PROJECT TECHNICAL SUBMISSION DOCUMENT

Contract Name: Design House, Manchester

Contractor: Thomason

Contract Ref: NV369

Technical Sub No: NV369-TQS-SUB-0004 **Revision:** 1

For the Attention of: THOMASONS

Equipment Specifying Schedule ☐ Builder's Work Requirements ☐

Manufacturer's Data ☒ Assembly / Installation Details ☒

Design Check Calculations ☐ O & M Manuals ☐

Certified Performance Data ☐ Reports ☒

Submission Details: Wetherby render system- with Cavity

- Specification: Rag rail 60mm stone wool & HECK silicone K 1.5mm
- Specification: Rag rail 80mm stone wool & HECK silicone K 1.5mm
- Typical details
- Wetherby Epsitec MW Fire Classification Report-Fire rating for Cavity render system

Issued By: Levi Wright	**Date Issued:** 24.11.23
Position: Semior Façade Design	**For:** Novo Facades Ltd
APPROVED:	**REJECTED:**
Signed By:	**Date:**
Position:	**For:**

wetherby
creating a greener future

Specification

Design House, Manchester

Technical Helpline: 0800 1073299 01942 717100 wbs-ltd.co.uk
Wetherby Building Systems Ltd: 1 kid glove rd | golborne enterprise park | greater manchester | wa3 3gs

BBA APPROVED – 09/4625 – PS5
WBS EPSITEC STONE WOOL
EWI SYSTEM

Project Specification

Project Name:	Design House, Manchester
System:	Wetherby 25mm RagRail Cavity Spacer Stone Wool System
Substrate:	Steel Frame Sheathed in 12mm A Rated Cement Particle Board.
Insulation:	60mm Stone Wool Insulation
System Finish:	WBS HECK Silicone 'K' 1.5mm Textured Finish
Technical Sales Manager:	Pat Stanley
Tel:	07703 974663
E-mail:	pat.stanley@wbs-ltd.co.uk
Technical Support Manager:	Matt Cawley
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WETHERBY BUILDING SYSTEMS

Wetherby Buildings Systems are the UK's market leading EWI system supplier, providing quality products and systems and unrivalled technical and on-site project support. We aim to provide environmentally responsible and sustainable building products of the highest quality, continually improving on our quality and system accreditations to ensure that optimum standards are met.

WETHERBY PREMIUM CERTIFIED PRODUCTS

Wetherby Buildings Systems products and EWI systems are tested to the highest level with an unrivalled range of BBA, BDA and ETA certificates available for use on projects in the UK. All testing achieves the highest European standards, ensuring long term durability, strength and premium performance. BBA/BDA approved systems provide a minimum life expectancy of 30 years. BRE Fire Certification has also been achieved for a large number of systems, with certain certification extending to 60-year life expectancy.

UK MANUFACTURING

Here at Wetherby, we take our responsibility to 'Buy British' extremely seriously. All of our current and potential suppliers undergo a rigorous annual assessment. Each supplier is reviewed over a number of areas including responsible procurement, product suitability, commitment to sustainability, quality etc. Only when we are completely satisfied are they included on our Supply Chain Database.

ISO 9001, ISO 14001, & ISO 45001

Wetherby Building Systems have a strong pro-active approach to internal Quality Systems, Environmental Management Systems and Health and Safety.
Our ISO Integrated System is regularly audited internally by qualified auditors and annually by independent external auditors, Alcumus ISOQAR. This ensures consistency in the supply and quality of our materials and services, and our environmental responsibilities and targets which we take very seriously. This includes our ongoing commitment to recycle, re-use, reduce GHG's and improve products and systems alongside our partners and suppliers. The main aim is to maximise sustainability for all products and systems across our extensive range. We have a strong pro-active approach to Health and Safety. We manage all risks associated with our activities by regularly monitoring our premises, revising Risk assessments, Safe Systems of work, and Method Statements when required. We strive to provide the best training, support, and management on all our projects providing knowledge and experience throughout the task being undertaken.

