CELCRETE
CLADDING SYSTEMS

PANEL VENEER SYSTEM TECHNICAL MANUAL

Product Description and Building System Details

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CELCRETE PANEL VENEER SYSTEM

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CELCRETE PANEL VENEER SYSTEM

General Description

An exterior wall system comprising autoclaved aerated concrete masonry panels 50mm thick and reinforced with vertical and horizontal corrosion protected steel wires. It is suitable for the external walls of both single and two storeyed residential and light commercial buildings. After fixing, the external surfaces are coated with a reinforced plaster system **(see Appendix 1 for Plaster & Paint Specifications)**.

CELCRETE PANEL VENEER SYSTEM is the innovative marriage of this well proven masonry material with New Zealand lightweight timber or steel framing construction & external plaster finish.

The panels are fixed to the timber wall frame of the building using either a 40x40x200mm H3.2 timber batten tie that creates a 40mm cavity between the panels and the framing or a 20x40x300mm batten tie that creates a 20mm cavity between the panels and framing.
The panels are 600mm wide, with a dry density of 500kg/m3, about $1/5^{th}$ that of concrete.
CELCRETE 50mm veneer panels are available in a standard length of 2200mm.

Material Properties – 50mm Panel

CELCRETE PANELS have the following material properties:

Dry Density:	500kg/m^3
Working Density	610kg/m3
Compressive strength, f'c:	4.0 MPa
Modulus of Elasticity, E:	1500MPa
Water absorption (by volume):	up to 24 – 35%
Thermal Conductivity:	0.114 W/(mK)
Thermal Resistivity, R:	0.56 m^2K/W

CELCRETE PANEL VENEER SYSTEM

Performance

THE CELCRETE PANEL VENEER SYSTEM fixed in accordance with the details and instructions in this Technical Manual will meet the relevant clauses of the New Zealand Building Code (NZBC) being:

B1 – Structure
B2 – Durability
E2 – External Moisture
F2 – Hazardous Building Materials

Structure:

The panels and their fixings are able to withstand earthquake and wind loadings (up to and including extra high) in all areas of New Zealand in terms of NZS 3604:2011. The **CELCRETE PANEL VENEER SYSTEM** can also be used in specific design wind pressures up to a maximum design differential ultimate limit state (ULS) of 2.5kPa.

Durability:

When installed and maintained in accordance with this technical information as an exterior wall cladding system, the **CELCRETE PANEL VENEER SYSTEM** will meet the requirements of NZBC Clause B2.3.1(b).

External Moisture:

Provided that the integrity of the external plaster and coating system, flashings and any sealed joints are maintained, the requirements of clause E2.3.2 relating to the resistance of water penetration, are met by the system.

Maintenance: To ensure the integrity of the coating system is maintained, regular cleaning and inspections of the jointing and coating systems, plasters, flashings and any sealed joints must be carried out to ensure they remain in a weatherproof condition and routine maintenance performed as and when required. Any damage to the coating system must be promptly repaired by an approved applicator.

Hazardous Building Materials:

CELCRETE PANELS are non-hazardous in terms of Clause F2 of the NZBC providing the safety precautions included in this literature are adhered to.

Mass:

The working density of 50mm **CELCRETE PANELS** without the coating system is 31 kg/m^2. The weight per panel is 41kg.Once the coating system is applied the total weight is approximately 36kg/m2 and the overall mass is within the range for medium wall cladding defined in NZS 3604:2011

Insulation:

Insulation is installed to meet the requirements set out in H1/AS1.
The **CELCRETE PANEL VENEER SYSTEM** alone does not meet NZBC Acceptable Solution E3/AS1, Paragraph 1.1.1(a). Buildings must be designed with an adequate combination of thermal resistance and ventilation, and space temperature must be provided to all habitable spaces, laundries and other spaces where moisture may be generated or may accumulate.

Design Considerations (CAD REFs relate to 40mm Cavity System)

General:

While **CELCRETE PANELS** can be readily cut to sizes to suit, maximum efficiency and speed of installation is gained where wall and soffit heights and window and door openings are set out to a vertical 600mm module as panels are fixed horizontally. This is best established at the design stage, with due allowance being made for the corner details **(CAD REF 3-1)** and floor rebate or overhang of the floor slab.

Footings:

CELCRETE PANEL VENEER SYSTEM can be a used in place of thin sheet cladding material eg. fibre cement sheeting or polystyrene cladding and fixed with a 40mm or 20mm cavity on a timber frame. The panel shall be sat on a rebated step down in a similar manner to that provided for brick veneer, or alternatively shall be fixed with an overhang of the concrete slab or timber base **(CAD REFS 4-1, 4-2, 4-3 & 4-4)** in accordance with NZS 3604: 2011 Section 6.

Framing:

Timber studs shall be spaced at nominal 600 mm centres. Studs shall be sized as normal to suit the wind loadings, vertical loading and stud height in accordance with NZS 3604: 2011 Section 8 **(see Appendix 2 and 2a for Pre-Cladding Checklist).** All timber framing treatment is to comply with NZBC Acceptable Solution B2/AS1.

Damp Proof Course:

DPC to be in accordance with NZS 3604:2011 Section 2.3.3.

Bracing:

The timber framed walls shall be braced for a medium weight wall cladding in accordance with NZS 3604:2011 Section 5.

Wall Underlays:

Wall underlay to comply with Acceptable Solution E2 / AS1 Table 23 must be fixed to the exterior wall framing in accordance with Section 9.1.7 of E2 / AS1 before the **CELCRETE PANELS** are installed. Rigid underlay is required in Extra High Wind Zone and specifically designed buildings up to 2.5kPa design differential ULS wind pressure. Unlined gables and walls must incorporate a rigid wall underlay or an air barrier which meets the requirements of NZBC Acceptable Solution E2/AS1, Table 23. For attached garages, wall underlays must be selected in accordance with NZBC Acceptable Solution E2/AS1, Paragraph 9.1.3.4. Where rigid wall underlays up to 7mm thick are used, the 33mm Celcrete battens must be used. Where rigid underlay greater than 7mm are used, the cavity batten fixing lengths must be increased by a minimum of the thickness of the underlay.

Control Joints:

Horizontal control joints are used when timber joists are not seasoned **(CAD REF 6-2)**. Inter-storey drained joints are used when wall height exceeds two storeys or 7m **(CAD REF 6-3)** . If the distance between corners exceeds 8m then vertical control joints shall be located in line with window and door openings and at the sides of any large penetrations such as ranch sliders or garage doors**(CAD REF 6-1)**. Non-expressed control joints are located at internal and external corners. These joints require 4-8mm gaps between panels that are injected with low expandable PU foam **(CAD REFS 5-1 & 5-2)**.

Two storeyed construction: **CELCRETE PANELS** can be used for two storeyed construction when fixed in accordance with the detail in **CAD REF 3-3**.

Components

NOTE: Only components specified by **CELCRETE** are to be used in the **CELCRETE PANEL VENEER SYSTEM** and all references to components in the CAD details are for these products. All components are supplied to trained installers by Licensed Celcrete Distributors.

Panels:

600x2200x50mm autoclaved aerated concrete panels that are reinforced with vertical and horizontal corrosion protected steel wires.

Nails:

75mm galvanised ringshank nails are used to fix the timber batten ties to the framing.
All nails to comply with Acceptable Solution E2 / AS1 Table 20.

Screws:

10x75mm stainless steel screws are used for fixing the 50mm panels to the timber batten ties. All screws to comply with Acceptable Solution E2 / AS1 Table 20. They are suitable for all New Zealand conditions providing that they are fixed through the face of the panel and embedded a minimum of 5mm, and that the panel receives a **RENDERTEK** external plaster finish and paint finish that is properly maintained. Screws are positioned a minimum of 40mm in from the top and bottom edges of the panels.

Mortar Glue:

CELCRETE Mortar Glue is supplied by **CELCRETE** for use in the jointing and stopping of **CELCRETE PANELS.** This mortar is mixed on site and applied with the aid of a trowel.

Sealants:

Low expandable PU foam for use in control joints of **CELCRETE PANELS.**
Paintable urethane sealant.
All sealants shall comply with E2/AS1 Section 9.1.6 or be covered by a valid BRANZ Appraisal.

Zinc Primer:

Zinc primer complying with AS/NZS 2311:2000, Part 2.3 is applied to all exposed reinforcing steel.

Vents: (CAD REF 1-3)

Celcrete PVC vents are 110mm x 40mm (opening size) with vermin gauze.

Battens: (CAD REFS 2-1, 2-2 & 2-3)

40x40x200mm H3.2 timber batten ties.
33x40x200mm H3.2 timber batten ties.
20x40x300mm H3.2 timber batten ties.

Flashings: (CAD REF 1-2)

Celcrete PVC reveal bead flashing
Celcrete PVC sill flashing
Powder coated aluminium head flashings

Mouldings: (CAD REFS 1-1 & 1-2)

Celcrete PVC window head moulding
Celcrete PVC soffit moulding.
Celcrete PVC base cap moulding
Control Joint moulding

Adhesive:

All PVC flashings and mouldings are glued to the **CELCRETE PANELS** using a solvent based construction adhesive.

Plaster System:

RENDERTEK external mesh plaster system is used over **CELCRETE PANELS (see Appendix 1 for plaster specifications)**.

Fibreglass reinforcing mesh:

Alkali-resistant fibreglass reinforcing mesh that complies with Paragraph 9.9.3.2 of E2/AS1 is embedded in the Rendertek plaster system.

Paint System:

Once plaster has cured a paint system of at least two coats of an exterior grade latex acrylic paint complying with any of Parts 7,8,9 or 10 of AS3730 is applied **(see Appendix 1 for paint specifications)**.

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Installation

General:

CELCRETE PANEL VENEER SYSTEM must be constructed or supervised by trained and certified installers to ensure quality of workmanship. Please contact Celcrete International for details of Licensed Celcrete Distributors on **0508 CELCRETE (0508 2352 7383)**

Handling & storage:

CELCRETE PANELS should be stored on site on the pallets provided and kept dry until required. Care is required in handling the product and edges and corners must be protected from damage.

Safety precautions:

Autoclaved Aerated Concrete (AAC) dust contains crystalline silica in common with the dust from other concrete products including fibre cement products.
This dust is irritating to the eyes, skin and respiratory system and inhalation may cause irreversible damage to health.
Avoid breathing the dust and contact with eyes and skin. Wear suitable protective clothing and gloves.
When cutting, grinding or drilling panel do so in the open air or in well ventilated spaces and wear approved safety glasses and dust mask.
All aspects of cutting, grinding or drilling must comply with the latest regulations of the Occupational Safety & Health (OSH) division of the Labour Department.

Tools:

Tools that will be required to install **CELCRETE PANELS** include:

- Power drill with square drive
- Power saw with metal or diamond blade.
- Power planer
- Nail gun
- Safety glasses & dust mask
- Mortar mixer & bucket
- 50mm spreader trowel
- Stopping blade & sanding float

Construction Method 1 – Rebated Step-down:

1. Ensure builder has completed items set out in pre-cladding checklist **(see Appendix 2)**.

2. Check to ensure framing is straight and plumb with a straight edge, especially corner studs, and is sheathed with wall underlay in accordance with Acceptable Solution E2/AS1 Table 23.

3. Measure 600mm up the stud from the step down of the footing then mark a horizontal line around the building. Repeat this method at 600mm intervals up to the soffit line or top plate **(CAD REF 3-1)**.

4. Nail 200mm long x 40mm thick or 300mm long x 20mm thick H3.2 timber batten ties vertically with two nails, firstly from the bottom of the bottom plate, in line with studs. In extra high wind zones three nails per batten tie are required. Repeat this method on existing chalk lines, at 600mm centres, so that the batten ties are centralised. Batten ties can be planed to allow for any irregularities in the framing. In areas where there is face-mounted brace ply substitute the 40mm thick batten ties for 33mm thick batten ties. When using a 20mm thick batten tie brace ply must be checked in flush with the framing.

5. Calculate the quantity of panels required for the first course around the building. Making allowances for window and door openings cut slots for PVC vents (110mm long x 40mm high) into the bottom of the panels at a maximum of 1200mm intervals.

6. Spread Celcrete mortar glue onto rebate (approx 2-3mm thick) and starting from a corner place the first panel, horizontally, onto the mortar. Using a spirit level ensure panel is level and is flush with the rebate edge. Push the panel hard against the batten ties and screw fix through the exterior face into the 200mm or 300mm long H3.2 batten ties, a minimum of 40mm in from the edge of the panel. The screw must be wound into the panel until the head is embedded by 5mm and a minimum of six screws are required per panel. Panels must span a minimum of two studs, cantilevered a maximum of 500mm beyond the stud.

7. Spread Celcrete mortar glue 2-3mm thick along the vertical edge of the panel and abut the next panel hard against the fixed panel. Ensure this panel is level also and screw to batten ties as before. This procedure is repeated around the perimeter of the building.

8. Spread Celcrete mortar glue, approx 2-3mm thick along the top edge of the first row of panels, approx. one panel length at a time. Lay the next row of panels with a half or quarter stretcher bond, then screw panels to timber batten ties as before.

9. Panels must be cut to size so that wherever possible no reinforcing steel is exposed to openings or corners. Where exposed it must be treated with zinc primer.

10. At window and door openings fix sill flashings and window head mouldings to edge of panels prior to screwing panels to timber batten ties **(CAD REFS 7-1, 7-3 & 7-6**).

11. For non-expressed control joints on external corners extend the panels 90mm for a 40mm cavity or 70mm for a 20mm cavity past the corner of the framing with the abutting panel installed, end to side, with a 4-8mm gap which shall be injected with a low expandable PU foam **(CAD REF 5-1)**. For non-expressed control joints at internal corners panels abut, end to side, with a 4-8mm gap and they shall be filled in the same way as external control joints **(CAD REF 5-2)**.

12. When installing Celcrete panels around window and door openings wherever possible abut the factory edge of the panel into the joinery. Where cut panels are abutting the aluminium joinery, any exposed steel reinforcing must be treated with zinc primer. Where

openings are over 2.2m in length and panels are abutting the joinery make sure that the factory edge on the off-cut panel is abutting the joinery.

Construction Method 2 – Panels Overhanging Foundation:

1. Ensure the builder has completed items set out in pre-cladding checklist **(see Appendix 2)**.

2. Check to ensure framing is straight and plumb with a straight edge, especially corner studs and is sheathed with wall underlay in accordance with Acceptable Solution E2/AS1Table 23.

3. Measure a minimum of 50mm down from floor level and mark with a chalk line, then measure up 600mm from this line and mark a horizontal line around the building. Repeat this method at 600mm intervals up to the soffit line of top plate.

4. Starting from the baseline nail the 200mm long x 40mm thick or 300mm long x 20mm thick H3.2 timber batten ties, vertically, to the studs (two nails per batten tie or three nails per batten tie in extra high wind zones). Repeat this method on marked chalk lines at 600mm centres, so that the batten ties are centralised. Batten ties can be planed to allow for any irregularities in the framing. In areas where there is face-mounted brace ply substitute the 40mm thick H3.2 batten ties for 33mm thick batten ties. When using a 20mm thick H3.2 batten tie brace ply must be checked in flush with the framing.

5. Starting from a corner place the first Celcrete panel horizontally on to timber support blocks, if required, and using a spirit level ensure the panel is level. Push the panel hard against the batten ties and screw fix through the exterior face into the 200mm long H3.2 batten ties, a minimum of 40mm in from the edge of the panel. The screw must be wound into the panel until the head is embedded by 5mm and a minimum of six screws are required per panel. Panels must span a minimum of two studs, cantilevered a maximum of 500mm beyond the stud.

6. Spread Celcrete mortar glue, 2-3mm thick along the vertical edge of the panel and abut the next panel hard against the fixed panel. Ensure this panel is level also and screw to batten ties as before. This procedure is repeated around the perimeter of the building.

7. Fix the Celcrete PVC base cap/vermin strip to the bottom edge of the panels **(CAD REF 4-2)** using a solvent based construction adhesive.

8. Spread Celcrete mortar glue, approx. 2-3mm thick along the top edge of the first row of panels, approx. one panel length at a time. Lay the next row of panels with a half or quarter stretcher bond, then screw panels to timber batten ties as before.

9. Panels must be cut to size so that wherever possible no reinforcing steel is exposed to openings or corners. Where exposed it must be treated with zinc primer.

10. At window and door openings fix sill flashings and window head mouldings to edge of panels prior to screwing panels to timber batten ties **(CAD REFS 7-1, 7-3 & 7-6)**.

11. For non-expressed control joints on external corners extend the panels 90mm for a 40mm cavity or 70mm for a 20mm cavity past the corner of the framing with the abutting panel installed, end to side, with a 4- 8mm gap which shall be injected with a low expandable PU foam **(CAD REF 5-1)**. For non-expressed control joints at internal corners panels abut, end to side, with a 4-8mm gap and they shall be filled in the same way as external control joints **(CAD REF 5-2)**

12. When installing Celcrete panels around window and door openings wherever possible abut the factory edge of the panel into the joinery. Where cut panels are abutting the aluminium joinery, any exposed steel reinforcing must be treated with zinc primer. Where openings are over 2.2m in length and panels are abutting the joinery make sure that the factory edge on the off-cut panel is abutting the joinery.

PVC Flashings / Mouldings:

All PVC flashings and mouldings are glued to the **CELCRETE PANELS** using a solvent based construction adhesive.
Celcrete window head mouldings are fixed above all openings (excluding meter box) **(CAD REF 7-1)**.
Celcrete sill flashings are fixed below openings **(CAD REF 7-3)**.
Celcrete PVC reveal bead are fixed to jambs **(CAD REF 7-2)**. .
Celcrete base cap moulding are fixed to bottom of panels in all situations where panel is overhanging foundation **(CAD REF 4-2, 4-3 & 4-4)**, overhanging roofs **(CAD REF 8-1)** and any other area (other than openings) where panel is not sitting on rebate **(CAD REFS 9-2& 12-2)**.
Celcrete soffit mouldings are fixed to soffit edge **(CAD REF 8-2)**.
Control joint mouldings are used when seasoned joists have not been used **(CAD REF 6-2)**. They are also used for vertical and horizontal control joints **(CAD REF 6-1)**.
Celcrete vents are fitted once plastering is completed.

Openings:

Typical window details are shown in **CAD REFS 7-1, 7-1a, 7-2, 7-3, 7-4, 7-5 & 7-6**.
Panels over doors and windows shall be as provided or cut from full **CELCRETE PANELS.**

Penetrations:

Typical penetrations are shown in **CAD REFS 11-1 & 11-2**.

Corners:

CELCRETE PANELS are butted together, end to side, at corners allowing for a 4-8mm non-expressed control joint **(CAD REFS 5-1 & 5-2)**.

Control joints:

Non-expressed control joints are formed at external and internal corners by separating adjacent panels by 4-8mm and the gap filled with a low expandable PU foam **(CAD REFS 5-1 & 5-2).** If the distance between corners exceeds 8m then vertical control joints are located in line with window and door openings and at the sides of large penetrations such as garage doors and ranch sliders **(CAD REF 6-1)**. Horizontal control joints are required if seasoned joists have not been used **(CAD REF 6-2)**. Inter-storey drained joints are required if wall height exceeds two storeys or 7m **(CAD REF 6-3).**

CELCRETE PANELS cannot be used for retaining walls or in any situation where they come into contact with the ground.

CELCRETE PANEL VENEER SYSTEM

External Plaster and Paint System

(See Appendix 1 for Plaster and Paint Specifications)

General:

Rendertek Plaster is the only plaster system to be applied over **CELCRETE**. It is a specially formulated polymer modified cement based plaster system with a fibreglass reinforcing mesh trowelled into the first coat.

Preparation:

Full and thorough preparation of the **CELCRETE PANELS** must be carried out prior to the application of the **Rendertek Plaster**. Ensure all items listed on pre-coating checklist have been completed **(see Appendix 3)**.

Application of Plaster:

The **Rendertek Plaster** system is only to be applied by an applicator approved by **CELCRETE INTERNATIONAL**.

Before commencing application the applicator must ensure that all required preparation has been carried out and that the **CELCRETE PANELS** are suitably dry and ready for the application.

Apply the base coat of plaster with the reinforcing mesh trowelled in. Apply the second coat to bring the plaster to a flat and level finish.

Allow the plaster to dry before applying a further finishing coat of plaster if a decorative finish is required.

Application of Paint:

After plaster has cured a paint system of at least two coats of an exterior grade latex acrylic paint complying with any of parts 7,8,9 or 10 of AS3730 is applied to provide colour and water protection. **CELCRETE INTERNATIONAL** recommends Dulux Acra Tex 968 Elastomeric 201.

CELCRETE PANEL VENEER SYSTEM

Maintenance:

Regular maintenance is essential to ensure that the performance requirements of the NZBC are continually met.

An annual inspection must be made to ensure that all aspects of the cladding system are in a weatherproof condition. This means that the paint coating system, plaster, flashings and all sealed joints must be thoroughly checked to confirm that they are still weathertight. All cracks, damaged areas or areas showing signs of deterioration which would allow water ingress must be repaired immediately. These areas must be repaired with materials specified by CELCRETE. Sealant, paint coatings etc. must be repaired in accordance with manufacturer's specifications.

Please contact **CELCRETE INTERNATIONAL** on **0508 CELCRETE (0508 2352 7383)** for a list of **CELCRETE** materials and for information on carrying out any repairs that may be required.

Annual cleaning of the paint coating by washing down with warm water, detergent and a soft brush shall be carried out to maximise the life of the coating. The paint coating system shall be recoated approx, every 5-10 years in accordance with manufacturer's specifications.

It is essential that the **CELCRETE PANELS** maintain the minimum ground clearance at all times in accordance with the details and specifications set out in this Technical Manual.

CELCRETE PANEL VENEER SYSTEM

The following construction details describe the most commonly used applications of the **CELCRETE PANEL VENEER SYSTEM**. If designers / specifiers require additional or modified details please contact Celcrete International immediately on:
0508 CELCRETE (0508 2352 7383).

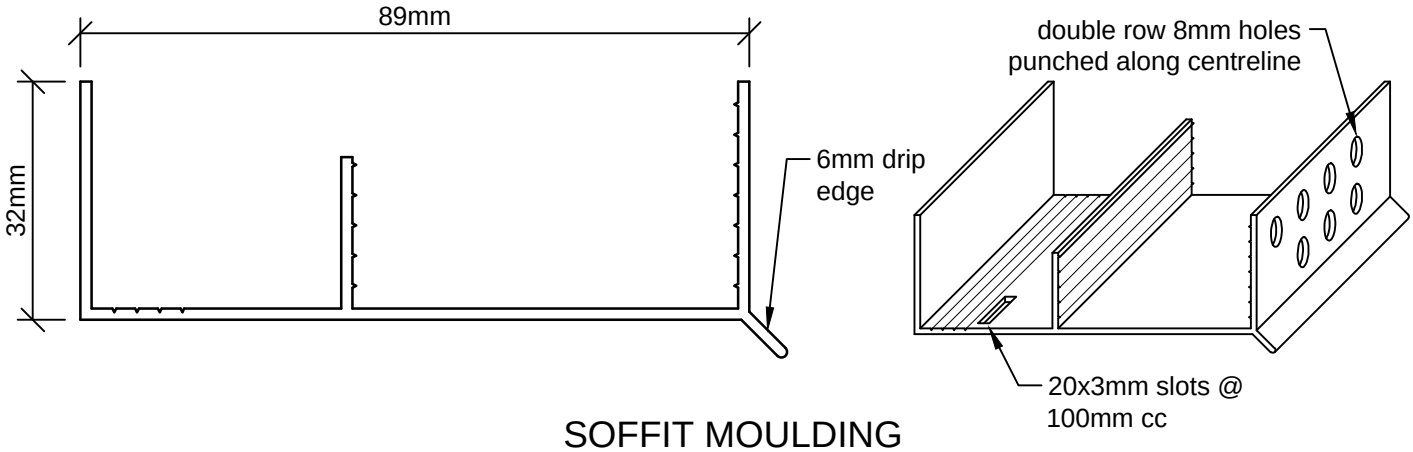
40mm cavity details

Selected 20mm cavity details

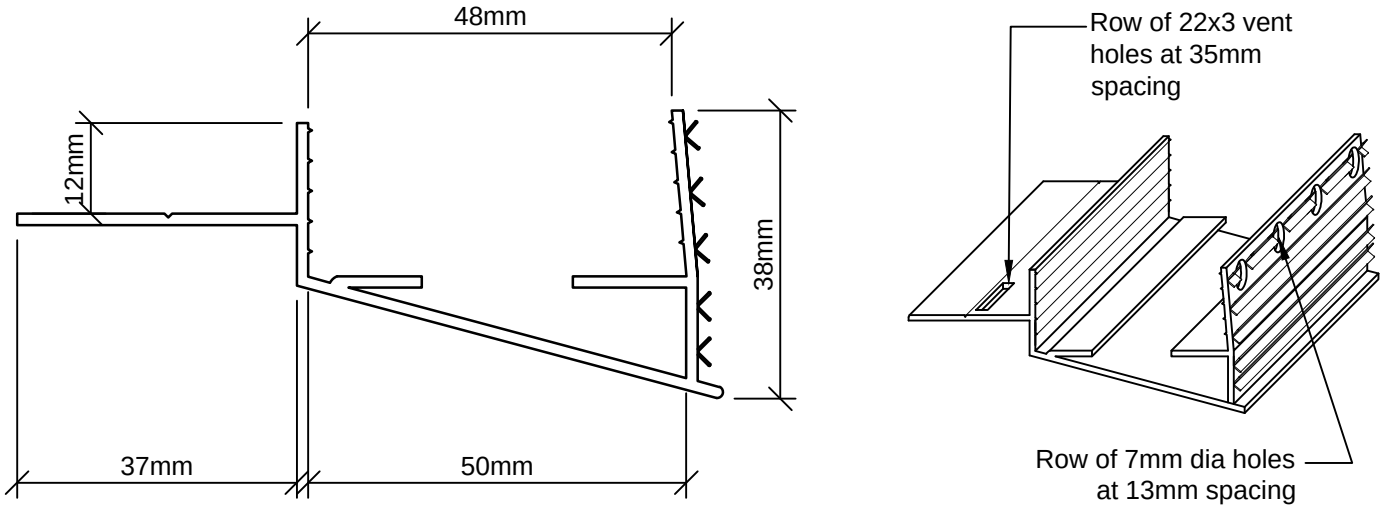
3-1-20	Panel veneer system fixing details
3-1-20a	Panel veneer system fixing details
3-2-20	Single storey section
4-1-20	Rebated step-down footing detail
4-2-20	Overhanging footing details
5-1-20	Celcrete panel external corner junction
5-2-20	Celcrete panel internal corner junction
7-1-20	Aluminium window head
7-1a-20	Aluminium window head
7-2-20	Aluminium window jamb
7-3-20	Aluminium window sill
8-2-20	Soffit edge detail
8-3-20	Exposed monoplane roof & soffit junction
8-6-20	Celcrete panel soffit eaves junction
8-8-20	Roof / wall junction detail
11-1-20	Penetration through wall cladding for pipes
11-2-20	Penetration through wall cladding for meter boxes
13-1-20	Timber garage door head detail
13-2-20	Timber garage door jamb detail

Appendix 1	Plaster and Paint Specifications
Appendix 2 & 2a	Builders Checklist
Appendix 3	Pre-Coating Checklist

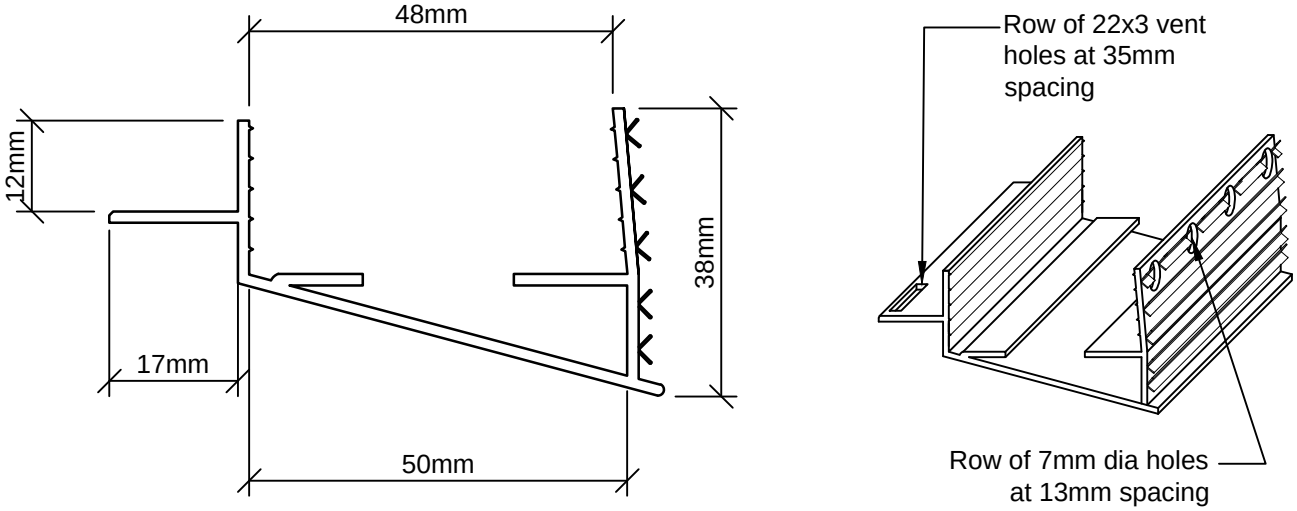
40mm CAVITY DETAILS



SOFFIT MOULDING

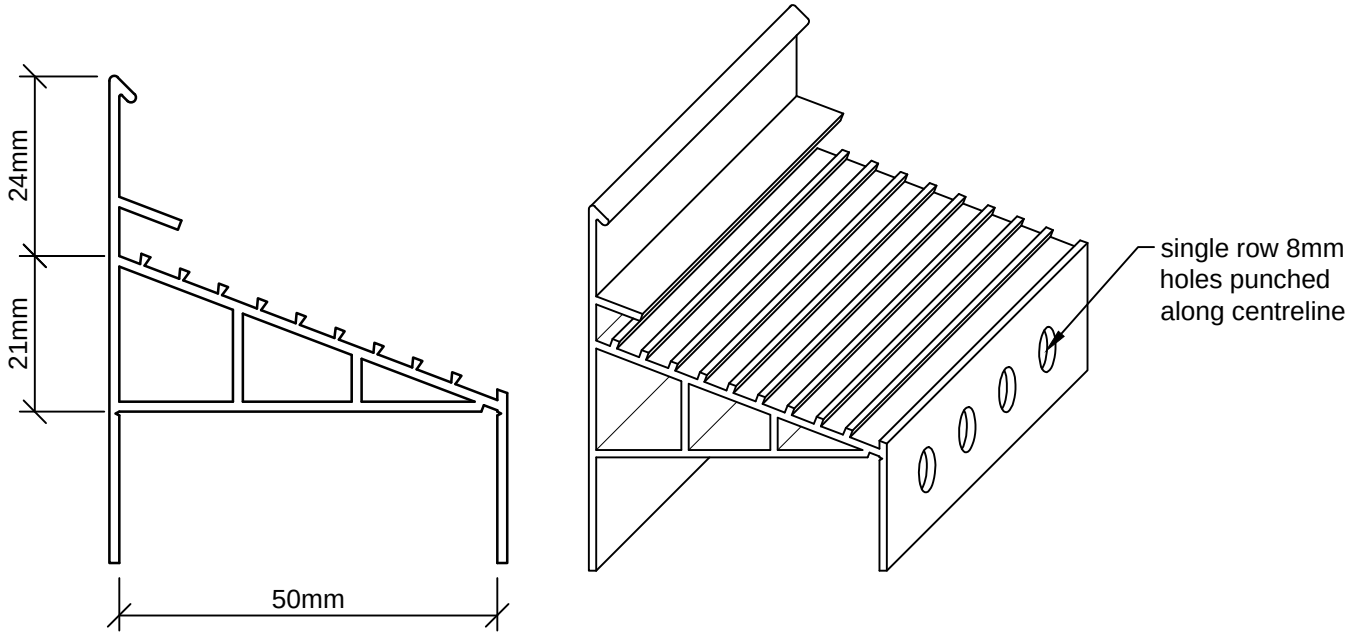


WINDOW HEAD / BASE CAP MOULDING 40mm

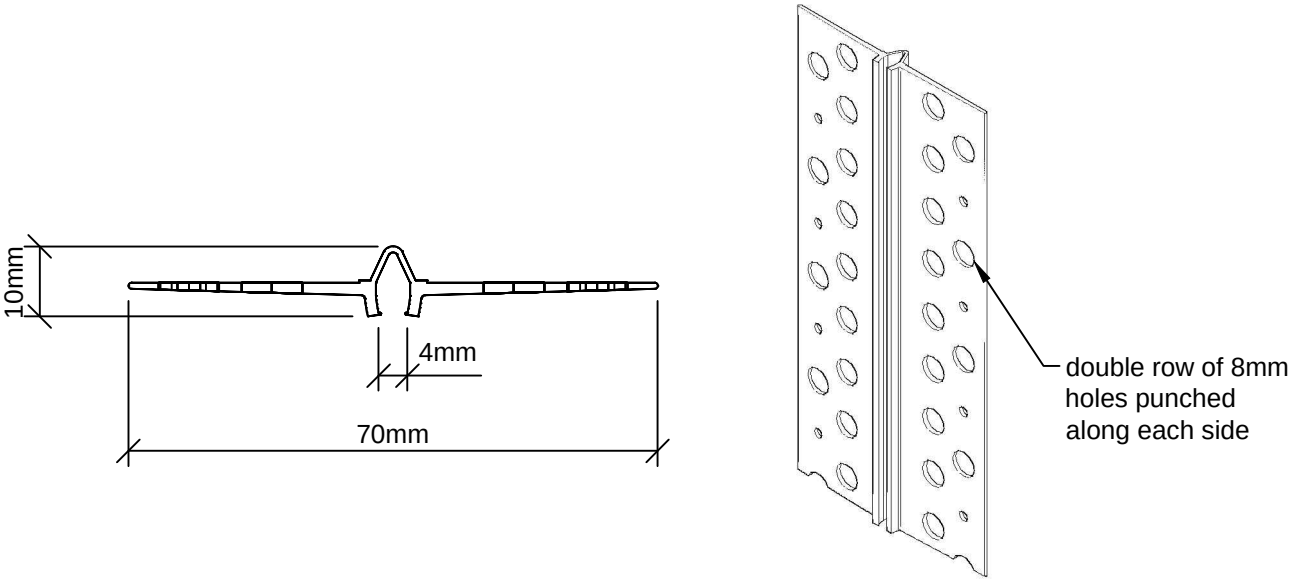


WINDOW HEAD / BASE CAP MOULDING 20mm

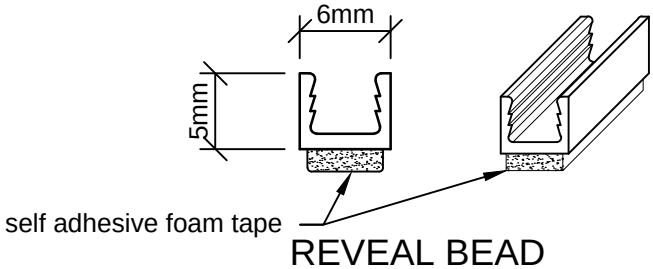
CAD REF 1-1
SCALE 1:1



50mm HOLLOW SILL FLASHING

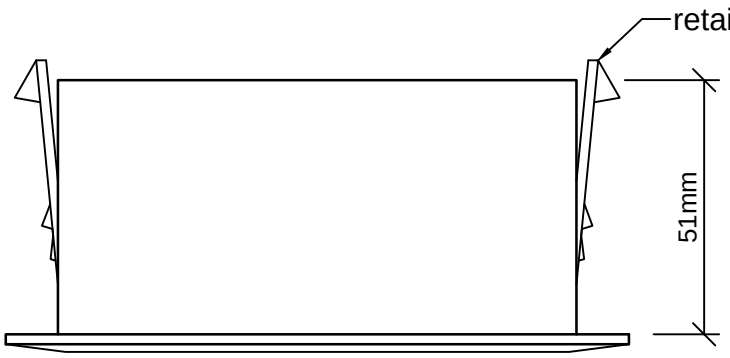


CONTROL JOINT MOULDING

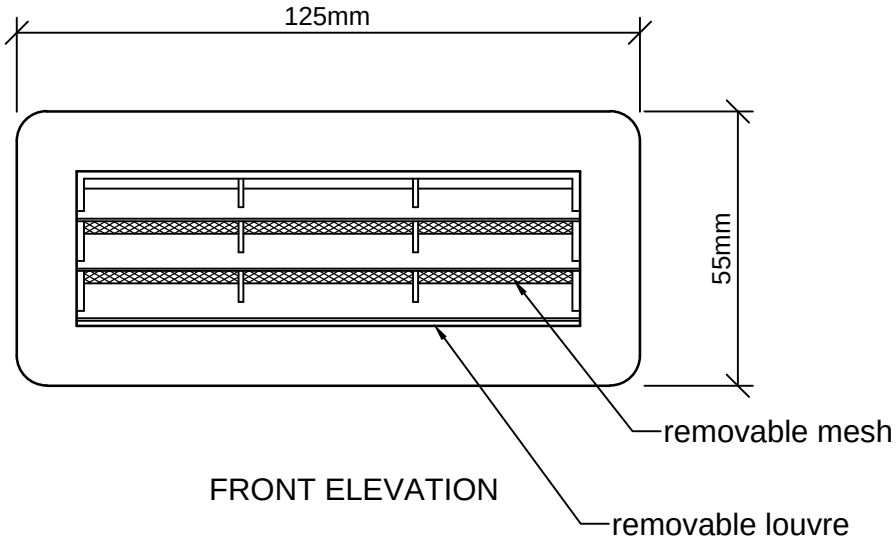


REVEAL BEAD

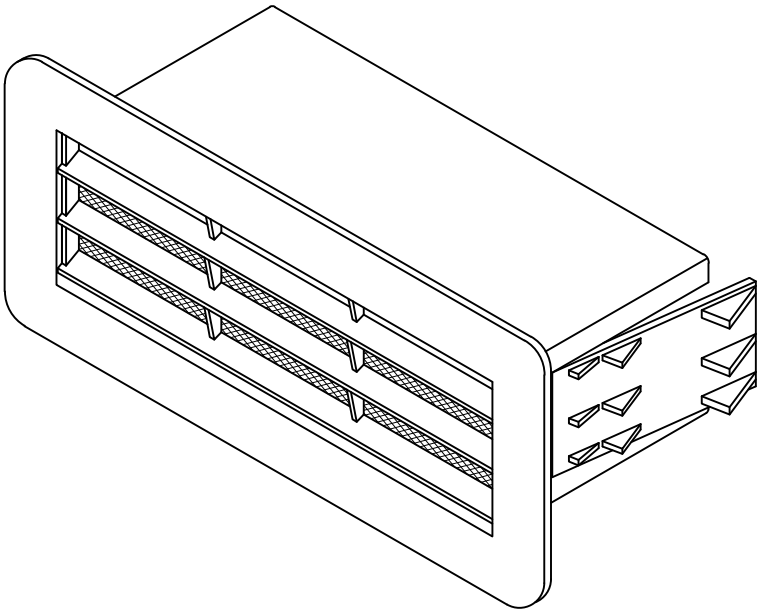
CAD REF 1-2
SCALE 1:1



PLAN



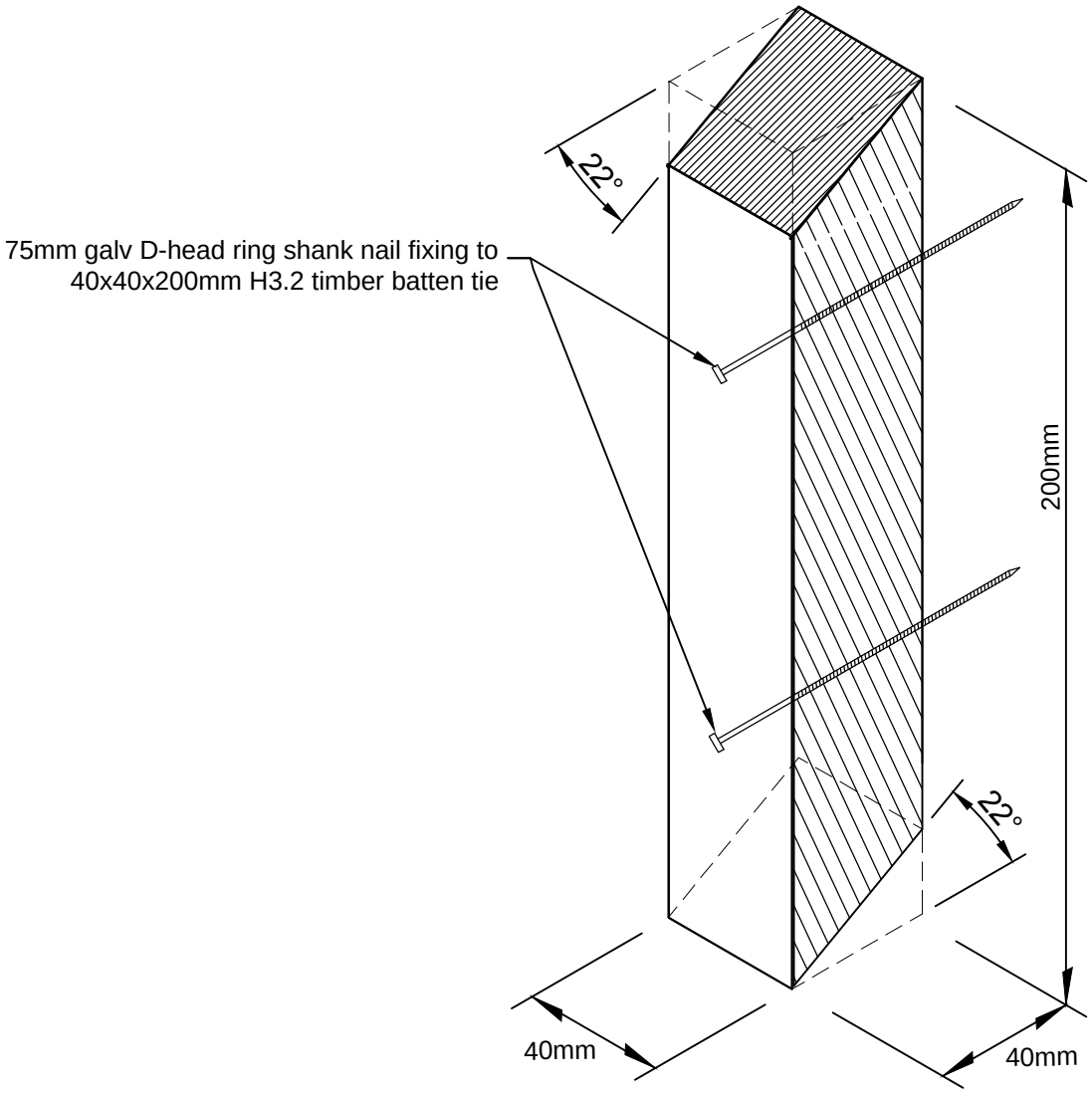
FRONT ELEVATION



ISOMETRIC VIEW

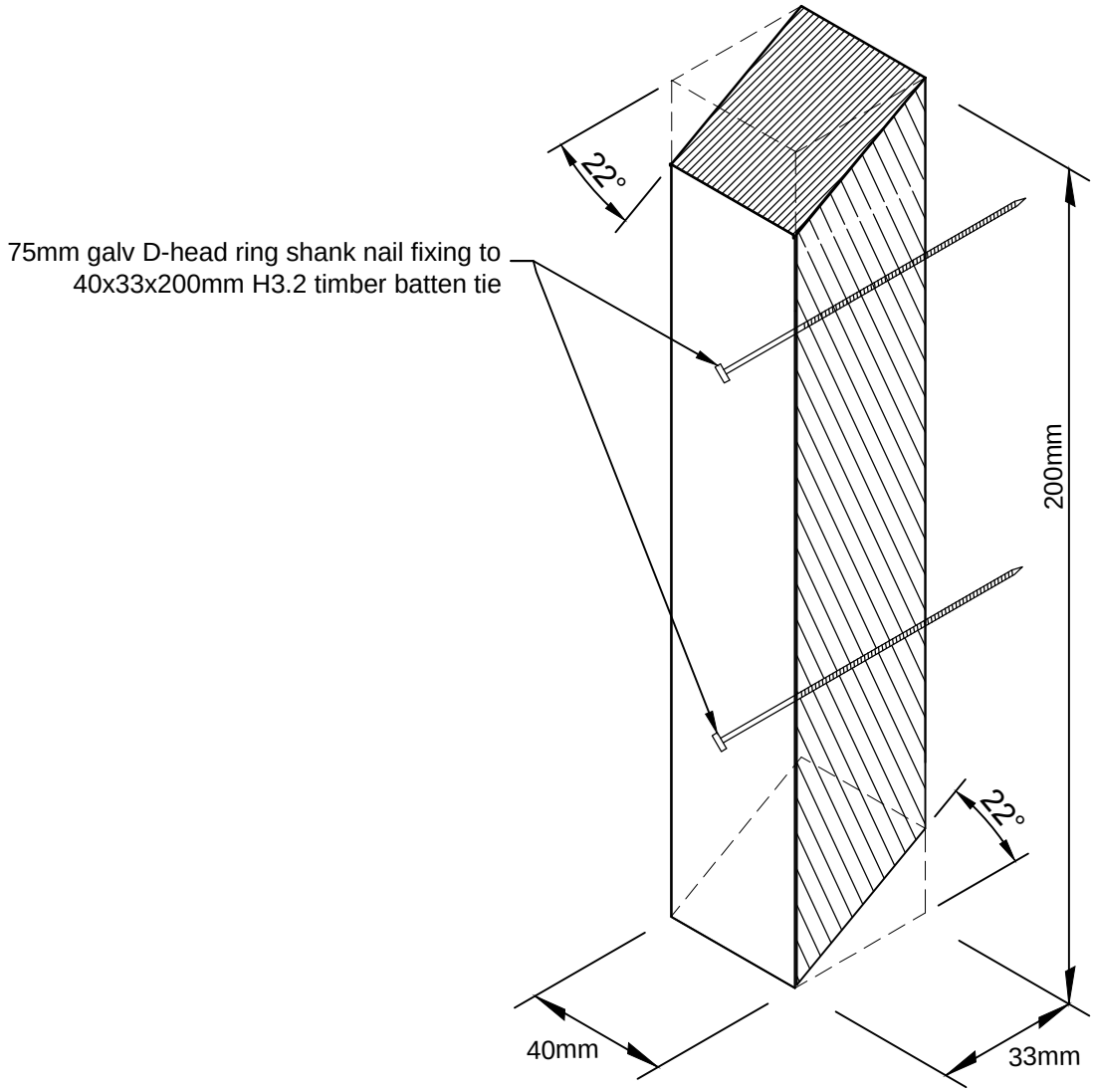
CELCRETE VENT

CAD REF 1-3
N.T.S.



