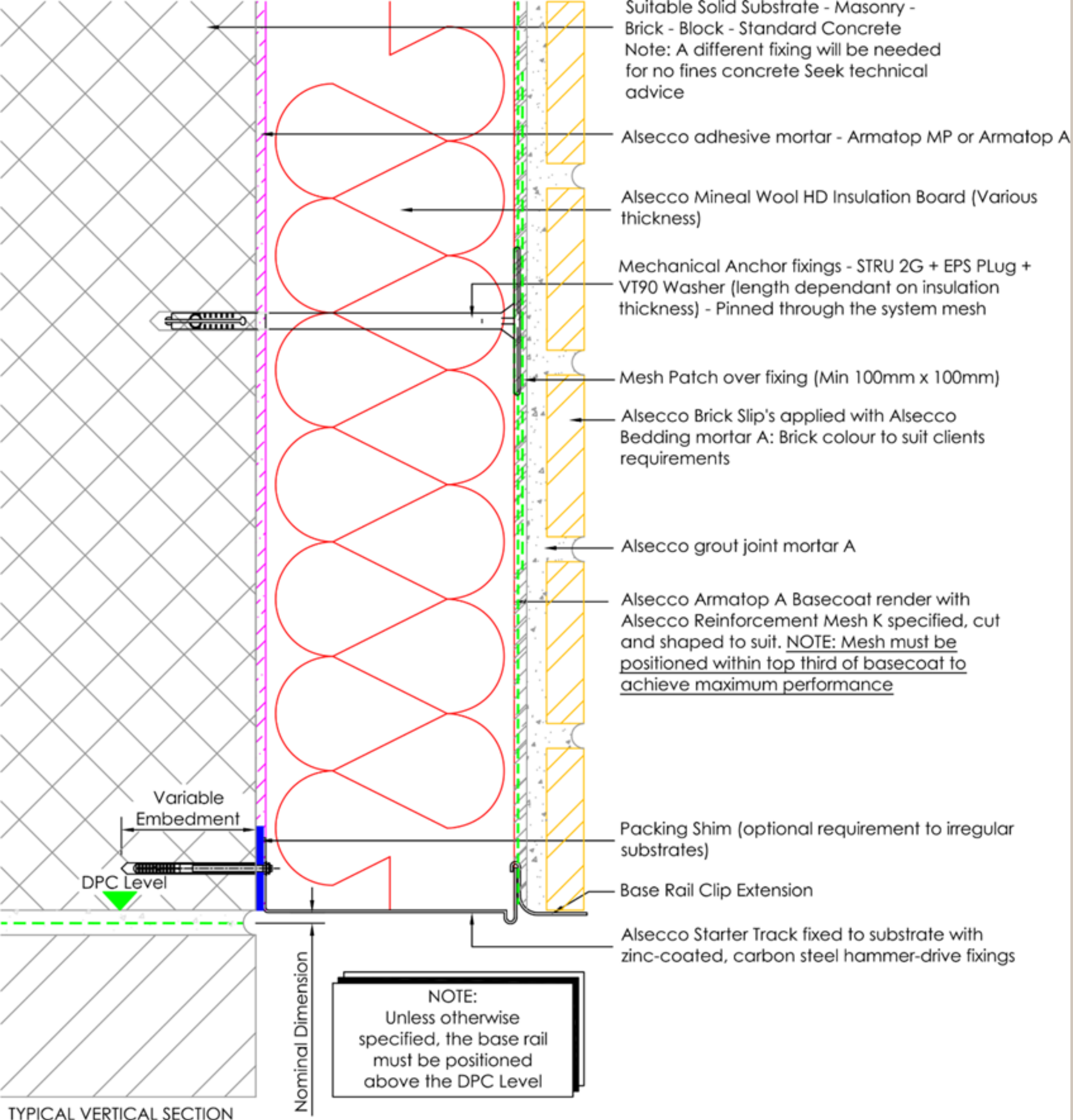


Pre Planning

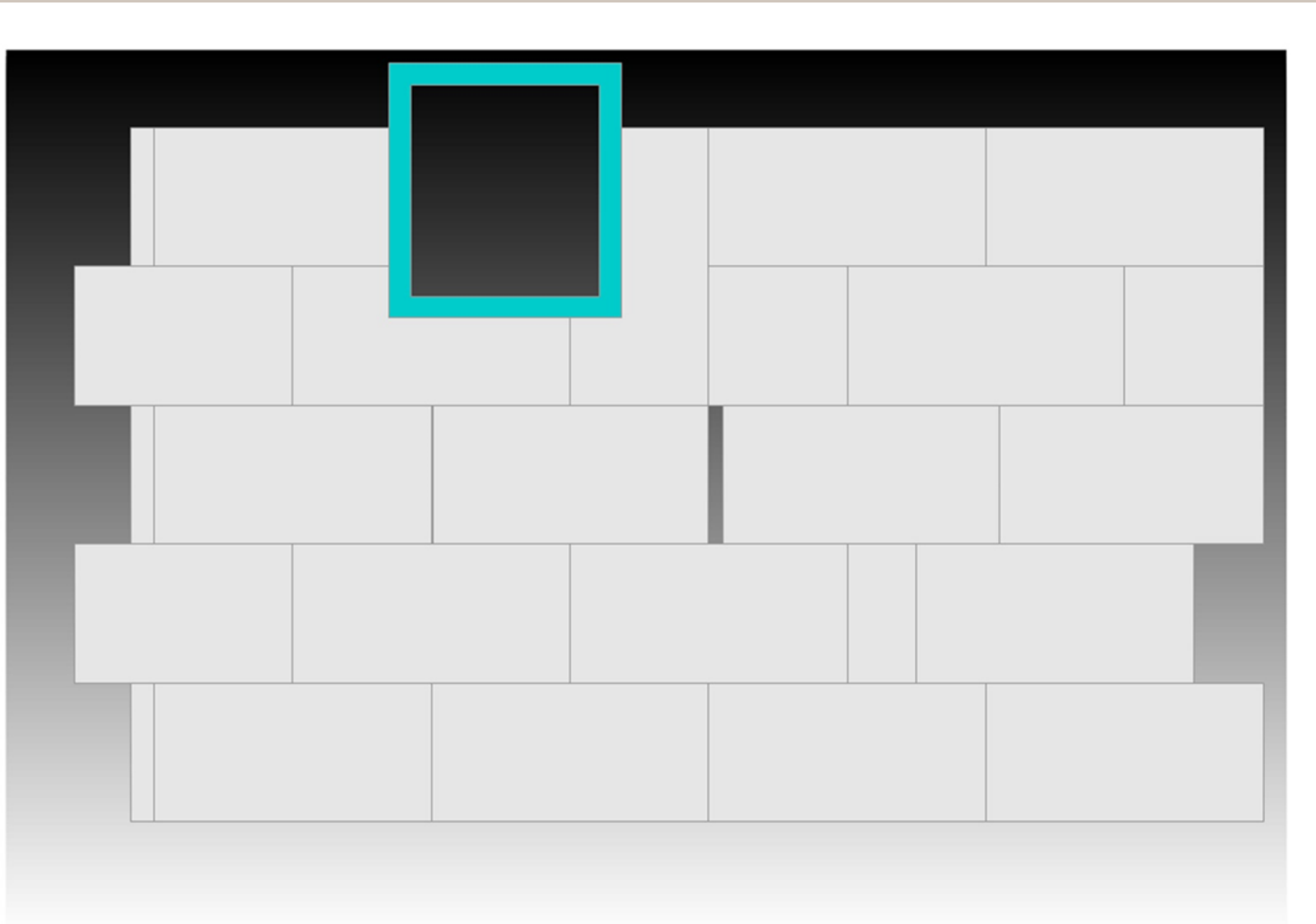
The insulation board must be both adhered to the wall, and base coated with a fully waterproof system achieved by using waterflex, this will ensure that the area below DPC is completely sealed.

Drip edge – the pre formed edge on the base rail acts in the same way as a bell bead, ie forming a drip edge to track moisture away from the building

Mechanical protection – the way the base rail wraps the front edge of the insulation provides added strength in a vulnerable area.



The Key Points of Boarding



Corners must be "Toothed" together to provide strength to corner. Excess insulation allowed on external corner to accommodate corrections in vertical level of adjoining wall

If necessary a board can be rotated around a window to ensure 200mm min. of insulation is presented around the corner

The bond between the boards must have a minimum stagger of 200mm

Using the "notch trowel" method of fixing the board ensures sufficient adhesion between the insulation and the wall: it also supports the fixing pins when applied to our standard fixing pattern

