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Agrément Certificate

23/6909

Product Sheet 1 Issue 1

MAPEI RENDERS

MAPEREND

This Agrément Certificate Product Sheet⁽¹⁾ relates to Maperend, applied to Knauf Aquapanel Exterior Cement Board, comprising thin coat external render, for use as a ventilated and drained exterior wall cladding product on timber- and steel-frame buildings.

(1) Hereinafter referred to as 'Certificate'.

The assessment includes

Product factors:

- compliance with Building Regulations
- compliance with additional regulatory or non-regulatory information where applicable
- evaluation against technical specifications
- assessment criteria and technical investigations
- uses and design considerations

Process factors:

- compliance with Scheme requirements
- installation, delivery, handling and storage
- production and quality controls
- maintenance and repair

Ongoing contractual Scheme elements†:

- regular assessment of production
- formal 3-yearly review



KEY FACTORS ASSESSED

- Section 1. Mechanical resistance and stability
- Section 2. Safety in case of fire
- Section 3. Hygiene, health and the environment
- Section 4. Safety and accessibility in use
- Section 5. Protection against noise
- Section 6. Energy economy and heat retention
- Section 7. Sustainable use of natural resources
- Section 8. Durability

The BBA has awarded this Certificate to the company named above for the product described herein. This product has been assessed by the BBA as being fit for its intended use provided it is installed, used and maintained as set out in this Certificate.

On behalf of the British Board of Agrément

Date of issue: 16 June 2023

Hardy Giesler
Chief Executive Officer

This BBA Agrément Certificate is issued under the BBA's Inspection Body accreditation to ISO/IEC 17020. Sections marked with † are not issued under accreditation.

The BBA is a UKAS accredited Inspection Body (No. 4345), Certification Body (No. 0113) and Testing Laboratory (No. 0357).

Readers MUST check that this is the latest issue of this Agrément Certificate by either referring to the BBA website or contacting the BBA directly.

The Certificate should be read in full as it may be misleading to read clauses in isolation.

Any photographs are for illustrative purposes only, do not constitute advice and should not be relied upon.

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SUMMARY OF ASSESSMENT AND COMPLIANCE

This section provides a summary of the assessment conclusions; readers should refer to the later sections of this Certificate for information about the assessments carried out.

Compliance with Regulations

Having assessed the key factors, the opinion of the BBA is that Maperend, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements of the following Building Regulations:



The Building Regulations 2010 (England and Wales) (as amended)

Requirement:	A1(1)	Loading
Comment:		The product is acceptable. See section 1 of this Certificate.
Requirement:	B3(4)	Internal fire spread - Structure
Comment:		The product can contribute to satisfying this Requirement. See section 2 of this Certificate.
Requirement:	B4(1)	External fire spread
Comment:		The product may be restricted by this Requirement. See section 2 of this Certificate.
Requirement:	C2(b)(c)	Resistance to moisture
Comment:		Walls rendered with the product can satisfy this Requirement. See section 3 of this Certificate.
Regulation:	7(1)	Materials and workmanship
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	7(2)	Materials and workmanship
Comment:		The product may be restricted by this Regulation. See section 2 of this Certificate.



The Building (Scotland) Regulations 2004 (as amended)

Regulation:	8(1)(2)	Fitness and durability of materials and workmanship
Comment:		The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	8(3)	Fitness and durability of materials and workmanship
Comment:		The product may be restricted by this Regulation. See section 2 of this Certificate.
Regulation:	9	Building standards applicable to construction
Standard:	1.1(a)(b)	Structure
Comment:		The product is acceptable, with reference to clause 1.1.1 ⁽¹⁾⁽²⁾ of this Standard. See section 1 of this Certificate.
Standard:	2.4	Cavities
Comment:		The product can contribute to satisfying this Standard, with reference to clause 2.4.2 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.
Standard:	2.6	Spread to neighbouring buildings
Standard:	2.7	Spread on external walls
Comment:		The product may be restricted by these Standards, with reference to clauses 2.6.4 ⁽¹⁾⁽²⁾ , 2.6.5 ⁽¹⁾ , 2.6.6 ⁽²⁾ and 2.7.1 ⁽¹⁾⁽²⁾ . See section 2 of this Certificate.

Standard:	3.10	Precipitation
Comment:		Walls rendered with the product can satisfy the requirements of this Standard, with reference to clauses 3.10.1 ⁽¹⁾⁽²⁾ , 3.10.2 ⁽¹⁾⁽²⁾ , 3.10.3 ⁽¹⁾⁽²⁾ and 3.10.5 ⁽¹⁾⁽²⁾ . See section 3 of this Certificate.
Standard:	7.1 (a)	Statement of sustainability
Comment:		The product can contribute to satisfying the relevant requirements of Regulation 9, Standards 1 to 6, and therefore will contribute to a construction meeting a bronze level of sustainability as defined in this Standard.
Regulation:	12	Building standards applicable to conversions
Comment:		Comments in relation to the product under Regulation 9, Standards 1 to 6, also apply to this Regulation, with reference to clause 0.12.1 ⁽¹⁾⁽²⁾ and Schedule 6 ⁽¹⁾⁽²⁾ .
		(1) Technical Handbook (Domestic). (2) Technical Handbook (Non-Domestic).



The Building Regulations (Northern Ireland) 2012 (as amended)

Regulation:	23(1)(a)(i)	Fitness of materials and workmanship
Comment:	(b)(i)	The product is acceptable. See sections 8 and 9 of this Certificate.
Regulation:	23(2)	Fitness of materials and workmanship
Comment:		The product may be restricted by this Regulation. See section 2 of this Certificate.
Regulation:	28(b)	Resistance to moisture and weather
Comment:		Walls rendered with the product can satisfy this Regulation. See section 3 of this Certificate.
Regulation:	30	Stability
Comment:		The product is acceptable as set out in section 1 of this Certificate.
Regulation:	35(4)	Internal fire spread – Structure
Comment:		The product can contribute to satisfying this Regulation. See section 2 of this Certificate.
Regulation:	36(a)	External fire spread
Comment:		The product may be restricted by this Regulation. See section 2 of this Certificate.

Additional Information

NHBC Standards 2023

In the opinion of the BBA, Maperend, applied to Knauf Aquapanel Exterior Cement Board, if installed, used and maintained in accordance with this Certificate, can satisfy or contribute to satisfying the relevant requirements in relation to *NHBC Standards*, Part 6 *Superstructure (excluding roofs)*, Chapters 6.2 *External timber framed walls*, 6.9 *Curtain walling and cladding*, 6.10 *Light steel framed walls and floors*, 6.11 *Render*, Clause 6.11.8 *Weather Resistance*, and 9.1 *A consistent approach to finishes*.

Fulfilment of Requirements

The BBA has judged Maperend, applied to Knauf Aquapanel Exterior Cement Board, to be satisfactory for use as described in this Certificate. The product has been assessed for use as a ventilated and drained exterior wall cladding product on timber- and steel-frame buildings.

ASSESSMENT

Product description and intended use

The Certificate holder provided the following description for the product under assessment.

Maperend, applied to Knauf Aquapanel Exterior Cement Board, is a thin coat render for use as a ventilated and drained exterior wall panel product on timber- and steel-frame buildings.

