

fatra

Technical Specification

Internal Wet Area PVC Membrane System

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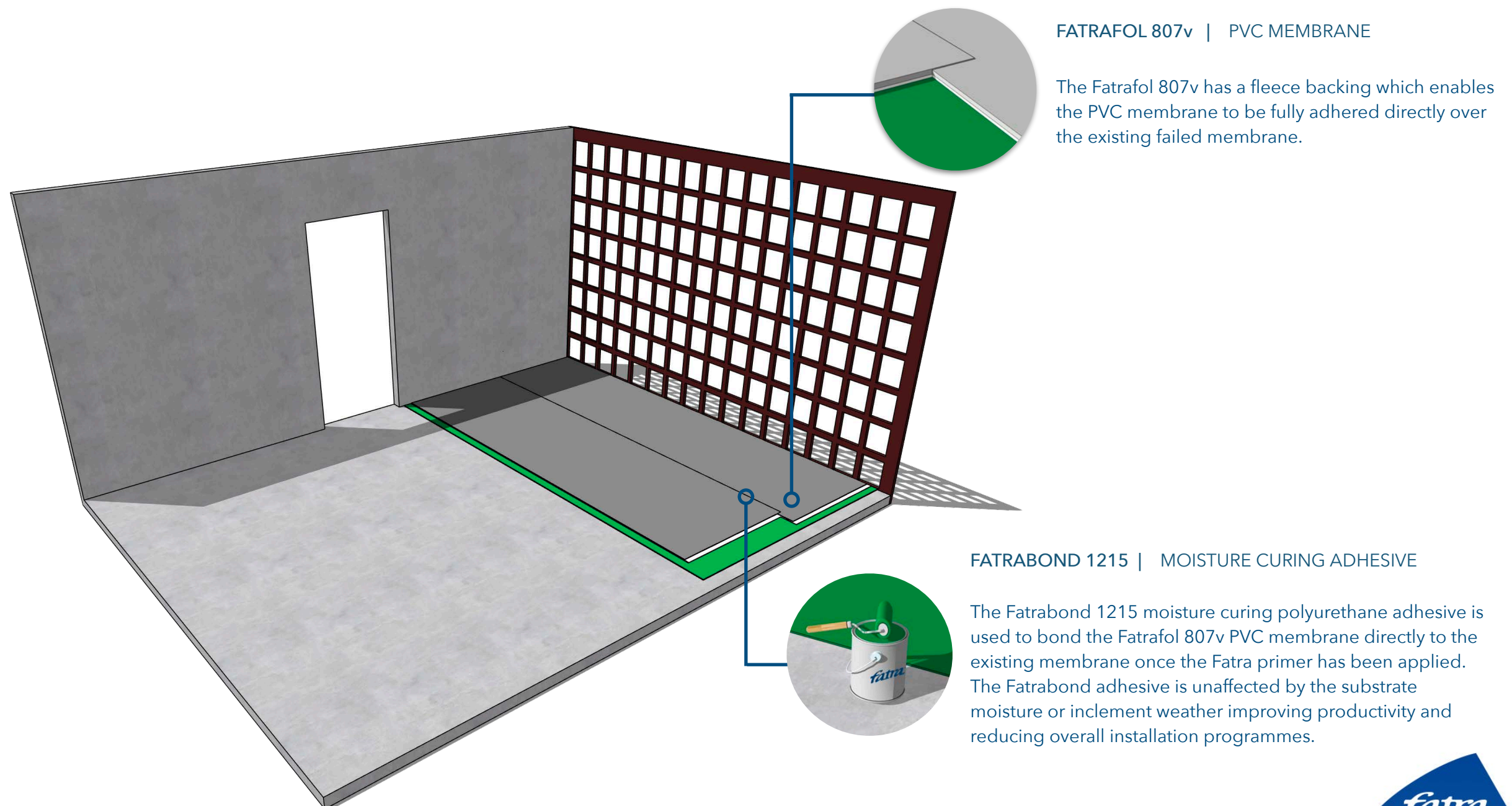
PROPOSED | System

The Fatra internal wet area waterproofing system implements the Fatrafol 807v fleece back PVC Membrane fully adhered directly to the substrate using the Fatrabond 1215 moisture curing polyurethane adhesive.

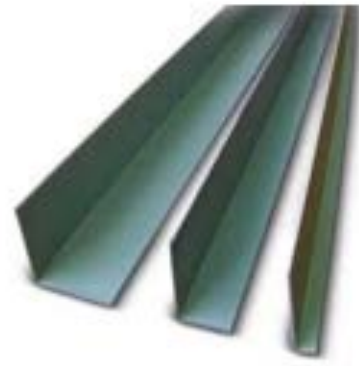
The Fatra internal wet area system comes with fully integrated ancillaries and accessories such as drainage outlets, compatible liquid membranes for shower and vanity walls and PVC coated termination angles to provide a fully homogenous waterproofing system.

The Fatrafol PVC membrane is a consistent sheet membrane system unaffected by substrate moisture and requires no drying time resulting in overlaying finishes being installed as soon as the installation has been completed unlike liquid applied systems which should be applied over several days and requires specific drying times depending on site conditions.

The Fatra internal wet area system can drastically reduce the installation and programming times and substantially reduce the risk of premature defects compared to a liquid applied system.



FATRANYL METAL | Ancillaries



FATRANYL | Chase Termination Metal

50mm x 15mm PVC coated zinc/stainless steel angle for termination of PVC membrane upturns. To be installed and mechanically fixed into a continuous saw-cut slot. A 2mm - 5mm gap between each section of metal is required to allow for structural movement. Metals are to be mechanically fixed at 150mm centres using the relevant fixings with a band of polyurethane/modified silicone sealant into the saw-cut slot and across the top of the termination metal to provide adequate seal.

FATRANYL | Internally Coated Peel Stop Bar

40mm x 40mm internal PVC coated zinc/stainless steel angle for the base of all perimeter and internal wall upturns to provide protection from high wind exposure and shrinkage of membrane. To be installed and mechanically fixed over the field sheet membrane. A 2mm - 5mm gap between each section of metal is required to allow for structural movement. Metals are to be mechanically fixed at 150mm centres using adequate fixings.

FATRANYL | Externally Coated Termination Metal

50mm x 50mm external PVC coated zinc/stainless steel angle. To be installed over hob detailing to provide protection from sharp edges affecting the PVC membranes performance. A 2mm - 5mm gap between each section of metal is required to allow for structural movement. Metals are to be mechanically fixed at 150mm centres using adequate fixings.

FATRANYL | Externally Coated Crush & Fold Metal

50mm x 50mm x 15mm external PVC coated zinc/stainless steel angle. To be installed to the outside edge of the perimeter hob to provide protection from sharp edges affecting the PVC membranes performance and provide a termination metal which sits slightly away from the outside vertical face of the building to prevent moisture running down the face of the building. A 2mm - 5mm gap between each section of metal is required to allow for structural movement. Metals are to be mechanically fixed at 150mm centres using adequate fixings.

FATRANYL | PVC Coated Site Specific Metals

Fatra have the ability to fabricate any termination metals, flashings and such items to site specific requirements. This will be established upon completion of a site survey by a Fatra Australia representative.

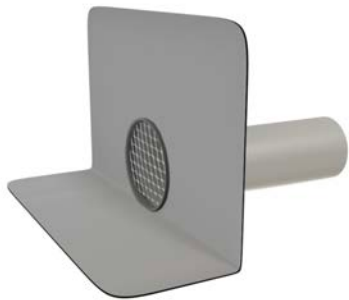
All fixing specifications, centre of fixings and relevant information regarding the fixing of the termination angles will be provide by Fatra Australia Pty Ltd based on the system being implemented, substrate and wind load calculations provided by Fatra Australia Pty Ltd.

FATRA | Accessories



PREFABRICATED | Rainwater Outlets

The prefabricated outlets are inserted in the rainwater outlet after the field sheet membrane has been installed. The outlets come complete with the back flow protection flange. The PVC membrane flange is then simply hot air fusion welded to the field sheet achieving a consistent 50mm weld around the entire perimeter.



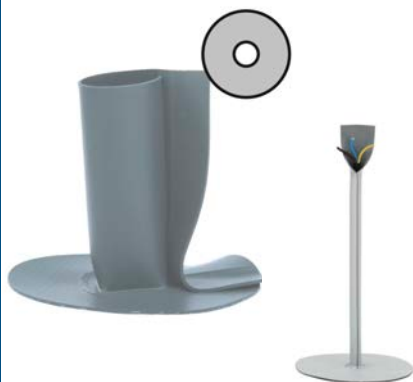
PREFABRICATED | Wall Outlets

The prefabricated wall outlets are inserted in the rainwater outlet after the PVC membrane has been installed. The outlets come complete with the back flow protection flange. The PVC membrane flange is then simply hot air fusion welded to the membrane achieving a consistent 50mm weld around the entire perimeter.



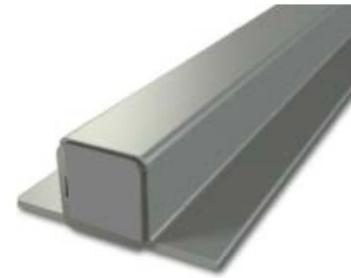
PREFABRICATED | Wall Overflows

The prefabricated wall overflows are inserted in the wall overflow pipe after the PVC membrane has been installed. The outlets come complete with the back flow protection flange. The PVC membrane flange is then simply hot air fusion welded to the membrane achieving a consistent 50mm weld around the entire perimeter.



PREFABRICATED | Pipe Collars

The prefabricated pipe collars cover all different diameters of pipes/post. The prefabricated pipe collars drastically reduce installation and material cost whilst providing an added benefit of being able to wrap the collars around the pipes and posts when you're restricted to sliding them over the top.



FATRAFIX | Bar

Fatra offer a unique ancillary which enables the client to mechanically anchor items such as solar panels, air conditioning units, timber decking and the like to the structure without having to penetrate the waterproofing membrane and create extensive detailing and weak points in the waterproofing membrane. The Fatrafix bar is an aluminium bar which is encapsulated in PVC membrane which is simply welded to the field sheet membrane.



PREFABRICATED | Internal & External Corners

The Fatra prefabricated corners are used to improve the aesthetics of the system for corner detailing. The corners also reduce labour install times onsite reducing the overall cost of the system.



FATRABOND | Contact Adhesive

The Fatrabond contact adhesive is a two sided application to both Fatra PVC membrane and the substrate its being applied to. The fatrabond contact adhesive can be applied to high parapet walls to avoid bagging of the membrane and improve the aesthetics of the the vertical membrane.



STANDING SEAM | Replicate

The Fatra standing seam replicate is for roofs where the client requires a metal roof look with the performance of a Fatra PVC membrane system, the standing seam replicate provides the perfect solution. This system is purely for modern architecture and provides excellent aesthetics to bespoke projects to create the look of a metal roof.

SYSTEM | Benefits

Excellent resistance to weather
Structural strength & resistance to mechanical stress
UV stable
Reflects up to 80% of UV Radiation
Reduced H&S risk
Cost affective
High chemical resistance
Root resistant
Excellent fire rating
High tensile strength
100% recyclable material
Lightweight
Excellent weldability
ISO 9001 Accreditation
ISO 14001 Accreditation
FM Approval Certification
BRE Eco Point
BBA certified 30 year life expectancy
Material warranties up to 25 years
Installation Quality Inspection throughout installation
Reduced time and leak detection costs

FATRA | Accreditation



BREEAM®



PREPARATION |

Ensure the surface is clean, dry and free from dirt and debris prior to commencing works onsite. Remove any protruding items in the surface which may damage the PVC sheet membrane. All mechanical plant, air conditioning units and associated item must be lifted slightly from the surface when installing the field sheet membrane to enable the membrane to be installed over the entire area.

Care must be taken to avoid damaging or disjoining the air conditioning units. Decommissioning may be required. Once the field sheet membrane has been installed the feet of the mechanical plant units must have suitable protection installed below to protect the PVC membrane. The plant can be lowed back down as soon as the field sheet has been laid and fully inspected for defects.

The existing membrane and substrate is to be assessed by a certified and approved engineer/consultant prior to commencing any works onsite to ensure a full scope of works relating to appropriate methodologies of preparation required is provided.

All preparation is to be carried out in accordance with engineer/consultants reports and Fatra Australia's technological methodologies. Preparation considerations include but aren't limited to:-

- A. Removal of existing membrane if existing membrane is deemed unsuitable to install directly over.
- B. Removal of defected sections of existing membrane such as vulcanised laps, bubbling and or delaminating membranes, corner fillets, cast in reglets and outlets.
- C. Removal of cappings, flashing, skylights, doors, mechanical plant and similar items which will impede the installation process.
- D. Localised repairs to cracks, expansion joints and similar aspects
- E. Mechanical surface grinding
- F. Re-levelling, creation or rectification of falls.
- G. Priming or sealing of the surface
- H. Cleaning and removal of any dirt, debris or chemicals present on the substrate.
- I. Removal of redundant materials present within the area.

STORAGE |

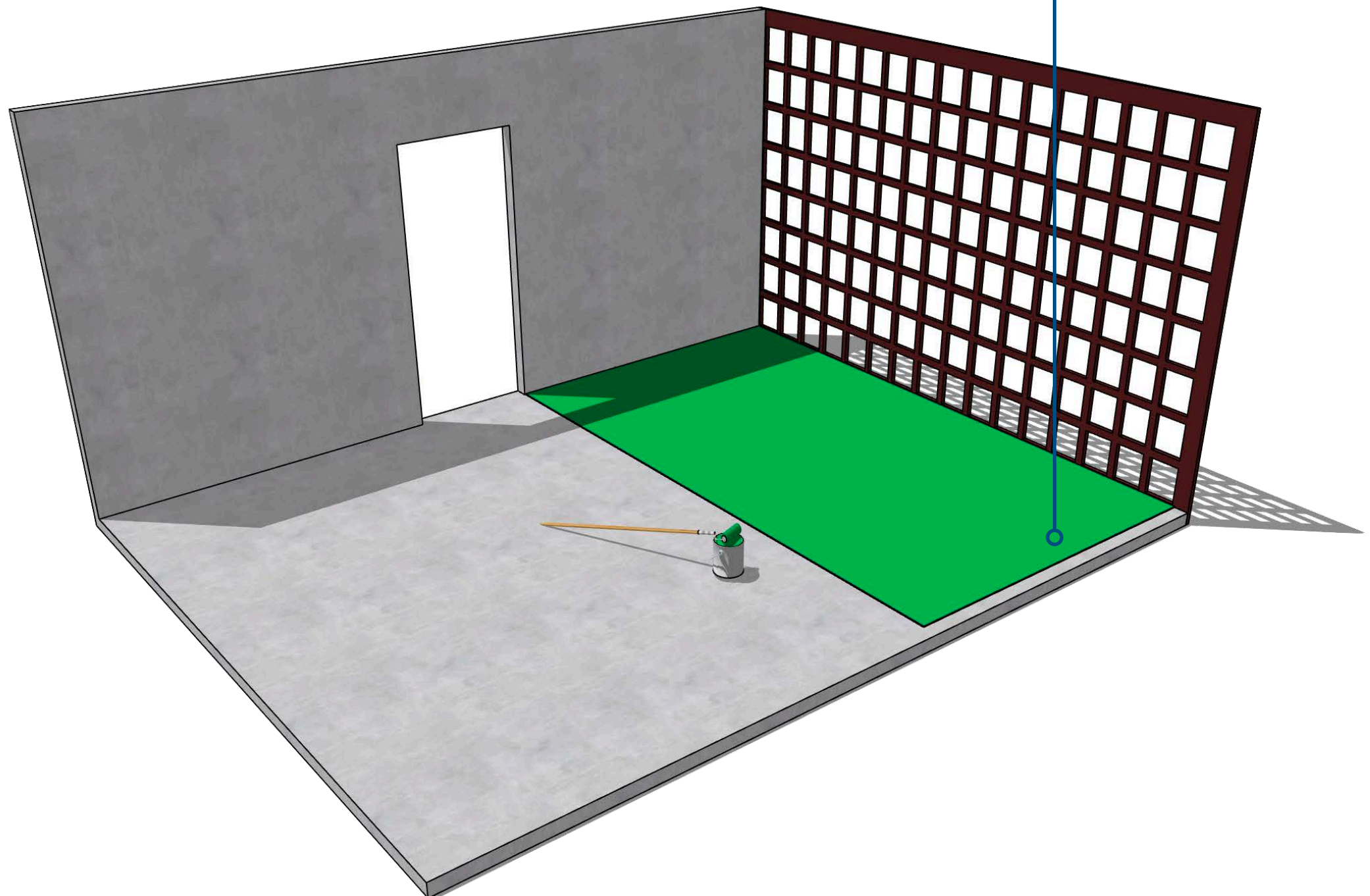
Materials are to be stored in a safe location and avoid being exposed to the elements or other damage such as mechanical or external contractors. All materials are to be stored in a safe and secure manner which will not result in dislodgement or displacement. Fatrafol membranes are to be covered and protected from the UV at all times until the point of installation of the Fatrafol PVC membrane to protect the underside of the PVC membrane rolls from being exposed to the UV.

It is advisable that loose items such as Fatranyl angles, fixings and associated accessories are stored in a safe and secure box to prevent them being damaged or displaced.

FATRABOND | FATRABOND 1251 FLEECEBACK ADHESIVE

Apply the Fatrabond adhesive over the substrate and spread evenly using a roller or squeegee. Ensure the adhesive covers the entire surface evenly. Ensure adhesive does not pond heavily as this may cause inconsistencies when installing the Fatrafol PVC membrane. Only apply the adhesive to the areas where the Fatrafol PVC membrane can be laid within 5 - 10 minutes to avoid the adhesive curing before the PVC membrane is laid. Allow the adhesive enough time to become tacky and the solvents to be released. This will minimise air pockets that may get trapped below the membrane.

Ensure the adhesive is not applied in excessive inclement weather including but not limited to rain, wind and snow.