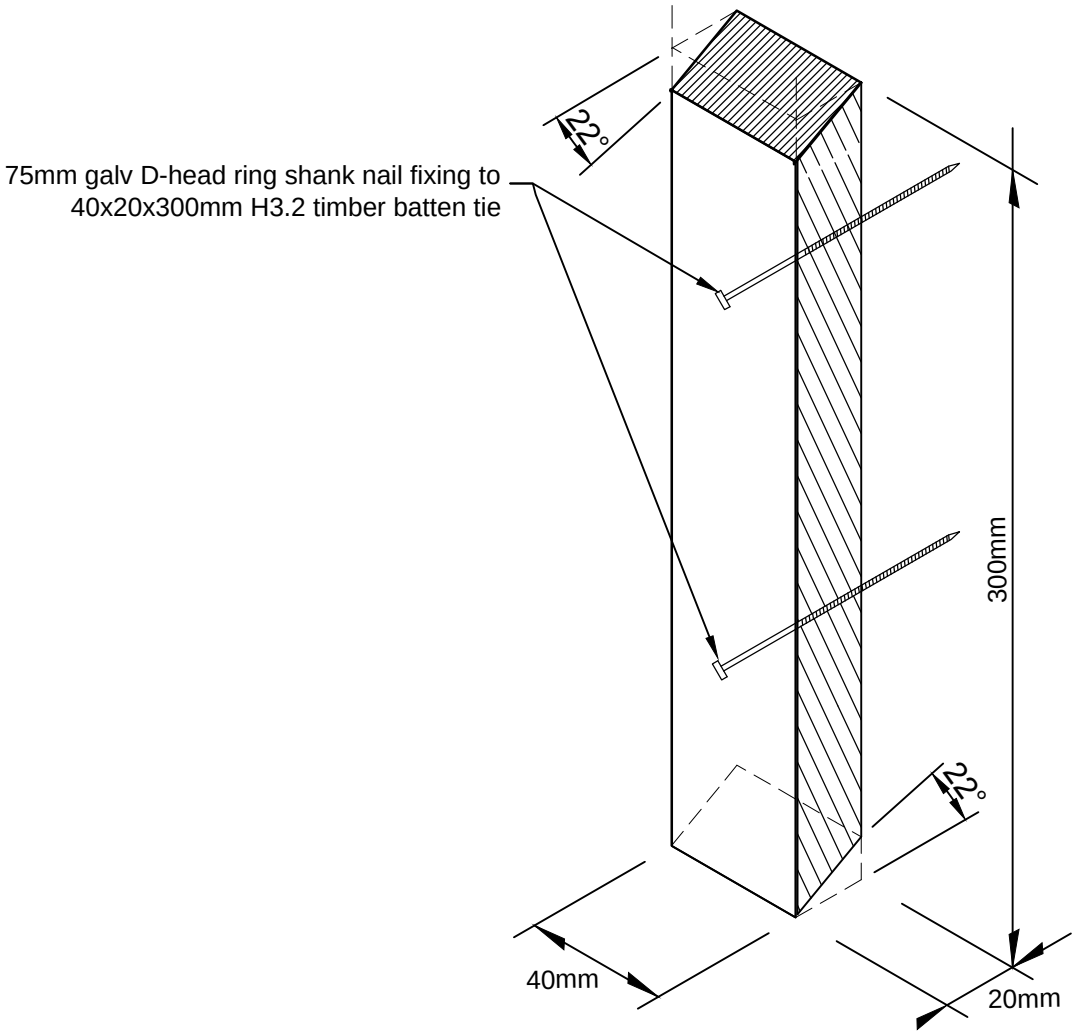
CELCRETE BATTEN TIES - 40mm CAVITY

H3.2 timber
CAD REF 2-1
SCALE 1:10



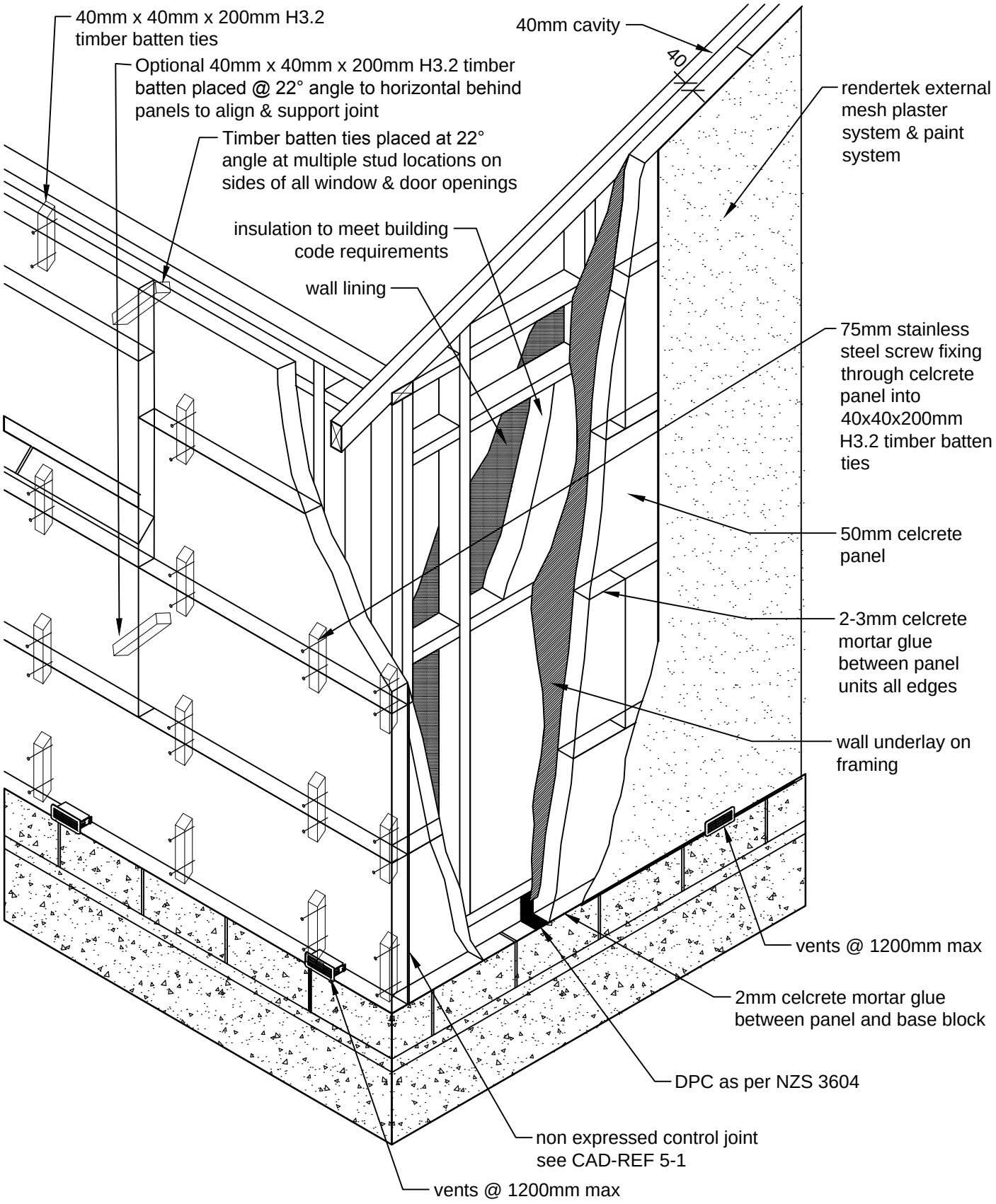
CELCRETE BATTEN TIES FOR 7mm PLY BRACE SHEETS

H3.2 timber
CAD REF 2-2
SCALE 1:10



CELCRETE BATTEN TIES - 20mm CAVITY

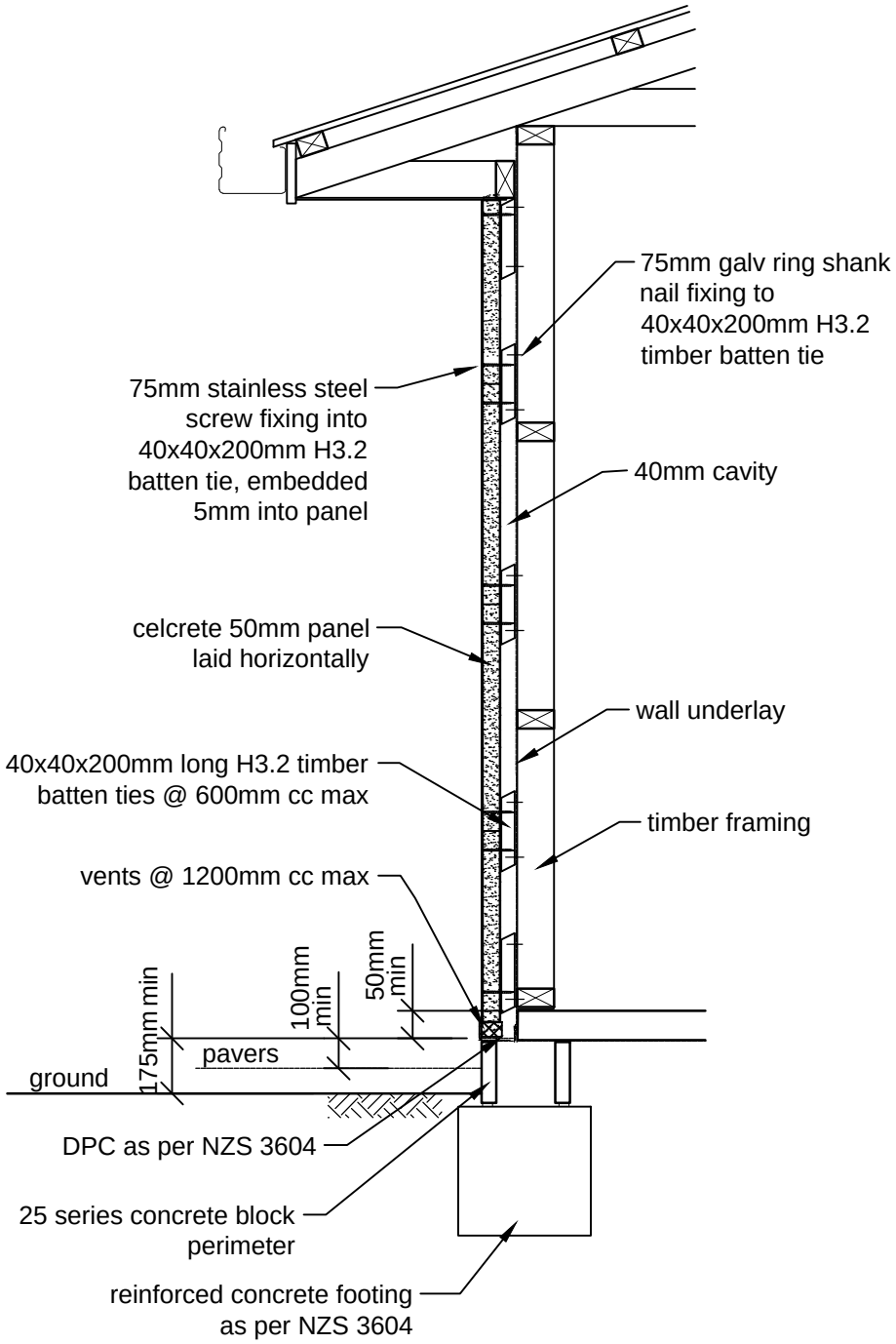
H3.2 timber
CAD REF 2-3
SCALE 1:10



CELCRETE 50mm PANEL VENEER SYSTEM FIXING DETAILS

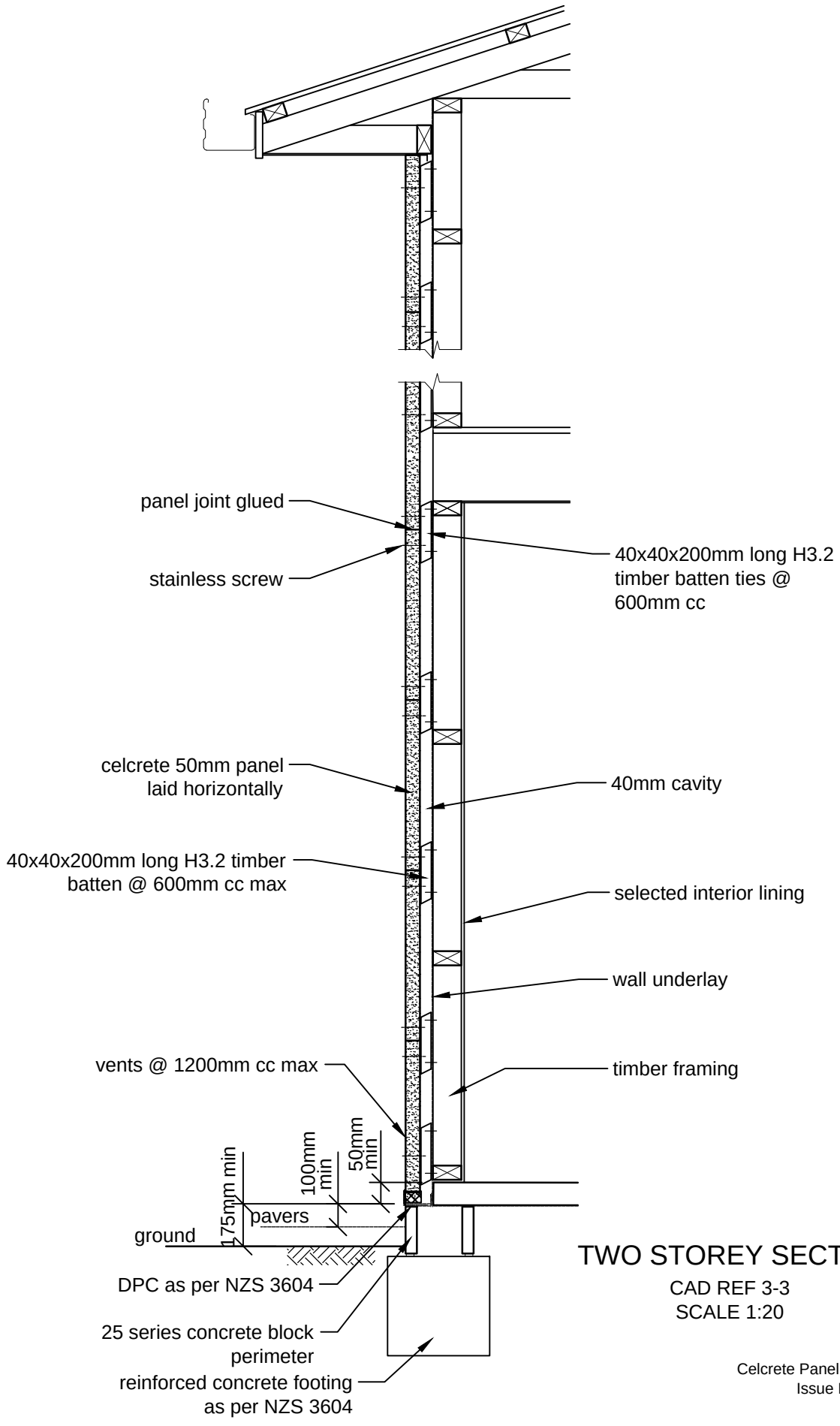
CAD REF 3-1
SCALE 1:20

Celcrete Panel Veneer System
Issue Date: Sept 2012



SINGLE STOREY SECTION

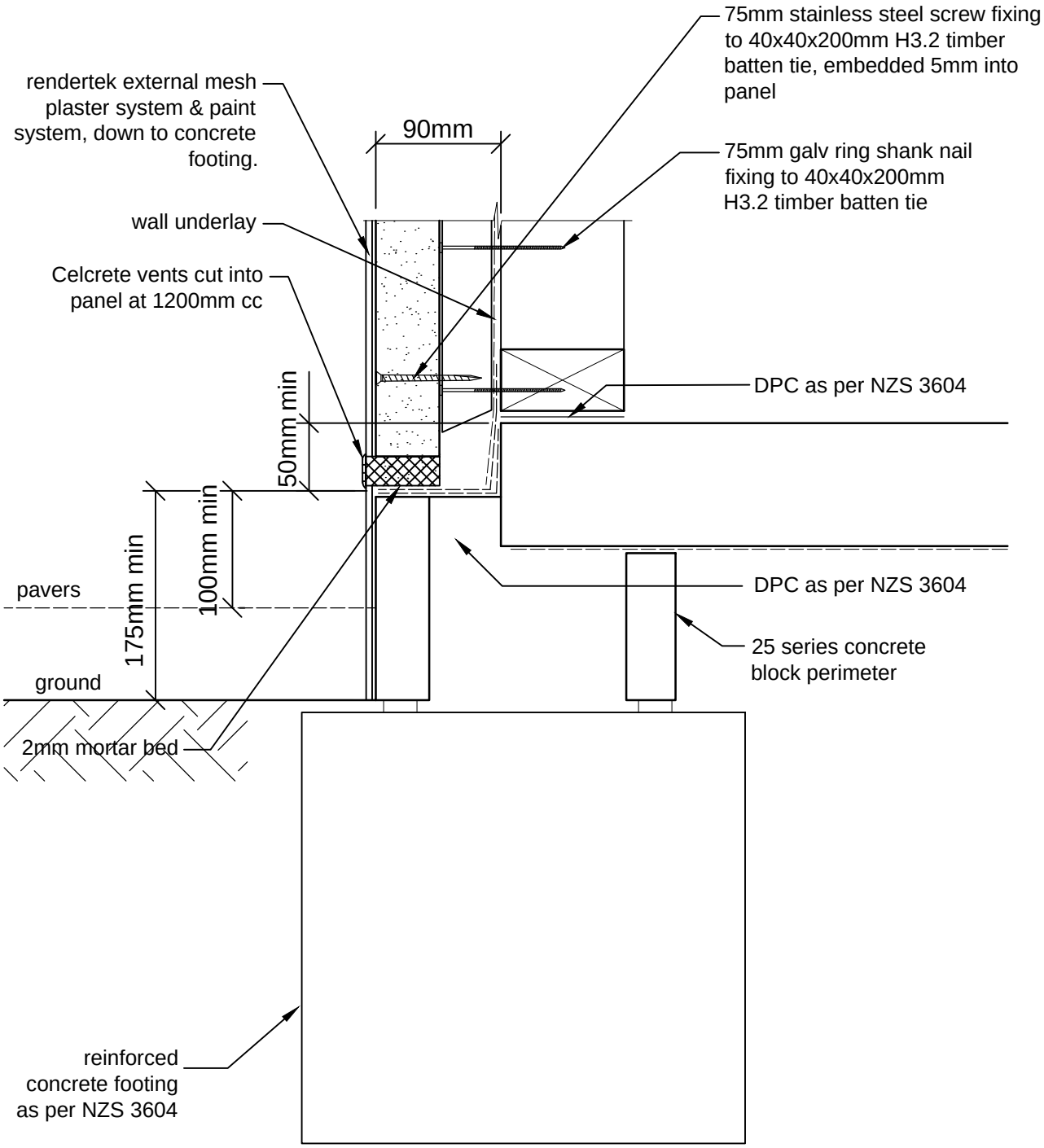
CAD REF 3-2
SCALE 1:20



TWO STOREY SECTION

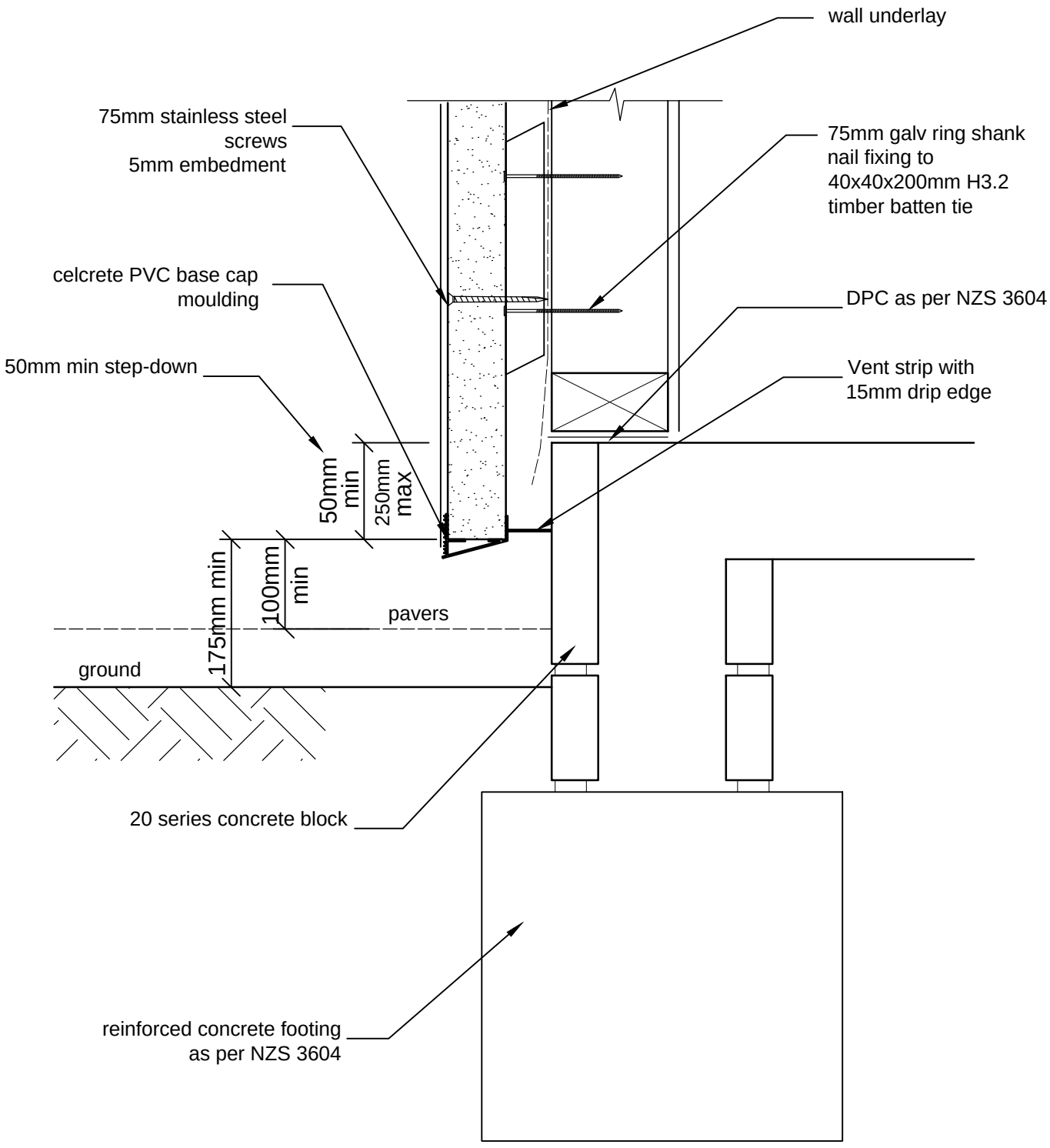
CAD REF 3-3
SCALE 1:20

Celcrete Panel Veneer System
Issue Date: Sept 2012



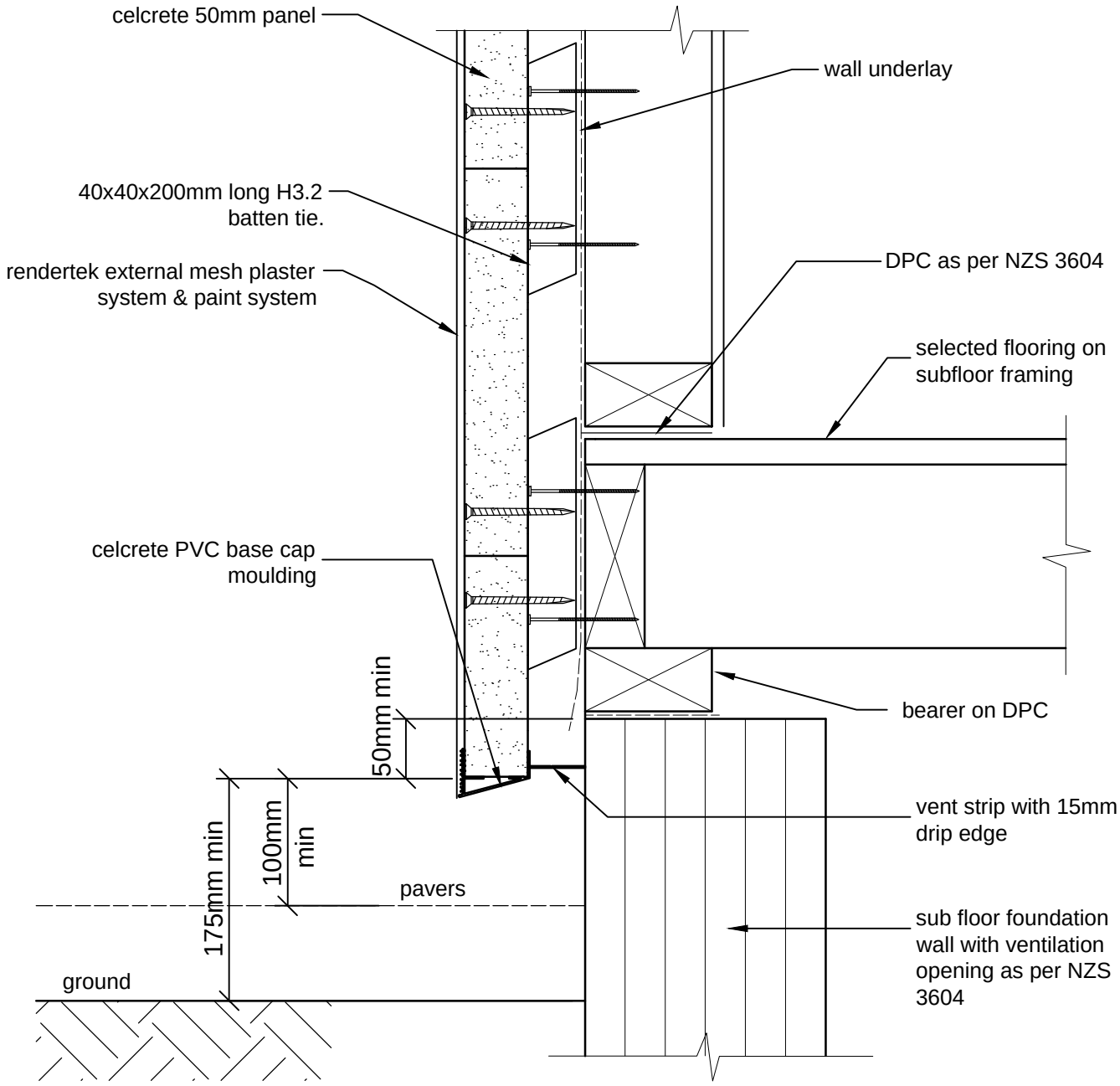
REBATED STEP-DOWN FOOTING DETAIL

CAD REF 4-1
SCALE 1:5



OVERHANGING FOOTING DETAIL

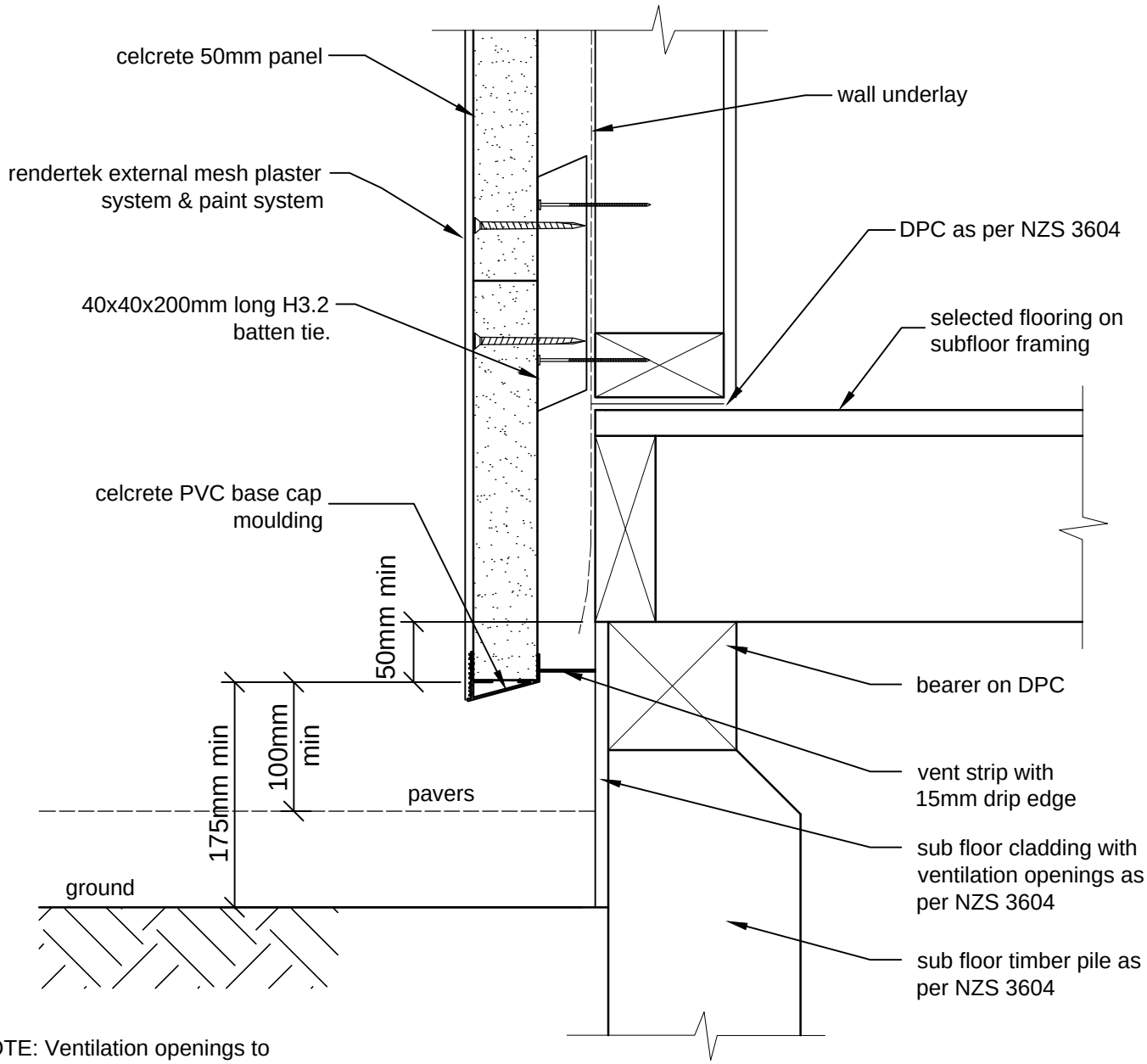
CAD REF 4-2
SCALE 1:5



NOTE: Ventilation openings to provide minimum ventilation of 1000m² per lineal metre of wall

TIMBER FLOOR DETAIL

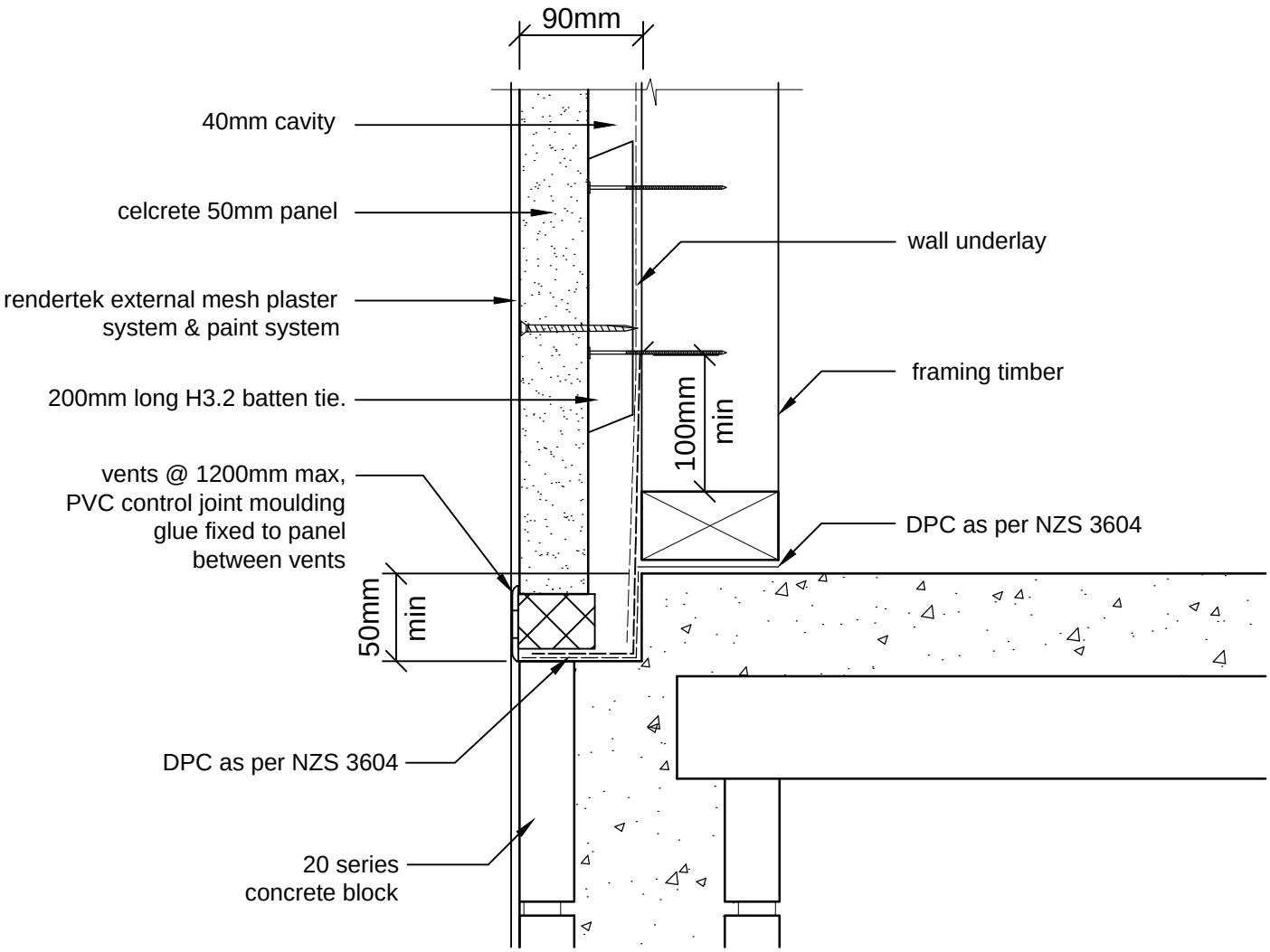
CAD REF 4-3
SCALE 1:5



NOTE: Ventilation openings to provide minimum ventilation of 100mm² per lineal metre of wall

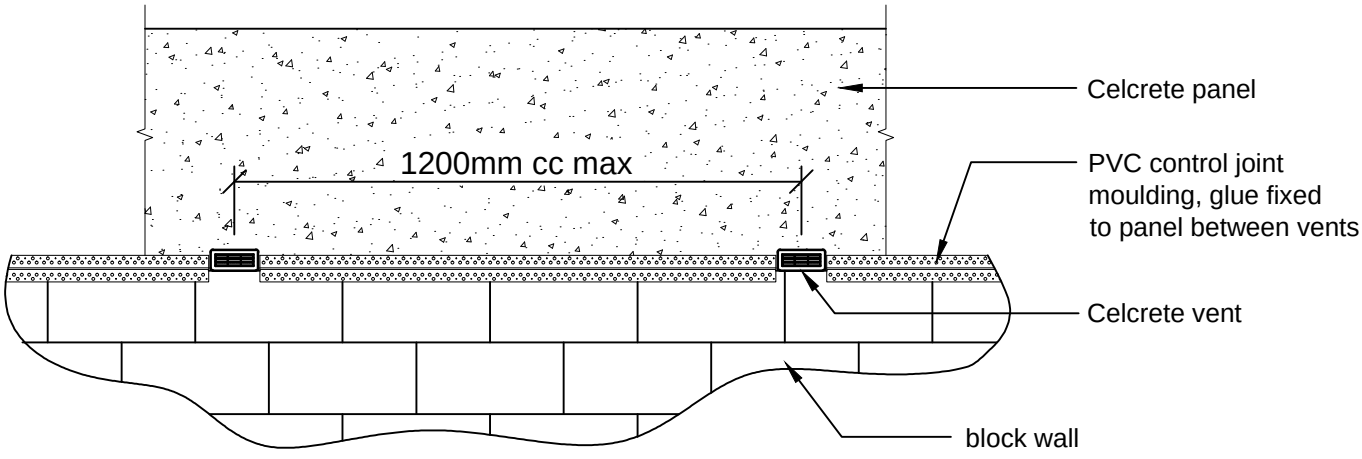
TIMBER FLOOR DETAIL

CAD REF 4-4
SCALE 1:5



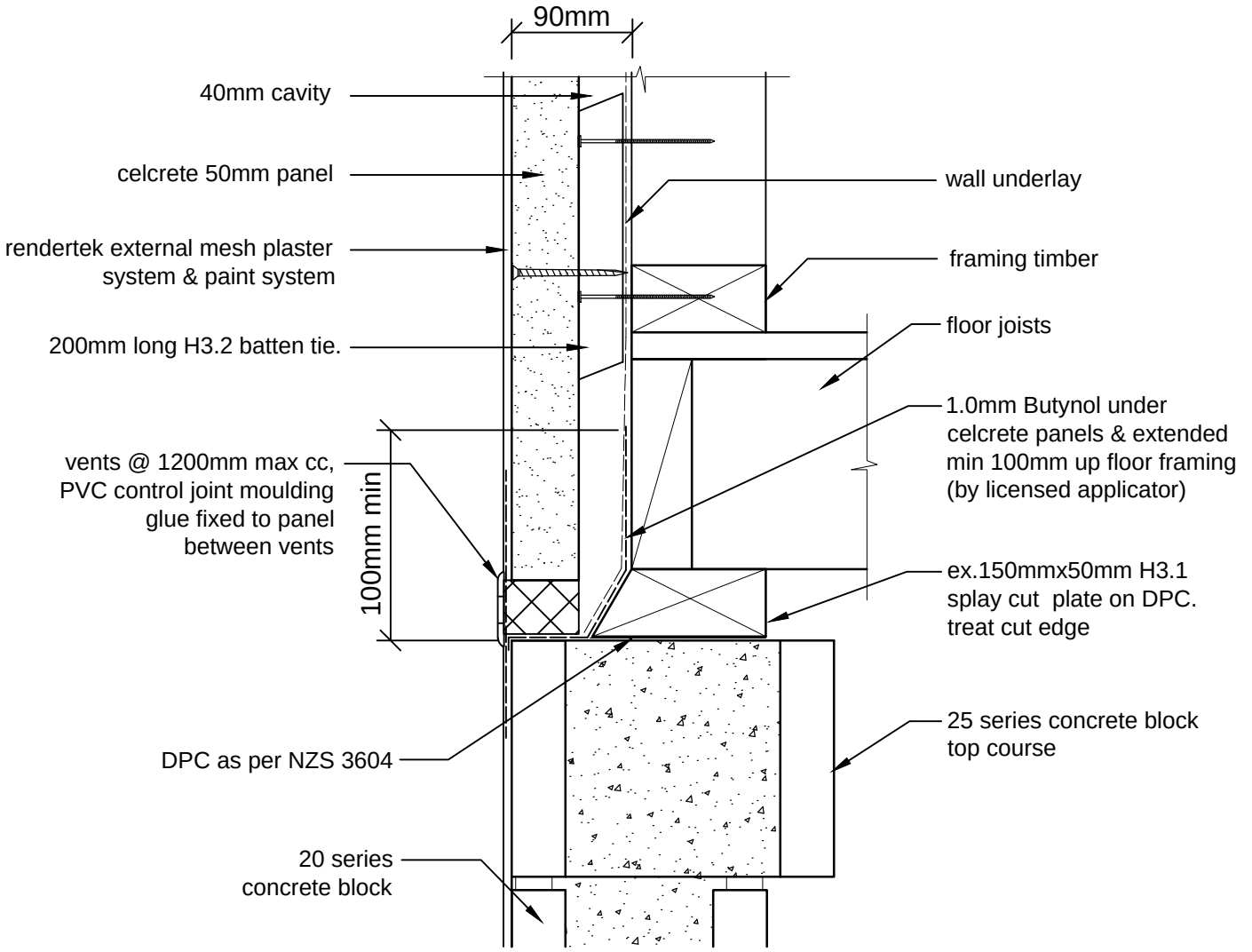
MID CONCRETE FLOOR JUNCTION

CAD REF 4-5
SCALE 1:5



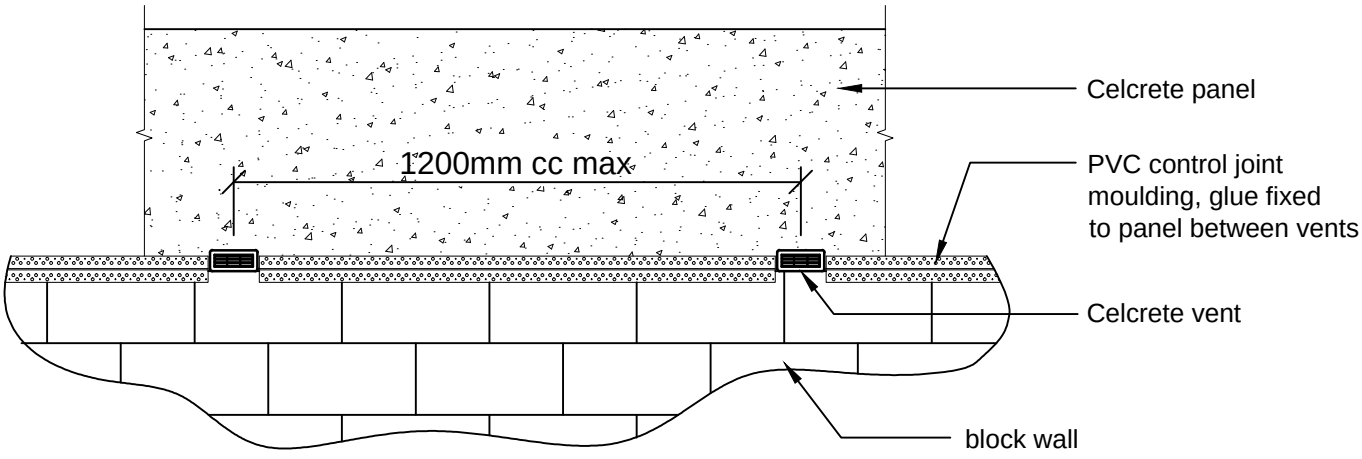
CONTROL JOINT & VENT ELEVATION

SCALE 1:20



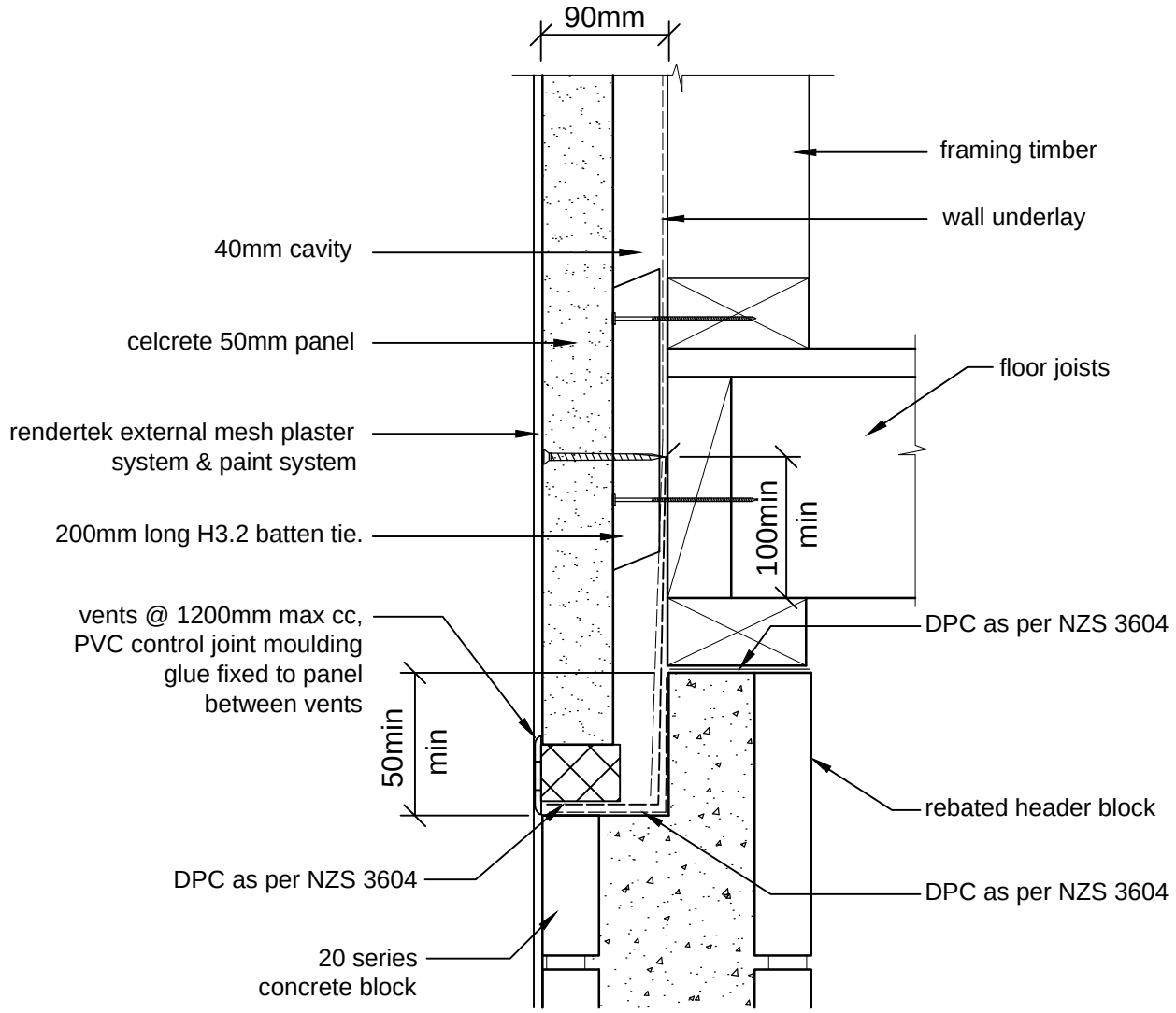
TIMBER FLOOR JUNCTION

CAD REF 4-6
SCALE 1:5



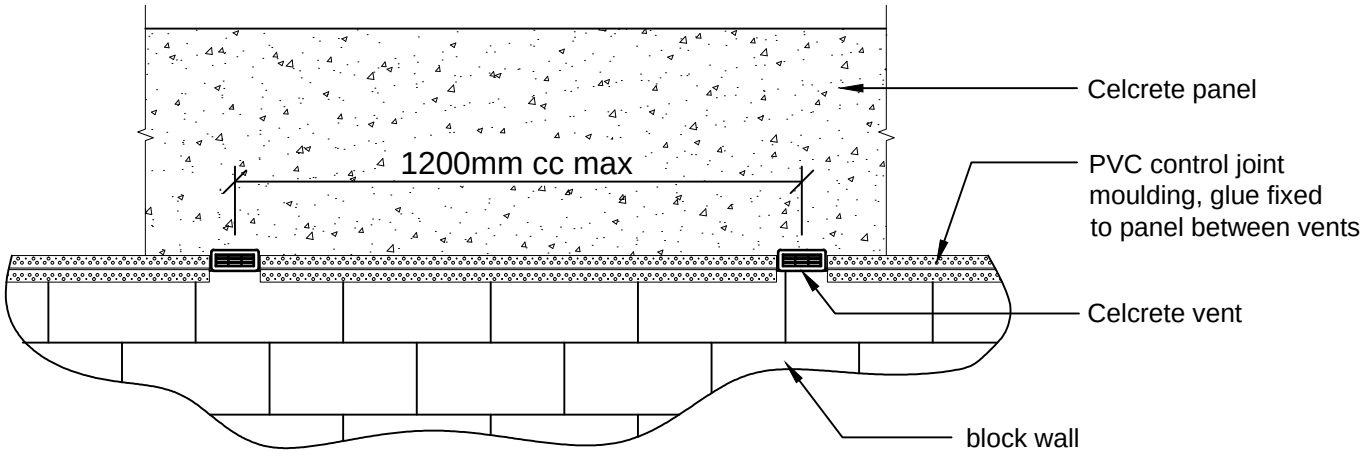
CONTROL JOINT & VENT ELEVATION

SCALE 1:20



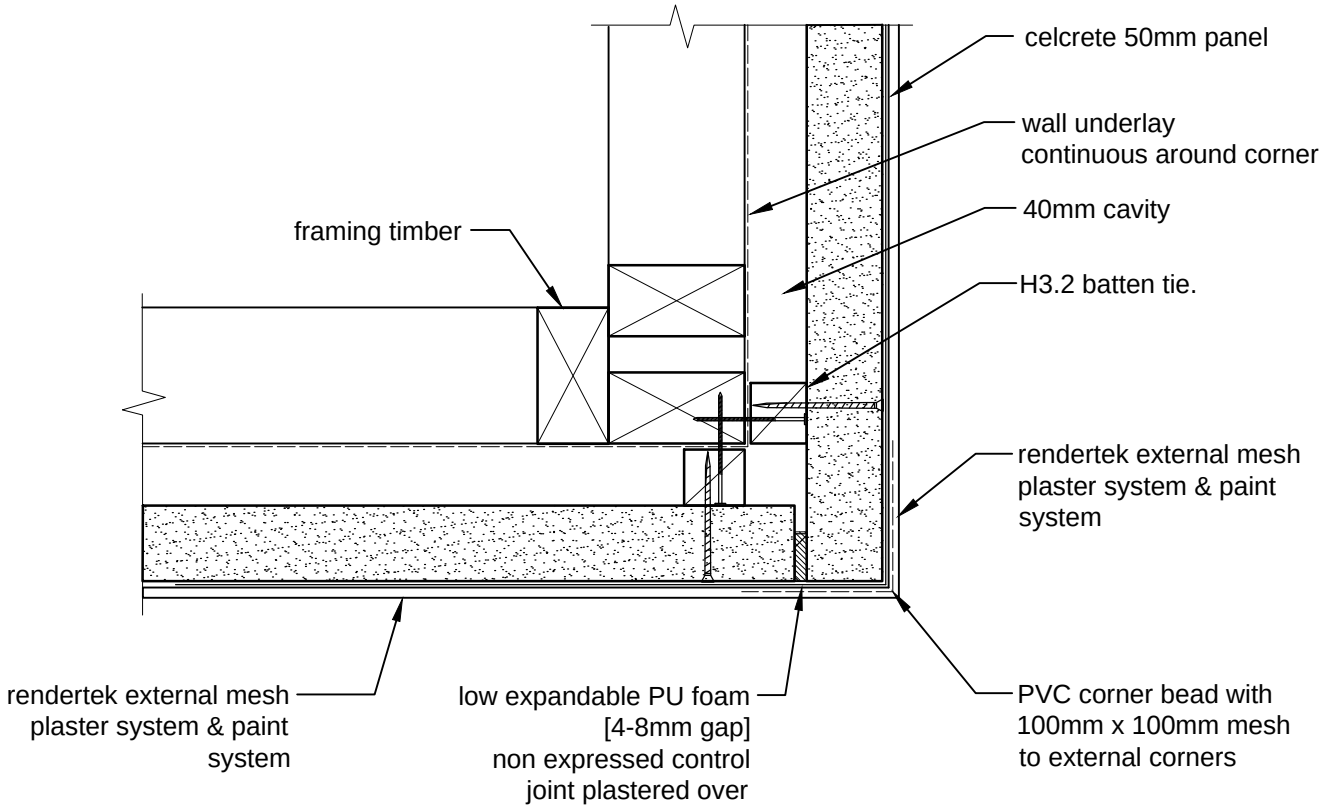
TIMBER FLOOR JUNCTION ALTERNATIVE DETAIL