Certificate Number 16512
ISO 9001
ISO 14001
ISO 45001

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ISO 9001
ISO 14001
ISO 45001

TECHNICAL SERVICES

Wetherby offer a wide range of technical services to support project design and system installation. In depth NBS Specifications, project specific CAD drawings, photographic overlays, U-values and condensation / humidity risk analysis documents are all readily available via our Technical Support Team. For **Technical Enquires** please contact on **0800 1073299** or technical@wbs-ltd.co.uk

TRAINING SERVICES AND TRAINED APPLICATORS

We provide a variety of in-depth training courses, covering all systems, to ensure that installations are completed to the highest possible standards.
For training enquires please contact: 01942 529336.
For information on our Trained Applicators please contact your Area Sales Manager as per details on page 2 of this specification.

SITE SUPPORT, PULL OUT TESTS AND INSPECTIONS

Wetherby Building Systems offer unrivalled site support for EWI projects with 8 Site Supervisors strategically positioned across the UK. Pull out testing, product information, detailing advice and application assistance are all available from our experienced team.

SAMPLE SERVICE

We provide a FREE sample service for all of our products and systems.
To access this service, contact our sample department on 0800 1073288 or alternatively e-mail Angela Naylor who will be more than happy to assist you with your enquiry: angela.naylor@wbs-ltd.co.uk

GUARANTEES

Wetherby can provide a guarantee covering defects in materials on Wetherby BBA / BDA / ETA approved EWI systems installed by Wetherby recognised contractors, for the first 10 years of the system lifespan*. Extended guarantees are available for government backed schemes provided by carefully selected third party insurance partners such as SWIGA and GDGC*. Please contact Wetherby for further information.
(*conditions apply)

CDM REGULATIONS 2015

Wetherby Building Systems provide technical support as a supplier of façade systems and we hold the position of 'designers' according to the CDM Regulations 2015. Wetherby have a number of legal responsibilities in this role when preparing or modifying designs, to eliminate, reduce or control foreseeable risks that may arise during construction, maintenance and use of a building once built. We are also obligated to provide timely information to other members of the project team to help them fulfil their duties.
Further information is contained in our CDM document (WF224) which is applicable to all designs and is available on our web site (www.wbs-ltd.co.uk/xpagex) or on request

WETHERBY 25MM RAGRAIL CAVITY SPACER STONE WOOL SPECIFICATION

M21
Insulation with rendered finish

To be read with Preliminaries/General Conditions.

This specification is valid for 6 months from issue date, due to the changing industry regulations and requirements.
For an updated version of the specification please contact the relevant technical sales manager.

This specification is specifically for the named project and is not transferable to other projects, projects require specific custom specifications, please contact Wetherby Technical departments for further information.

Wetherby BBA certification currently covers the range of Stone Wool thickness from 80-250mm.
Testing is currently underway to include a minimum thickness of 60mm within the BBA certification.
Fire certification already covers 60mm Stone Wool thickness.
This specification is subject to the completion of system testing and approval from all relevant parties

GENERAL / SYSTEM REQUIREMENTS

120 SURVEY OF EXISTING WALLS

- Timing: Before starting work covered in this section.
- Objective: To confirm suitability for application of external wall insulation system.
- Survey report: Submit, covering all relevant matters listed below:
  - The form and condition of the structural substrate.
  - A schedule of repairs and / or additional works necessary to render the substrate suitable to receive the system.
  - A schedule of services, fixtures and fittings requiring removal to facilitate installation of the system.
  - Proposals for treatment of potential cold bridges e.g. reveals, concrete floor edges.
  - Remove existing rainwater pipes and re-direct away from work surface whilst work proceeds. Ensure all rainwater from the roof area is carried away from the work area by means of temporary fixed rainwater goods.
  - Remove, extend beyond the surface of the proposed system and securely re-fix, to the satisfaction of the supervising officer, soil stacks, waste water pipes, overflows, vent pipes etc.
  - Any other information considered relevant.