Gaps In Boarding

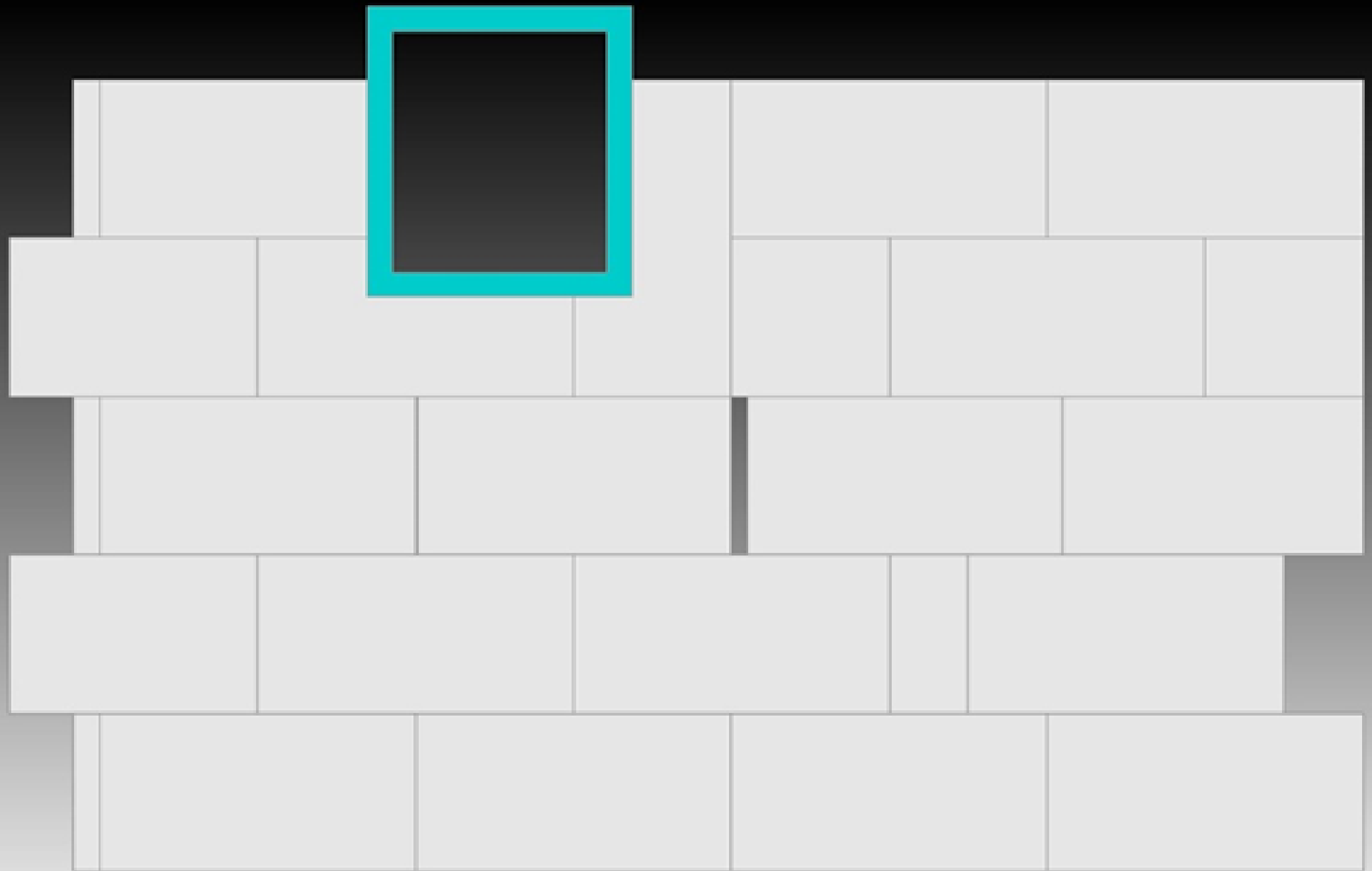
Every care should be taken to ensure that the boarding is as flat as possible, remember that at the stage the boarding is complete all lines and corners etc should be in their final position, no dubbing out with corner beads is possible .

Tamp boards back to ensure good contact of adhesive and level boards joints etc.

Any boards showing low spots should be removed, the rear of the boards. Dubbed out and the board re-fitted.

Once we are happy with the position of the boards they must be allowed to dry completely prior to filling any gaps or adding mechanical fixings. (Typically 24-48 hrs)

Returning to the wall prematurely will undermine all the care taken so far to establish a good foundation to the system.



Once boards are levelled and have been given enough time to completely dry any gaps between boards must be filled to prevent the basecoat entering them and causing a thermal bridge. Equally any adhesive trapped in board joints must be removed

Gaps In Boarding

Gaps within boarding

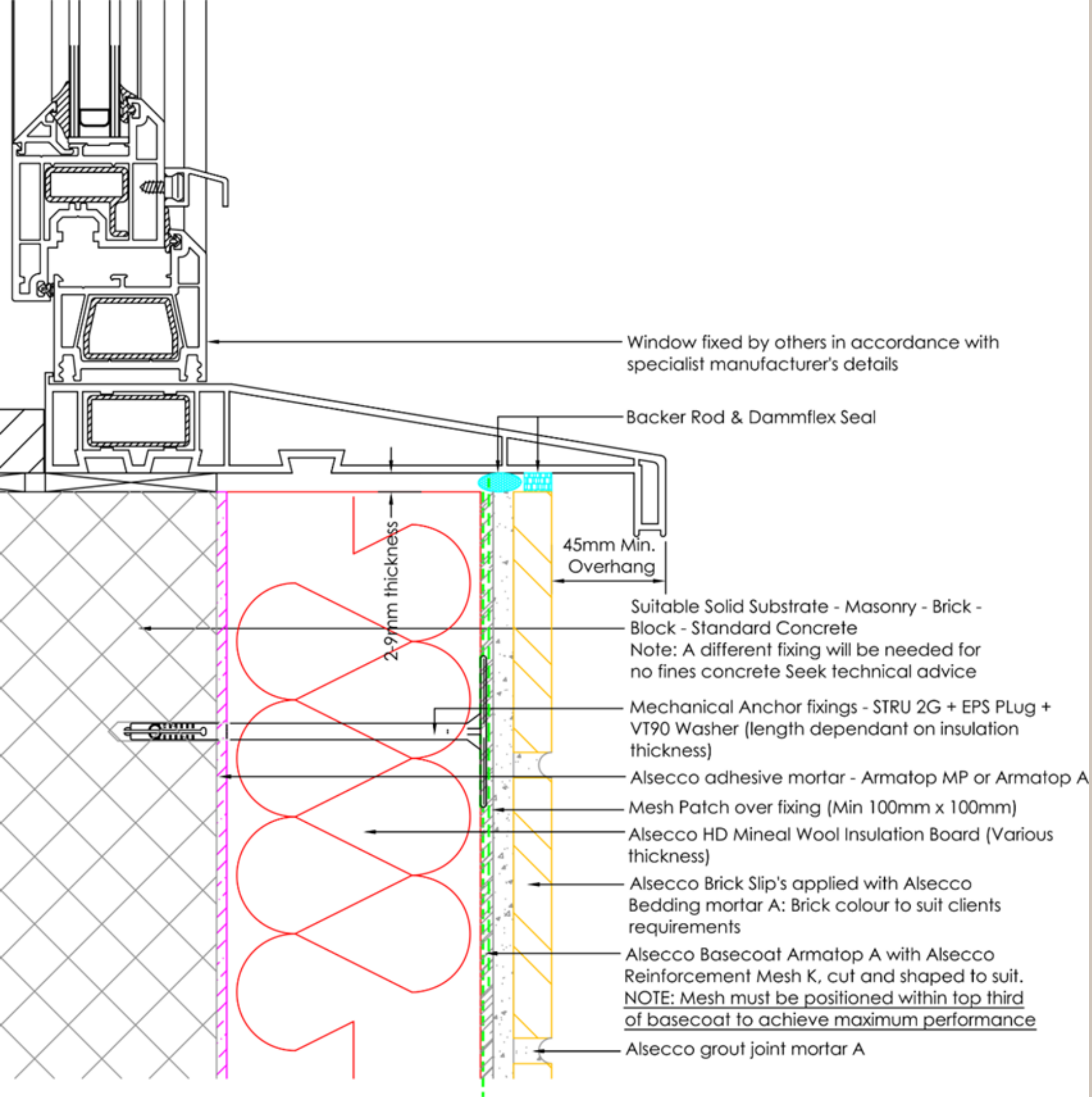


Gaps larger than 10mm must be filled with a tapered slither of insulation this ensures the gap is filled to the surface and saves time and money. Gaps less than 10mm thick should be filled with loose mineral wool.



Once any excess has been trimmed away, any high spots and steps between boards will need to be addressed. Additional adhesive can be applied to the insulation boards to allow installers to appropriately level the insulation board. The system adhesive can be applied up to 10-15mm thickness in a dot and dab manner where required. Please refer to Alsecco technical team for the relevant drawing.

Window Cill Detail



The system must be sealed onto the building at every junction i.e windows, doors, soffits, etc.