Maperend, applied to Knauf Aquapanel Exterior Cement Board, consists of:

- AR1 GG Cementitious Basecoat — a grey or white powder made from cement, sand, synthetic resin and additives, with a grain size up to 0.6 mm
- Mapetherm Net — an alkali-resistant glass fibre mesh
- Silancolor Basecoat primer — a coloured silicone resin-based paint in water dispersion
- Silancolor Tonachino — a fibre-reinforced silicone resin-based render. It is available in a range of colours that can be obtained with the ColorMap colour system, details of which can be obtained from the Certificate holder
- Knauf Aquapanel Exterior Cement Board⁽¹⁾ — comprising Portland cement and an aggregate core reinforced with a polymer-coated glass fibre mesh in the back and front surfaces
- Aquapanel Exterior Maxi Screws — coated screws. SN25 are for use in steel up to 0.7 mm thick with a single layer of board, SN39 are for use in steel up to 0.7 mm thick with a double layer of board, or in timber-frame construction with a single layer of board, and SB25 are for use in steel from 0.8 mm thick to 2 mm thick with a single layer of board Knauf Aquapanel Fixings
- Aquapanel Rustproof Screws — stainless steel screws, SN 40 (length 40 mm, diameter 4.0 mm), for use in timber battens for a single layer of boards.

(1) The board is supplied by Knauf UK GmbH and is the subject of BBA Certificate 09/4633.

Knauf Aquapanel Exterior Cement Board has the nominal characteristics given in Table 1.

Table 1 Nominal characteristics

Characteristic (unit)	Value
Width (mm)	900 ⁽¹⁾ , 1200 ⁽²⁾
Thickness (mm)	12.5
Approximate mass per unit area (kg·m ⁻²)	14.3
Apparent density (dry) (kg·m ⁻³)	1150
Modulus of rupture (MPa)	9.6

(1) Available in lengths of 1200, 2000, 2400, 2500 and 2800 mm.

(2) Available in lengths of 900, 2000, 2400, 2500, 2800 and 3000 mm.

Product assessment – key factors

The product was assessed for the following key factors, and the outcomes of the assessments are shown below. Conclusions relating to the Building Regulations apply to the whole of the UK unless otherwise stated.

1 Mechanical resistance and stability

Data were assessed for the following characteristics.

1.1 Strength and stability

The results of hygrothermal performance tests are given in Table 2.

Table 2 Hygrothermal performance

Product assessed	Assessment method	Requirement	Result
Maperend	ETAG 004 : 2013, Section 5.1.4.1.1 Control	Value achieved	0.29 MPa
Maperend	ETAG 004 : 2013, Section 5.1.4.1.1 Bond strength Basecoat Full product	≥0.08 MPa or cohesive rupture	After hygrothermal Pass Pass
Maperend	ETAG 004 : 2013, Section 5.1.3.3 Hard body impact at 3 Joules and 10 Joules	No visible damage	Pass

1.1.1 On the basis of data assessed, the product has adequate strength and can be incorporated in an external cladding product suitably designed to resist the wind loads normally experienced in the UK.

Impact resistance

1.1.2 The product has adequate resistance to impact and cracking in all normal circumstances. Where the product may be exposed to severe impact (eg on some industrial sites), or is to be applied over existing background cracks, precautions may be required to reduce the risk of damage.

1.1.3 It is essential that the surface of the board to be covered is clean and has a sound mechanical key to ensure a satisfactory bond between the backing board and the render.

2 Safety in case of fire

Data were assessed for the following characteristics.

2.1 Knauf Aquapanel Exterior Cement Board has a reaction to fire classification of A1 in accordance with BS EN 13501-1 : 2018.

2.2 Maperend has a fire classification⁽¹⁾ of A2-s1, d0 in accordance with BS EN 13501-1 : 2018. This classification applies to the complete colour range.

(1) Test report WF 437823, issued by Warringtonfire. Copies of the reports are available from the Certificate holder upon request.

Table 3 Tested product

Substrate	Plasterboard
Air gap	25 mm
Render carrier board	Knauf Aquapanel Exterior Cement Board
Basecoat	AR1 GG Cementitious Basecoat (grey), thickness of 5 mm, weight per unit area of 6 kg·m ⁻²
Glass fibre mesh	Mapetherm Net thickness <0.1 mm, weight per unit area 160 kg·m ⁻²
Primer	Silancolor Basecoat primer weight per unit area of 0.2 kg·m ⁻²
Topcoat	Silancolor Tonachino thickness of 1.5 mm, weight per unit area of 2.4 kg·m ⁻²

2.3 On the basis of data assessed, the construction given in Table 3 will be unrestricted under the documents supporting the national Building Regulations when used with steel Z-sections.

2.4 The classification and permissible areas of use of other specifications and constructions must be established by reference to the documents supporting the national Building Regulations.

2.5 Designers must refer to the relevant national Building Regulations and guidance for detailed conditions of use, particularly in respect of requirements for substrate fire performance, cavity barriers and combustibility limitations for other materials and components used in the overall wall construction (for example, thermal insulation).

2.6 For resistance to fire, the performance of a wall incorporating the product can only be determined by tests from a suitably accredited laboratory and this is outside the scope of this Certificate.

3 Hygiene, health and the environment

Data were assessed for the following characteristics.

3.1 Weathertightness

The result of weathertightness testing is given in Table 4.

Table 4 *Weathertightness test result*

Product assessed	Assessment method	Requirement	Result
Maperend	Weathertightness to BS EN 12865 : 2001	No observable leakage	Pass

3.1.1 The product is suitable for use in exposure zones up to and including the 'severe' wind-driven rain index category in accordance with PD 6697 : 2019.

3.1.2 Knauf Aquapanel Exterior Cement Board to which the render is applied must be designed and constructed in relation to local exposure conditions to minimise the incidence of rain penetration.

3.1.3 The render will tend to shed water and will considerably reduce the amount of water absorbed during rain.

3.2 Water vapour permeability

The results of water vapour permeability testing are given in Table 5.

Table 5 *Water vapour permeability results*

Product assessed	Assessment method	Requirement	Result
Maperend	ETAG 004 : 2013 Section 5.1.3.4. Equivalent air layer thickness (sd)	Value achieved	0.45 m

4 Safety and accessibility in use

Not applicable.

5 Protection against noise

Not applicable.

6 Energy economy and heat retention

Not applicable.

7 Sustainable use of natural resources

Not applicable.

8 Durability

8.1 The potential mechanisms for degradation and the known performance characteristics of the materials in this product were assessed.

Specific test data were assessed as given in Table 6.

Table 6 Hygrothermal performance

Product assessed	Assessment method	Requirement	Result
Maperend	ETAG 004 : 2013, Section 5.1.3.2.1. Hygrothermal behaviour	No observable issues	Pass

8.2 The durability and service life of the product will depend upon the building location, the immediate environment and the intended use of the building.

8.3 The product may become discoloured with time, the rate depending on the local environment. The appearance can normally be restored by cleaning with water and mild detergent. In industrial atmospheres, light colours must be avoided.

8.4 Service life

Under normal service conditions, the product will have a life of at least 30 years, provided it is designed, installed and maintained in accordance with this Certificate and the Certificate holder's instructions.

PROCESS ASSESSMENT

Information provided by the Certificate holder was assessed for the following factors:

9 Design, installation, workmanship and maintenance

9.1 Design

9.1.1 The design process was assessed by the BBA, and the following requirements apply in order to satisfy the performance assessed in this Certificate.

9.1.2 A suitably competent and experienced individual must check the design and installation of the product.

9.1.3 The designer must ensure that:

- the sub-frame and the support rails are designed to limit mid-span deflections to $L/200$, and cantilever deflections to $L/150$. Board mid-span deflections must be limited to $L/500$. Where L is the clear span
- the product's attachment to the substrate has adequate fixing pull-out capacity for the calculated loads. An appropriate number of site-specific pull-out tests is conducted on the substrate to determine the minimum pull-out resistance to failure of the fixings. The characteristic pull-out resistance must be determined in accordance with the guidance given in EOTA TR 055 : 2018, using 50% of the mean value of the five smallest measured values at the ultimate load
- the fixings attaching the board to the subframe have adequate pull-out strength from the subframe used
- the maximum centres between the studs supporting the wall are 600 mm
- the spacing of the fixings attaching the board to the sub-frame is to the manufacturer's instructions. This is typically into the batten at 600 mm centre-to-centre horizontally, and 250 mm centre-to-centre vertically
- the battens are treated timber, minimum 40 mm wide, with a thickness to suit the required cavity width. Cavity may be formed by timber battens or steel Z-sections.