150 WIND LOADING

- When installed on suitable walls, the system can adequately transfer to the wall the self-weight and negative (suction) and positive (pressure) wind loads normally experienced in the United Kingdom.
- Wetherby or the fixing manufacturer will undertake fixing pull out tests on site to verify the adequacy of the fixings.
- Wetherby will provide information on the system dead load weights on request to allow an independent check to be made of the substrates adequate strength and suitability.
- On projects where higher wind load coefficients are expected, wind load calculations are required in order to establish the minimum number of fixings required per m² to resist the maximum wind loads acting on the building. In order to do this, wind loads must be calculated by a suitably qualified and experienced structural engineer in accordance with BS EN 1991-1-4:2005 and provided to Wetherby. Wetherby will then confirm an adequate fixing pattern for the project.

160 REMEDIAL WORK

- Remedial work shown to be necessary by survey: Employer's responsibility.

180 STRUCTURAL SUBSTRATE

- Description: Steel Frame Sheathed in 12mm A Rated Cement Particle Board.

- Preparation:
  - All sheathing boards must achieve minimum pull out requirements to be suitable for the system application.
  - All sheathing boards must achieve minimum A2-s1,d0 to BS EN 13501-1 for fire performance on high rise projects over 18 metres in height.
  - The substrate to receive the WBS system must be completely dry and not damaged by rain / frost to reduce the board performance in any way. The board manufacturer should be consulted and pull out tests redone before continuing if rain / frost damage is evident.
  - The substrate shall be clean and structurally sound.
  - Sheathing boards / panel substrates should be line and level ensuring Cavity Spacer Rails can be installed flush to the substrate. Slight variances in the substrate can be overcome by using WBS metal packers to ensure the system is installed line and level.
  - All sheathing boards must be securely fixed, correctly jointed and sealed (where required) as per the board manufacturer's instructions.
  - If the walls are not line and level, the fixing lengths must be checked to ensure adequate embedment into the sheathing board / frame substrate. This will need to be confirmed on site prior to the installation of the Wetherby system. Sizing of flashings, trims and beads may also require alterations.
  - A Breather Membrane is advised to protect the building structure, subject to project designer requirements.

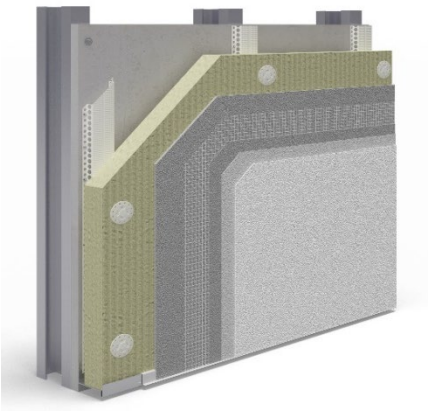
- Treatment to Substrate
  - Remove any defective areas of the existing substrate and where required make repairs ensuring the surface is ready to receive the EWI system. The existing walls are to be cleaned to the satisfaction of the Contract Administrator, to remove any friable material, algae or lichen. WBS Biocidal Wash can be used to treat areas of moss, algae and mould growth.

  - Wetherby Biocidal Wash
    Where required, apply one coat of Wetherby Biocidal Wash to the entire surface by roller or knapsack spray and allow to dry. Brush the surface to remove all signs of growth before work commences.

210A EXTERNAL WALL INSULATION SYSTEM

- **Manufacturer**:
  Wetherby Building Systems Ltd.
  1 Kid Glove Road
  Golborne Enterprise Park
  Golborne
  Greater Manchester
  WA3 3GS
  Tel: 01942 717100
  Fax: 01942 717101
  Email: info@wbs-ltd.co.uk
  Web: www.wbs-ltd.co.uk

- System Reference: **Wetherby Epsitec Cavity Spacer Rail Stone Wool System**.



- Cavity Spacer Rail: 25mm RagRail Cavity Spacer.
  - Cavity Spacer Rail Fixing: WBS LS 5.5 x 38mm / WBS R-QCP x 50mm rail fixing to be installed down one side of rail (300mm cts) and through the centre of rail (300mm cts) hitting the stud in all scenarios.
  - Fixing type, length and frequency subject to substrate type, pull out tests and wind load calculations.
  - Cavity Spacer Rail Layout: Max. 600mm centres.
  - Fixing type, length and frequency all subject to pull out tests, substrate type and wind load calculations.
  - Fixings must achieve a minimum pull out of 1.0kN.