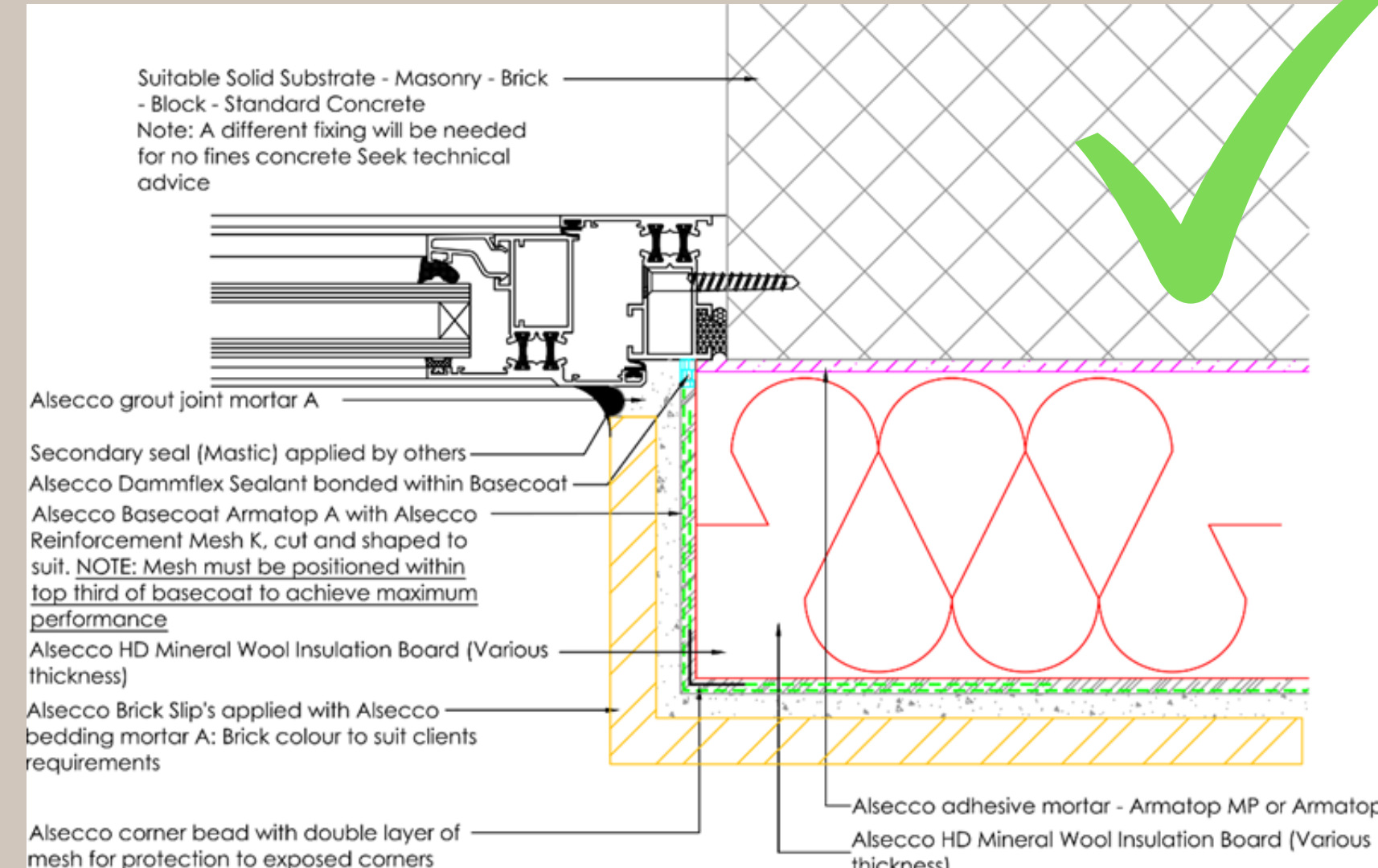
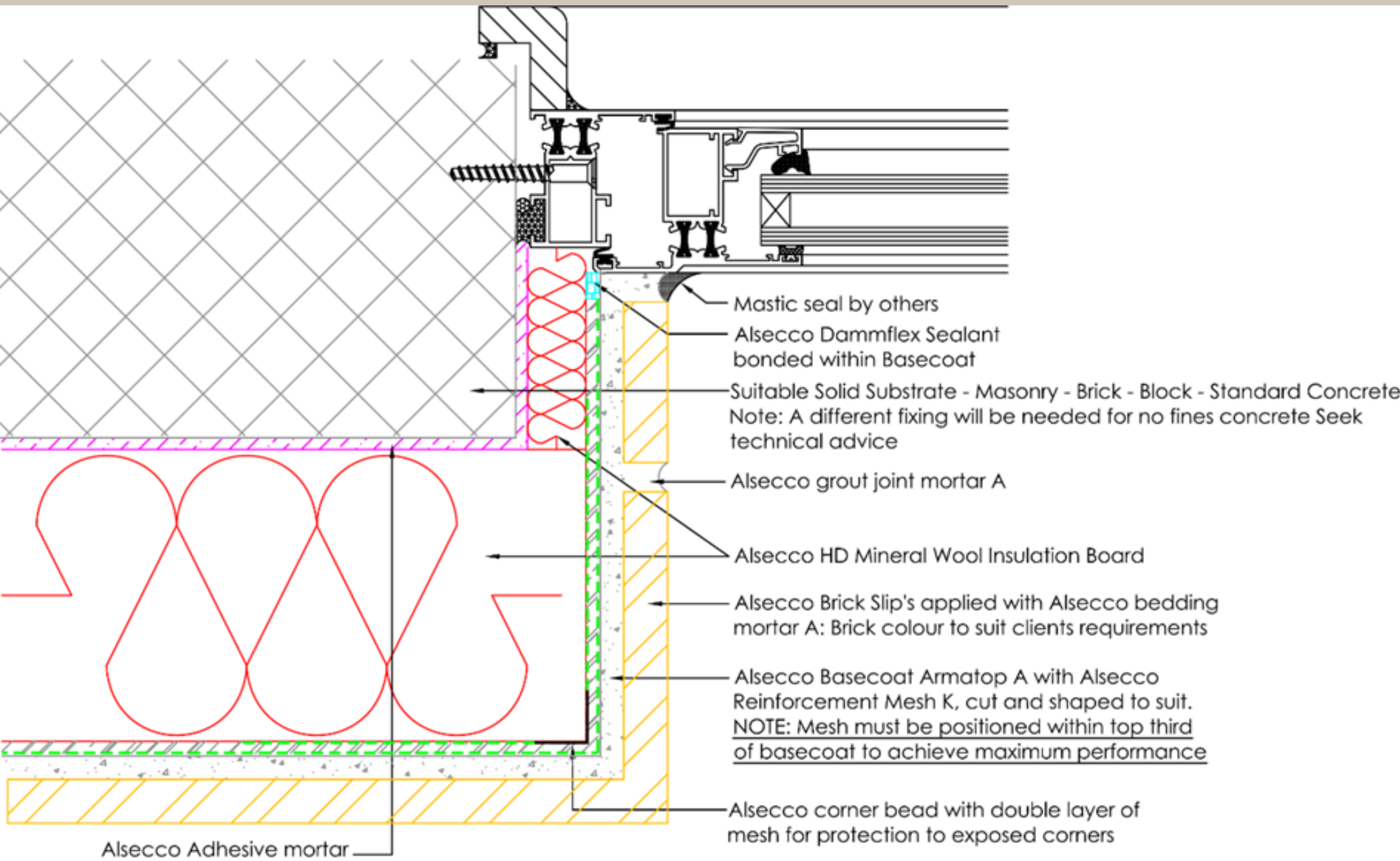
Sealing under window cill the main points to observe:

- The gap under the cill must be kept to a Maximum 2mm after the sealing strip has been Compressed between board and cill

Options for Window Reveals - Insulated

Unlike a standard external corner "toothing" the board joint together would provide no strength due to the different board thickness

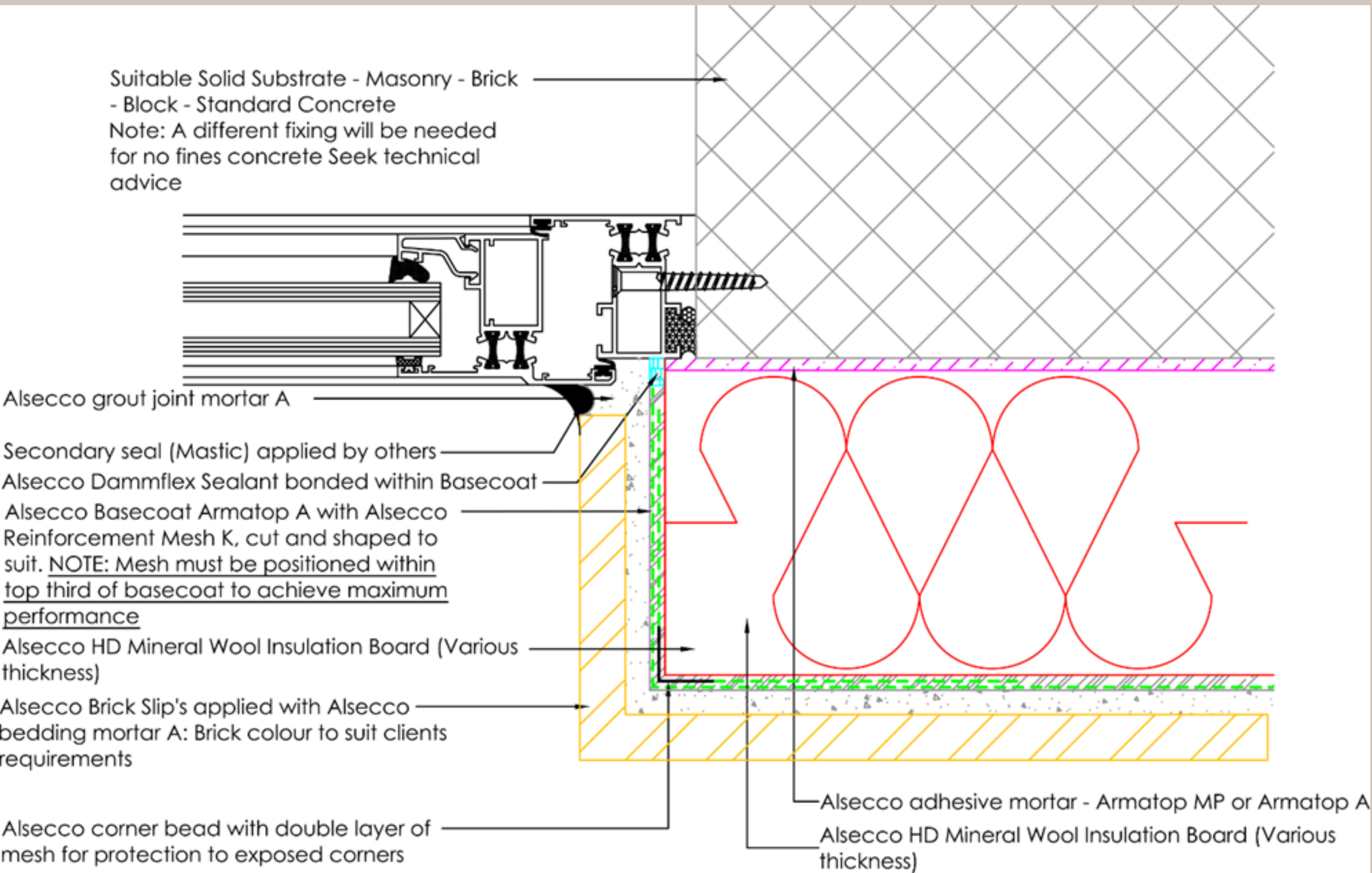
Using the 20mm insulation as a fillet will increase the strength of the corner maintain a skin of insulation avoiding cold bridges, reduce the risk of cracking caused by expansion etc.



