Sealco
Waterproofing Systems

ARCHITECTURAL PRODUCT MANUAL

EpiSPAN Wide EPDM Membrane

Revision 19.01

BRANZ Appraised
Appraisal No. 533 [2013]

epiSPAN® ROOF MEMBRANES

Appraisal No. 533 (2013)

This Appraisal replaces BRANZ Appraisal No. 533 (2006).

Amended 05 October 2016

BRANZ Appraisals

Technical Assessments of products for building and construction.

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Product

1.1 epiSPAN® Roof Membranes are synthetic rubber waterproofing membranes designed to be used on roofs, decks, balconies, parapets and gutters. epiSPAN® are based on an EPDM Rubber.

1.2 The products are supplied as a single-ply, flexible synthetic rubber sheet in roll form. The products are installed as single layer system.

Scope

2.1 epiSPAN® Roof Membranes have been appraised for use as waterproofing membrane for buildings within the following scope:

- scope limitations of NZBC Acceptable Solution E2/AS1, Paragraph 1.1; and,
- with timber supporting structures designed and constructed in accordance with the NZBC; and,
- with nominally flat or pitched roofs constructed to drain water to gutters and drain outlets complying with NZBC; and,
- with substrates of plywood sheet; and,
- with decks that have a maximum size of 40 m^2.

2.2 epiSPAN® Roof Membranes have also been appraised for use as a waterproofing membrane for external reinforced concrete and plywood roofs, pedestrian decks and balconies for buildings within the following scope:

- up to 3 storeys with a maximum height from ground to eaves of 10 m and with a floor plan area limited only by seismic and structural control joints; and,
- with the reinforced concrete structure designed and constructed in accordance with the NZBC; and,
- with timber supporting structures designed and constructed in accordance with the NZBC; and,
- with nominally flat, curved or pitched roofs constructed to drain water to gutters and drain outlets complying with NZBC.

2.3 This Appraisal is limited to roofs, decks and balconies within the following scope:

- constructed to suitable falls (Refer Paragraph 12.1 – 12.9); and,
- with no steps within the deck level, no integral roof gardens and no down pipe discharging directly onto the deck.

2.4 The design and construction of the substrate and movement and control joints is specific to each building, and therefore the responsibility of the building designer and building contractor and is outside the scope of this Appraisal.

2.5 The membranes must be installed by approved applicators, trained by Sealco Waterproofing Systems Ltd.

Contents

THIS PUBLICATION

This manual provides the technical information necessary to correctly specify the epiSPAN® membrane system. It has also been designed for use by Sealco Waterproofing Ltd approved applicators, for training and quality management purposes.

This manual may also be used by main contractors and Building Consent Authorities (BCA's) for quality management and inspection purposes.

NOTE TO APPLICATORS

As a Sealco approved applicator you are required to comply fully with the contents of this manual. Where a specific situation arises on a particular project that makes it difficult for you to follow the published procedure or comply with a particular detail drawing, you are required to communicate this to Sealco for an approved solution.

TRADEMEARKS

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BRANCHES:

AUCKLAND

CHRISTCHURCH

USING THE ICONS

Four different visual icons have been created for this manual to draw the reader's attention to important pieces of information.

1. **QUALITY CONTROL ICON**
   Information about warranties, quality control checks and related information.

2. **USEFUL TIPS ICON**
   Helpful advice to make the applicator's job easier and successful installation more likely.

3. **CRITICAL ICON**
   Vital information about the system and installation methodology. It is crucial that the specifier and/or applicator are aware of these facts.

4. **HEALTH & SAFETY ICON**
   Information about the importance of safety checks and ensuring that the work environment is always safe with potential hazards identified and minimised.

BRANZ APPRAISED

The epiSPAN® Systems have been BRANZ Appraised as an Acceptable Solution in terms of New Zealand Building Code Compliance and the products comply with NZBC Acceptable Solution E2/AS1 Paragraph 8.5

These products are also Appraised as an Alternative Solution on buildings subject to specific design.

Please contact Sealco Waterproofing for a copy of this BRANZ Appraisal.

You can also download the certificate on our website www.sealco.co.nz

BRANZ Appraised

acceptable solution E2/AS1

Introduction

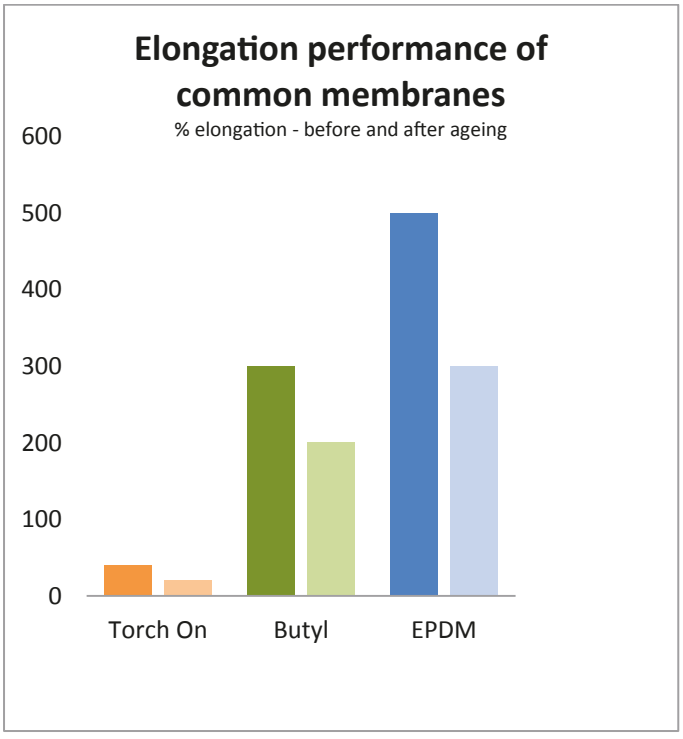
PRODUCT DESCRIPTION

epiSPAN® a high quality EPDM rubber membrane (ethylene-propylene-diene monomer) used to provide waterproofing protection for a variety of roofing and exterior deck applications.

The epiSPAN® system includes the epiSPAN® EPDM membrane, epiSEAM® lap tape and epiSTICK® adhesive. Also included as part of the system are the under flashing and over flashing tapes and associated sealants.

The epiSPAN® system is a fully bonded rubber membrane applied over concrete, steel, fibre cement boards or construction plywood substrates.

epiSPAN® have been independently appraised as an Acceptable Solution in terms of the NZBC, and comply with NZBC Acceptable Solution E2/AS1 Paragraph 8.5. epiSPAN® have also been appraised as an Alternative Solution under the NZBC.



WHY EPISPAN®

EPDM MEMBRANE

EPDM membranes have over 50 years of extensive use internationally in a wide variety of waterproofing applications. They are regarded as some of the most durable membranes available.

RESISTANCE TO UV AND AGEING

The excellent UV and ozone resistance of EPDM is well known. This is particularly important in New Zealand's climatic conditions. Other membranes such as torch-ons rely on a granule finish or reflective coating to provide the necessary UV resistance. This is not required with the epiSPAN® system. Furthermore, EPDM typically demonstrates a much higher elongation after ageing than other membranes. This is particularly important when working on timber substrates, which are prone to movement.

HISTORY OF USE

In addition to the benefits of being an EPDM membrane, epiSPAN® has extensive history of use. First installed in the 1960's, literally hundreds of millions of square metres have been installed since that time. epiSPAN® has been used in some of the most demanding projects internationally.

MULTI USE ADHESIVE

Single part epiSTICK® adhesive gives a high performance bond. It is used to adhere the epiSPAN® to the substrate. In detailing work, and in the laps special seam primers are required.

EPISEAM® SYSTEM

epiSEAM® is used in all lap joints to ensure an intimate seal. epiSEAM® is a non vulcanised rubber that vulcanises over time to produce an almost indestructible watertight seal.

AREAS OF USE

epiSPAN® is used as an exposed roofing and exterior deck membrane and in pond lining applications. When used as a deck membrane we do not recommend it be tiled over. It is best left exposed or alternatively covered with timber decking systems or pavers on ecoJACK paver supports.

Introduction

EPISPAN® MEMBRANE SPECIFICATIONS

Tensile Strength	10Mpa	ASTM D412
Elongation	490 -520%	ASTM D412
Hardness, DuroMeter A	60	ASTM D1415
Tear Resistance	33.0kN/m	ASTM D624
Ozone Resistance	No Cracks	ASTM D1149
Water Permeability	$3.8x10^{-6}$mg/p.a.s.m^2	ASTM E96
Water Absorption	2.7%	ASTM D471
Cold Flexibility	-49 ^{0}C	ASTM D746
Thermal Ageing	**120 ^{0}C 155 Hours**	
Tensile Strength	10.5 Mpa	ASTM 573
Elongation	280 - 300%	ASTM 573

PRODUCT PACKAGING

EPISPAN® MEMBRANE IS AVAILABLE IN

1.5mm thick x 3.0m wide x 15.2m Long (black)*
1.1mm thick x 6.0m wide x 30.4m long rolls (black)*
1.5mm thick x 6.0m wide x 30.4m long rolls (black)*

Where the or epiSPAN® membrane is to be overlaid with timber decking, or being installed in exposed deck applications, the 1.5mm thickness is required.

DURABILITY

When fixed according to specification, the epiSPAN® system will meet the NZBC B2.3.1 (b) requirements of 15 year durability. epiSPAN® meets the ASTM D6134 standard required by the Department of Building & Housing E2/AS1 Acceptable Solution.

The durability opinion given by BRANZ states that when subjected to normal conditions of environment and use, epiSPAN® is expected to have a service life of at least 20 years.

Case histories of the epiSPAN® system plus thermal ageing and ozone testing indicates the epiSPAN® system is durable for in excess of 50 years.

PLEASE ALSO REFER TO:

- BRANZ Bulletin No. 345 “Flat Membrane Roofs - design & installation” published June 1996.
- Department of Building & Housing Acceptable Solution E2/AS1 3rd Edition published July 2005.
- BRANZ Appraisal 533 (2013). epiSPAN® Roof Membrane.

Introduction

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PRODUCT OVERVIEW

EPDM RUBBER MEMBRANE

An EPDM (ethylene propylene - diene monomer) rubber membrane, offering excellent resistance against weathering and ageing.

A single ply, flexible, synthetic EPDM based rubber membrane. epiSPAN® is available in 1.14mm and 1.52mm x 3m or 6m in black.

EPDM FLEECE BACK RUBBER MEMBRANE

A single ply, flexible synthetic EPDM based rubber with a polyester fleece impregnated into the underside of the sheet.

Predominantely used in re-roof situations and can be installed over various other membranes.
1.14mm x 3m x 15m rolls

PRIMER

Cut back epiSTICK 50/50 with solvent

BOND BREAKER TAPE

A PVC pressure sensitive tape used over plywood sheet joints as a bond breaker to minimise stress caused at the joint. Supplied as 36mm wide tape.

EPISTICK ADHESIVE

A single part solvent based, modified chloroprene rubber adhesive for adhering the epiSPAN® membrane and associated tapes. epiSTICK® is applied by brush, roller or sprayer. Store in a cool, dry place. Supplied in 20kg drums.

EPISEALANT

A butyl-type termination sealant for termination flashing and used inside three way membrane junctions. epiSEALANT has a shelf life of 12 months when stored in a cool, dry place. Supplied in 330ml cartridges.

EPISEAM LAP TAPE

A room temperature curing butyl lap tape used in all side and end laps. epiSEAM® has a shelf life of 12 months when stored in a cool, dry place. epiSEAM® is available in 0.8mm thick x 80mm wide x 30m long rolls, with a clear backing foil.

COVER TAPE

A non-vulcanised EPDM/butyl tape used in exposed over flashing situations. Cover Tape has a 12 month shelf life when stored in a cool, dry place. Supplied in 2.0mm thick x 300mm wide x 15.2m long rolls

VENTRITE® VENTS

Ventrite vents are installed every 70m² to release moisture trapped under the epiSPAN® membrane. These are used in conjunction with bond breaker tapes.

POLYSEAL COATING

Polyurethane-based coating used to provide additional colour options. Supplied in 20 litre pails.

DRAINRITE® ROOF OUTLETS

A range of pre-formed polyethylene or roof outlets which which include drains, scuppers and other mechanical outlets to get the water straight off the roof. Outlets are installed at the lowest point in the roof or gutter and recessed into place.

Supplied in 20kg screw top can, Solvent and epiBOND are flammable and must be stored, transported and used with care. Refer to Material Safety Data Sheets for further information

The shelf life of these products is affected by the storage temperature. To gain maximum shelf life, ensure products are stored in a COOL dry place. Do NOT leave out on roofs or other areas exposed to sunlight.

Introduction

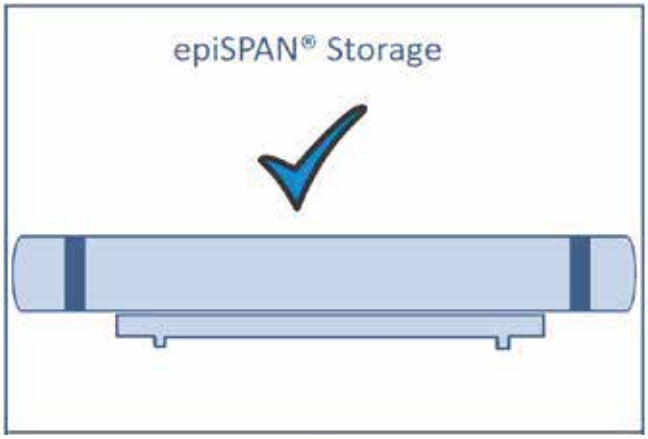
STORAGE

All epiSPAN® rolls must be stored laid flat as detailed below, on a flat surface in a ventilated area. Primers and adhesives must be stored in an upright position.

The shelf life of the adhesives and tapes is determined by the conditions of storage, the higher the storage temperature the shorter the shelf life.

Primers and adhesives must be stored in cool conditions away from heat and direct sunlight.

Before installation, all epiSPAN® membrane must be unrolled and relaxed for 20mins, to relive stresses through the manufacture, packaging and storage.



WEATHER

The epiSPAN® system should be installed in dry conditions. Note that a temperature of at least 10°C is required before laying the membrane and the substrate must have a maximum moisture content of 20% at the time of laying. The “tack off” time for the epiSTICK® adhesive will be extended when installing in cooler conditions, or when the humidity is high.

HEALTH & SAFTEY

The primers, adhesives and sealants used in the epiSPAN® system are Class 3 flammable goods. Contractors should be aware of the Health & Safety precautions identified in the Material Safety Data Sheets.

Ensure you display appropriate signage, as shown below. Keep well away from flame and heat sources and use only in ventilated areas with suitable safety equipment.

STAINING OF EPISPAN®

To avoid staining of light coloured epiSPAN®, care is required during design to ensure water running off some timber (e.g. quilla) and metal (e.g. copper) is avoided. Avoid water containing heavy metals coming into contact with epiSPAN® membrane.

Various degrees of chalking in rubber membranes in commonly identified and acceptable.

Installation

QUALITY CONTROL AND INSPECTIONS.

Quality control & inspection forms are downloadable from our website www.sealco.co.nz

TOOLS REQUIRED

Tools required include the following:

- Large stainless steel scissors.
- Stanley knife.
- Hand stirrer.
- Vacuum cleaner or leaf blower.
- Belt sander.
- Chalk line.
- Measuring tape.
- Paint roller, tray and 4 inch brush.
- Solvent for clean up
- Heavy roller.
- Broom.
- Hand roller.
- Sealant gun.
- Substrate moisture metre.
- Fire extinguisher.
- First aid kit.
- Scrubbie Pads

Roofers must wear flat-soled shoes to reduce possible footprints on the membrane.

SUBSTRATE PREPRATION

The substrate to which the membrane system is attached is a significant factor that determines the performance of the system. A belt sander should be used to smooth the areas around the screw fixings where wooden splints can damage the membrane. Sheet joints should be sanded flush where required. All holes must be filled with Builders Bog (timber substrates) or repair mortar (concrete substrates) which must be sanded off smooth.

Ensure fillets fit neatly and securely into all up-stands and that all plywood sheets are securely fixed. Mitres should also be neatly formed.

On concrete substrates, ensure the concrete is fully cured, firm and smooth, and that any loose surface concrete or latescence is removed. Repair any cracks or voids and remove any lumps or protrusions.

Use a vacuum cleaner or leaf blower to carefully remove all dirt/dust and surface contamination. Acid etching may also be required where the concrete surface is unsuitable for laying.

Sealco recommends that concrete surfaces are primed with 50/50 epiSTICK cut back with Solvent to give an adequate surface on which to install the membrane.