- Deflector Bead: WBS 625SS 25mm Stainless Steel Deflector Bead.

- Insulation: WBS Stone Wool Insulation Boards.
  - Thickness: 60mm.
  - Board Size: 1200 x 600mm.
  - Minimum Compressive Strength: 10 kPa.
  - Thermal Conductivity: 0.036 Wm^2/K.
  - Performance in Relation to Fire:
    - Class A1 (BS EN 13501-1:2002).
    - Non-combustible.
  - Environmental:
    - CFC / HCFC Free.
    - Zero ODP.
    - GWP Less Than 5.

- Insulation Board Fixing: Mechanical into 25mm RagRail Cavity Spacer.
  - Fixing Type: TiT/FiN Washer and 70mm TKR Screw
  - 8 fixings per board into RagRail. (Subject to Pull Out Tests / Wind Load Calculations).
  - Fixing Retaining Plate: KWL 90PP.
  - Fixings must achieve a minimum pull out of 1.0kN.

- Protective Scrim Adhesive Coat (If Required).
  - Reinforcement Adhesive: WBS Heck K+A Scrim Adhesive.
  - All board edgers must be protected to prevent water ingress into the Stone Wool insulation.
  - Where boards are to be left exposed, 1-2mm tight coat to be applied over all Stone Wool Insulation on the day of the board being fixed, ensuring all Stone Wool Insulation is coated and protected from moisture.
  - Stone Wool insulation must be fully dry before basecoat is applied.

- Movement Joints: As Per Drawings.
  - Vertical Movement Joint Ref: WBS 79/79SS 6mm Stainless Steel Movement Joint.
  - Horizontal Movement Joint Ref: WBS RCJT & RCJB 6mm Horizontal Compression Joint.
  - Movement joints must be used to replicate any structural movement in the existing substrate to be adequately designed for the building's movement as per site survey / Structural Engineers report.
  - All beads must be fully meshed in.

- Intumescent Strips: Required.
  - Intumescent Strip: WBS FF 102/50 Intumescent Strip.
  - Intumescent Strip Fixing: WBS 50mm TKE Stainless Steel Screw (subject to pull out tests).
  - Intumescent strips are required on all projects 2 storeys and above as per BRE Report BR135:2013.
  - If packing out of the rail is required and/or the cavity exceeds 25mm then the application of the Intumescent Strip will need to be amended. A1 CPB 100mm wide strips can be used to pack out behind the intumescent strip (subject to agreement from all parties). Please contact WBS for further information.
  - Intumescent Strip positioning to be confirmed by Building Control.

- Cavity Closer Detail: Required vertically at party walls and around all openings.
  - Cavity Closer Insulation: Tenmat NVFB Non-Ventilated Fire Barrier 80mm x 27mm.
  - Board Size: 27mm x 80mm x 1000mm.
  - NVFB Fixing: JT3-FR6 x 50mm Stainless Steel Screw (subject to pull out tests).
  - Thermal Conductivity: 0.035 W/Mk.
  - System cavity closer detail positioning to be confirmed by Building Control.

- Reinforcement: WBS Alkali Resistant Scrim Cloth incorporated into top third of the WBS Heck K+A Scrim Adhesive.
  - Reinforcement Adhesive: WBS Heck K+A Scrim Adhesive

  - Stainless Steel Secondary Fixing: Required at a rate of 1 per m².
  - Stainless Steel Fixing Type: 120mm TKE S/S Screw and MKC-A2 x 60mm S/S Washer.
  - Fixing type, length and frequency subject to substrate type, pull out tests / wind load calculations.
  - Secondary mechanical fixings are required on all projects 2 storeys and above as per BRE Report BR135:2013.
  - NHBC require in all cases that a minimum of one non-combustible fixing is installed through the reinforcement mesh per insulation board, in addition to other fixings.

- Decorative Finish.
  - Wetherby Primer: Solvent free pigmented bonding primer in a colour to match the finish coat.
  - Wetherby Finish Coat: HECK Silicone 'K' 1.5mm Textured Finish.
  - Colour: TBC.