9.1.4 The supporting wall must be able to take the full wind actions as well as any racking loads. The product cannot be assumed to contribute in this respect.

9.1.5 Design wind actions must be calculated in accordance with BS EN 1991-1-4 : 2005 and its UK National Annex. Consideration must be given to higher pressure coefficients applicable to corners of buildings as recommended in this Standard. In accordance with BS EN 1990 : 2002, it is recommended that a partial load factor of 1.5 is used to determine the design wind load to be resisted by the product.

9.1.6 The characteristic pull-through resistance (kN) for the stainless steel screws are:

- centre 0.42
- edge (25 mm minimum) 0.19
- corner (25 mm minimum) 0.14.

9.1.7 For design purposes, the board may be assumed to have the following mechanical properties:

- allowable flexural stress 2.4 N·mm⁻²
- flexural modulus 4000 N·mm⁻².

9.1.8 The board, when incorporated in a cladding comprising support members (eg timber battens – see Figure 1) at 400 mm centres, and specified screws at maximum 250 mm centres with a minimum embedment of 25 mm in structural grade timber and a minimum of 10 mm thread through the back of the steel flange, must adequately resist all wind pressures likely to be experienced in the UK. For other member spacing, fixing arrangements and design wind pressures, the structural adequacy of the board must be checked by a suitably competent and experienced individual.

9.2 Installation

9.2.1 Installation instructions provided by the Certificate holder were assessed and judged to be appropriate and adequate.

9.2.2 Installation must be carried out in accordance with this Certificate and the Certificate holder's instructions. A summary of instructions and guidance is provided in Annex A of this Certificate.

9.2.3 Application of the product, within the context of this Certificate, must be carried out by contractors recommended or recognised by the Certificate holder. Such a contractor is a company:

- which operates in the specialist field of activity and has been audited
- which has achieved required installation standards consistently to comply with the Certificate holder's application procedure
- subject to at least one inspection per annum by the Certificate holder to ensure suitable site practices are being employed. This may include unannounced site inspections.

9.2.4 Application of Maperend applied to Knauf Aquapanel Exterior Cement Board must be carried out strictly in accordance with the Certificate holder's instructions and specifications, the relevant recommendations of BS EN 13914-1 : 2016 and this Certificate.

9.2.5 A pre-application survey of the property must be carried out to determine the suitability of the substrate to receive the product, and whether repairs to the building structure are necessary before application. A specification is prepared by the designer or rendering contractor for each elevation, indicating:

- preliminary treatment of the background
- position of beads
- detailing around windows, doors and at eaves
- areas where flexible sealants must be used.

9.2.6 The sub-frame to which the cladding is fixed must be structurally sound and constructed in accordance with the requirements of the relevant national Building Regulations and Standards.

9.2.7 The product is capable of transmitting its self-weight and wind load to the structure. The adequacy of fixing of the sub-frame to the structural frame for specific installations is outside the scope of this Certificate and must be verified by a suitably competent and experienced individual. Particular care is required around window and door openings to ensure that the structure is capable of sustaining the additional weight of Knauf Aquapanel Exterior Cement Board.

9.2.8 Horizontal movement joints must be provided at every floor to accommodate vertical shrinkage of up to 6 mm in the timber-frame and to follow movement joints in the substructure. For steel-frame structures, reference must be made to the Structural Engineer's details for deflection at floor level and movement joints in the substructure.

9.2.9 Vertical movement joints must be provided at the required intervals. The actual spacing and position of the joints will be determined by the shape of the area to be rendered and must coincide with movement joints in the structure and allow for the same degree of movement.

9.2.10 The breather membrane must be installed and properly overlapped in accordance with the instructions of the membrane manufacturer and the building designer.

9.2.11 All window and door openings must be sealed strictly in accordance with the Certificate holder's installation instructions to ensure that they are weathertight before application of the product.

9.2.12 The render must not be applied in rain or mist, at temperatures above 25°C or below 5°C, or if exposure to frost is likely to occur during curing.

9.2.13 In sunny weather, work must commence on the shady side of the building, following the sun round to prevent the rendering drying out too rapidly.

9.2.14 To minimise colour shade variations and to avoid dry line jointing, continuous surfaces must be completed without a break. If breaks cannot be avoided, they must be made where services or architectural features, such as reveals or lines of doors and windows, help mask cold joints. Where long, uninterrupted runs are planned, products from the same batch must be used. Different batch numbers must be checked for colour consistency.

9.2.15 Knauf Aquapanel Exterior Cement Board must be securely fixed to the framework at maximum 600 mm spacings using the specified fixings at maximum 600 mm centre-to-centre horizontally, and maximum 250 mm centre-to-centre vertically, to provide a rigid in-plane surface without deflection or edge protrusions.

9.2.16 The board is supported on a minimum of three members, the centres of which must be at a maximum spacing of 600 mm.

9.2.17 Screws must be fixed at a minimum of 15 mm from board edges. The spacing for the screws must be no more than 250 mm and they must not be over-tightened.

9.2.18 It is essential that the board is rested directly on the framework during installation.

9.2.19 The board is fixed horizontally over supports with gaps between 3 and 5 mm. Successive rows of boards must be installed with vertical joints offset by a minimum of one stud cavity.

9.2.20 Render beads and expansion beads are fixed in accordance with the Certificate holder's instructions.

9.2.21 At the top of walls, the product must be protected by a coping, adequate overhang or adequately sealed purpose-made flashing.

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Proximity of flues

Detailed guidance can be found in the documents supporting the national Building Regulations for the provisions that are applicable when the product is installed in close proximity to certain flue pipes and/or heat-producing appliances.

9.3 Workmanship

Practicability of installation was assessed by the BBA, on the basis of the Certificate holder's information. To achieve the performance described in this Certificate, installation of the product must be carried out by approved contractors who have successfully undergone training and registration by the Certificate holder.

9.4 Maintenance and repair

9.4.1 Ongoing satisfactory performance of the product in use requires that it is suitably maintained. The guidance provided by the Certificate holder was assessed by the BBA and found to be appropriate and adequate.

9.4.2 Regular maintenance checks must be carried out on architectural details and on external plumbing and fittings, to ensure that they are functioning correctly and to prevent water damage to the render.

9.4.3 Damaged render must be repaired as soon as is practicable.

10 Manufacture

10.1 The production processes for the product have been assessed, and provide assurance that the quality controls are satisfactory according to the following factors:

10.1.1 The manufacturer has provided documented information on the materials, processes, testing and control factors.

10.1.2 The quality control operated over batches of incoming materials has been assessed and deemed appropriate and adequate.

10.1.3 The quality control procedures and product testing to be undertaken have been assessed and deemed appropriate and adequate.

10.1.4 The process for management of non-conformities has been assessed and deemed appropriate and adequate.

10.1.5 An audit of each production location was undertaken, and it was confirmed that the production process was in accordance with the documented process, and that equipment has been properly tested and calibrated.

†10.1.6 The BBA has undertaken to review the above measures on a regular basis through a surveillance process, to verify that the specifications and quality control operated by the manufacturer are being maintained.

11 Delivery and site handling

11.1 The Certificate holder stated that the product is delivered to site as shown in Table 7 in packaging bearing the product name, company name, batch number, health and safety information and weight of contents in kilograms.

Table 7 Component supply details

Component	Quantity and package
AR1 GG Cementitious Basecoat	25 kg bags
Silancolor Basecoat Primer	20 kg containers
Silancolor Tonachino	25 kg containers

11.2 Mapetherm Net is 1 m wide and supplied in rolls of 50 m length.

11.3 Powder mortars must be stored in dry conditions, off the ground and protected from frost at all times.

11.4 The primer and Silancolor Tonachino must be stored in a safe area, under cover and protected from excessive heat and frost at all times.