SUBSTRATES

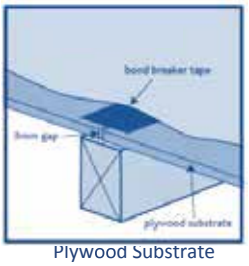
CONCRETE SUBSTRATE SHOULD

- Have cured for a minimum of 28 days and any curing compounds removed before membrane application.
- Be smooth, clean and thoroughly dry.
- Have all soft areas ground off.
- Have all cracks or imperfections fixed using repair mortar.
- Have **mortar fillets** installed on all roof and wall junctions. (Do not use timber fillets)
- Have all external edges chamfered to 5mm radius to remove sharp edges.
- Have adequate falls to outlets.
- Set to minimum falls of 2° slope (1:30) for roofs.
- Set to minimum falls of 1.5° slope (1:40) for decks.
- Set to minimum falls of 1.0° slope (1:100) for gutters.

PLYWOOD SUBSTRATE SHOULD

- Be CD structural grade plywood with sanded c-face upwards, H3.2 CCA treated and kiln dried.
- Be a minimum of 17mm thick and complying with AS/NZS2269.
- Be laid in a staggered pattern (offset all plywood sheets) with all edges supported and 3mm gap between sheets.
- Be face grain laid at right angles to supports or cross members.
- Set to minimum falls of 2° slope (1:30) for roofs.
- Set to minimum falls of 1.5° slope (1:40) for decks.
- Set to minimum falls of 1.0° slope (1:100) for gutters.
- Be fixed at 150mm centres at sheet edges and 200mm in the girth.
- Be fixed with corrosion-resistant stainless steel countersunk screws (10 gauge x 50mm).
- Be smooth, clean and dry (maximum moisture content
- 20%), and all lip edges sanded if necessary.
- Be fitted with fillets to all up stands, with external corners chamfered to a rounded edge (5mm radius). Fillets should be 20mm x 20mm minimum.

LOSP treated plywood must not be used with epiSPAN® under any circumstances.



Plywood Substrate

Installation

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WORKING WITH ADHESIVES

As with any adhesive-based system, the application of the adhesive and subsequent application of the membrane is critical to the success of the system. The adhesive application rate, conditions of application and the time between applying the adhesive and placing the epiSPAN® membrane are all important factors.

Make sure you:

- Thoroughly mix the epiSTICK® adhesive with a hand stirrer to ensure it is fully mixed.
- Apply the adhesive at the correct rate. Failure to achieve the correct coverage rate will reduce the bond strength of the membrane to the substrate. Generally speaking, increasing the application of adhesive increases the resulting bond strength.
- Achieve a good even coverage so a consistent bond and peel strength is achieved across the system.
- Allow the adhesive to "tack-off" correctly before placing the membrane. Note that if insufficient time is allowed for, retained solvent can cause bubbling to occur. Leaving the adhesive too long will result in poor bond strength.
- Install in correct conditions. Moisture and temperature extremes will affect the performance of the adhesive.
- Make sure the adhesive is used within its shelf life. If the epiSTICK® does not flow from the stirrer when drawn from the can, it is likely to have expired.

APPLYING THE EPISTICK ADHESIVE

Ensure the epiSTICK® adhesive is stirred and viscosity consistent. Apply with a brush, roller or spray. Coverage approximately 30m^2 of laid material per 20L can.

Allow both surfaces to "tack-off" before putting membrane into place.

Ensure you wear appropriate safety equipment and have Adequate ventilation.

Prime substrate before laying the epiSPAN® membrane. DO NOT lay epiSPAN® membrane in temperatures below 10°C

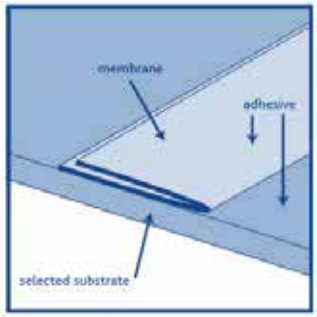
LAYING THE MEMBRANE

Ensure the substrate is clean and dust free and that all bond breaker tapes and under flashings have been installed.

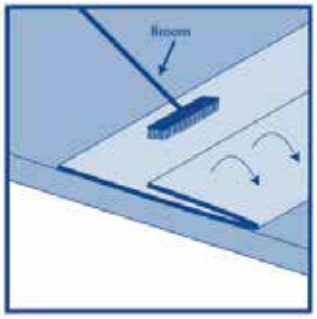
Once the epiSPAN® material has relaxed, lay out the membrane in the exact position in which it will be finally positioned. Take one side edge and fold back themembrane sheet to expose half of the underside.

To the exposed underside, apply epiSTICK® to epiSPAN® and the substrate. When adhesive is tacky totouch but does not adhere to your fingers (approx. 10-20 min dependent on climate conditions) lay the membrane by carefully drawing back the membrane into its final permanent position. Broom the surface of the membrane to remove all air and any wrinkles, taking care not to stretch the membrane.

Repeat this application with the other half of the membrane to complete the installation of the sheet. Roll the surface of the membrane to obtain a full bond. When installing onto parapets or up stands over 170mm, it is better to install the membrane in two pieces, making sure the lap is positioned 150mm above the roof line. Take care to avoid stretching the membrane during installation. The membrane must be installed in a relaxed state.



Apply Adhesive to both membrane and Substrate



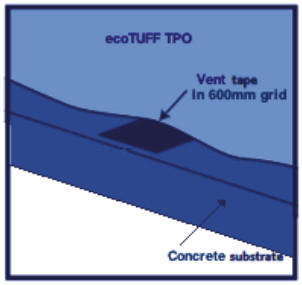
draw back the membrane and broom to remove wrinkles

Once you have applied the adhesive, sometimes the membrane sticks where you don't want it to. If you need to reposition the membrane, flick the epiSPAN® quickly to release it from the adhesive. This way you don't peel the adhesive off the membrane or substrate.

Laying membrane should not commence until the substrate is up to standard, and the relevant substrate readiness check sheet has been completed.

BOND BREAKER / VENT TAPES ON CONCRETE

36mm wide bond breaker / vent tapes should be installed onto the concrete substrate with 600mm centres.



Concrete Substrate

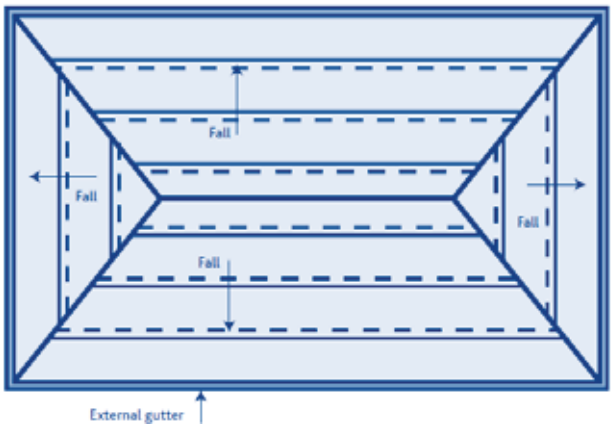
Installation

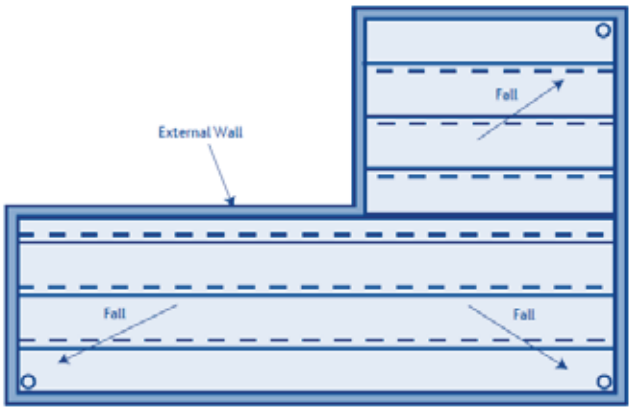
LAYING PATTERN

Start from the lowest point (i.e. at valleys or water outlets / gutters) and lay the membrane across the roof fall.

Work up to the highest point on the roof. This will ensure that water runs over the laps rather than down the lap edge.

Mark out the 80mm lap on the roll to be installed. Set out subsequent rolls to that mark and continue, ensuring 80mm end laps are allowed for.





Seams should be aligned across the roof or deck fall so water runs over the lap. Joins should be avoided in the gutters

FORMING LAPS

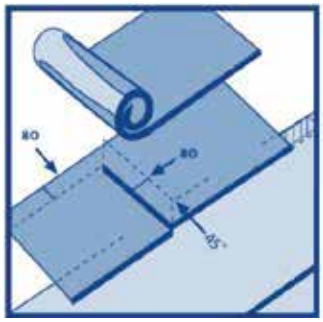
The waterproofing performance of the system is dependent on good lap integrity. Ensure all contaminants are removed from the lap area before proceeding.

Set the next adjoining membrane to give an 80mm lap and install as described previously. Apply epiSEAM® primer using a scrubbie pad to both surfaces by of the 80mm lap area as a primer and leave to tack-dry.

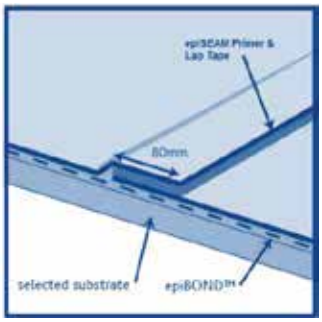
Using epiTAPE® lap tape, place carefully onto the lower sheet, (marked to the outer edge), and roll firmly into place with a lap roller. Carefully dress the overlap membrane down onto the epiTAPE® lap tape. Remove the epiTAPE® release plastic by pulling out at a 45° angle, thumbing out all wrinkles and air to form a watertight seal.

Where laps coincide giving a build-up of three or more layers, cut the outside edge of the second membrane layer at a 90° angle.

Over-roll with a hand roller working the two membrane surfaces into the lap tape. Inspect all joints on completion. All side laps and end laps should be 80mm.



Cut 3 Way laps at 45°



All Side and End Laps to be 80mm

FLASHING

Drawings: Page 15

Apply epiSTICK® by brush, onto the substrate area to be under flashed and the underside of the under flashing tape. When touch dry, install under flashing tape to the substrate.

Ensure the under flashing tape is over-rolled with enough pressure to create a neatly fitted under flashing. Install the epiSPAN® membrane as follows:

On the internal corner do not cut the membrane, simply fold back to create the “pig’s ear” to lay behind the main sheet. Note: under flashing tapes are not required in internal corners.

On external corners do not cut the membrane below the top line of the fillet. Install the Cover Tape to the corner.

Installation

INSTALLING GUTTERS

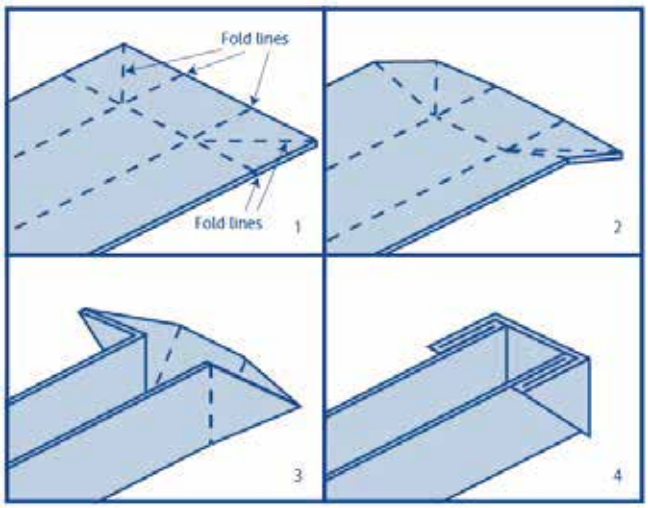
Ensure the gutter is clean and dry and install bond breaker tapes to all plywood sheet joints. Apply epiSTICK® to all external corners, and when “tacked off” install the under flashing tapes to these areas.

Cut the epiSPAN® membrane allowing enough width for the full internal girth of the gutter plus a 80mm allowance for the lap. Cut the length to suit, allowing for both end-up stands and any laps.

Apply the epiSTICK® adhesive, at the required rate, to the gutter base and all side/end up stands. Allow to tack off. Place the epiSPAN® membrane into the gutter and position correctly. Fold back in manageable sections and apply the epiSTICK® at the required rate to the membrane. Allow to tack off, and dress the membrane into place eliminating all creases and any air entrapment.

Proceed accordingly until the full gutter has been installed. Carefully dress the membrane into the internal corners forming the pig’s ear. Do not cut the membrane.

For external gutters, ensure epiTAPE® is installed onto the outside face of the metal angle fixed to the plywood (see ‘External Gutter 2’ detail on page 17). This ensures a secure termination of the epiSPAN®.



Installing Gutters

DO NOT CUT THE MEMBRANE. The end up stand is to be bonded in the normal way but the additional material (pig’s ear) is to be folded behind the membrane

PIPE PENETRATIONS

Detail Drawings: Page 18

Apply epiSEAM® primer around the pipe base (up 80mm) and surrounding substrate by brushing the adhesive to the required area.

When touch dry, install the under epitape around the base of the penetration, and dress up neatly onto the pipe penetration forming a seal.

Lay out the first epiSPAN® sheet to suit the pipe penetration size and location, and slit the epiSPAN® accordingly. Install this epiSPAN® sheet, thumbing and dressing into place around the pipe penetration without stretching the membrane.

Position and slit the second sheet accordingly, installing from the opposite direction. Install epiTAPE® to the slit ensuring it is centred, thumbing and dressing into place around the pipe penetration without stretching the membrane.

Over-roll to ensure all air entrapment and wrinkles are removed.

Install an epiSPAN® collar around the penetration using the epiTAPE® to form the lap in the collar. Install a proprietary cover flashing. Where pipe boots complete with seam tape are available, primer on substrate is all that is required.

MOVEMENT JOINTS

Purpose-made expansion joints and flashings should be installed to meet the specific stresses expected, and be compatible with EPDM membranes.

Movement joints should be allowed for in the following situations:

- Around the perimeter of the roof or deck, allow a 5mm gap at all abutments.
- Around perimeter of columns and post penetrations through roof or deck.
- Where a new roof area meets and joins an existing roof or deck.
- At changes of direction or at changes of heights in a roof or deck surface. i.e. at all “T” or “L” type building junctio
- Where construction plywood abuts a concrete slab or wall.

WPS recommend that all movement joint details and locations are approved by the architect / engineer and a WPS representative

Installation

ROOF DRAINS

Detail Drawings: From Page 18

The substrate should be recessed to accommodate the outlet. Apply epiSealant to this recessed area and put the outlet into place and fix with stainless steel screws.

Primer should be applied by brush onto the flange and out onto the surrounding substrate. When dry, install the under flashing lap tape into the rainwater outlet and onto the substrate surface by at least 80mm. Roll out all air and wrinkles. When working with ring clamp fittings, dress the tape into the internal angle of the outlet.

Lay the epiSPAN® membrane in the normal manner, installing across the outlet. At this point roll the membrane to form a bond across the flush surface of the outlet. Locate the rainwater outlet centre and cut a small hole in the centre, large enough to make the turn down fold into the rainwater outlet. Carefully fold the epiSPAN® into the outlet ensuring the membrane is dressed neatly down, all air is removed and ensuring a good bond to the under flashing tape. Insert the ring clamp fitting.

Apply a bead of epiSeal to the top edge of the compression ring and epiSPAN® membrane.

When working on substrates where moisture is present, it is vital to vent under the membrane. Failure to do so will allow entrapped moisture to expand under the membrane causing bubbling

If a HVAC ventilation system is going to be installed by another contractor, DO NOT install our roof space vents.

ROOF VENTS

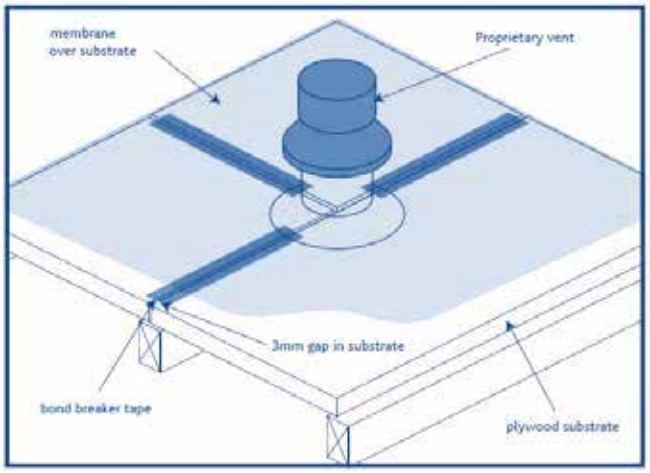
Detail Drawings: Page 22 & 23

WHY VENT?