CAD REF 4-7
SCALE 1:5



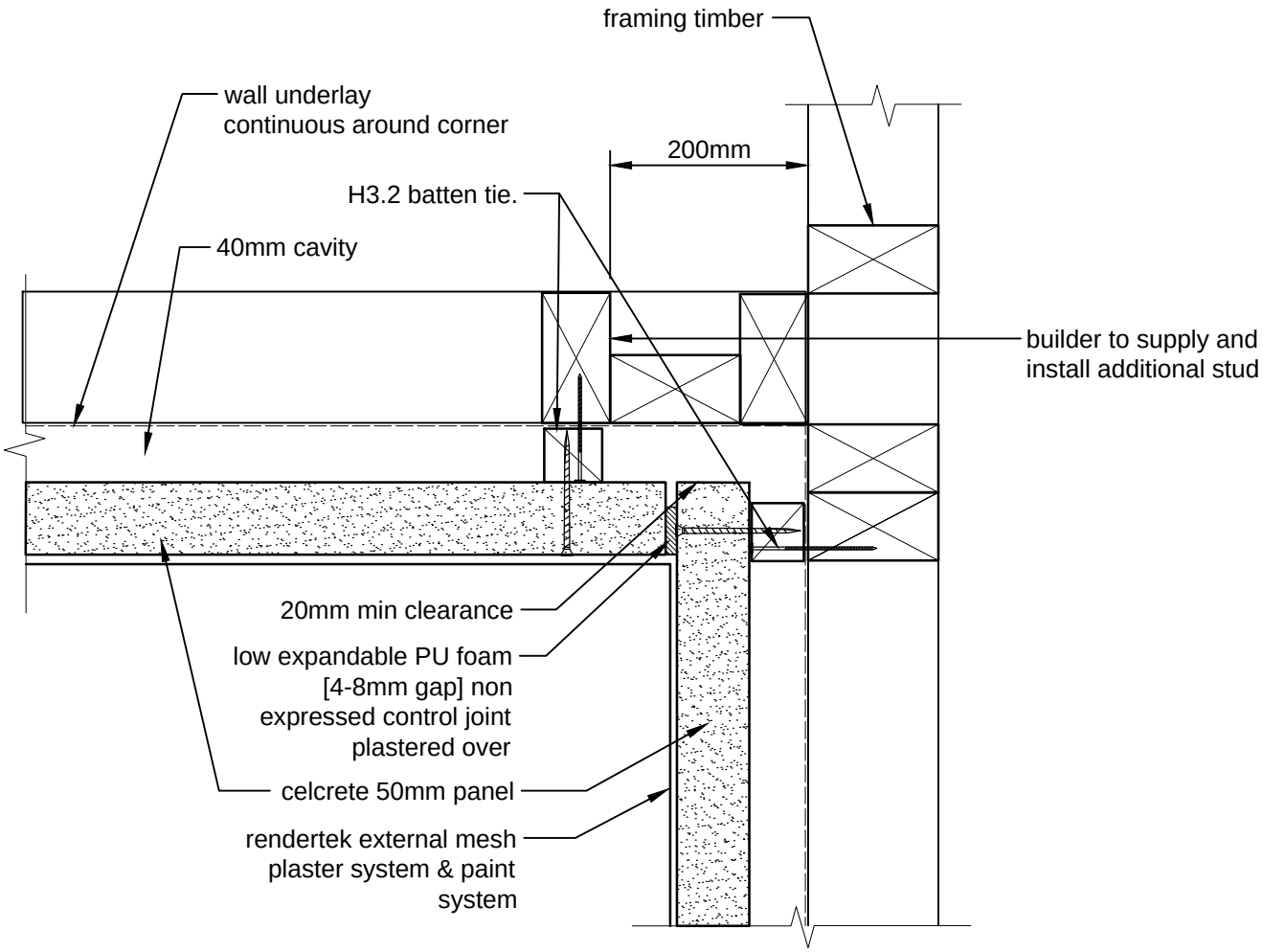
CONTROL JOINT & VENT ELEVATION

SCALE 1:20



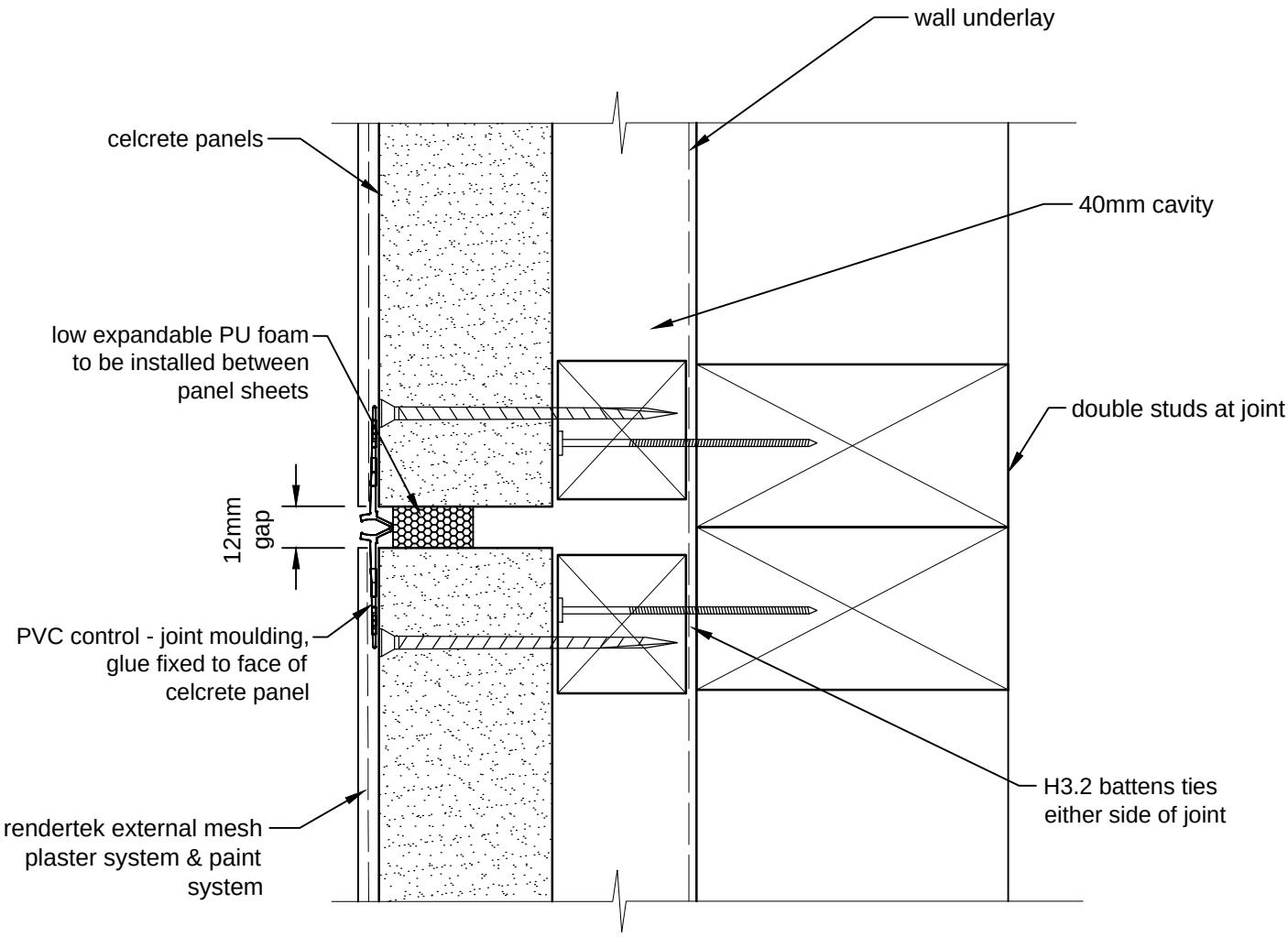
CELCRETE PANEL EXTERNAL CORNER JUNCTION

CAD REF 5-1
SCALE 1:5



CELCRETE PANEL INTERNAL CORNER JUNCTION

CAD REF 5-2
SCALE 1:5

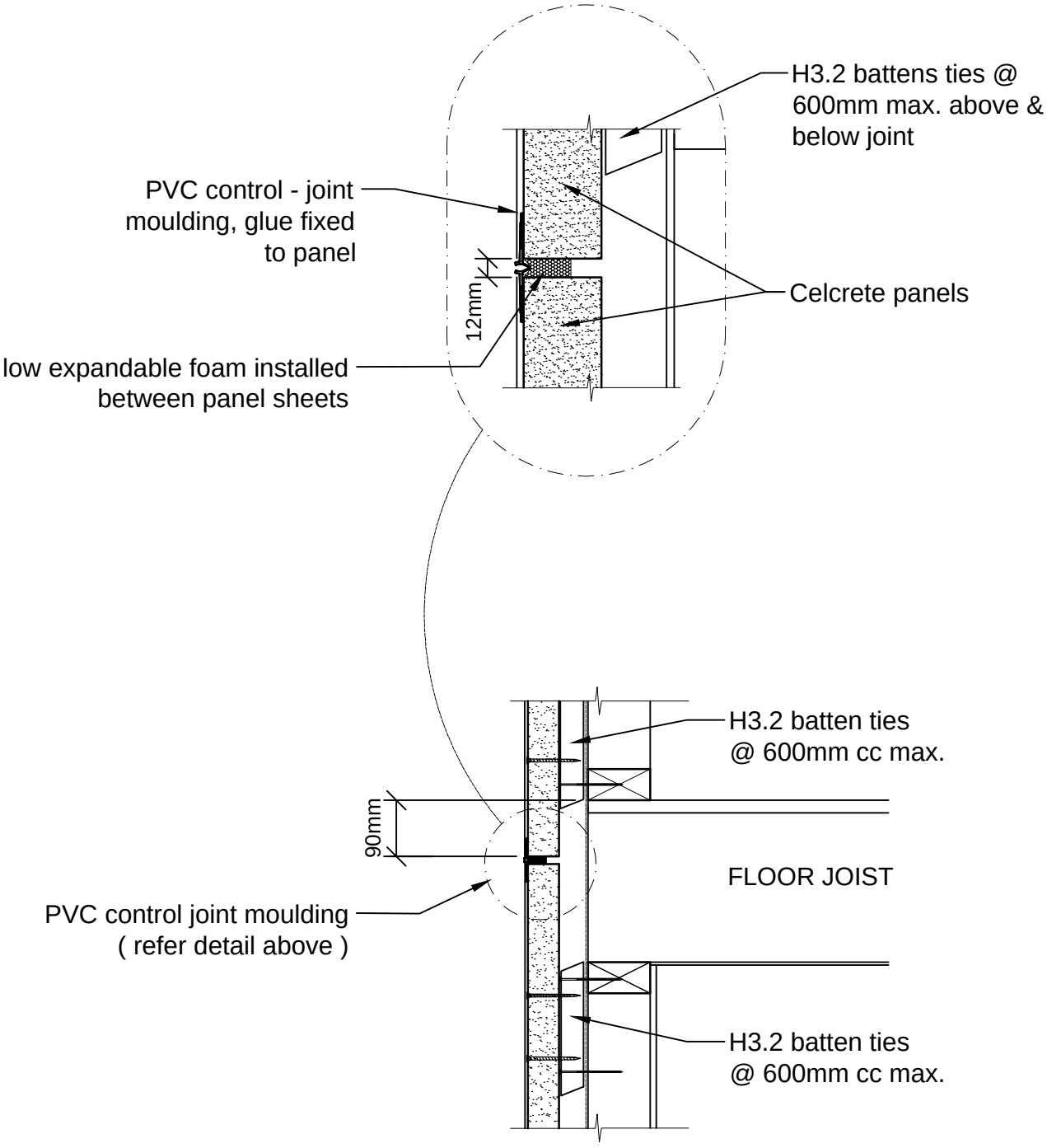


PLAN VIEW

VERTICAL CONTROL JOINT DETAIL - MAXIMUM 8m CRS

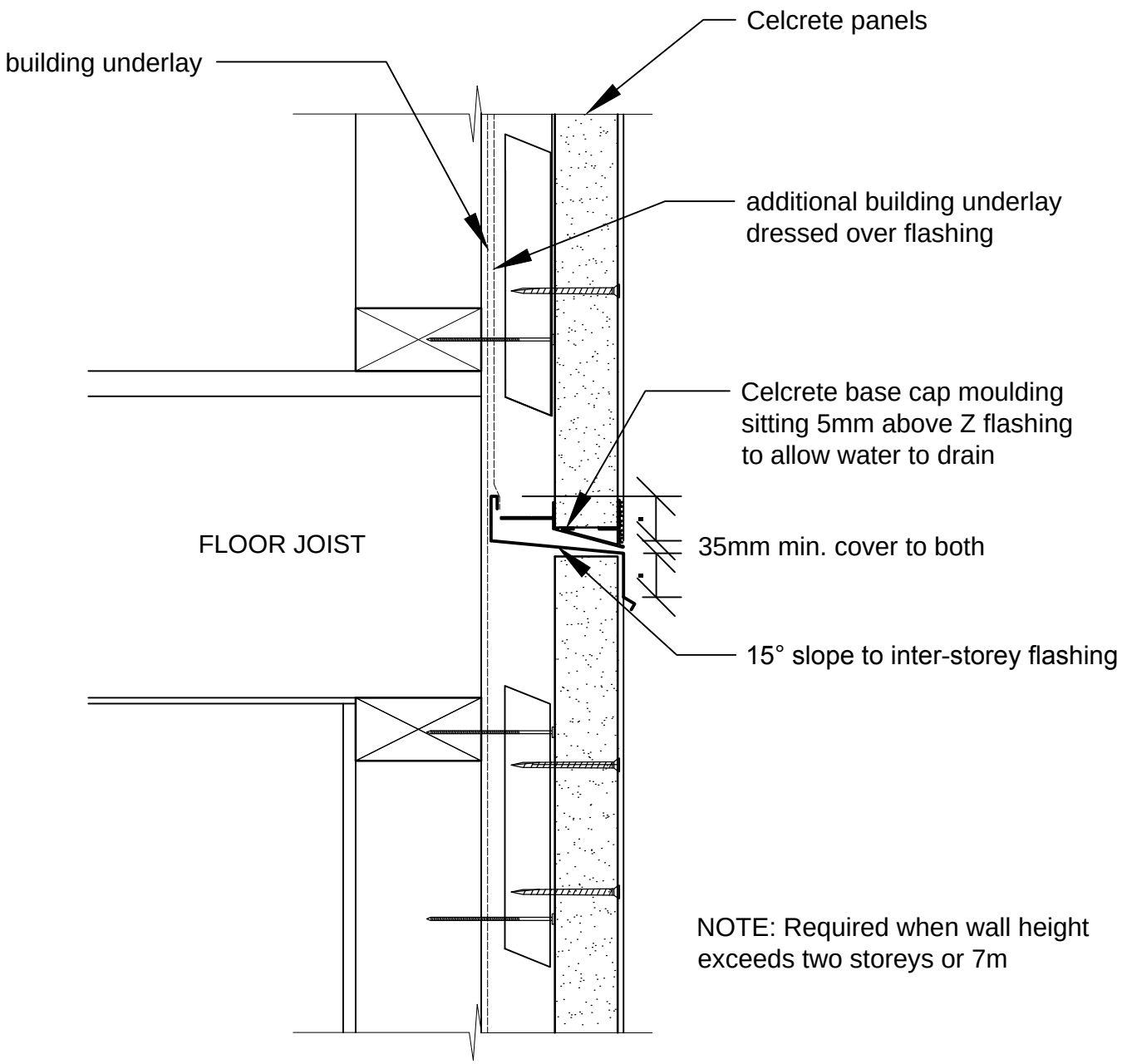
CAD REF 6-1

SCALE 1:2



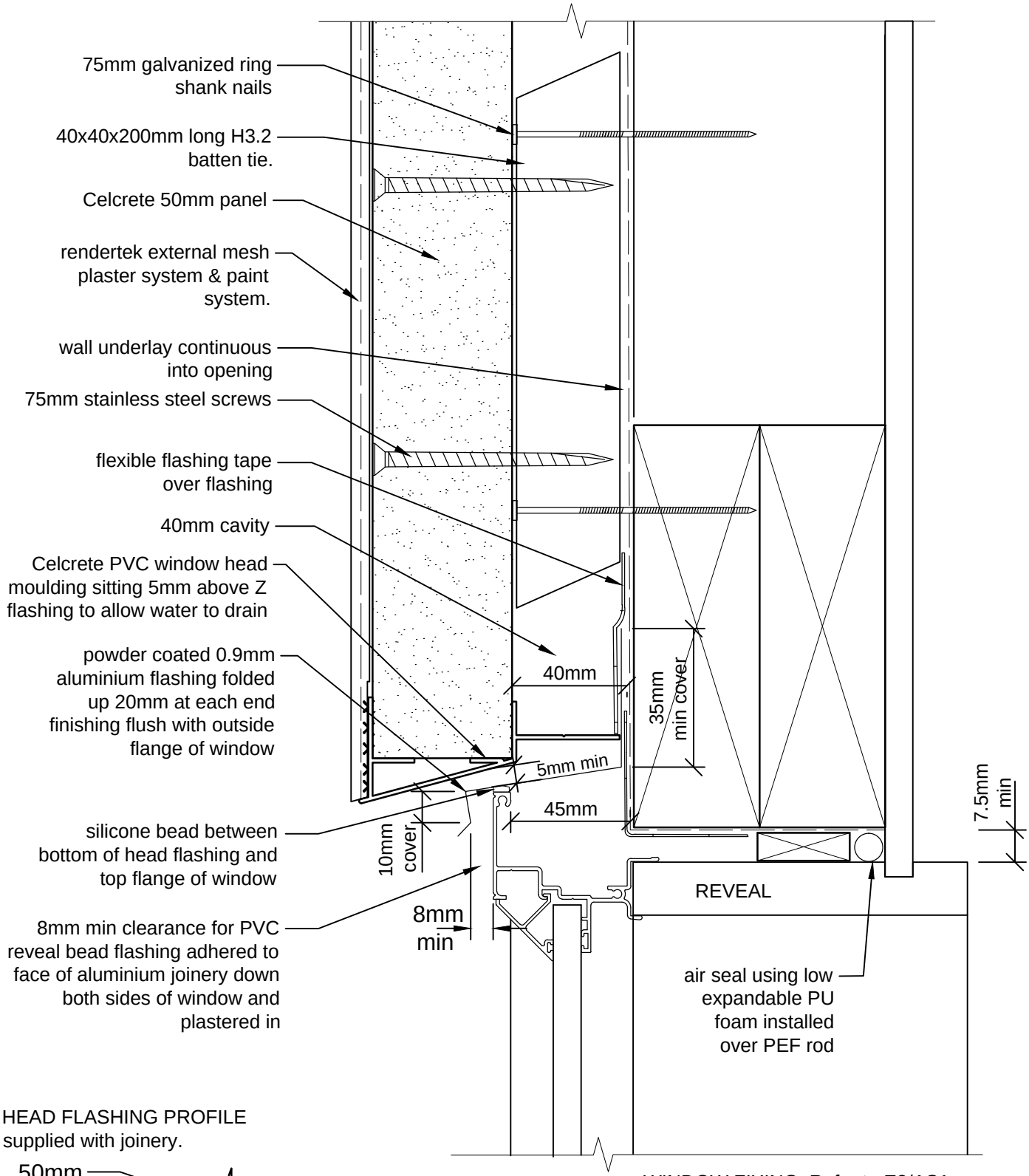
HORIZONTAL CONTROL JOINT
(used where timber joists are not seasoned)

CAD REF 6-2
SCALE 1:20

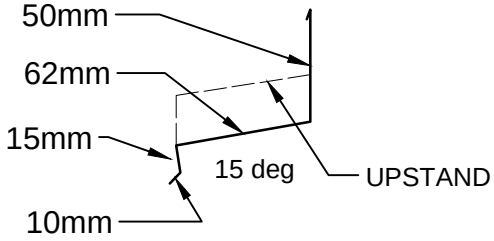


INTER-STOREY JOINT DETAIL
WHEN EXCEEDING TWO STOREYS OR 7m

CAD REF 6-3
SCALE 1:10



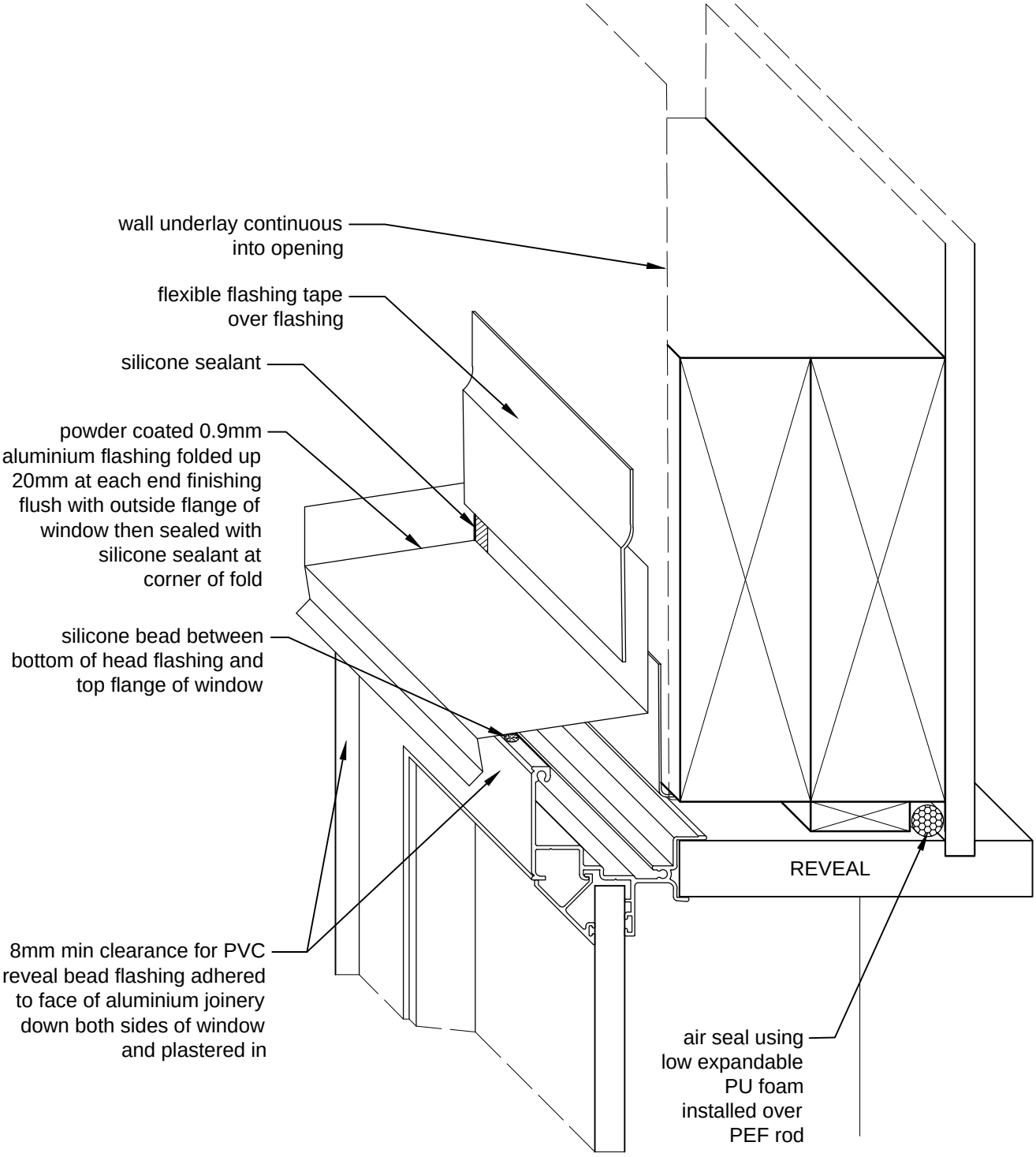
HEAD FLASHING PROFILE
supplied with joinery.



WINDOW FIXING: Refer to E2/AS1 paragraph 9.1.10.8.

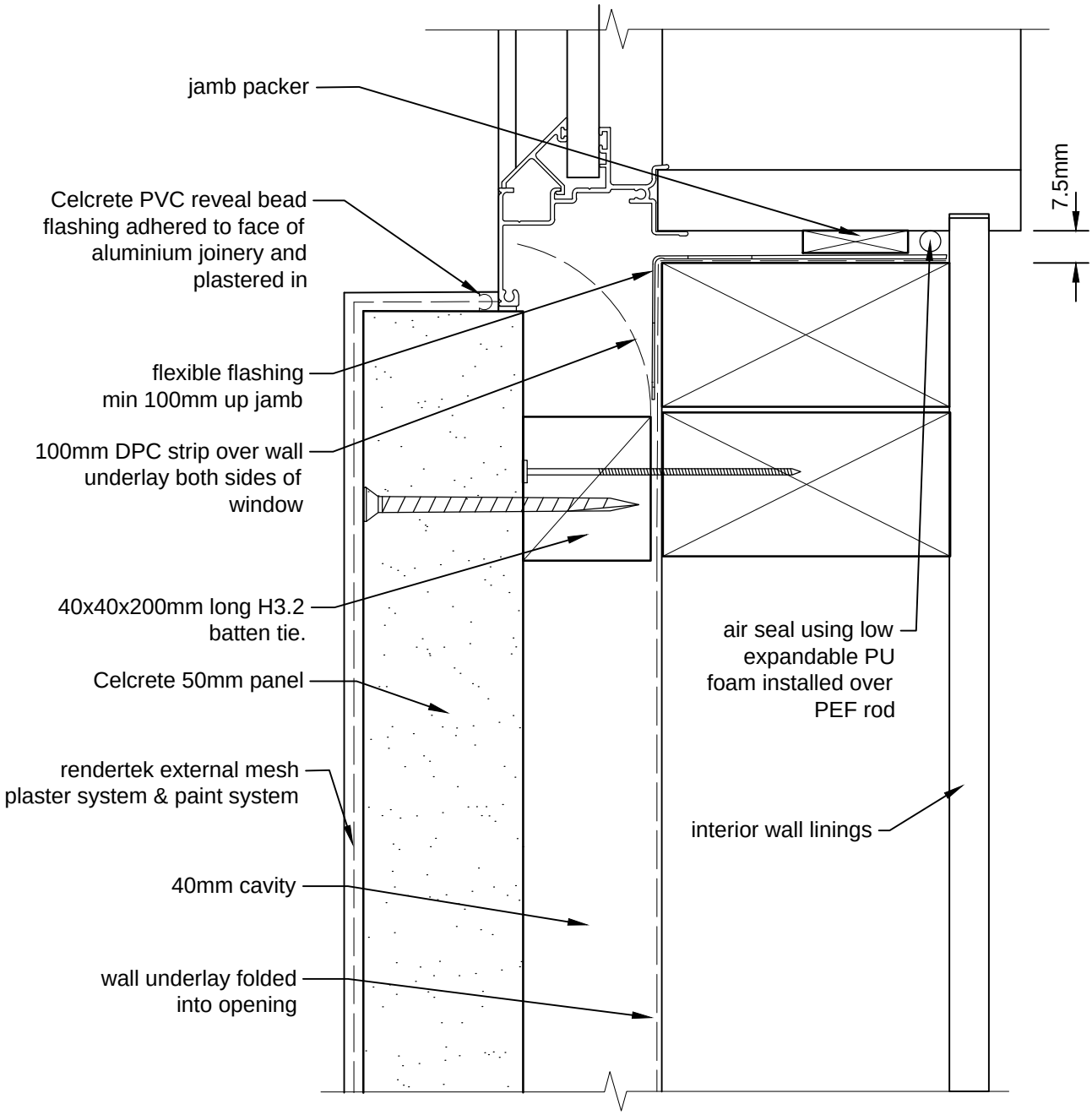
ALUMINIUM WINDOW HEAD

CAD REF 7-1
SCALE 1:2



ALUMINIUM WINDOW HEAD

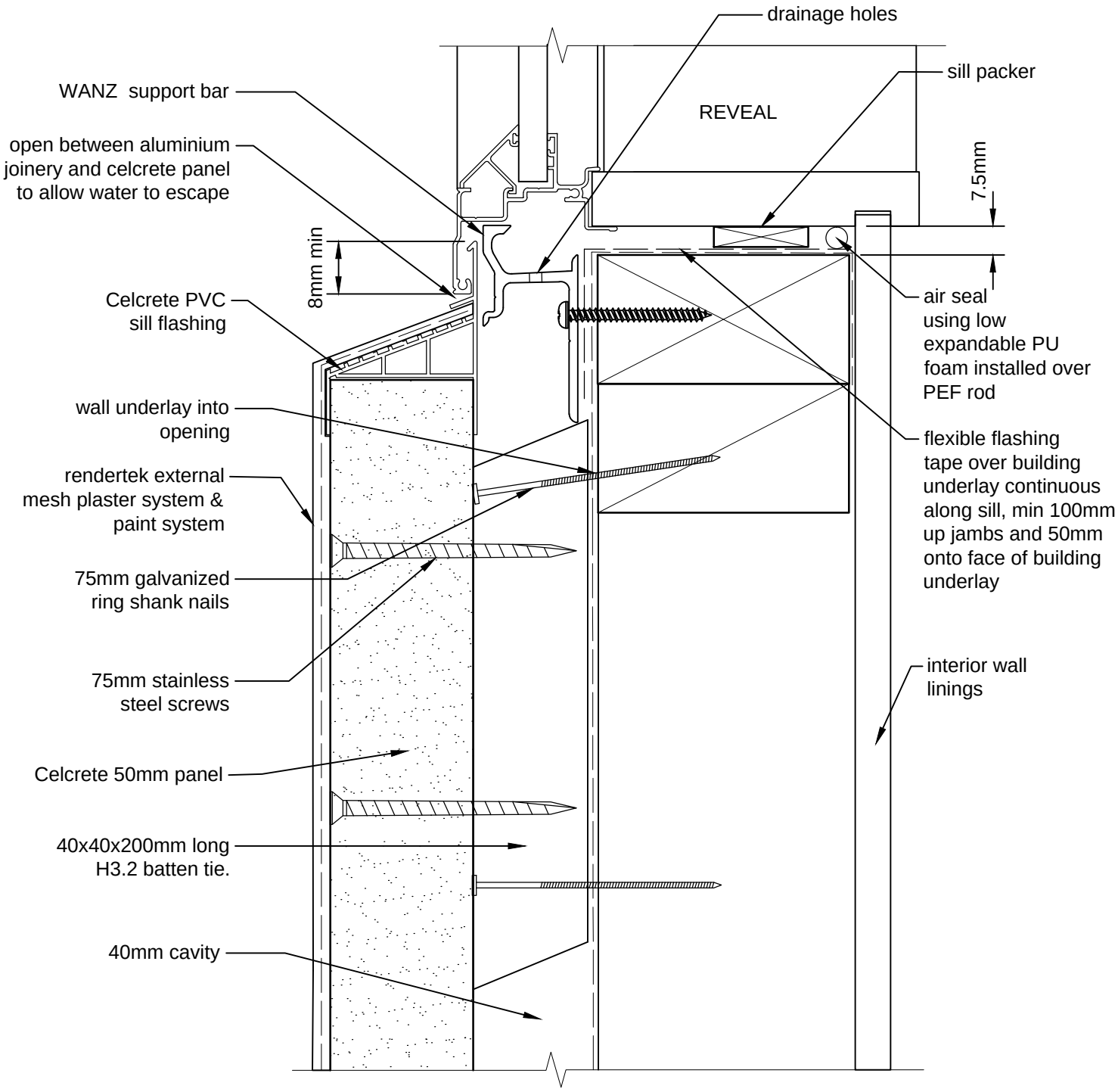
CAD REF 7-1-a
N.T.S.