ANNEX A – SUPPLEMENTARY INFORMATION †

Supporting information in this Annex is relevant to the product but has not formed part of the material assessed for the Certificate.

Construction (Design and Management) Regulations 2015

Construction (Design and Management) Regulations (Northern Ireland) 2016

Information in this Certificate may assist the client, designer (including Principal Designer) and contractor (including Principal Contractor) to address their obligations under these Regulations.

CLP Regulations

The Certificate holder has taken the responsibility of classifying and labelling the product under the *GB CLG Regulation* and *CLP Regulation (EC) No 1272/2008 - Classification, labelling and packaging of substances and mixtures*. Users must refer to the relevant Safety Data Sheet(s).

CE marking

The Certificate holder has taken the responsibility of CE marking AR1 GG Cementitious Basecoat in accordance with harmonised European Standard BS EN 998-1 : 2016 and Silancolor Tonachino in accordance with harmonised European Standard EN 15824 : 2017.

Management Systems Certification for production

The management system of the manufacturers has been assessed and registered as meeting the requirements of BS EN ISO 9001 : 2015 by Certiquality (Certificates 15835 and 250).

Additional information on installation

A.1 Advice concerning site survey and preliminary work is available to the designer or rendering contractor from the Certificate holder, but such advice is outside the scope of this Certificate.

A.2 If it is necessary to cut board, it should be scored and snapped with a kraft-type knife. Alternatively, a hand-held circular saw with a dust extractor or a pendulum jig saw can be used. The use of a carbide- or diamond-tipped saw blade is recommended.

A.3 The board is cut to fit up to the head and down to the sill of windows, ensuring that no continuous vertical joint is formed to avoid leakage and cracks.

A.4 AR1 GG Cementitious Basecoat is mixed using clean water (5.0 to 6.0 litres of water per 25 kg bag of render), to achieve a thick creamy consistency, and a 2 mm thick layer is applied onto the board.

A.5 Mapetherm Net is laid in the first pass of AR1 GG Cementitious Basecoat and left to dry for approximately 30 minutes to 4 hours (depending on climate conditions) before application of a second pass of 2 to 3 mm minimum, to achieve a minimum total thickness of 4 mm. Alternatively, 4 mm of product may be applied with a notched trowel, and the mesh then pushed through this layer and fully covered so that it sits in the final third of this build-up. Depending upon the rendering technique, the basecoat layer should be fully flat, which can be achieved with a trowel, float or rule, or by sponging the surface. The basecoat render is allowed to dry for 2 to 5 days.

A.6 A coat of Silancolor Basecoat primer (coverage rate 0.3 to 0.5 kg·m⁻²) is applied by roller and the surface left to dry for 24 hours prior to application of the finishing coats.

Render finishes

A.7 A finishing coat of Silancolor Tonachino at a coverage rate 1.7 to 2.0 kg·m⁻² is applied to a thickness of 1.5 mm using a steel float and hawk. A thin plastic float is used to smooth the surface, ensuring evenness of cover and aesthetic consistency. Note: coverage rates vary, depending on the final grain size to be used.

A.8 Care should be taken in the detailing of the product around features such as openings, projections and at eaves to ensure adequate protection against water ingress and to limit the risk of water penetrating the product.

A.9 A typical wall build-up is shown in Figures 1 to 11.