Moisture venting helps remove any retained moisture in the substrate. Roof-space venting in confined skillion-type roofs creates air flow and equalises roof space pressure. Venting minimises temperature variations across the roof and so reduces substrate movement due to thermal expansion and contraction. To vent the roof space, simply cut out a small hole in the plywood and position the vent accordingly.

INSTALLING VENTS

A minimum of two vents are required in each roof area to be vented. Vents should be installed for every 70m² of roof area depending on the vent model being used.



Moisture Vent

CONCRETE SUBSTRATE VENTING

Install 36mm wide PVC bond breaker tapes onto concrete in a 600mm grid pattern. Ensure the VENTRITE vent is positioned on a junction in the grid tape layout.

Installation

MEMBRANE TERMINATION

Detail Drawings: Page 26

CHASE TERMINATION

A chase flashing is normally required when terminating into a concrete block or any masonry wall. The chase is to be 150mm up from the substrate. The chase is recommended to be 6mm wide x 20mm deep. Remove all dust from the chase.

Dress the epiSPAN® over the mortar fillet, up the wall face terminating at the bottom edge of the chase. Install a metal flashing into the chase and mechanically fix. Apply epiSeal sealant into the chase between the metal flashing and chase cavity, tooling off the outer edge to a 45° angle.

UPSTAND TERMINATION

When dressing the epiSPAN® onto a vertical surface which will be covered by exterior cladding, the epiSPAN® is to be installed to a minimum height of 150mm.

COMPRESSION FLASHING

Strike a chalk line to mark the height of the up stand. Install the epiSPAN® membrane up to this mark. Install the metal compression flashing with the top fold (6mm angle field) lining up with the top edge of the membrane and mechanically fix into place. Using a sealant gun, apply epiSEAL sealant into the 6mm cavity at a 45° angle.

MEMBRANE COATING (OPTIONAL)

Once the membrane is fully installed remove all dust, debris and sweep clean. Make good any imperfections and check all laps are fully adhered. A range of colour options are available in the PolySEAL range.

Coating black EPDM membranes with the PolySEAL grey colour will reduce heat build-up in the roof space and help minimise substrate movement. PolySEAL is available in 4L and 20L Pails.

COMPLETION INSPECTION

During installation, the QC sheet (pages 27 - 28) is to be used by the installer to ensure that the work complies with our specification.

On completion, inspect all work for defects, making good as required. Pay particular attention to penetrations and other complex details and laps. Remove unused materials from site leaving the completed works clean and tidy for hand over.

Protection boards are to be used by any following trades.

Ensure that the QC sheets are completed and signed off, preferably with the main contractor.

WARRANTY

When laid by an approved applicator in accordance with Sealco specifications, a material warranty for up to 20 years is available for black epiSPAN.

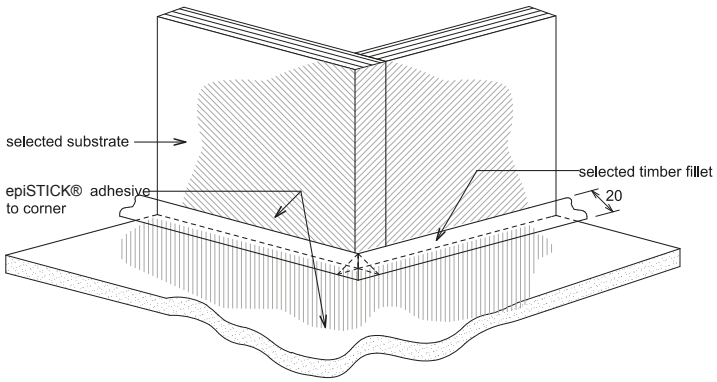
DECK INSTALLATIONS

The installation procedure is as described in this manual. However, in exposed deck applications – 1.5mm thick epiSPAN® is required.

Where duckboards are being installed over the membrane, EPPM impact isolation cradles are required to be installed under the duckboards.