PLAN VIEW

ALUMINIUM WINDOW JAMB

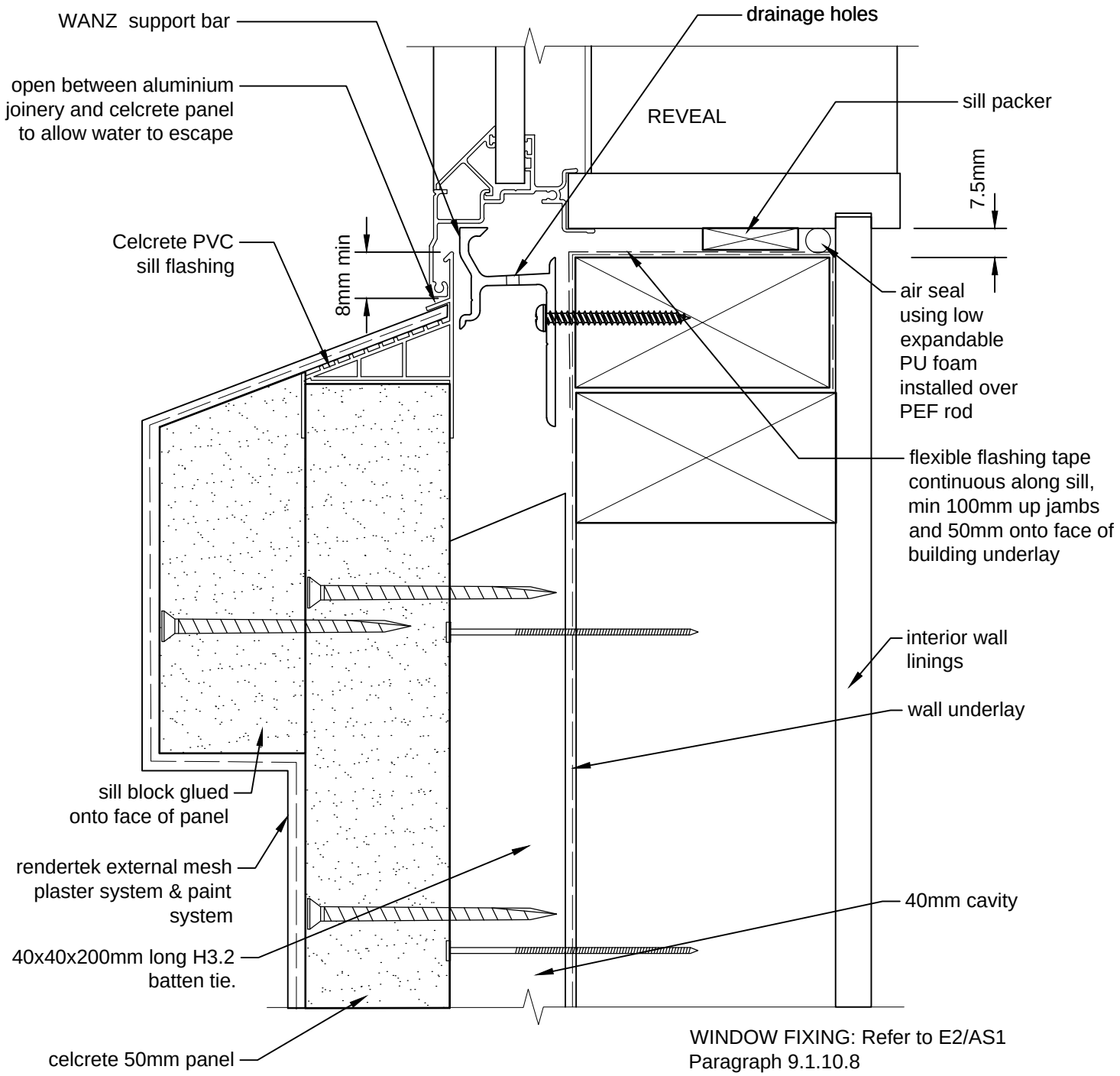
CAD REF 7-2
SCALE 1:2



WINDOW FIXING: Refer to E2/AS1 Paragraph 9.1.10.8

ALUMINIUM WINDOW SILL WITH WINDOW SUPPORT BAR

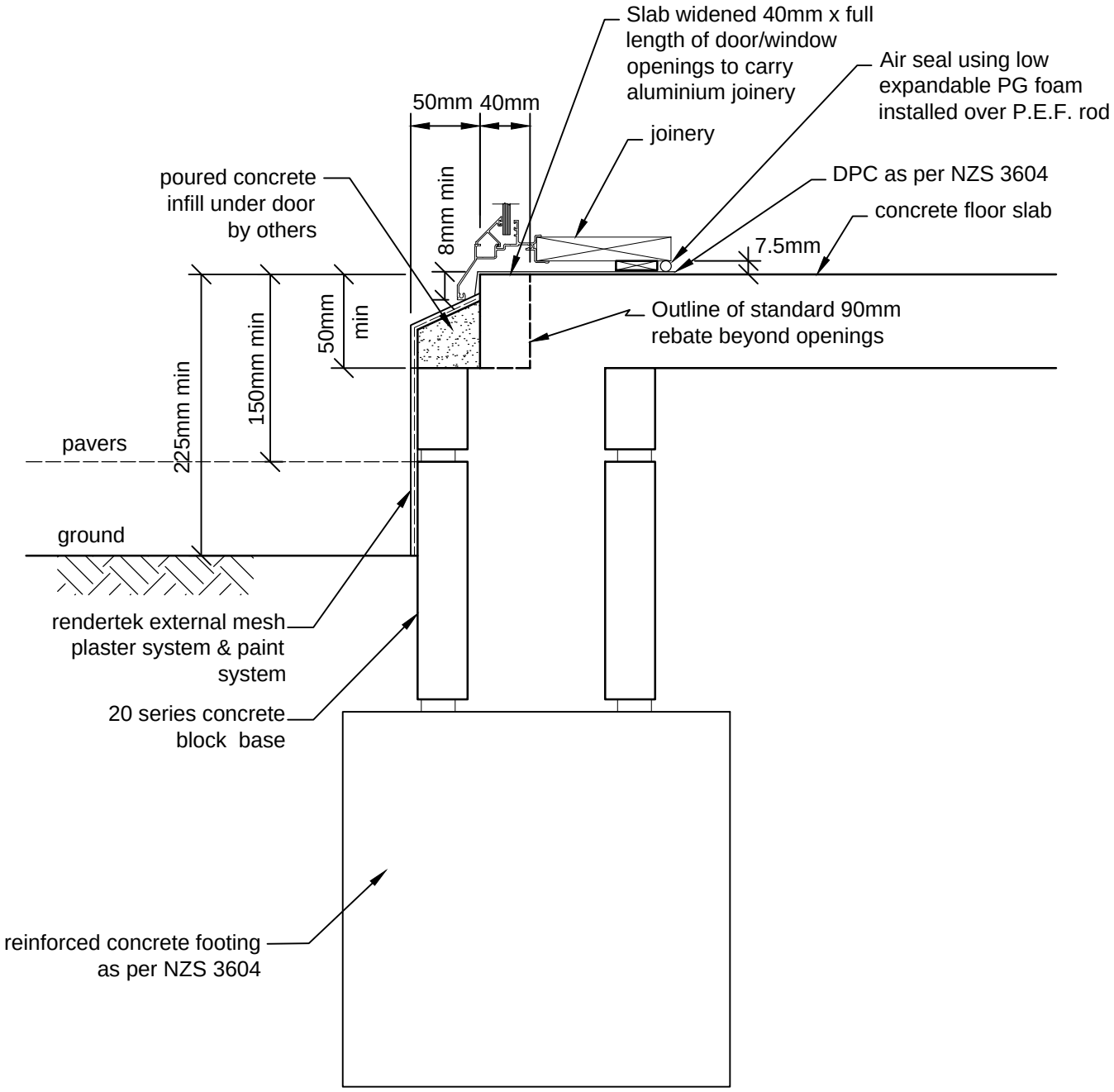
CAD REF 7-3
SCALE 1:2



ALTERNATIVE SILL DETAIL

CAD REF 7-4

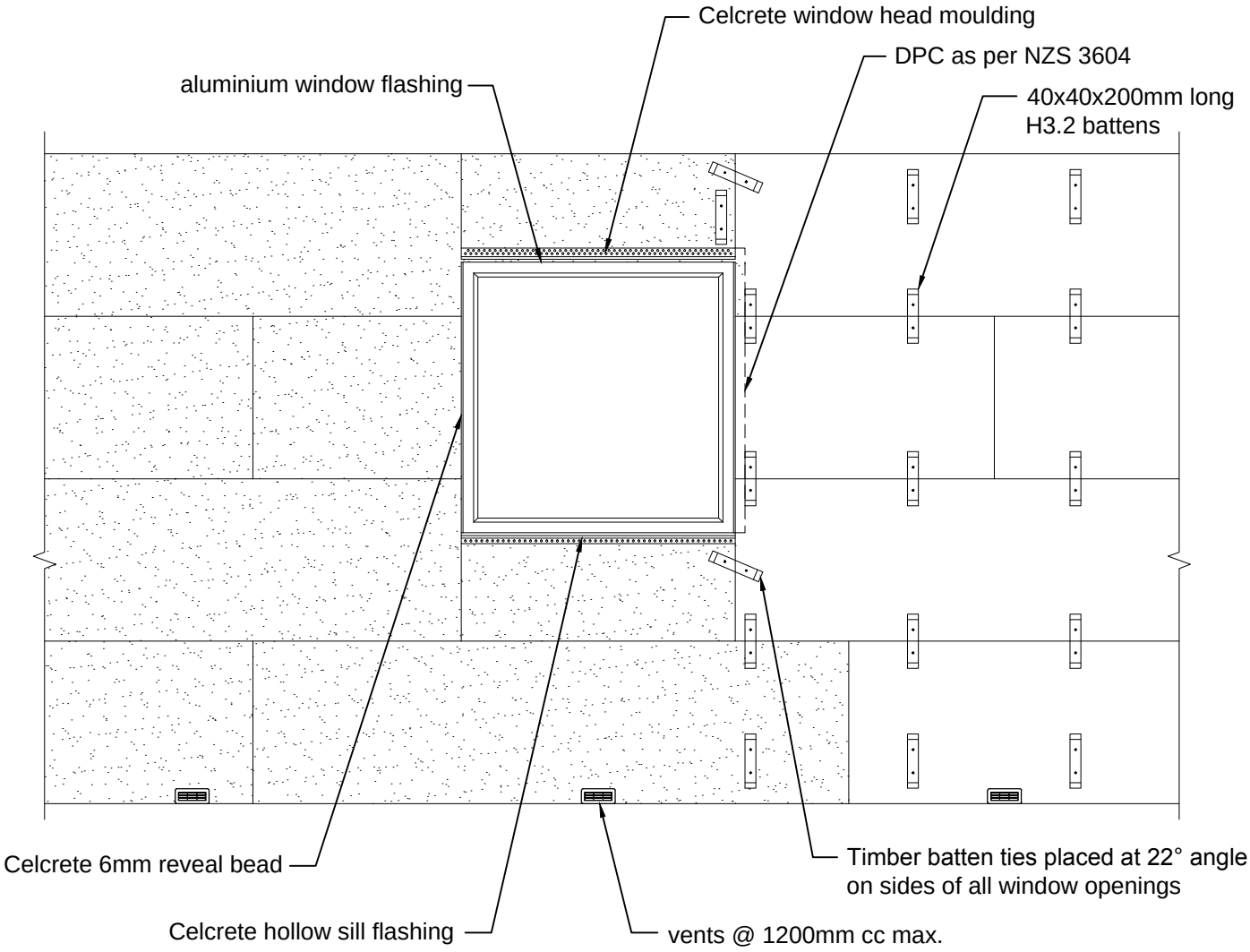
SCALE 1:2



STANDARD DOOR SILL DETAIL

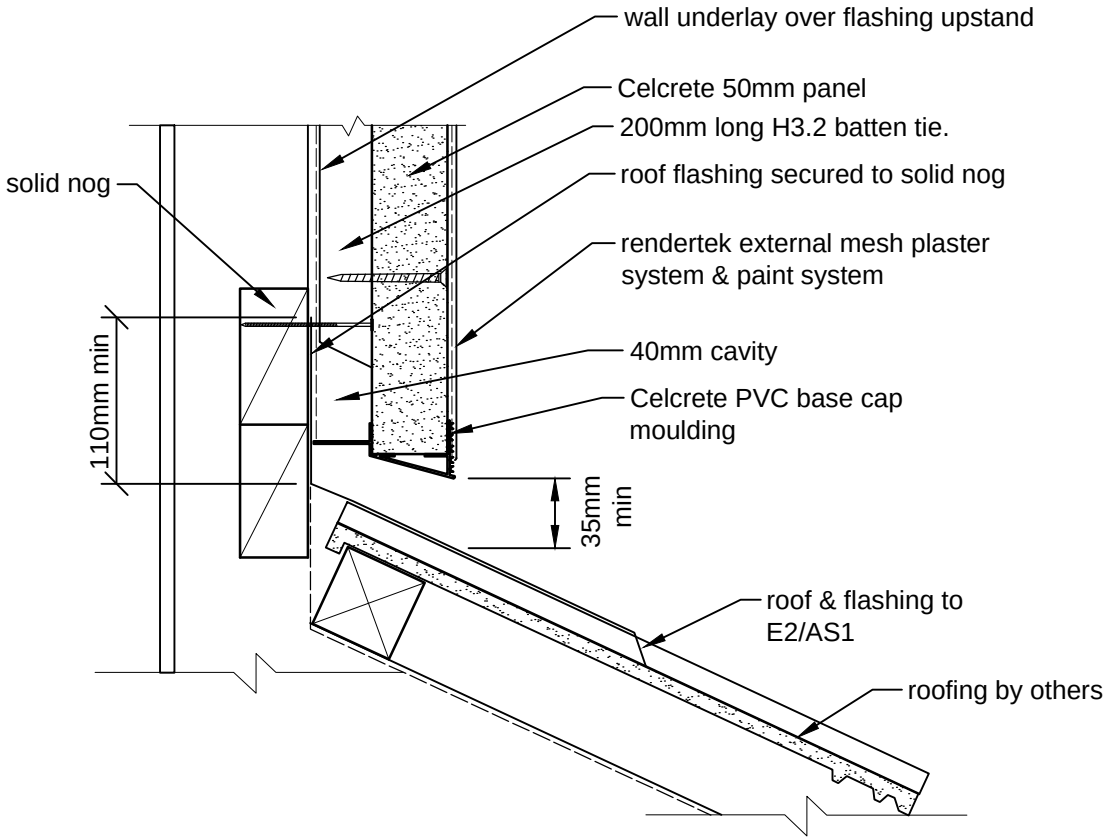
CAD REF 7-5

SCALE 1:5



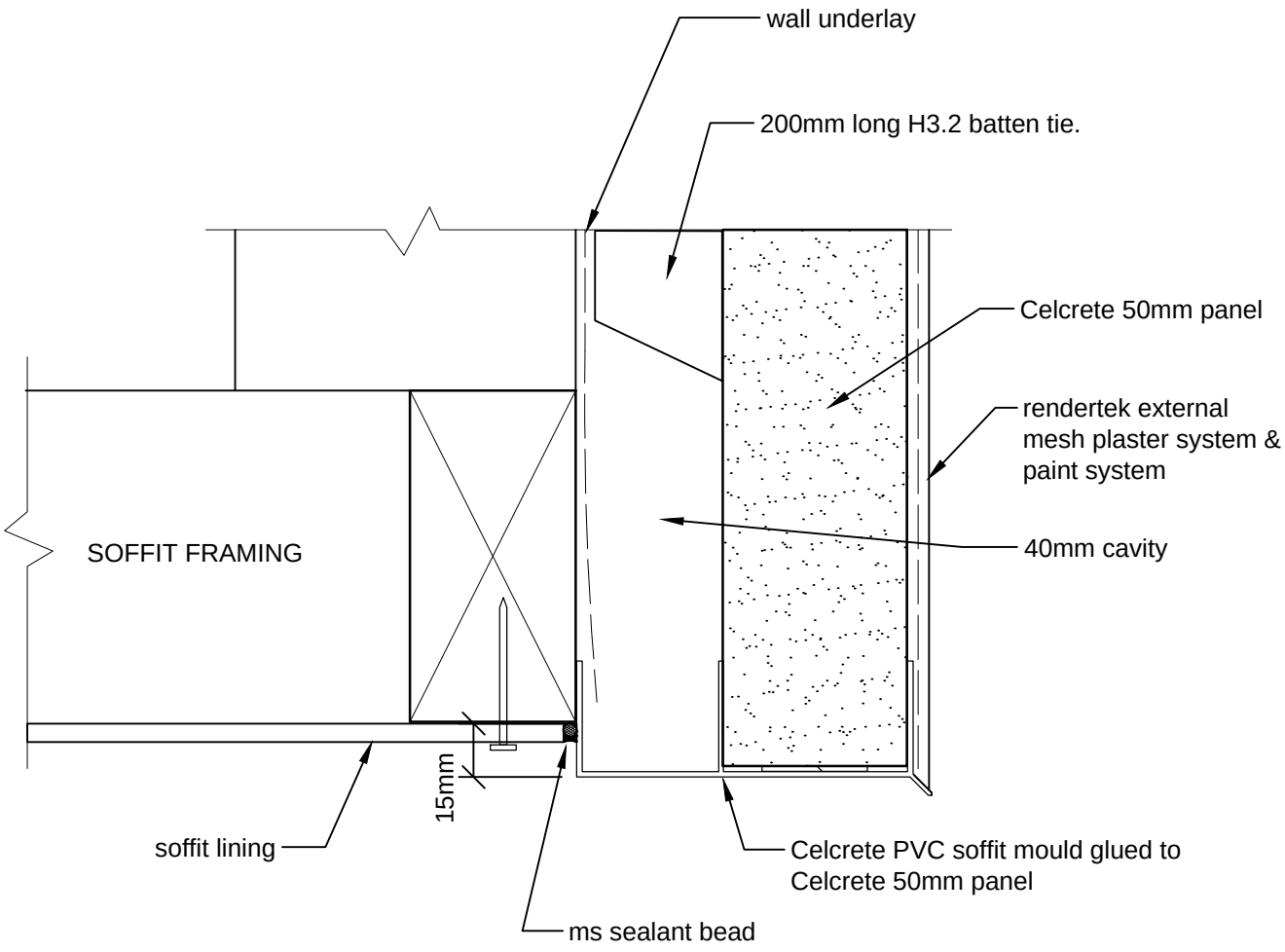
TYPICAL PANEL LAYOUT AROUND WINDOWS

CAD REF 7-6
SCALE 1:25



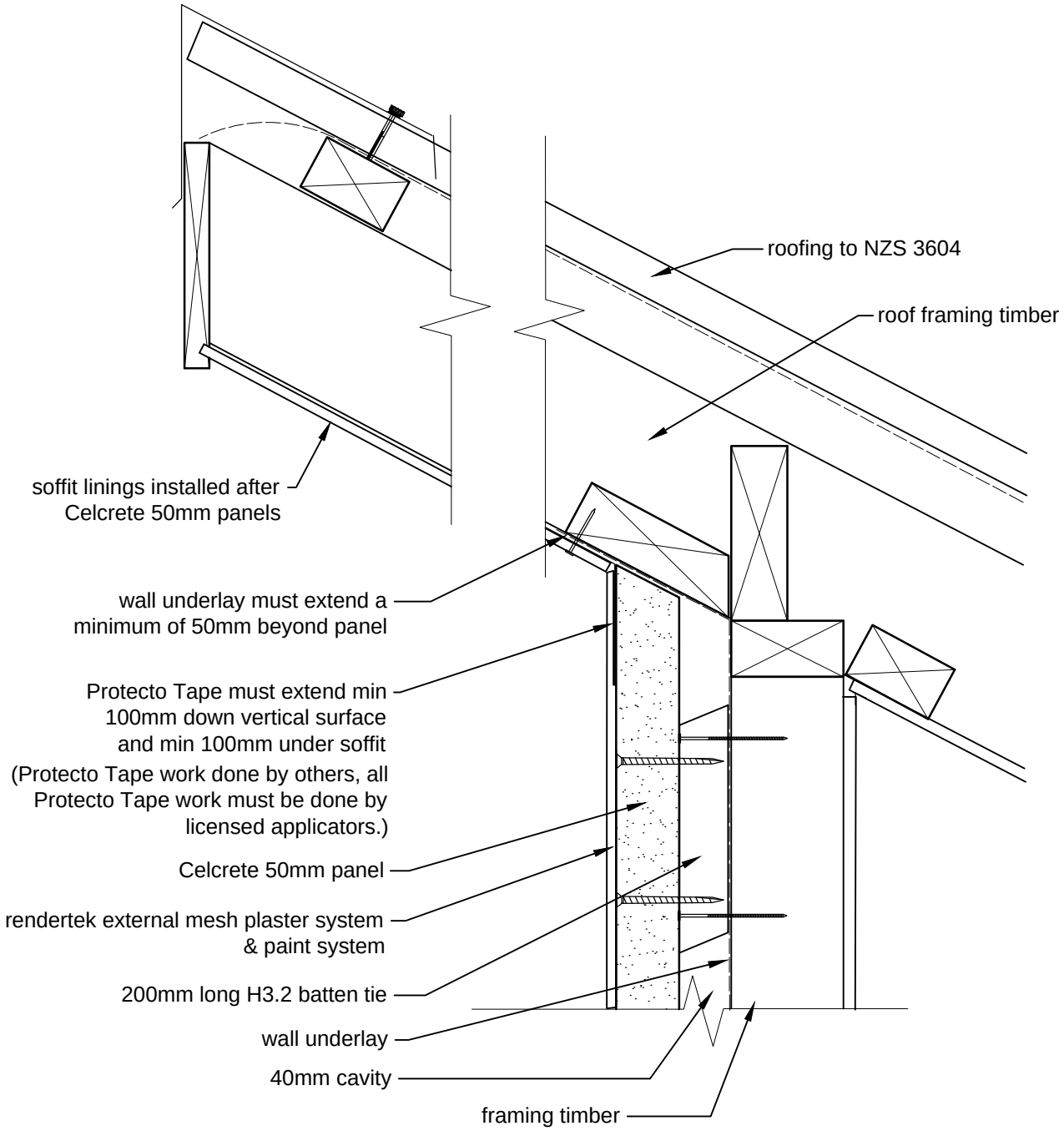
ROOF/ WALL JUNCTION DETAIL

CAD REF 8-1
SCALE 1:5



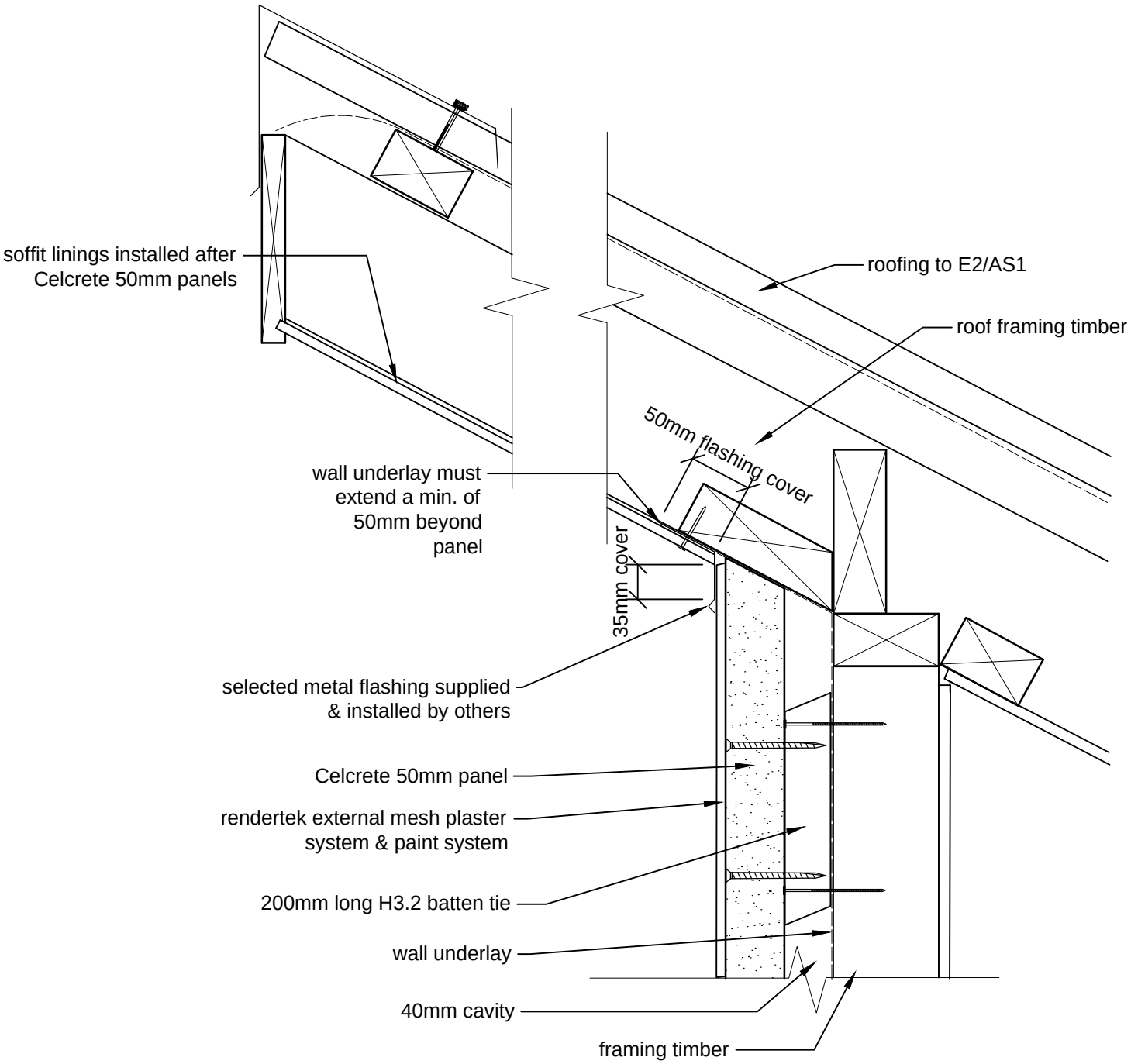
SOFFIT EDGE DETAIL

CAD REF 8-2
SCALE 1:2



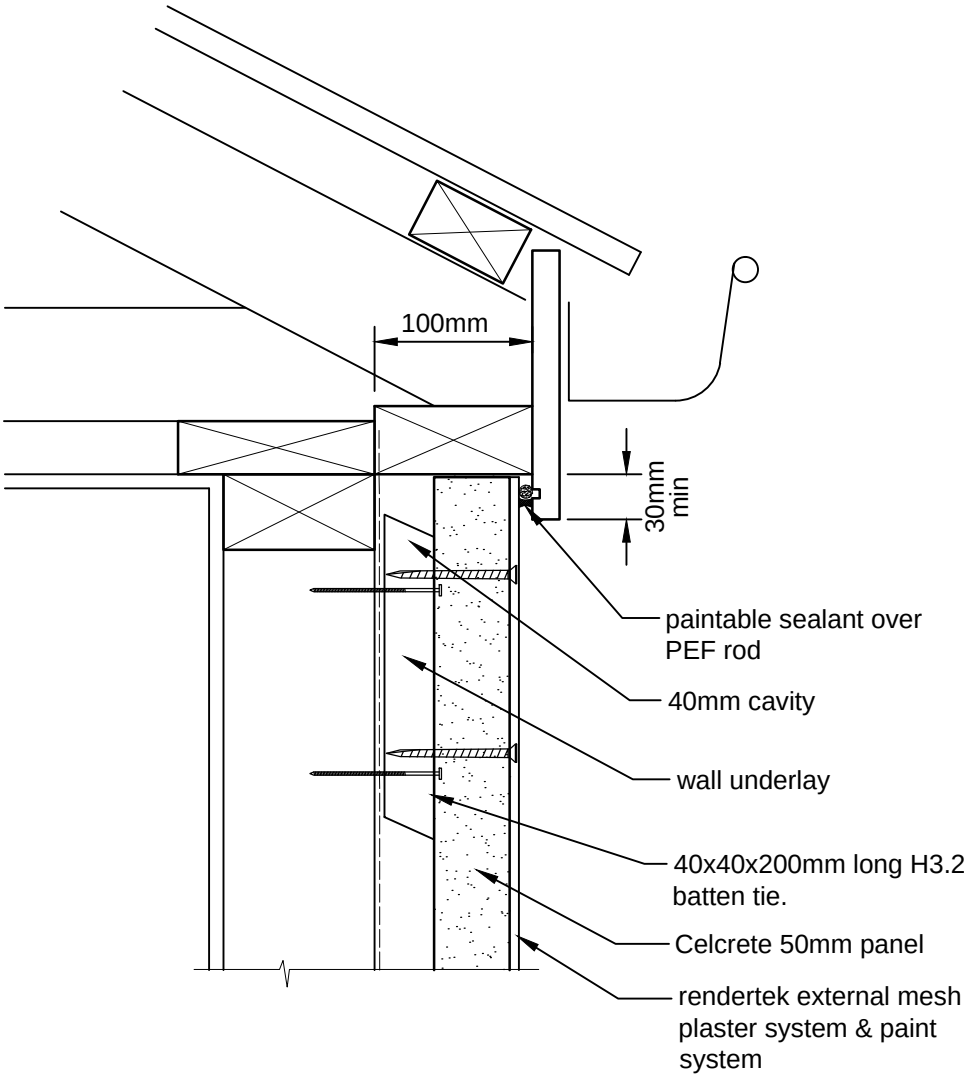
EXPOSED MONOPLANE ROOF & SOFFIT - CELCRETE PANEL JUNCTION

CAD REF 8-3
SCALE 1:5



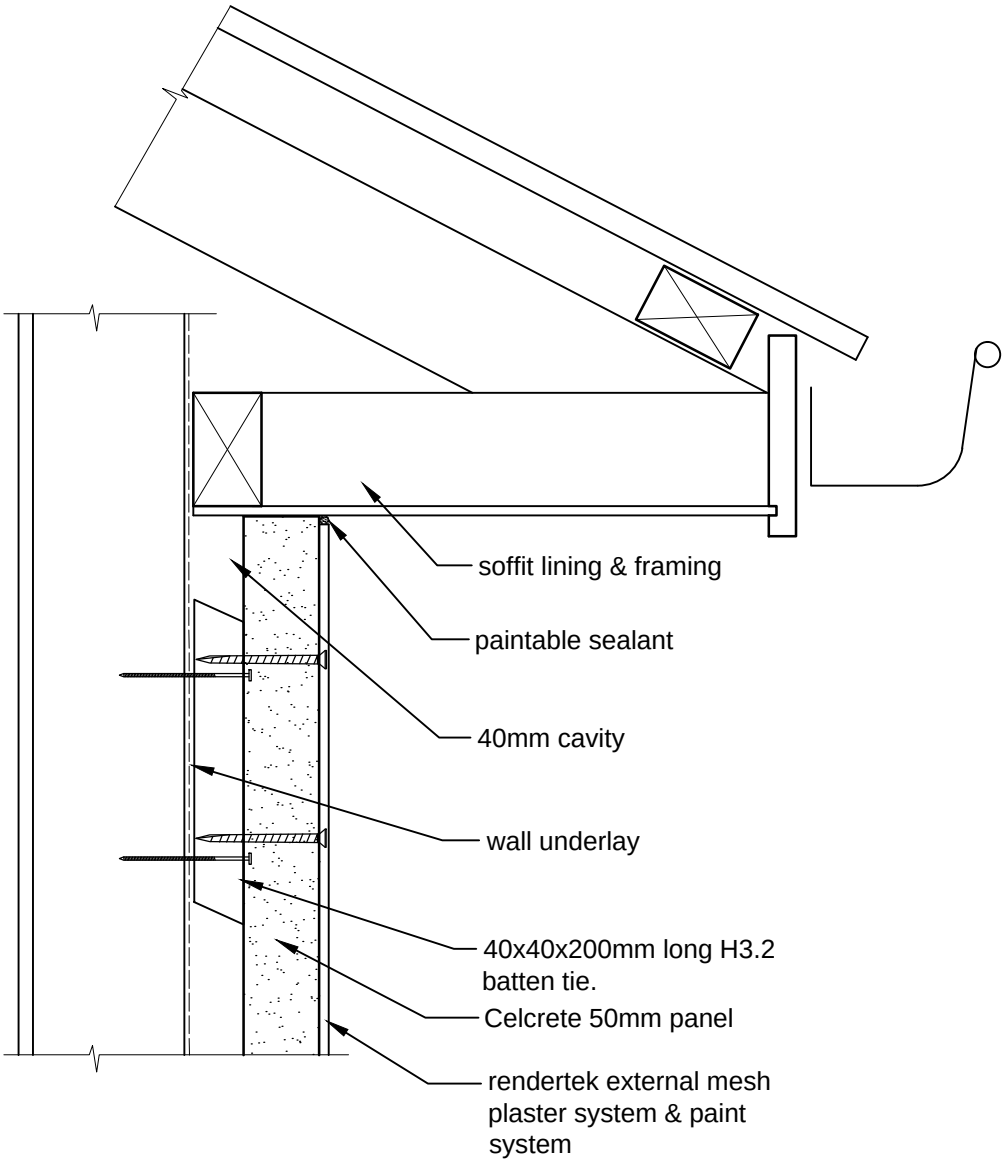
EXPOSED MONOPLANE ROOF & SOFFIT - CELCRETE PANEL JUNCTION

CAD REF 8-4
SCALE 1:5



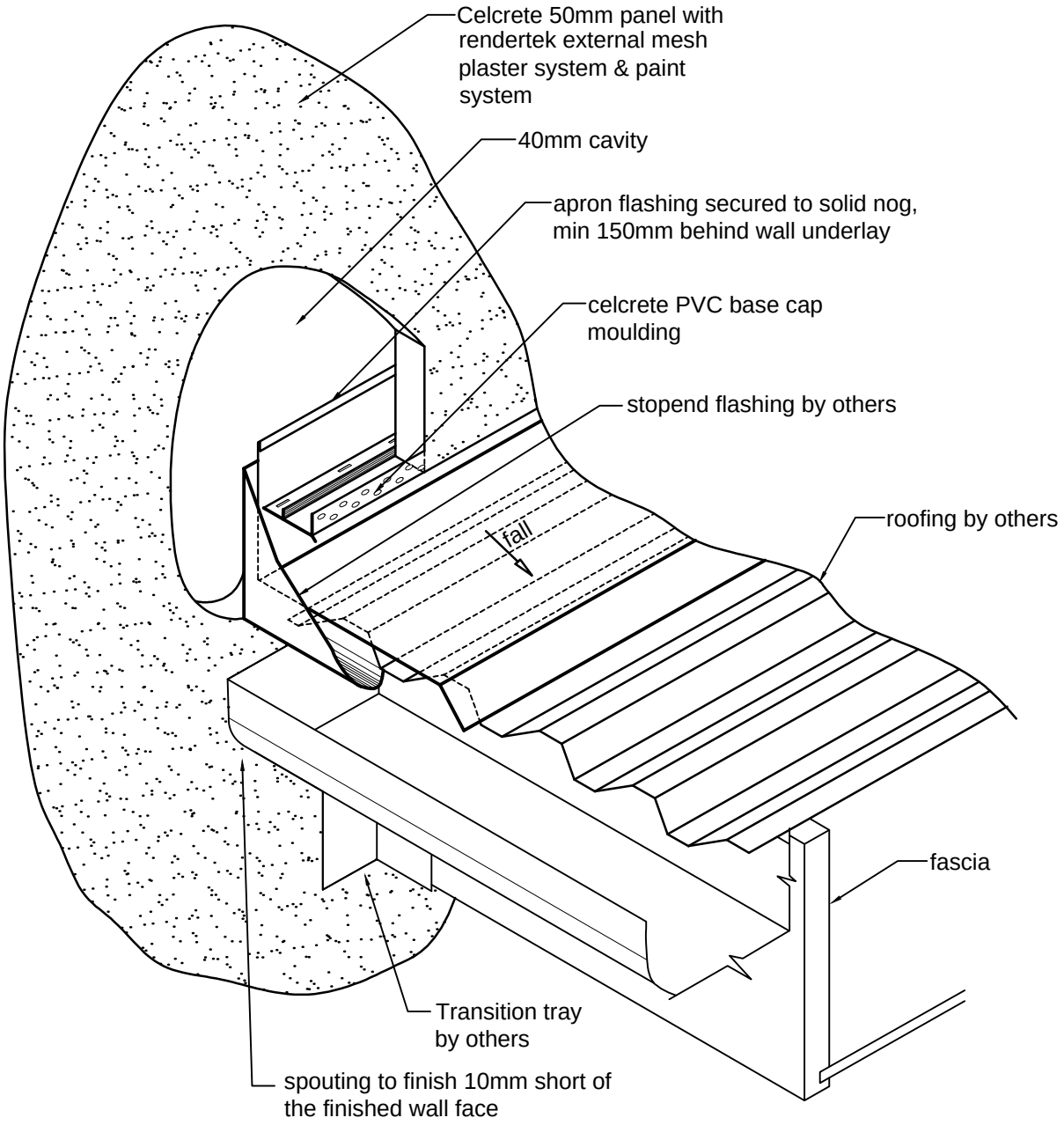
CELCRETE PANEL CLIPPED EAVES DETAIL

CAD REF 8-5
SCALE 1:5



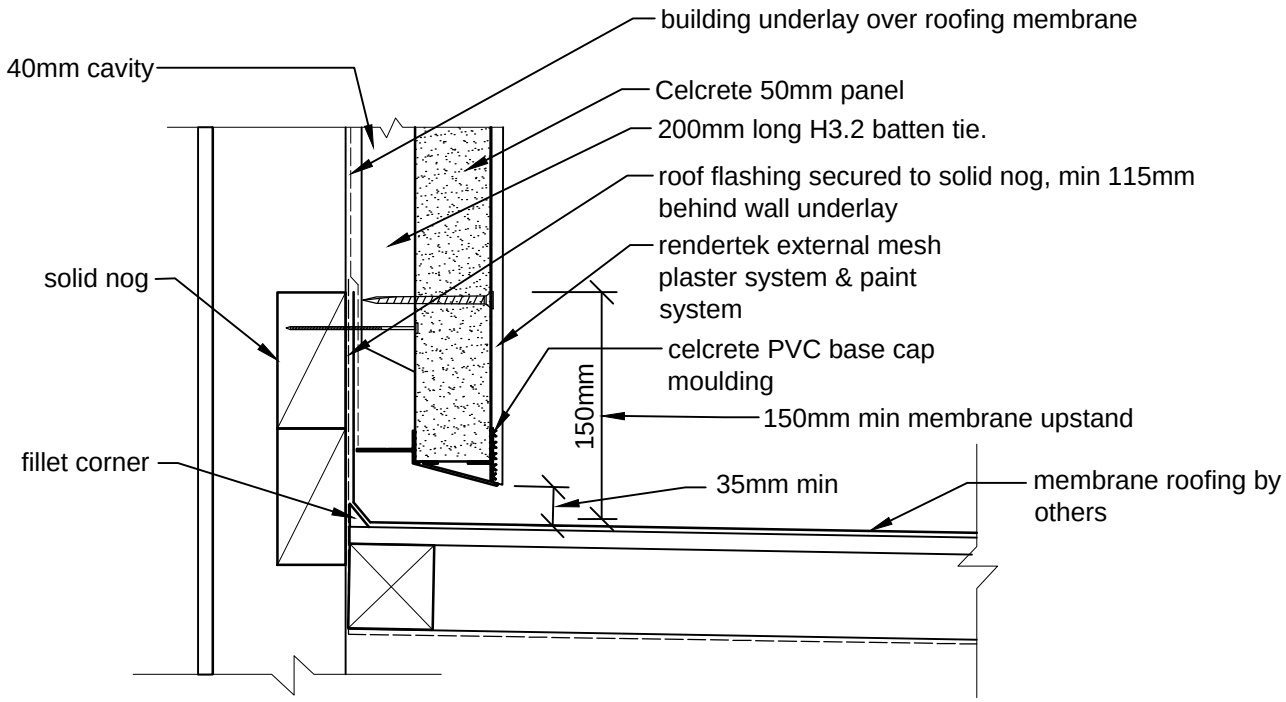
CELCRETE PANEL SOFFIT EAVES JUNCTION DETAIL

CAD REF 8-6
SCALE 1:5



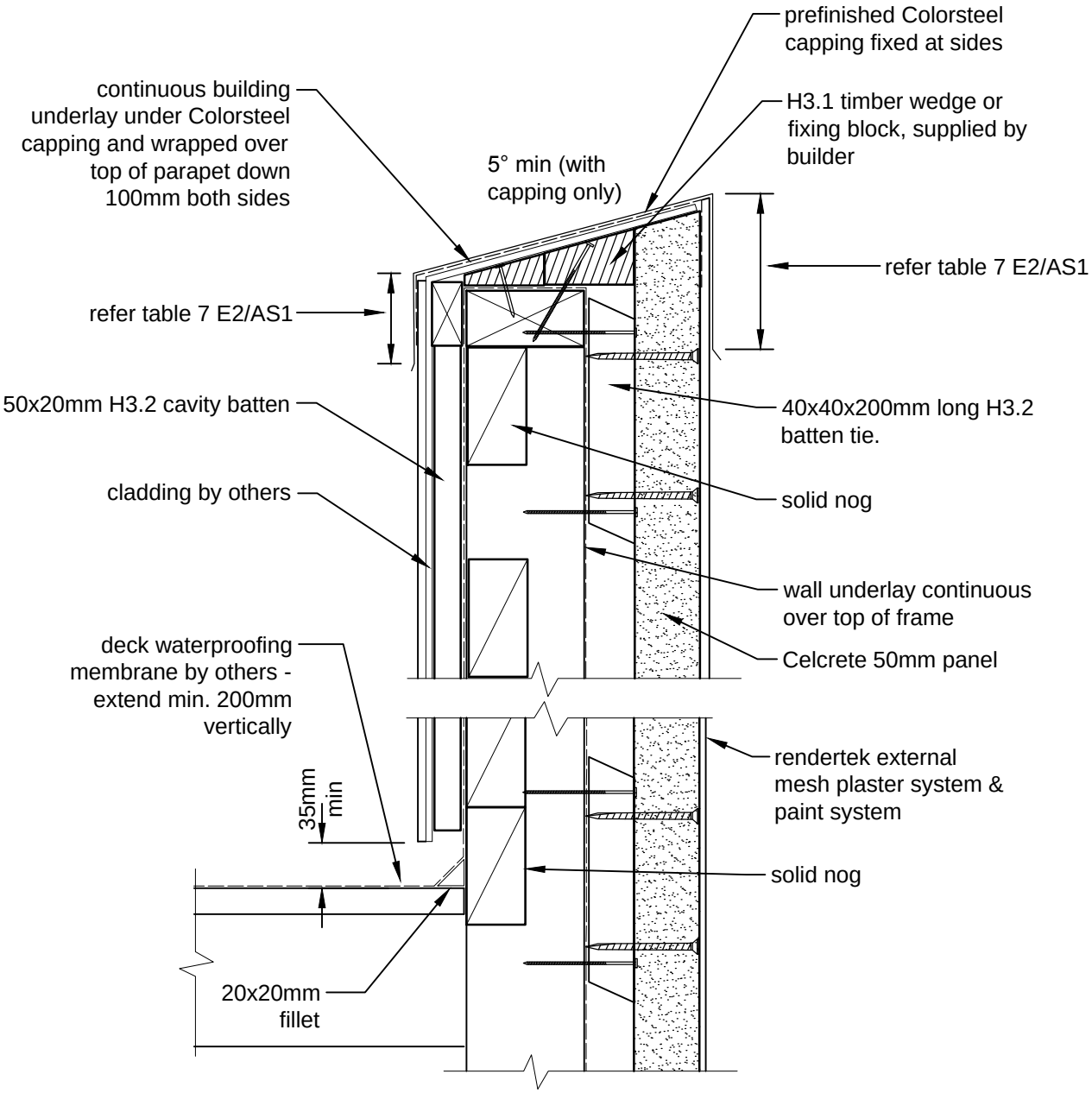
CELCRETE PANEL ROOF KICKOUT FLASHING

CAD REF 8-7
SCALE 1:10



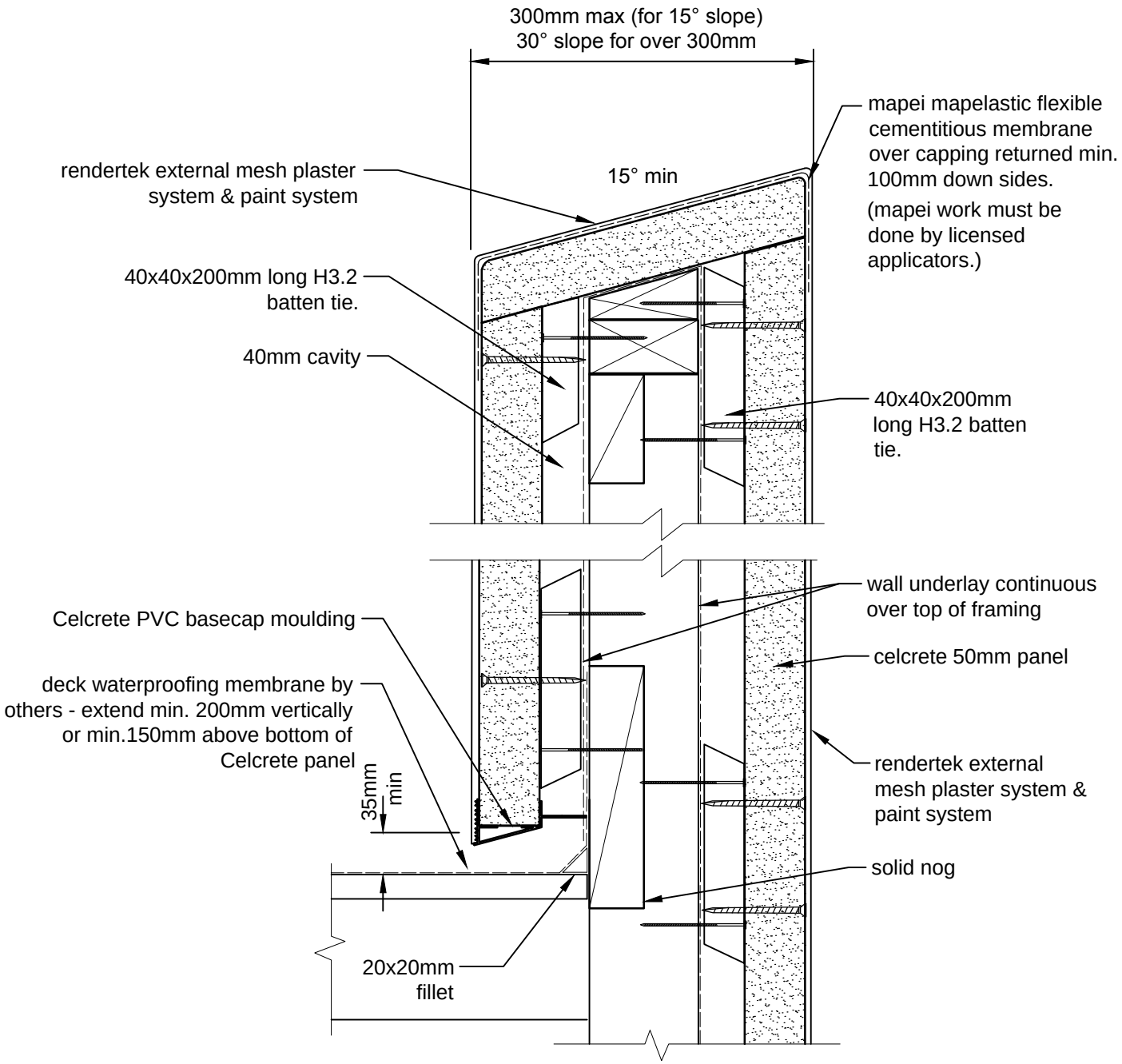
ROOF/ WALL JUNCTION DETAIL

CAD REF 8-8
SCALE 1:5



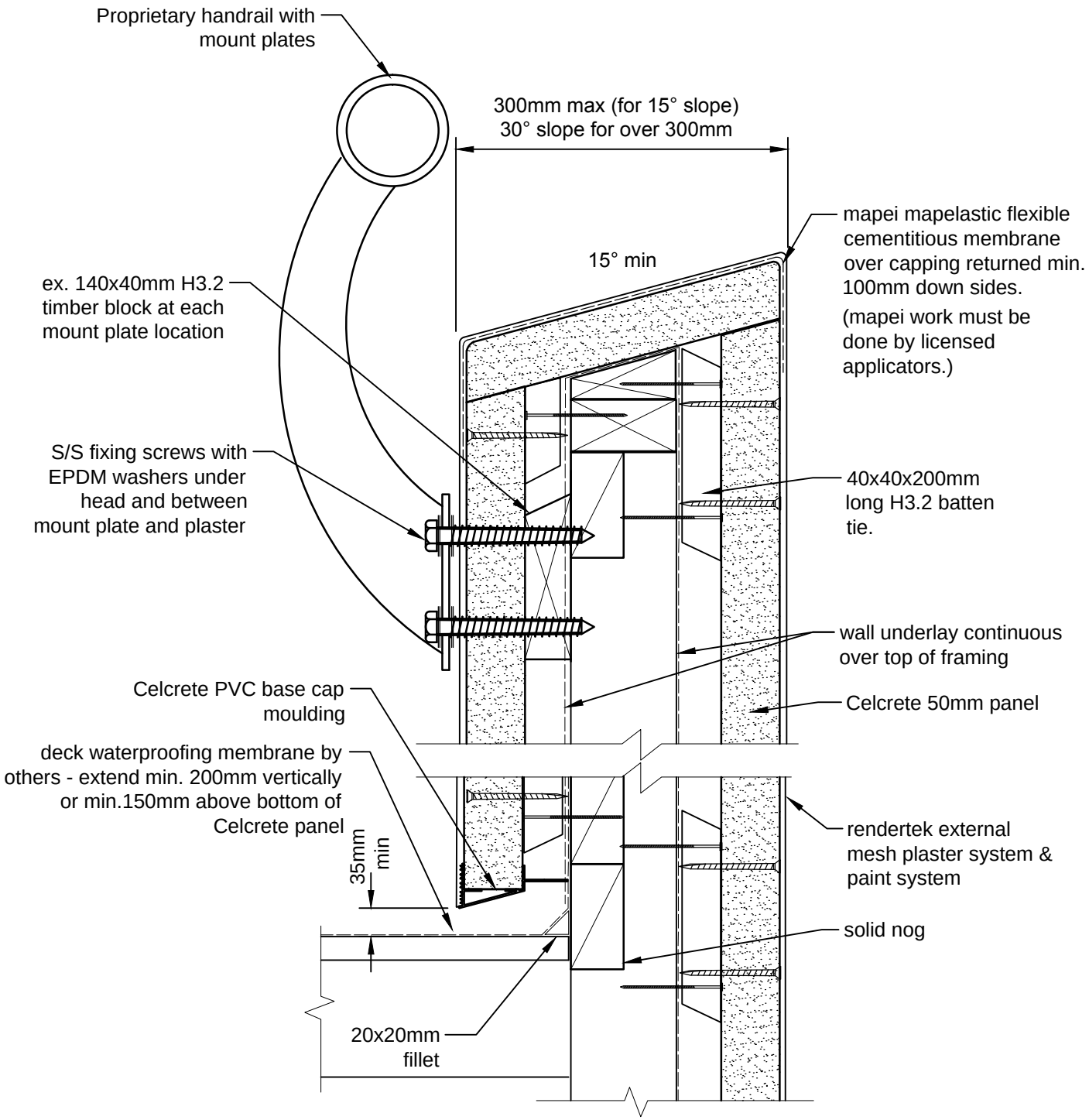
DECK BARRIER DETAIL

CAD REF 9-1
SCALE 1:5



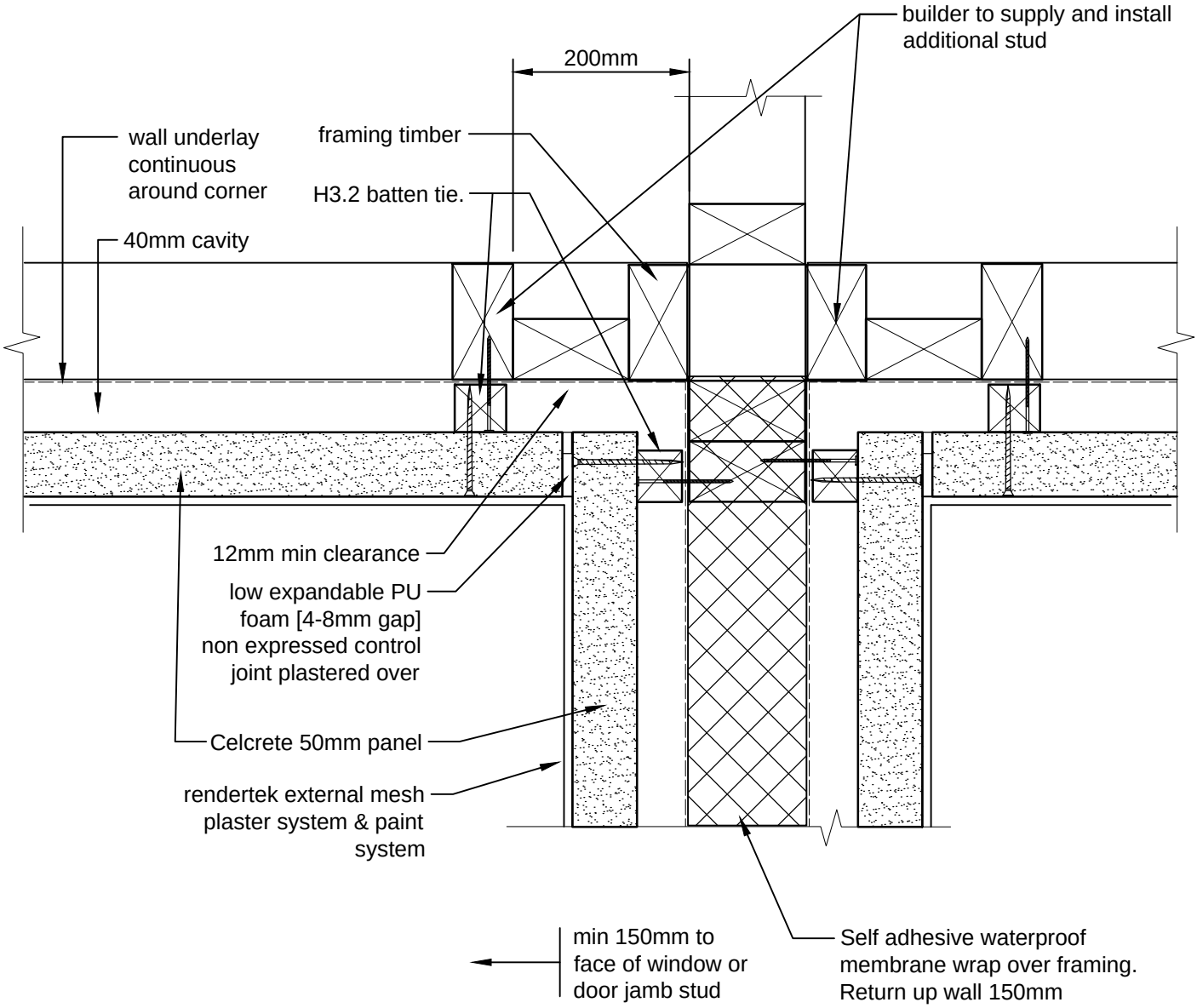
DECK BARRIER DETAIL

CAD REF 9-2
SCALE 1:5



DECK BARRIER / HANDRAIL FIXING DETAIL

CAD REF 9-3
SCALE 1:5



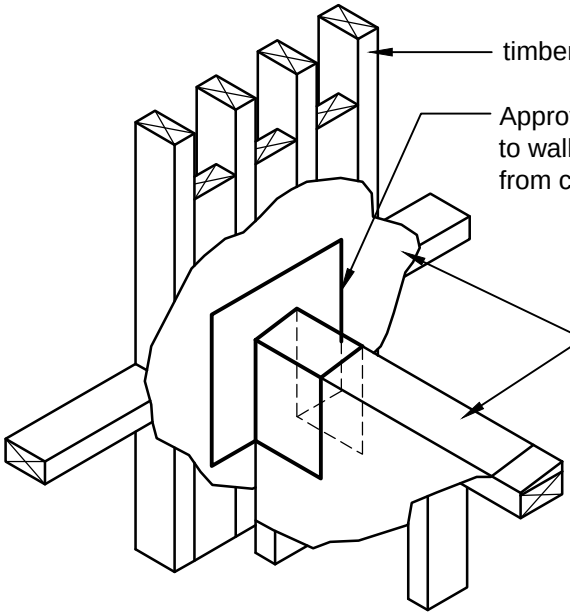
PLAN VIEW

CELCRETE PANEL CORNER JUNCTION AT SOLID HANDRAIL

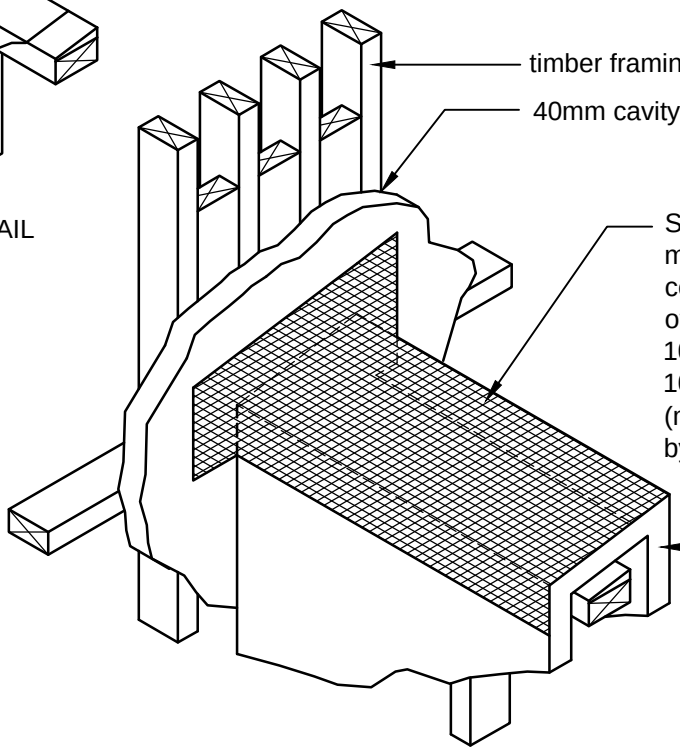
CAD REF 9-4

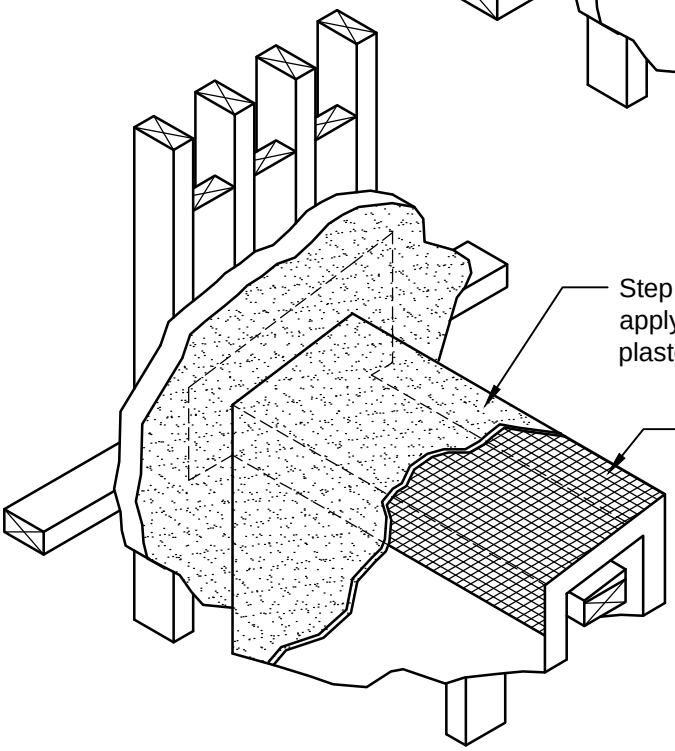
SCALE 1:5

(also refer CAD REF 9-6)