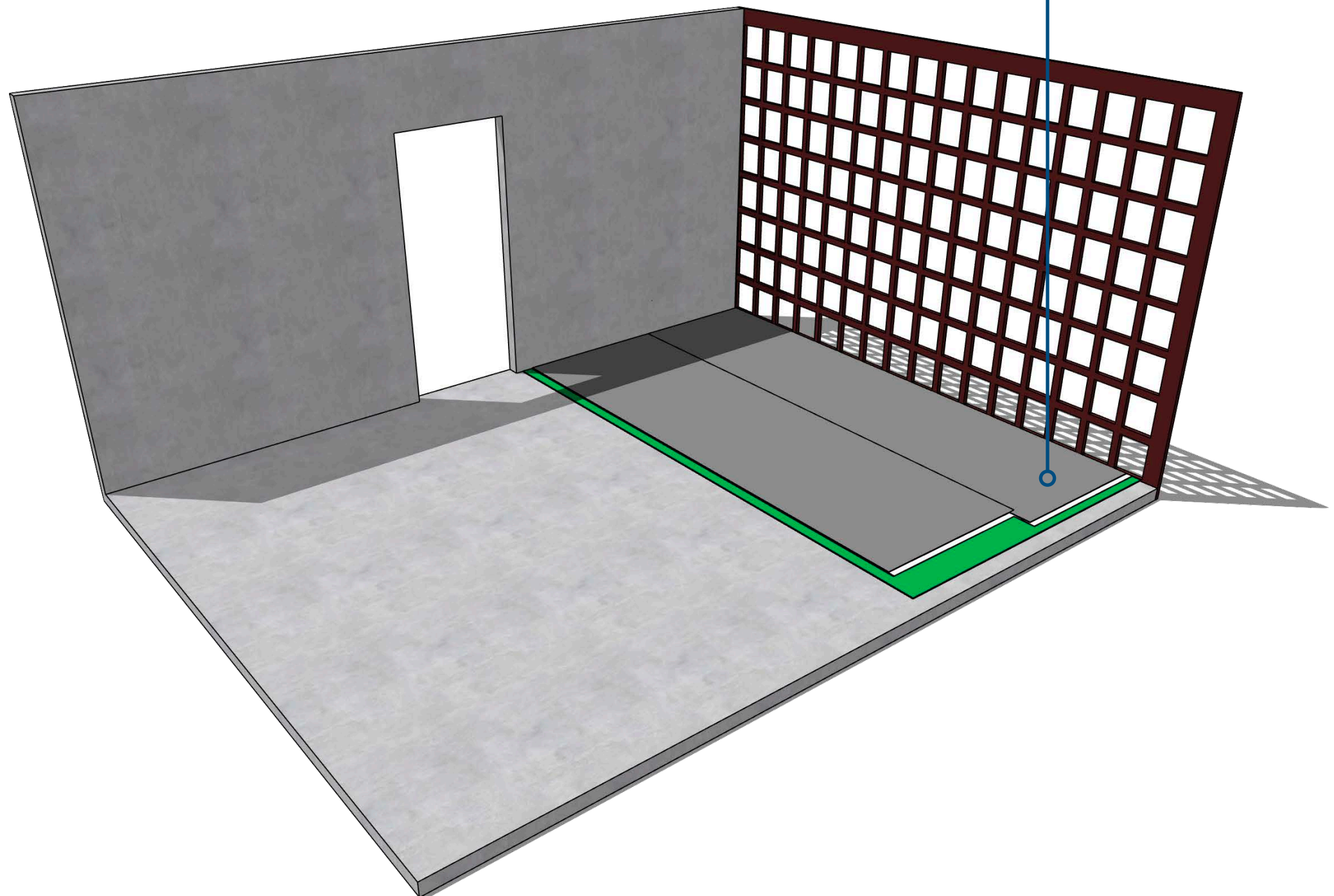
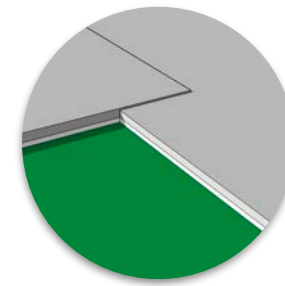


FATRAFOL | 807v PVC FLEECE BACK MEMBRANE

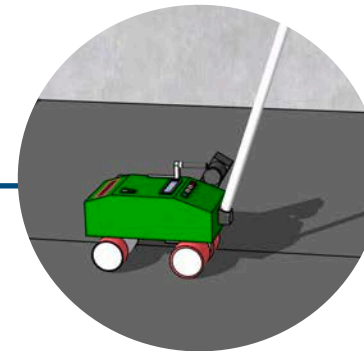
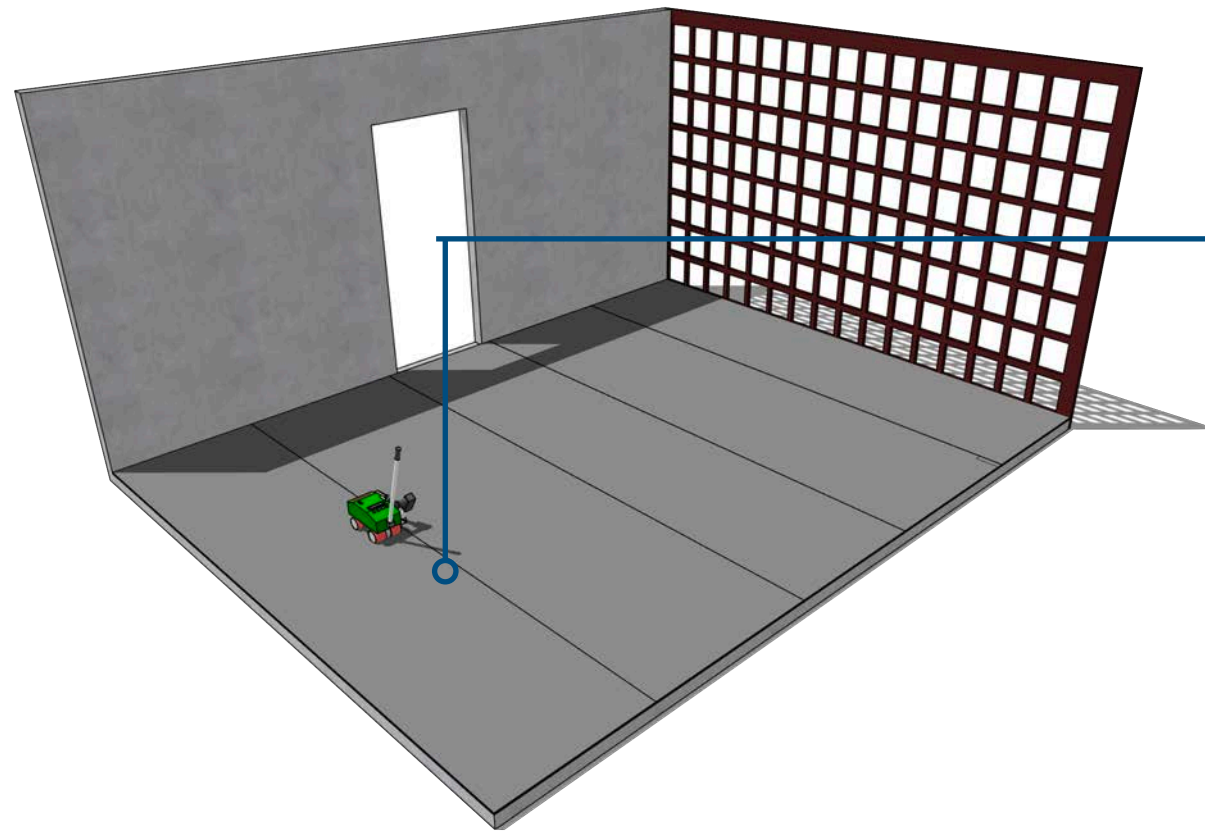
Roll the Fatrafol 807v over the Fatrabond adhesive. Using a weighted roller or brush, push out any air pockets that may be trapped below the PVC membrane to achieve maximum adhesion.

Ensure that the weldable laps on the Fatrafol PVC membrane do not get exposed to the adhesive as this may affect the weld strength when welding the Fatrafol 807v together. If this happens use a Fatra approved cleaning agent to clean off the adhesive before the adhesive cures.

Do not apply Fatrafol membranes in excessive inclement weather conditions.

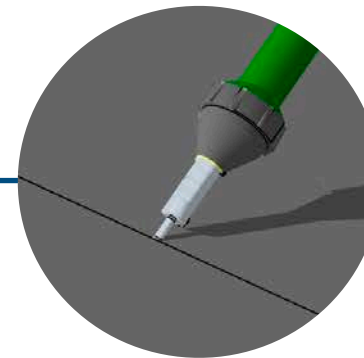
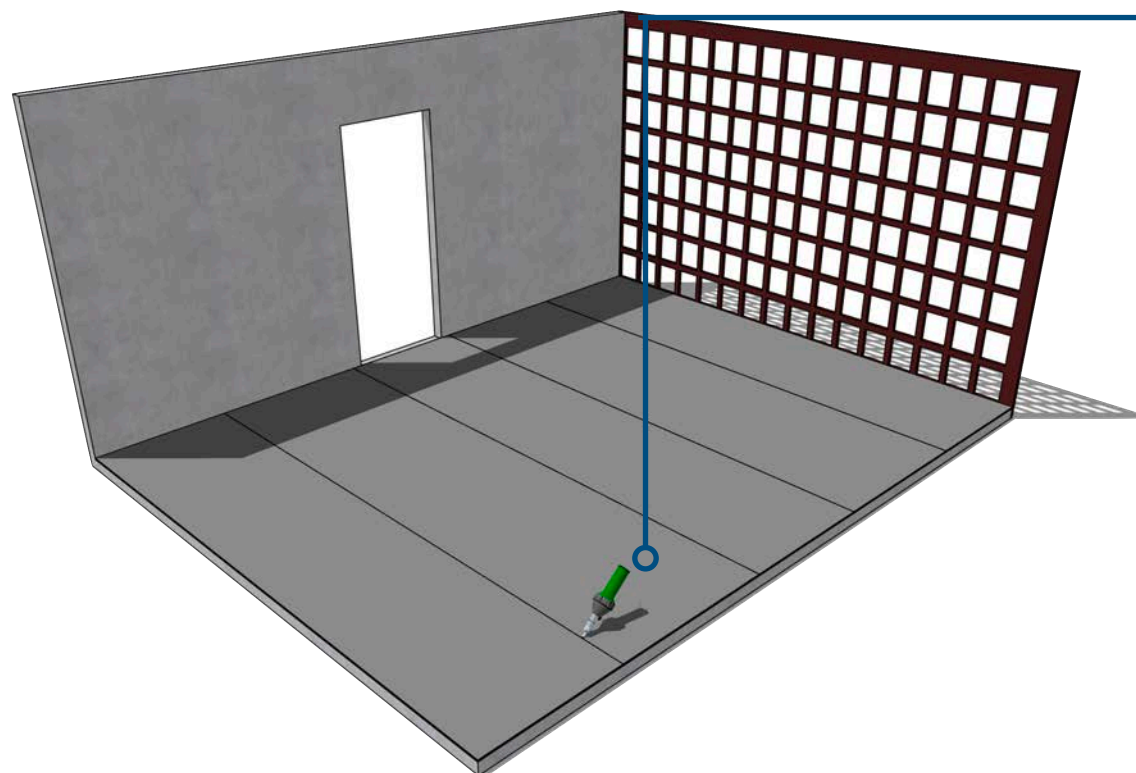


FATRAFOL | 807v PVC FLEECE BACK MEMBRANE



Once the membrane have been fully adhered to the surface the membrane will then needed to be hot air fusion welded together using either the Varimat V2 welding machine or the Leister Triac ST hand welders.

Ensure that all membrane welds contain a consistent bleed from the edge of the heated materials and that regular peel tests are carried out to ensure adequate weld adhesion.



Membrane must lap a minimum of 70mm and achieve a weld width of 40mm minimum. Roll ends should be conjoined with a minimum width of 150mm wide 810v membrane jointing strips and hot air fusion welded to both conjoining 807v roll ends.

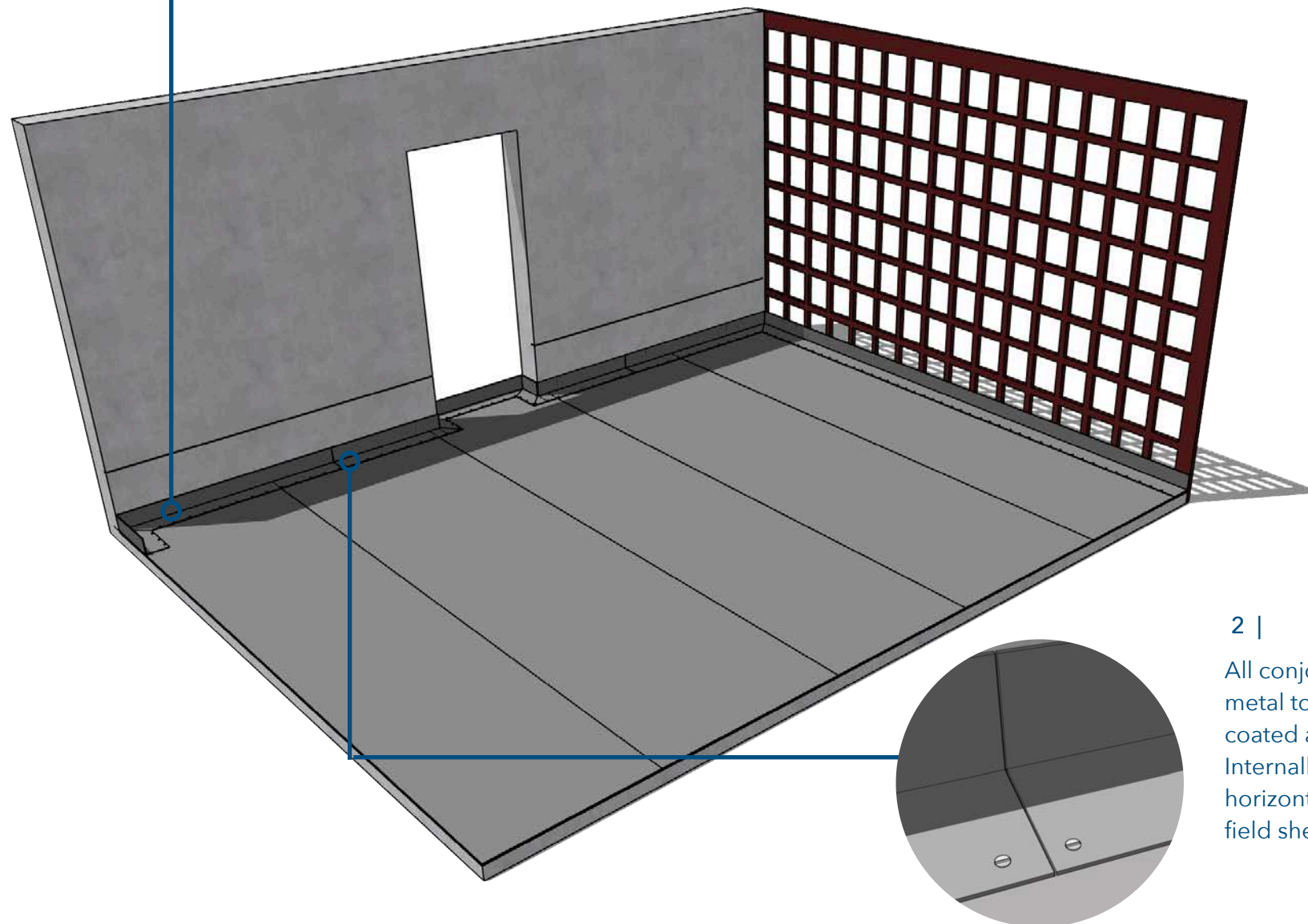
Avoid excessive build ups of membrane and ensure to take extra care when welding capillary overlap joints where the use of a brass roller may be required to create additional pressure.

VERTICAL UPTURN TERMINATION | INTERNAL PEEL STOP ANGLES

1 |

Once the field sheet has been fully installed, a Fatranyl internally coated PVC peel stop angle must be installed to all horizontal and vertical junctions. When installing Fatranyl internally coated angles, ensure the angles contour fully with the substrate and do not protrude off the surface.

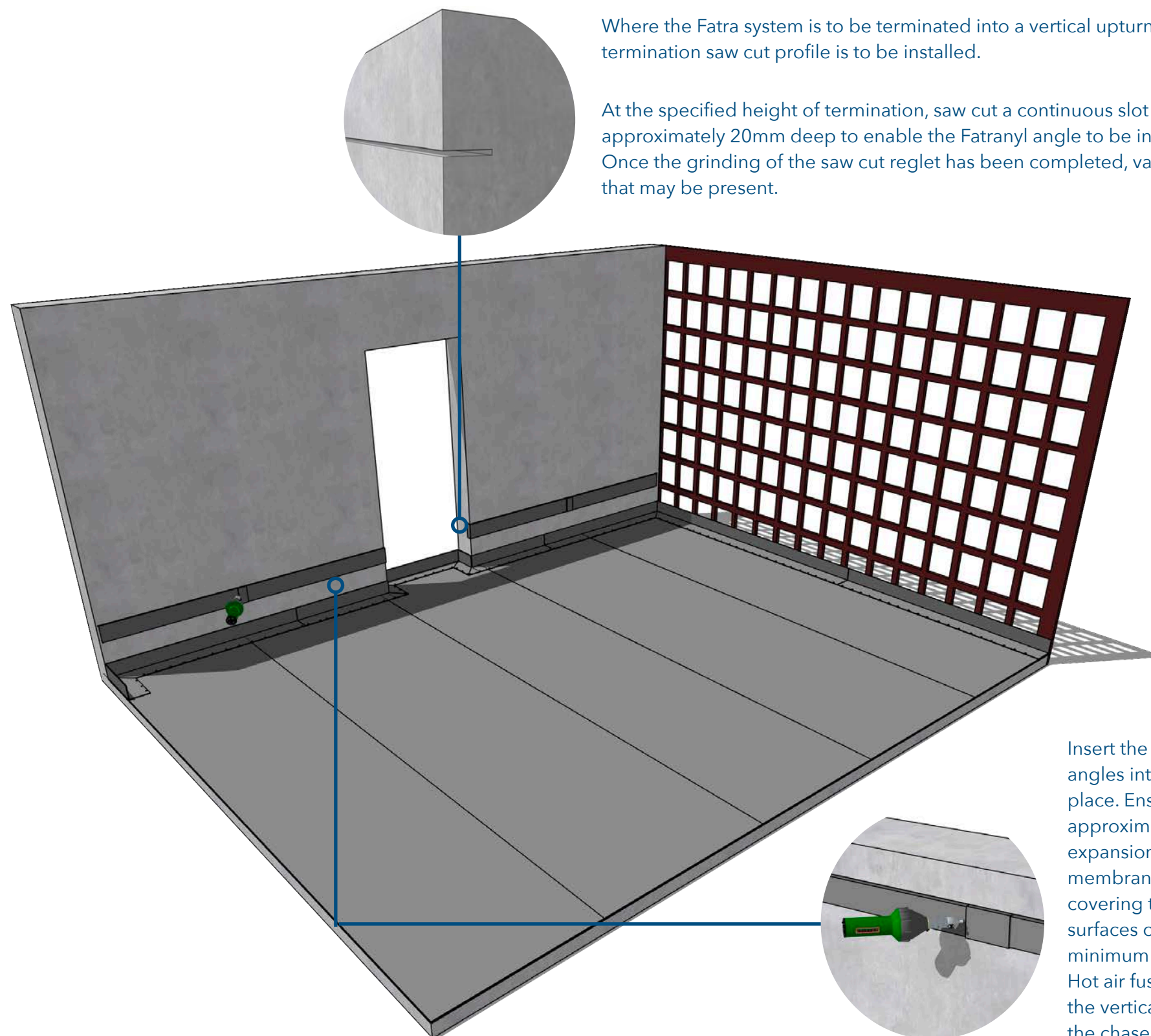
The Fatranyl angle is mechanically anchored over the field sheet at 150mm centres using Fatra approved fixings into the substrate. The fixing locations must always be no closer than 10mm from the edge of the Fatranyl angle but always in the bottom third section to allow enough room to complete a hot air fusion weld when installing the PVC membrane strap.



2 |

All conjoining angles must have 2 - 5mm gap between each metal to allow for structural movement. The Fatranyl internally coated angle minimises shrinkage which may occur. Internally coated angles are to be installed to every horizontal and vertical junction and are to be fixed over the field sheet membrane at all times.

VERTICAL UPTURN TERMINATION | CHASE DETAIL

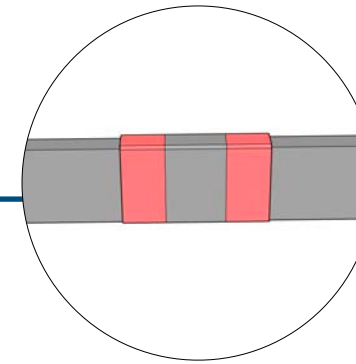
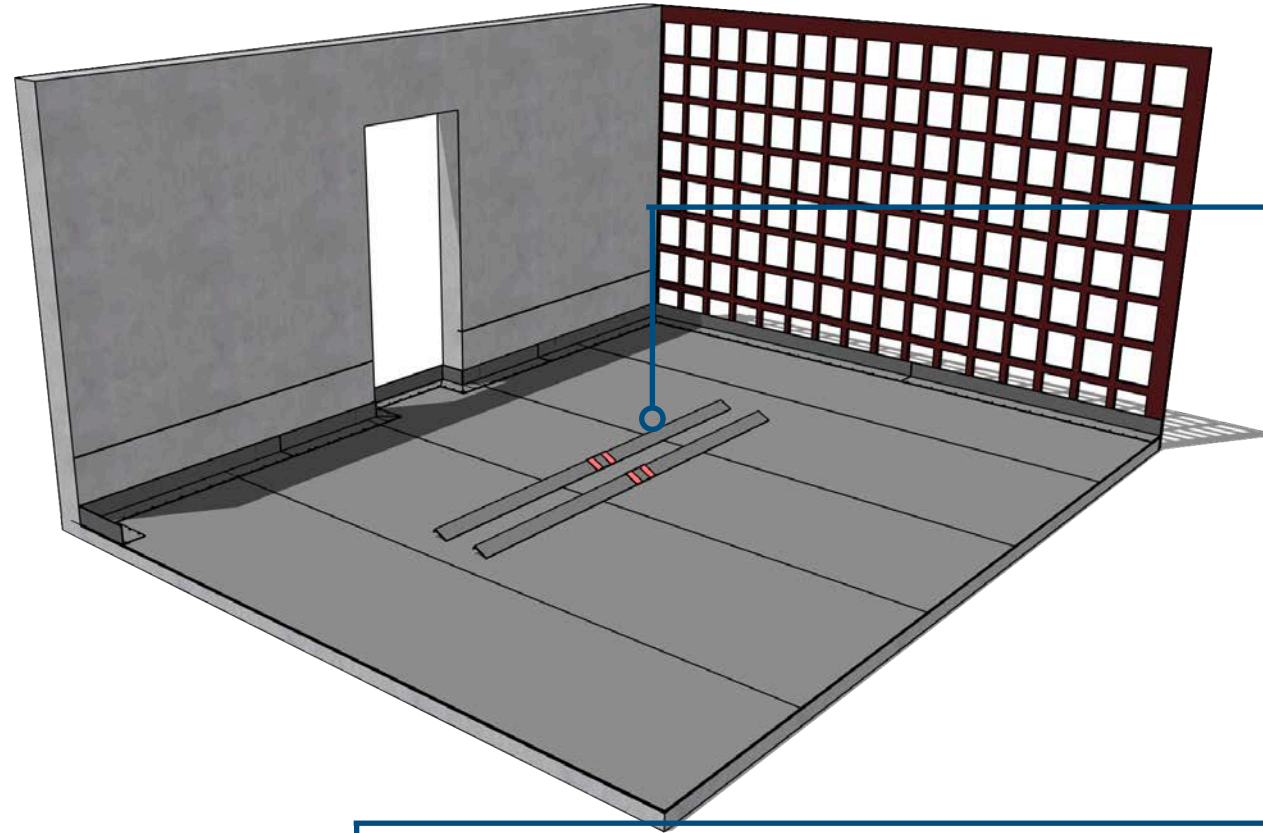


Where the Fatra system is to be terminated into a vertical upturn, a Fatranyl PVC coated chase termination saw cut profile is to be installed.