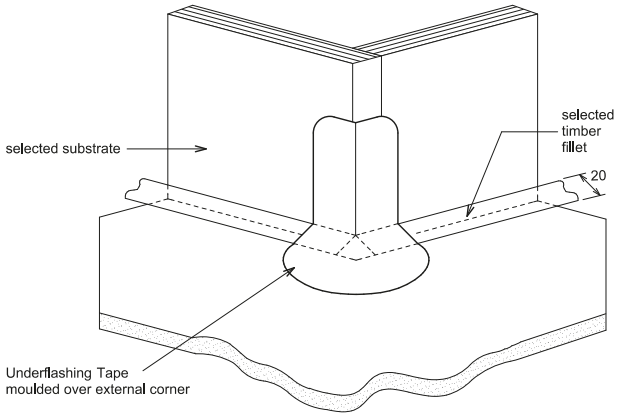
Flashing Drawings

EXTERNAL CORNERS



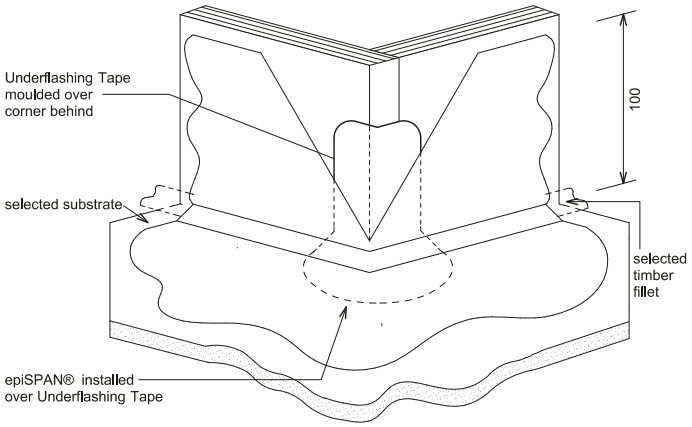
epiG03 - Ext Corner 1

Revision B: 5 Nov 2013



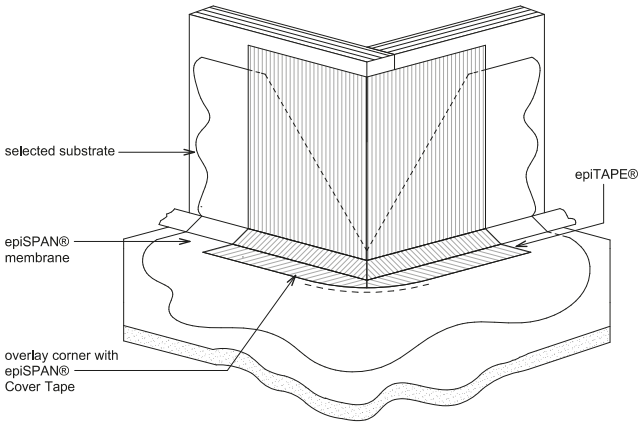
epiG04 - Ext Corner 2

Revision B: 5 Nov 2013



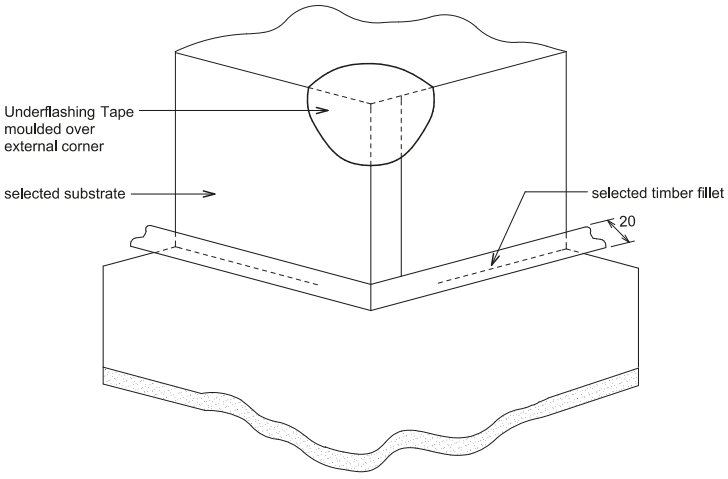
epiG05 - Ext Corner 3

Revision B: 5 Nov 2013



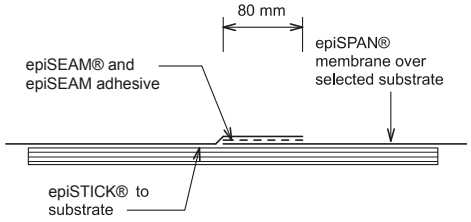
epiG06 - Ext Corner 4

Revision B: 5 Nov 2013



epiG16 - Ext Corner 5

Revision B: 5 Nov 2013

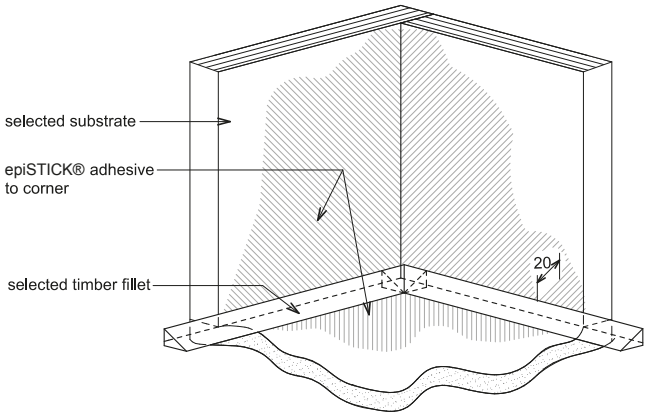


epiG15 - Standard Lap Joint

Revision B: 5 Nov 2013

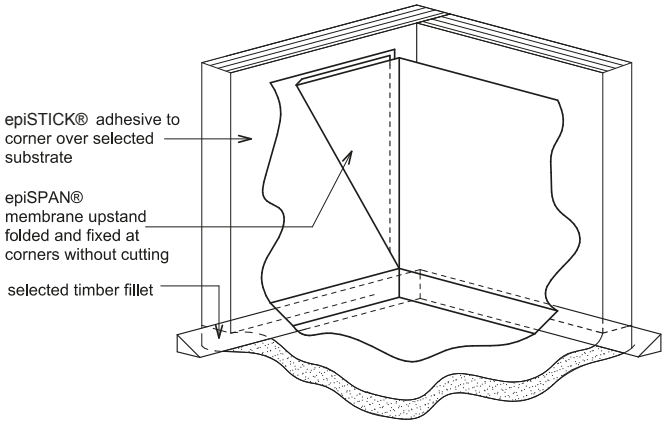
Flashing Drawings

INTERNAL CORNERS



epiG07 - Int Corner 1

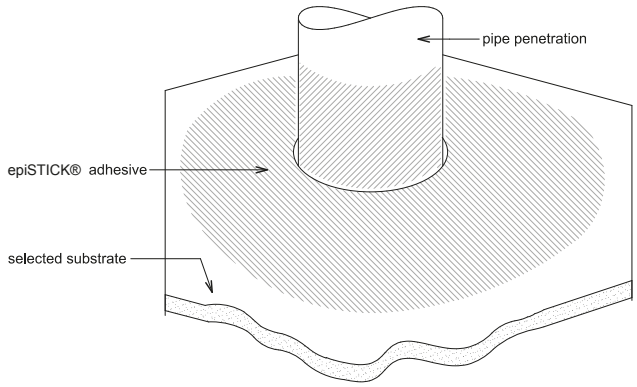
Revision B: 5 Nov 2013



epiG09 - Int Corner 3

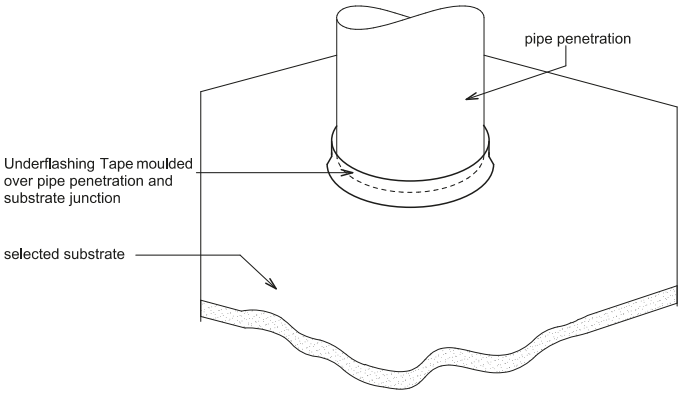
Revision B: 5 Nov 2013

PIPE PENTRATIONS



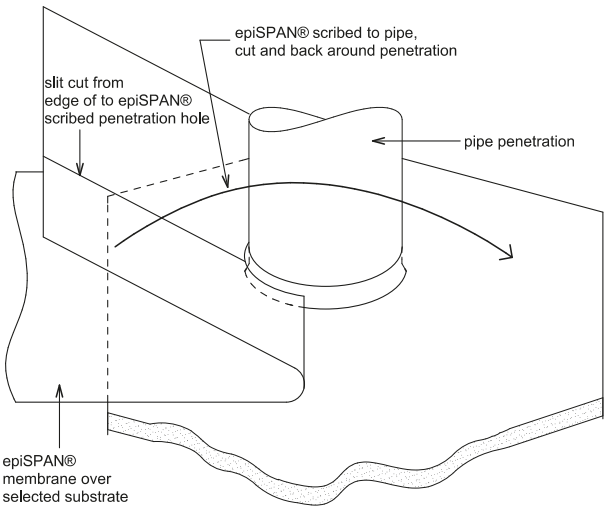
epiG10 - Pipe Penetration 1

Revision B: 5 Nov 2013



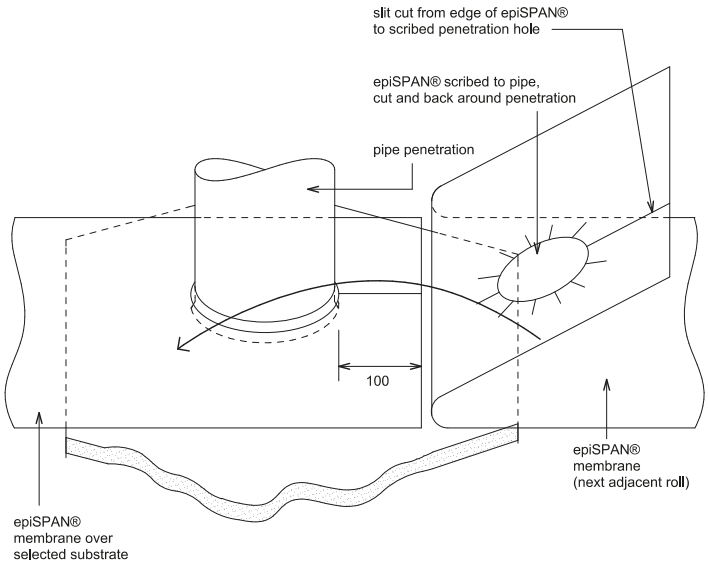
epiG11 - Pipe Penetration 2

Revision B: 5 Nov 2013



epiG17 - Pipe Penetration 6

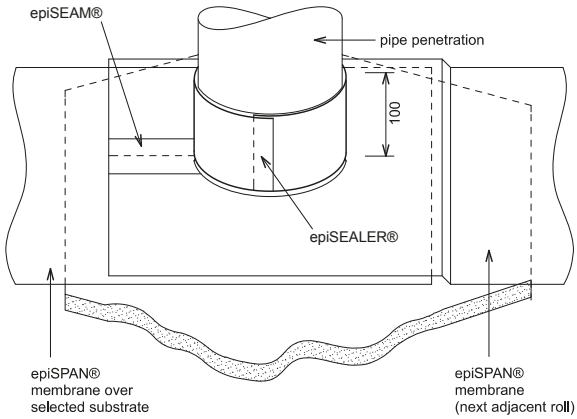
Revision B: 5 Nov 2013



epiG18 - Pipe Penetration 7

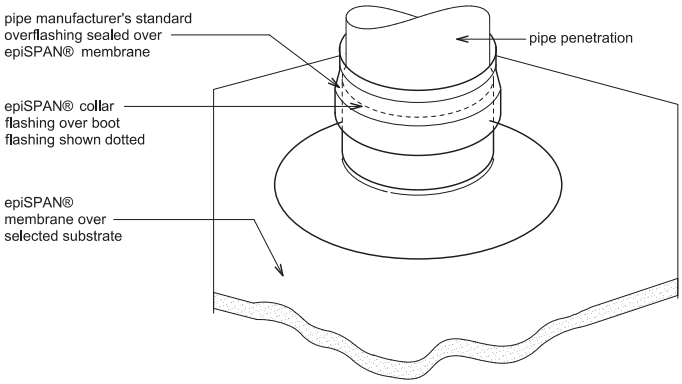
Revision B: 5 Nov 2013

Detail Drawings



epiG19 - Pipe Penetration 8

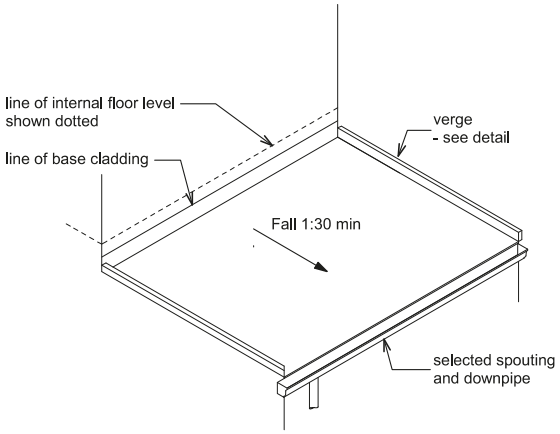
Revision B: 5 Nov 2013



epiG14 - Pipe Penetration 5

Revision B: 5 Nov 2013

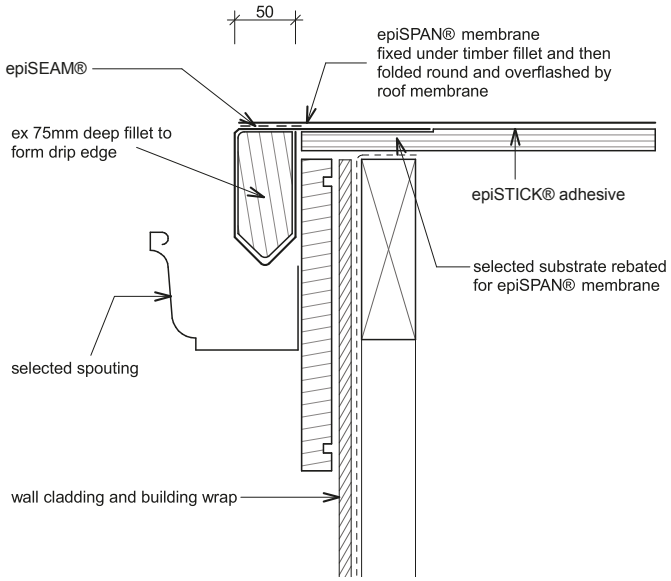
ROOF DETAILING



epiG01 - Roof 3D

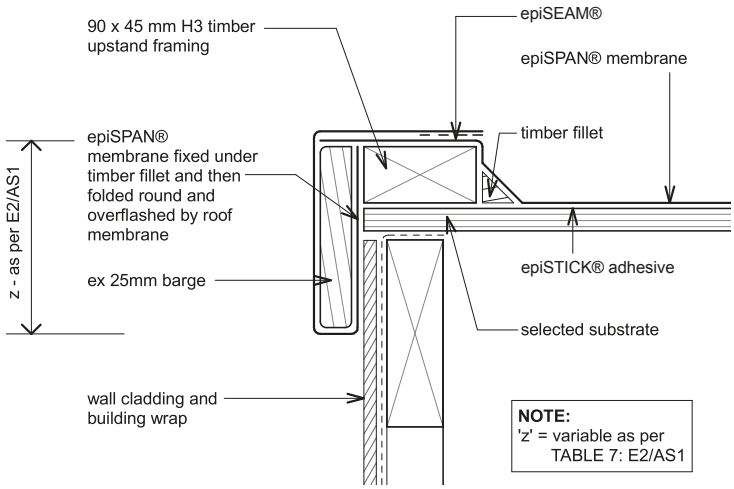
Revision B: 5 Nov 2013

Detail Drawings



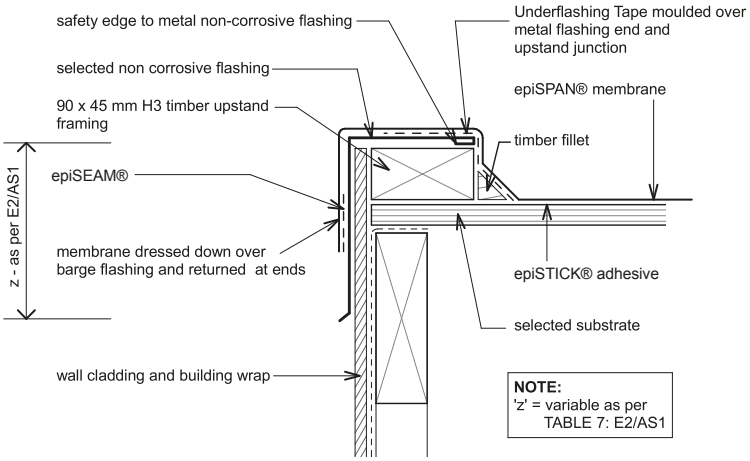
episS01 - External gutter Type 1

REVISION: 20 JULY 2019



episS02 - Barge Board Type 2

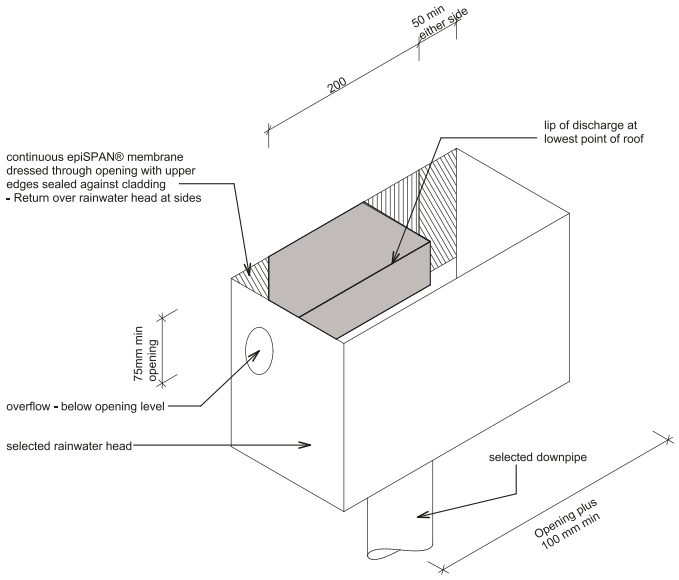
REVISION: 20 JULY 2019



episS03- Barge Board Type 1

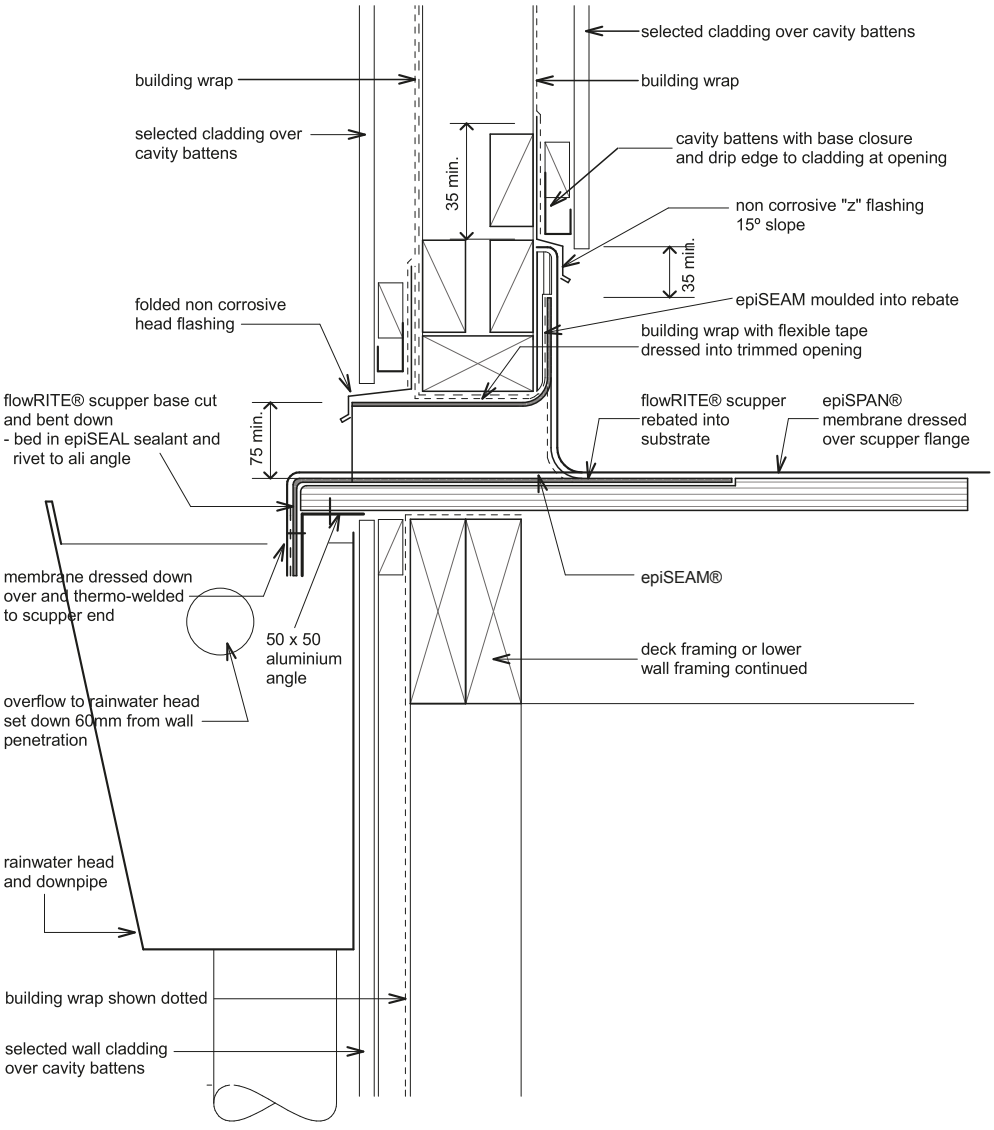
REVISION: 20 JULY 2019

Detail Drawings



epiS04 - Rainwater Head (for Scupper)