- Beads / Trims / Accessories.
  - Full System Beads / Trims:
  - Wetherby Starter Track Ref: WBS 9148 (90608) 80mm Aluminium Base Rail with WBS 9124 6mm Profile Clip.
  - Wetherby Full Depth Stop Bead Ref: WBS 9248 (93308) 80mm Aluminium Full System Stop Profile.
  - Mechanical Fixing: WBS LS 5.5 x 38mm Bead Fixing.

  - Wetherby Roof Detail: TBC.
  - Specialist flashing or WBS 781 type trim to be used subject to roof design, ensuring a minimum 40mm overhang and a long-lasting watertight detail (approval required from Wetherby).
  - The top of the system must be protected at all times during installation, using temporary capping protection where required.

  - Wetherby Cills: Type TBC.
  - Specialist Cills to be designed and installed to provide a minimum 40mm overhang.
  - Cill manufacturer to design and advise on Cill type, end caps and fixing.

  Surface Render System Beads:
  - Wetherby Corner Bead Ref: WBS 9075 Aluminium Corner Bead with mesh.
  - Wetherby Render Bellcast Bead Ref: WBS 410SS 10mm Stainless Steel Bellcast Bead.
  - Wetherby Render Stop Bead Ref: WBS 79SS 6mm Stainless Steel Stop Bead.
  - Wetherby Movement Joint Ref: WBS 79/79SS 6mm Stainless Steel Movement Joint
  - Wetherby APU Frame Seal Ref: WBS APU 37909 PVC Frame Seal.

- Accessories:
  - WBS Sealing Tape: Pre-compressed, expanding waterproof sealing tape.
  - WBS Firtree Fixings.
  - WBS Fire Rated Silicone Sealant.

N.B. Beads / trims may need to be altered depending on site inspections and job specific detailing / application.

310 DESIGN

- Complete the detailed design of system and associated features shown on drawings:
  Complete to meet requirements of this specification. Refer to Wetherby detail drawings.
- Please note all compliance needed to meet Building and Fire Regulations is the responsibility of the principle designer/ main contractor.
- Detailing of system junctions & ancillary items are to be agreed by all parties.

320 INTEGRITY

- Installation Requirements:
  - Weathertight under all anticipated conditions.
  - Capable of resisting all dead loads and design live loads, including impact and wind loads, and accommodating all thermal movements without damage.

330 IMPACT LOADING

- Impact Resistance of Finished Walls: Resistance to hard body impacts (3 joules to 10 joules) and to perforation.

340 WIND LOADING

- Design Wind Loads: The system shall be designed to withstand all design wind loads.

360 SAMPLES

- Procedure: Submit samples / examples of designated items for approval. Keep approved samples on site for the duration of the contract for inspection / comparison purposes.
- Designated items: Textured sample of Wetherby Silicone Finish.

370 UNIFORMITY OF COLOUR AND TEXTURE

- Type / proportion of constituent materials: Unchanged once samples of coatings have been approved.
- Supplies of materials: Sufficient to give consistent and uniform colour and texture.
- All materials shall be manufactured and supplied in accordance with BS EN ISO 9001: 2008.
- WBS renders and mortars are pre-blended during the manufacturing process by the supplier, although care should be taken to ensure colour uniformity between individual batches of material.

380 LIGHTNESS

- It is advised that Silicone Textured Render Systems for application over insulated render backgrounds shall be selected in colour(s) with a lightness factor of >20. Should the lightness factor of the selected colour(s) be <20, please contact the Wetherby Technical Support Team for further information.

390 AVOIDANCE OF COLOUR SHADING

- To minimise the risk of variations in colour shade and to avoid dry line jointing, decorative finishes should be applied continuously without a break.
- Where breaks are unavoidable, they should be made where services or architectural features such as the lines of doors, windows, reveals or drainpipes help to conceal the position of the joint. Surface render beads can be used to provide a clean break in the render.
- Material sharing the same batch number should be used to complete an entire elevation where possible.
- Material with different batch numbers should be checked for colour consistency.