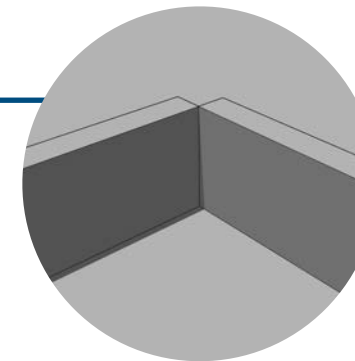
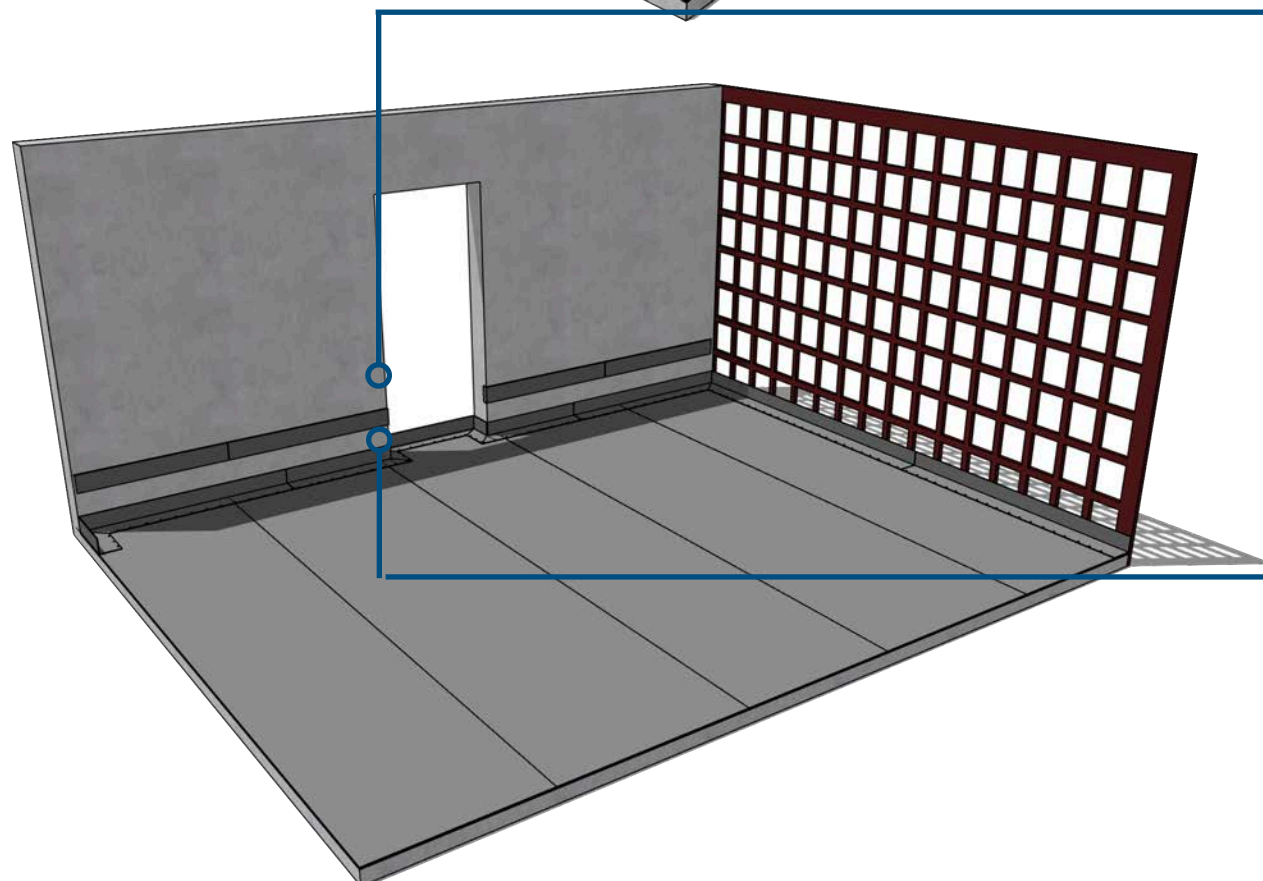
At the specified height of termination, saw cut a continuous slot into the vertical substrate approximately 20mm deep to enable the Fatranyl angle to be inserted into the saw cut slot. Once the grinding of the saw cut reglet has been completed, vacuum out any dust and debris that may be present.

Insert the Fatranyl PVC coated chase termination angles into the saw cut reglet but do not fix into place. Ensure conjoining Fatranyl angles are approximately 2 - 5mm apart to allow for expansion. Place Fatrafol 804 detailing membrane butt strap over the expansion gap covering the entire horizontal and vertical surfaces of the Fatranyl angles lapping a minimum of 50mm onto each conjoining angle. Hot air fusion weld the Fatrafol 804 butt strap to the vertical face of the Fatranyl angle to connect the chase angles together achieving a weld width of 40mm

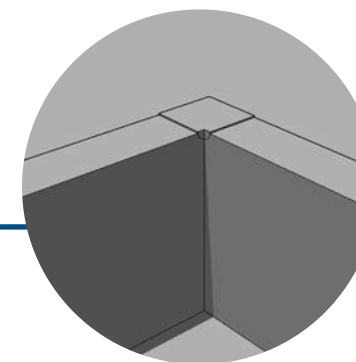
VERTICAL UPTURN TERMINATION | CHASE DETAIL



Once the Fatrafol 804 butt straps are welded to the vertical face of the Fatranyl angles, remove the connected angles from the saw cut reglet. Once the Fatranyl angles are removed, hot air fusion weld the top horizontal plane to the Fatrafol 804 butt strap to full seal the Fatranyl angle. The image to the right indicates in red the specific areas which are to be fully hot air fusion welded.

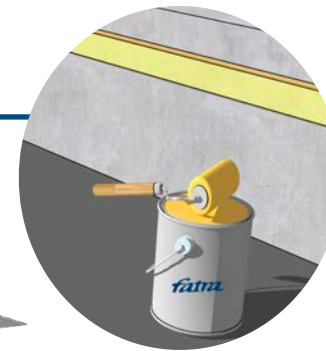
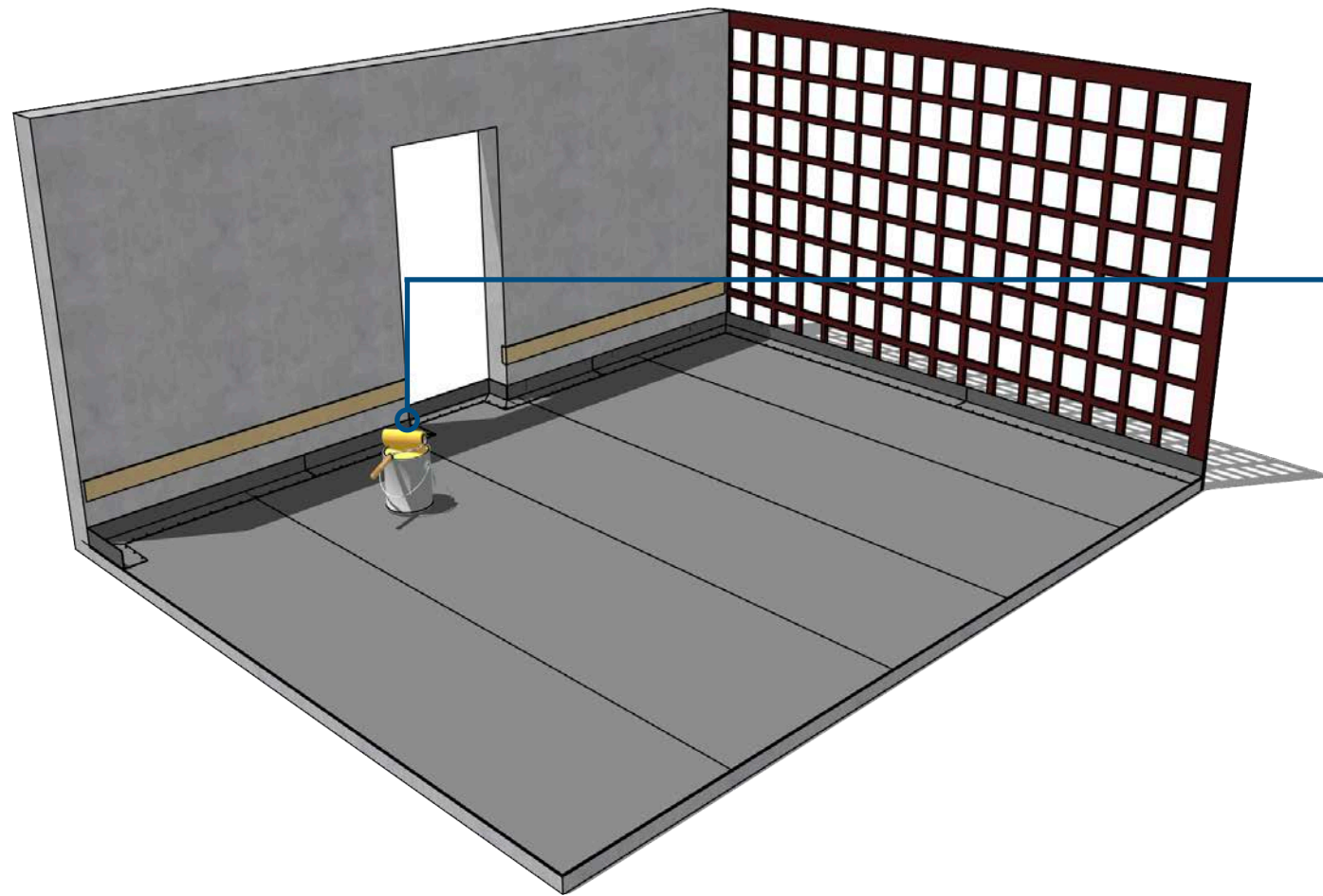


Where a change in direction is present and requires a chase termination profile to be installed. Mitre the 15mm horizontal section of the chase termination angle to enable the Fatranyl angle to contour with the change of direction. This reduces gaps in the termination angle and provides a more reliable termination detail.

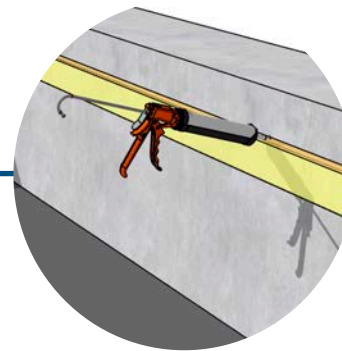
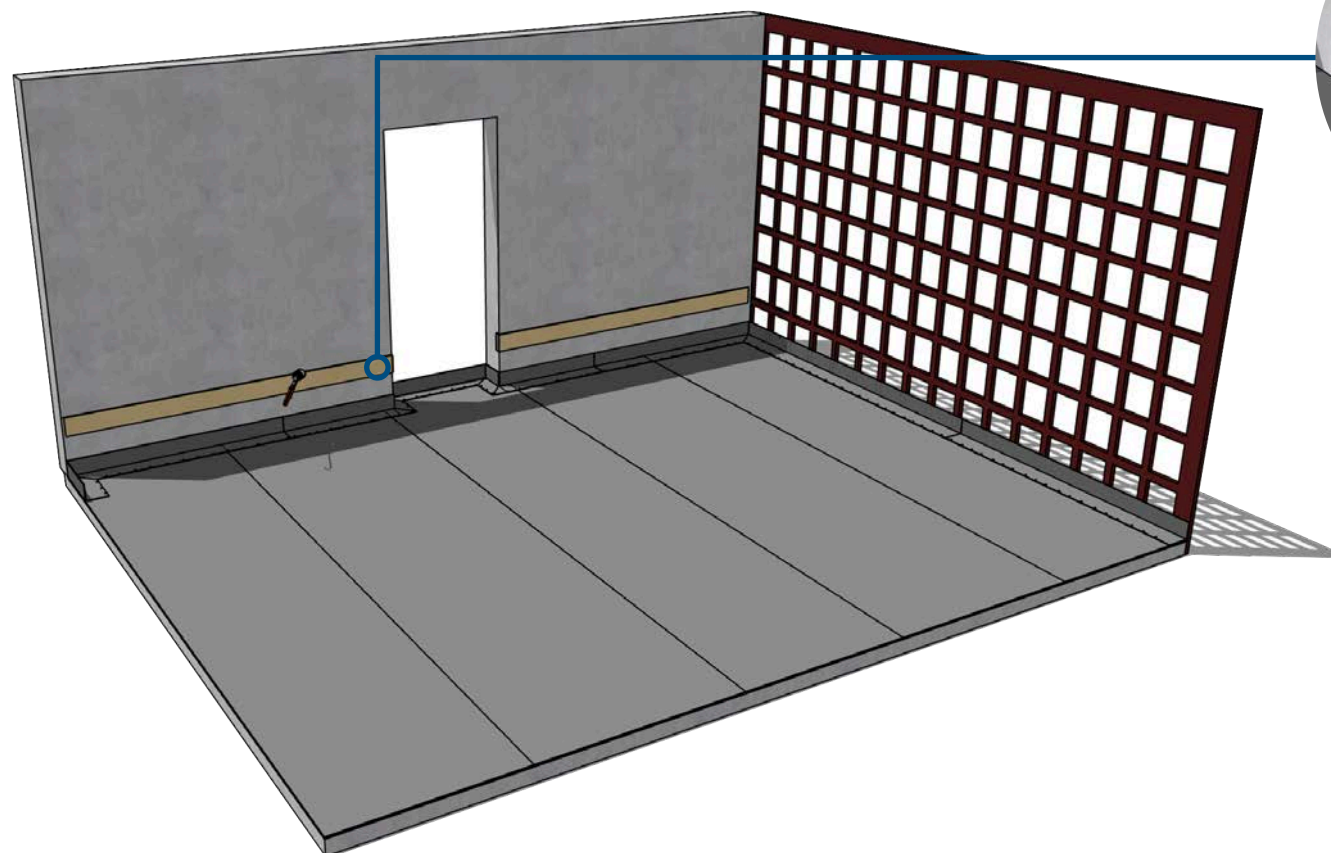


Once the Fatranyl angle has been mitred, hot air fusion weld a triangular Fatrafol 804 PVC patch to bridge the gap where the Fatranyl angle has been mitred. Ensure the PVC patch protrudes down the vertical face of the Fatranyl angle to completely cover any gaps in the Fatranyl angle.

VERTICAL UPTURN TERMINATION | CHASE DETAIL

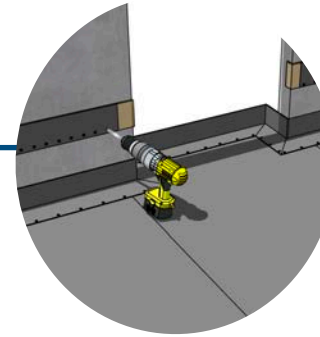
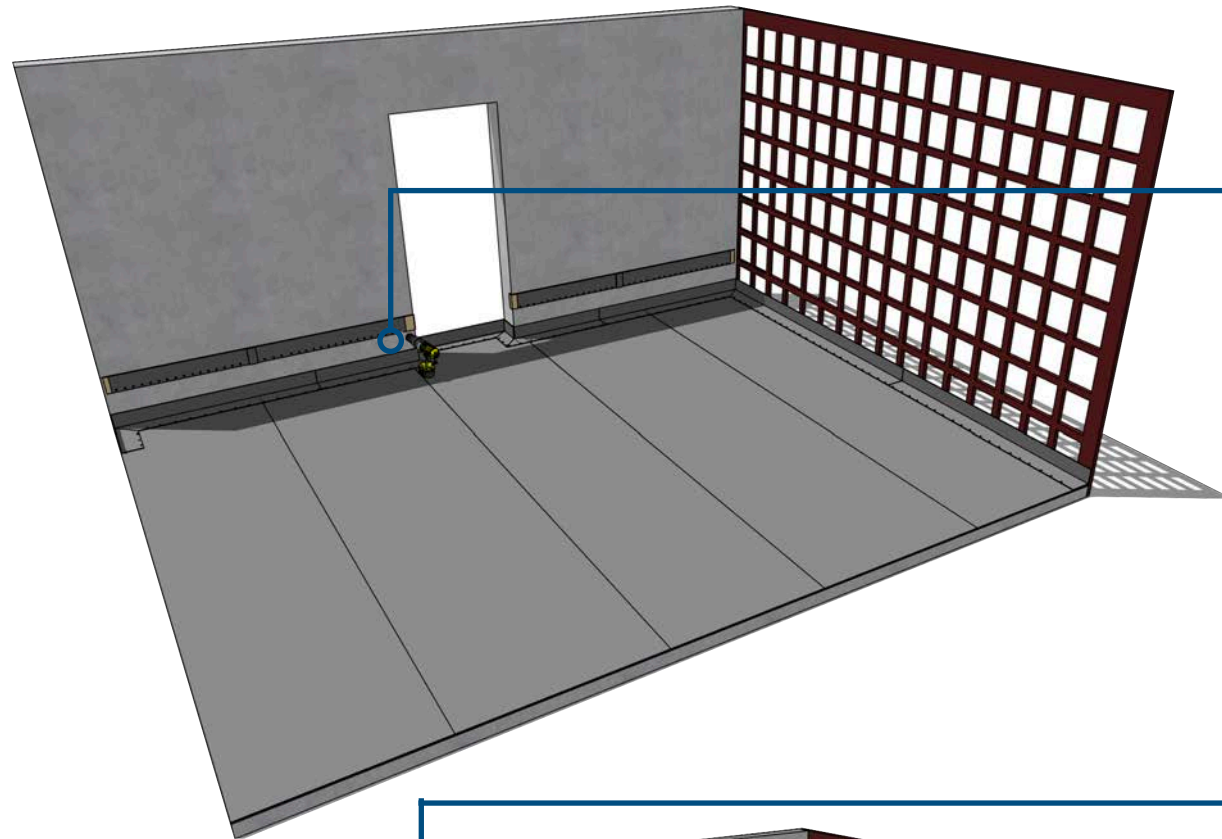


Using a Fatra approved primer, apply the primer in accordance with suppliers recommendations to the areas where an approved sealant will be applied. Ensure an even and consistent coverage is achieved.