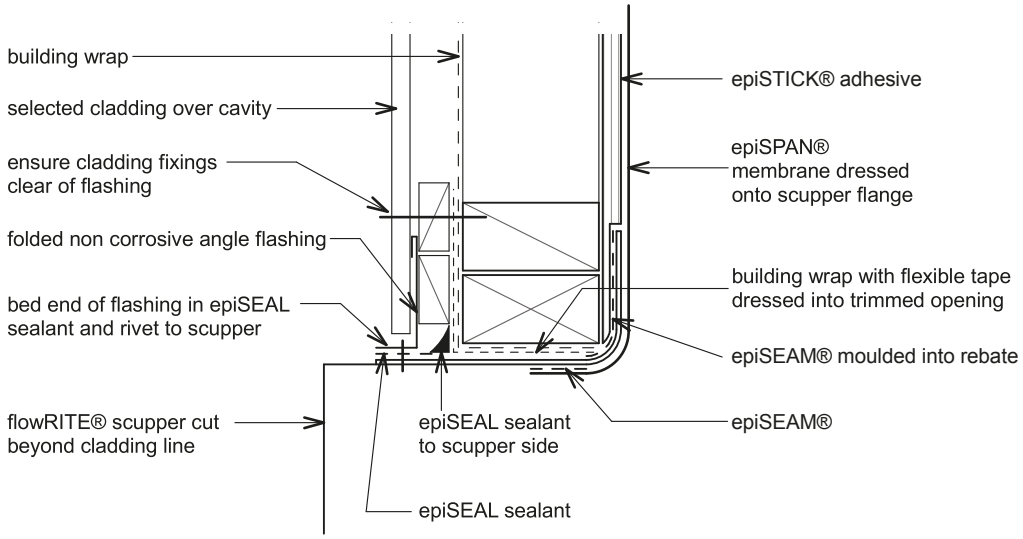
REVISION: 20 JULY 2019



epiS05 - flowRITE® Scupper Scupper Outlet Section 1

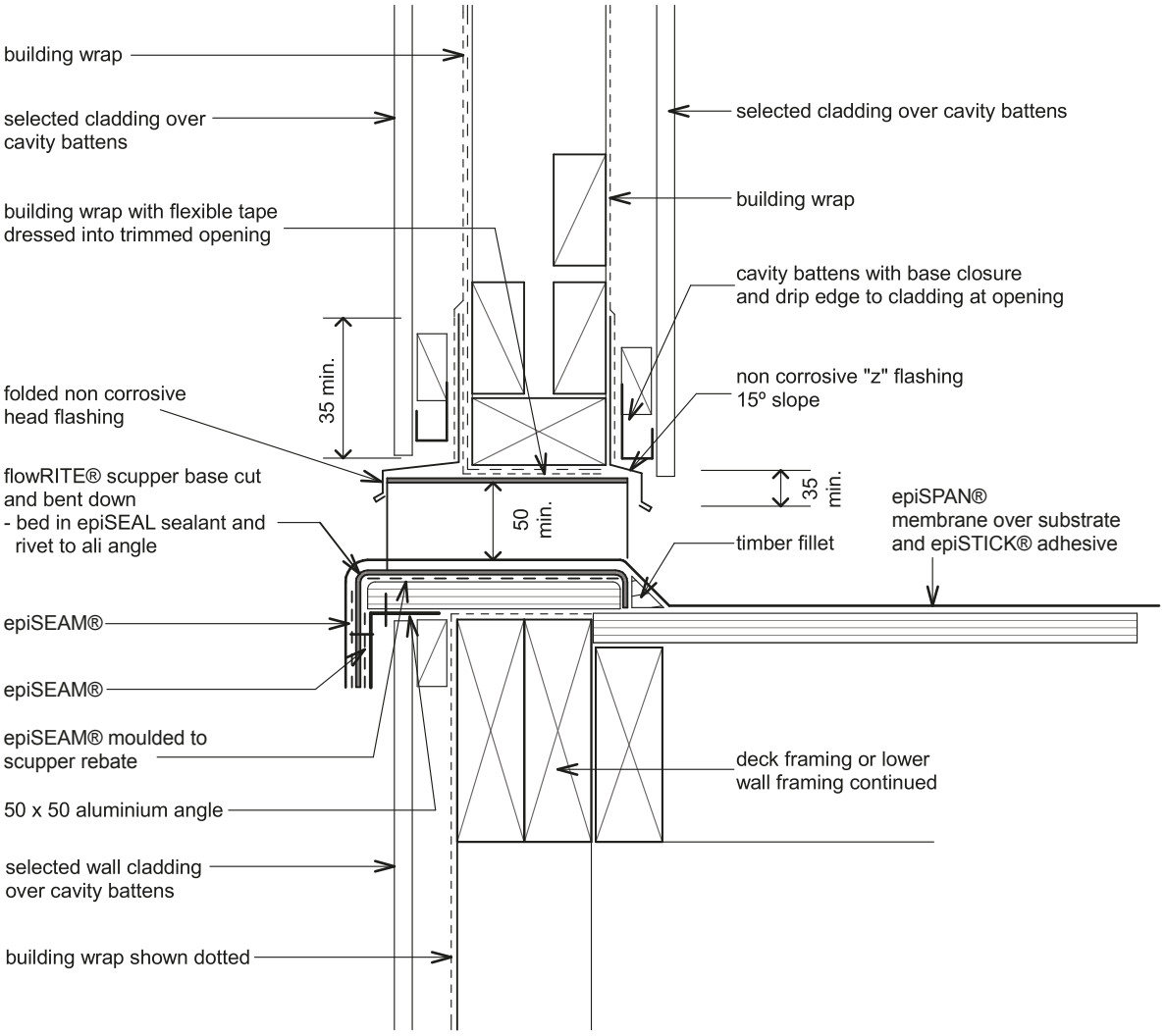
REVISION: 20 JULY 2019

Detail Drawings



episS06 - flowRITE® Scupper Outlet Plan 1

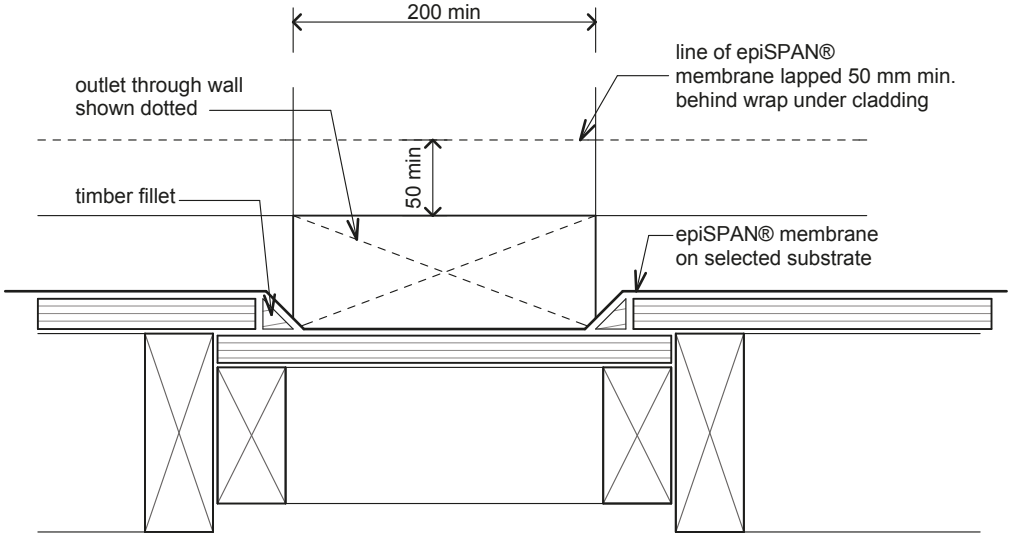
REVISION: 20 JULY 2019



episS07 - flowRITE® Overflow Scupper Section 2

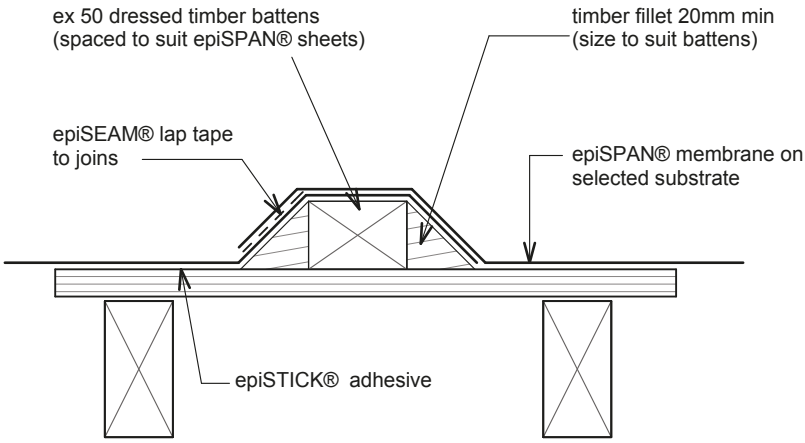
REVISION: 20 JULY 2019

Detail Drawings



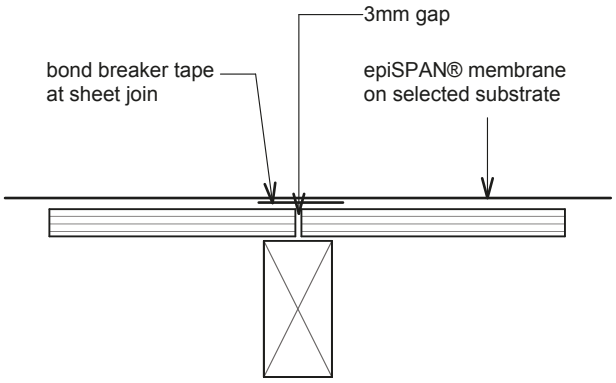
episS08 - Overflow Scupper Plan 2

REVISION: 20 JULY 2019



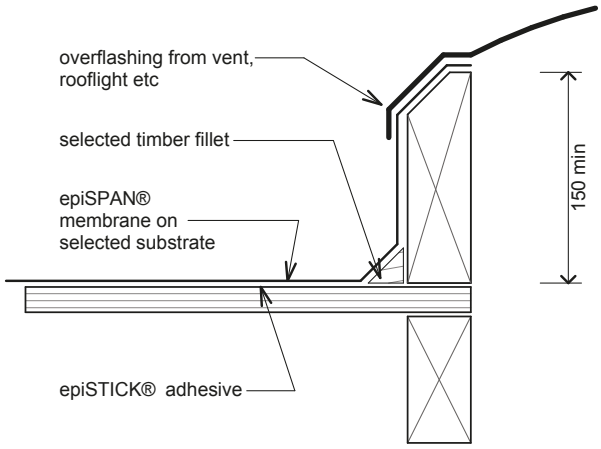
episS09 - Batten Join

REVISION: 20 JULY 2019



episS10 - Substrate Join

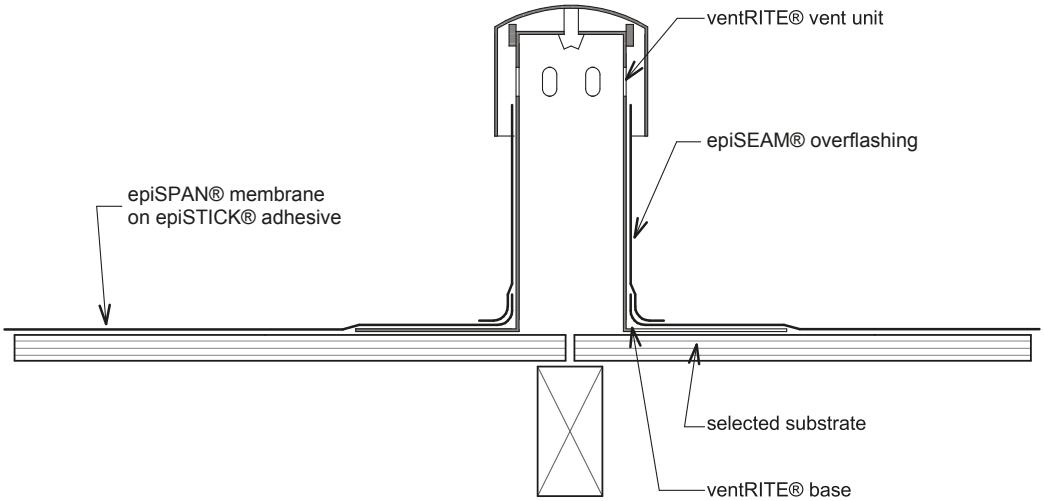
REVISION: 20 JULY 2019



episS11 - Roof Skylite

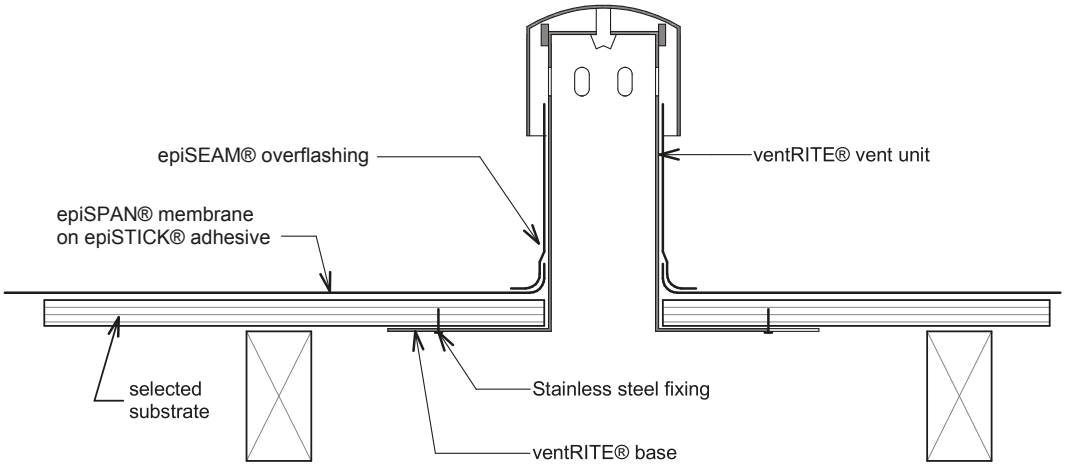
REVISION: 20 JULY 2019

Detail Drawings



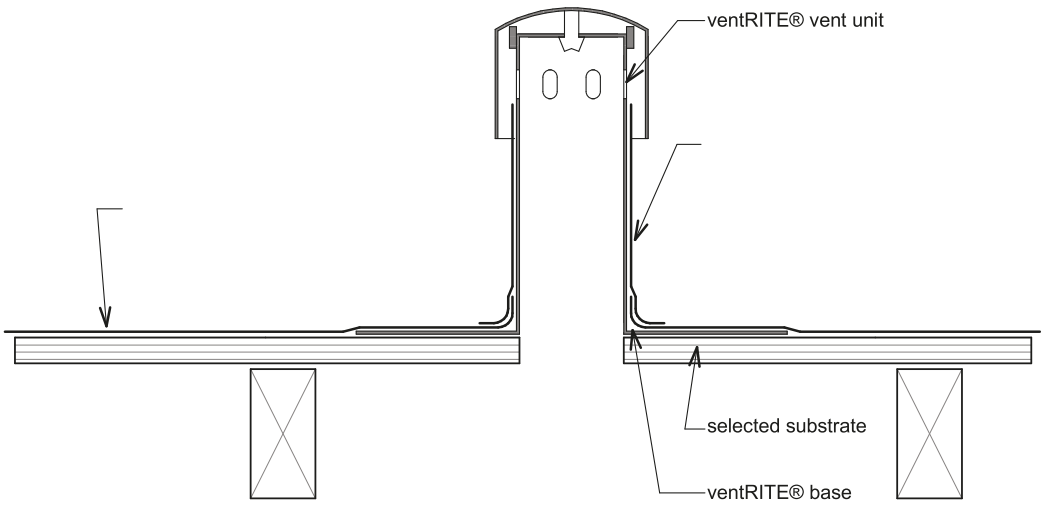