Figure 1 Mesh reinforcement at opening

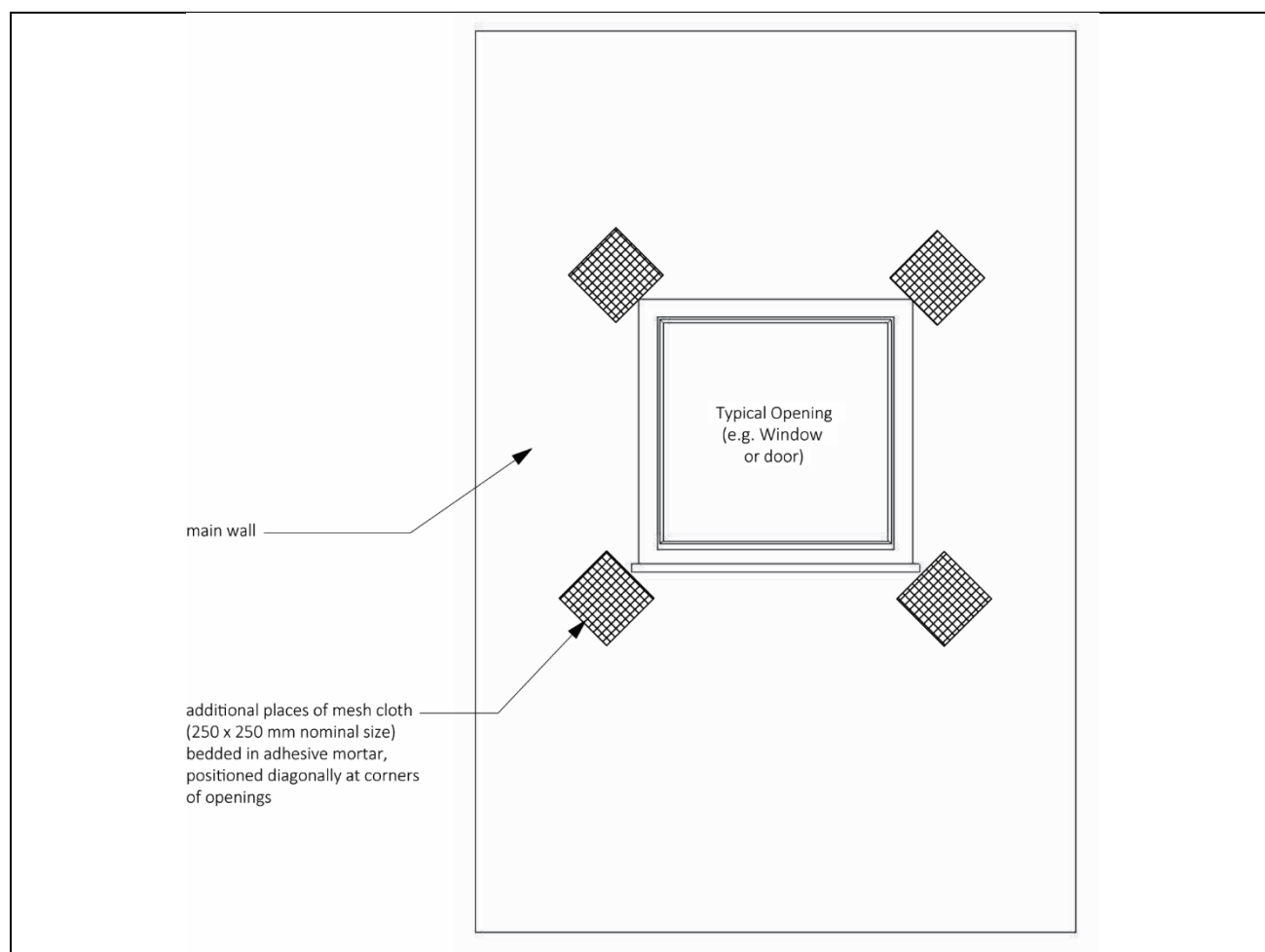


Figure 2 Detail section – main wall

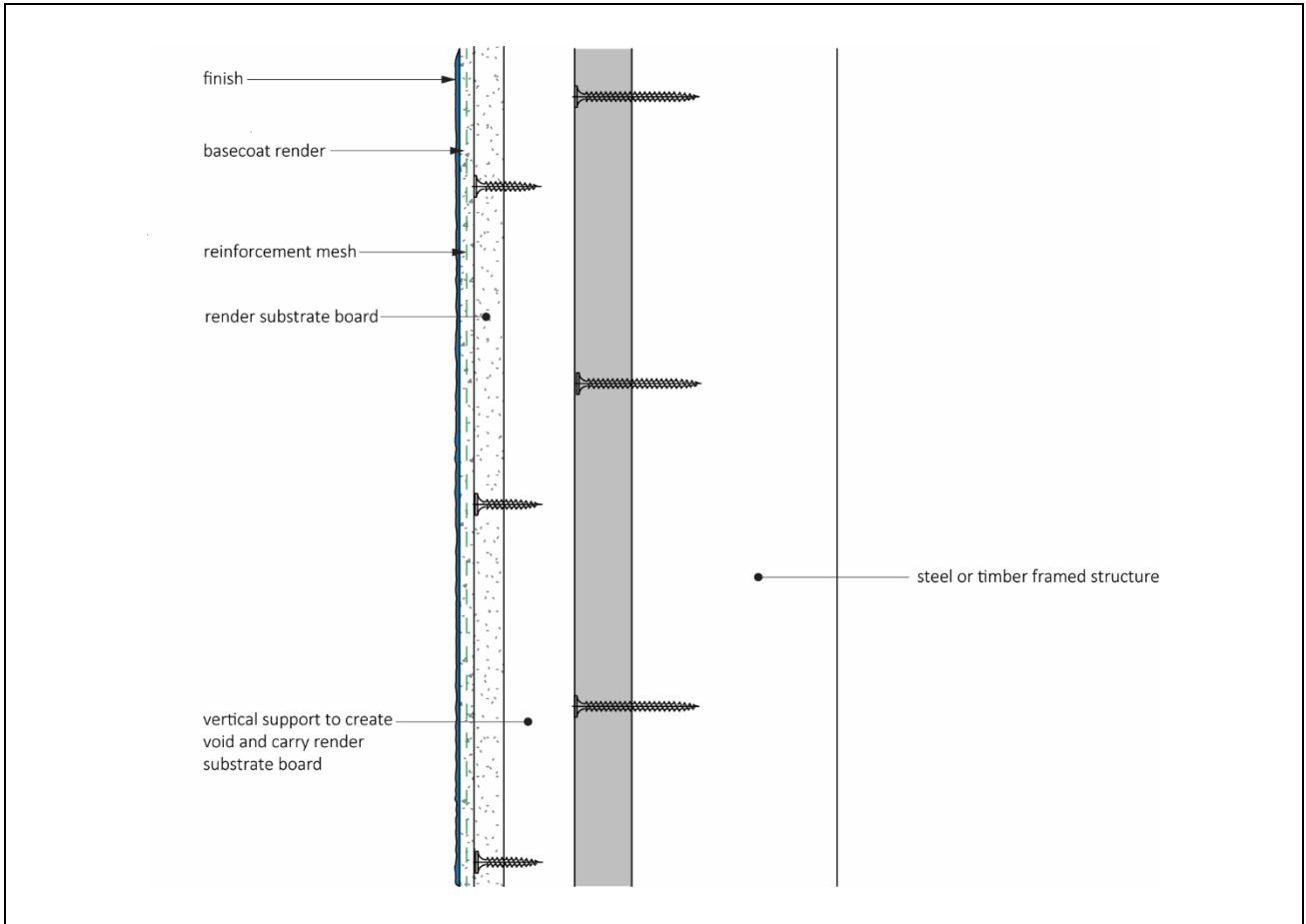


Figure 3 Detail section – base (Z flashing)