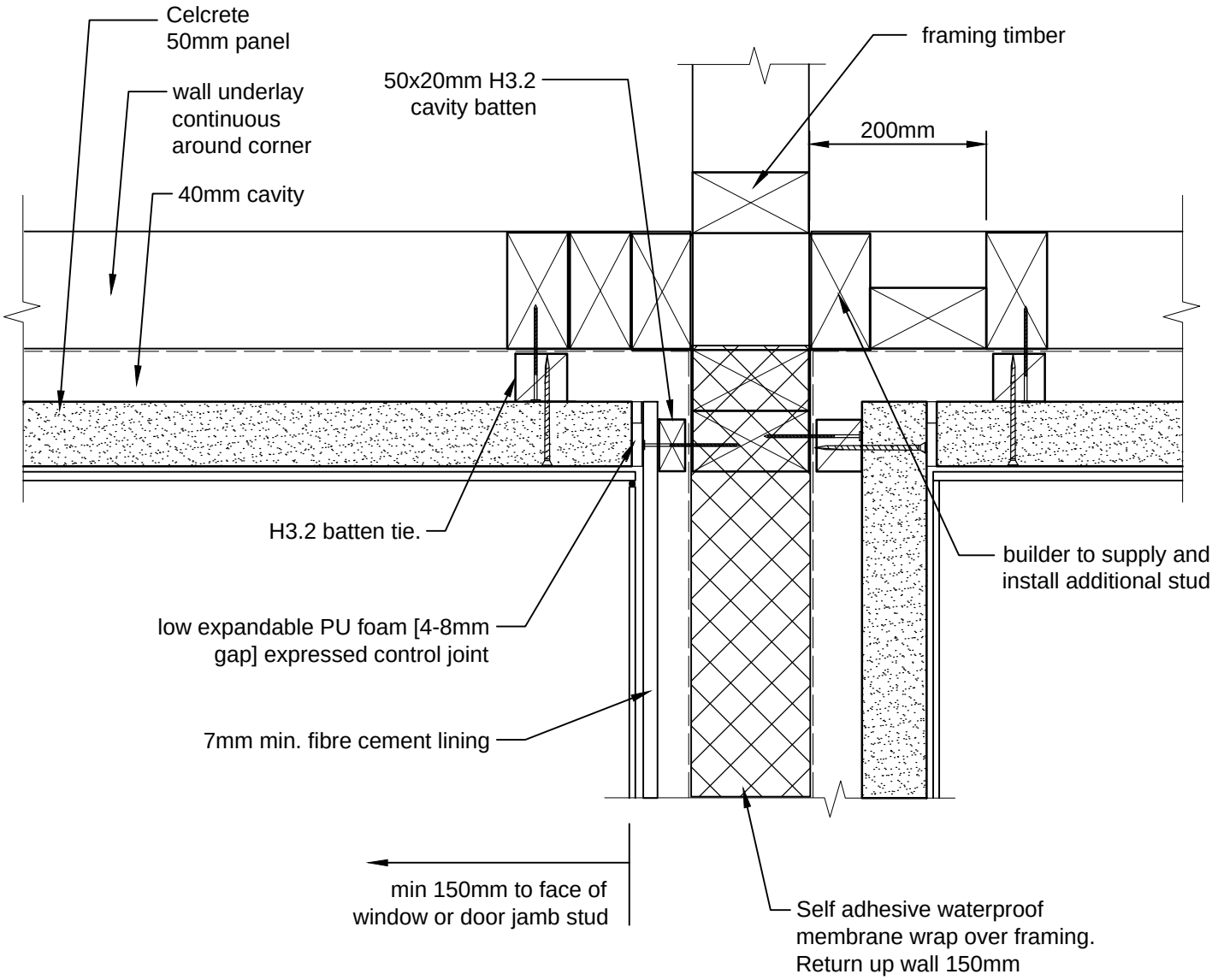
TIMBER FRAMED HANDRAIL
as per NZS 3604





SOLID HANDRAIL / WALL INTERSECTION

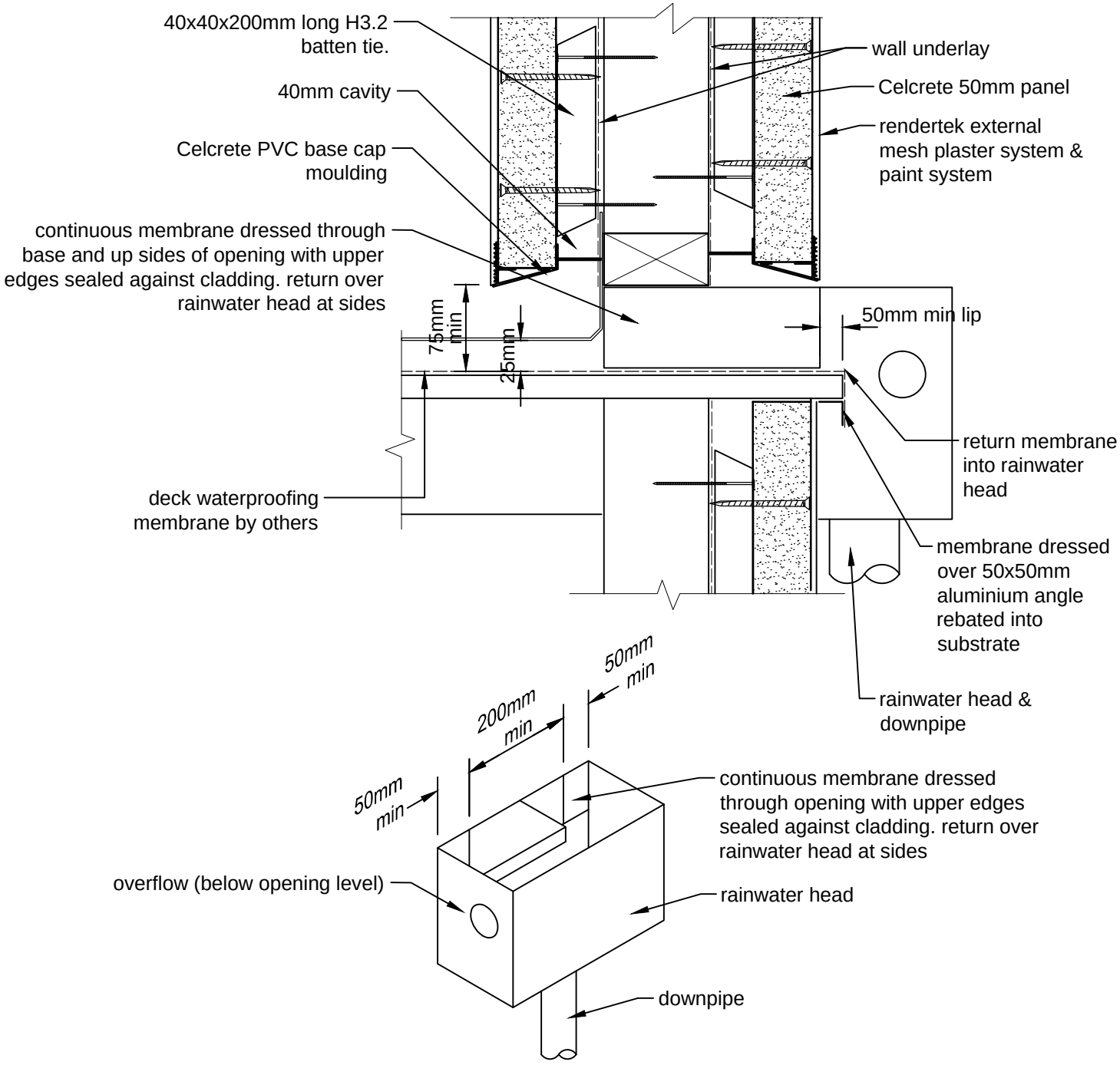
CAD REF 9-5
SCALE 1:15



CELCRETE PANEL CORNER JUNCTION WITH FIBRE CEMENT LINING AT SOLID HANDRAIL

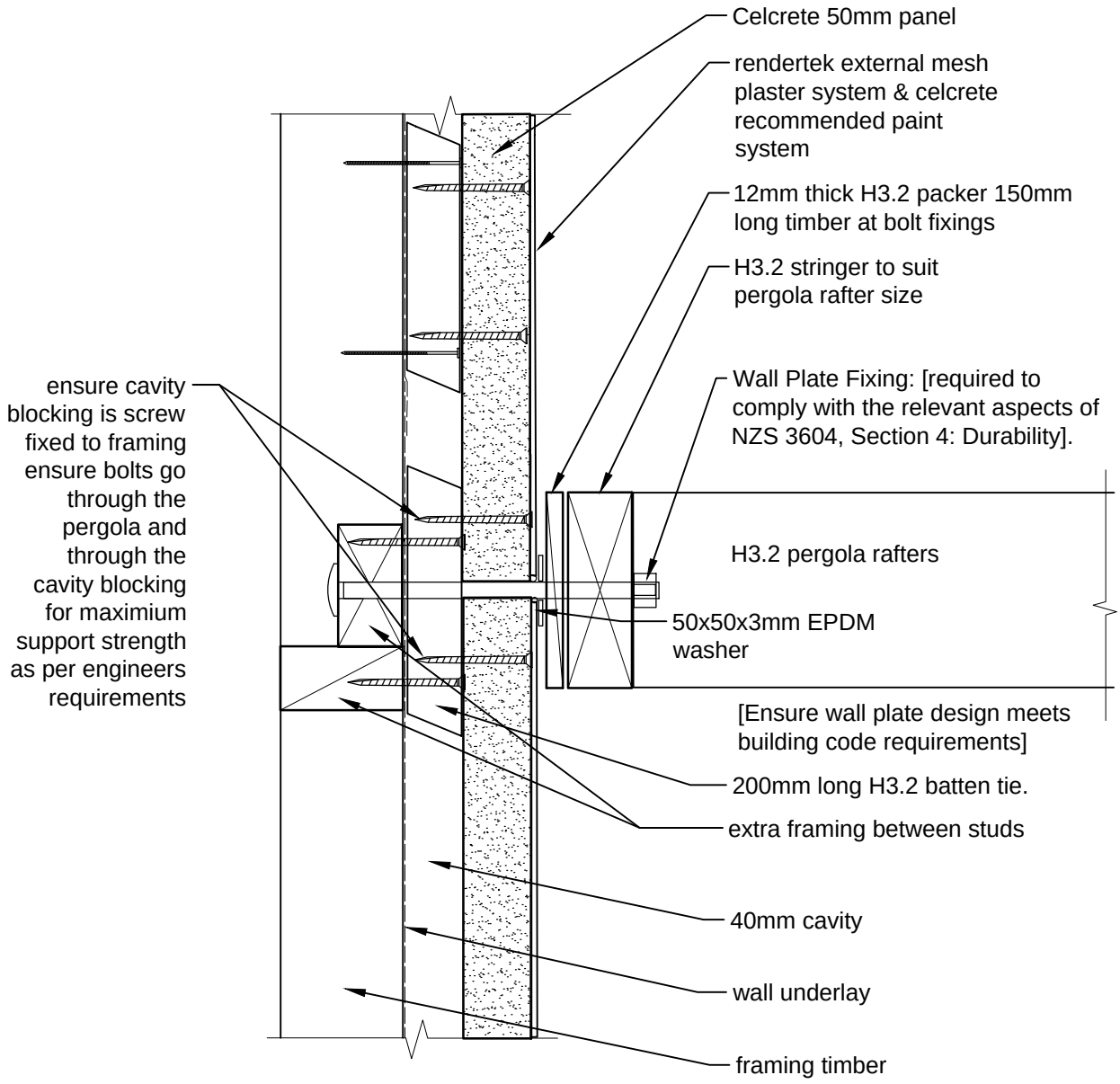
CAD REF 9-6
SCALE 1:5

(also refer CAD REF 9-4)



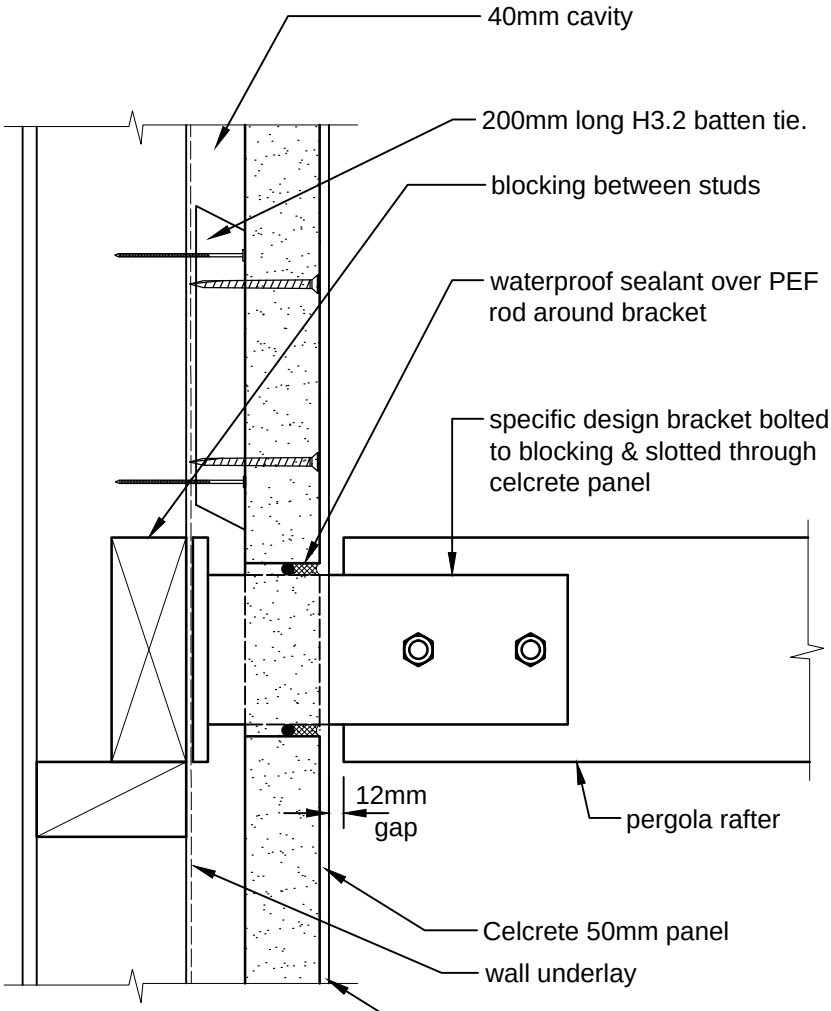
RAINWATER HEAD OPENING DETAIL

CAD REF 9-7
SCALE 1:5



PERGOLA WALL PLATE FIXING AND CELCRETE PANEL JUNCTION

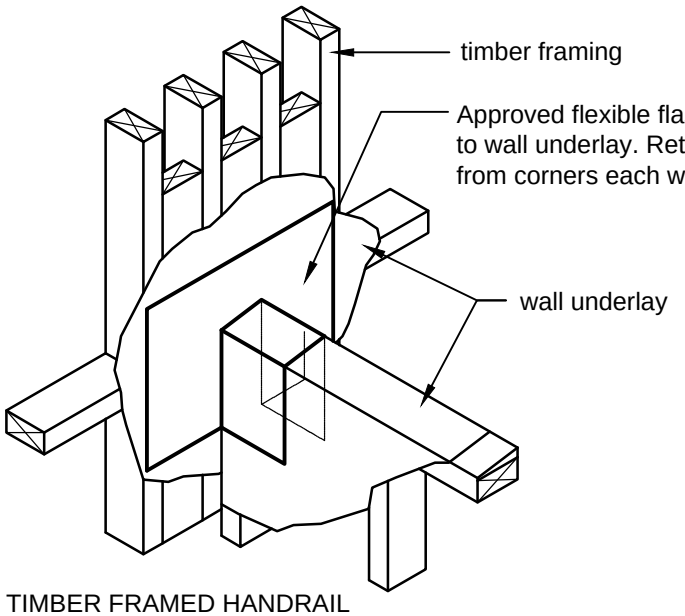
CAD REF 9-8
SCALE 1:5



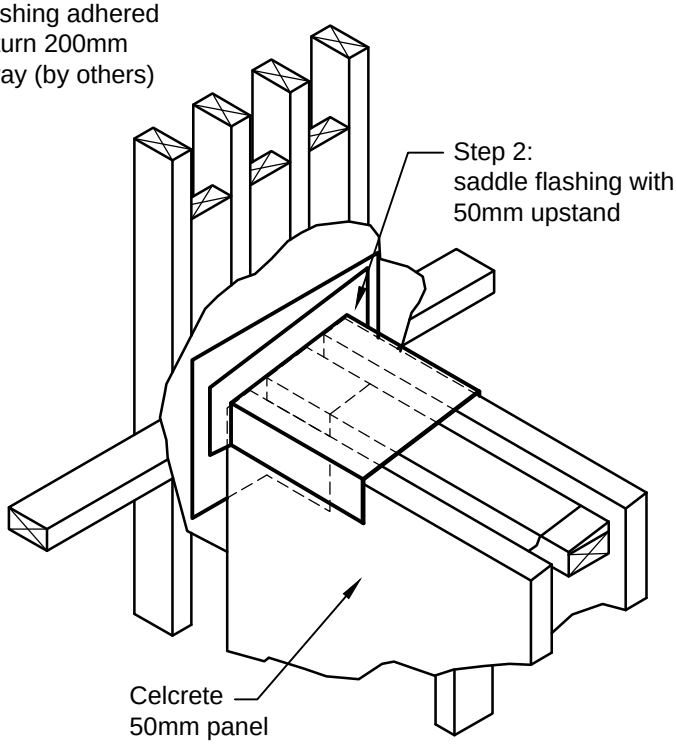
Note: wall to be plastered prior to fitting pergola rafters

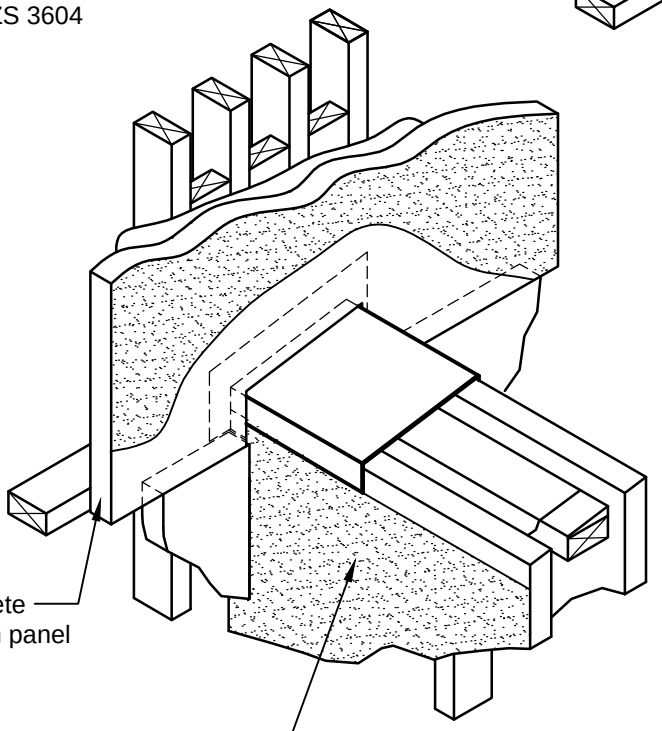
PERGOLA RAFTER SUPPORT BRACKET DETAIL

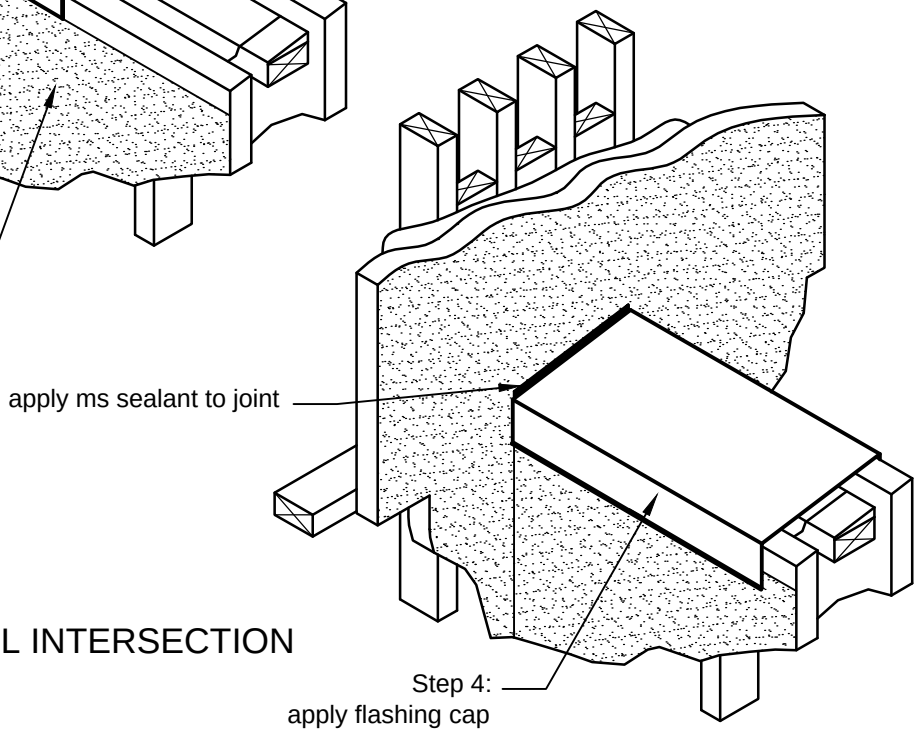
CAD REF 9-9
SCALE 1:5



TIMBER FRAMED HANDRAIL
as per NZS 3604

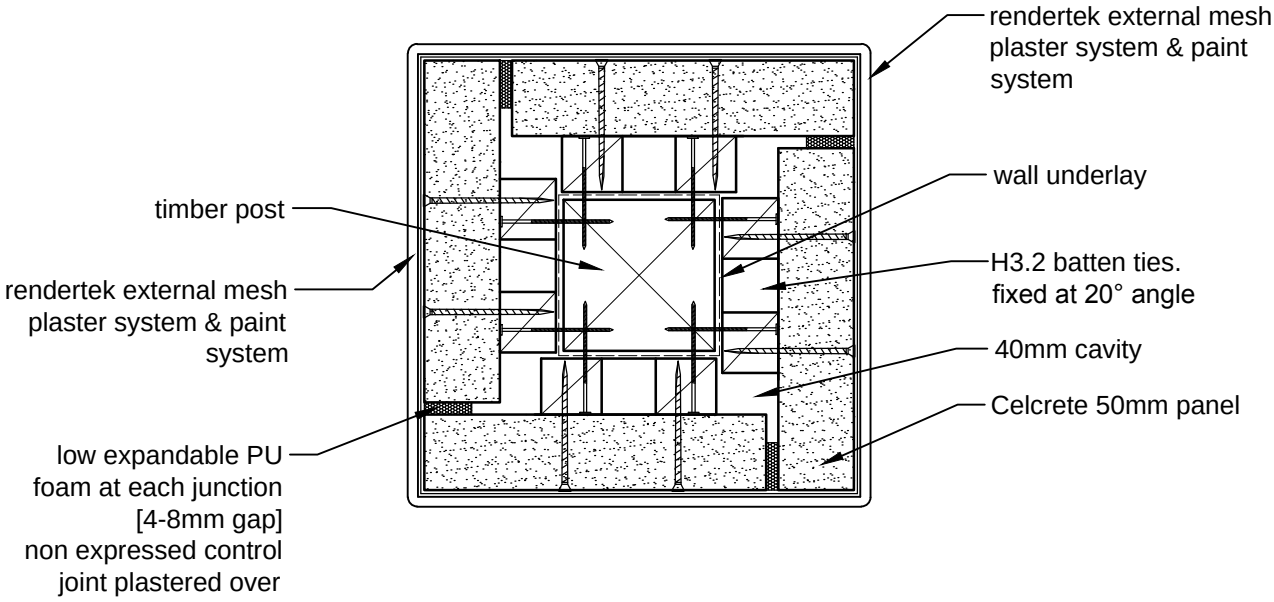


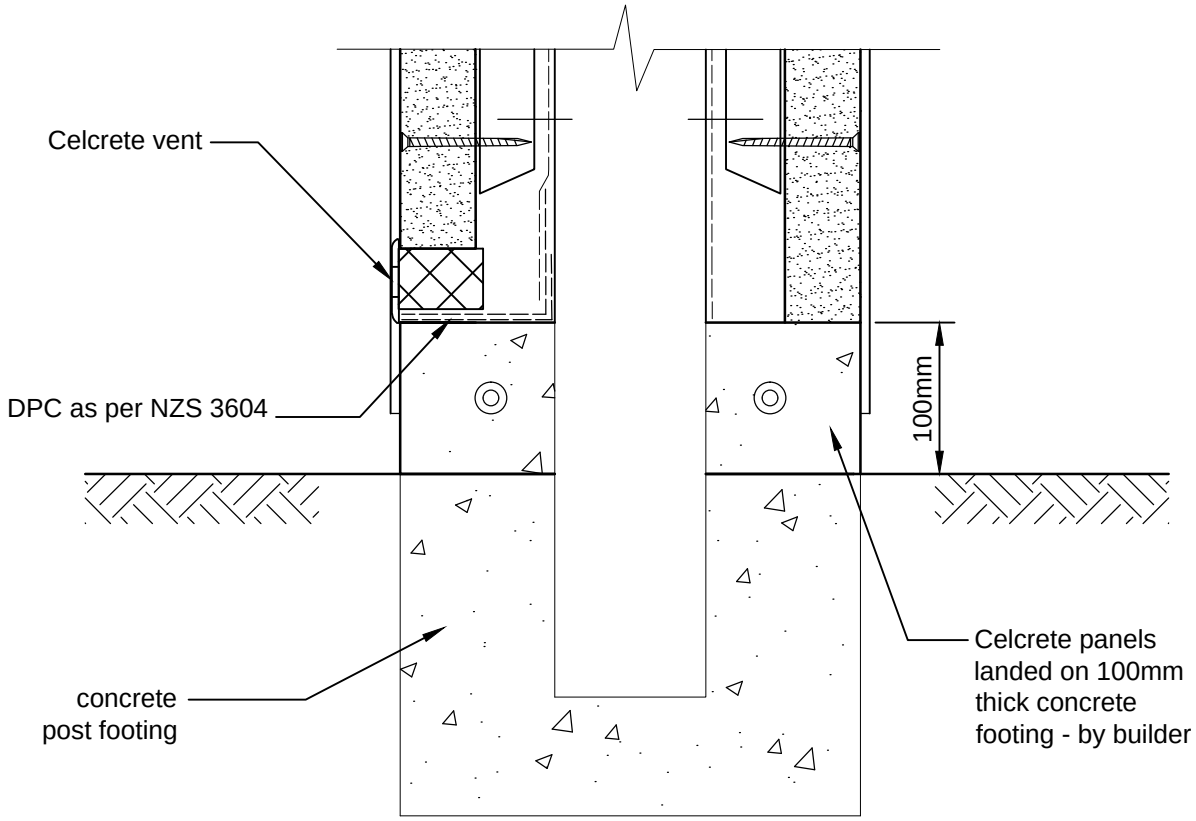




SOLID HANDRAIL / WALL INTERSECTION

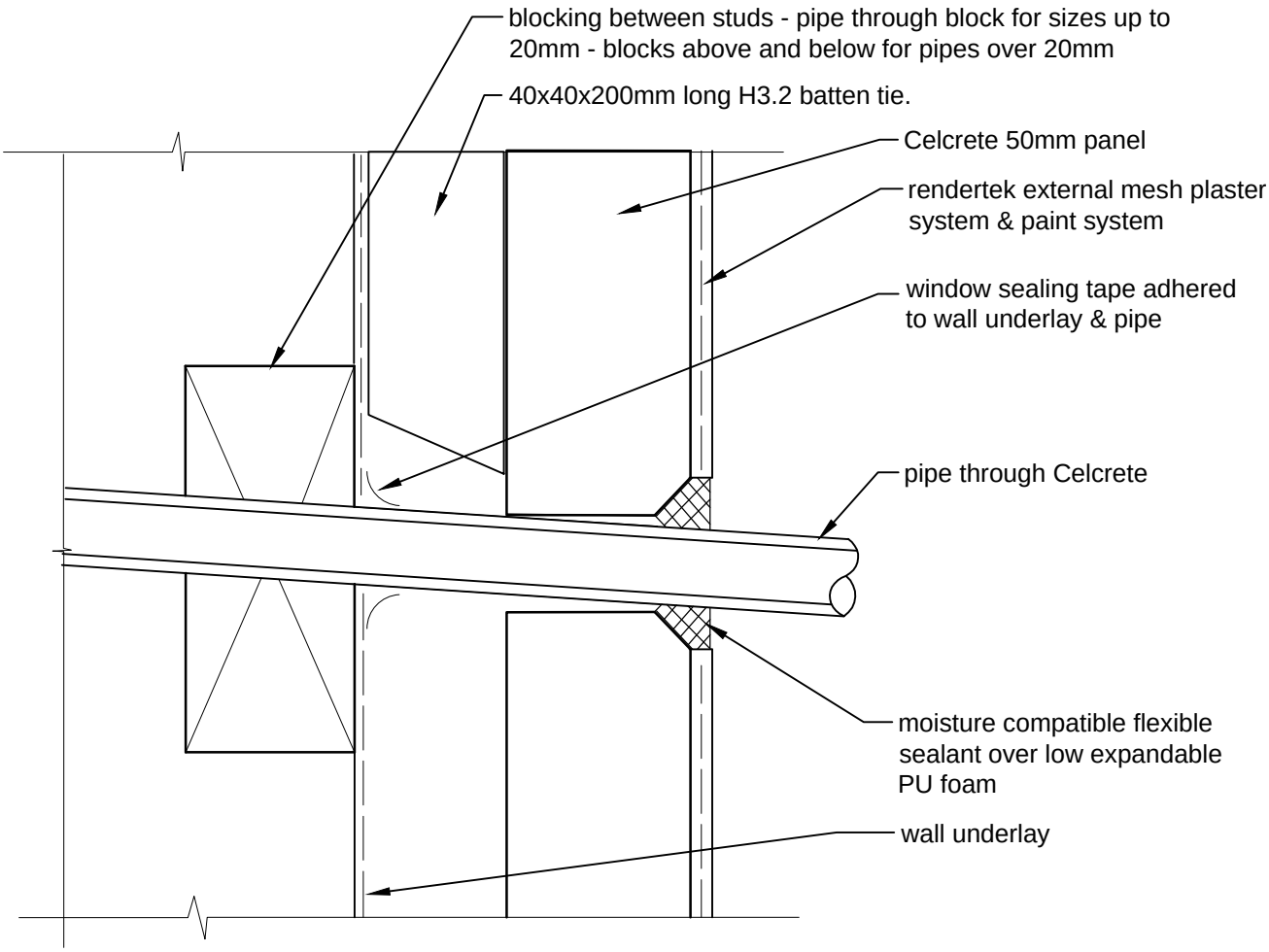
CAD REF 9-10
SCALE 1:15





CELCRETE PANEL TYPICAL POST / BEAM DETAIL & CELCRETE PANEL TO GROUND DETAIL ON TIMBER POSTS

CAD REF 10-1
SCALE 1:5



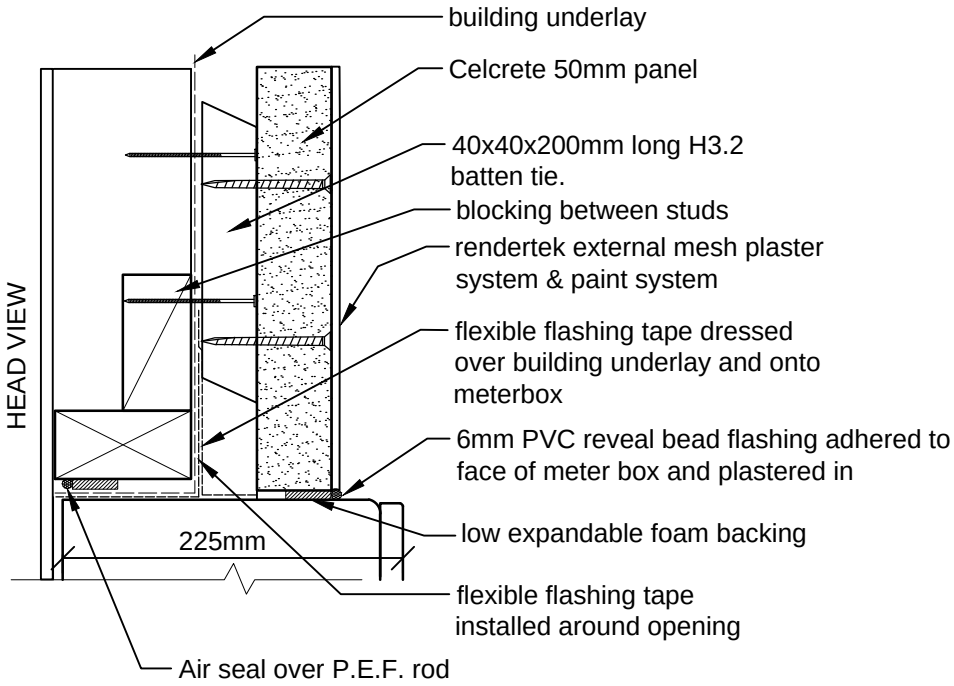
Where cables penetrate cladding, a sleeve or conduit shall be provided and sealed into the Celcrete 50mm panel system. All wires that pass through a conduit shall be sealed into position inside the conduit.

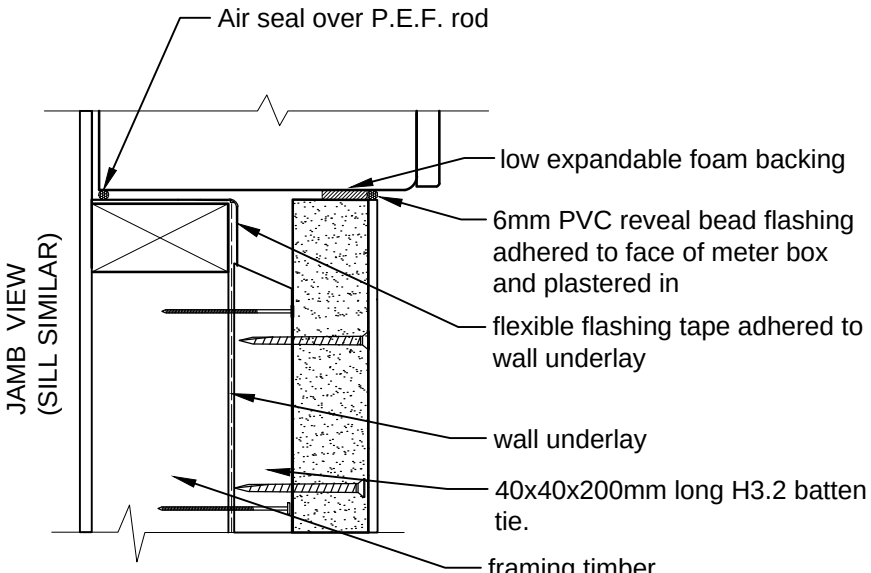
PENETRATION THROUGH CELCRETE WALL CLADDINGS FOR PIPES

[Where possible, provide outwards fall to pipework for water run-off]

CAD REF 11-1

SCALE 1:2





STANDARD METER BOX ASSEMBLY

COMMENT:
Where possible, meter-boxes should be located in sheltered areas of the building, such as a porch, or be installed behind a weatherproof glazed panel.

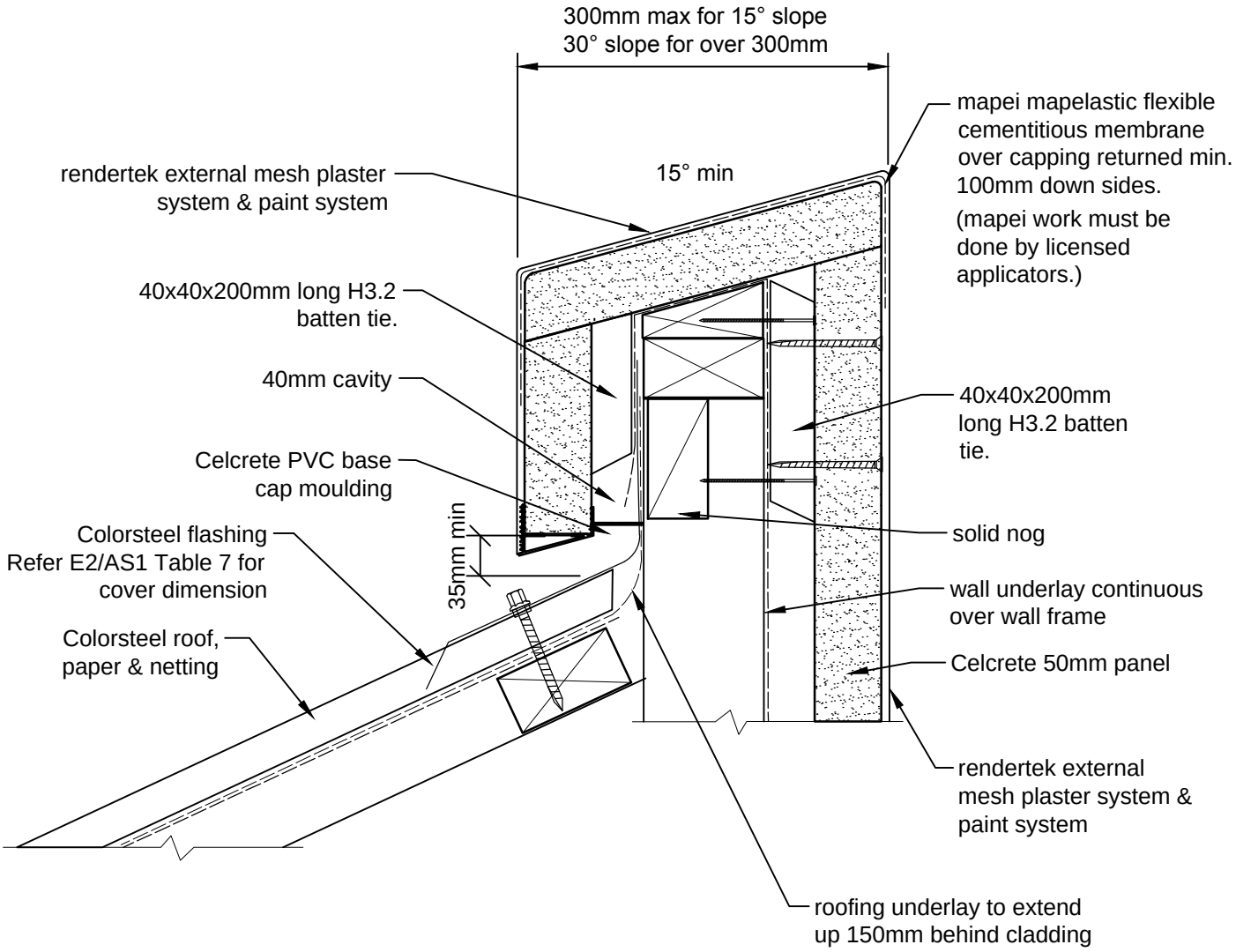
When installing window tape apply pressure
along entire surface for a good bond to wall and Meter box surfaces.

Care must be taken to ensure that when using low expandable PU foam excess foam is cut off. A moisture compatible flexible sealant is to be spread over the exposed foam edge .

Detail tape may need to be used around the corners of the meterbox
to ensure weathertightness.