episS12 - ventRITE® Moisture Outlet

REVISION: 20 JULY 2019



episS13A - ventRITE® Roof-space Vent Type 1

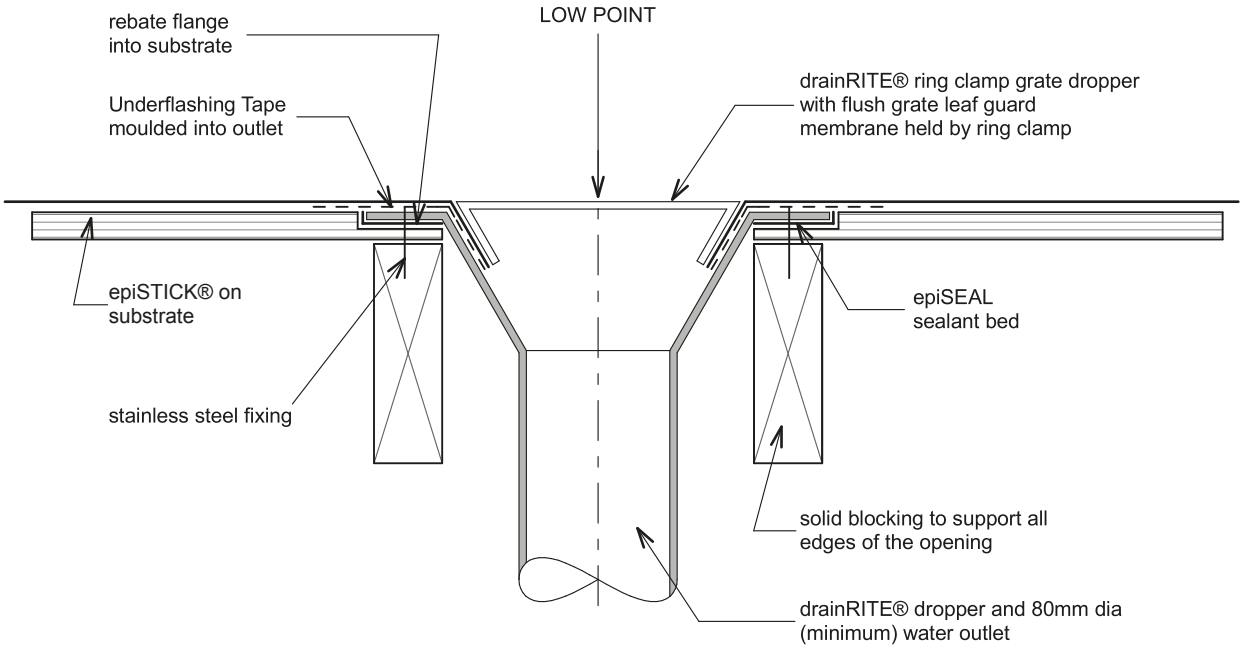
REVISION: 20 JULY 2019



episS13B - ventRITE® Roof-space Vent Type 2

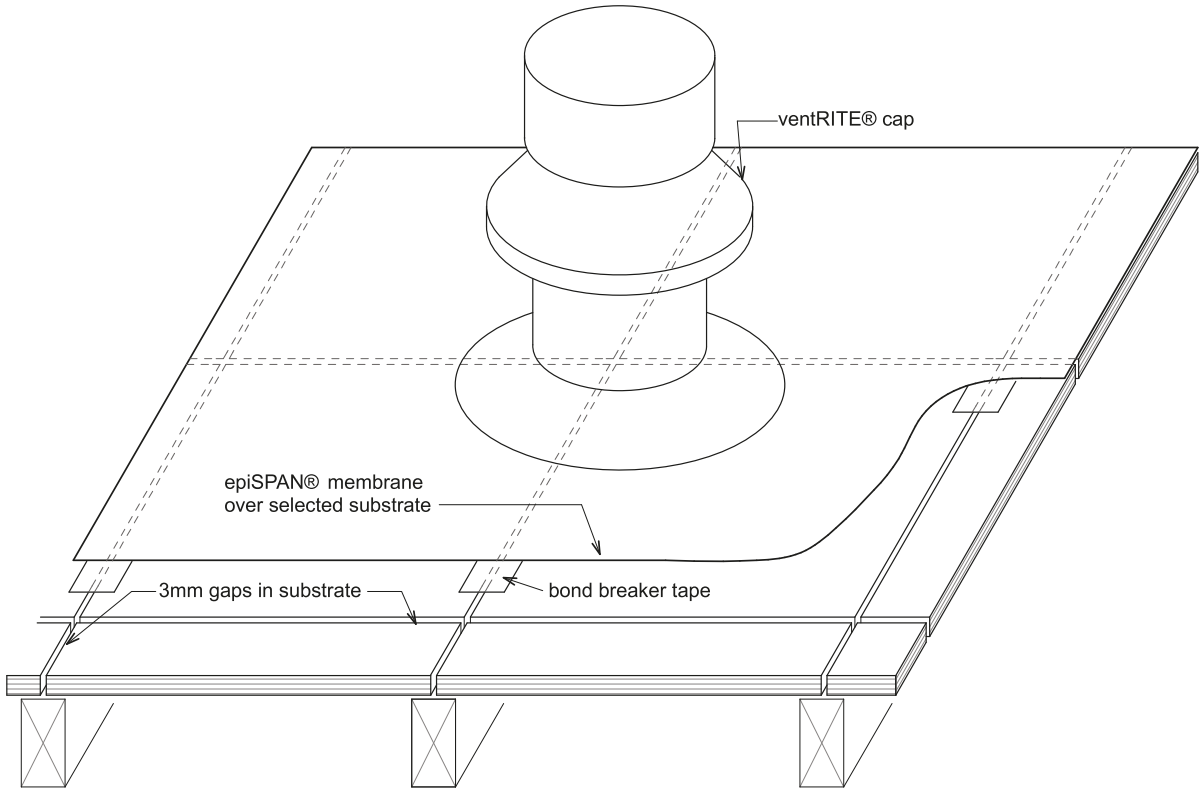
REVISION: 20 JULY 2019

Detail Drawings



epiS14 - drainRITE® Water Outlet

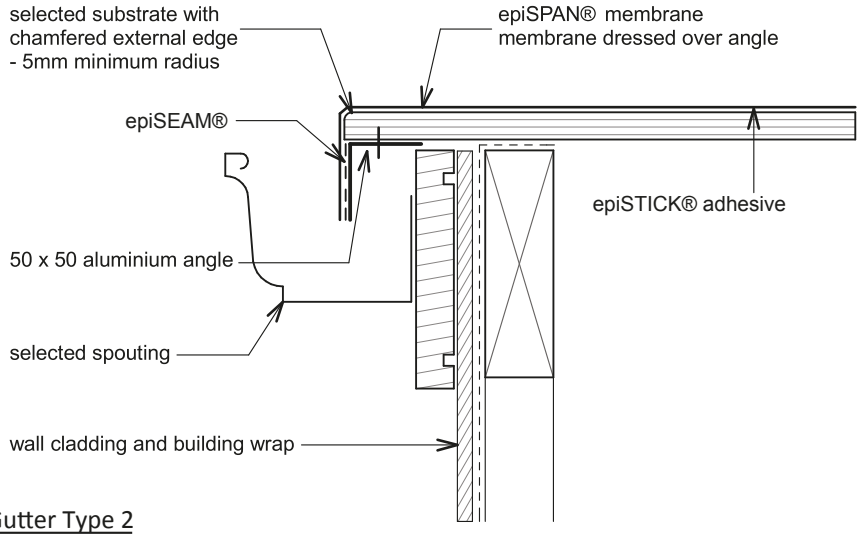
REVISION: 20 JULY 2019



epiS15ventRITE® Moisture Vent

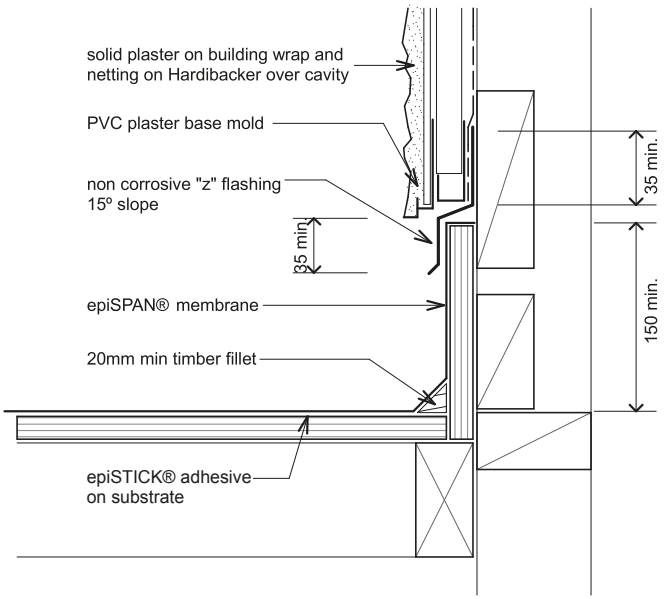
REVISION: 20 JULY 2019

Detail Drawings



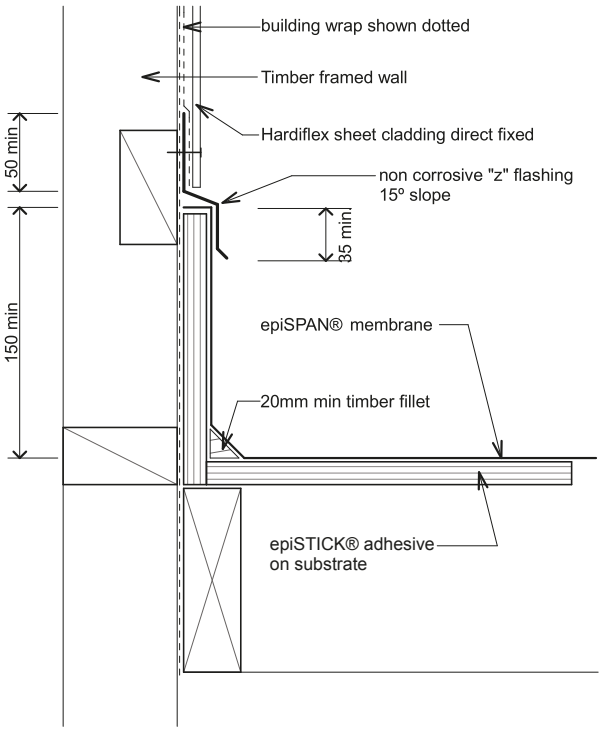
epiS16 - External Gutter Type 2

REVISION: 20 JULY 2019



epiS17 - Gutter/Wall 1

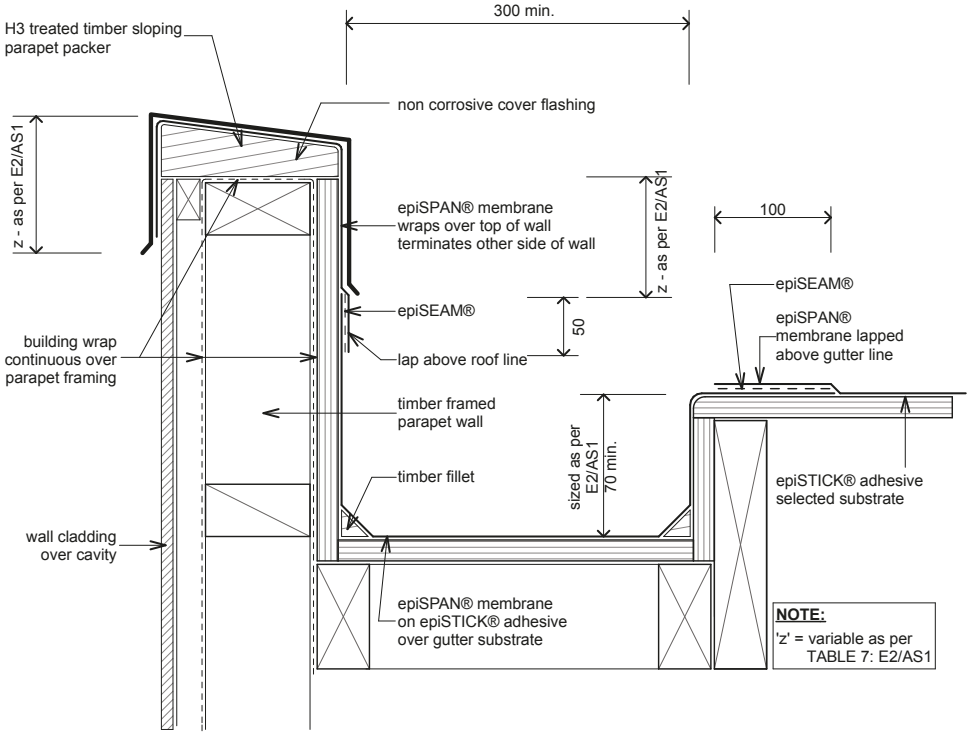
REVISION: 20 JULY 2019



epiS187 - Gutter/Wall 2

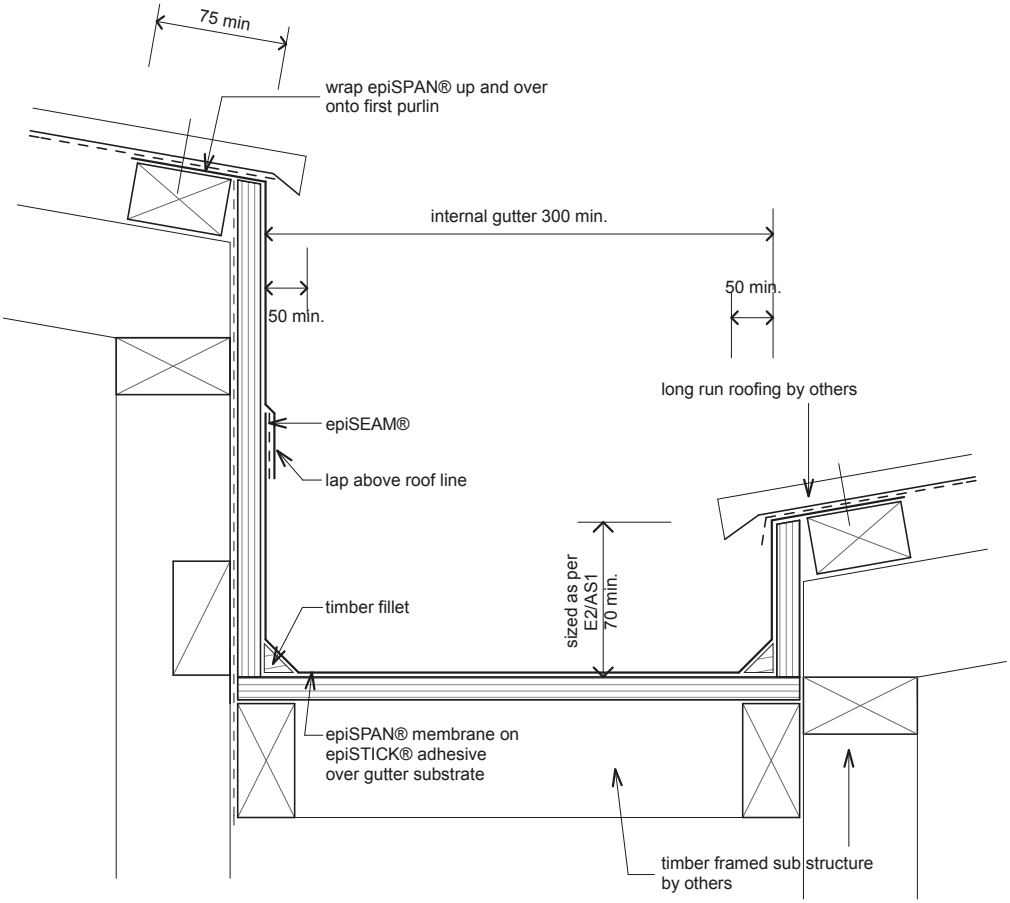
REVISION: 20 JULY 2019

Detail Drawings



ecoS19 - Gutter/Parapet