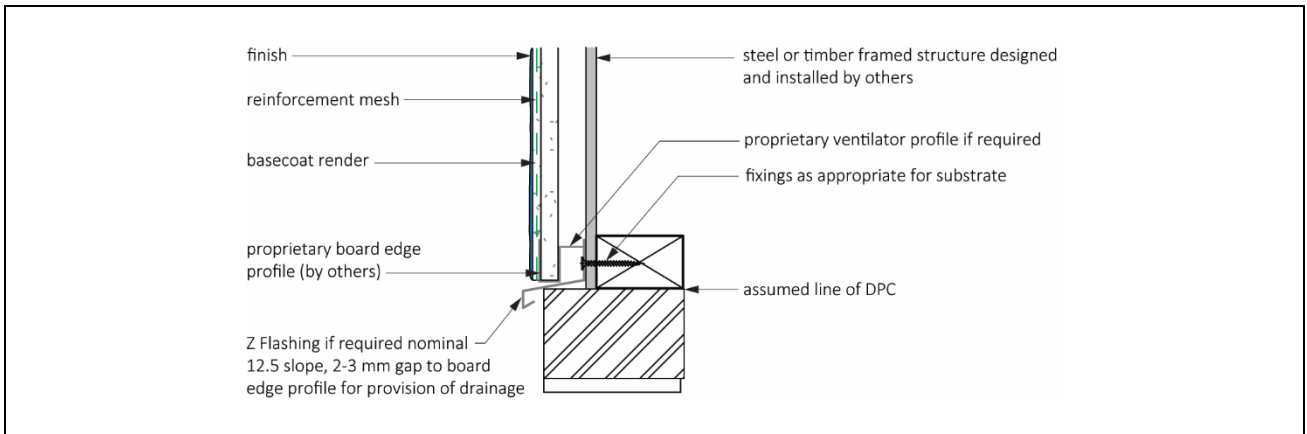


Figure 4 Detail plan – external corner

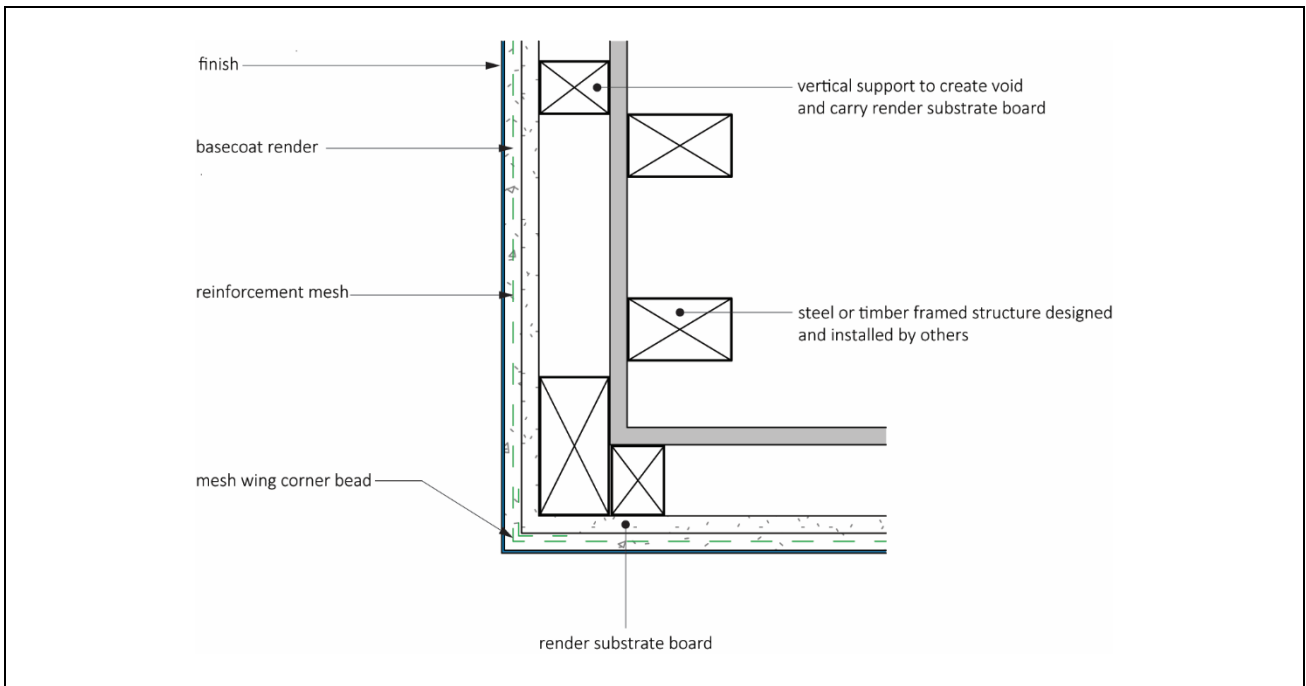


Figure 5 Detail plan – internal corner

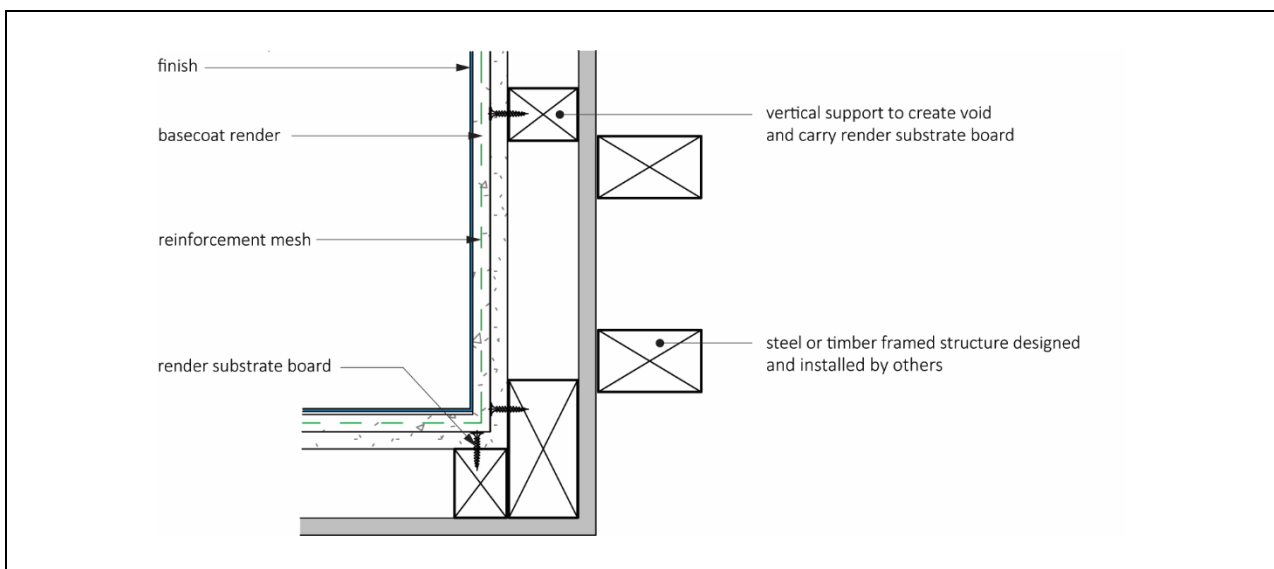


Figure 6 Detail plan – UPVC sill

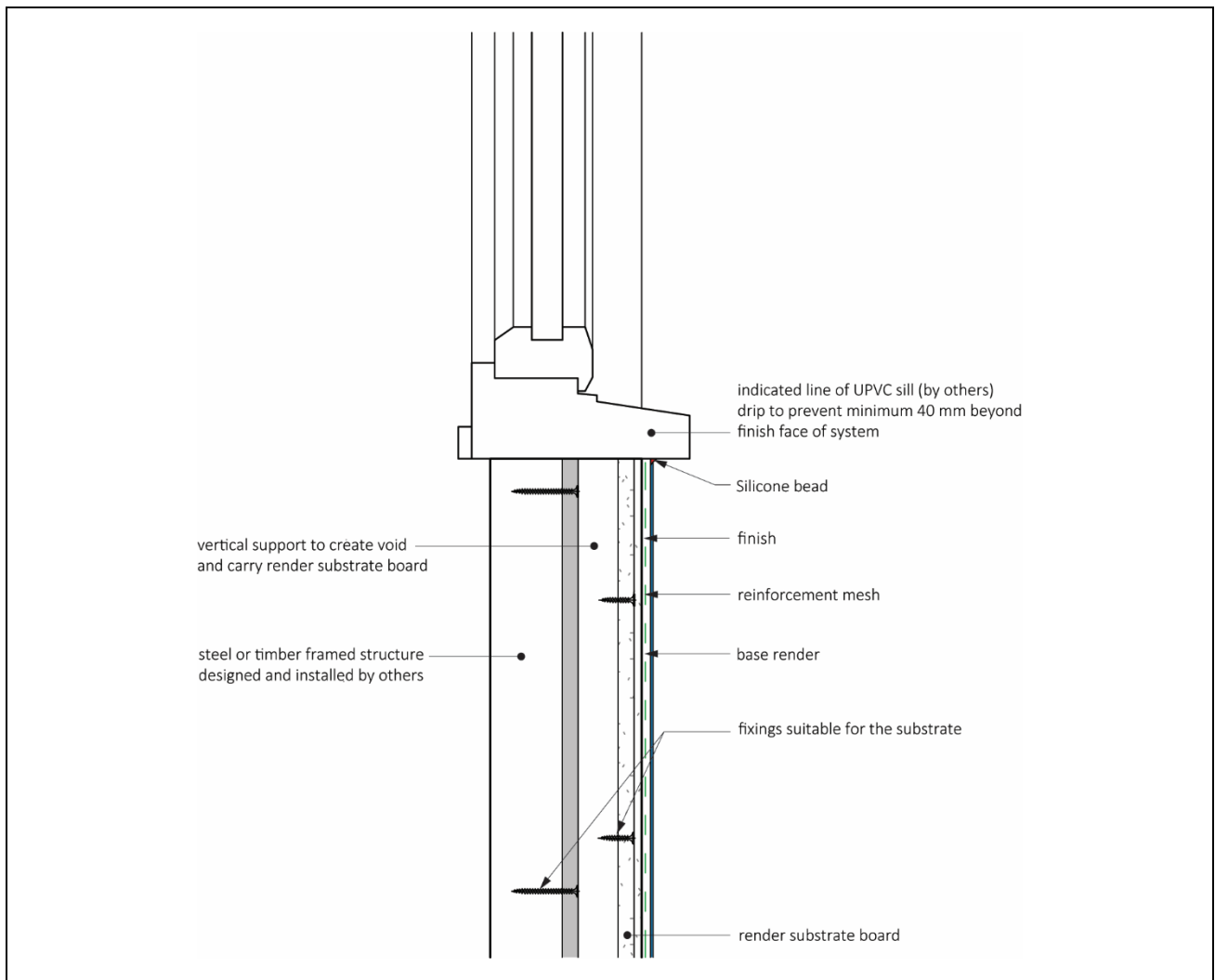


Figure 7 Detail plan – reveal (bead + mastic)