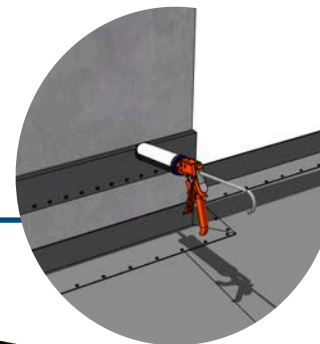
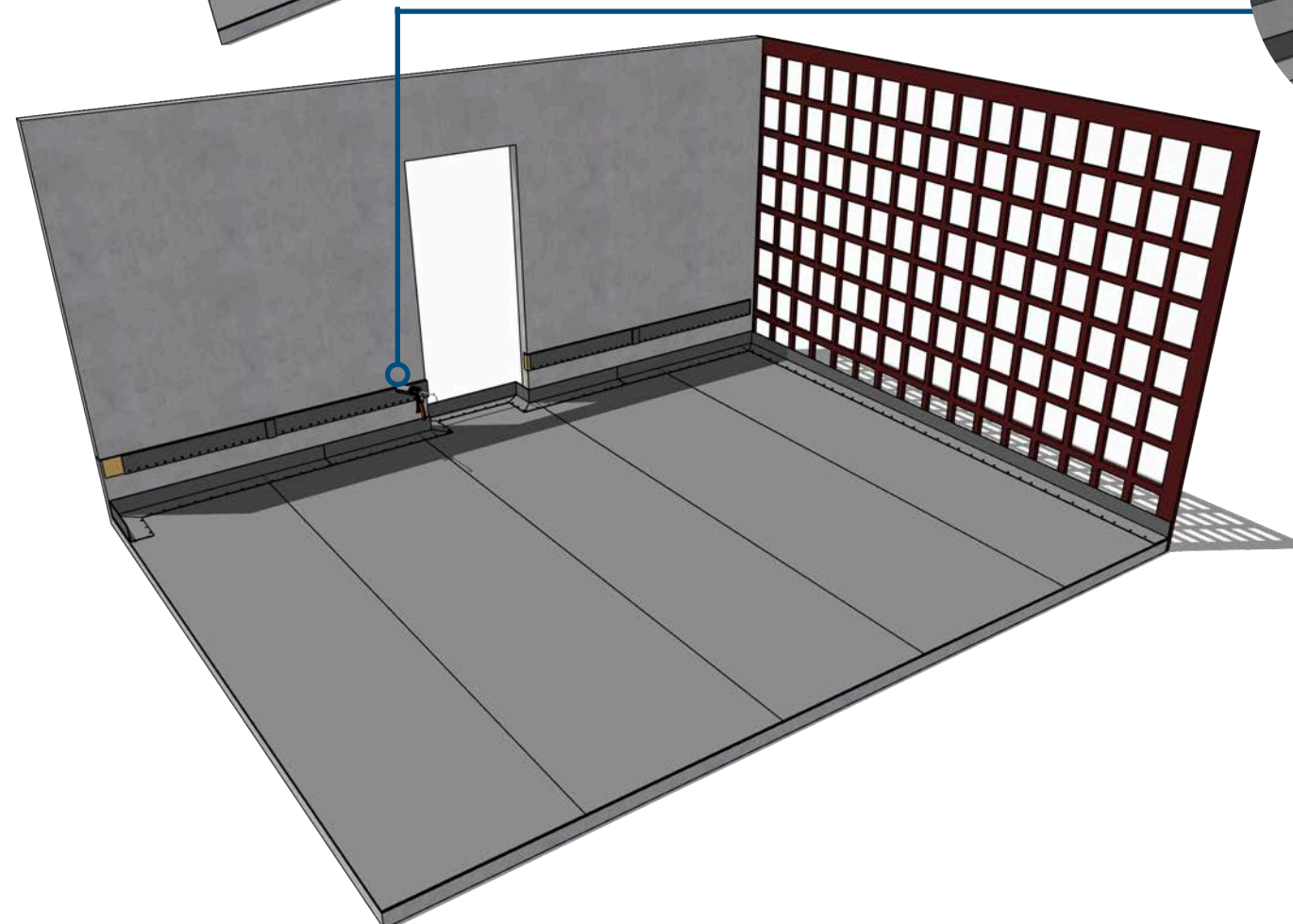


Once the approved primer has fully cured, apply a consistent bead of approved sealant into the saw cut reglet slot across the entire length of termination.

VERTICAL UPTURN TERMINATION | CHASE DETAIL



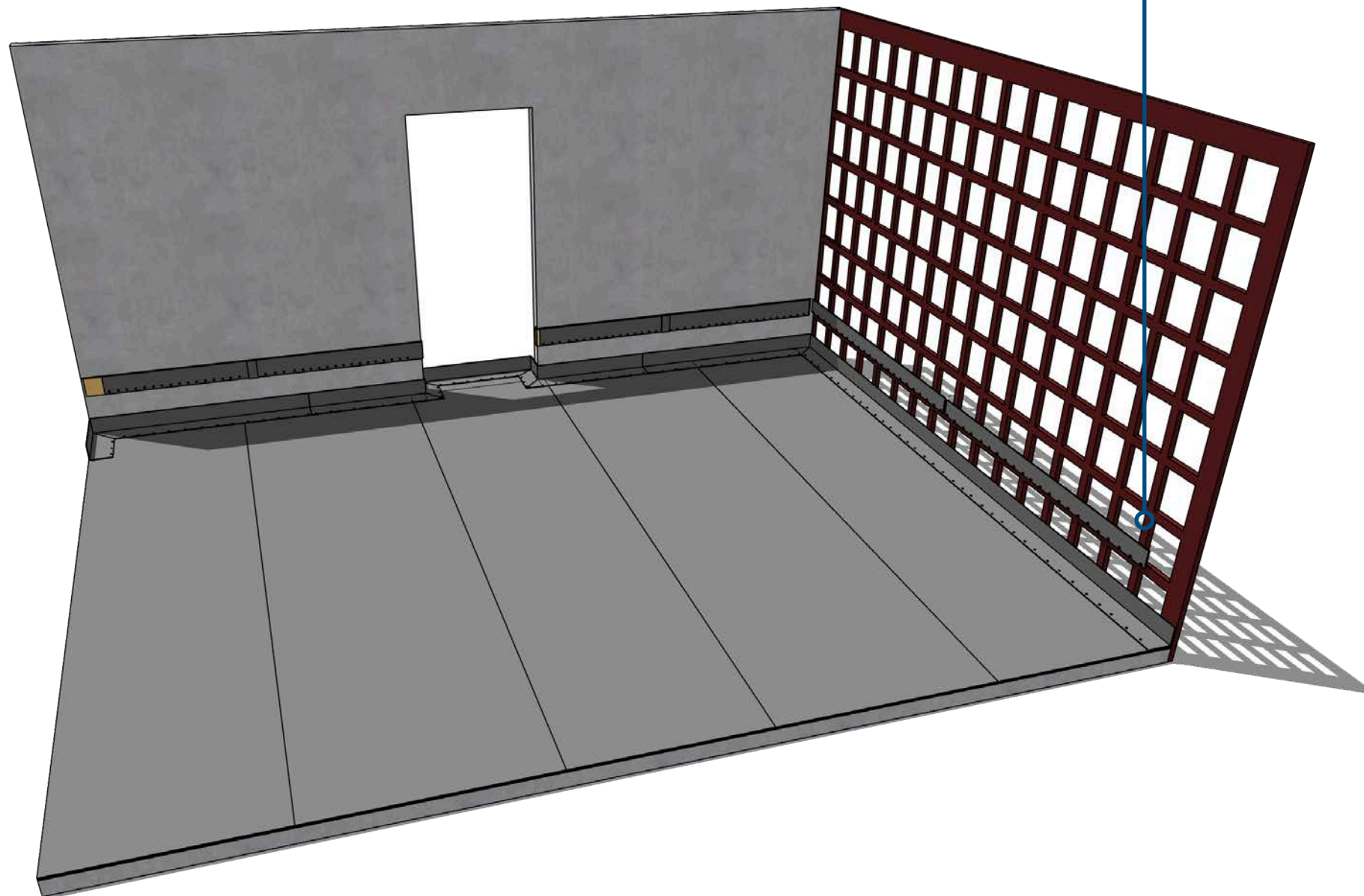
Fix Fatranyl chase termination approximately 10mm from the bottom edge and in the bottom third section of the Fatranyl angle at 150mm centres using Fatra approved fixings to secure into place. Ensure Fatranyl angles are sat flush against the wall and do not protrude off the surface.



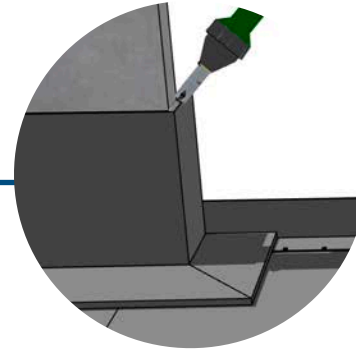
Once the Fatranyl angle has been fully fixed, install a final bead of approved Fatra sealant across the top edge of the Fatranyl termination angle to fully seal the termination. Using a spray bottle and warm water, lightly spray the wet sealant and smooth off to achieve a consistent sealed joint.

VERTICAL UPTURN TERMINATION | PVC MEMBRANE STRAP

Fix Fatranyl pressure seal termination angle approximately 10mm from the bottom edge and in the bottom third section of the Fatranyl angle at 150mm centres using Fatra approved fixings to secure into place. Ensure Fatranyl angles are sat flush against the wall and do not protrude off the surface as this may cause issues when the wall sheeting is installed at a later date

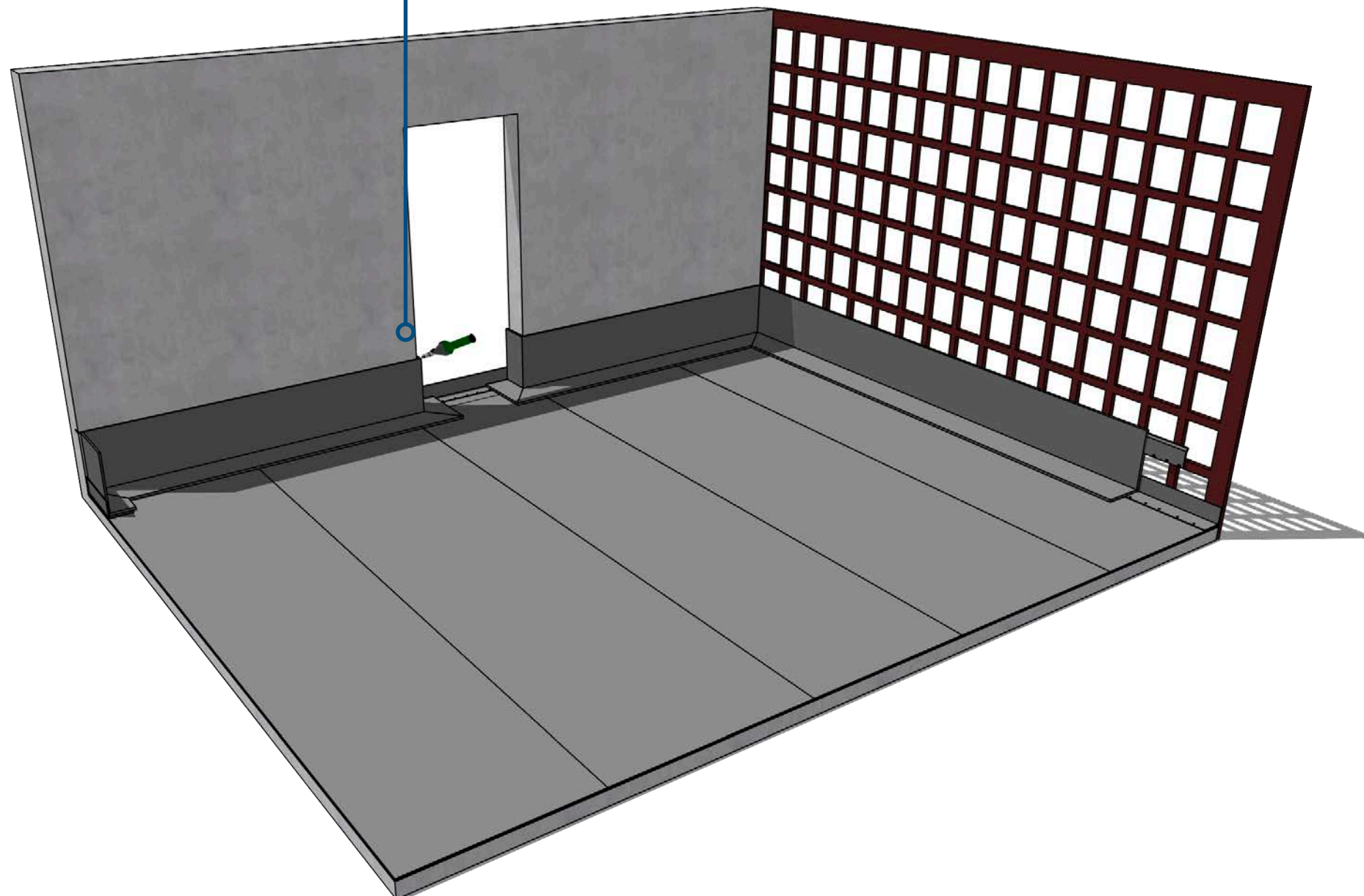


VERTICAL UPTURN TERMINATION | PVC MEMBRANE STRAP

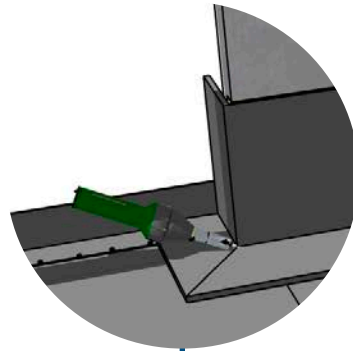


Once the Fatranyl chase termination angles have been installed a Fatrafol 810v reinforced membrane strap is installed to the vertical upturns.

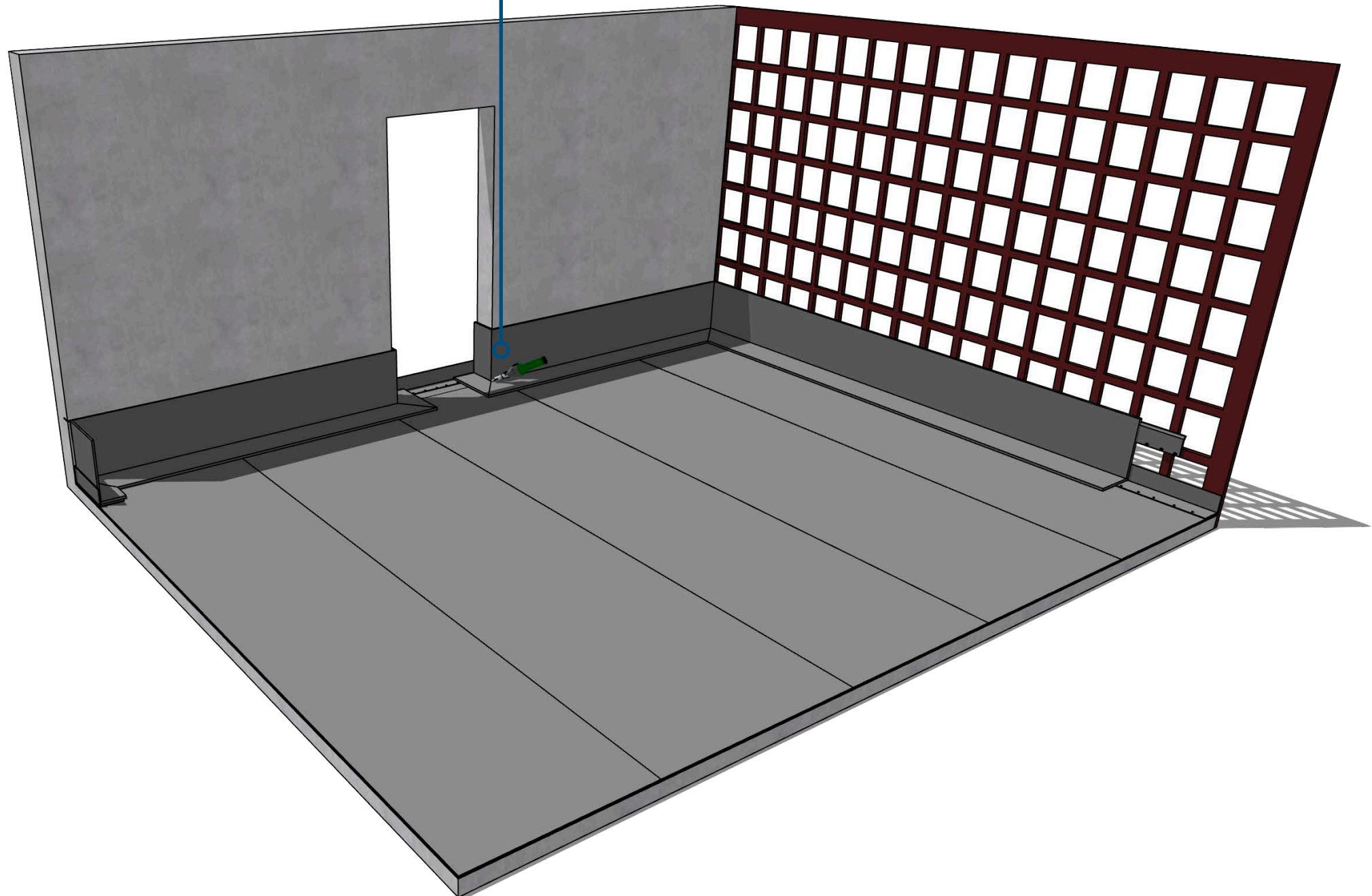
Where a vertical chase termination has been implemented the Fatrafol 810v PVC strap is to be hot air fusion welded approximately 1mm from the top of the Fatranyl PVC coated chase termination achieving a continuous minimum weld width of 40mm along the entire length of the Fatranyl chase termination angle



VERTICAL UPTURN TERMINATION | PVC MEMBRANE STRAP

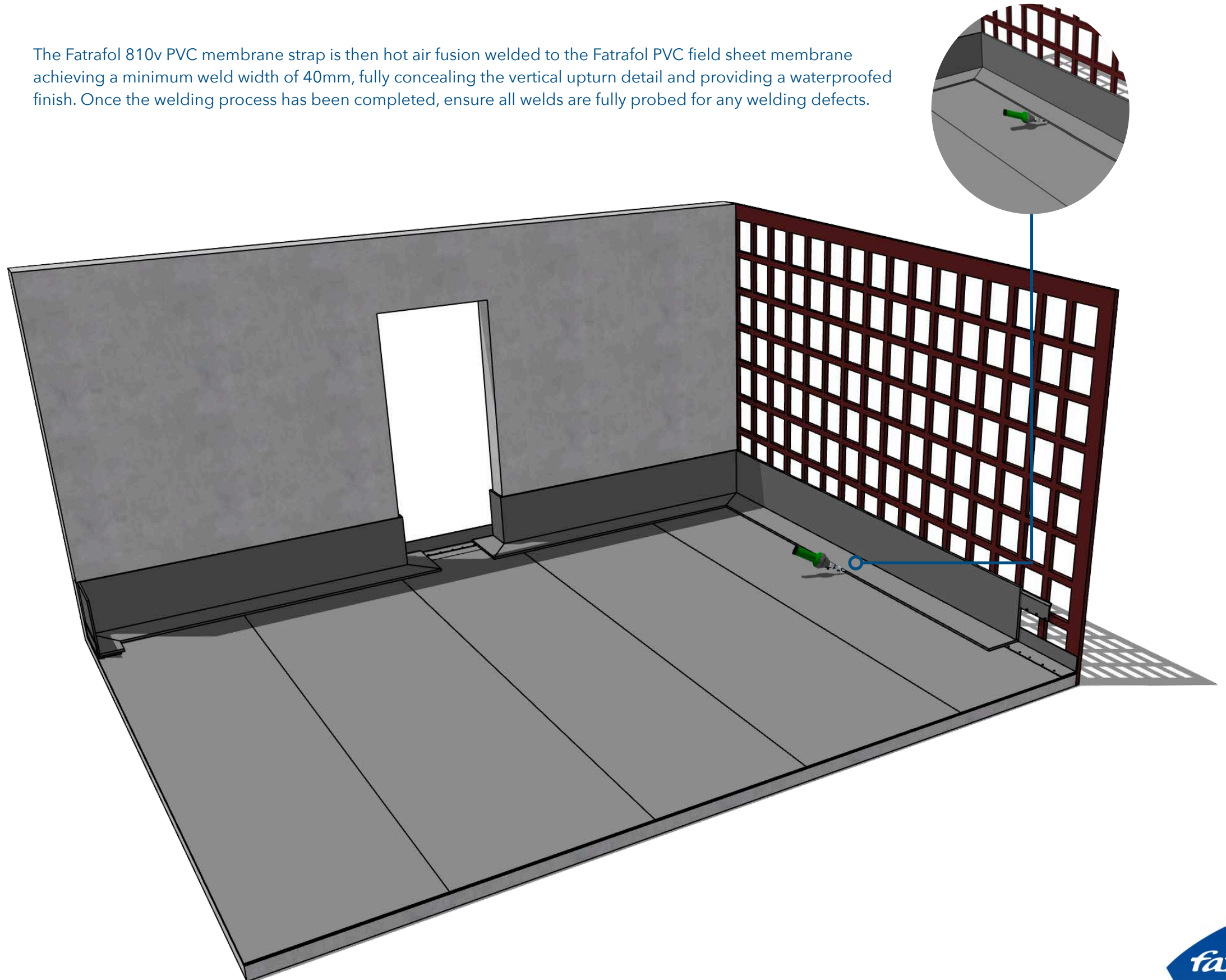


The Fatrafol PVC membrane strap will come down the inside vertical face, lapping over the Fatranyl internally coated PVC coated angle and 100mm onto the Fatrafol PVC field sheet membrane. A continuous weld is to be installed in the full width and length of the horizontal section of the Fatranyl internally coated PVC angle to ensure tenting of the vertical upturn membrane strap does not occur