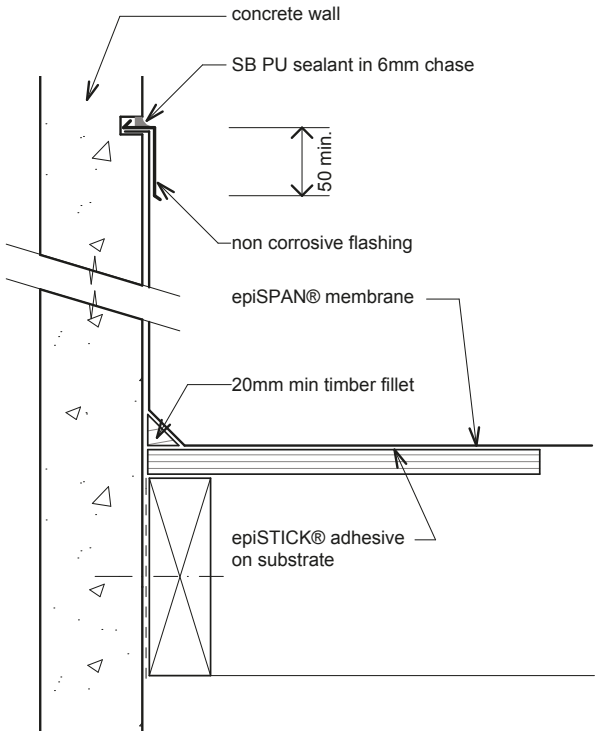
REVISION: 20 JULY 2019



episS20 - Internal Gutter

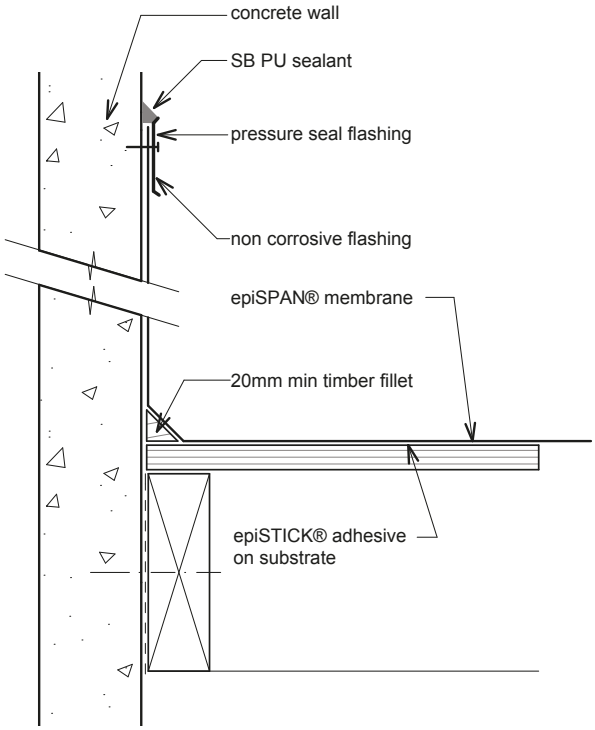
REVISION: 20 JULY 2019

Detail Drawings



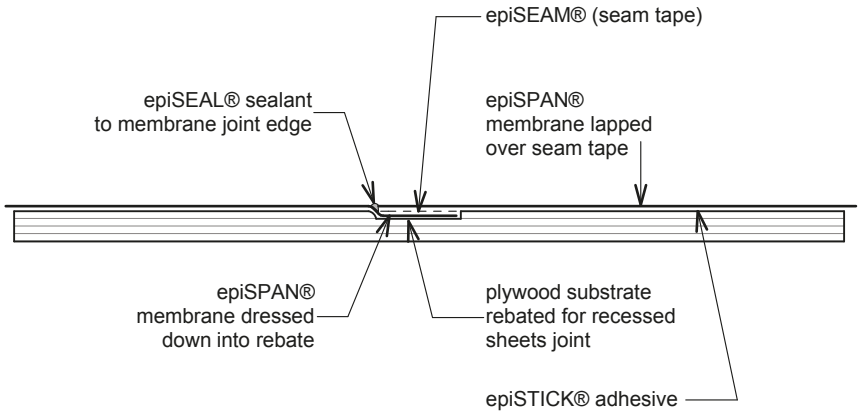
episS23 - Chase Termination

REVISION: 20 JULY 2019



episS24 - Compress Termination

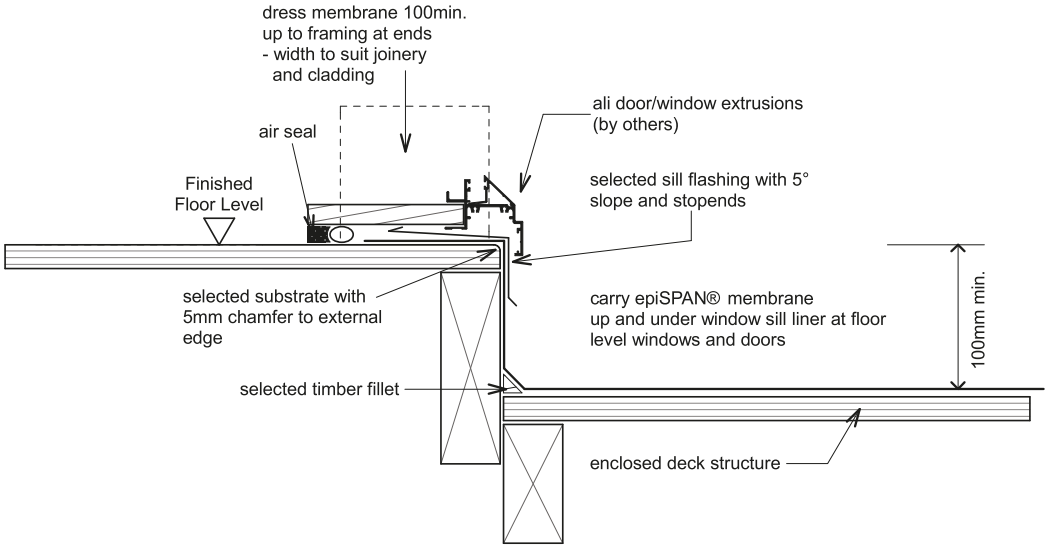
REVISION: 20 JULY 2019



episS25 - Rebated Joint

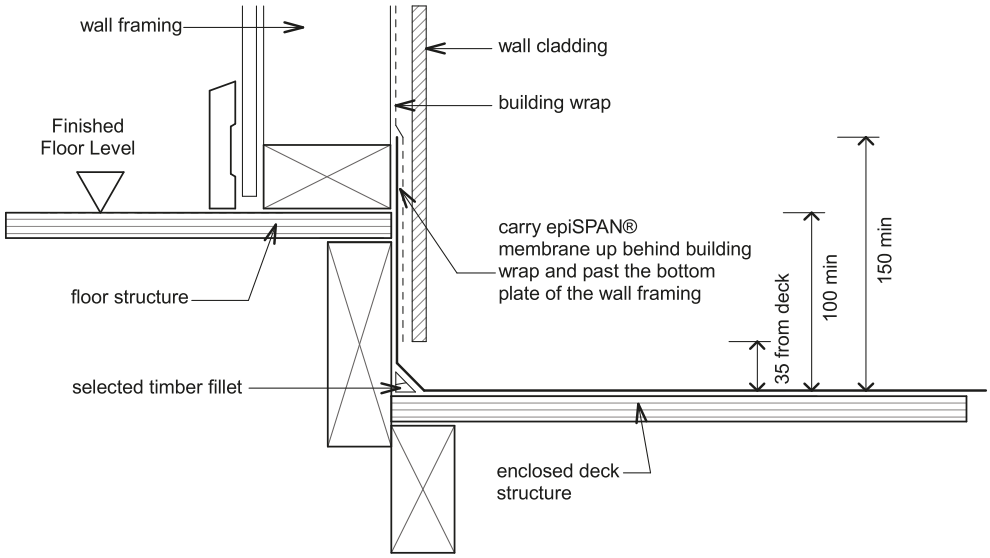
REVISION: 20 JULY 2019

Detail Drawings



epiD01 - Deck Detail 1 - Aluminium Frame Sill

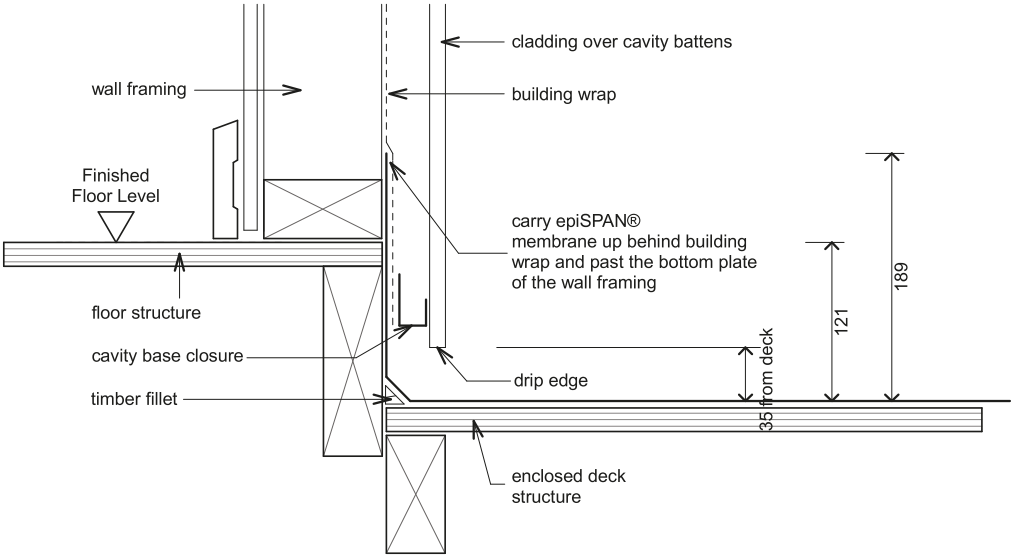
REVISION: 25 AUGUST 2014



epiD02 - Deck Detail 2 - Wall Base

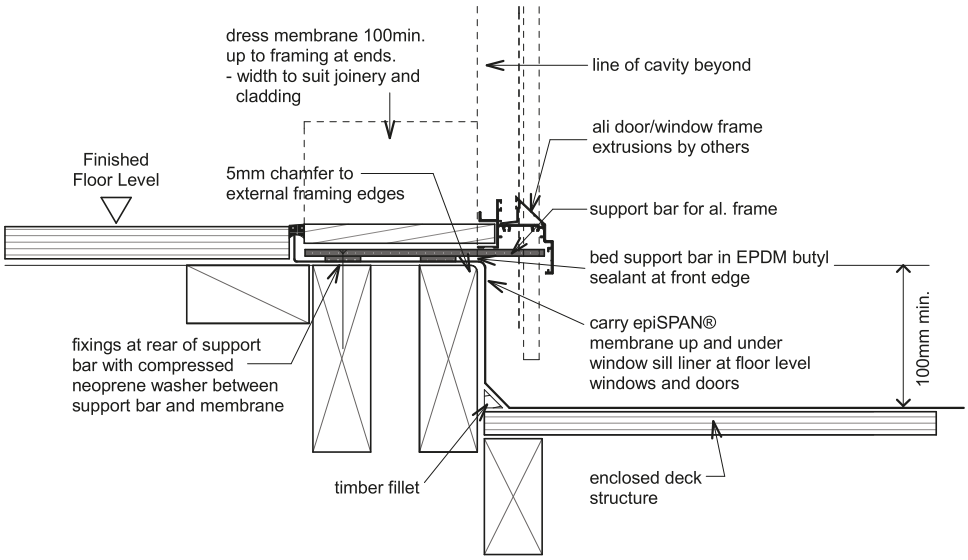
REVISION: 25 AUGUST 2014

Detail Drawings



epiD03 - Deck Detail 3 - Cavity Wall Base

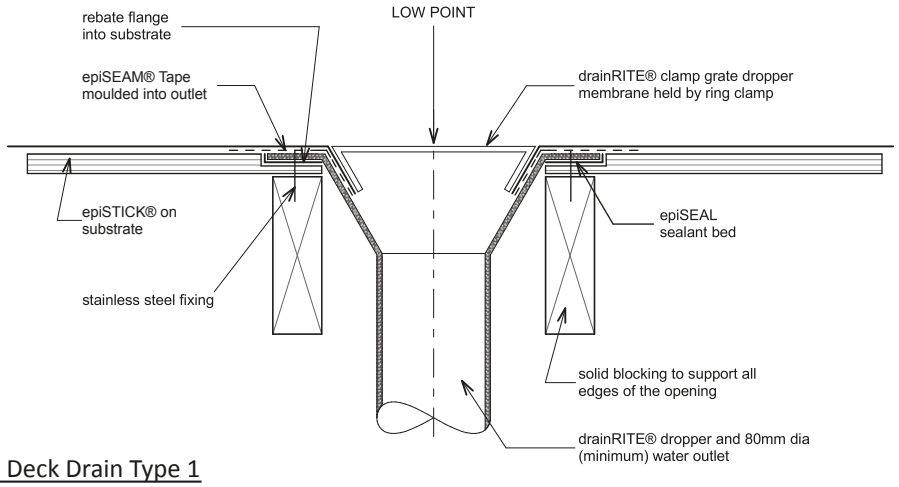
REVISION: 25 AUGUST 2014



epiD04 - Deck Detail 4 - Aluminium Frame Sill (Cavity Wall)