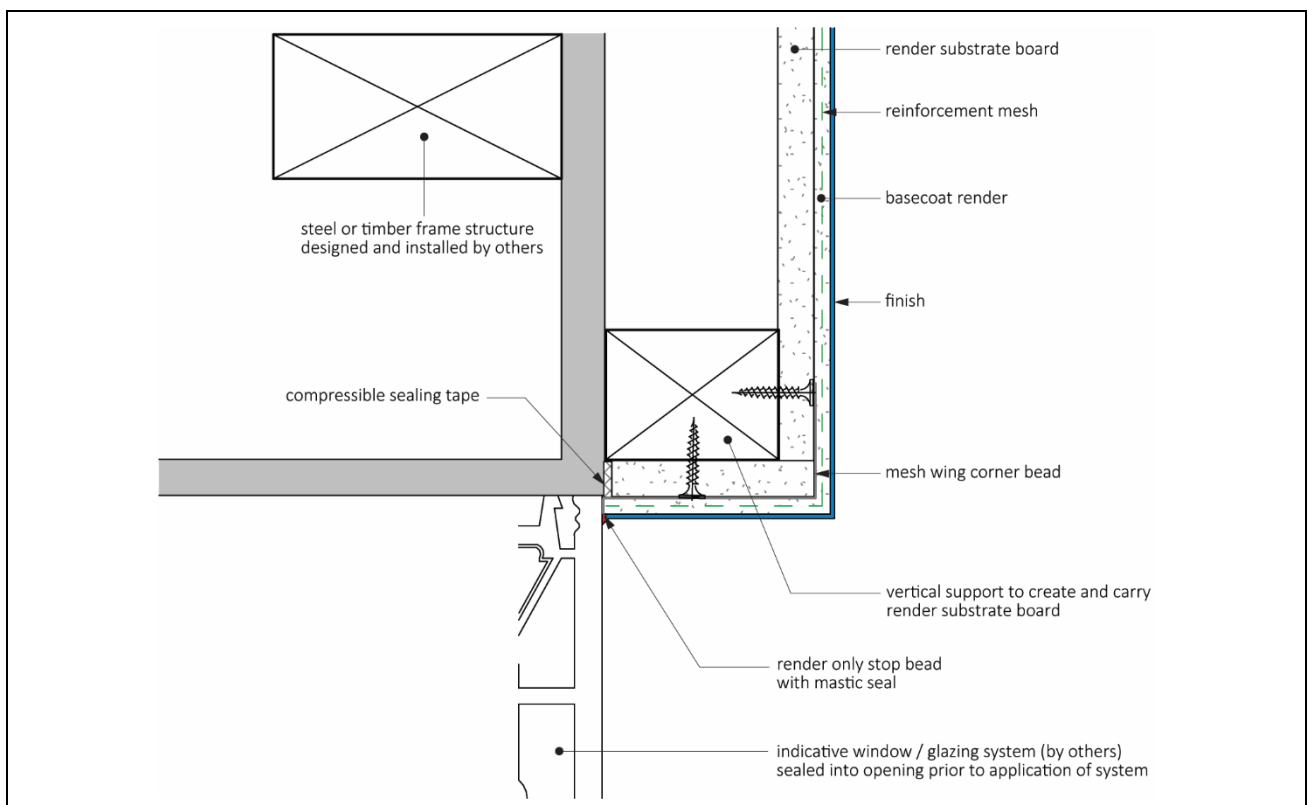


Figure 8 Detail section – head (bead + mastic)