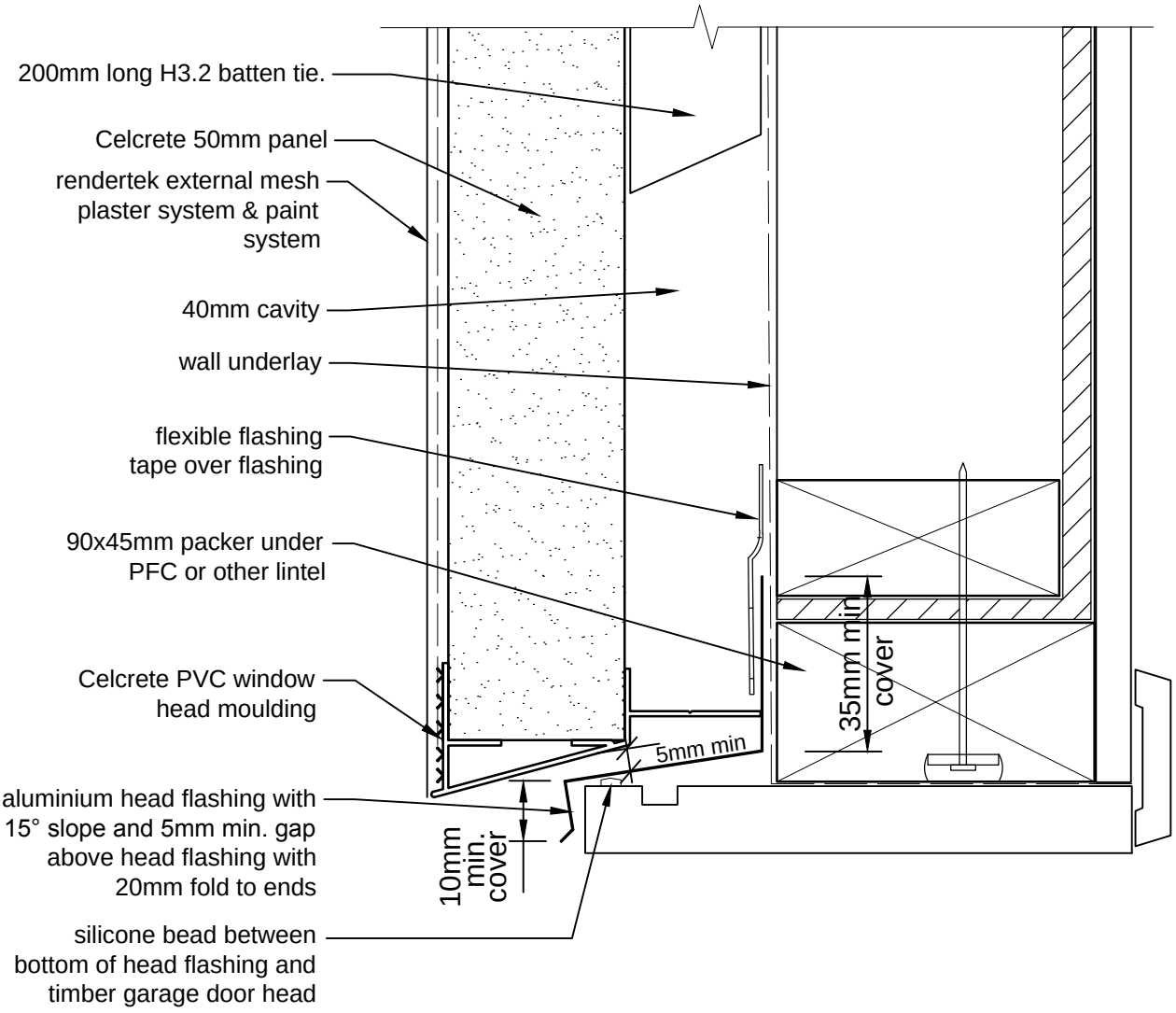
PENETRATION THROUGH CELCRETE WALL CLADDINGS FOR METER BOXES

CAD REF 11-2
SCALE 1:5 & 1:10



PARAPET CAPPING DETAIL

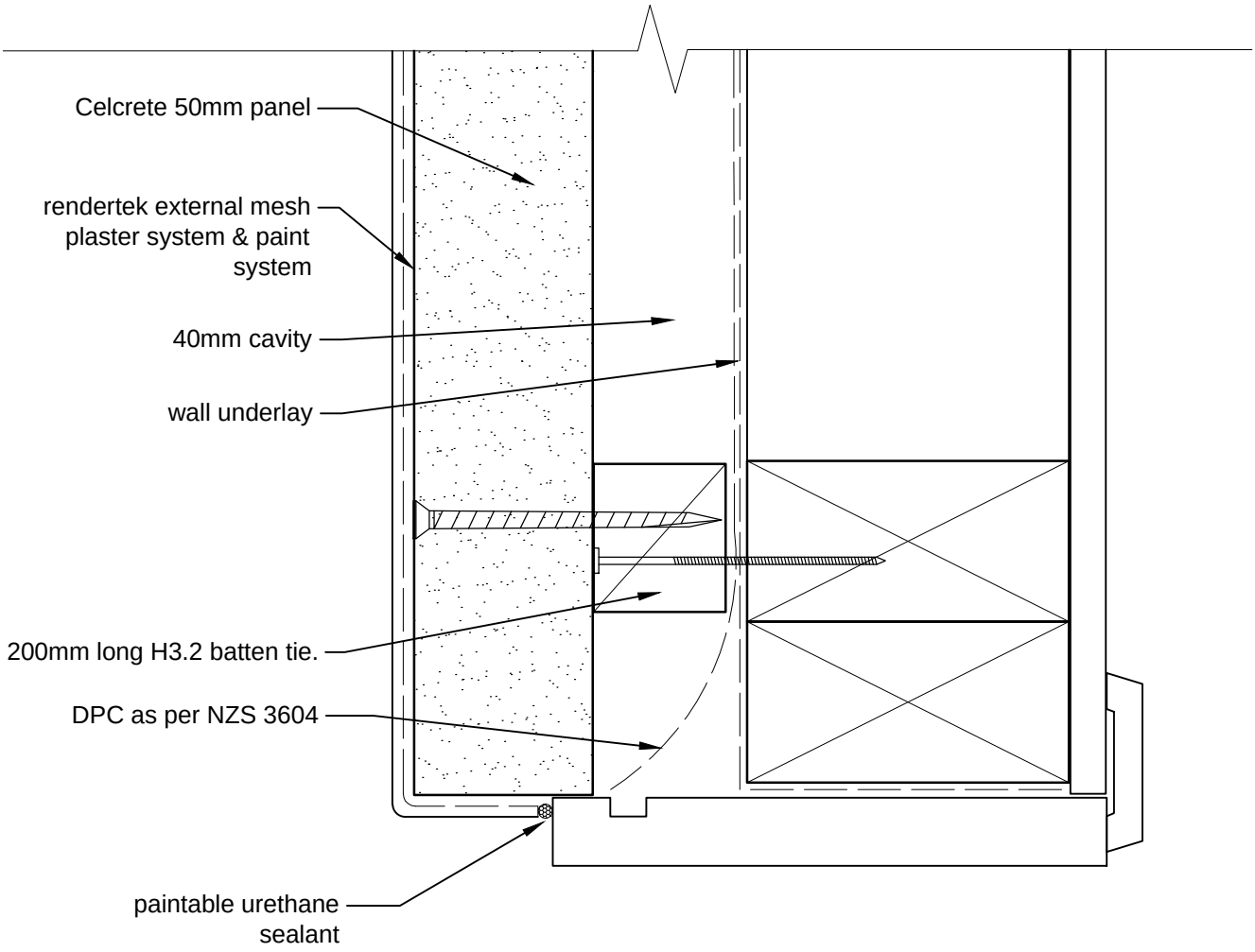
CAD REF 12-1
SCALE 1:5



TIMBER GARAGE DOOR HEAD DETAIL

SECTIONAL VIEW OF GARAGE DOOR-HEAD

CAD REF 13-1
SCALE 1:2

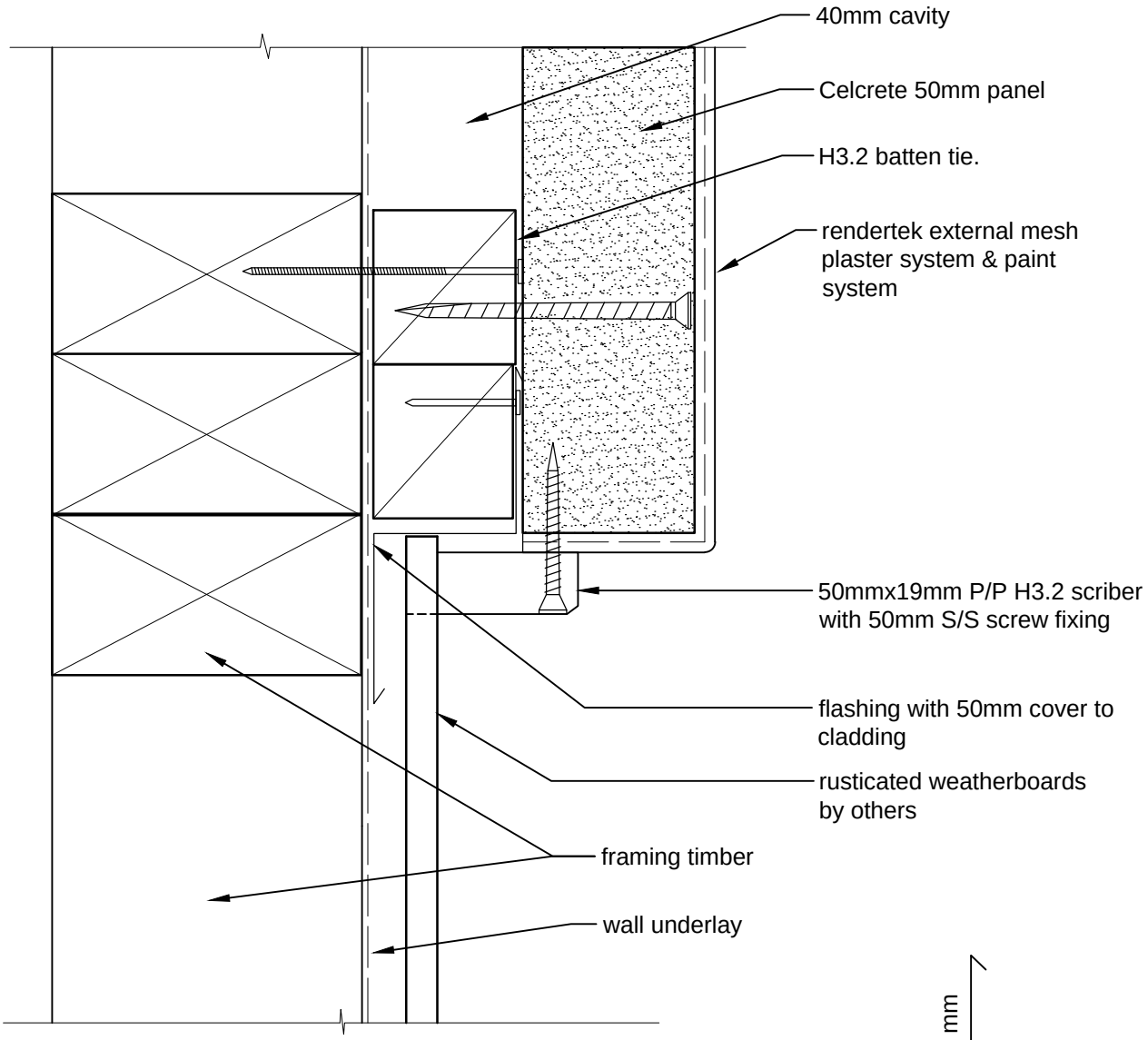


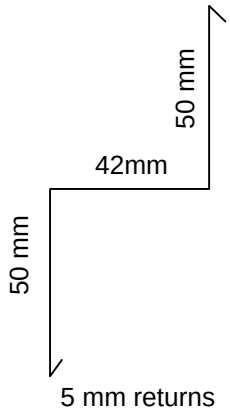
STD TIMBER JAMB GARAGE DOOR DETAIL

PLAN VIEW OF JAMB

CAD REF 13-2

SCALE 1:2





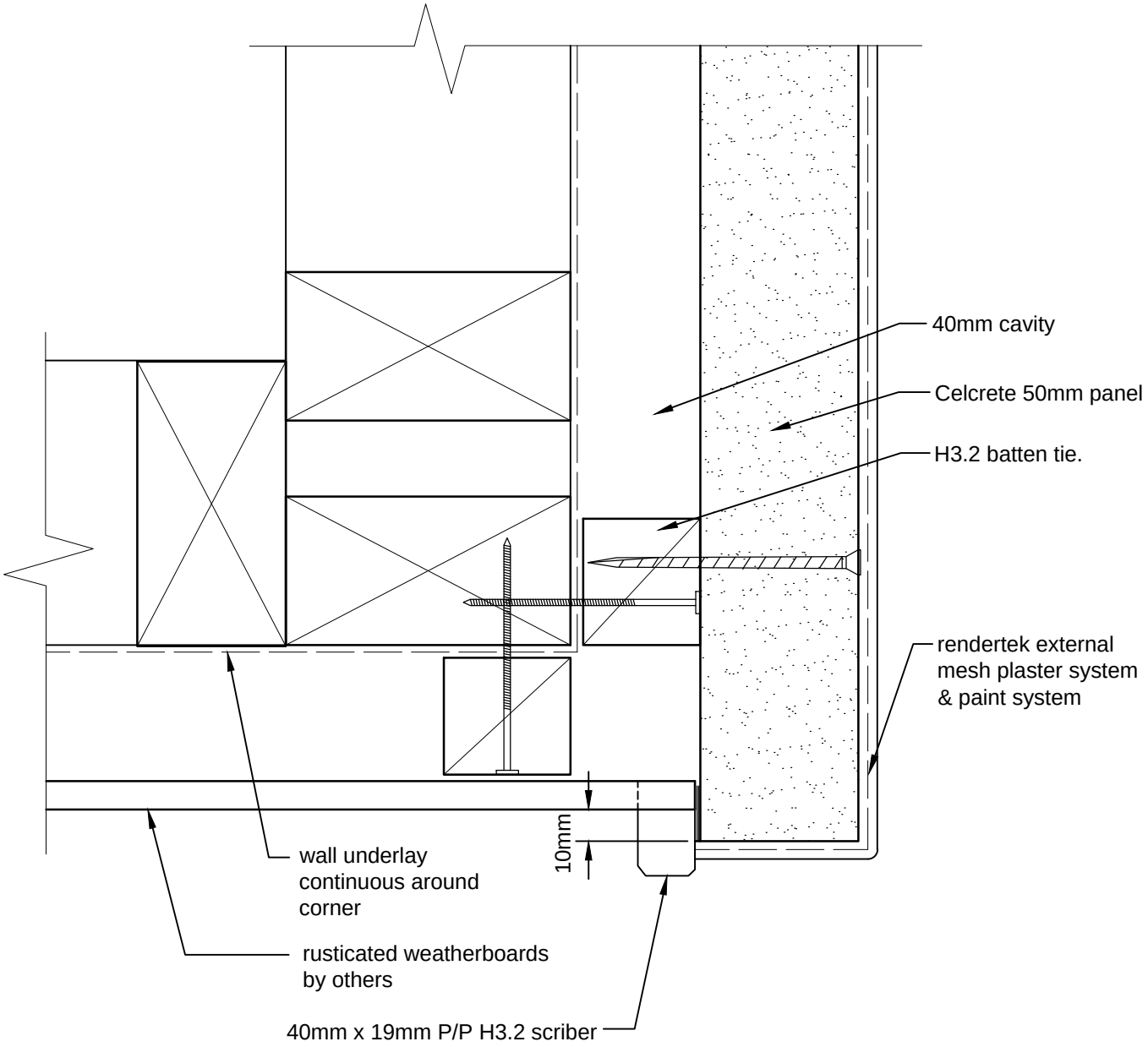
FLASHING DIMENSIONS

PLAN VIEW

CELCRETE - CAVITY - ABUTTING HORIZONTAL TIMBER WEATHERBOARDS

CAD REF 14-1

SCALE 1:2

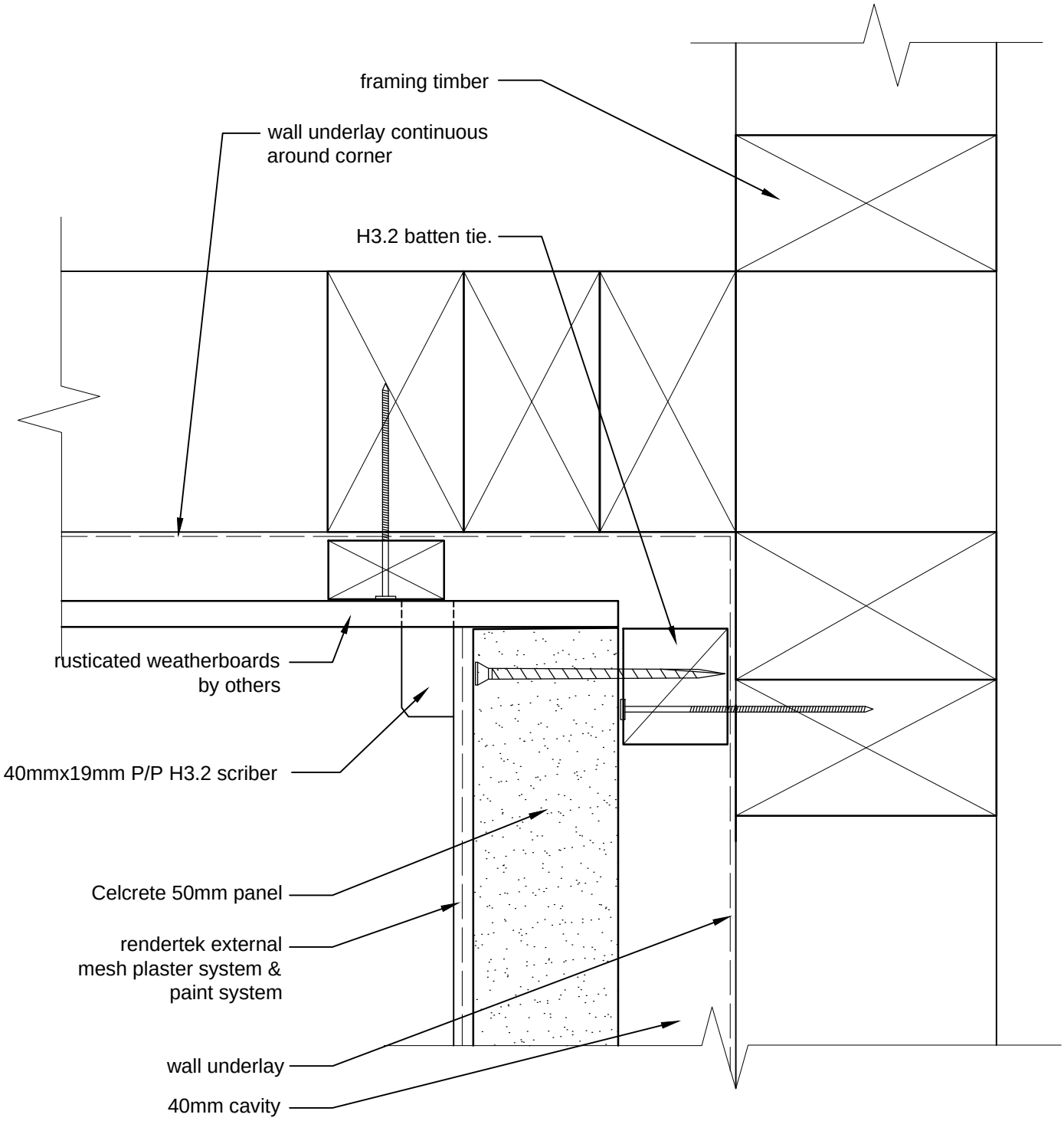


PLAN VIEW

CELCRETE PANEL EXTERNAL CORNER JUNCTION WITH HORIZONTAL TIMBER WEATHERBOARDS

CAD REF 14-2

SCALE 1:2

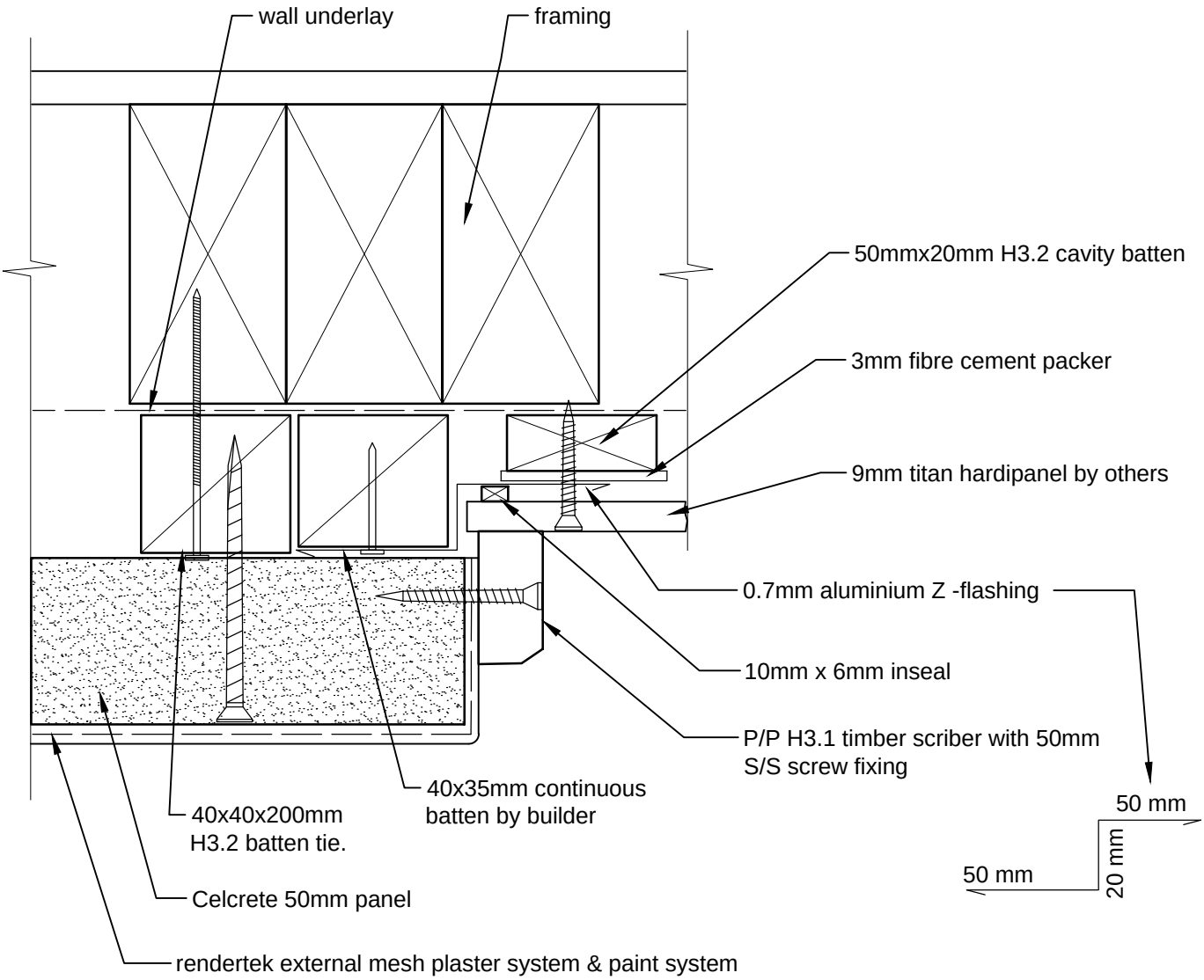


PLAN VIEW

CELCRETE PANEL INTERNAL CORNER JUNCTION WITH HORIZONTAL TIMBER WEATHERBOARDS

CAD REF 14-3

SCALE 1:2

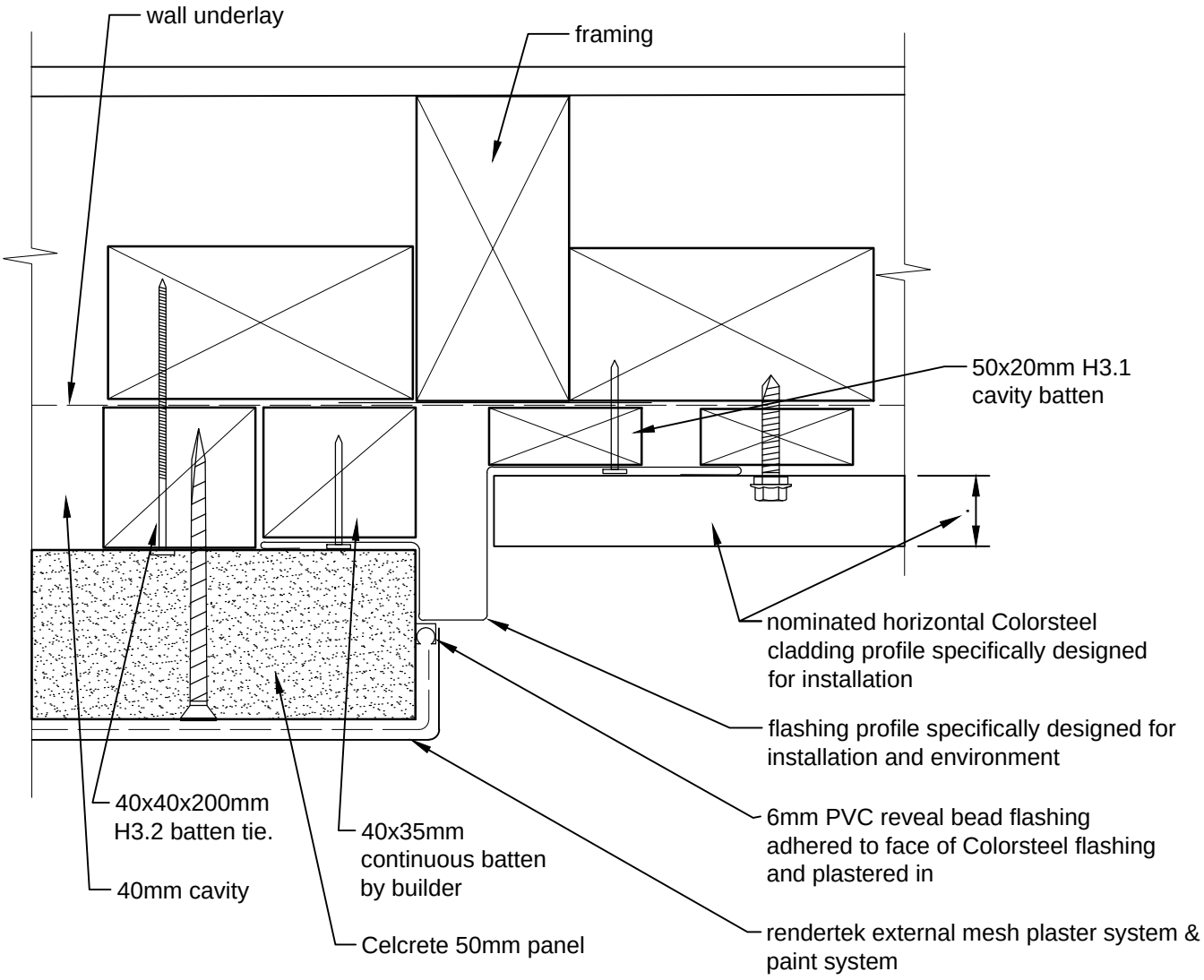


PLAN VIEW

CELCRETE - CAVITY - ABUTTING TITAN BOARD

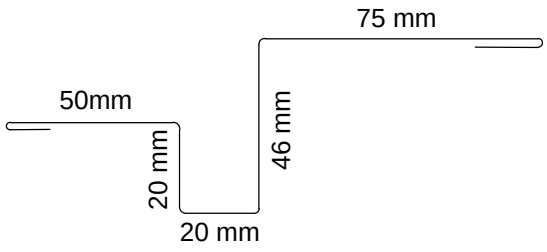
CAD REF 15-1

SCALE 1:2



IMPORTANT NOTE:
Selection of flashing materials
in all applications, the choice of flashing materials shall take into account the following factors:
a) The requirements of NZBC B2 Durability,
b) The environment where the building is located,
c) The specific conditions of use, and
d) Consideration of the surrounding materials.
~

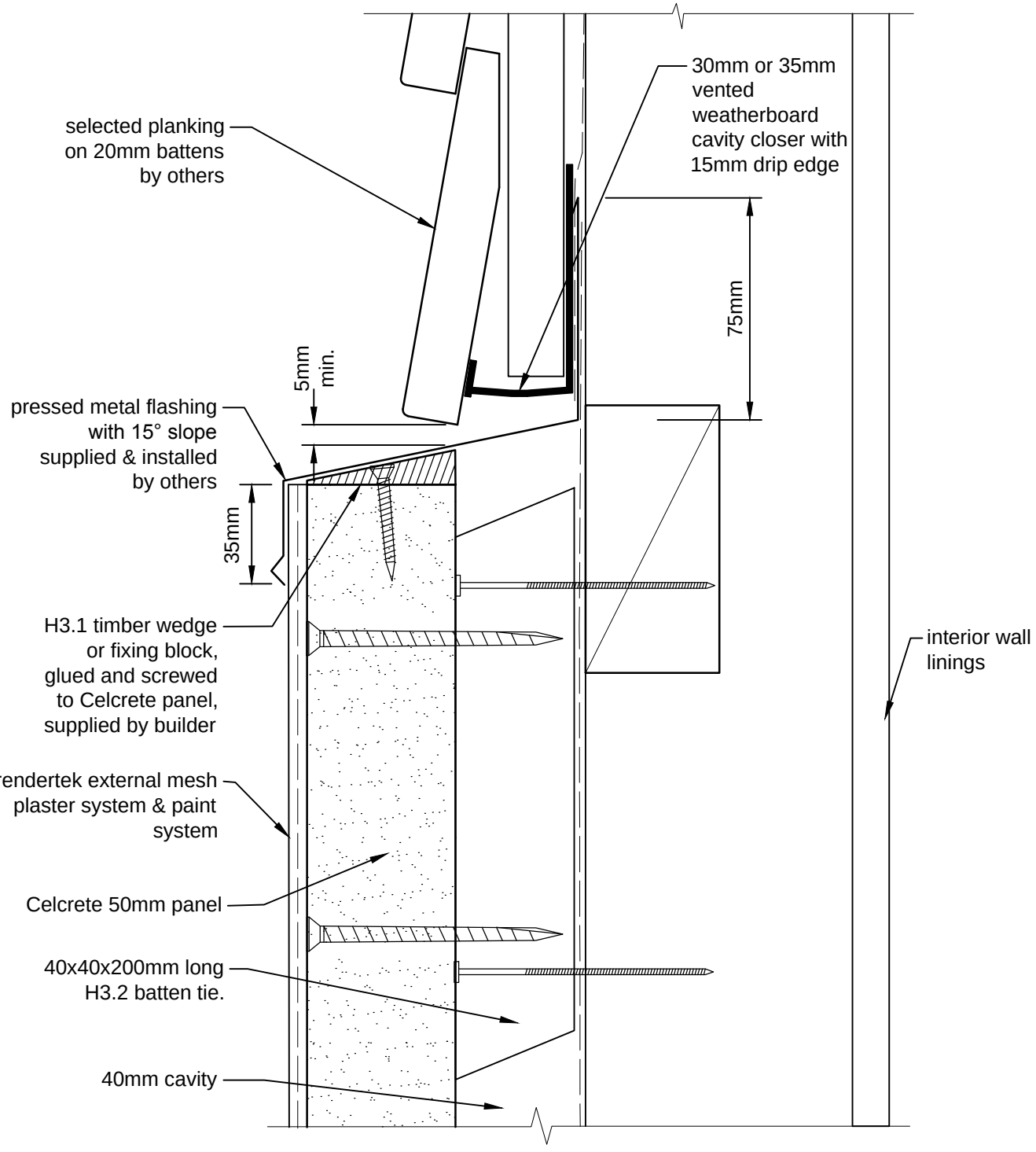
METAL FLASHING PROFILE



PLAN VIEW

CELCRETE - CAVITY - ABUTTING HORIZONTAL CORRUGATED STEEL

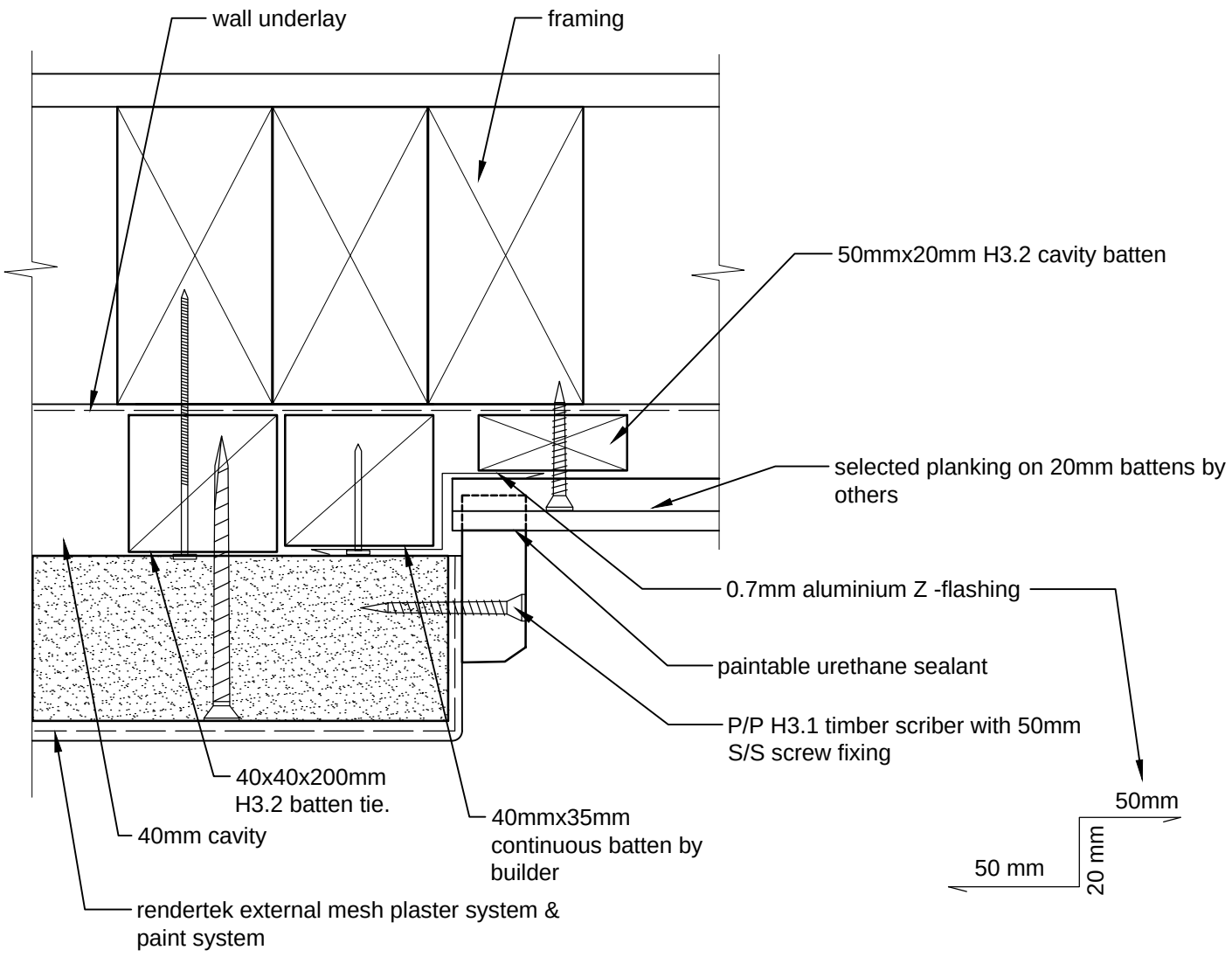
CAD REF 16-1
SCALE 1:2



CELCRETE PLANKING JUNCTION

CAD REF 17-1

SCALE 1:2

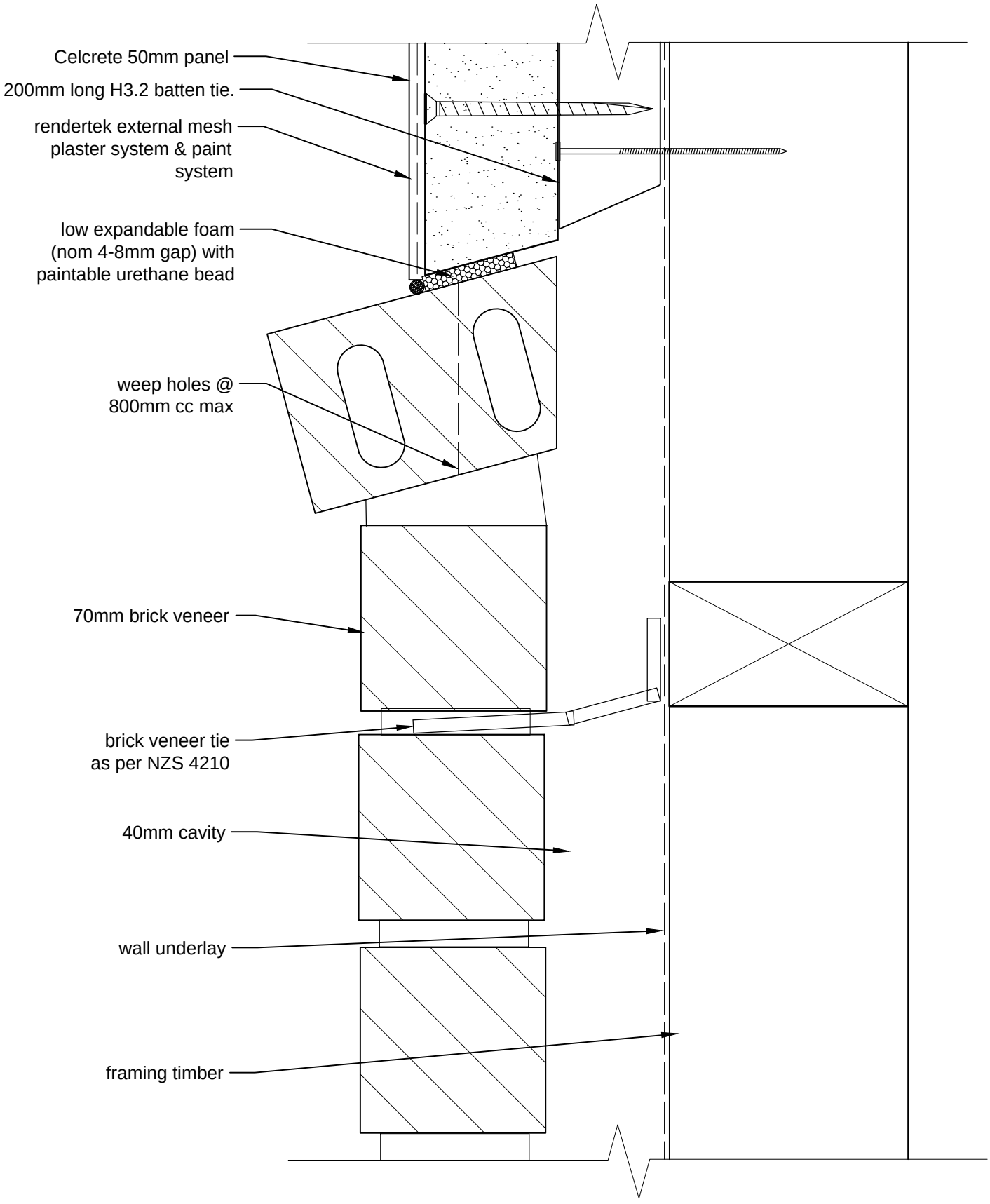


PLAN VIEW

CELCRETE ABUTTING PLANKING

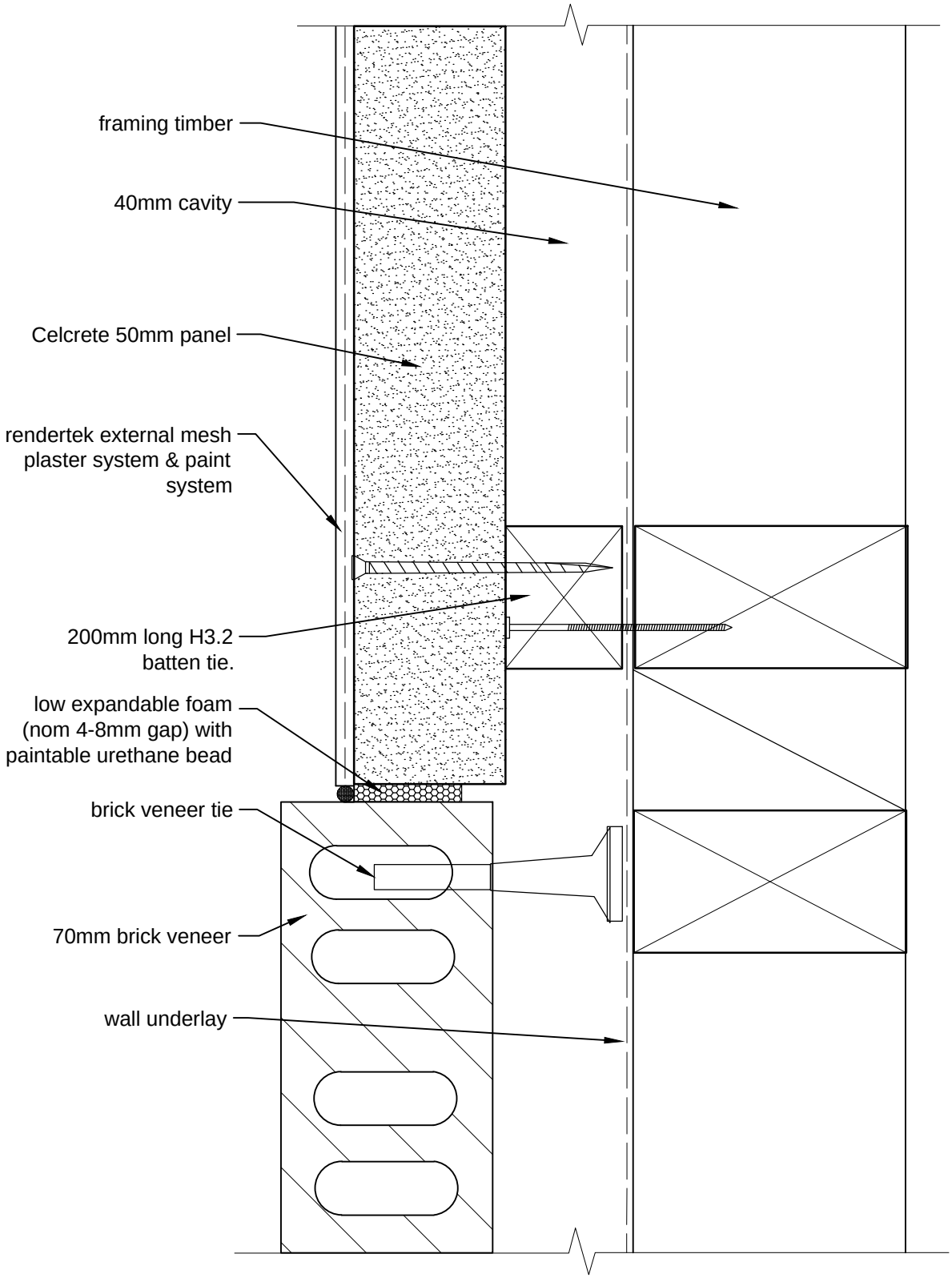
CAD REF 17-2

SCALE 1:2



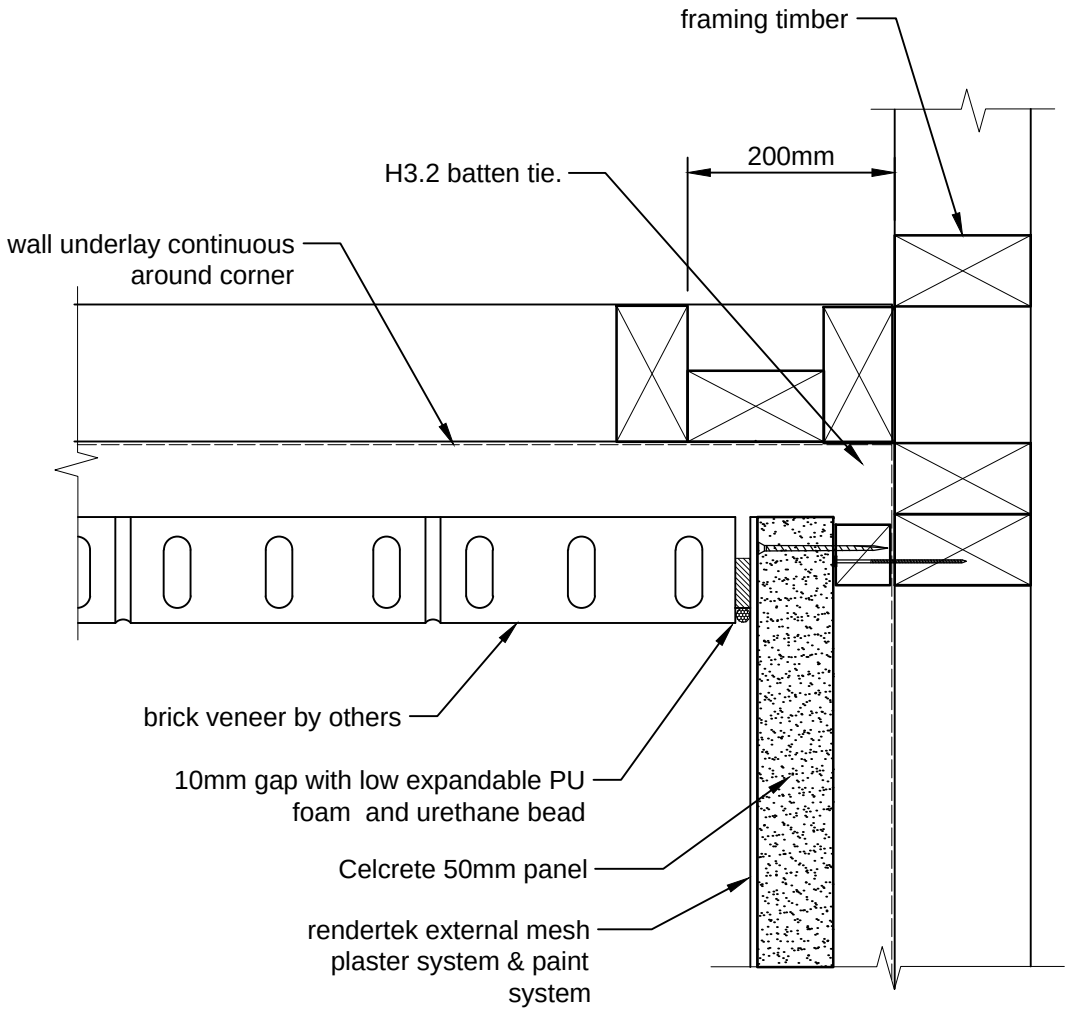
BRICK VENEER BELOW CELCRETE PANEL VENEER JUNCTION

CAD REF 18-1
SCALE 1:2



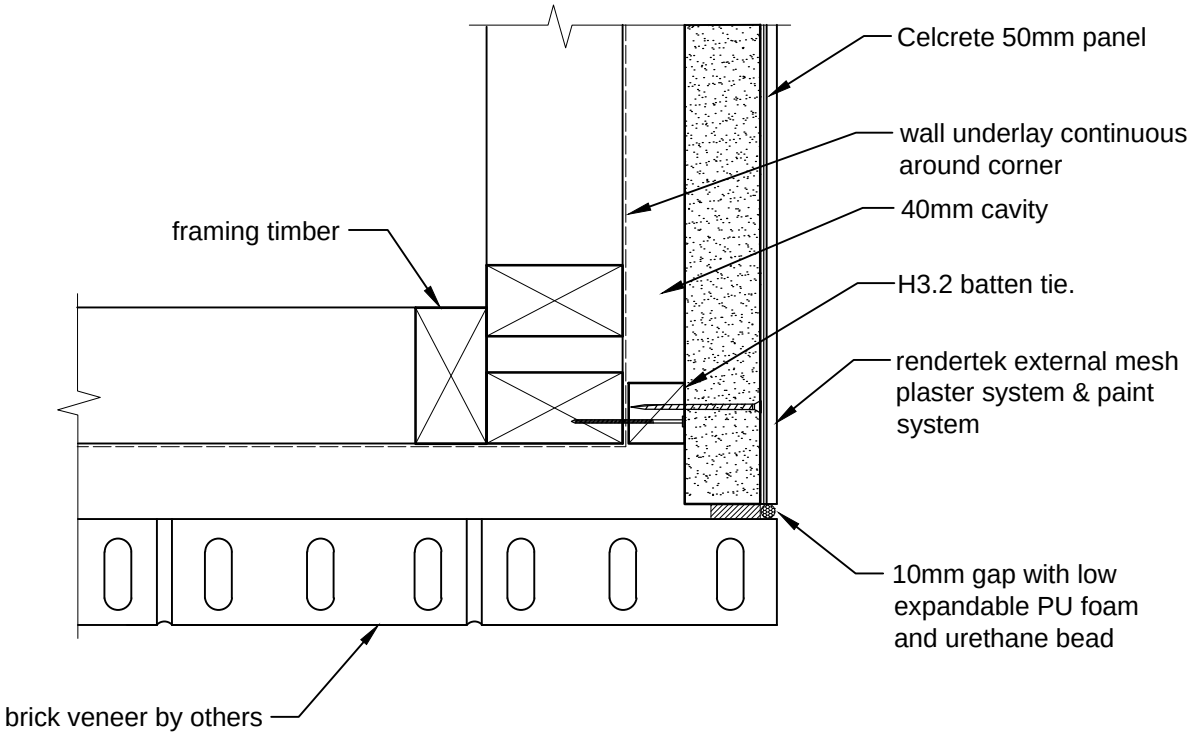
BRICK VENEER ABUTTING CELCRETE PANEL JUNCTION

CAD REF 18-2
SCALE 1:2



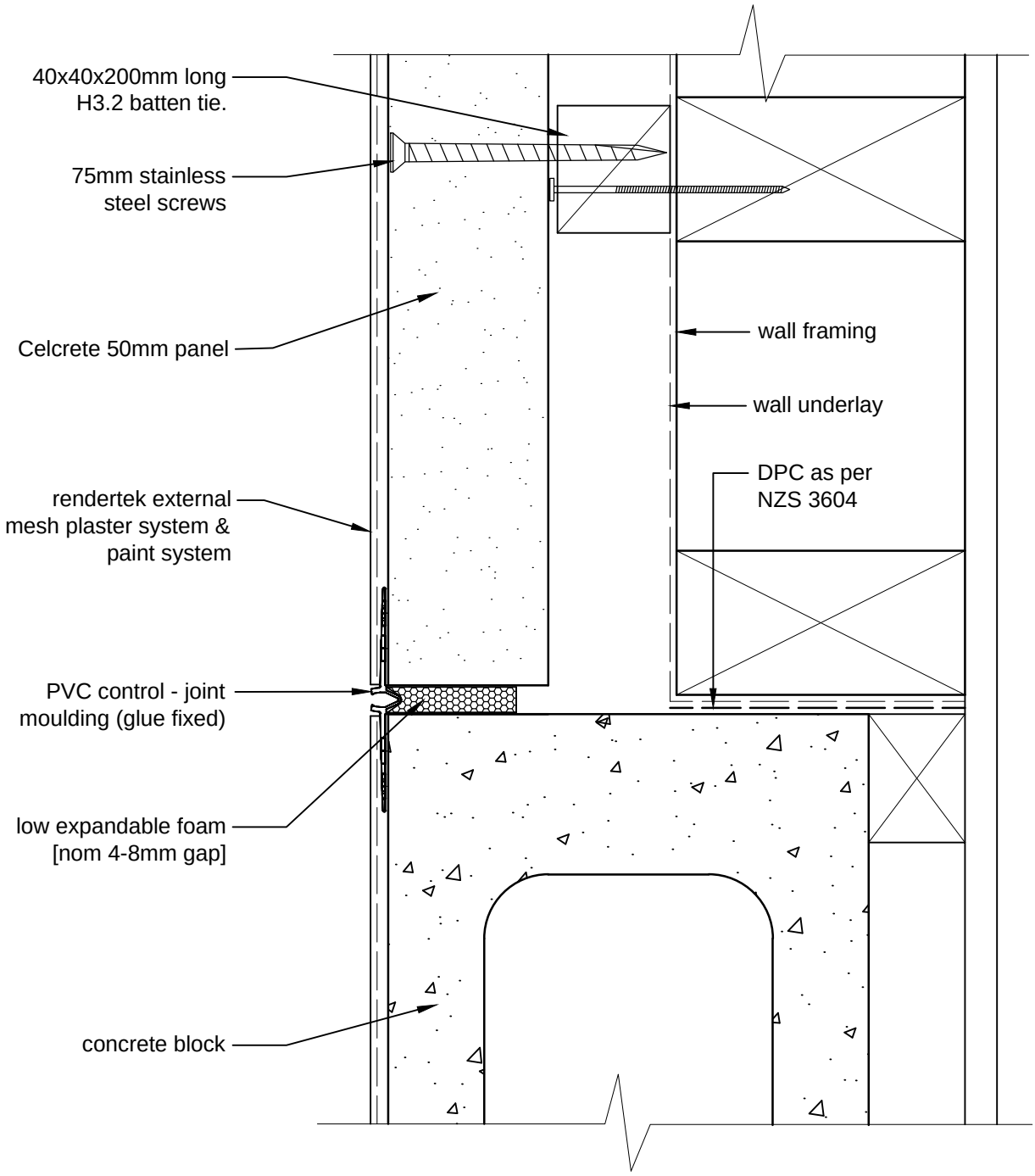
CELCRETE PANEL /BRICK INTERNAL CORNER JUNCTION

CAD REF 18-3
SCALE 1:5



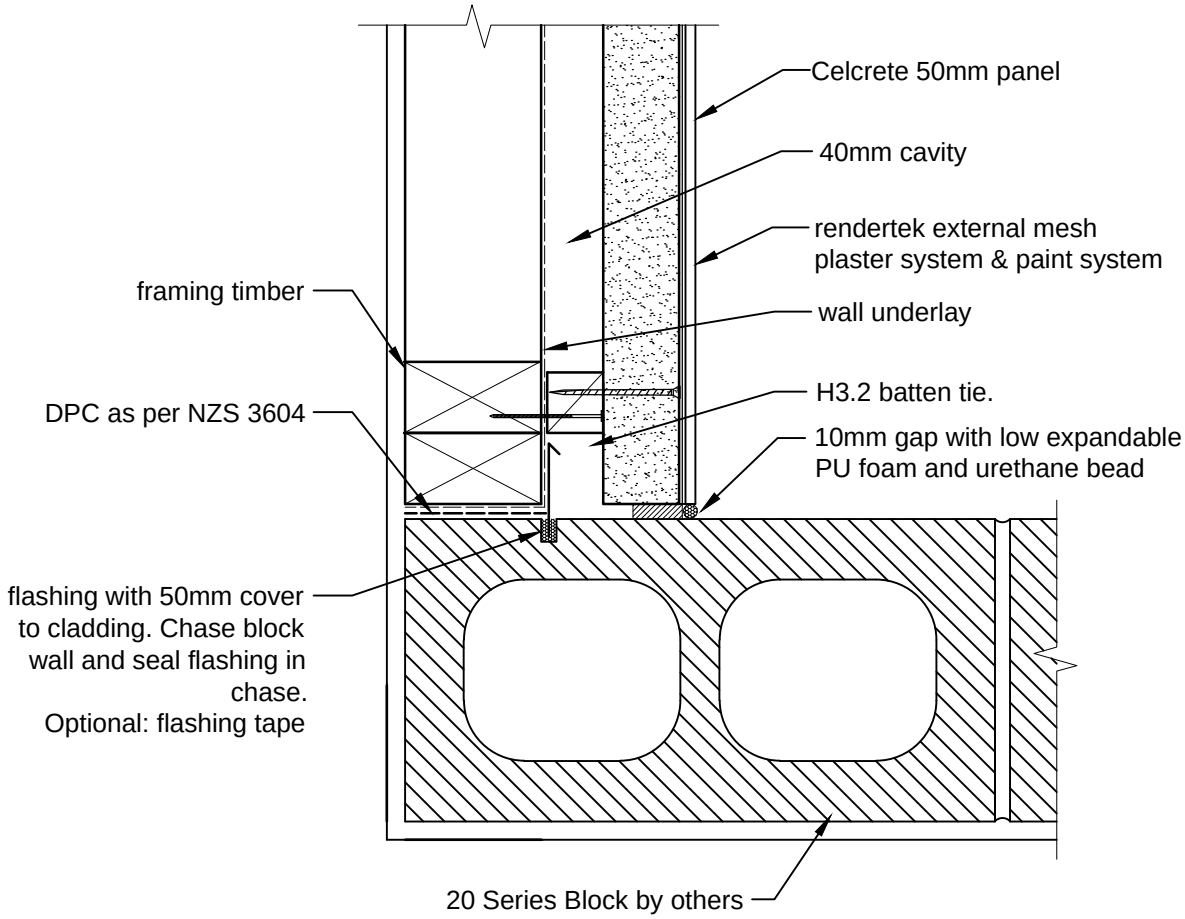
CELCRETE PANEL / BRICK VENEER EXTERNAL CORNER JUNCTION

CAD REF 18-4
SCALE 1:5



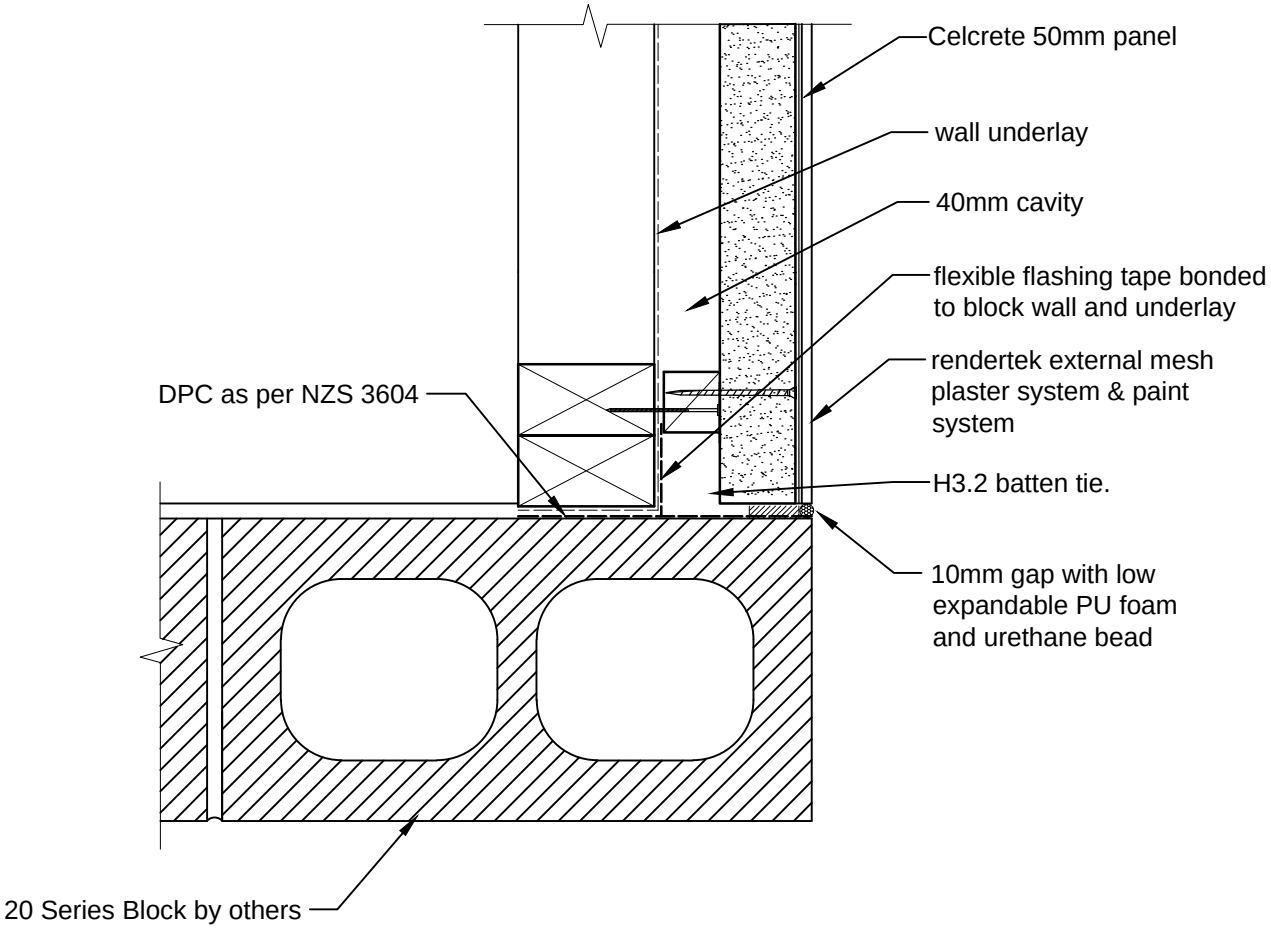
CELCRETE PANEL / CONCRETE BLOCK VERTICAL JUNCTION DETAIL