Sealing the Alsecco System – Dammflex

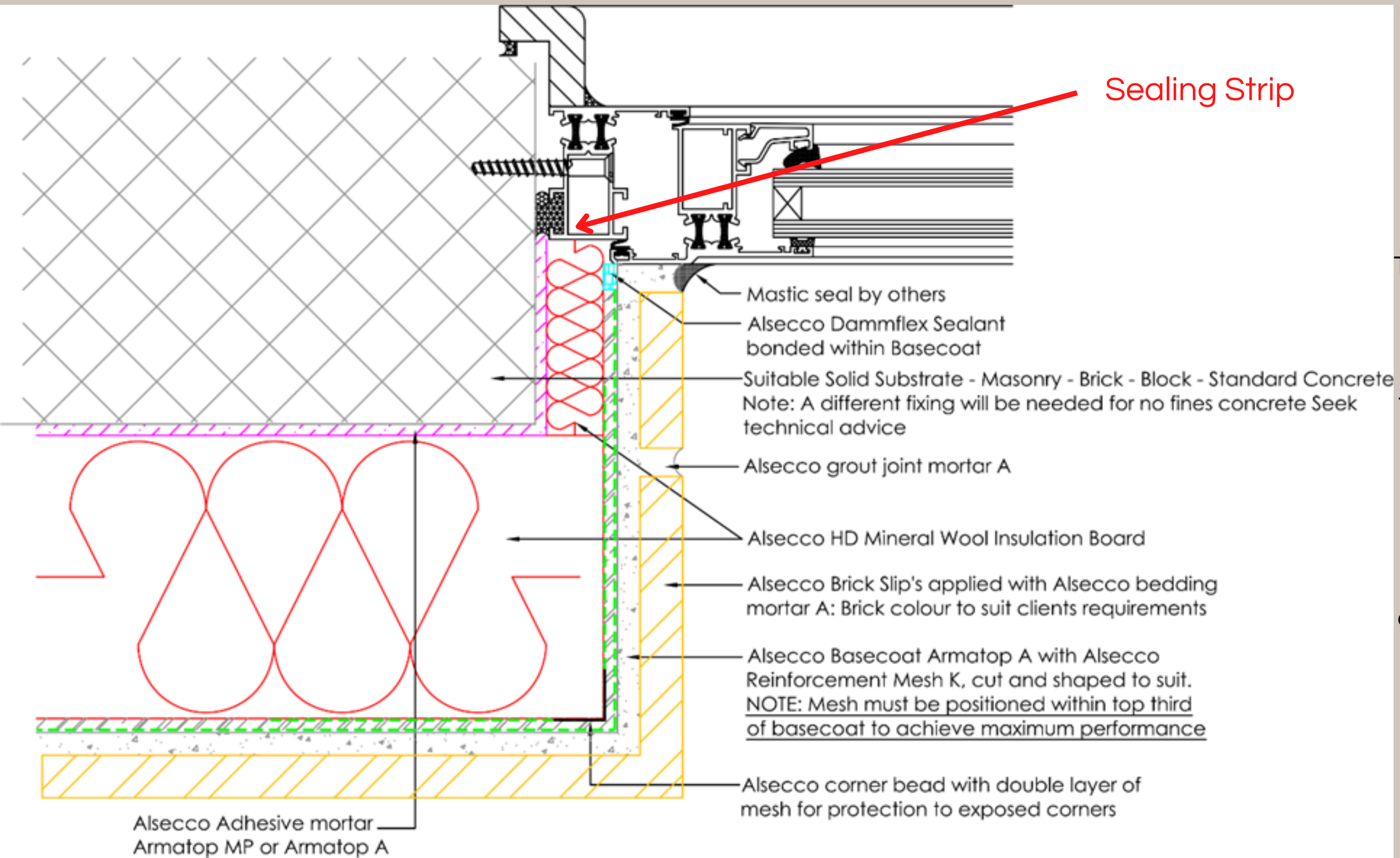
At every termination point the system should have a secondary seal in accordance with PAS 2030

The system must be sealed onto the building at every interface with (ie windows, doors, soffits, etc) to prevent ingress of water, it is important to remember that we are not responsible for the primary seal of the building (ie gaps around windows) the building must be weather tight before the system is fitted.



- Dammflex is alseccos version of a flexible mastic seal.
- Excellent adhesion to all alsecco products including topcoat. This makes dammflex a useful tool for repairing minor damage to the system.
- A void must be created in the base coat with either a trowel or screwdriver while the basecoat is still "green" (Damp).
- Once the base coat is dry, this void is then flooded with dammflex and brushed level with the basecoat with a wet brush, etc
- Once dry topcoat can then be applied over the seal to protect
- A secondary seal must then be applied by others
- It is inevitable that a hairline crack will appear between the window and
- topcoat. This is purely cosmetic as the seal is intact behind this point

Sealing the Alsecco System – Sealing Strip



Can only be used with insulated systems

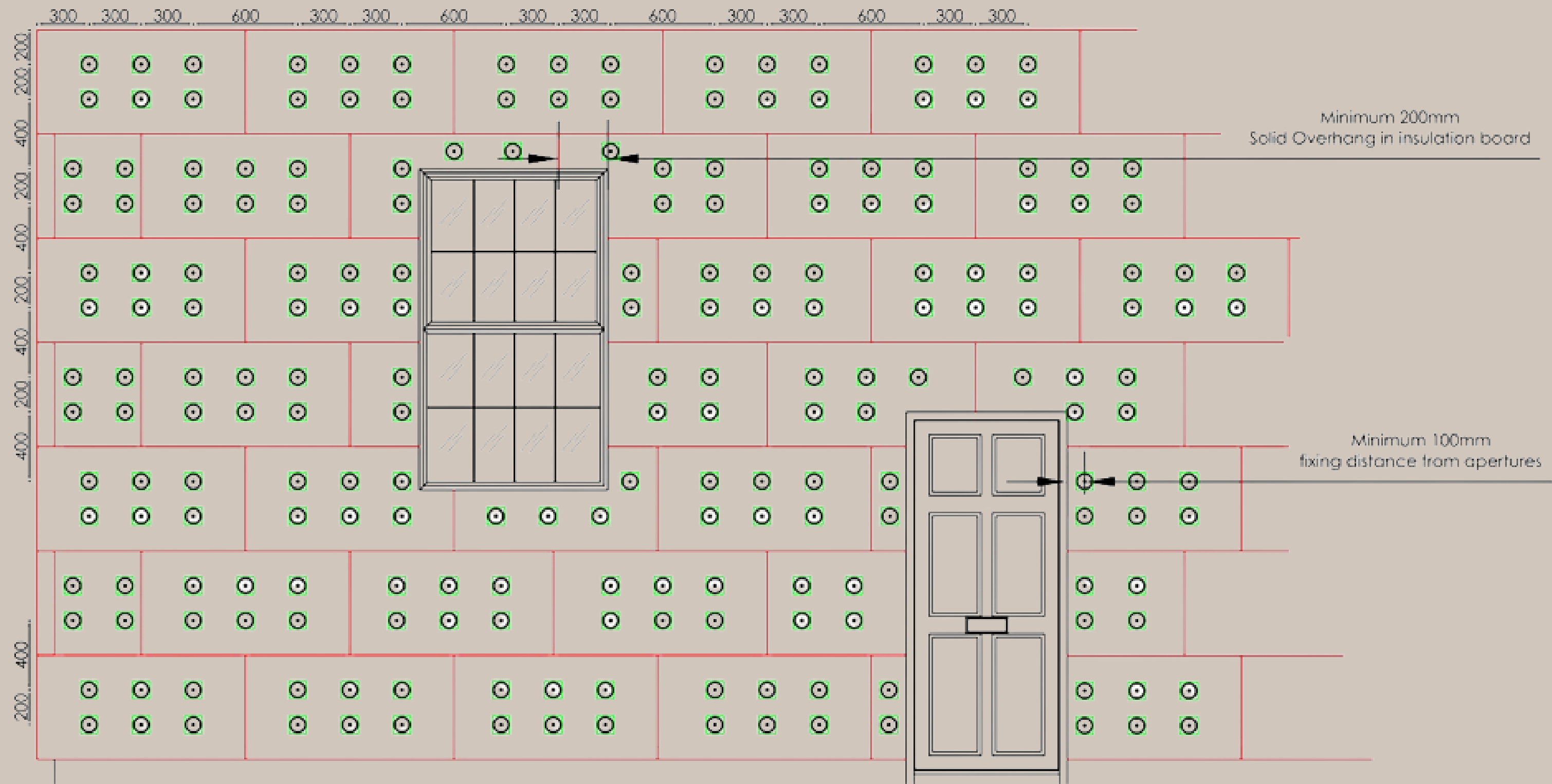
The tape ideally needs to be applied directly to the window or to an uncut edge of the board

The seal should be positioned just behind the face of the insulation

The insulation should be pressed firmly onto the sealing tape to compress it as much as possible (providing a solid seal)

The basecoat and topcoat cover the seal, giving it added protection. It is inevitable that a crack will appear between the window and topcoat, this is purely cosmetic as the seal is intact behind this point.

At every termination point the system should have a secondary seal in accordance with PAS 2030



INSULATION BOARD SIZES:

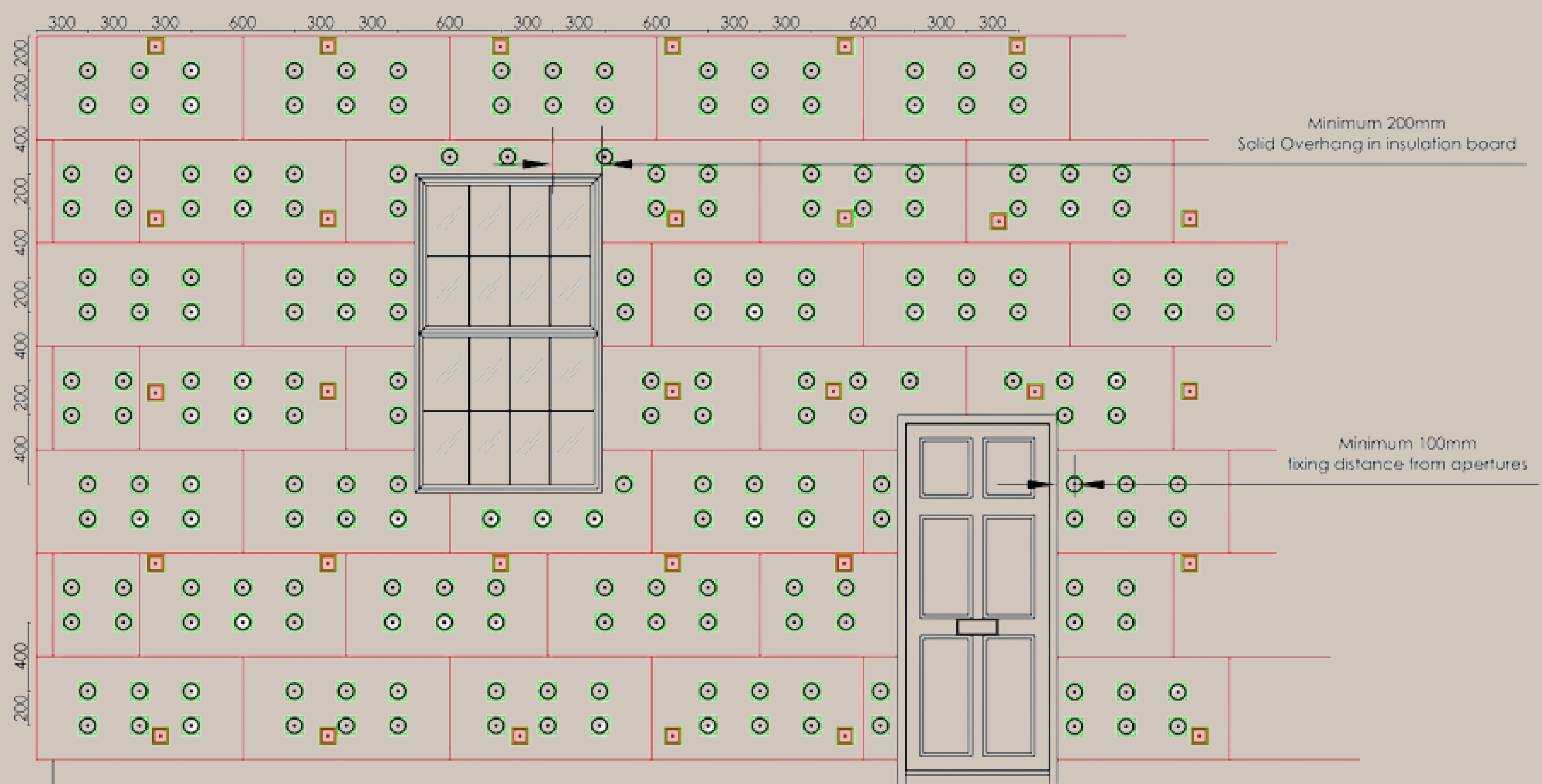
Mineral Wool:- 1200 x 600mm .