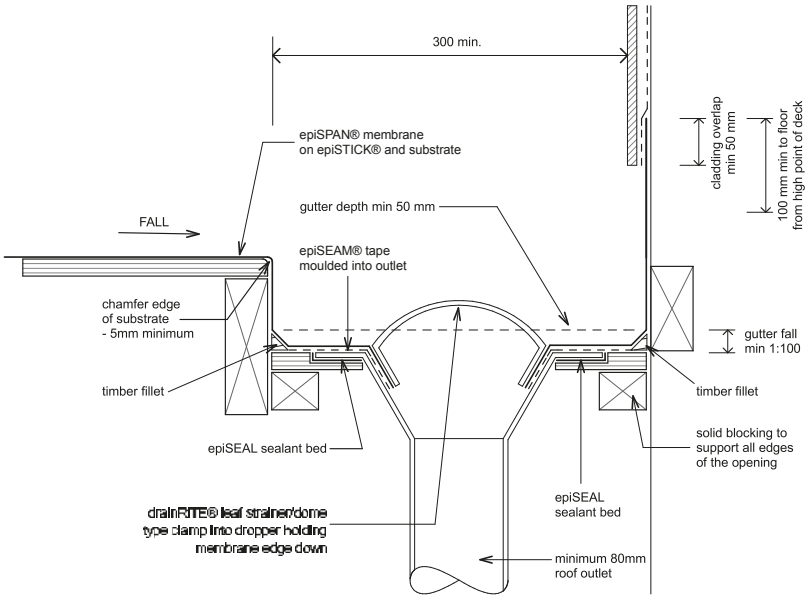
REVISION: 25 AUGUST 2014

Detail Drawings



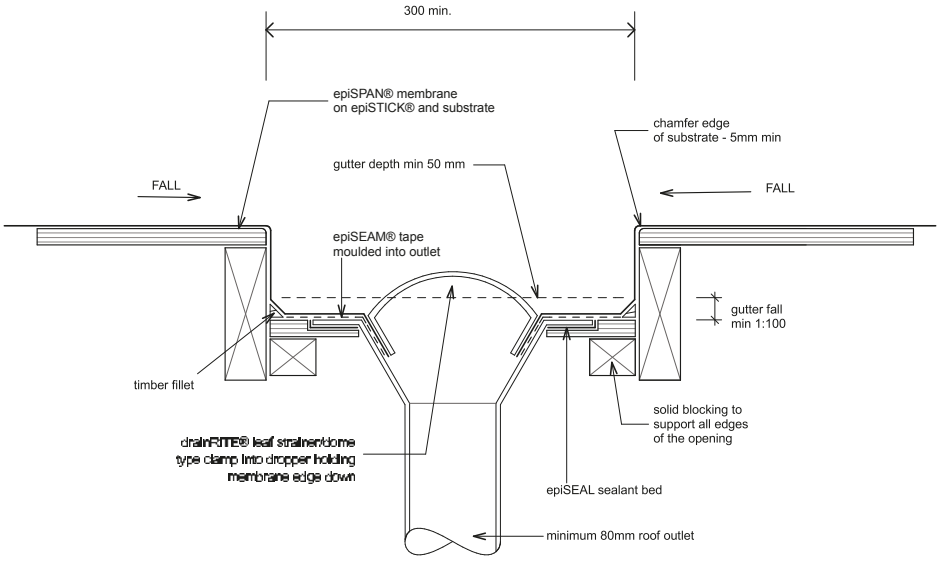
epiD05 - drainRITE® Deck Drain Type 1

REVISION: 25 AUGUST 2014



epiD06 - drainRITE® Deck Drain Type 2

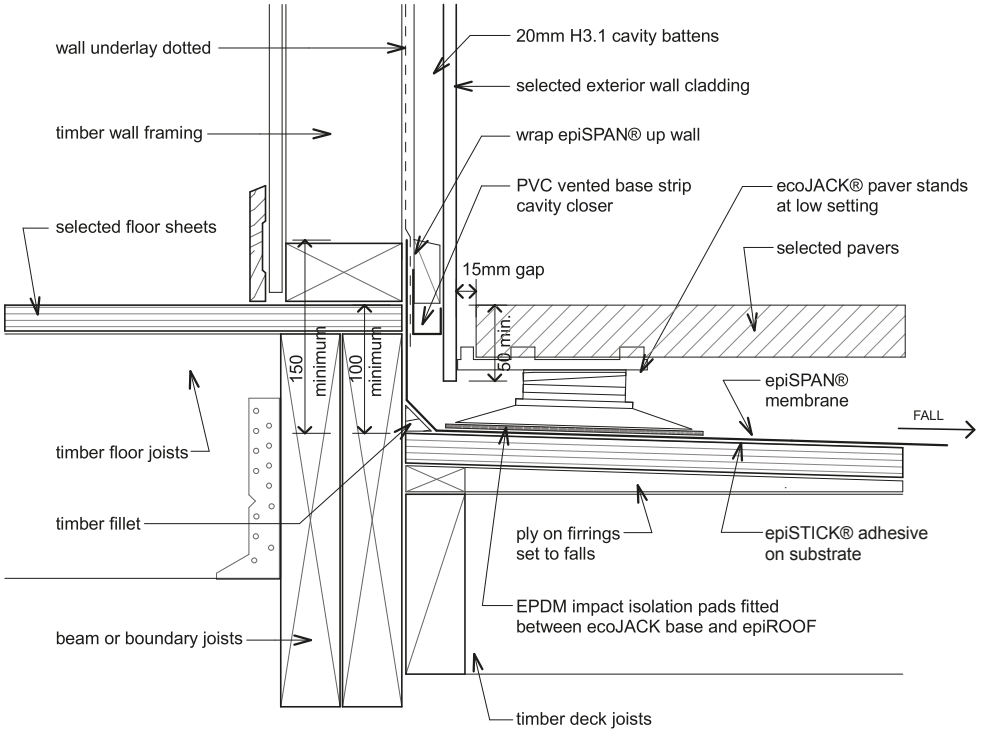
REVISION: 25 AUGUST 2014



epiD07 - drainRITE® Deck Drain Type 3

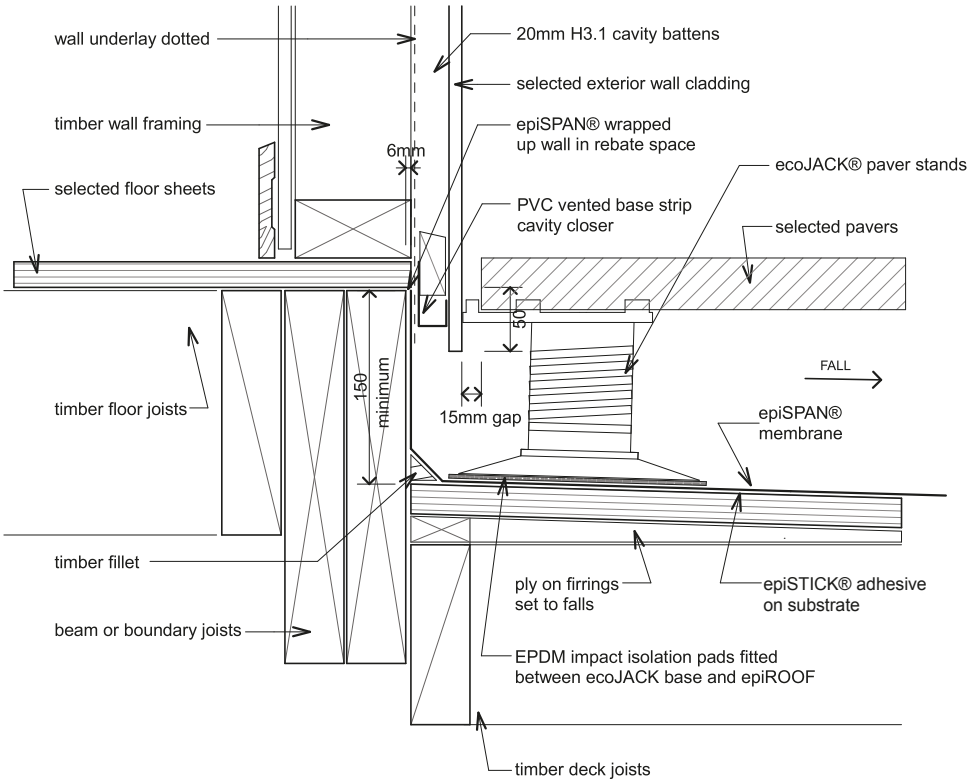
REVISION: 25 AUGUST 2014

Detail Drawings



epiD08 - ecoJACK® paver-wall detail - type 1

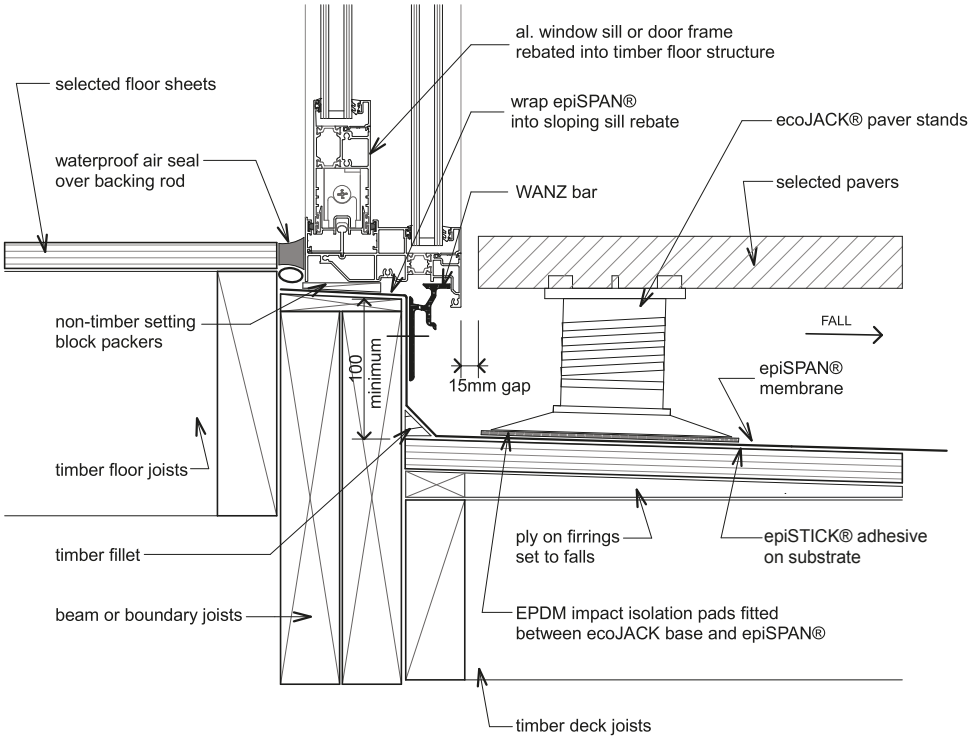
REVISION: 25 AUGUST 2014



epiD09 - ecoJACK® paver-wall detail - type 2

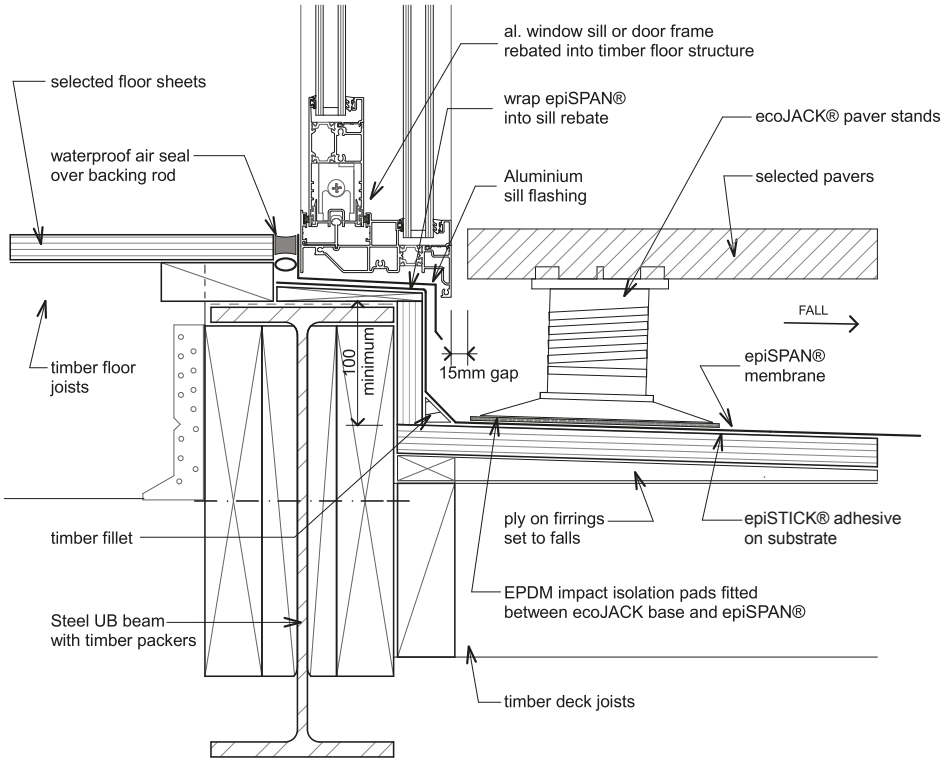
REVISION: 25 AUGUST 2014

Detail Drawings



epiD10 - ecoJACK® paver-threshold detail - type 1

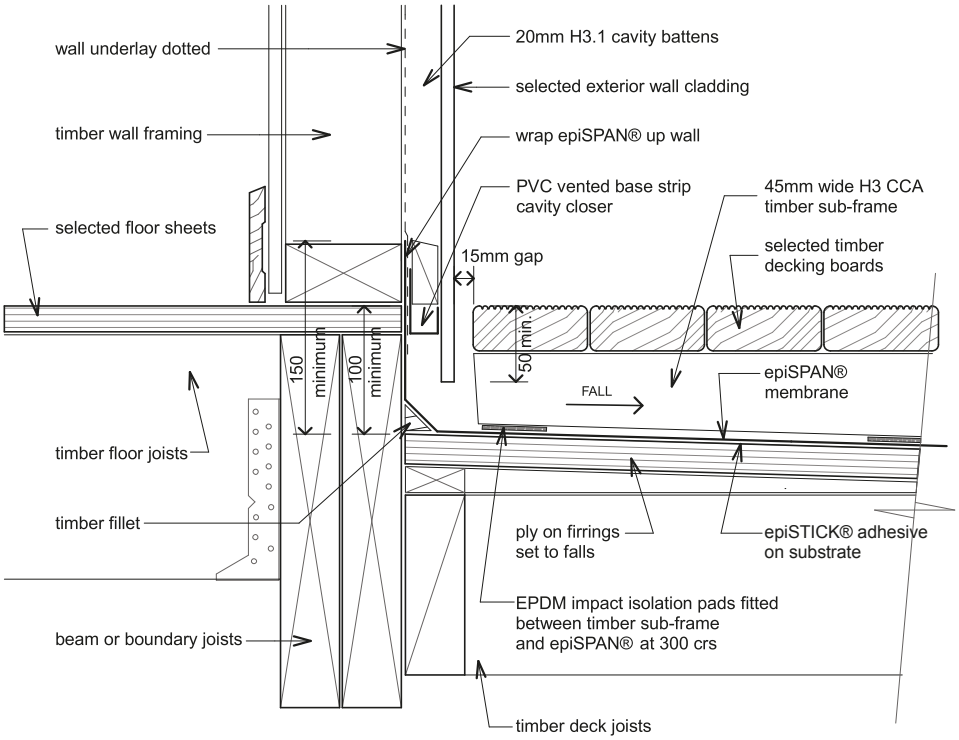
REVISION: 25 AUGUST 2014



epiD11 - ecoJACK® paver-threshold detail - type 2

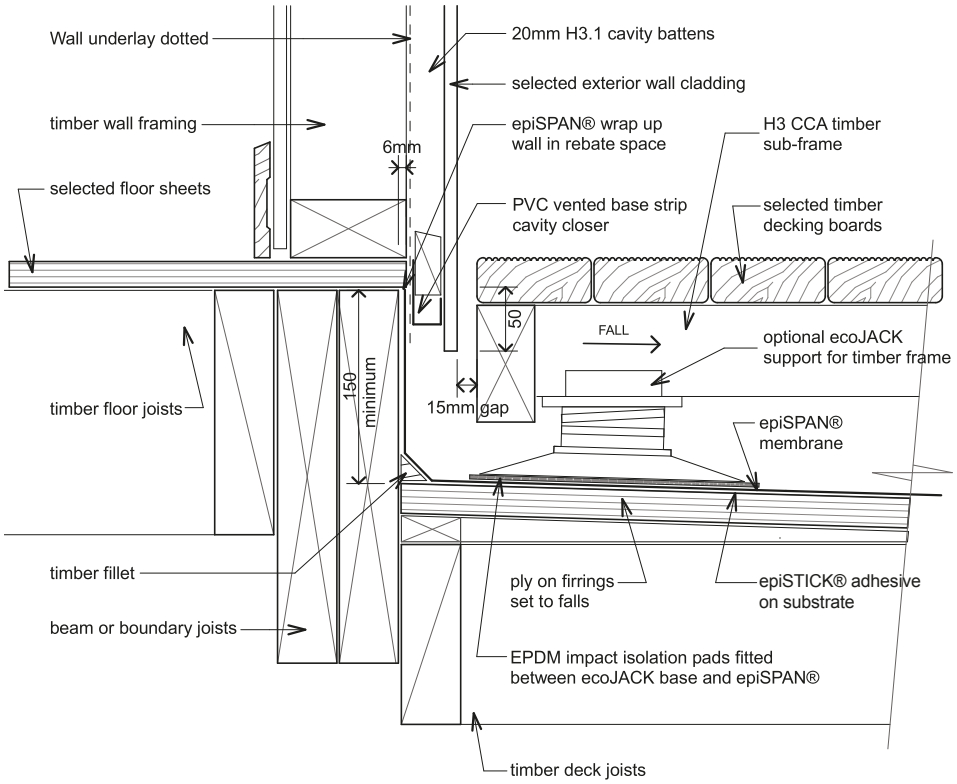
REVISION: 25 AUGUST 2014

Detail Drawings



epiD12 - timber raft floating deck-wall detail -type 1

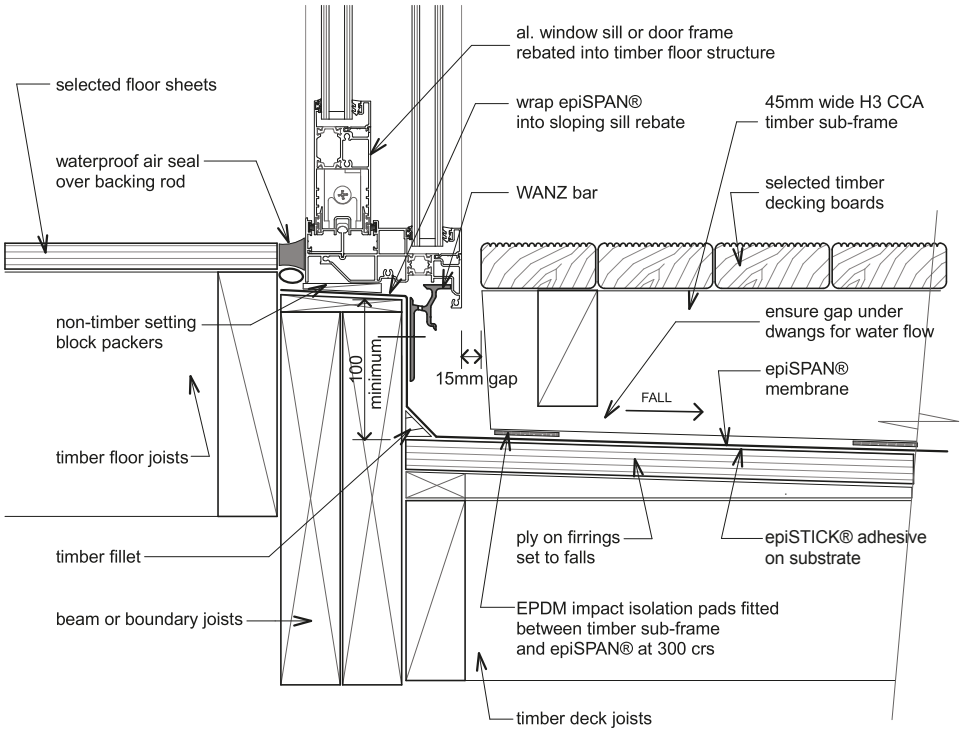
REVISION: 25 AUGUST 2014



epiD13 - timber raft floating deck-wall detail -type 2

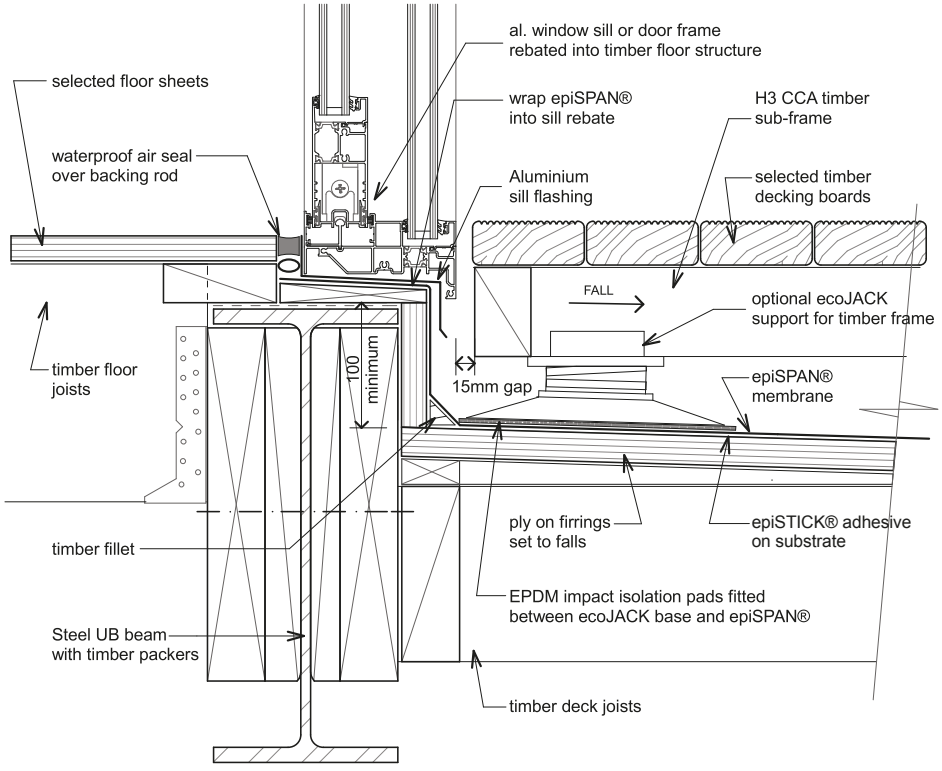
REVISION: 25 AUGUST 2014

Detail Drawings



epiD14 - timber raft floating deck-threshold detail - type 1

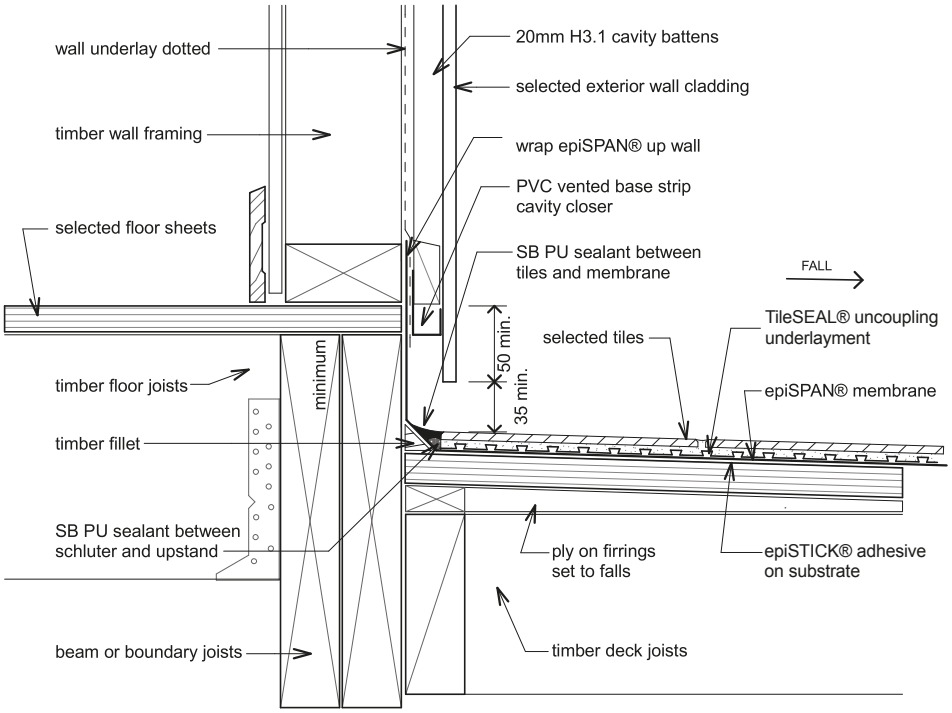
REVISION: 25 AUGUST 2014



epiD15 - timber raft floating deck-threshold detail - type 2

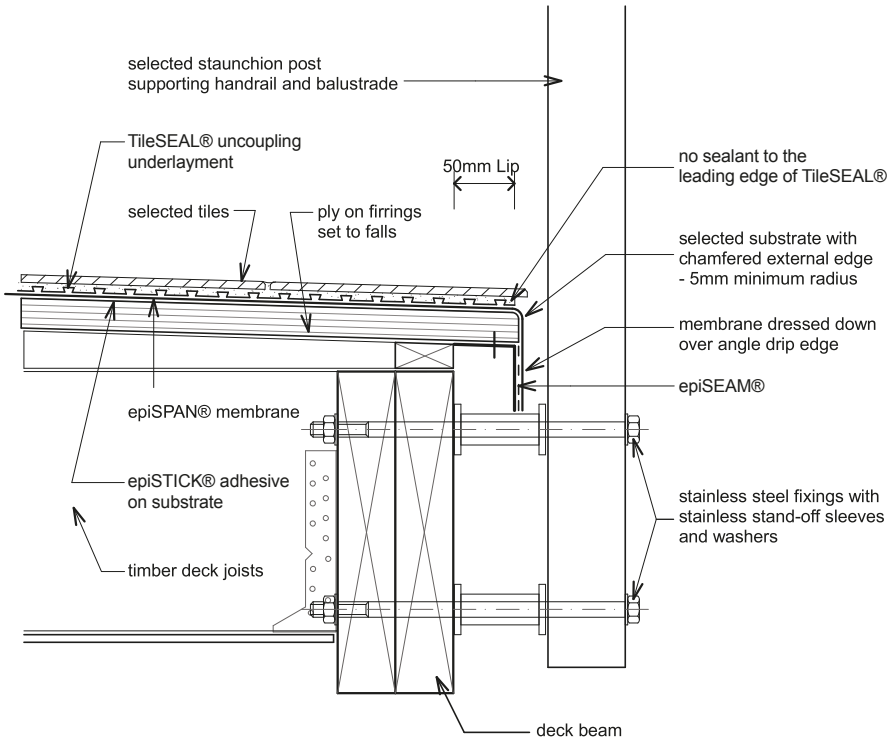
REVISION: 25 AUGUST 2014

Detail Drawings



epiD16 - Tiles (on Uncoupling underlay) - wall junction

REVISION: 25 AUGUST 2014



epiD17 - Tiles-balustrade junction

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