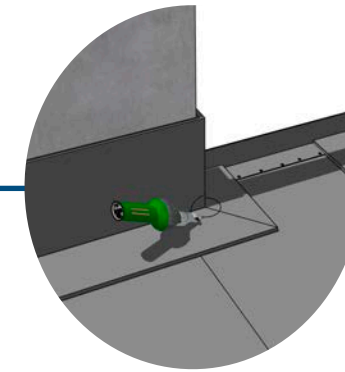
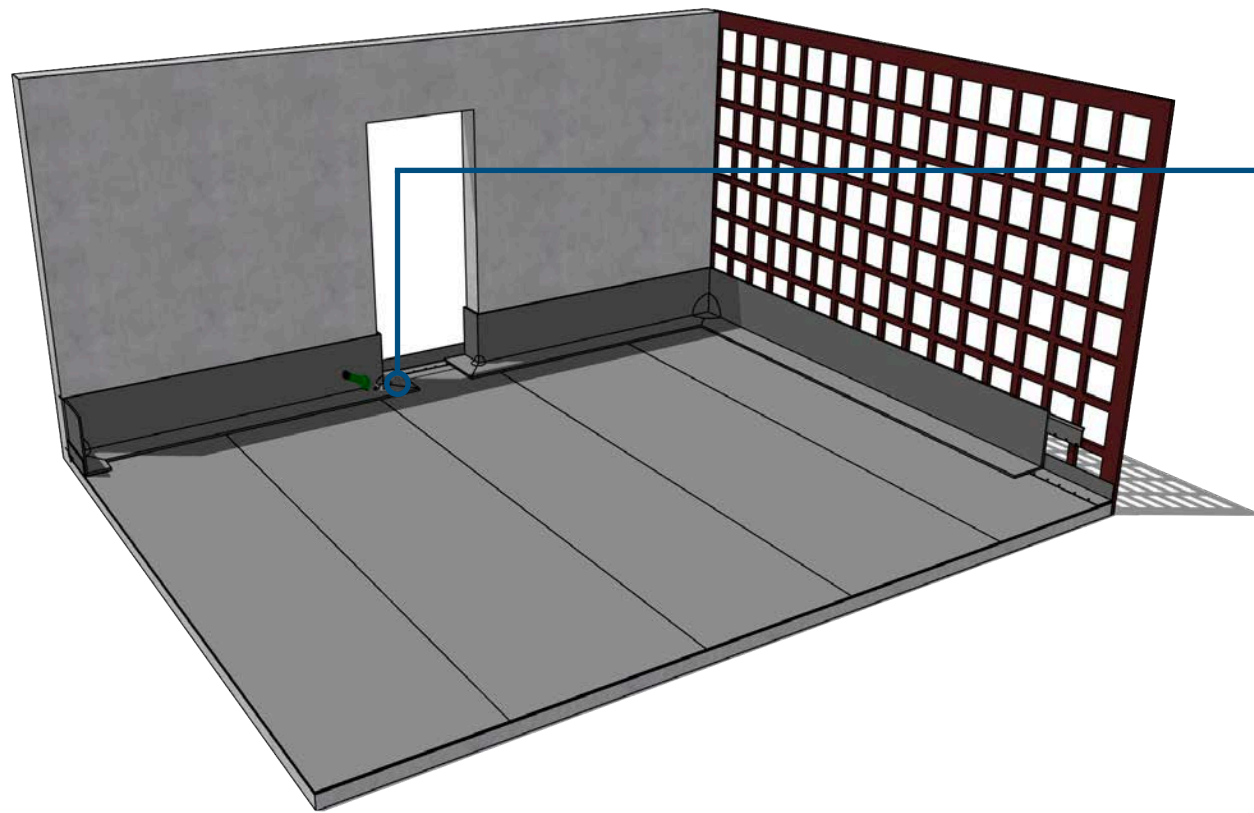


VERTICAL UPTURN TERMINATION | PVC MEMBRANE STRAP

The Fatrafol 810v PVC membrane strap is then hot air fusion welded to the Fatrafol PVC field sheet membrane achieving a minimum weld width of 40mm, fully concealing the vertical upturn detail and providing a waterproofed finish. Once the welding process has been completed, ensure all welds are fully probed for any welding defects.

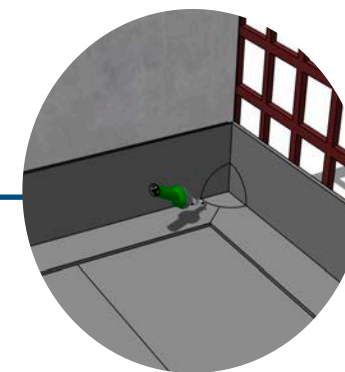
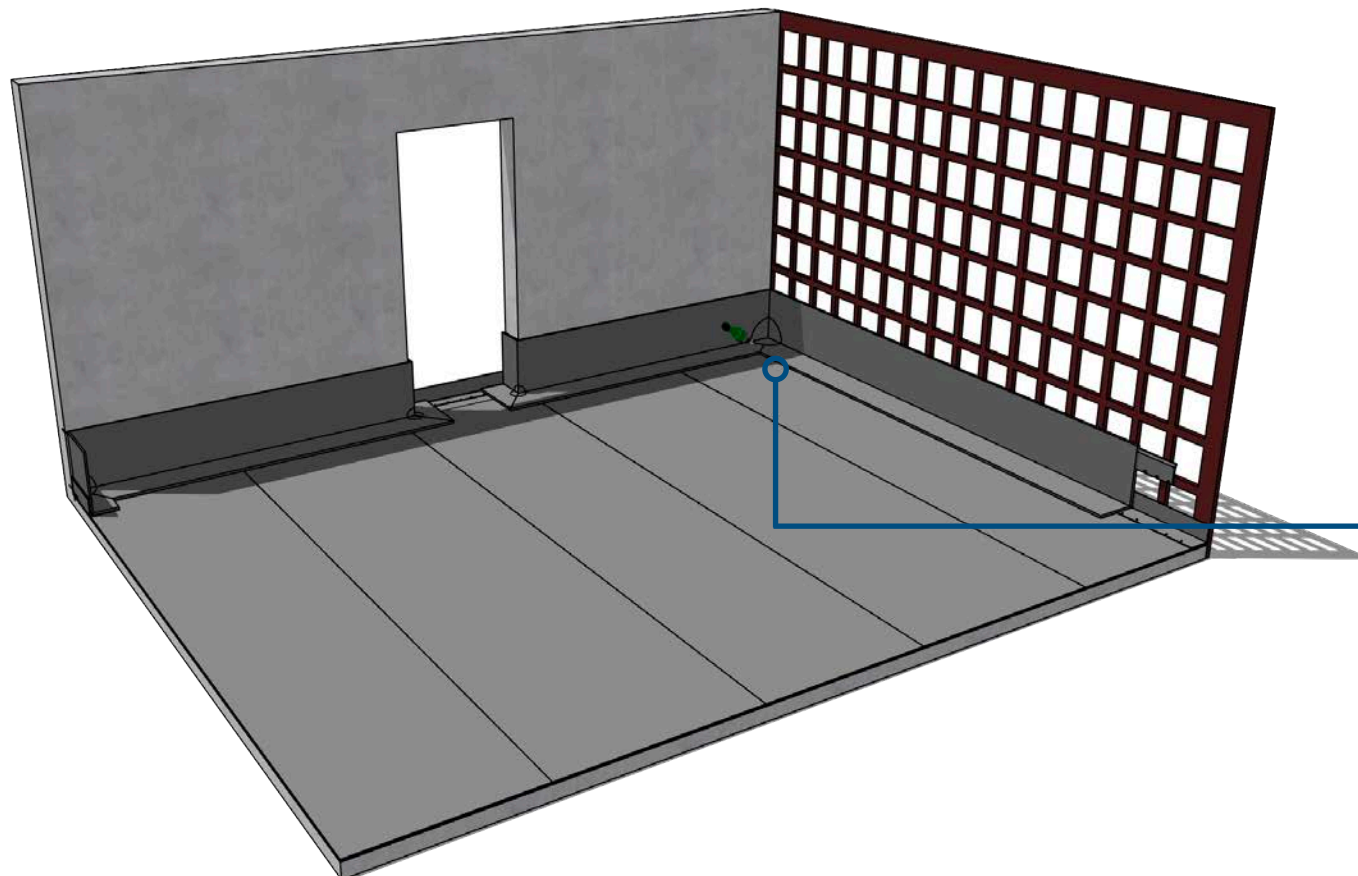


VERTICAL UPTURN TERMINATION | CORNER PATCHES



Once the PVC membrane strap has been fully installed and welded, installation of external corner patches at the base of the outside corner junction is to be installed.

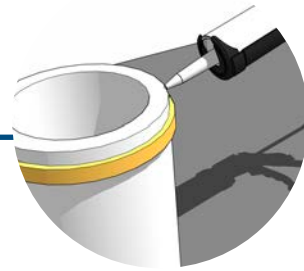
Hot air fusion weld around the entire perimeter of the external corner patch ensuring a consistent 40mm weld width is achieved to fully waterproof the junction.



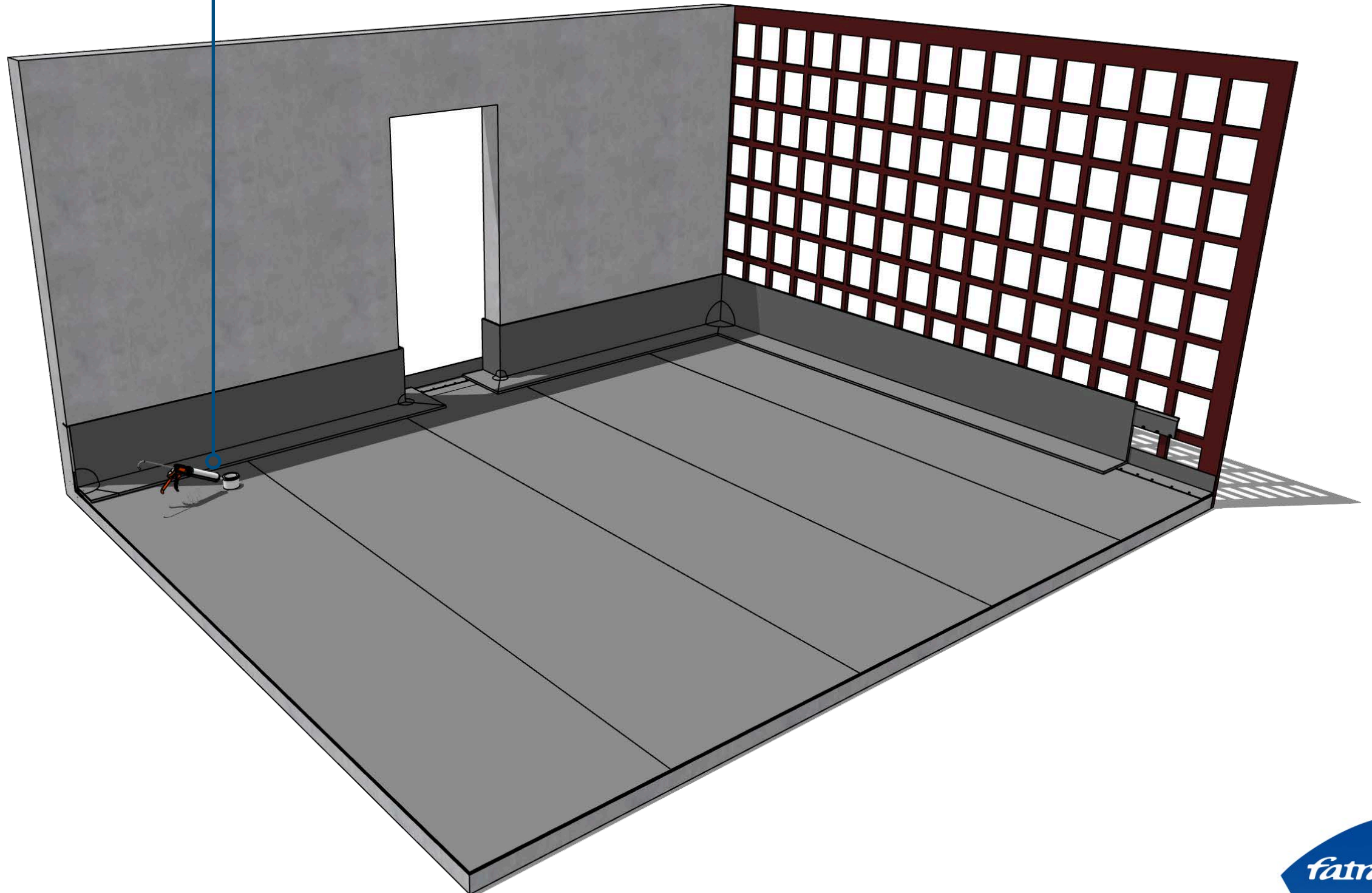
Once the PVC membrane strap has been fully installed and welded, installation of internal corner patches at the base of the inside corner junction is to be installed.

Hot air fusion weld around the entire perimeter of the internal corner patch ensuring a consistent 40mm weld width is achieved to fully waterproof the junction.

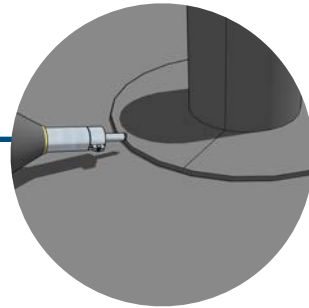
PIPE/POST | DETAILING



Where there are pipes, posts, balustrades and similar penetrations present, Fatra prefabricated pipe collars are to be used to waterproof these details. Once the Fatra PVC field sheet membrane has been installed, install a bead of approved sealant around the penetration approximately 5mm below the highest point where the pipe collar will finish.

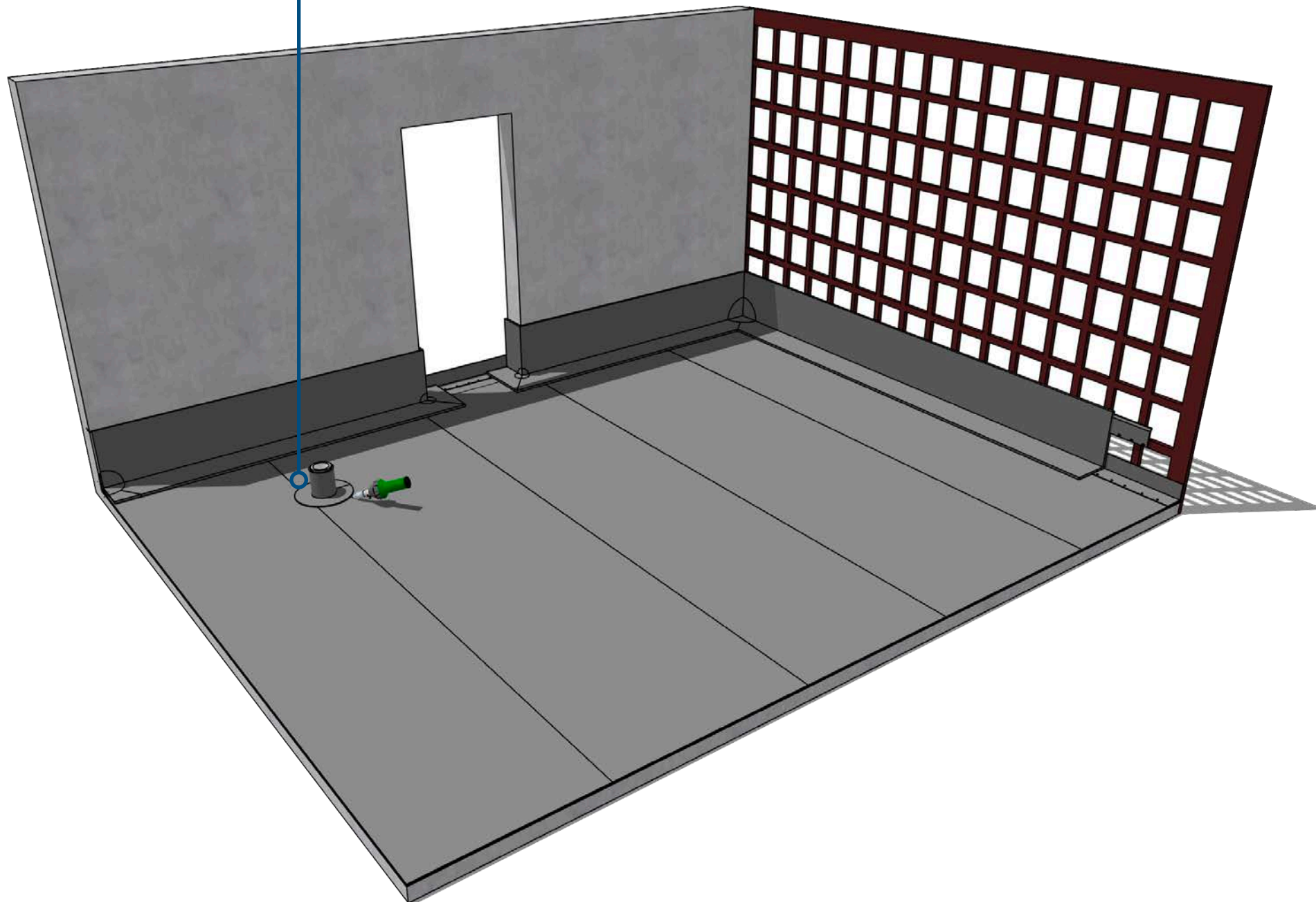


PIPE/POST | DETAILING

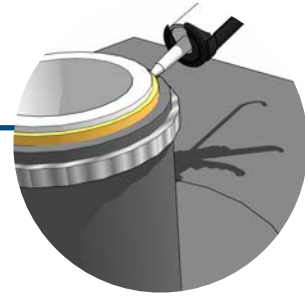


Wrap the Fatra pipe collar around the penetration. The prefabricated Fatra PVC membrane pipe collar is hot air fusion welded down the vertical and horizontal overlapping section of the PVC pipe collar to secure into place.

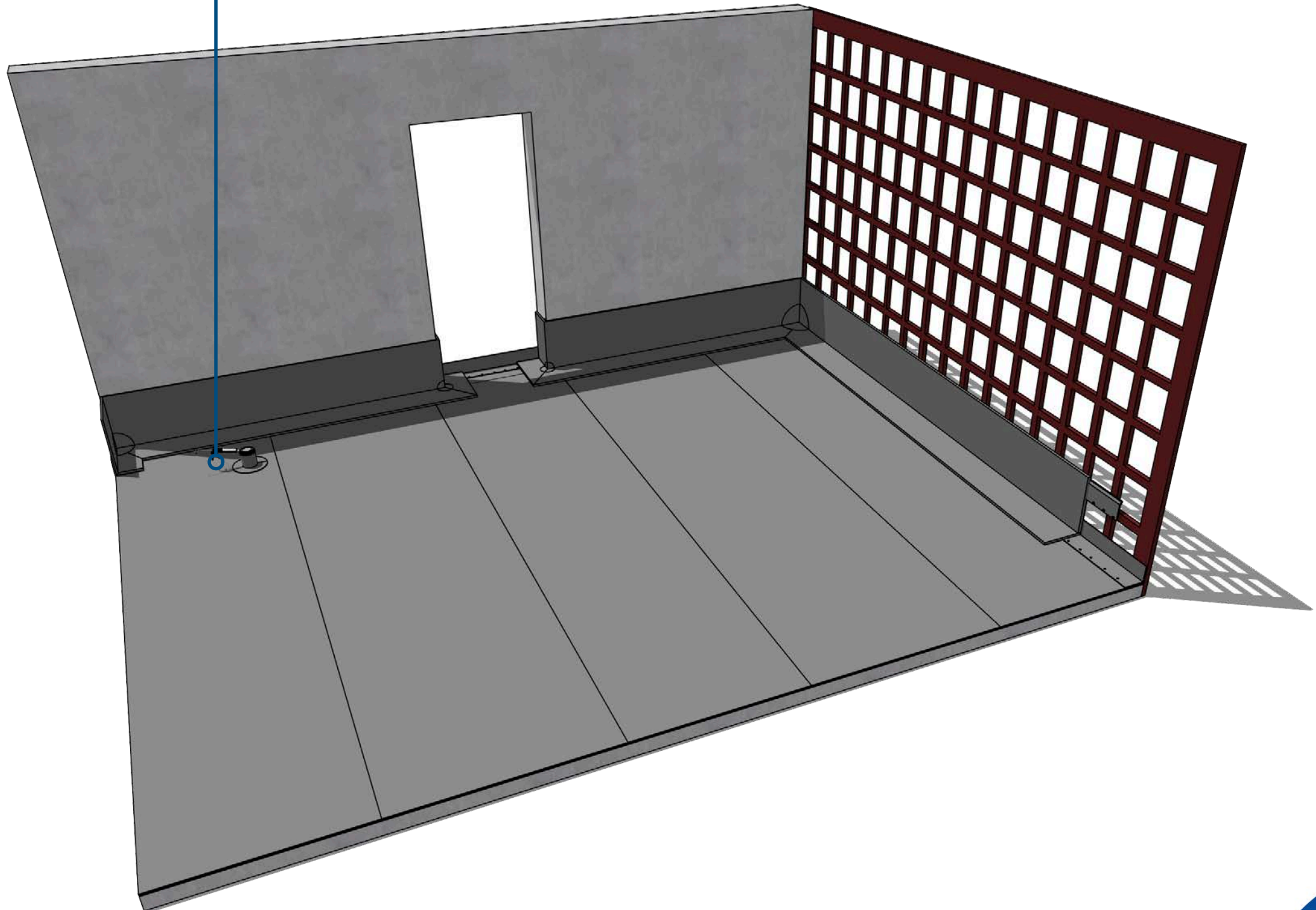
The Fatra PVC pipe collar base flange is then hot air fusion welded to the Fatrafol PVC field sheet membrane achieving a continuous 40mm weld around the diameter of the flange.