NOTE:

- Min 8 No. Anchor Fixings per m² applied through the system mesh.
Mesh patch over fixing min 100mm x 100mm
(SUBJECT TO WINDLOAD CALCULATIONS)
ALL DIMENSION LINES ARE TO THE CENTRE LINES OF FIXINGS UNLESS
STATED OTHERWISE

Fire Fixings not required below 2 storeys

Fixing Pattern- Low Rise



INSULATION BOARD SIZES:

Mineral Wool:- 1200 x 600mm .

NOTE:

- ⊙ Min 8 No. Anchor Fixings per m² applied through the system mesh.
Mesh patch over fixing min. 100mm x 100mm
(SUBJECT TO WINDLOAD CALCULATIONS)
ALL DIMENSION LINES ARE TO THE CENTRE LINES OF FIXINGS UNLESS
STATED OTHERWISE
- ⊠ Fire Fixing - Installed through mesh at 1 per m² to all
areas above the second storey and covered with a
min. 100mm x 100mm mesh patch

Fixing Pattern- Mid & High Rise

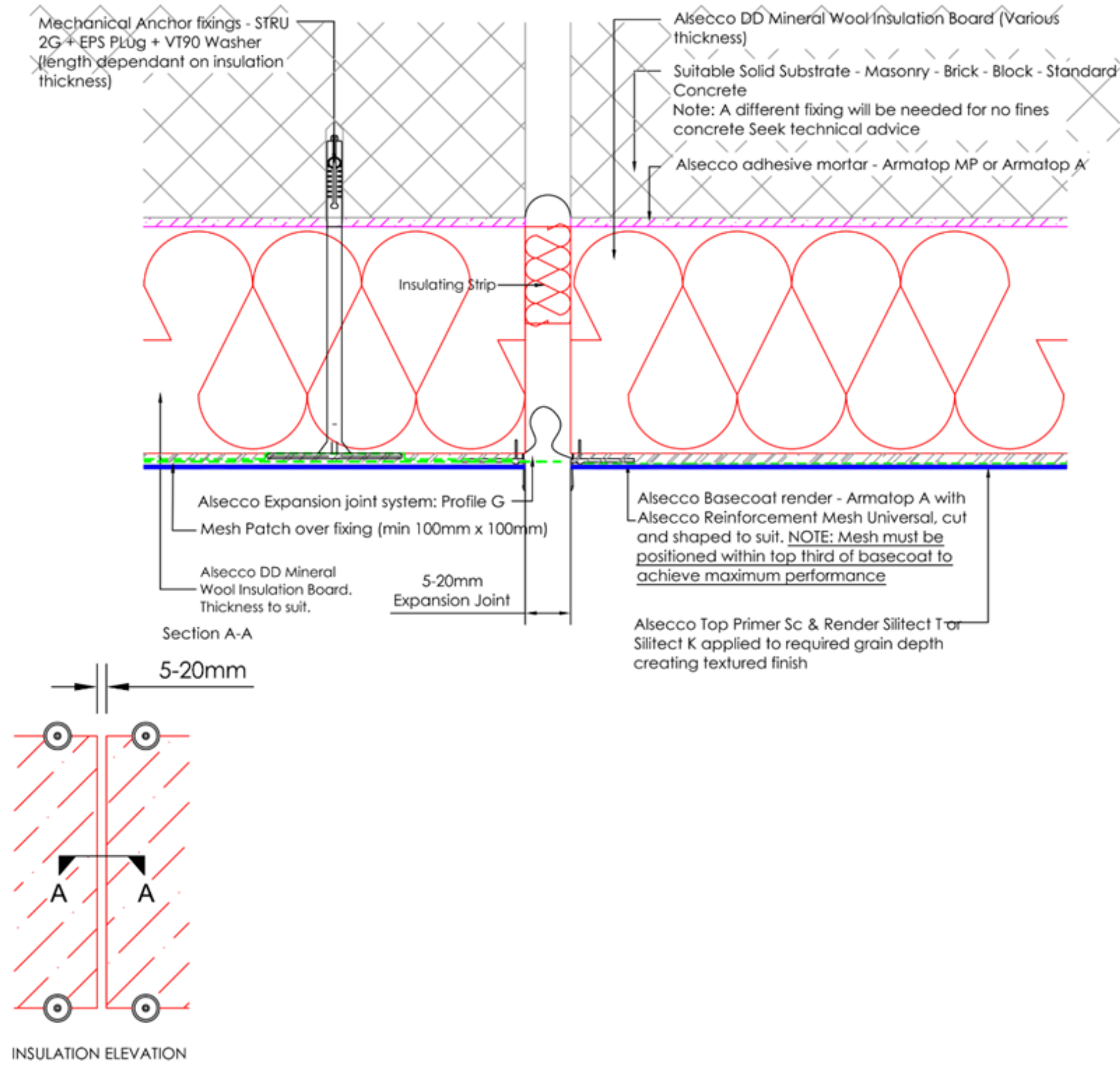
Fixing Pattern

All fixing must be supported by adhesive to prevent the back of the board breaking. All fixing are pinned through the mesh on Ecomin systems. A min 100 x 100mm mesh patch is then placed over the fixing before the basecoat is applied.



Firebreaks NOT required
with Ecomin systems Fire
engineer to provide project
specific verification

Movement Joints – Full System Vertical movement joint



Standard details are indicative only and must be read in conjunction with the specification, BBA certification and other relevant approvals and standards

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The Contractor is to check and verify all building and site dimensions, before work commences.

The Contractor is to comply in all respects with current Building Legislation, British Standards, Building Regulations etc, whether or not specifically stated on this drawing.

This drawing is not intended to show details of foundations, ground conditions or ground contaminants.

Notes

Details with an Orange light attributed to them present areas that are partially insulated (partially being defined by inconsistent insulation through the wall construction. This typically occurs where insulation thickness is less than that deemed required to reach the desired W/m2k U-value target or where the EWI interfaces with other items such as window cills that do not provide the same level of thermal performance.) This does not mean that condensation/damp will occur at the partially insulated areas, nor does it rule out the risk of condensation/damp completely. The detail should be considered in the context of the property and current ventilation by the EEM Designer.

Revisions	Date	Amendment	Name
1:20 = 0	200mm	400mm	600mm
1:100 = 0	1m	2m	4m
1:50 = 0	1m	2m	4m
1:5 = 0	100mm	200mm	400mm



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T 01785 818 998 F 01785 818 144
E technical@alsecco.co.uk W www.alsecco.co.uk

Client: STANDARD DETAILS

Project: STANDARD DETAILS

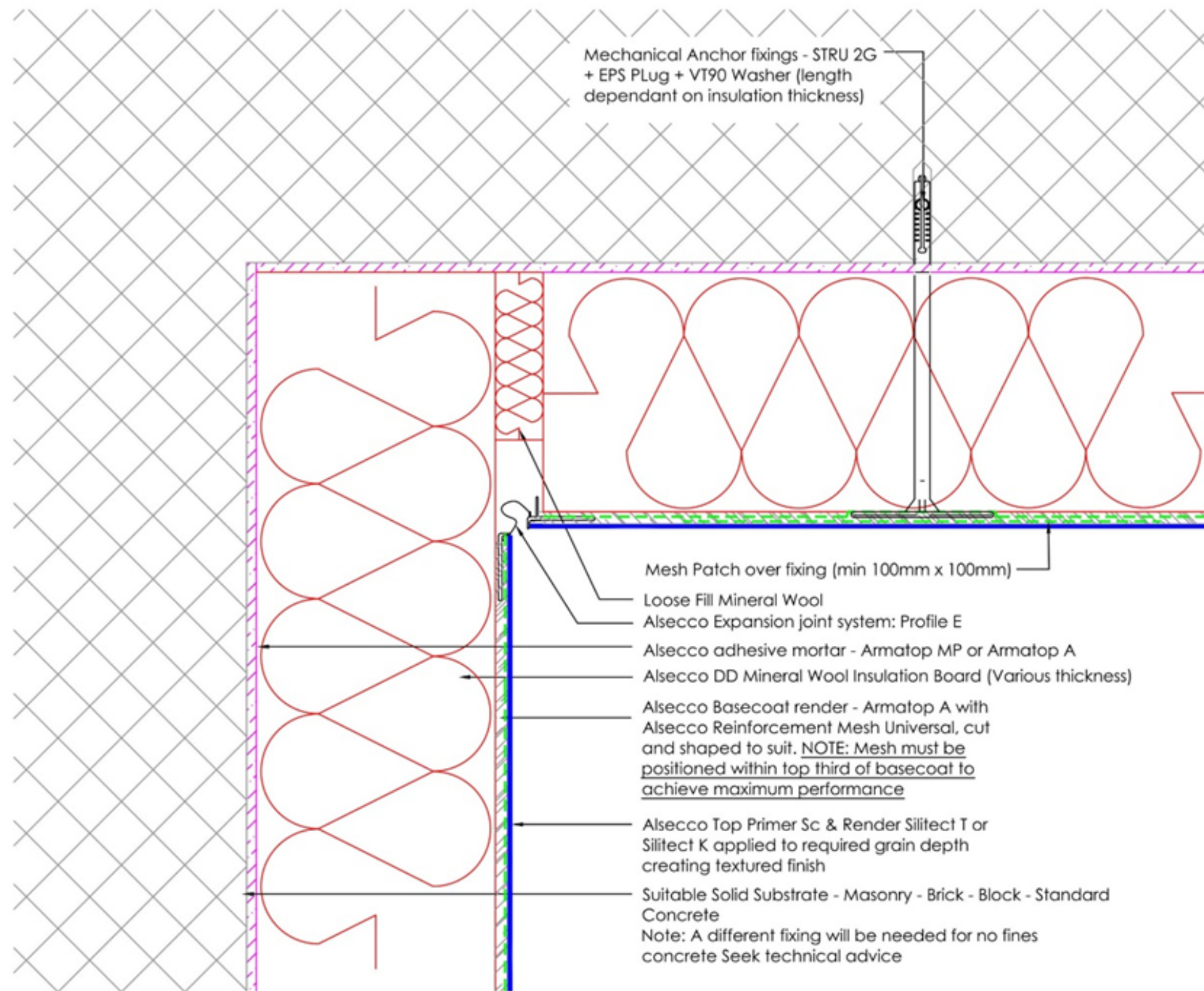
Title: FULL SYSTEM VERTICAL MOVEMENT JOINT