CAD REF 19-1
SCALE 1:2



CELCRETE PANEL / 20 SERIES BLOCK INTERNAL CORNER JUNCTION

CAD REF 19-2
SCALE 1:5

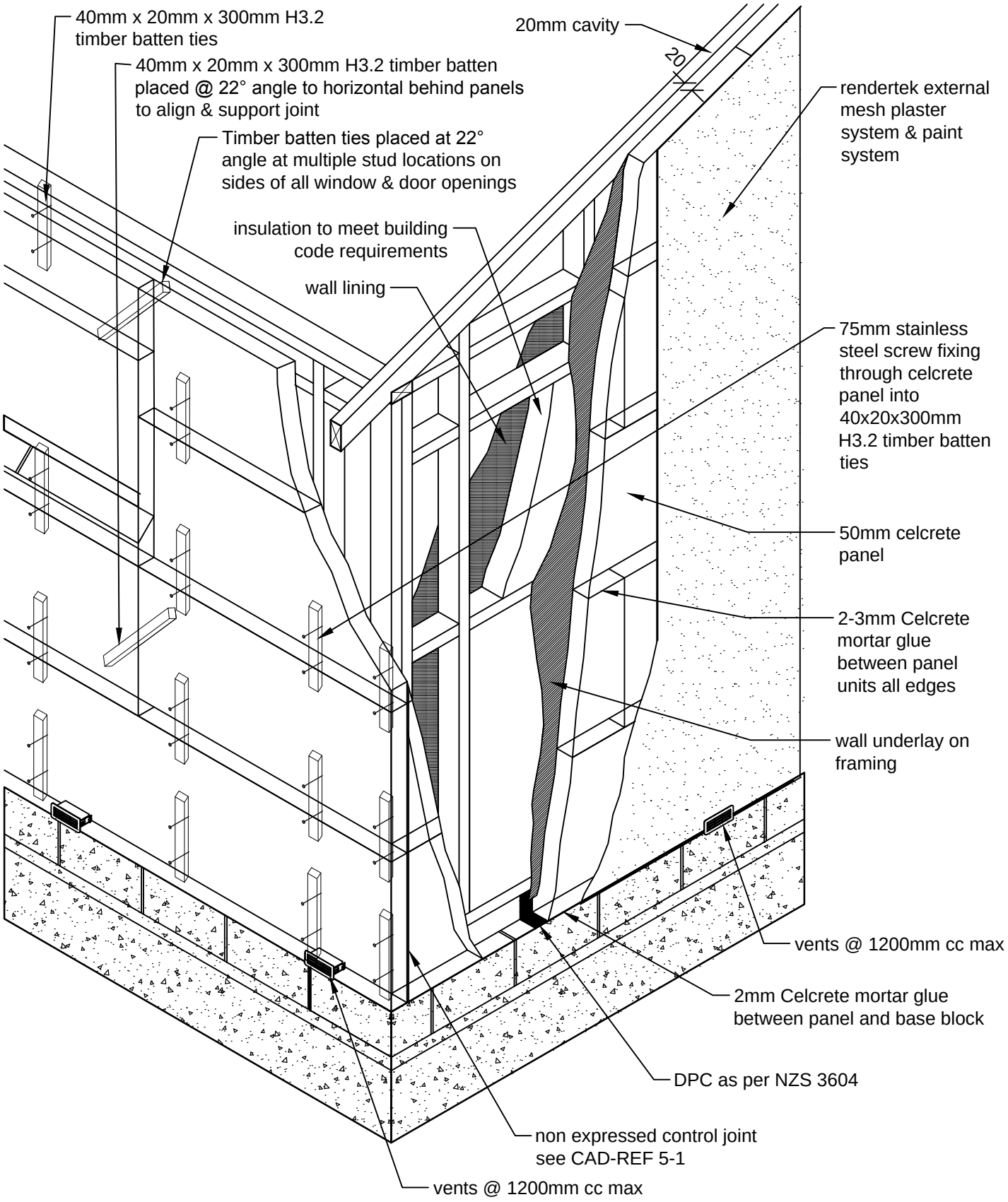


CELCRETE PANEL / 20 SERIES BLOCK EXTERNAL CORNER JUNCTION

CAD REF 19-3
SCALE 1:5

SELECTED 20mm CAVITY DETAILS

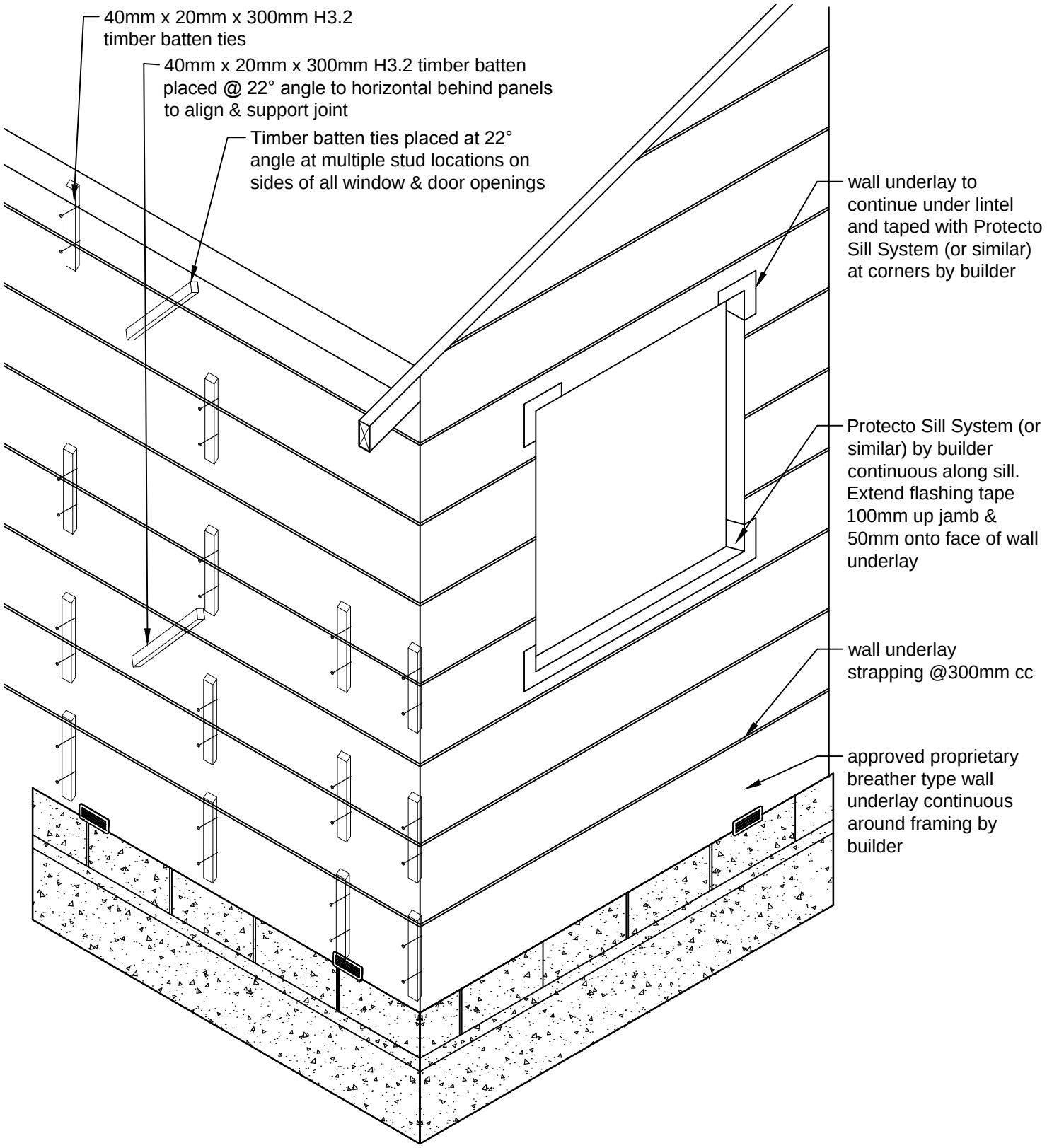
For additional 20mm cavity details please contact
CELCRETE INTERNATIONAL on 0508 CELCRETE (0508 2352 7383).



CELCRETE 50mm PANEL VENEER SYSTEM FIXING DETAILS - 20mm CAVITY

CAD REF 3-1 - 20
SCALE 1:20

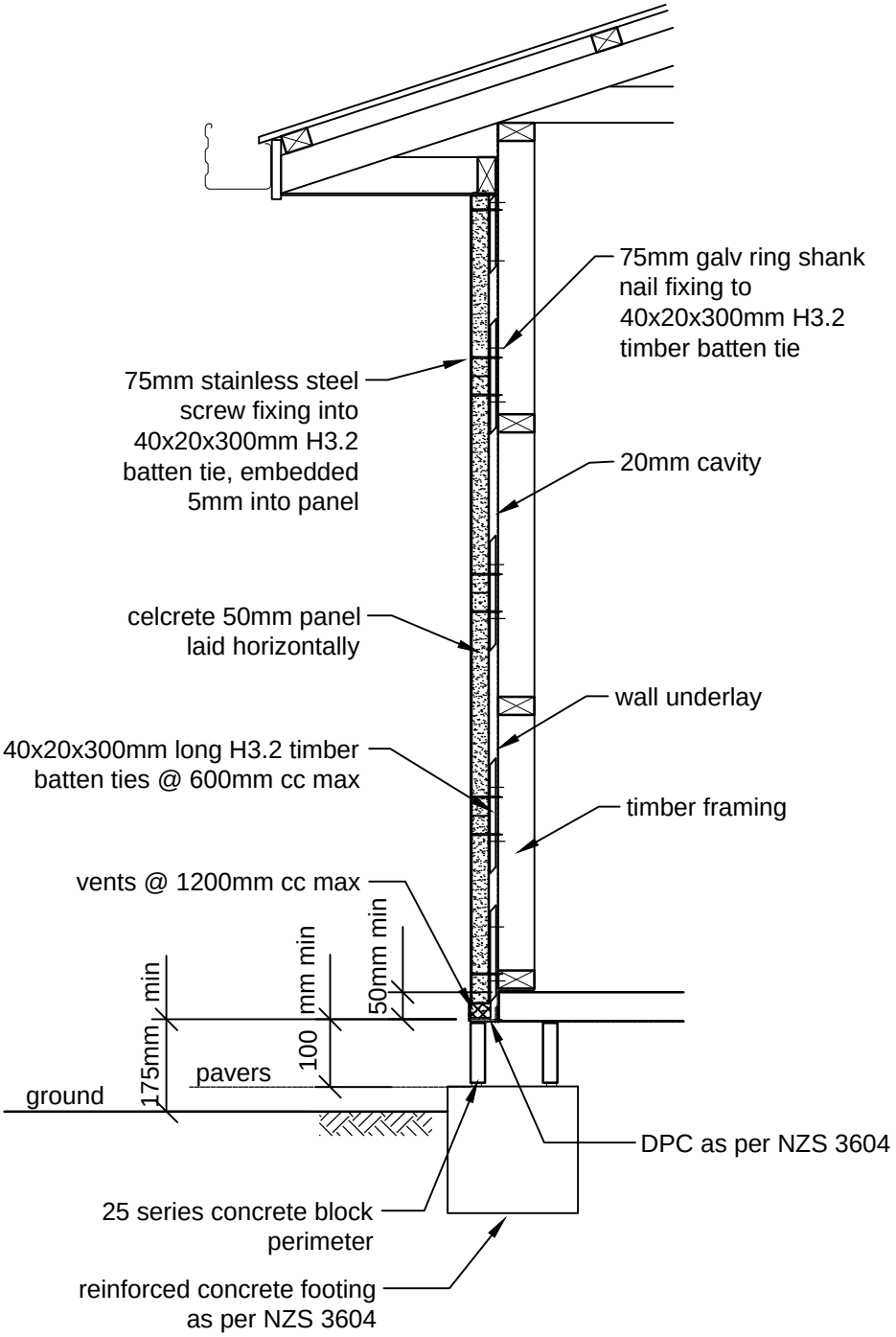
Celcrete Panel Veneer System
Issue Date: Sept 2012



CELCRETE 50mm PANEL VENEER SYSTEM FIXING DETAILS - 20mm CAVITY

CAD REF 3-1-a - 20

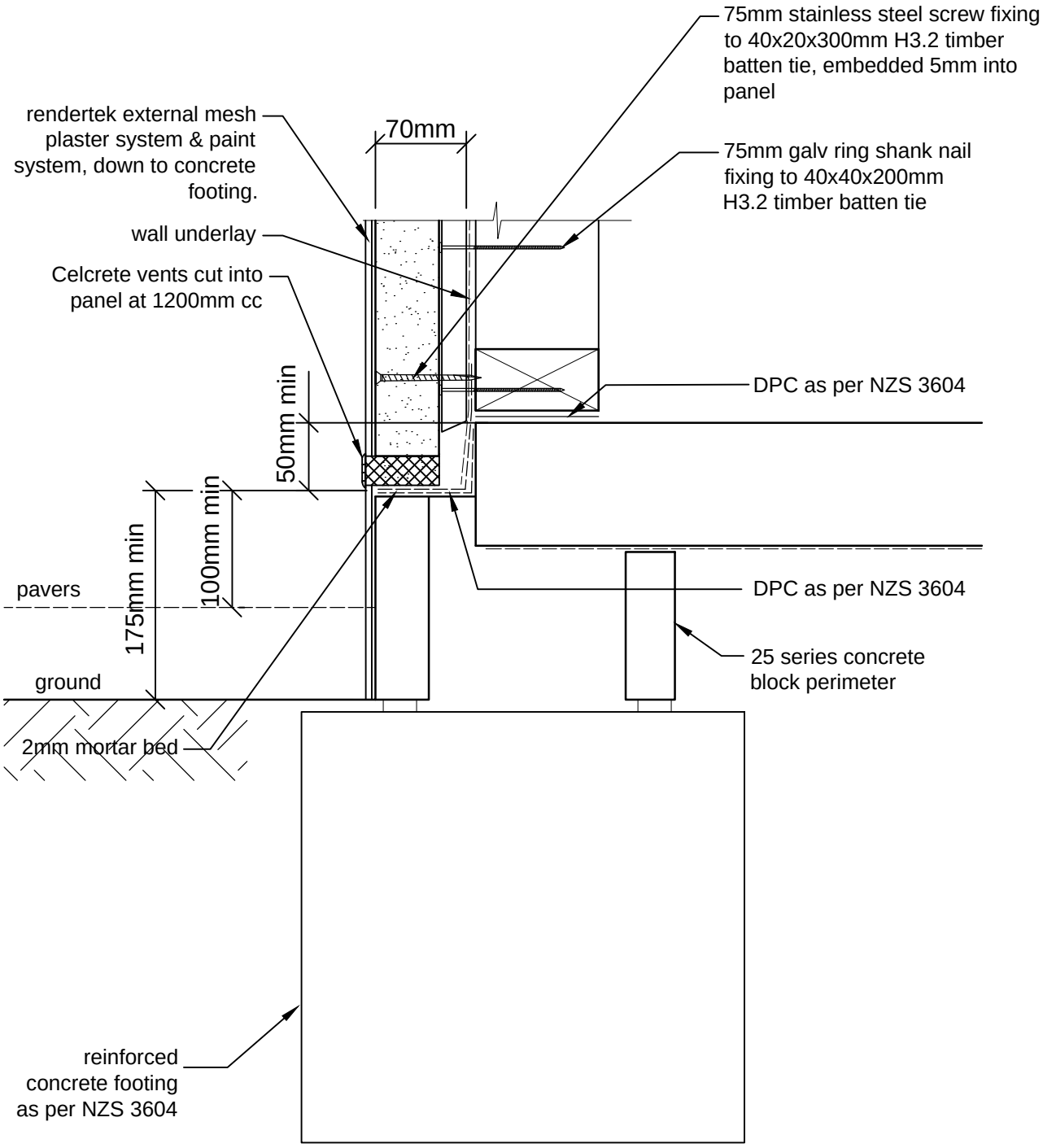
SCALE 1:20



SINGLE STOREY SECTION - 20mm CAVITY

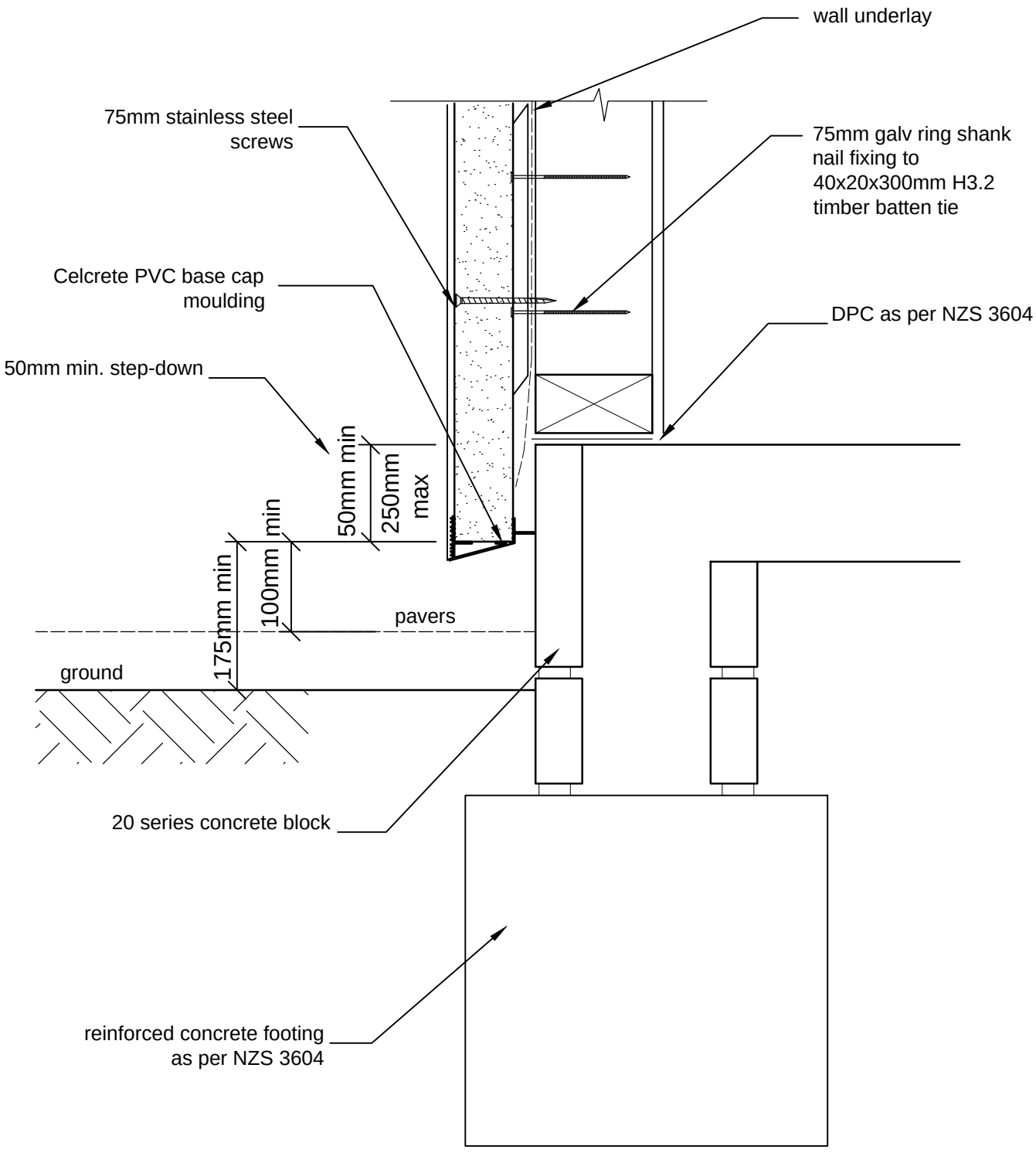
CAD REF 3-2 - 20

SCALE 1:20



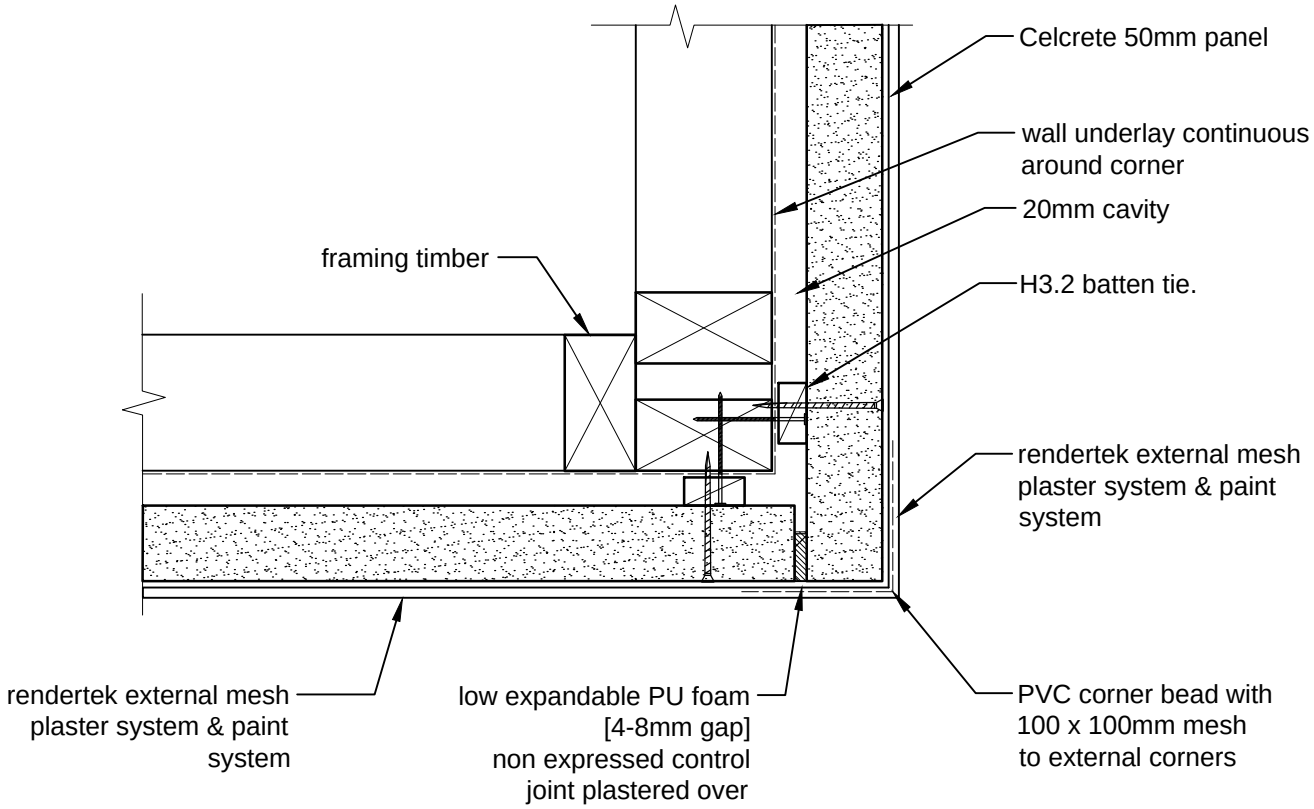
REBATED STEP-DOWN FOOTING DETAIL - 20mm CAVITY

CAD REF 4-1 - 20
SCALE 1:5



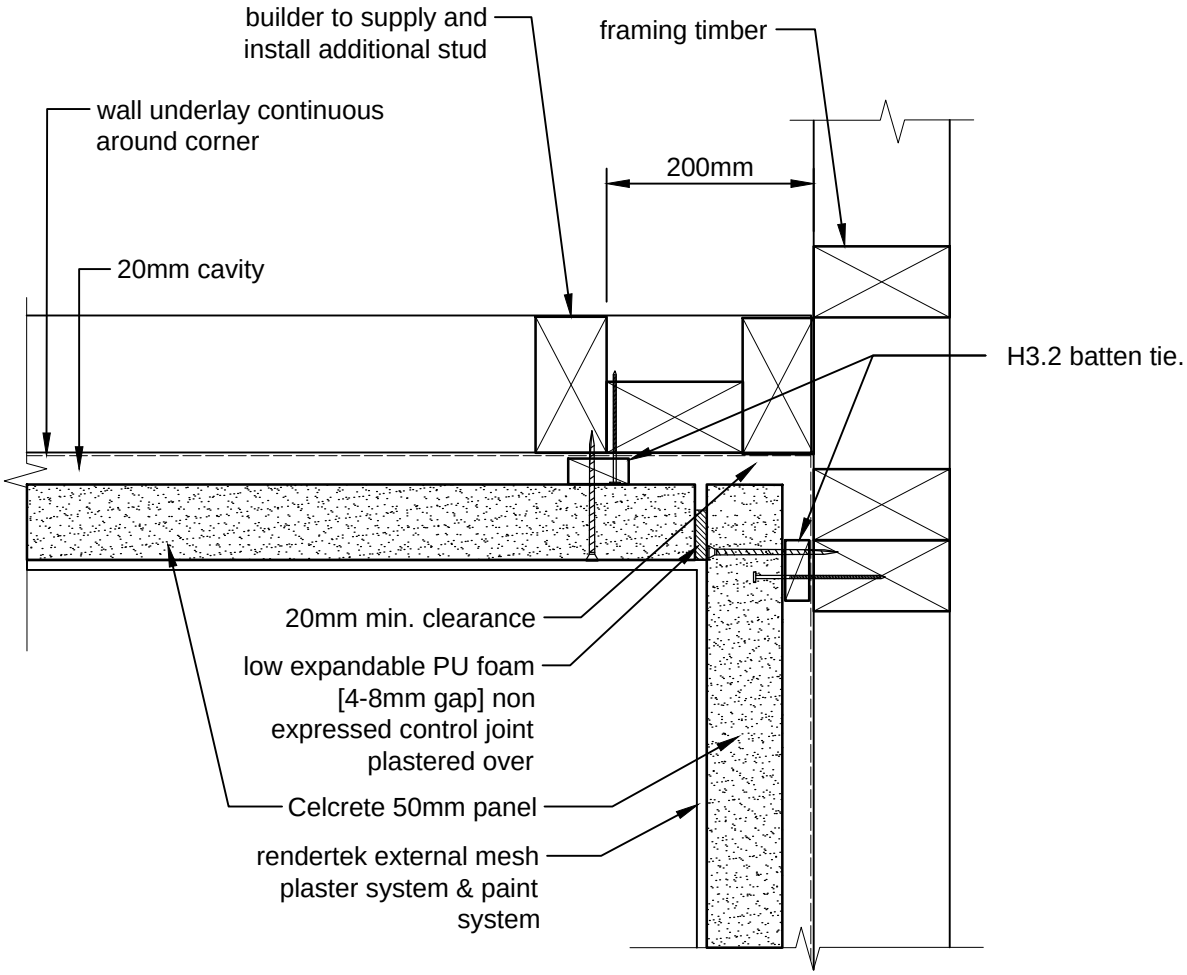
OVERHANGING FOOTING DETAIL - 20mm CAVITY

CAD REF 4-2 - 20
SCALE 1:5



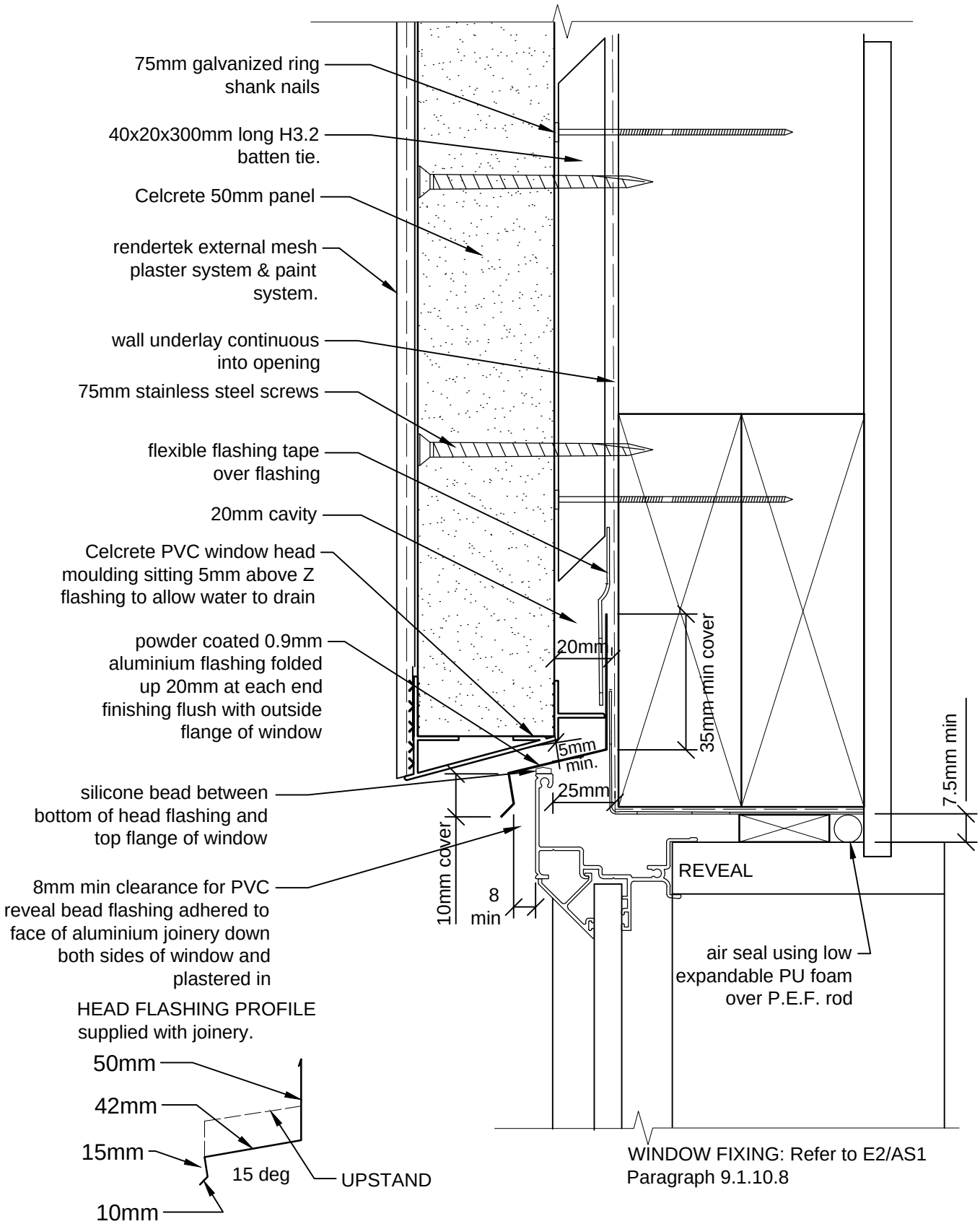
CELCRETE PANEL EXTERNAL CORNER JUNCTION - 20mm CAVITY

CAD REF 5-1 - 20
SCALE 1:5



CELCRETE PANEL INTERNAL CORNER JUNCTION - 20mm CAVITY

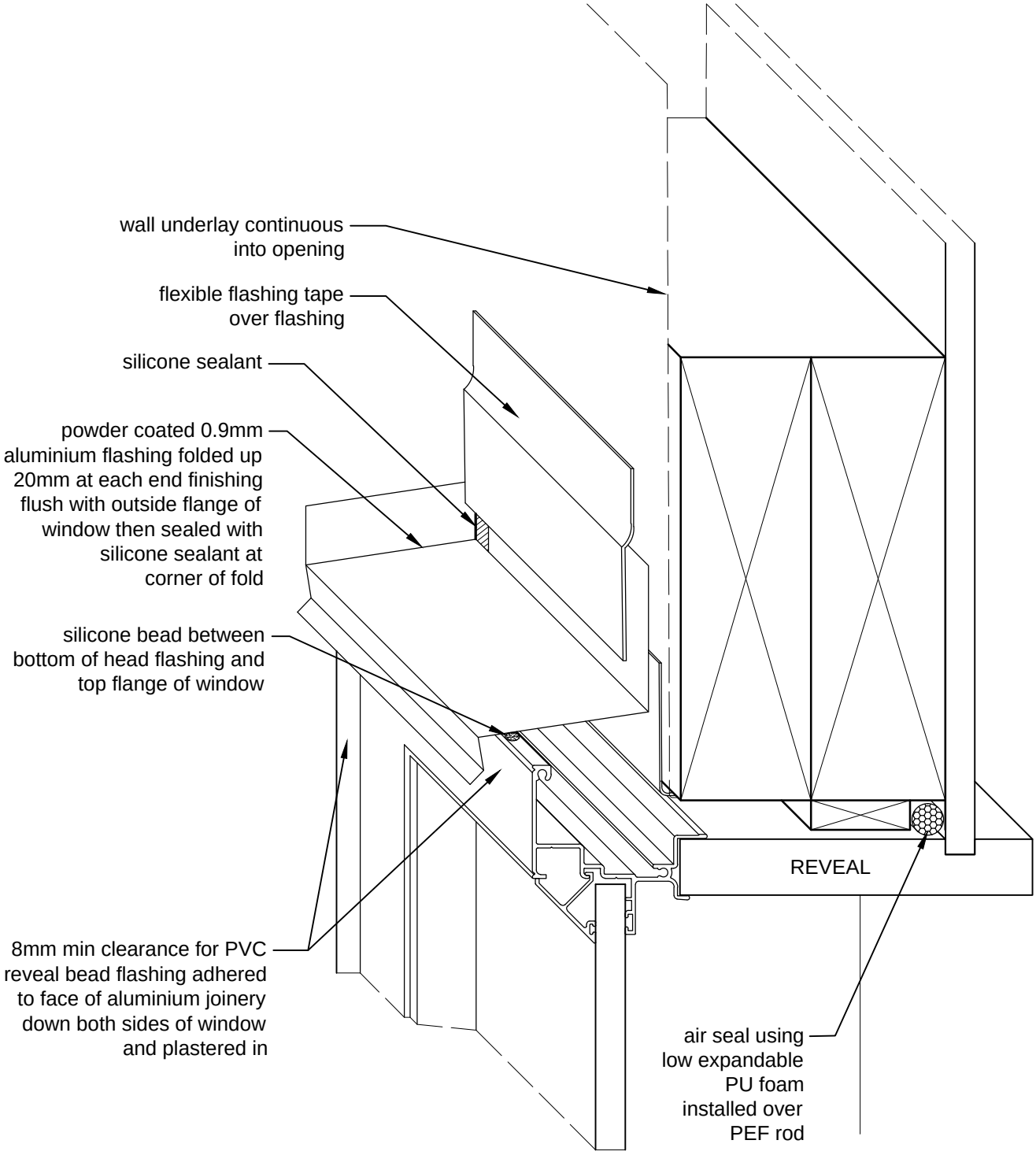
CAD REF 5-2 - 20
SCALE 1:5



ALUMINIUM WINDOW HEAD - 20mm CAVITY

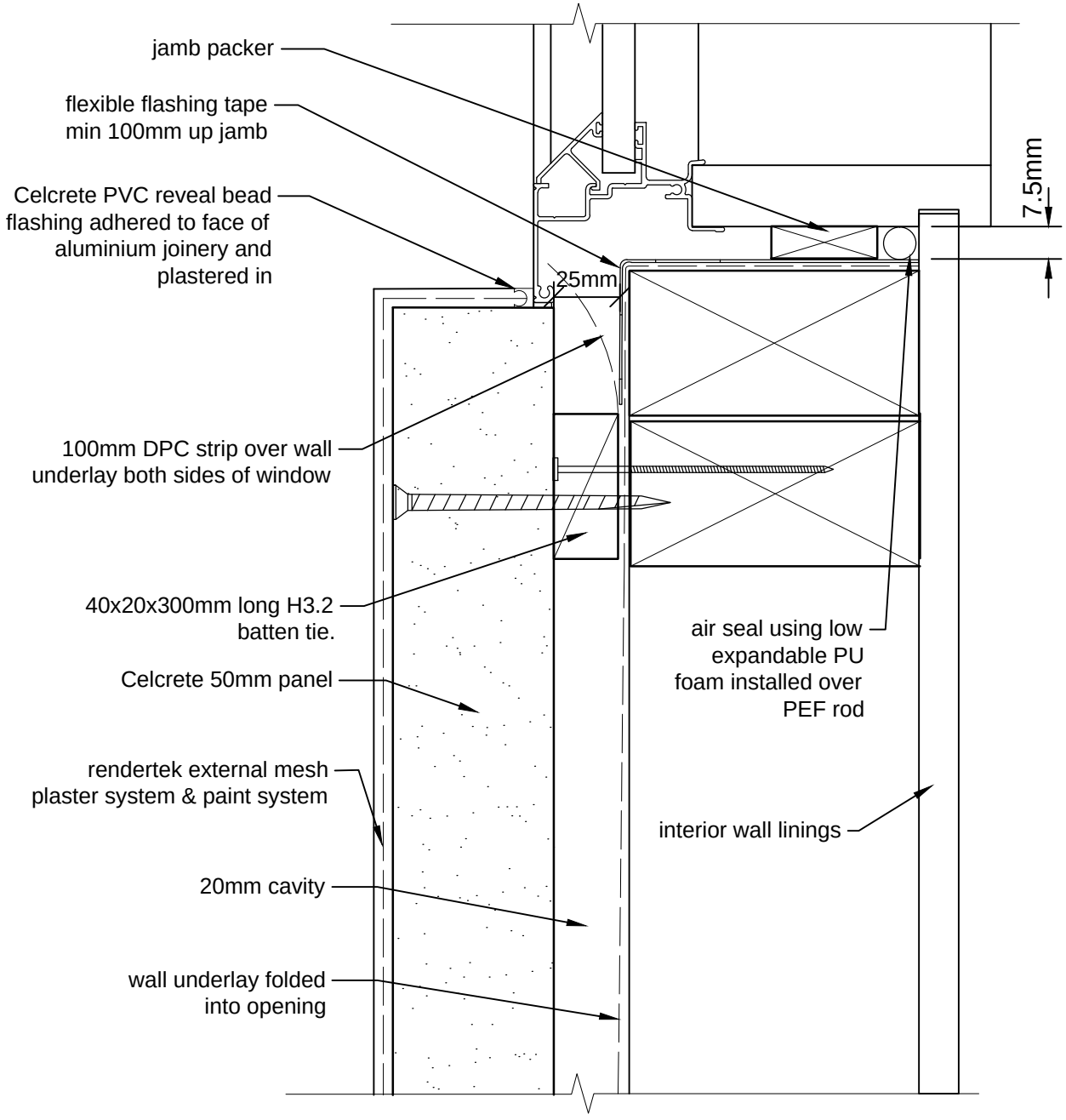
CAD REF 7-1 - 20
SCALE 1:2

Celcrete Panel Veneer System
Issue Date: Sept 2012



ALUMINIUM WINDOW HEAD - 20mm CAVITY

CAD REF 7-1-a - 20
N.T.S.