PIPE/POST | DETAILING



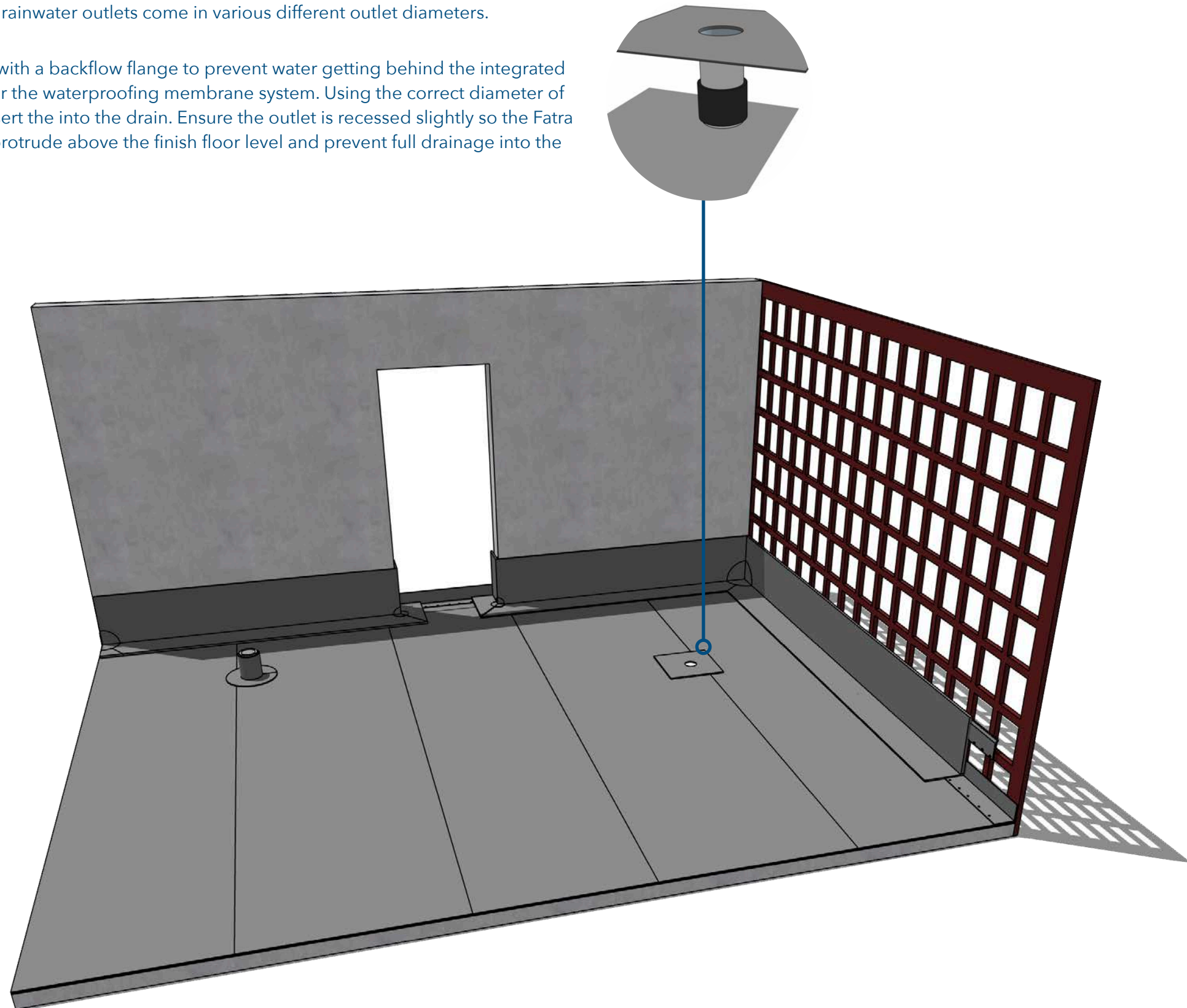
Install a pressure clamp approximately 5mm from the top of the collar and tighten to create a pressure seal. Once tightened apply a final bead of approved sealant around the top of the pipe collar to seal the detail. If the pipe is hollow, where possible install a rain cap over the pipe to reduce the risk water getting through the pipe and behind the waterproofing system.



RAINWATER | FLOOR OUTLET DETAILING

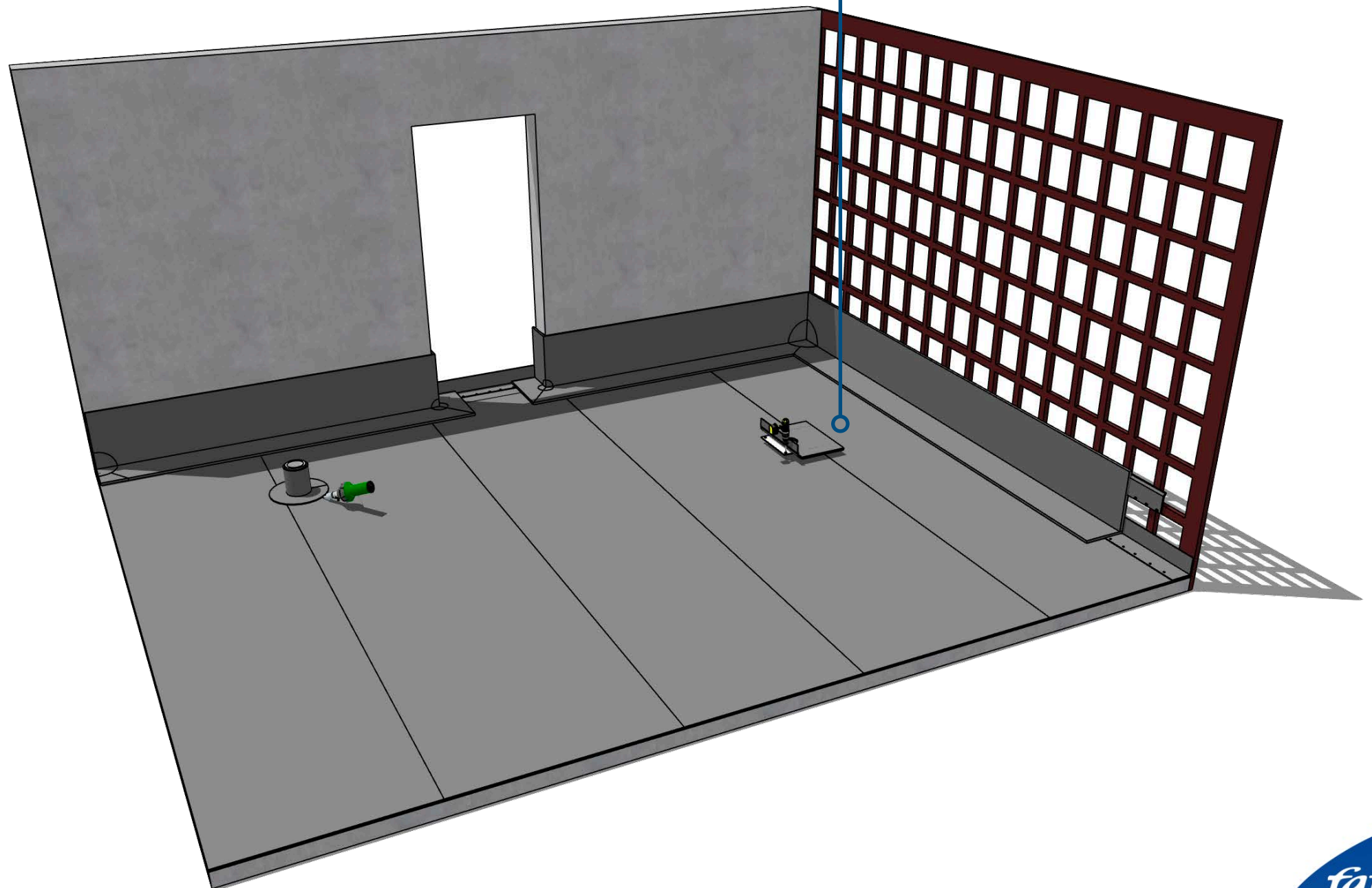
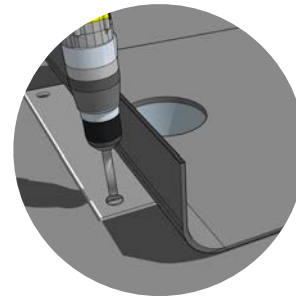
Fatra prefabricated rainwater outlets come in various different outlet diameters.

Each outlet comes with a backflow flange to prevent water getting behind the integrated PVC pipe and under the waterproofing membrane system. Using the correct diameter of rainwater outlet, insert the into the drain. Ensure the outlet is recessed slightly so the Fatra ancillary does not protrude above the finish floor level and prevent full drainage into the outlet.



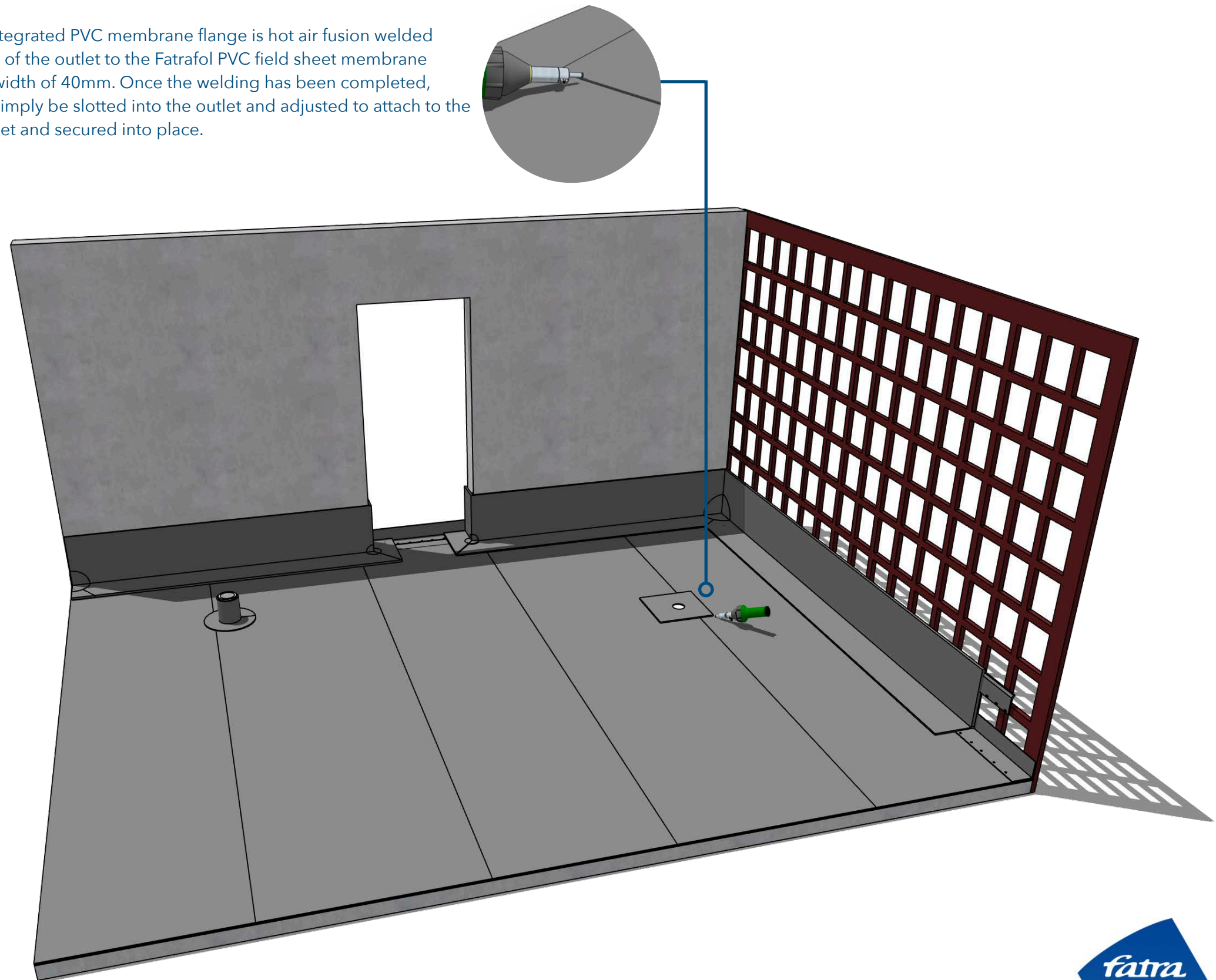
RAINWATER | FLOOR OUTLET DETAILING

The Fatra rainwater outlet is fixed in all four corners using Fatra approved fixings to secure into place. Fixing of the outlet prevents the ancillary becoming dislodged or damaged in the event of sever pressure from back flowing.



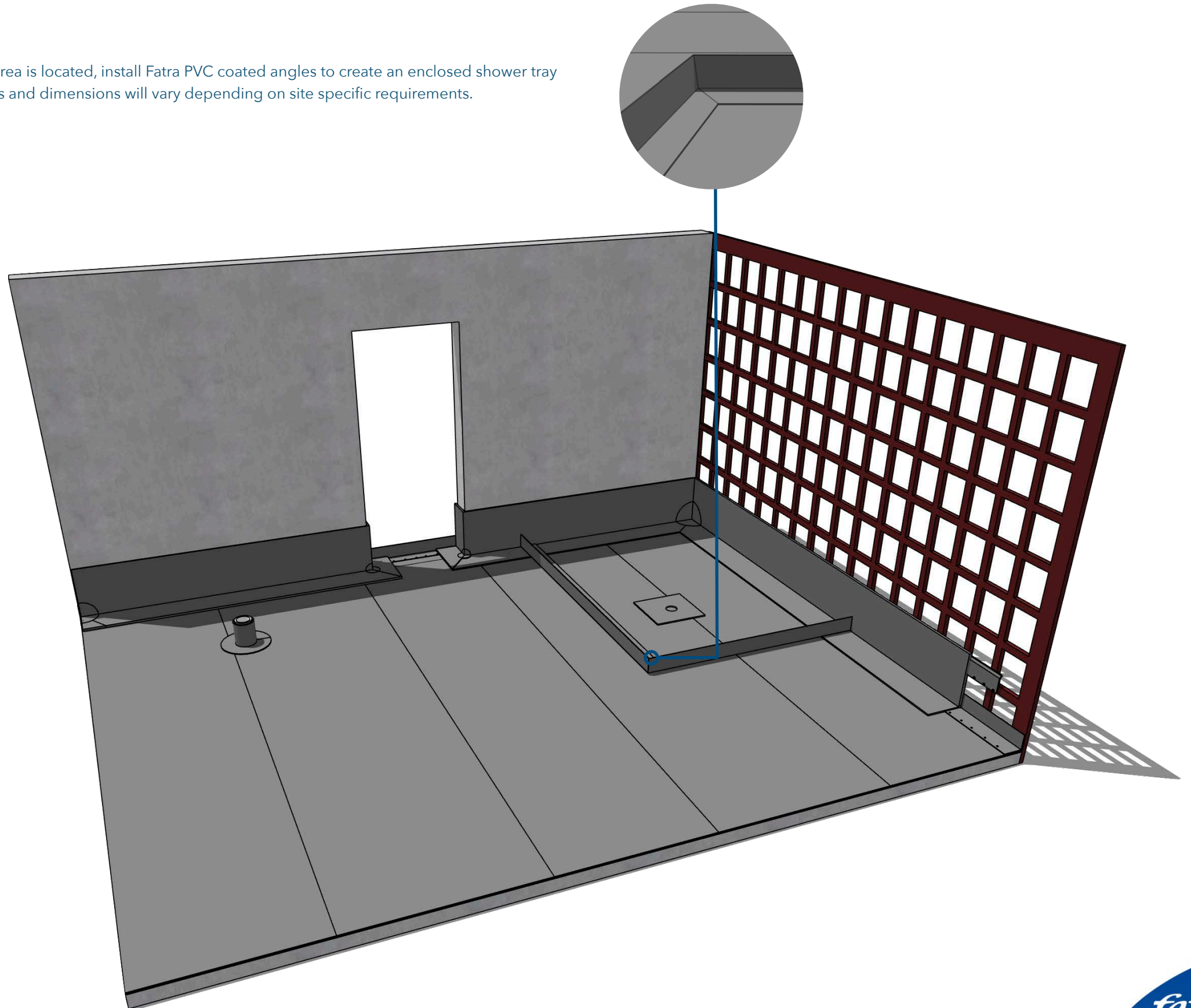
RAINWATER | FLOOR OUTLET DETAILING

Once fixed into place the integrated PVC membrane flange is hot air fusion welded around the entire perimeter of the outlet to the Fatrafol PVC field sheet membrane archiving a minimum weld width of 40mm. Once the welding has been completed, adjustable leaf guards can simply be slotted into the outlet and adjusted to attach to the prefabricated rainwater outlet and secured into place.



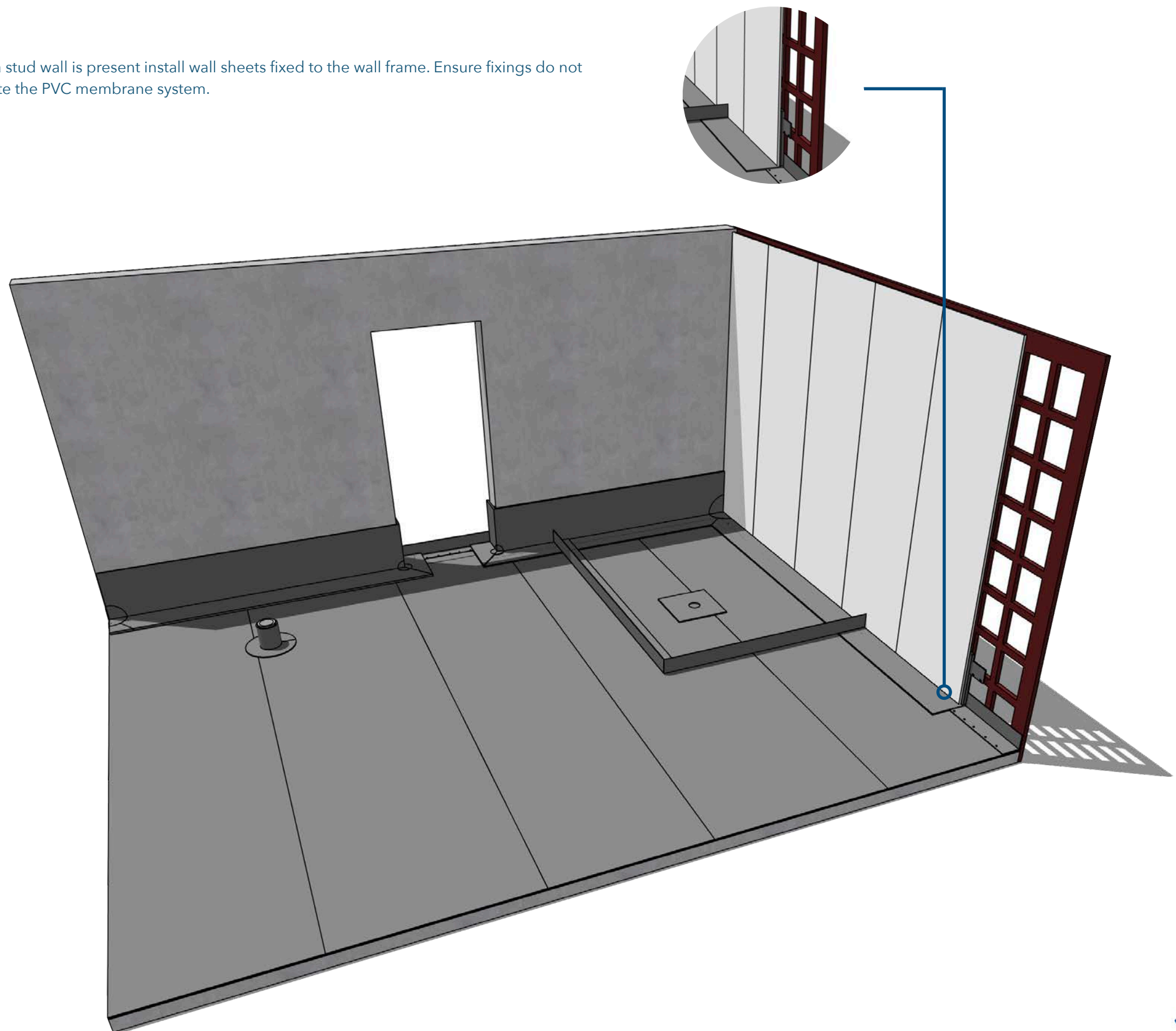
SHOWER | FATRA PVC COATED ANGLES

Where the shower area is located, install Fatra PVC coated angles to create an enclosed shower tray area. Locations, sizes and dimensions will vary depending on site specific requirements.