Status: Construction Checked: MPR
Drawn: SJG Date: 01/01/2019 Scale: 1:2 @A3

Job No: 0000000 Drg No: HR-EC300-SOL-008 Rev:

Movement Joints – Internal Corner Movement Termination Detail

A3



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Revisions

Date	Amendment	Name
1:20 - 0	200mm	400mm
1:100 - 0	1m	2m
1:50 - 0	1m	2m



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Client: STANDARD DETAILS

Project: STANDARD DETAILS

Title: CORNER MOVEMENT DETAIL

Status: Construction

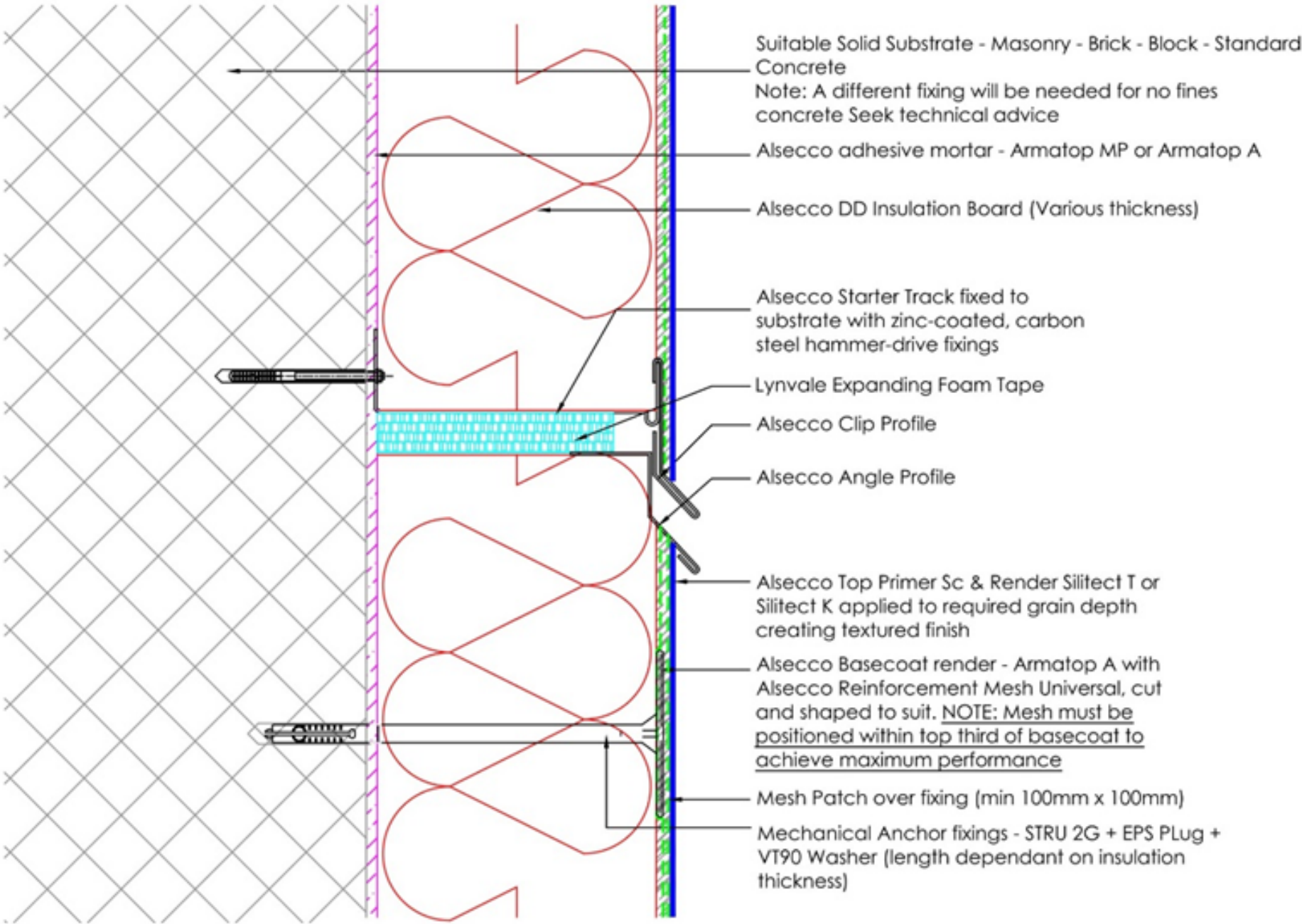
Checked: MPR

Drawn: SJG

Date: 01/01/2019 Scale: 1:2 @A3

Job No: 0000000 Drg No: HR-EC300-SOL-009 Rev:

Movement Joints – Full System Horizontal Movement Detail



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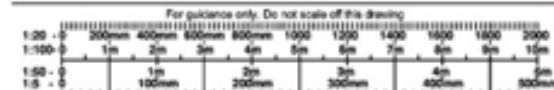
This drawing is not intended to show details of foundations, ground conditions or ground contaminants.

Notes



- Details with a red light attributed present areas that are not fully insulated and as such can lead to a thermal bridge. In some cases these thermal bridges are caused by pipe outlets or existing penetrations such as balconies that are unavoidable. The detail should be considered in the context of the property and current ventilation by the EEM Designer

Revisions Date Amendment Name



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Client: STANDARD DETAILS

Project: STANDARD DETAILS

Title: FULL SYSTEM HORIZONTAL MOVEMENT DETAIL

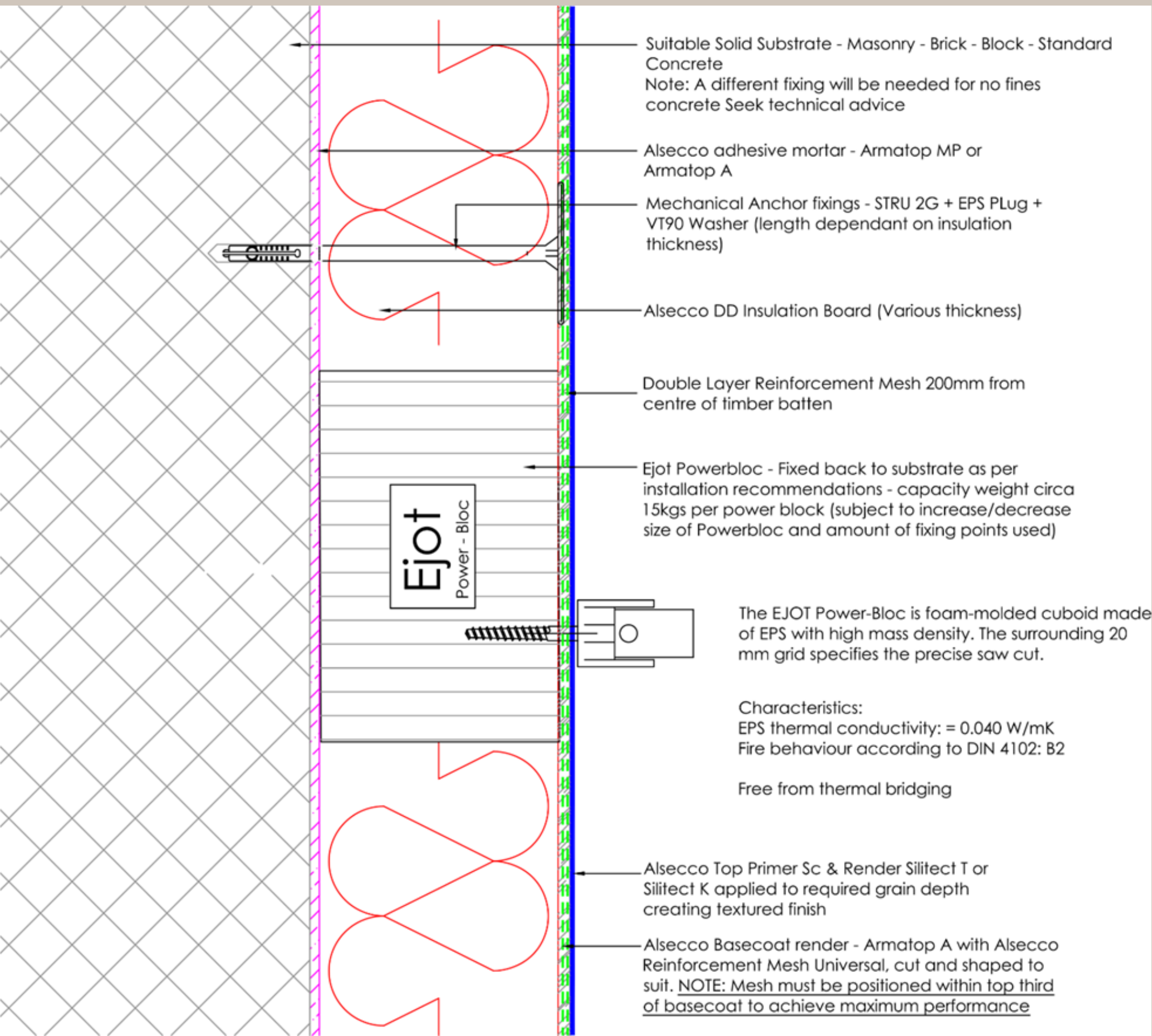
Status: Construction

Checked: MPR

Drawn: SJG

Date: 01/01/2019 Scale: 1:2 @A3

Externally Mounted Items (Power-Bloc)



Using a hand saw or a hot wire cutter, cut the thickness of the Power-Bloc to the necessary length.