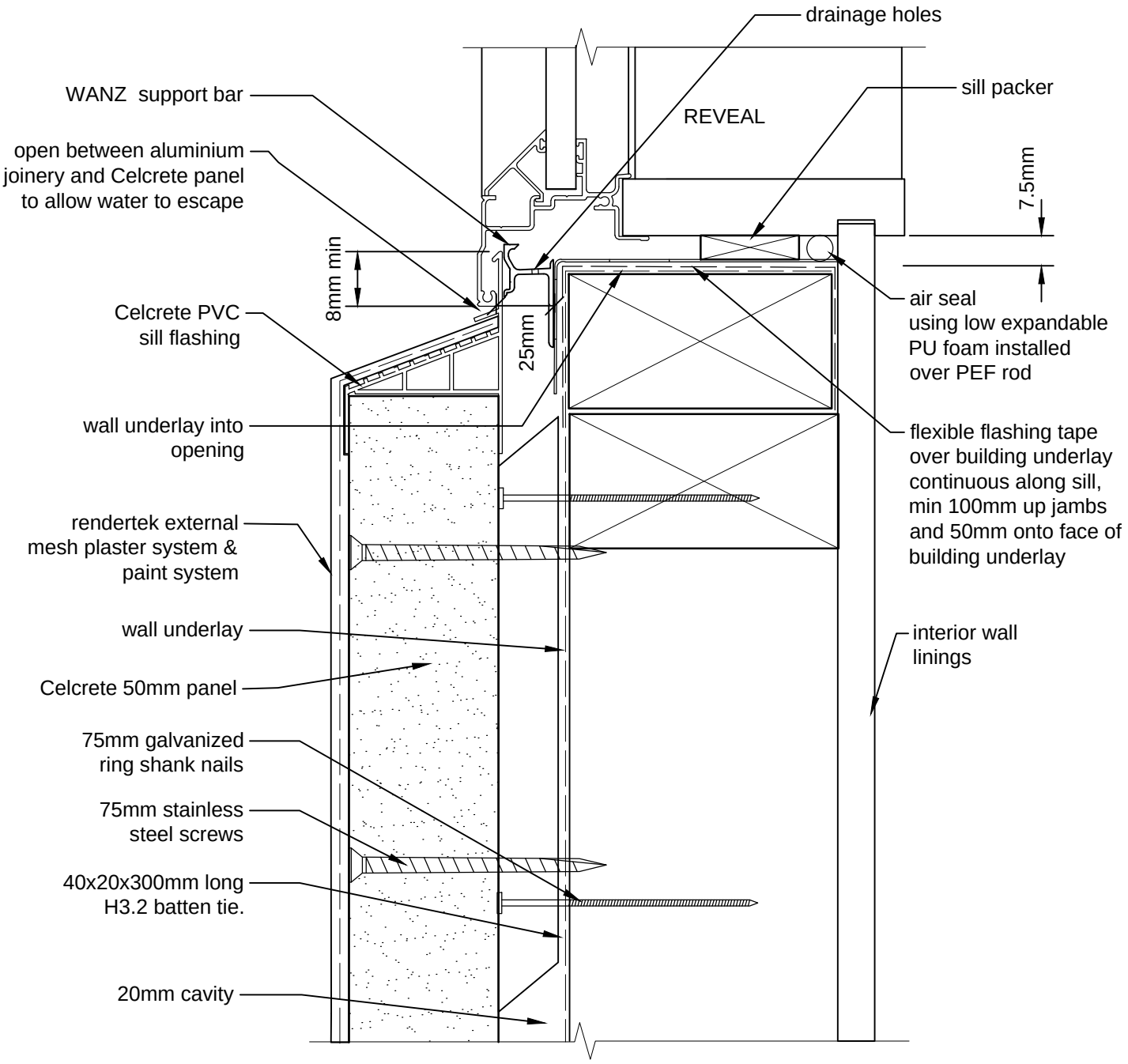


PLAN VIEW

ALUMINIUM WINDOW JAMB - 20 CAVITY

CAD REF 7-2 - 20

SCALE 1:2

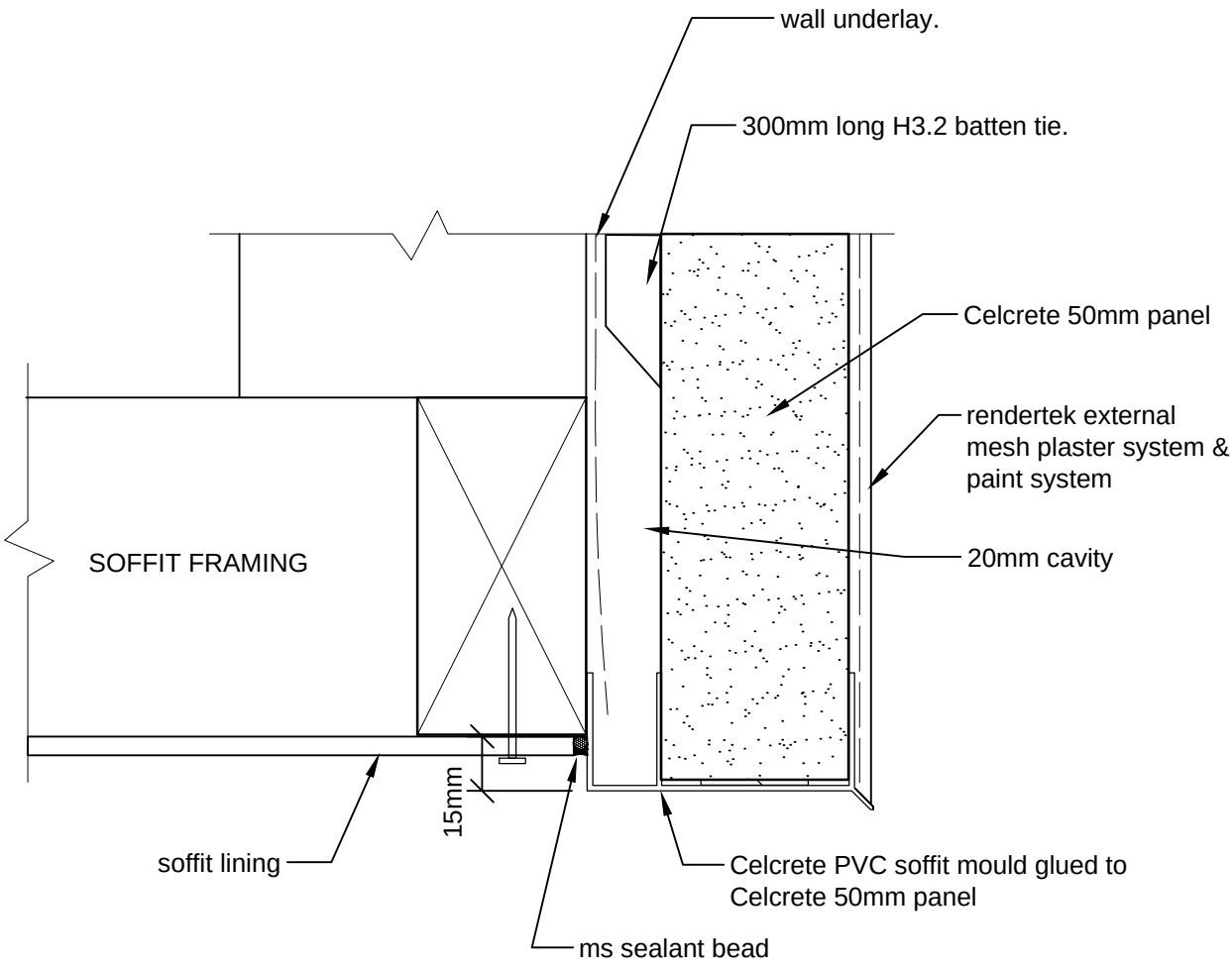


WINDOW FIXING: Refer to E2/AS1 Paragraph 9.1.10.8

ALUMINIUM WINDOW SILL - 20mm CAVITY

CAD REF 7-3 - 20

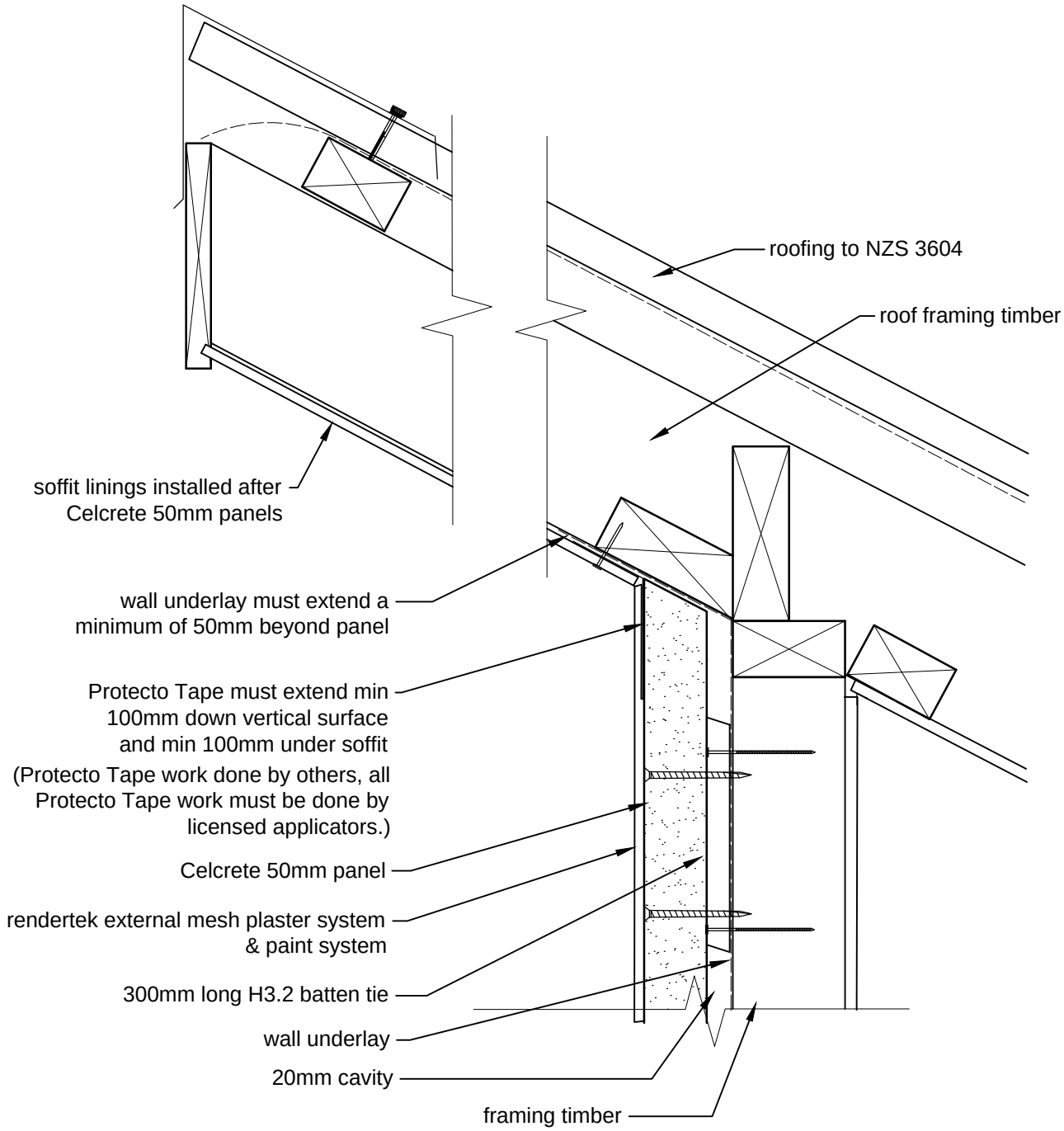
SCALE 1:2



SOFFIT EDGE DETAIL - 20mm CAVITY

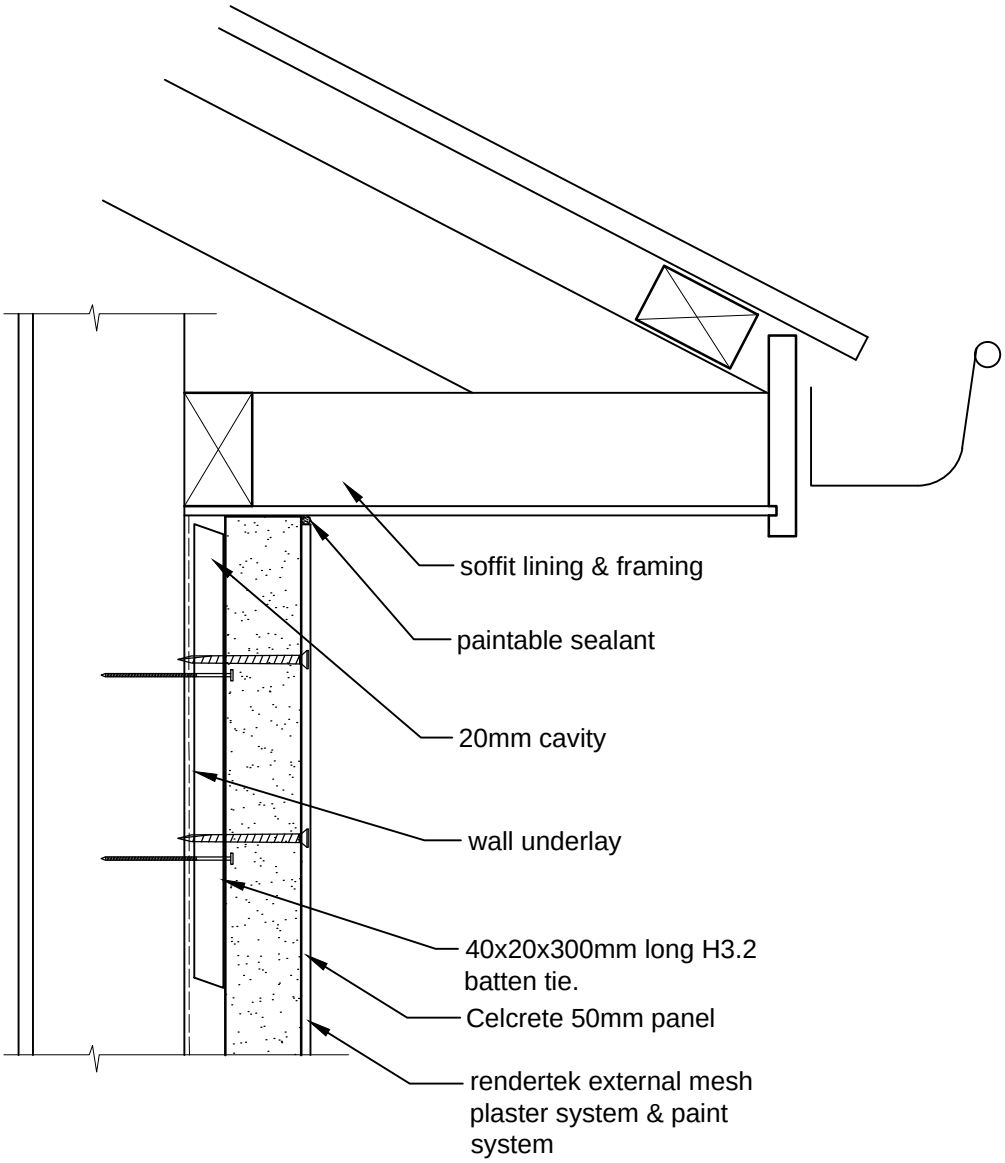
CAD REF 8-2 - 20

SCALE 1:2



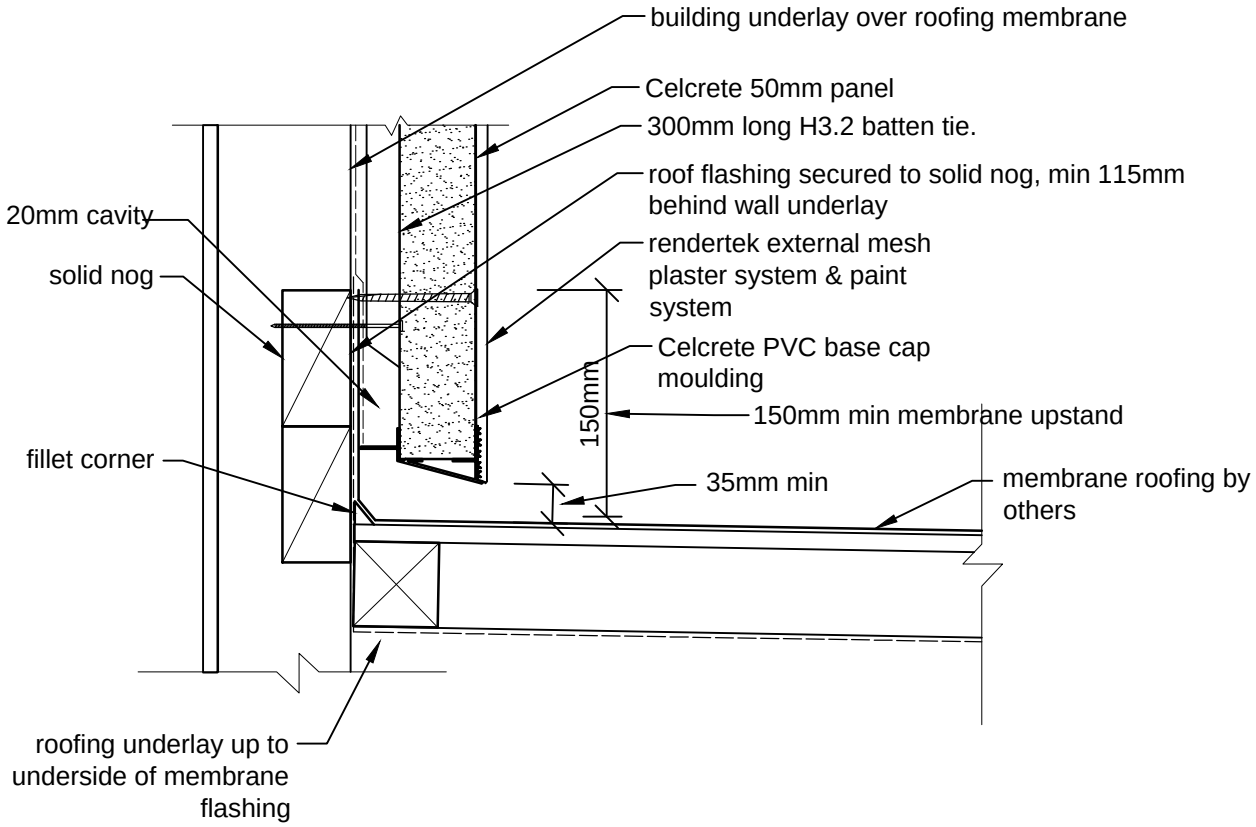
EXPOSED MONOPLANE ROOF & SOFFIT - CELCRETE PANEL JUNCTION - 20mm CAVITY

CAD REF 8-3 - 20
SCALE 1:5



CELCRETE PANEL SOFFIT EAVES JUNCTION DETAIL - 20mm CAVITY

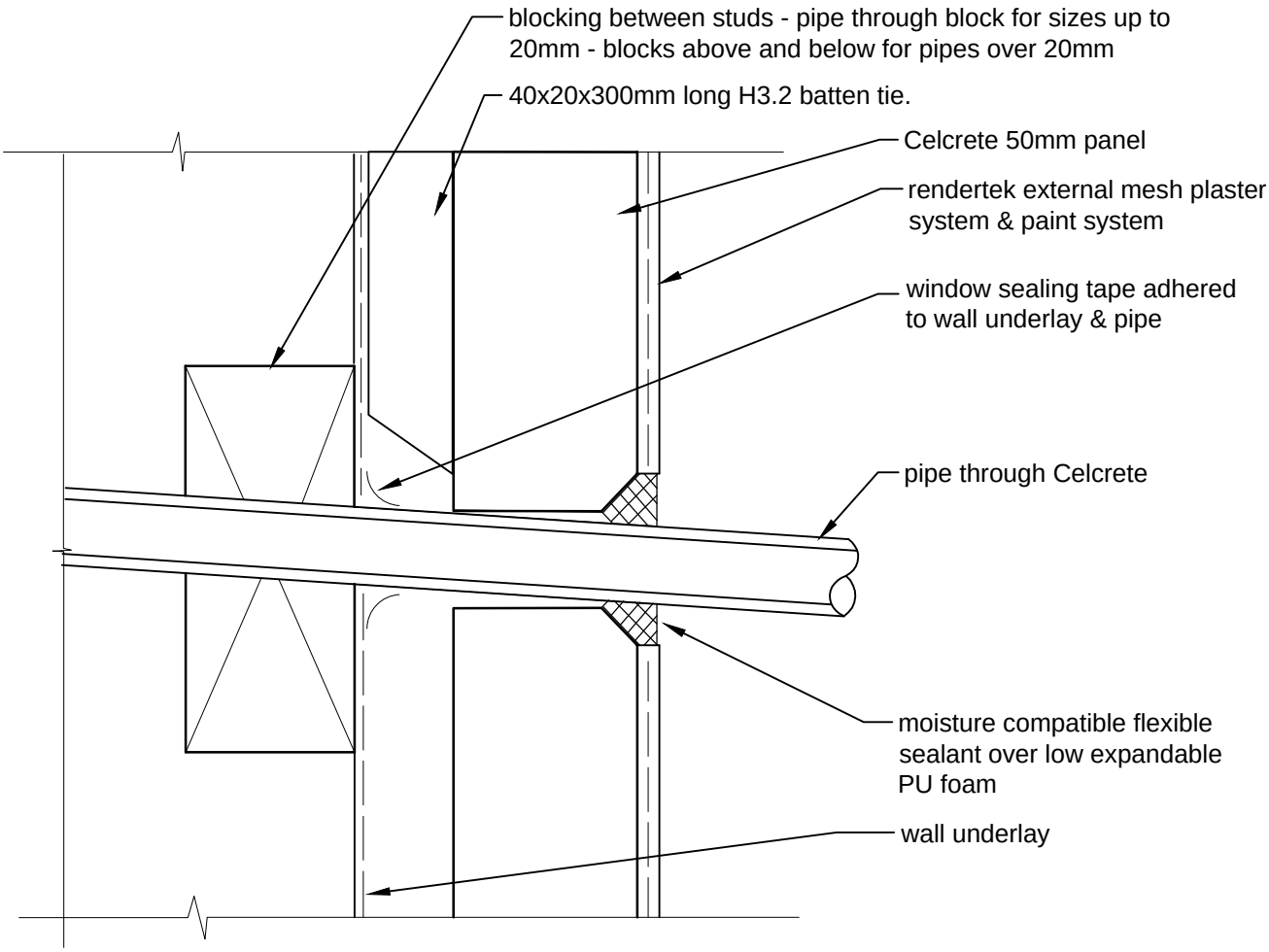
CAD REF 8-6 - 20
SCALE 1:5



ROOF/ WALL JUNCTION DETAIL - 20mm CAVITY

CAD REF 8-8 - 20

SCALE 1:5



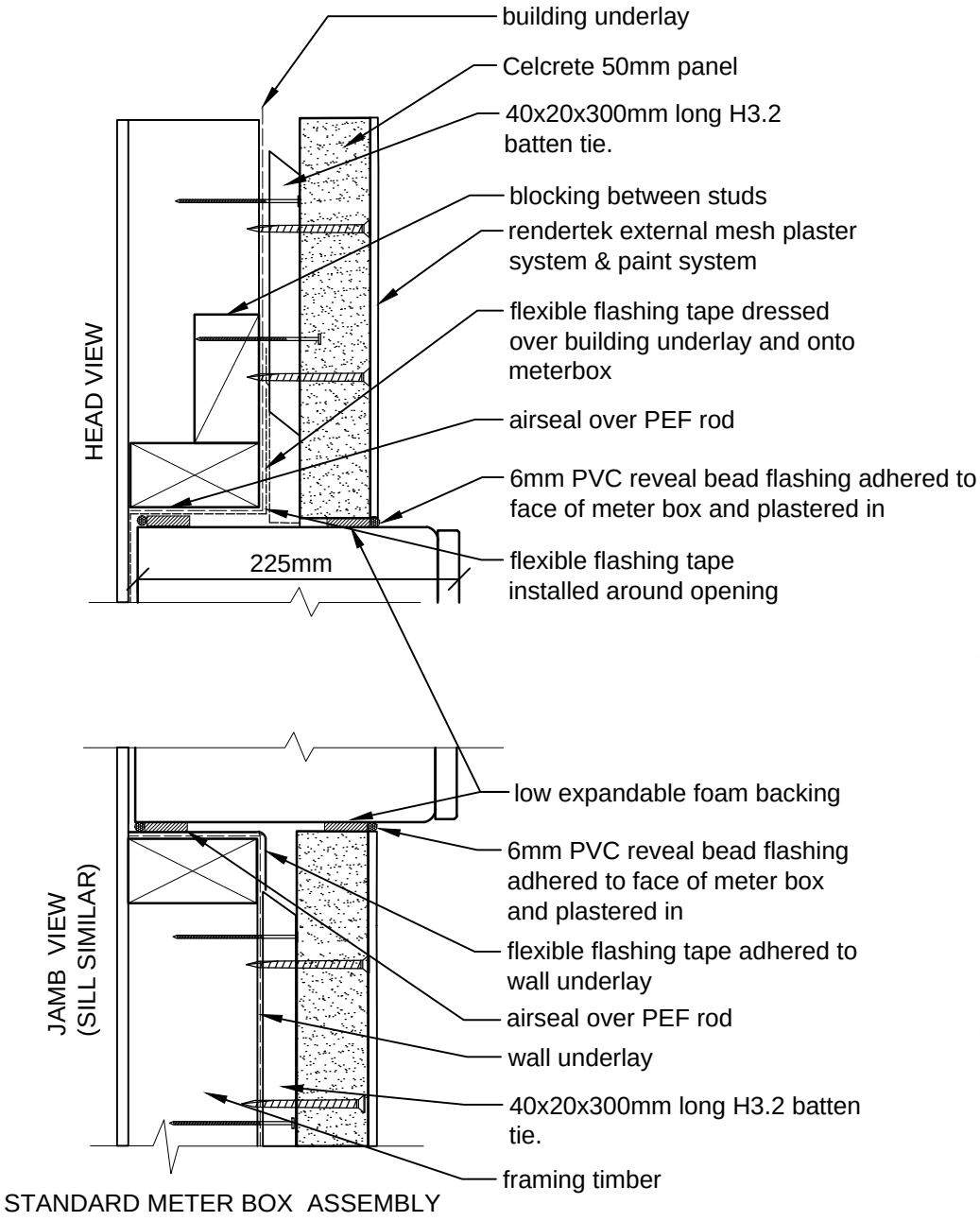
Where cables penetrate cladding, a sleeve or conduit shall be provided and sealed into the celcrete 50mm panel system. All wires that pass through a conduit shall be sealed into position inside the conduit.

PENETRATION THROUGH CELCRETE WALL CLADDINGS FOR PIPES - 20mm CAVITY

[Where possible, provide outwards fall to pipework for water run-off]

CAD REF 11-1 - 20

SCALE 1:2



STANDARD METER BOX ASSEMBLY

COMMENT:
Where possible, meter-boxes should be located in sheltered areas of the building, such as a porch, or be installed behind a weatherproof glazed panel.

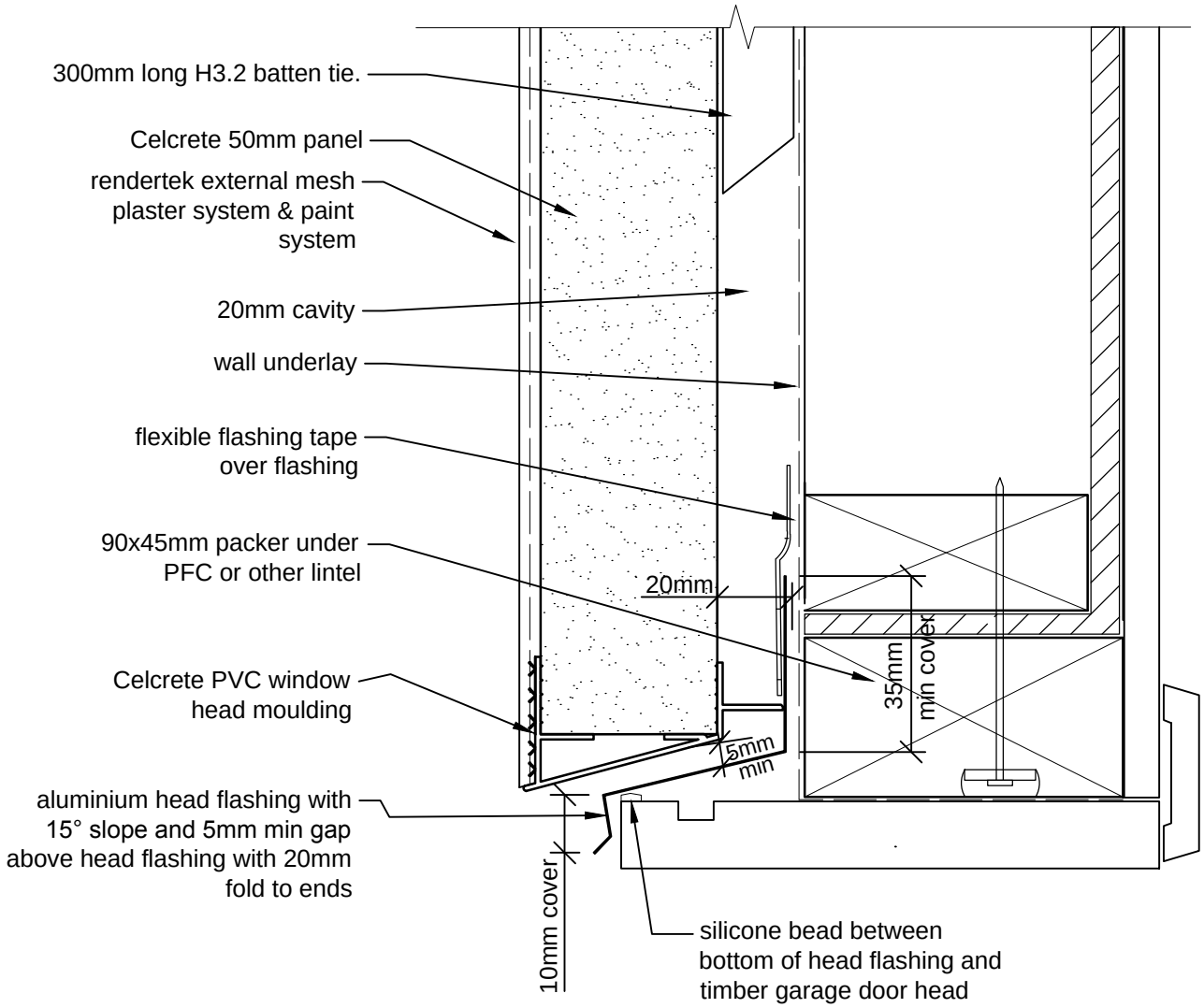
When installing window tape apply pressure
along entire surface for a good bond to wall and Meter box surfaces.

Care must be taken to ensure that when using low expandable PU foam excess foam is cut off. A moisture compatible flexible sealant is to be spread over the exposed foam edge .

Detail tape may need to be used around the corners of the meterbox
to ensure weathertightness.

PENETRATION THROUGH CELCRETE WALL CLADDINGS FOR METER BOXES - 20mm CAVITY

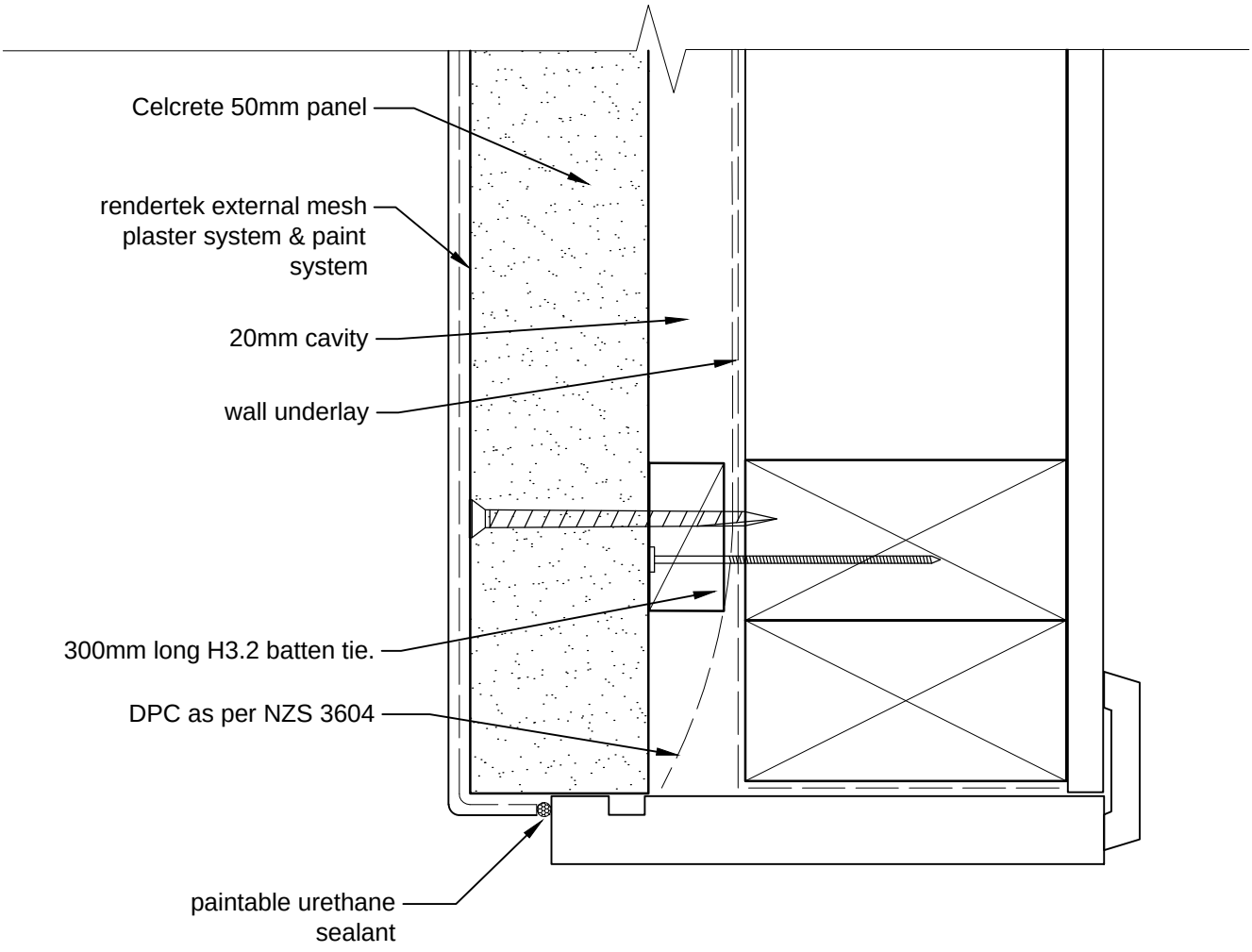
CAD REF 11-2 - 20
SCALE 1:5 & 1:10



TIMBER GARAGE DOOR HEAD DETAIL - 20mm CAVITY

SECTIONAL VIEW OF GARAGE DOOR-HEAD

CAD REF 13-1 - 20
SCALE 1:2



STD TIMBER JAMB GARAGE DOOR DETAIL - 20mm CAVITY

PLAN VIEW OF JAMB

CAD REF 13-2 - 20

SCALE 1:2

BASE RENDER - TECHNICAL DATA SHEET

GENERAL DESCRIPTION

- RenderTek Base Render is a high quality pre-blended, cementatious rendering and screeding material specifically designed for rendering in one or more applications of minimum 4mm over solid substrates – AAC panel and Block, Concrete and Clay substrates.

PRODUCT CHARACTERISTICS

- Suitable for interior or exterior use.
- Applies with exceptional ease to provide a base coat for the application of mesh reinforcement and finishing plasters.
- Can be applied between 2 - 6mm thicknesses in one application.
- Superior application properties when compared to conventional sand and cement render.
- Easy to apply and being pumpable can offer economies in time and labour

BASIC PRODUCT DATA

Surface Dry	Six (6) hours.
Recoat	Twenty four (24) hours, if required
Fully Cured	Seven (7) days

All figures are quoted at 25°C and 50% Relative Humidity. Drying will take longer at lower temperatures or higher relative humidity.

Consistency	Dry powder – Grey
Texture	Grainy
Dry Material Volume	1.420 kg per litre by volume
Ideal Water Content	20-22% by weight volume { = 4.5 – 5.5 litres per 25kg bag } or as required to achieve a workable mix.
Pot-Life*	60 minutes when mixed with water (*climate conditions dependant)
Coverage per coat	3-4m² per 25kg bag at 5-6mm thickness (2 coats @ 2-3mm per coat)
Product Parameters	min. 2mm max 6mm application in a single coat.
Clean-up	Thoroughly clean equipment with water.

SUBSTRATE, APPLICATION CONDITIONS AND TEMPERATURE

- RenderTek Base Render is suitable for application to Autoclaved Aerated Concrete (AAC) blocks or panels, off-form concrete and any other fair-faced, flush and straight laid concrete block or brickwork (common, clay).
- Surface Preparation is the responsibility of the Builder, Renovator or Main Contractor and the Applicator. To achieve the indicated performance, application must be carried out according to the manufacturer's specifications recommendations.
- Ensure the surface is clean and dry. All substrates must be free of dirt, grease, oil, mould, release agents, bondbreakers or any other contaminants that may interfere with adhesion.
- **Note:** To extend the workable wall time of this material over Porous substrates, wetting of the wall may be required as stated by the substrate manufacturer**.**
- Application **should not** be carried out if the air temperature or the substrate temperature is below 5°C or above 35°C. Freshly applied material must be protected from rain, prevailing winds and frost conditions for the first 24 hours following application.
- **Note:** Should application be carried out in lower temperatures marginally above the recommended 5°C minimum, increased drying and curing times must be expected for over coating.

MIXING AND APPLICATION INSTRUCTIONS

- **Application of 4mm and greater than 4mm thickness**
- Mix one 25 kg bag of RenderTek Base Coat with the required amount of water. Add the powder to the water steadily and mix with a power stirrer until it is smooth and lump free. Alternatively use an M-Tec D20 or similar to mix the material.
- Trowel or pump one coat of RenderTek Base render at 2-3mm film thickness, trowelling in the glass fibre mesh reinforcement into the uppermost surface of the base coat. A period of up to 12 hours must be allowed for the material to dry.
- Apply a second coat of RenderTek Base Render at 2-3mm over the preceding coat and using a plastic float or butterfly work this coat until a flat even surface is achieved in preparation for a texture.
- **Curing**
- Do not allow the applied product to be in exposed conditions for the first 12 hours to ensure full curing strength is developed. This is critical in windy conditions or when humidity is low.
- Allow to fully cure for 7 days or when moisture content is no greater that 15% wood equivalent before top coating.

SAFETY DATA

- **Caution** Provide adequate ventilation during use.
  - Avoid inhalation of the powder, prolonged skin contact and particularly eye contact. Wear protective clothing to minimise skin contact and wear goggles where splatter is likely.

  Spills and Disposal Do not allow spilt material to enter drains or other watercourses. Sweep up and dispose of waste
  - In sealed containers to minimise dust. Disposal of waste is subject to statutory control. Consult your local authority for disposal guidelines.
- **M.S.D.S.** A Material Safety Data Sheet (M.S.D.S.) is available on request.
- **First Aid**
- If swallowed **do not** induce vomiting. Give plenty of water to drink. Contact a doctor or the Poisons Information Centre.
- Phone 0800 764766 (New Zealand).
- If in eyes, hold eyes open and flood with water for at least 15 minutes. Contact a doctor if any irritation occurs.
- If on skin remove contaminated clothing, wash skin thoroughly with soap and water or a proprietary skin cleanser. Do not use solvents.
- If affected by inhalation remove person to fresh air. If breathing difficulties persist or occur later, contact a doctor.

ADDITIONAL INFORMATION

- Available in 25 kg bags – 40 BAGS = 1 Tonne.
- Bags must be dry during transport and storage.
- Bags must not be exposed to moisture, excessive heat or cold.
- **Shelf Life:** 12 months, if stored appropriately. This must include storage under cover, above ground, away from direct heat and moisture.

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1mm,2mm Sponge, Adobe Finish
TECHNICAL DATA SHEET

RENDERTEK
plaster systems limited

GENERAL DESCRIPTION

- RenderTek 1mm, 2mm Sponge, Adobe Finish products are high quality pre-blended, cementatious texture coat materials specifically designed for rendering onto RenderTek Base Coat applied over AAC panel and Block, Concrete and Clay substrates.

PRODUCT CHARACTERISTICS

- Suitable for interior or exterior use.
- Products apply with exceptional ease to provide a variety of aesthetic texture coats available from RenderTek.
- 1mm Sponge can be floated and/or sponged to create a 1mm texture. 2mm Sponge can be sponged to create a 2mm texture. Adobe finish can achieve a multitude of different textural effects.
- Superior application properties when compared to conventional sand and cement renders/textures.
- Easy to apply and being pumpable can offer economies in time and labour

BASIC PRODUCT DATA

- **Surface Dry** Four - Six (4-6) hours.
- **Recoat** Twenty four (24) hours, if required
- **Fully Cured** Seven (7) days

All figures are quoted at 25°C and 50% Relative Humidity. Drying will take longer at lower temperatures or higher relative humidity.

- **Consistency** Dry powder – Grey
- **Texture** Grainy
- **Dry Material Volume** 1.260 kg per litre by volume
- **Ideal Water Content** 22-24% by weight volume { = 5.5 – 6.0 litres per 25kg bag } or as required to achieve a
- **Pot-Life** 60 minutes when mixed with water
- **Coverage per coat (1)** (1mm Sponge) = 8m² per 25kg bag at 1mm coat thickness
- **Coverage per coat (2)** (2mm Sponge) = 6m² per 25kg bag at 2mm coat thickness
- **Coverage per coat (3)** (Adobe Finish) = 4m² per 25kg bag at 3-5mm coat thickness
- **Product Parameters (1)** (1mm Sponge) 1mm min. 2mm max. in a single coat (multiple coats can be achieved providing a curing period is left between coats.)
- **Product Parameters (2)** (2mm Sponge) 2mm min. 4mm max in a single coat.
- **Product Parameters (3)** (Adobe Finish) 2mm min. 5mm max in a single coat.
- **Clean-up** Thoroughly clean equipment with water.

RECOMMENDED SUBSTRATE, CONDITIONS AND TEMPERATURE

- RenderTek 1mm, 2mm Sponge, Adobe Finish Materials are suitable for application to RenderTek Base Render.
- Surface Preparation is the responsibility of the Builder, Renovator or Main Contractor and the Applicator. To achieve the indicated performance, application must be carried out according to the manufacturer's specifications recommendations.
- Ensure the surface is clean and dry. All substrates must be free of dirt, grease, oil, mould, release agents, bondbreakers or any other contaminants that may interfere with adhesion. There must be less than 15% moisture Wood Equivalent in the surface at the time of coating to ensure optimum coating performance.
- Application **should not** be carried out if the air temperature or the substrate temperature is below 5°C or above 35°C. Freshly applied material must be protected from frosts and rain for a minimum of forty eight (48) hours.
- **Note:** Should application be carried out in lower temperatures marginally above the recommended 5°C minimum, increased drying and curing times must be expected for over coating.

INSTRUCTIONS FOR USE

- **1mm Sponge**
  Apply the plaster over a determined set area by;
  Trowel the plaster tight (1mm) to the wall.
  Using a hard plastic float, with moderate force against the wall, float in a circular pattern.
  If required a sponge can be lightly floated over the wall to lift the 1mm aggregate and create a more pronounced texture. Multiple coats can be achieved if required providing an adequate curing period is left between coats.
- **2mm Sponge**
  Apply the plaster over a determined set area by;
  Trowel the plaster tight (2mm) to the wall.
  A hard plastic float, with moderate force against the wall, can be floated in a circular pattern (this is not always necessary.)
  A sponge must then be lightly floated over the wall to lift the 2mm aggregate and fill in any 'worm' marks.
- **Adobe Finish**
  Apply the Adobe over a determined set area at a thickness of 2-5 mm.
  Use a specialised trowel to create a sculptured trowel finish.
  This may left if desired texture is achieved.
  Alternatively use the same procedure as above, and apply a sponge to the material in a random pattern to create a textured softened adobe and/or sandy effect.

Note:
All Plasters must be protected from rain for the first 24 hours and from hot drying winds and direct sun for the first 16 hours to aid curing.

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SAFETY DATA

- **Caution** Provide adequate ventilation during use.
  - Avoid inhalation of the powder, prolonged skin contact and particularly eye contact. Wear protective clothing to minimise skin contact and wear goggles where splatter is likely.
- **Spills and Disposal** Do not allow spilt material to enter drains or other watercourses. Sweep up and dispose of waste
  - In sealed containers to minimise dust. Disposal of waste is subject to statutory control. Consult your local authority for disposal guidelines.
- **M.S.D.S.** A Material Safety Data Sheet (M.S.D.S.) is available on request.
- **First Aid**
- If swallowed **do not** induce vomiting. Give plenty of water to drink. Contact a doctor or the Poisons Information Centre.
- Phone 0800 764766 (New Zealand).
- If in eyes, hold eyes open and flood with water for at least 15 minutes. Contact a doctor if any irritation occurs.
- If on skin remove contaminated clothing, wash skin thoroughly with soap and water or a proprietary skin cleanser. Do not use solvents.
- If affected by inhalation remove person to fresh air. If breathing difficulties persist or occur later, contact a doctor.

ADDITIONAL INFORMATION

- Available in 25 kg bags – 40 BAGS = 1 Tonne.
- Bags must be dry during transport and storage.
- Bags must not be exposed to moisture, excessive heat or cold.
- **Shelf Life:** 12 months, if stored appropriately. This must include storage under cover, above ground, away from direct heat and moisture.

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SPECIFICATION SHEET

DULUX Elastomeric 201 on Rendertek Plaster System

Spec Code NZSD5620

COATING SYSTEM

	Data Sheet	Dry Film Thickness (microns)	Theoretical Spreading Rate (square metres per litre)	*Recoat**
1st Coat				
DULUX AcraTex 501/8 HAR Primer	DA1039	Min 30	10.0	4 Hours
Brush, roller, conventional or airless spray.		Max 30	10.0	
2nd Coat				
DULUX AcraTex 968 Elastomeric 201	DA1035	Min 125	4.0	2 hours
Brush, Roller or Airless Spray		Max 125	4.0	Indefinite
3rd Coat				
DULUX AcraTex 968 Elastomeric 201	DA1035	Min 125	4.0	2 hours
Brush, Roller or Airless Spray		Max 125	4.0	Indefinite

* Practical Spreading Rate will vary from the quoted Theoretical Spreading Rate due to factors such as method and condition of application and surface roughness.** Recoat times are quoted for 25°C and 50% Relative humidity, these may vary under different conditions

Important Notes

Do not apply paint if Relative Humidity is above 85% or temperature is within 3°C of Dew Point.
Do not apply if the surface temperature is greater than 40°C or below 10°C, or likely to fall below 10°C during the application or drying period.

Do not apply paint if Relative Humidity is above 85% or temperature is within 3°C of Dew Point.
Do not apply if the surface temperature is greater than 40°C or below 10°C, or likely to fall below 10°C during the application or drying period.
This specification must be read in conjunction with the appropriate technical data sheets.

Warranty - A ten (10) year written warranty for this Dulux Acratex paint system can be applied for, provided that the coatings have been applied by a Dulux approved applicator, in strict accordance with the technical data documented by Dulux Acratex Texture Coatings, regarding application, substrate preparation and coverage rates for this paint system.

A Systems Guide for AcraTex Paint Preservation and Maintenance.
1/ The exterior texture coatings on your home should be cleaned on a regular basis. This will help to improve your homes appearance and to preserve your homes texture coating system. Cleaning once every year will remove light soil as well as grime and airborne pollutants. Sea spray zone every six months.
2/ The exterior can be cleaned with a low-pressure water blaster (less than 400 psi) using a fanjet of cold water at a 45degree angle from the wall (not perpendicular). The fan of water blaster should be kept at a minimum of 20cm from the surface of the paint coating in order to avoid damage. Chemwash is also a recommended commercial cleaning method.
3/ Localised grime or ingrained dirt should be removed by cleaning with a scrubbing brush along with a solution of detergent and warm water. Under no circumstances should you attempt to remove heavy staining using a high pressure water blaster.
4/ Check for cracked, loose or missing sealant as part of your regular maintenance inspections. You will find sealant in most areas where different substrates meet. These include around windows and doors, pipes, where walls meet the soffit line and where electrical fittings and handrails have been attached to walls. Control joints should also be inspected as part of the maintenance inspections. All deteriorated or damaged sealant should e removed and replaced as soon as it appears. We recommend that a paintable MS Branz Appraised Sealant be used.

SPECIFICATION SHEET

DULUX Elastomeric 201 on Rendertek Plaster System

Spec Code NZSD5620

Description

Dulux AcraTex 968 Elastomeric 201 is an extremely weather resistant, highly flexible, water based acrylic coating, that is a technologically advanced version of an elastomeric membrane. It combines the protective performance of a membrane (water resistance, crack-bridging, carbon dioxide diffusion) with the advantages of a decorative paint (ease of application, attractive finish, low roller splatter).

Substrate

RENDERTEK PLASTER OVER CELCRETE AAC PANEL OR BLOCK

Cement Render
Cement Render is a substrate produced by mixing sand and cement that is applied to a surface, usually block-work and brick. Subsequently finished by screeding, floating or sponging to give an even finish.

Celcrete Panel Veneer – Blocks & Panels

The Celcrete panels and blocks must be installed in strict accordance with the manufactures specifications and instructions Plaster surfaces must be protected from rain and hot drying winds for at least 24 hours following application. Allow to fully cure before the application of the texture/coating system.

Signed approval must be given by the manufacturer of the panel and block system to certify that it has been installed to their detailed instructions and requirements prior to plastering and finish coating commencing.

Substrate Preparation

PCE007 - NEW CEMENT RENDER / PRE MIXED RENDER
ASSESS SUITABILITY
The surface must be inspected to ensure integrity and uniform consistency. Drummy sections identified by a hollow ring when tapped with a coin indicate poor adhesion of the render and should be removed and made good by the renderer. The surface should be uniform in colour, texture and be free of surface cracks >0.2mm.

REMOVE POWDER LAYERS & EFFLORESCENCE
Remove any powdery layers, laitance or efflorescence by detergent cleaning, wire brushing or a suitable chemical treatment.

CLEAN
Clean the surface thoroughly. Where a commercial cleaning detergent is used the surface must be thoroughly rinsed with clean water. This may need to be repeated on extremely dirty surfaces. Ensure that the surface is dry, clean and free from dust.

REPAIR SURFACE IMPERFECTIONS
Fill any cracks or surface imperfections with suitable filler or patching compound and allow to dry according to manufactures specifications.

Appendix 2

CELCRETE Pre-Cladding Checklist for 40mm Cavity.
For Builders and Trained Installers

Consent No. _____
Site Address _____
_____
Start Date _____

Client Name _____ Ph _____
Builder _____ Ph _____
Architect _____ Ph _____

Builder must have job prepared for the installation of the Celcrete Panels in accordance with the Celcrete Technical Manual

Floor Slab Layout

☐ Ensure distance from outside of framing to outside of concrete footing is exactly 90mm on all sides of building. If slightly under it is okay on single storey only. This allows 40mm for the cavity and 50mm for the Celcrete panels. 33mm batten ties will be used where 7mm brace ply is required.

☐ Ensure ground level is 250mm below floor level, min. 300mm out around base to allow for plastering while under construction.

Rebate

☐ Coated with Damp Proof Course e.g 3 coats approved bitumastic paint

☐ Smooth and level

Framing – All straight and Level

☐ Studs straightened for wall lining before Celcrete Panels are installed

☐ Internal corners – supply and install 1 stud or full length 40x40mm H3.2 batten, 200mm from internal corner **(CAD REF 5-2)**

Wall Underlay

☐ Exterior timber framed walls must be wrapped with an approved wall underlay prior to the cavity batten tie installation and all penetrations must be sealed up to the wall underlay. Wall underlay to be strapped as required by E2/AS1.

Head Flashings

☐ Cut aluminium powder coated z-flashings 20mm either side of outside flange of windows. These will need to be cut and turned up to form stop ends and sealed with silicone.

☐ Window sealing tape over z-flashing and onto building paper **(CAD REF 7-1)**.

Windows

☐ Window distance from framing – minimum 45mm from outside of framing to inside flange of window **(CAD REF 7-1)**

Joinery

☐ All joinery must be set into openings minimum 45mm from outside of framing to inside flange of window. This allows 10mm of the joinery bearing over the Celcrete panel

If two storey:

☐ Check with Builder that all waterproofing details including roof junctions, flashings and diverters have been done

☐ All protective sheeting is on roof

All Plumbing including Gas lines, need to be pressure tested prior to installation of internal linings. Celcrete will not be responsible for replacement of internal linings if this is not done.

Variables / Concerns / Comments:

_____

_____

_____

_____

Applicator: _____ Signed: _____

Approved by: _____ Position: _____ Signed: _____

PLEASE CONTACT LOCAL DISTRIBUTOR BEFORE JOINERY IS PRODUCED

Appendix 2a

CELCRETE Pre-Cladding Checklist for 20mm Cavity.
For Builders and Trained Installers

Consent No. _____
Site Address _____
_____
Start Date _____

Client Name _____ Ph _____
Builder _____ Ph _____
Architect _____ Ph _____

Builder must have job prepared for the installation of the Celcrete Panels in accordance with the Celcrete Technical Manual

Floor Slab Layout

☐ Ensure distance from outside of framing to outside of concrete footing is exactly 70mm on all sides of building. If slightly under it is okay on single storey only. This allows 20mm for the cavity and 50mm for the Celcrete panels. All brace ply must be checked in flush with the framing.

☐ Ensure ground level is 250mm below floor level, min. 300mm out around base to allow for plastering while under construction.

Rebate

☐ Coated with Damp Proof Course e.g 3 coats approved bitumastic paint

☐ Smooth and level

Framing – All straight and Level

☐ Studs straightened for wall lining before Celcrete Panels are installed

☐ Internal corners – supply and install 1 stud or full length 40x40mm H3.2 batten, 200mm from internal corner **(CAD REF 5-2-20)**

Wall Underlay

☐ Exterior timber framed walls must be wrapped with an approved wall underlay prior to the cavity batten tie installation and all penetrations must be sealed up to the wall underlay. Wall underlay to be strapped as required by E2/AS1.

Head Flashings

☐ Cut aluminium powder coated z-flashings 20mm either side of outside flange of windows. These will need to be cut and turned up to form stop ends and sealed with silicone.

☐ Window sealing tape over z-flashing and onto building paper **(CAD REF 7-1-20)**.

Windows

☐ Window distance from framing – minimum 25mm from outside of framing to inside flange of window **(CAD REF 7-1-20)**

Joinery

☐ All joinery must be set into openings minimum 25mm from outside of framing to inside flange of window. This allows 10mm of the joinery bearing over the Celcrete panel

If two storey:

☐ Check with Builder that all waterproofing details including roof junctions, flashings and diverters have been done

☐ All protective sheeting is on roof

☐ Scaffolding

All Plumbing including Gas lines, need to be pressure tested prior to installation of internal linings. Celcrete will not be responsible for replacement of internal linings if this is not done.

Variables / Concerns / Comments:

_____

_____

_____

_____

Applicator: _____ Signed: _____

Approved by: _____ Position: _____ Signed: _____

PLEASE CONTACT LOCAL DISTRIBUTOR BEFORE JOINERY IS PRODUCED

Appendix 3

CELCRETE Pre-Coating Checklist
For Trained Installers and Plasterers

Consent No. _____
Site Address _____
_____
Start Date _____

Client Name _____ Ph _____
Builder _____ Ph _____
Architect _____ Ph _____

Celcrete recommends an inspection by Building Inspector prior to plastering

☐ Panels must be flat and straight with min. 6 stainless steel screws per 2200x600mm sheet, countersunk 5mm **(CAD REF 3-1)**.

☐ Ensure all exposed steel reinforcing ends are treated with zinc primer.

☐ All external and internal corners are filled with expandable foam **(CAD REFS 5-1 & 5-2)**.

☐ Vents - 110x40mm slots are cut into the bottom of the panel at max. 1500 centres for PVC vents. These are then placed in after plastering, before painting.

☐ Ensure that PVC sill flashings are in place and sealed with urethane at corners.

☐ Ensure all PVC window head capping is glued in place and level and straight **(CAD REF 7-1)**.

☐ Powder-coated head flashings must be in place with 20mm folded ends, flush with outside flange of window and sealed with silicone **(CAD REF 7-1 & 7-1a)**.

☐ PVC base cap/vermin strip must be glued and fixed in a straight line to bottom edge of panel where required **(CAD REFS 4-2, 8-1, 9-2,& 12-2).**

☐ Ensure PVC soffit moulding is glued and fixed in a straight line **(CAD REFS 8-2 & 13-3)**.

☐ Ensure roof flashings are in place and checked by Builder and Building Inspector prior to plastering. Check junctions between roof flashings and Celcrete mouldings.

☐ All pipe work / penetrations through cladding are filled with expandable foam and sealed with flexible sealant **(CAD REFS 11-1 & 11-2)**.

***Note*:** PVC Reveal Bead Flashing is installed by plasterers when masking windows **(CAD REF 7-2)**

Variables / Concerns / Comments:

_____

Applicator: _____ Signed: _____

Approved by: _____ Position: _____ Signed: _____