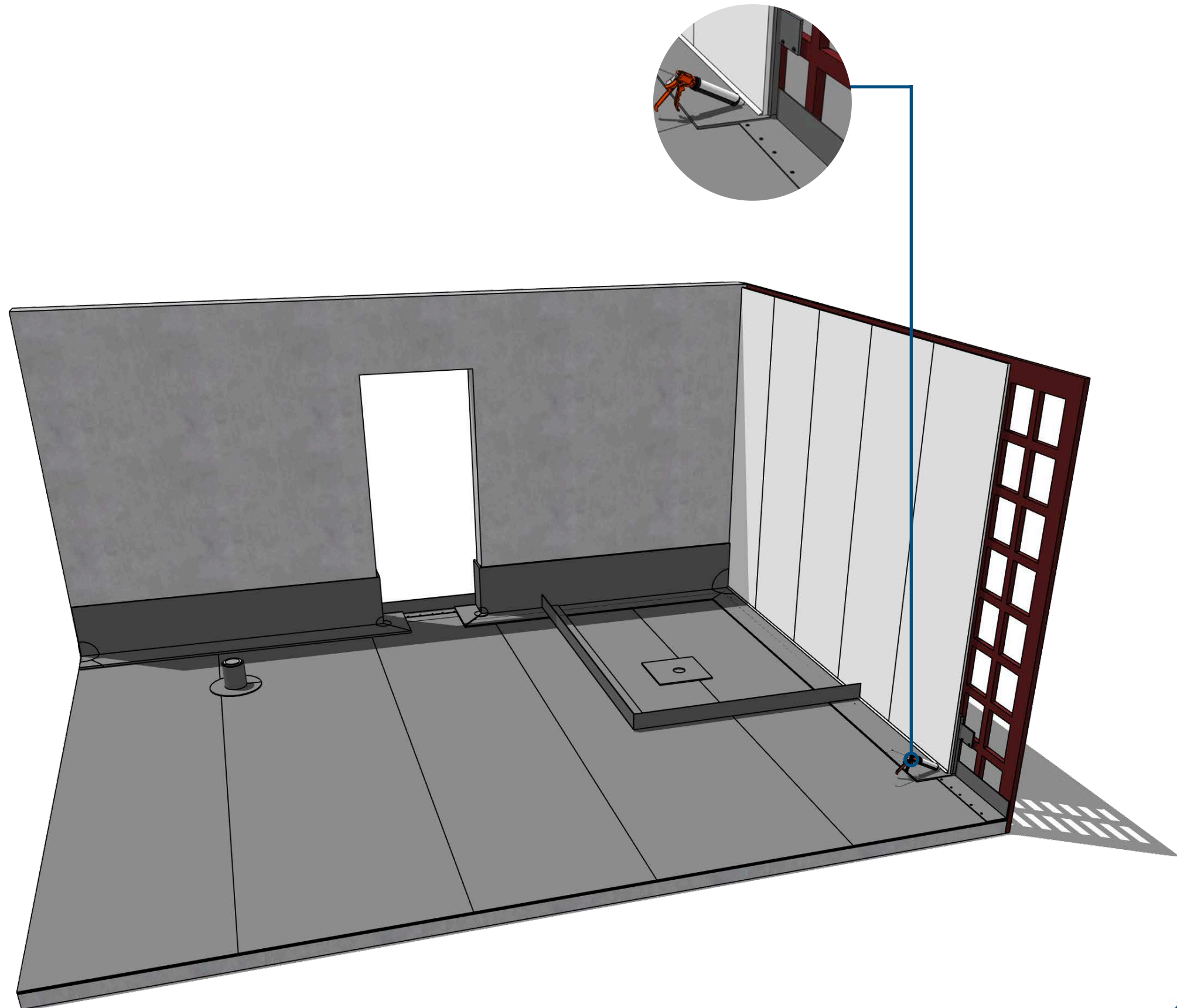


SHOWER | FATRA PVC COATED ANGLES

Where a stud wall is present install wall sheets fixed to the wall frame. Ensure fixings do not penetrate the PVC membrane system.

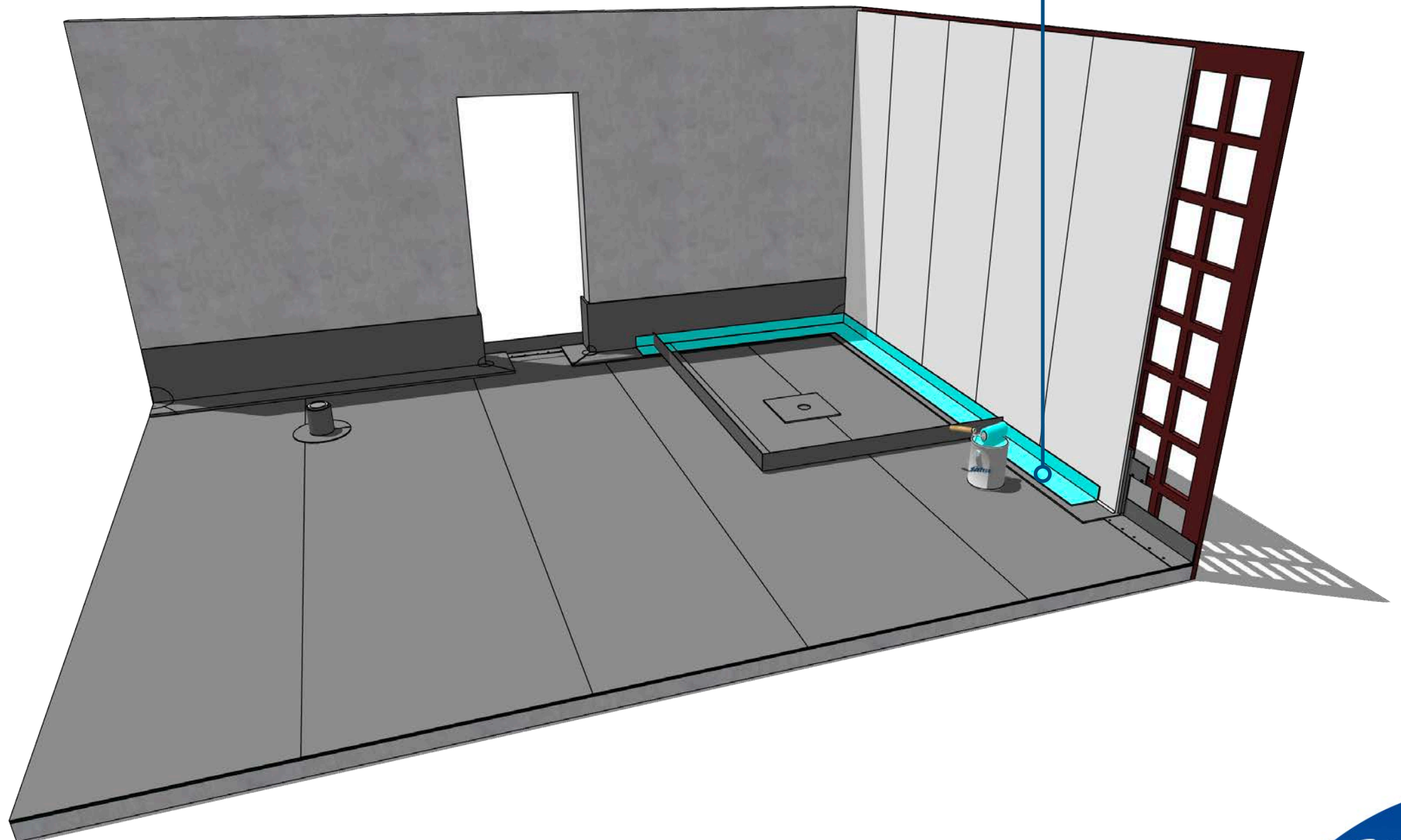


SHOWER | FATRA PVC COATED ANGLES

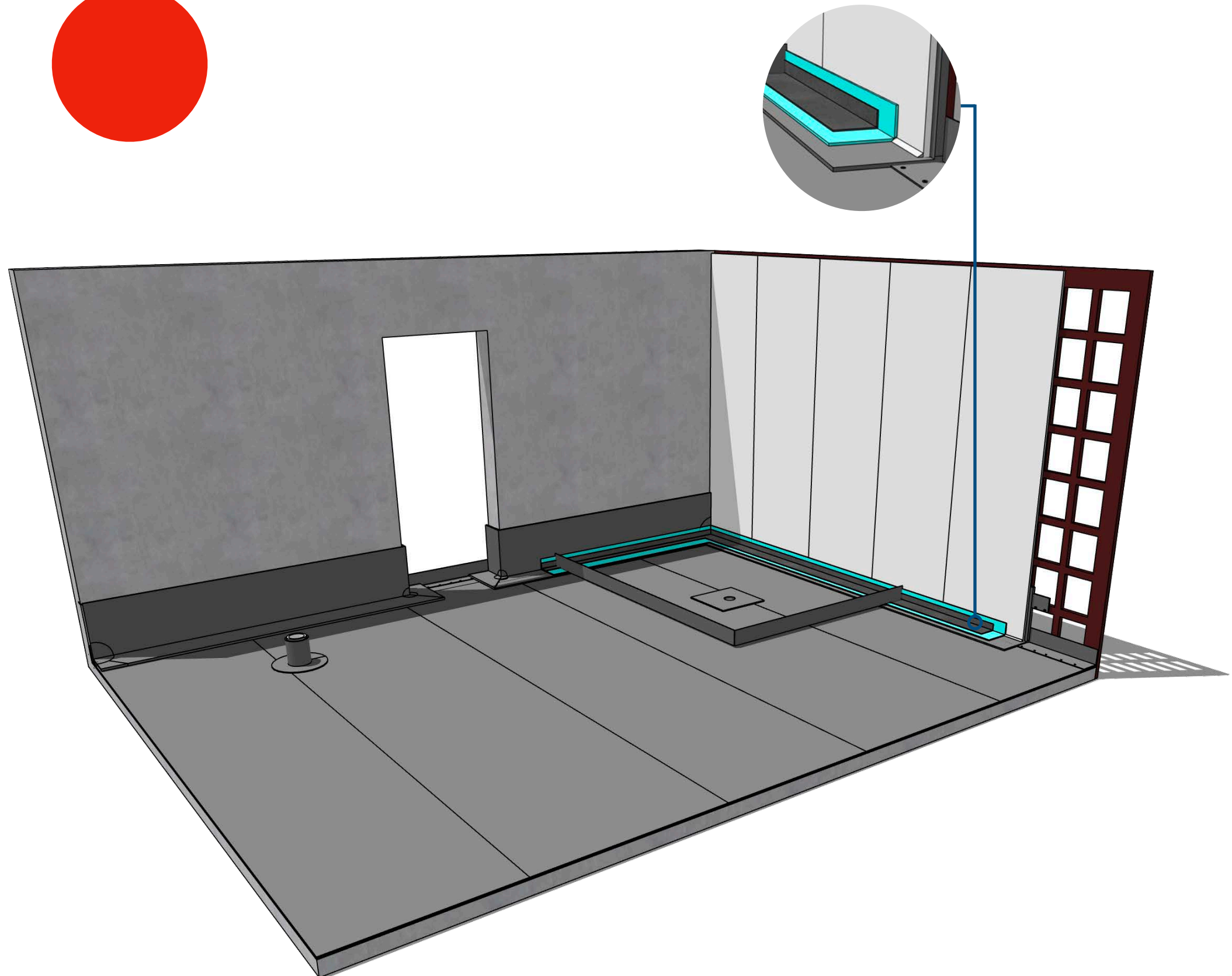
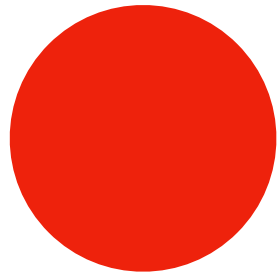


SHOWER | FATRA PVC COATED ANGLES

Liquid membrane is to lap over the PVC membrane a minimum of 100mm with all relevant bond breakers and joint sealants in accordance with supplier and AS standards. Liquid membrane is to be a water based product to ensure capability with Fatrafol PVC membrane.

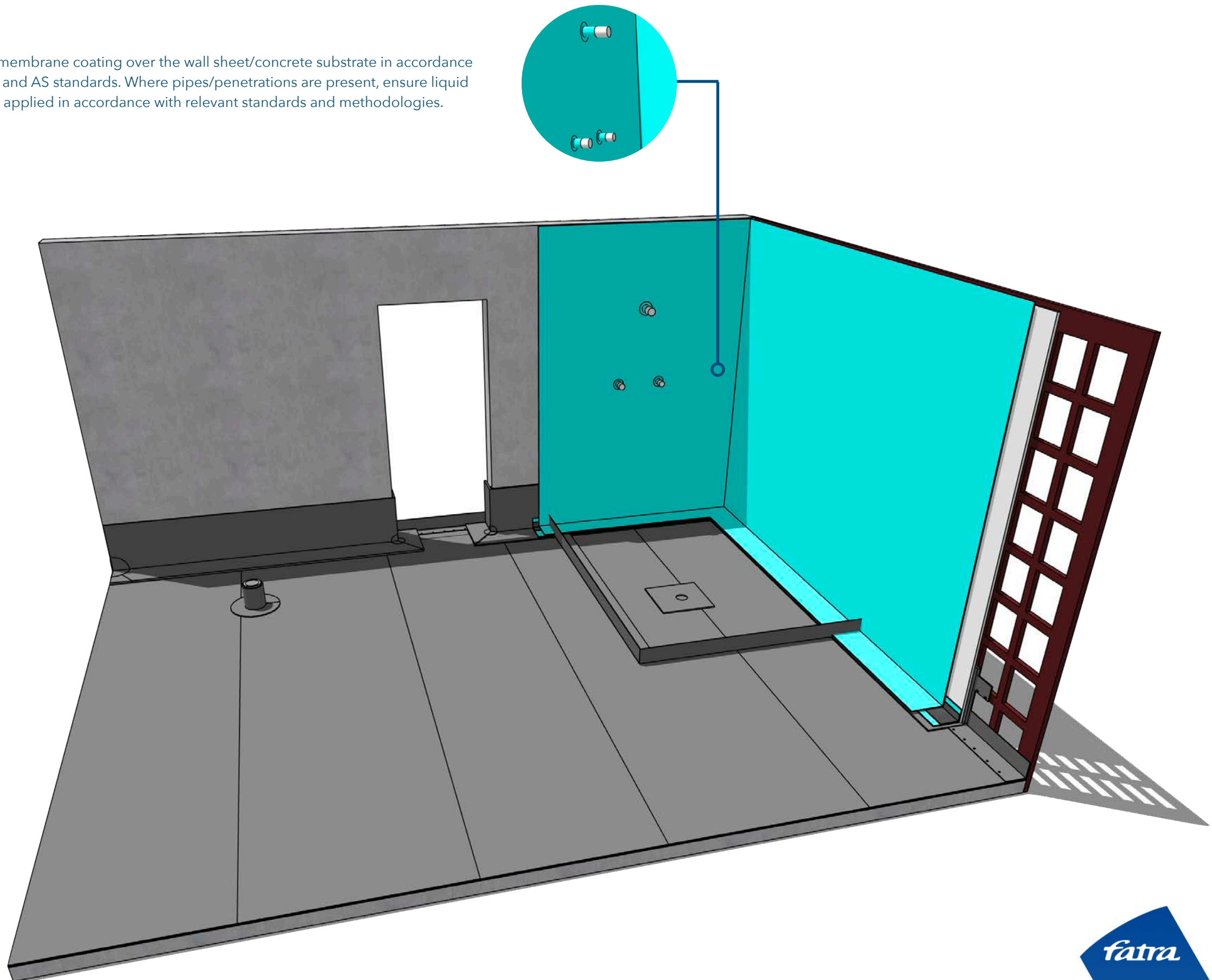


SHOWER | FATRA PVC COATED ANGLES

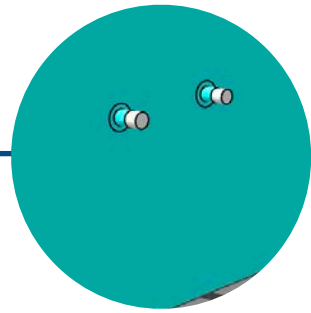


SHOWER | FATRA PVC COATED ANGLES

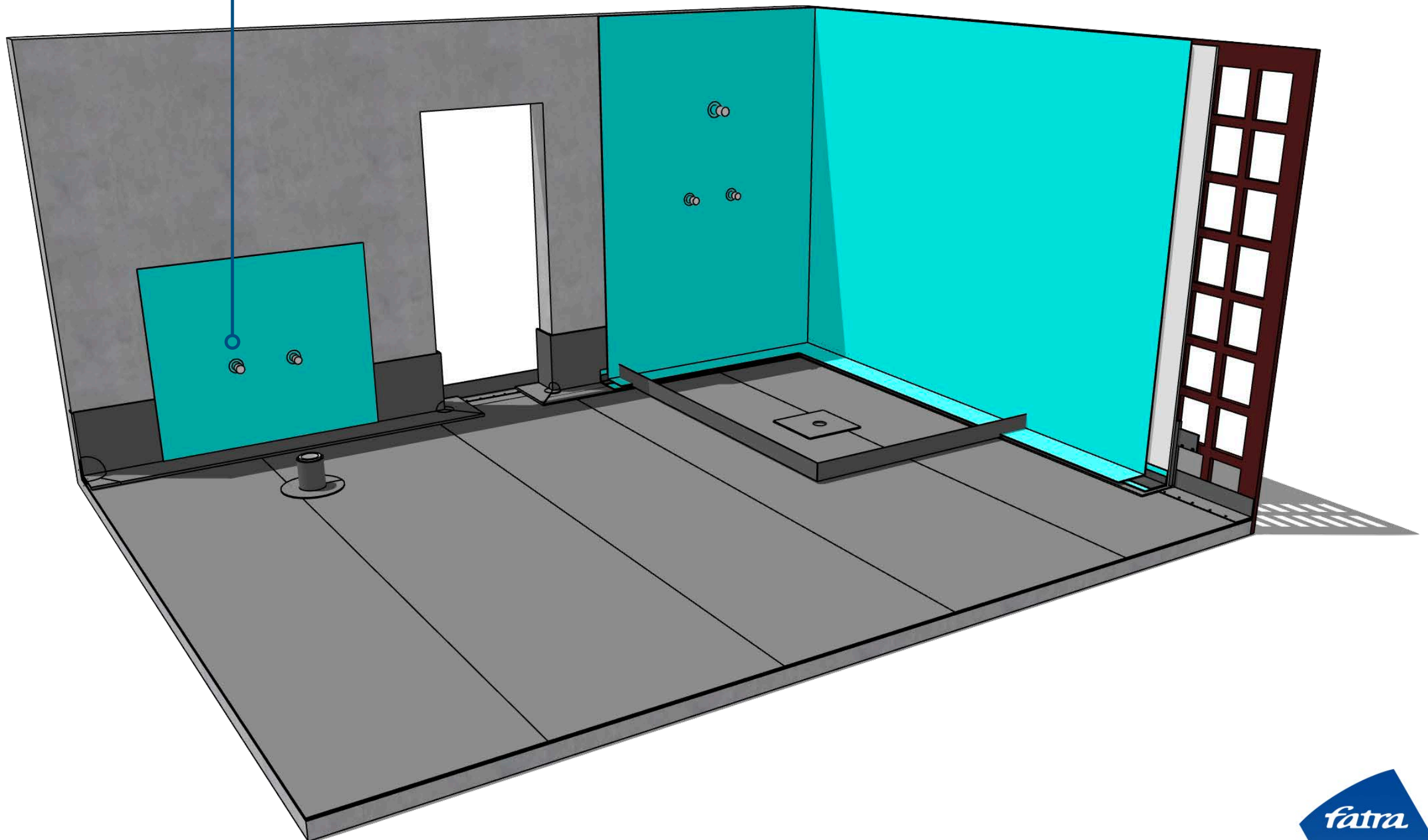
Install liquid membrane coating over the wall sheet/concrete substrate in accordance with supplier and AS standards. Where pipes/penetrations are present, ensure liquid membrane is applied in accordance with relevant standards and methodologies.