Apply adhesive mortar to the bonding surface of the EJOT Power-Bloc. The element must be bonded to the load bearing substrate over the entire surface.

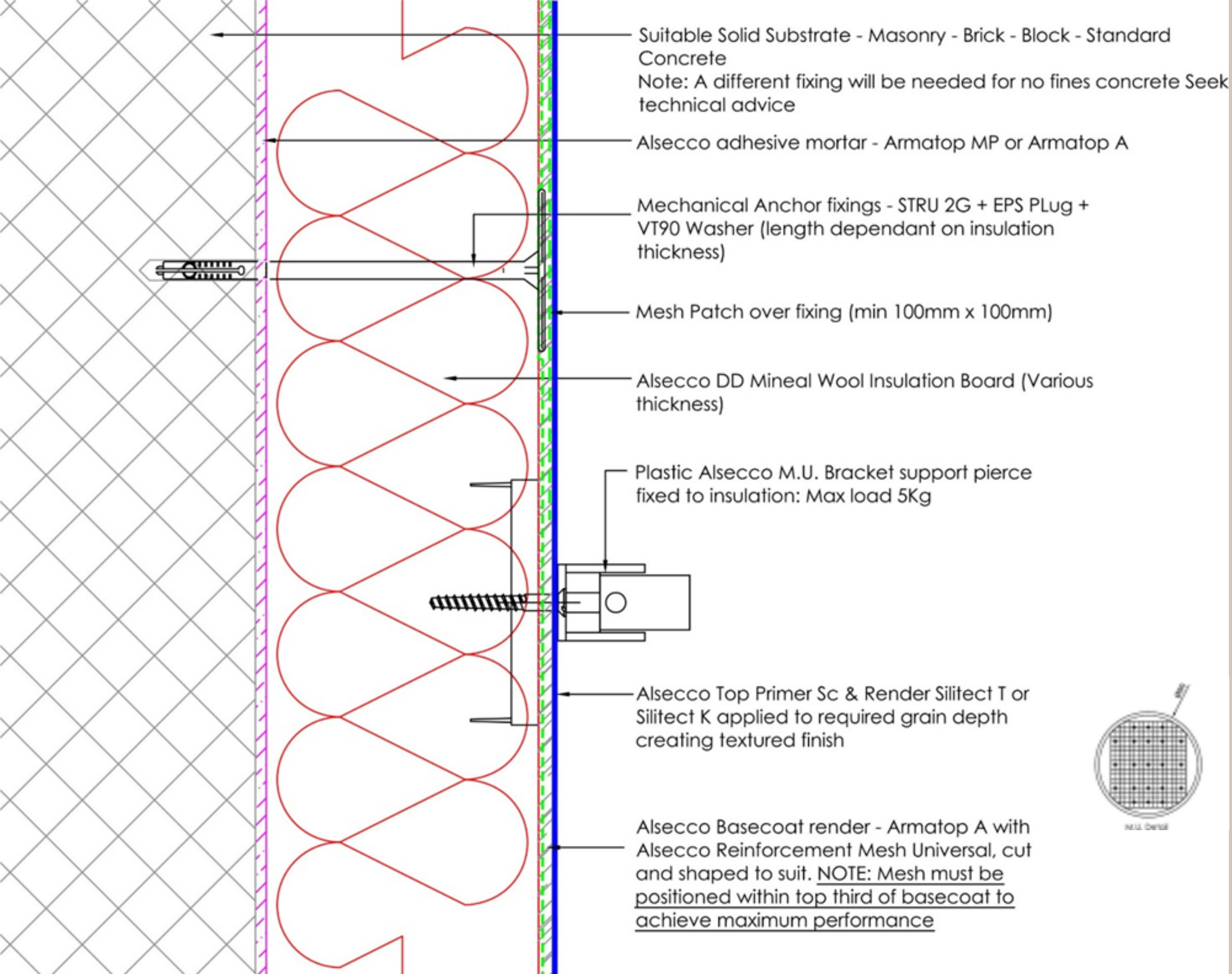


Can be used with solid and SFS constructions

Externally Mounted Items (MU Set)

- Surface mounted MU Set
- No thermal bridge

Can be used with solid and SFS constructions



Corner Bead

With the Alsecco EWI system the corner beads are fully embedded with-in the system, with no visible profile edge.

The main purpose of the bead is to provide additional mechanical protection for the external corners. Though it also provides the usual means of squaring up a corner it must not be used to “dub out” and line up corners.

The final position of the corners is determined by the insulation board.