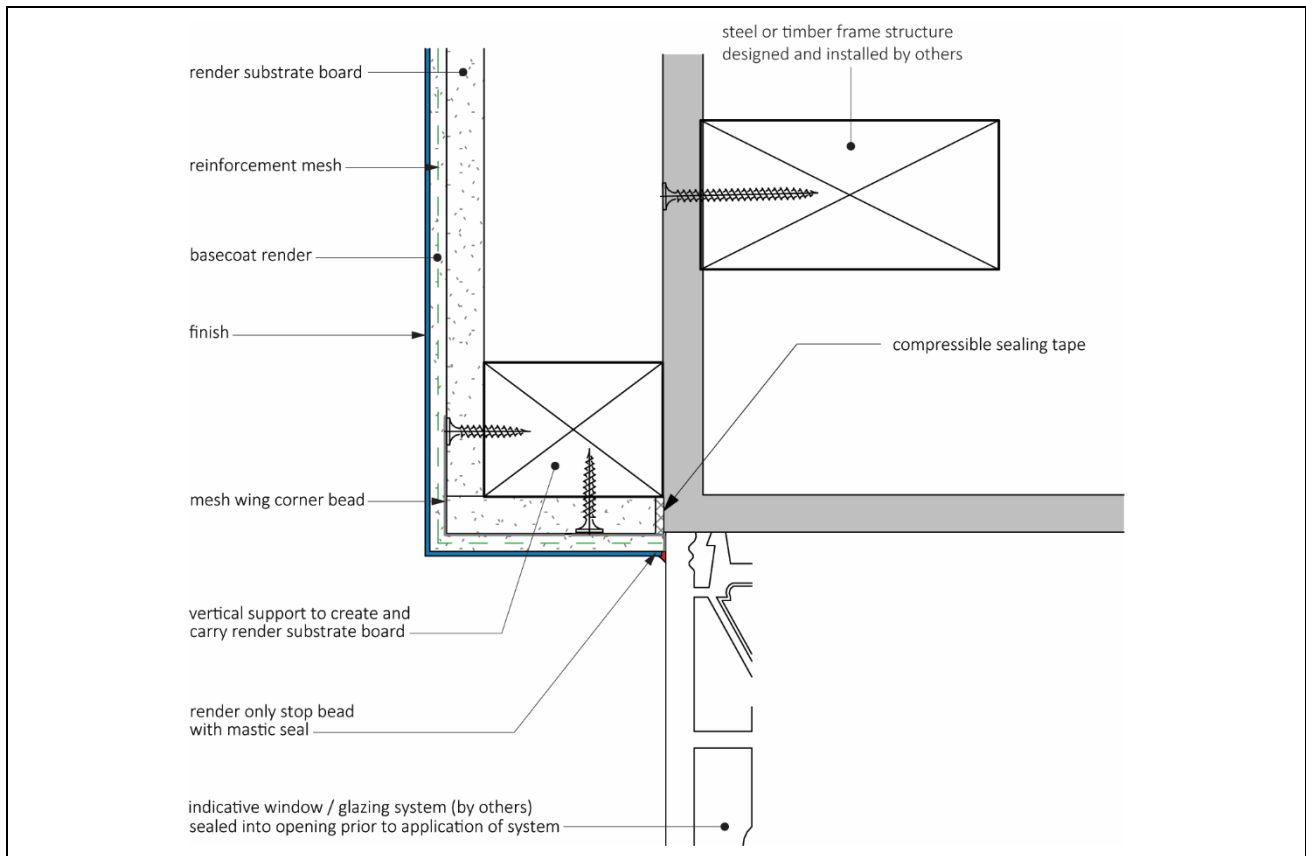


Figure 9 Detail section – compression joint

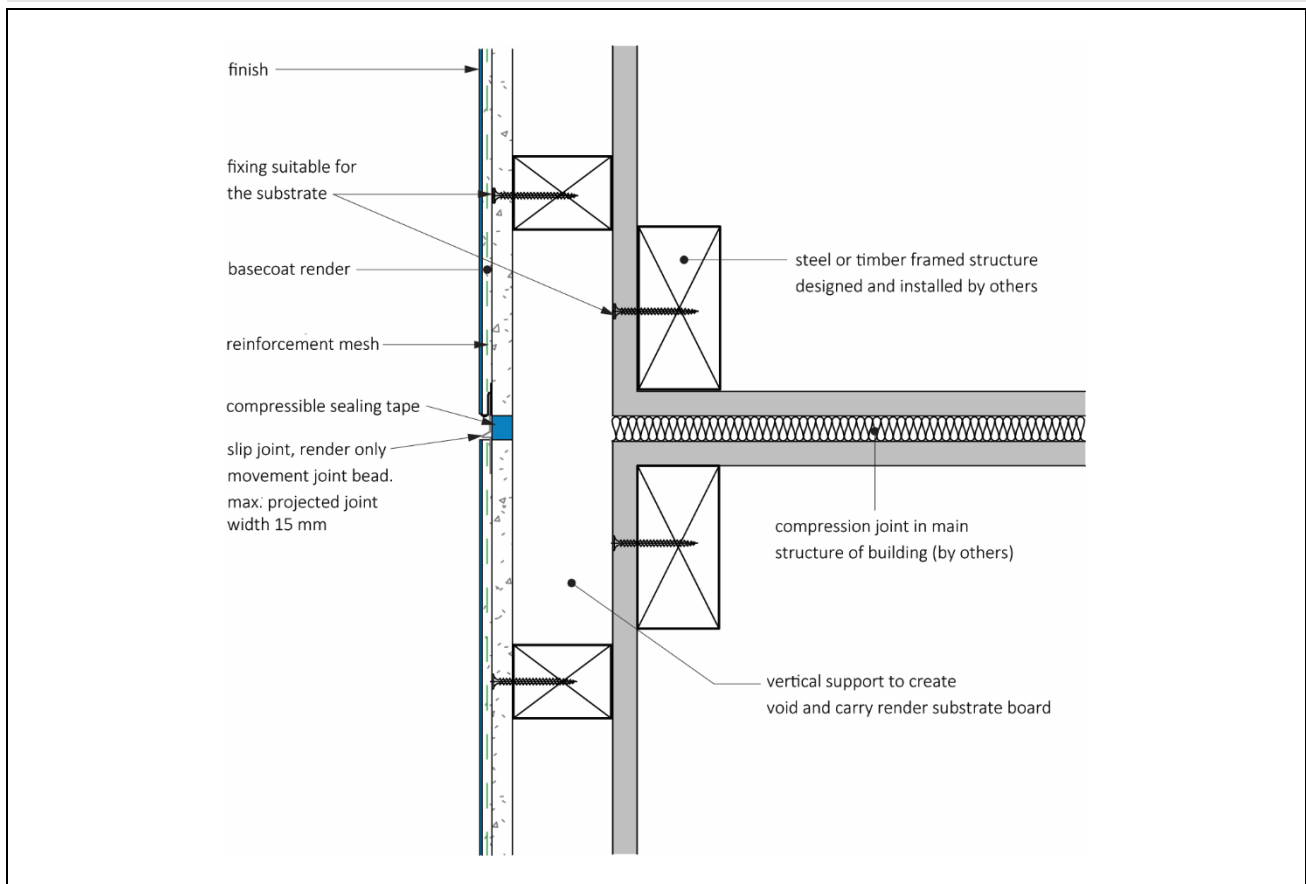


Figure 10 Detail plan – vertical movement joint (bead)

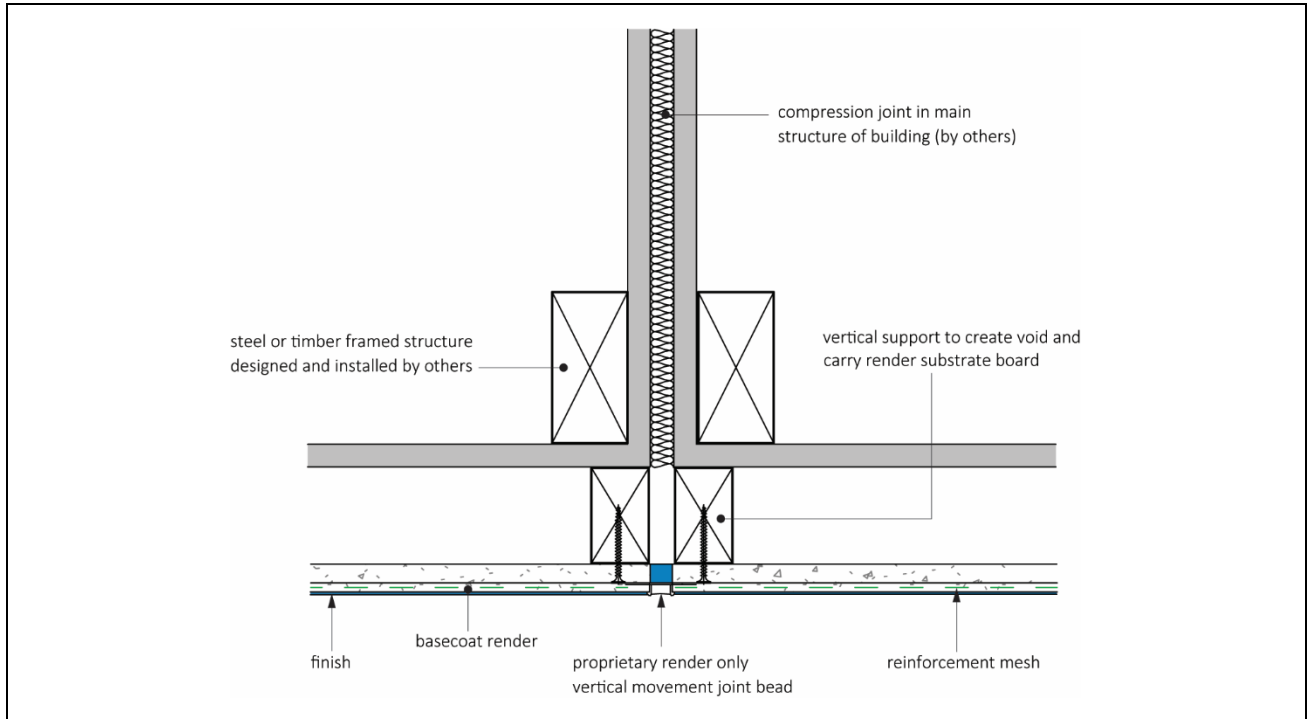
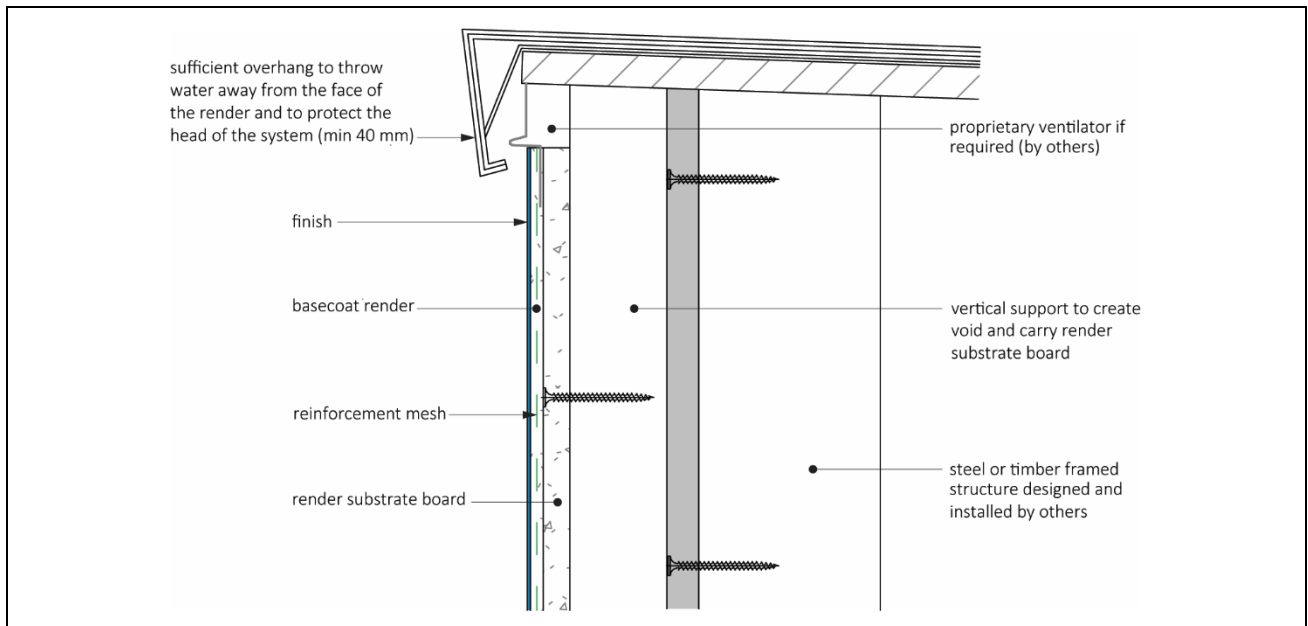


Figure 11 Detail plan – coping trim



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