SHOWER | BASIN

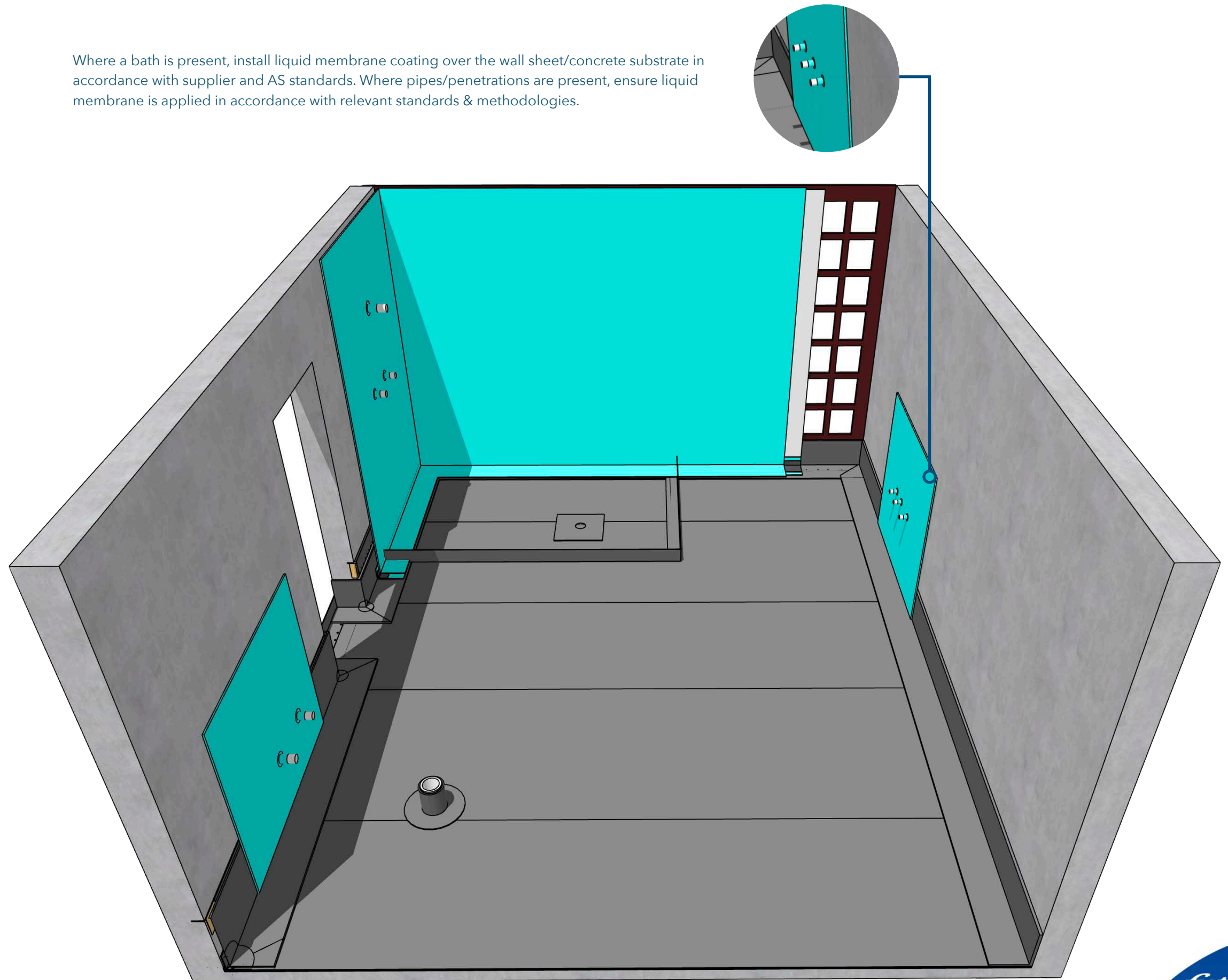


Install liquid membrane coating over the wall sheet/concrete substrate in accordance with supplier and AS standards. Where pipes/penetrations are present, ensure liquid membrane is applied in accordance with relevant standards and methodologies.



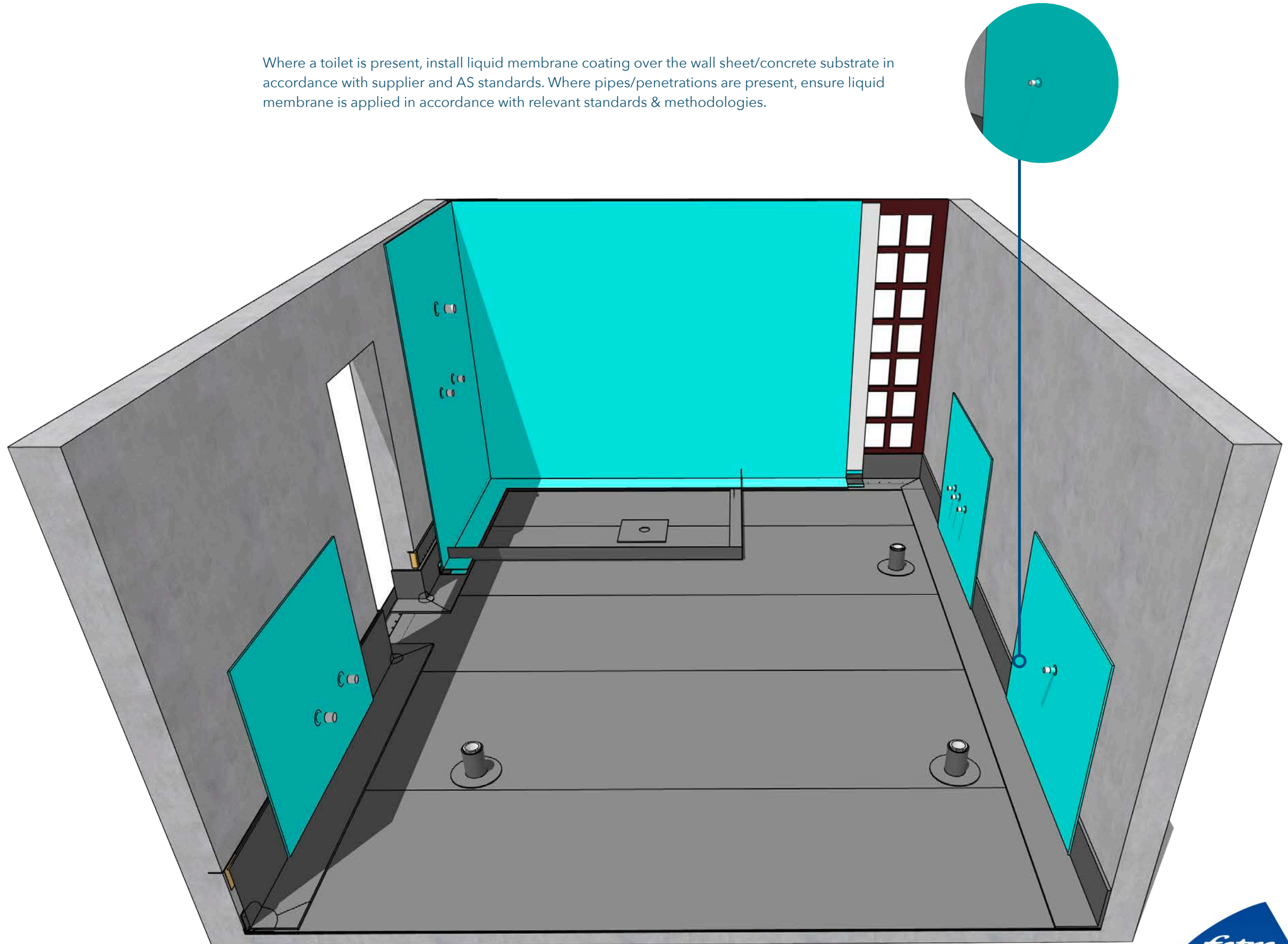
SHOWER | BATH

Where a bath is present, install liquid membrane coating over the wall sheet/concrete substrate in accordance with supplier and AS standards. Where pipes/penetrations are present, ensure liquid membrane is applied in accordance with relevant standards & methodologies.



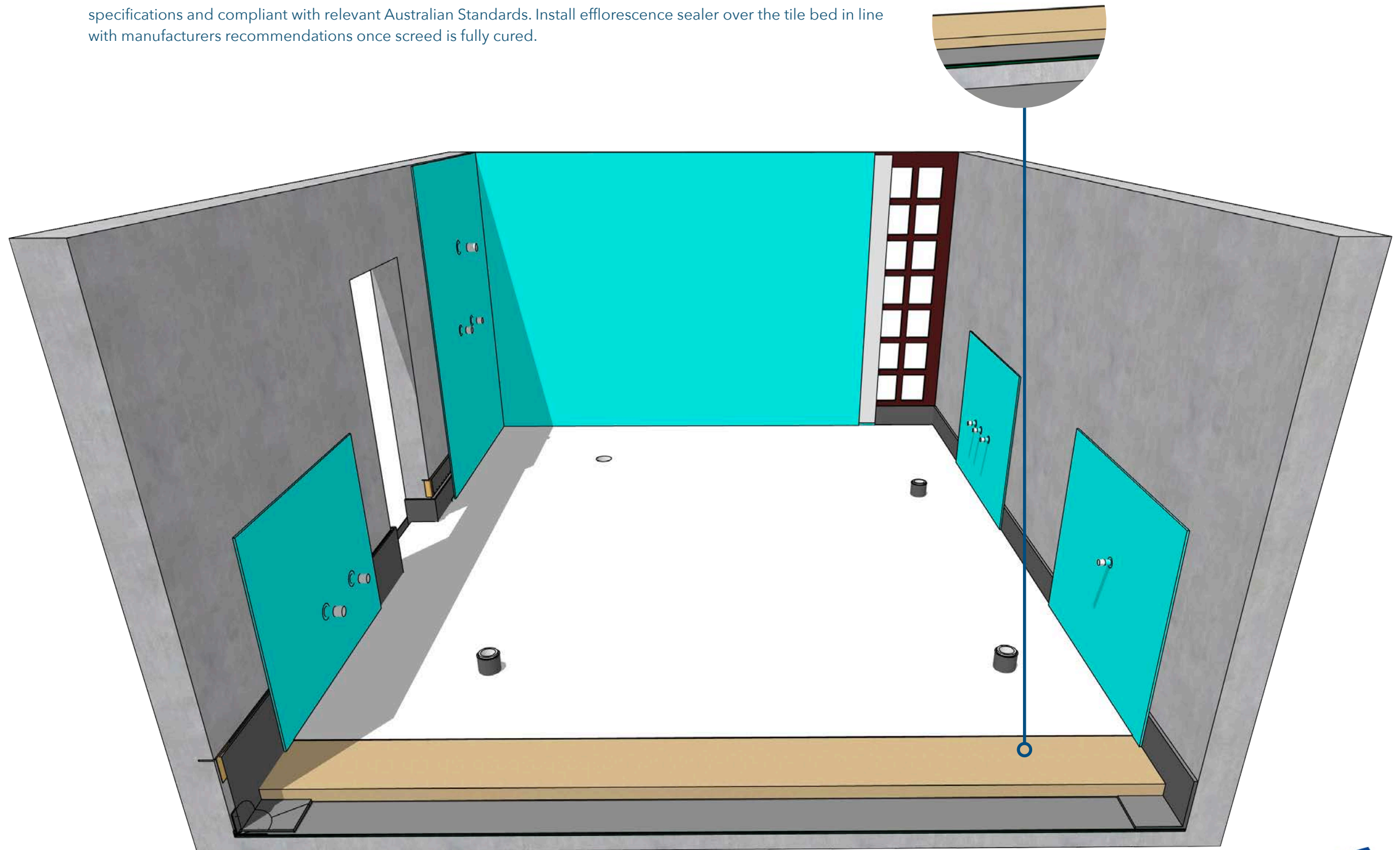
SHOWER | TOILETTE

Where a toilet is present, install liquid membrane coating over the wall sheet/concrete substrate in accordance with supplier and AS standards. Where pipes/penetrations are present, ensure liquid membrane is applied in accordance with relevant standards & methodologies.

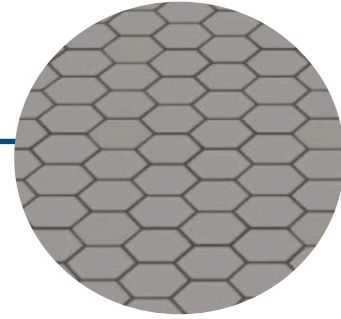


SCREEN BED | BATH, VANITY AND TOILET

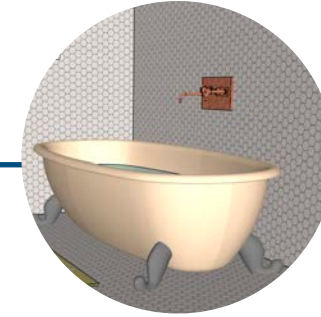
Install tile screed bed over the Fatrafol PVC membrane with relevant falls and in accordance with architectural specifications and compliant with relevant Australian Standards. Install efflorescence sealer over the tile bed in line with manufacturers recommendations once screed is fully cured.



TILES AND FINISHES | BATH, VANITY AND TOILET



Install specified tiles to all horizontal and vertical walls in accordance with architectural specification and Australian Standards



Install all specified hardware such as taps, shower screen, bath, vanity and toilet in accordance with construction drawings and relevant Australian Standards.



HOT AIR FUSION | Welding

HAND | Welding



When installing a membrane covering, the key task is to make entirely watertight and firm joints between waterproofing membrane sheets, membranes and linear plastic-coated metal profiles at the perimeter, and between membranes and accessories (rainwater outlets, vent outlets etc) in order to create a single unit. Two technologies are available to make these structural joints:

This method is based on the so-called fusion welding, which involves heat-melting contact surfaces of membrane overlaps and their simultaneous compression. This is achieved by hot air flowing out of a slot nozzle of a welding machine with continuous temperature control. Move the welding machine gently in the direction of an open joint (with the slot nozzle projecting 3 to 5 mm over the upper membrane edge). Heated contact surfaces must be pressed down immediately behind the nozzle, using a rubber or Teflon roller.

This joining method may be used at temperatures from -5°C for PVC-P/-10°C

AUTOMATIC | Welding



This method is similar to hot-air welding, differing only in that the welded surfaces are heated by thermal transfer from a wedge welder. Heated contact surfaces must be pressed down immediately behind the wedge welder, using a roller. This system is used only for automatic welding machines and is suitable for materials with lower thermal oxidation stability.

If a proper working process is followed, both methods can create joints with shear resistance of at least 80% of the waterproofing membrane shear resistance indicated by the manufacturer. Hot-air welding must be considered the primary method of joining FATRAFOL membranes. Membrane sheets are welded at their overlaps. If using a hand-operated welding machine, the weld must be at least 30 mm wide. Most automatic welding machines have a 40 mm wide welding nozzle.

Where membrane sheets are fastened mechanically, fixing washers must be positioned at least 10 mm from the edge of the lower fastened membrane sheet. The overlap of the upper membrane sheet behind the washer must be 10 mm greater than the weld width – see figure 7. Oval washers must always be aligned lengthwise with the joint axis. Hot-air welding may be performed using a hand-operated welding machine or an automatic welding machine ¹⁾, subject to adherence to this Instructions and applicable standards

HAND | Tools



- Hot-air welding machine with 40 mm and 20 mm wide slot nozzle
- Hot-air mobile automatic welding machine (recommended type: LEISTER VARIMAT, HERZ – Laron etc)
- Impact drill with set of drill bits for concrete and other materials
- Water extractor
- Vacuum pump and bells for vacuum tightness test
- Cordless screwdriver
- Angle grinder with metal cutting disc
- Other electrical equipment and devices such as automatic fastening machines, sealing guns, PU adhesive applicators etc
- Electrical extension cord
- Tension meter
- Folding ruler
- Steel ruler
- Greasy chalk
- Carpenter's pencil
- Knife with hook
- Scissors
- Membrane cutting pad
- Handheld rubber and teflon rollers
- Pressing roller (if membrane is bonded to substrate)
- Brass brush for cleaning slot nozzles
- Hammer Rivet pliers
- Sealant cartridge gun
- Joint testing needle
- PE bottles with delivery tube
- Steel cutter
- Cleaning cloths
- Flat and crosshead screwdrivers
- Rubber spatulas for cleaning membrane surface
- Hacksaw
- Sponges for removing puddles
- Hand metal shears
- PE waste bags
- Broom
- Spatulas for sealant
- Dustpan

TESTING | PROCEDURES

PEEL | Testing

All surfaces that are being welded must be clean of any dirt, debris or moisture before welding. Before commencing the installation test samples must be carried out to determine that the temperature and speed of welding is correct. These will vary depending on the membrane types and the welders technique and skill level. A peel test must be carried out to establish the correct heat and speed of the hot air fusion welding. This consists of using two small strips of membrane that has been welded at the seam. Pull away the upper strip of membrane to test the weld strength. If the seam separates the welding method is inadequate or the membrane is not in a condition to be welded. If tearing occurs it should be outside the seam weld either within the layer of reinforcement or in the synthetic sheeting.

SEAM | Probe Testing

Use a testing probe to check all types of welds (continuous and detail welds including T- joints) no earlier than 1 hour after welding. A testing needle used for this test is usually included in the welder's essential kit and delivered by the welding equipment manufacturer (Leister, Herz etc). Drive the needle in the direction of the weld axis and apply gentle side pressure on the joint to easily detect any non-welded or separated points in the weld. This test should be performed before securing the welds with a joint sealant for roofs with a stabilisation layer, inverted roofs, traffic roofs, green roofs and in all places where the waterproofing layer is to be covered with another layer.

ELECTRONIC | Leak Detection

Electronic leak detection method can be used to test the membrane and establish if moisture is penetrating the membrane and grounding through the substrate. This can be completed by either a dry or wet testing method depending on the specific details on site. The test procedure is a non intrusive method of leak detection and is a highly accurate method of leak detection. Wet testing procedures is done by applying water over the membrane surface and using the water and a conductive medium where an electronic field is created to trace a beach in waterproofing system.

The test procedure is also a non intrusive or destructive method of leak detection and pin points the source of the leak without having to flood the membrane. This method is used to establish if moisture is penetrating the membrane and grounding through the substrate.

SUBMERSION | Testing

Testing of water-tightness - may to some extent be used for this test. The use of this method is limited by roof deck specifications, in particular the permissible load of the load-bearing structure, maximum water level and the roof deck area. Typically, roof decks up to 100 m² in area are covered with a continuous water layer while larger roofs are only partly covered, e.g. in valleys between roof planes or in individual tested sectors. The maximum water column height should be determined by a structural engineer, with consideration being given to dynamic load of the roof deck.

MAINTENANCE |

Regular cleaning and clearing of leaves and any other debris is recommended for drainage and any other outlets within the structure to avoid build up and clogging of these areas. Visual checks should also be carried out for any damage caused by excessive weather or environmental damage such as fallen branches, hail etc.

Fatra can provide annual maintenance surveys of the area and issue a full report. This will give you assurance that the system is still performing at its optimum efficiency and is a proactive way of ensuring there is no damage or potential issues that could affect the integrity of the membrane. Contact Fatra for more details on how we can provide a suitable maintenance plan for the area.

INSPECTIONS |

A Fatra field technician is to attend at the start of the project to ensure all parties have read and understood the specification and requirements. Upon completion of the installation, a Fatra technician is to attend and carry out a project completion guide to inspect prior to issuing warranties. Once the inspection has been completed and any defects or rectifications have been completed, a final inspection will be carried to enable the issuing of material warranties.

WARRANTY |

Depending on what system is implemented Fatra can provide material warranties from 15 years to 25 years. A material warranty will only be issued once a Fatra field technician has inspected and passed the installation of the Fatra waterproofing system. All warranties are issued directly to the client.

QUALITY CONTROL |

Fatra systems are ISO 9001 & ISO 14001 accredited

Fatra to provide on going support with design and installation to ensure the most efficient system is implemented based on site specific details

Fatra to provide all relevant information and documentation

Applicator must have relevant licences and insurances to carry out the works in hand

Contractor are to be an approved Fatra applicator

SUBMISSIONS |

Fatra to attend site prior to commencing work and establish all necessary requirements

Fatra to provide technical data sheets, detail drawings of termination, specification and any other relevant documentation prior to commencing onsite.

Client to provide site specific section drawings for all details on each project to enable Fatra to provide detailing drawings for these sections.

MATERIALS |

Materials are to be stored in a safe location and avoid being exposed to the elements or other damage such as mechanical etc.

Fatra to provide a signed document prior to delivering materials to site clarifying that all materials are fit for purpose.

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