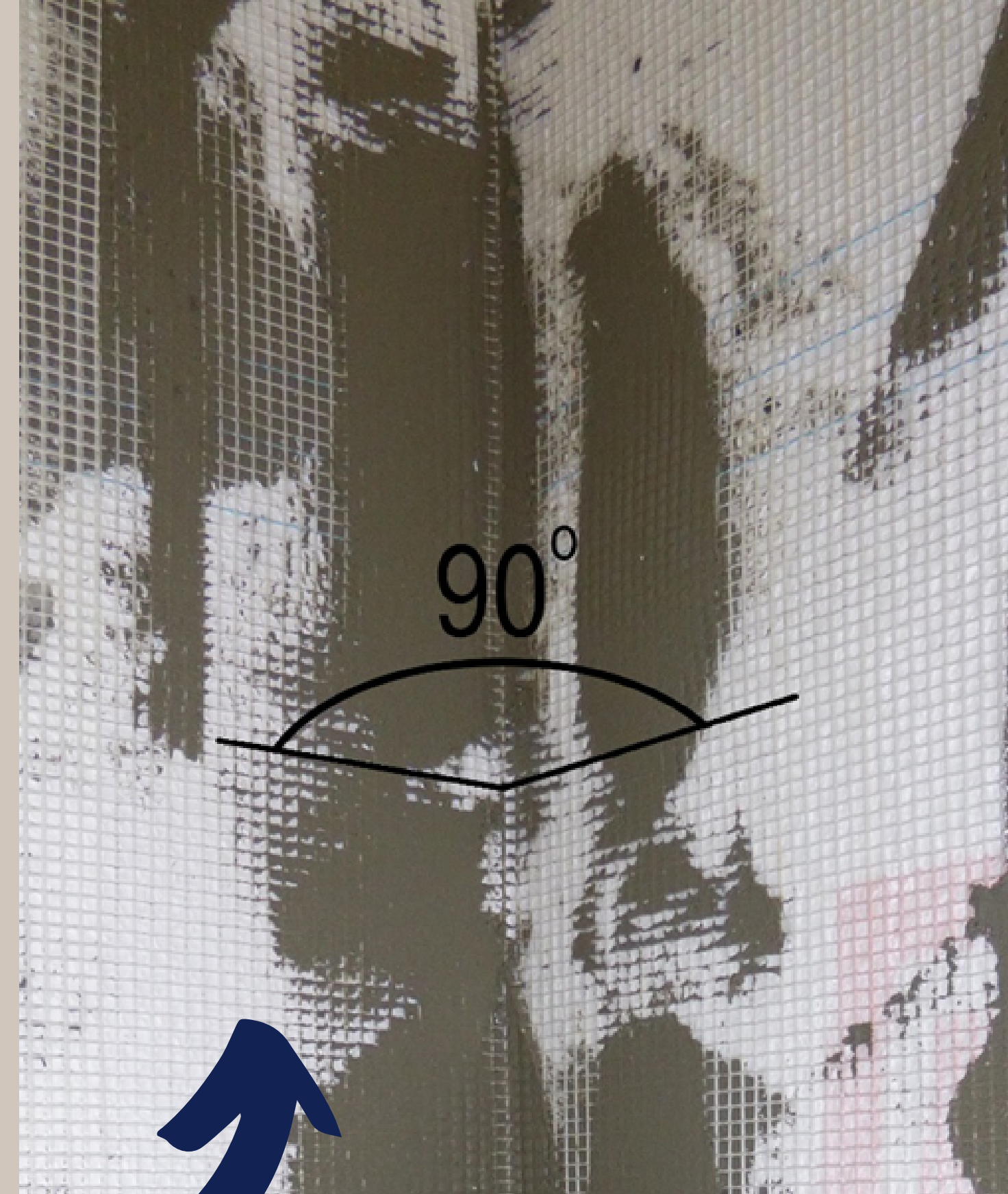
Corner Bead- Common Mistakes

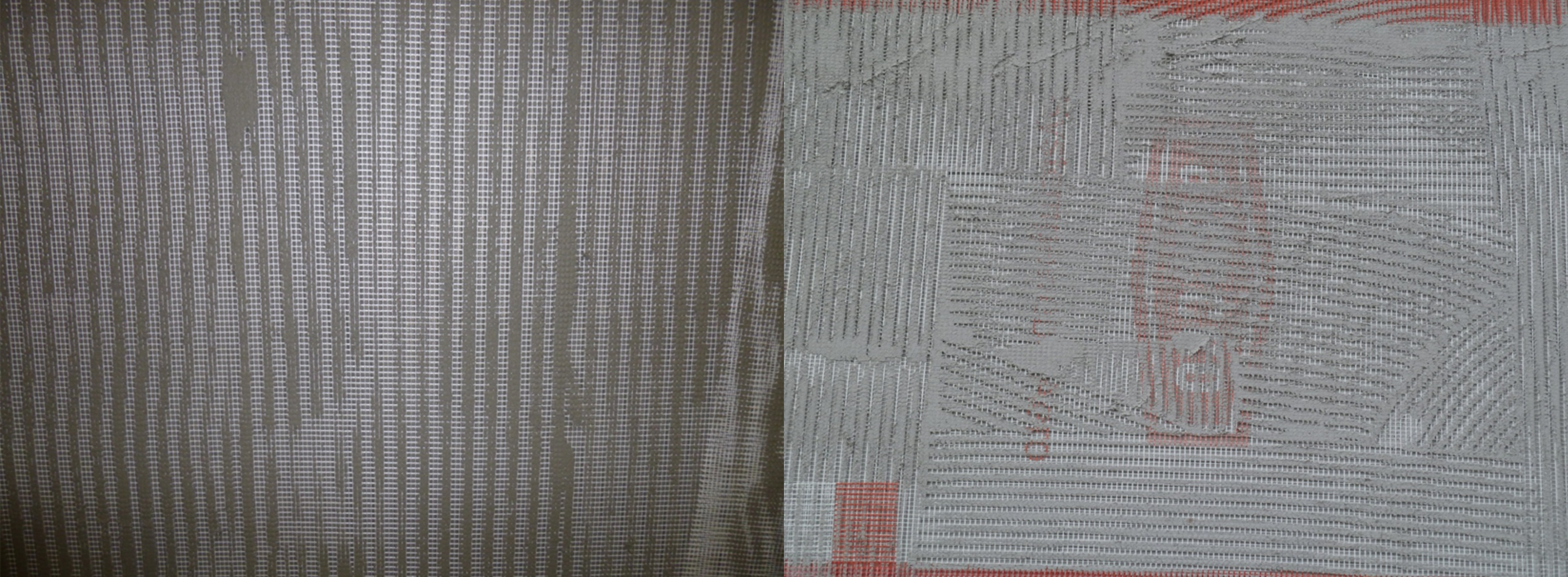


"Frayed fingers" on the mesh. Simple solution cut the mesh well back from the edge of the beads remember we only need to maintain a 100mm overlap on the mesh

It is just as important to continue the mesh around an internal as an external corner. The best way of doing this is to apply a 300mm wide band of mesh around the corner, Prior to the basecoat 150mm on each wall allowing a sharp internal corner with no creases in the mesh, this can be done at the same time as the corner beads are applied.

The mesh can then be fitted onto the basecoat on each wall without any additional work





Basecoat

The best way to ensure a flat and even surface is to use a notch trowel.

Using a 10x10mm notch will guarantee:

- A level basecoat
- An even thickness

Basecoat



The best way to ensure a flat and even surface is to use a notch trowel

Using a 10x10mm notch will guarantee:

- A level basecoat
- An even thickness



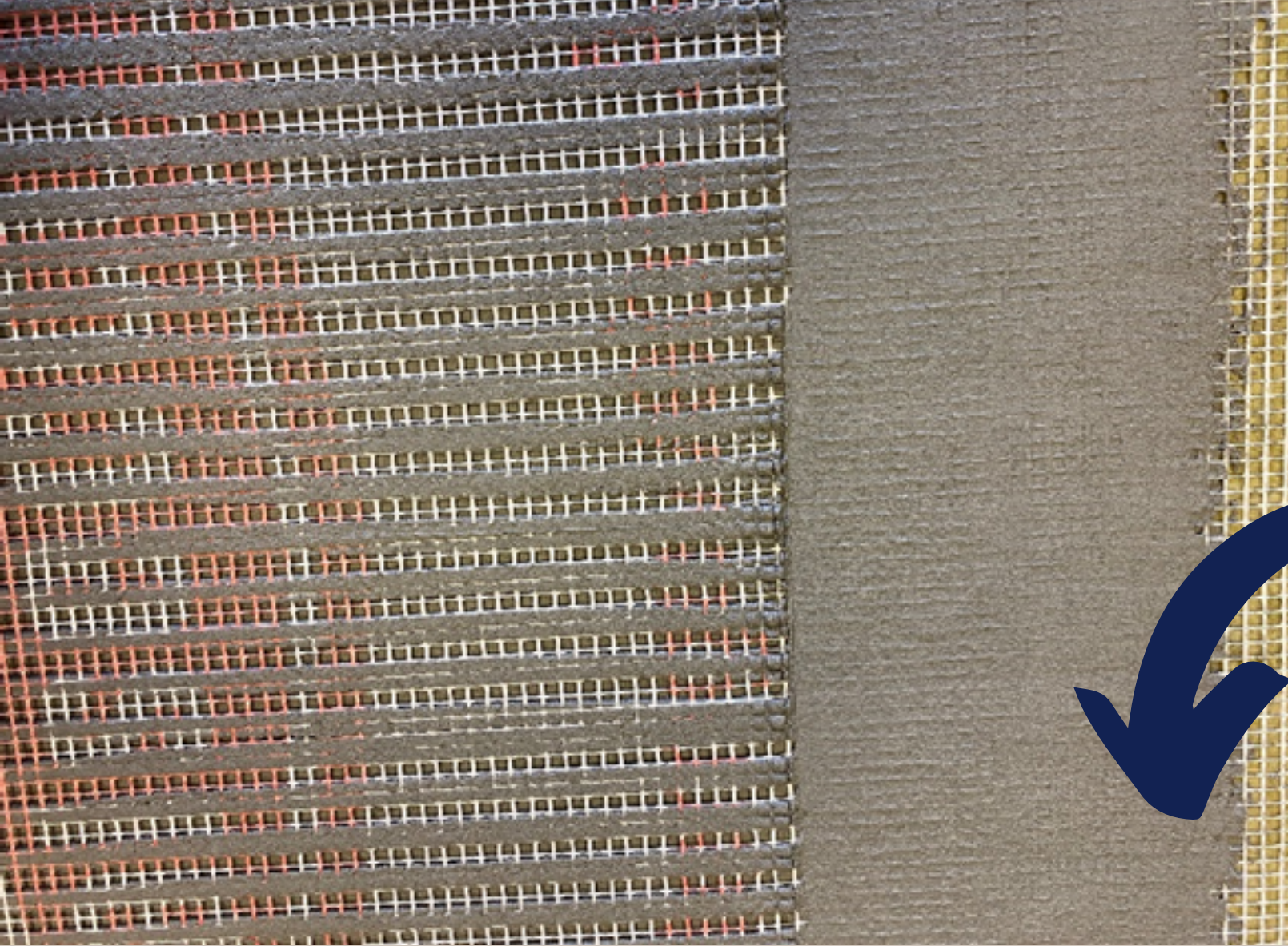
Basecoat

The best way to ensure a flat and even surface is to use a notch trowel.

Leaving the basecoat to “pick up” with the notch pattern visible will allow the material to “skin over” quicker due to the increased surface area. This will mean that the material will be capable of resisting rain showers in a shorter space of time.

Areas where the system needs to be temporarily stopped must be finished off with a day joint.

Day Joints



The last 100mm of the mesh must be pressed back against the insulation boards, with the excess basecoat being removed, This means that when the job is continued, that the basecoat can be applied over the top of the flattened mesh, the new mesh is then laid into The fresh material maintaining the 100mm overlap in the mesh, and ensuring that the mesh continues in the top 1/3 of the system



When making day joints, try to avoid joining areas at the scaffold lift points. Always continue to work down to head height on the lift below. This will give an unobscured view of the joint allowing the fresh work to be blended in without any ridges and in a position less likely to become contaminated.



Stress Patches

It is important to remember that the stress patch should be fitted at 45 to the main layer of mesh, if the stress patch is fitted prior to the basecoat this cannot be guaranteed, also this would make it impossible to confirm the presence of stress patches during a visual site inspection.

While the potential for cracking around the windows is reduced by allowing the insulation board to pass a minimum of 200mm beyond any corner, the basecoat and mesh must still be reinforced with a "stress patch" at any corner, on windows, doors & anywhere else that they occur on elevations

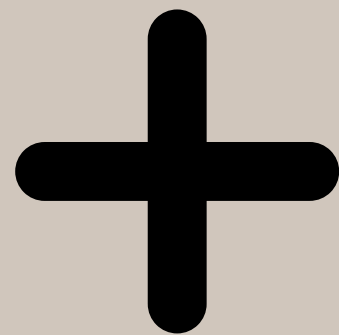
The minimum size for the stress patch is 250mmx250mm Patches can be fitted as squares or with cut outs allowing more of the corner to be covered it is essential that a stress patch always starts immediately adjacent to the corner, failure to observe this rule can increase the potential for a crack to start and then continue around the stress patch

Stress Patches

Once the basecoat has “picked up” the notched material will support the mesh ensuring the correct system thickness behind, requiring only a “tight coat” of material over the top of the mesh to complete the basecoat stage of the system.

The more time that can be left to allow the notched material to dry, the more the final coat can be pushed in.

REMEMBER as the material is air drying the more you trowel over the semi dry material the more you will bring it “back to life” this can mean, the mesh may sink into the layer below and not remain in the top 1/3, also the overall thickness of the system may be reduced.



The tight coat must be forced into any voids in the notch and the mesh completely closed in and embedded in to the system

"Closing In" The Mesh

Over working a wet
base coat leads to this.....



If a tight coat is applied correctly onto a firm notched coat, there should be little to no trowel marks and a closed in surface, therefore there is no real need to sponge up.



A notched bed of Bonding mortar A is applied to the wall with a 10 x 10 notch trowel

Just like traditional brickwork – setting out is key!
Picture below for illustration purposes only



Bonding mortar A is applied to the back of each slip or tile

The slip is then pressed into the notched bed to collapse the ridges and achieve a 100% cohesive bond of the Slip to the render facing

Applying Brick Slips

Applying Meldorfer Brick Slip Finishes

Joint mortar A or AS is then applied into the joints by hand or by bagged methods.





Applying Meldorfer Brick Slip Finishes

Once joints are completely filled and compacted – these should be left to partially dry.



Applying Meldorfer Brick Slip Finishes

Any excess Joint mortar A should be brushed away with a soft brush before the material has fully cured to complete the finish

If brick acid or similar cleaning products are required – use the product in an inconspicuous area to check for risks of bleaching Where possible avoid the requirement for brick acid



Applying Meldorfer Brick Slip Finishes

Just like traditional brickwork – setting out is key!