410A INSTALLATION

- Installer: The system shall be installed by a specialist contractor approved for the project by Wetherby Building Systems.

415A 25MM RAGRAIL CAVITY SPACER EWI SYSTEM APPLICATION

Base Bead

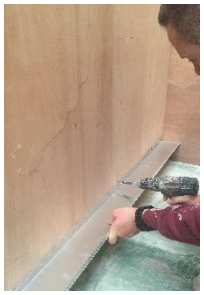
Securely fix Wetherby starter track with profile clip above DPC level at base of the system. Mechanically fix starter track at max. 300mm centres, 50mm from each end. WBS 3756 base rail connectors should be used to join the tracks, packing shims may be required to ensure the starter track is true to line and level. Drainage holes must be drilled into the back of the starter track to allow the cavity to drain. Install 8mm holes at 300mm centres to allow for drainage and partial ventilation. Any gaps behind the basetrack allowing free air movement behind the insulation should be sealed appropriately.

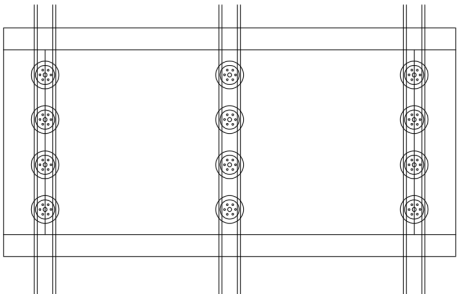
Full System Stop Bead
Securely fix Wetherby full system stop beads on WBS Sealing Tape to the extent of the system and its abutment to untreated areas i.e. meter boxes, rising service supplies or any other untreated abutment. Stop beads are to be fixed at max. 300mm centres, 50mm from each end. A continuous bead of WBS Fire Rated Silicone Sealant must be applied to seal the stop bead to the substrate.

Roof Detail
The EWI system must be sealed against a suitably stable & water tight roof junction/ flashing to ensure the system is adequately protected.

Where the existing roof does not provide an adequate overhang to the EWI system (minimum 40mm), a specialist roofing profile or flashing must be installed to provide adequate protection. All flashings must be correctly jointed and fixed, ensuring no weak points or potential areas for water ingress. Where required, temporary capping protection must be provided to protect the insulation from moisture until flashings / roof trims are in place. The EWI system must be sealed to the roofing profile using WBS Sealing Tape and Silicone Sealant.

Cills
Securely fix cills, ensuring they are secure and provide a water tight detail to protect the EWI system. Sealing tape & silicone sealant are required where the EWI system abuts the cill. Install end caps and apply Wetherby Fire Rated Silicone Sealant where required. All cills must be correctly jointed and fixed, ensuring no weak points or potential areas for water ingress.





RagRail Cavity Spacer
Mechanically fix Cavity Spacer Rail down one side of the rail at 300mm cts and through the centre of rail at 300mm cts hitting the stud in all scenarios, ensuring the rails are secure. Rails should be installed vertically at 600mm centres and around openings ensuring the insulation boards are fully supported. The rails may need packing out with suitable packers to ensure the system is installed true to line and level. If rails require packing out, the fixing sizes, cavity fire barriers, beads, trims and flashings may require alterations.

Drainage Deflector Bead
Mechanically fix drainage deflector beads above all openings at a 10 degree minimum fall, ensuring all moisture is channelled away from the opening below. Deflector beads should be installed at 300mm centres, 50mm from each end and bedded on Fire Rated Silicone sealant.

Intumescent Strip
Mechanically fix WBS Intumescent Strips at agreed locations to form horizontal cavity fire breaks. Intumescent strips should be screw fixed in place at 250mm max centres, using a non-combustible screw with a head of no more than 11.5mm diameter. Where the cavity exceeds 25mm, A1 CPB 100mm wide strips are to be used to pack out the intumescent strip ensuring the distance between the CPB and Stone Wool is max. 25mm (subject to agreement from all parties).

Vertical Cavity Closer Detail / Cavity Closers Around Openings – Tenmat NVFB Non-Ventilated Fire Barrier
Mechanically fix the NVFB through the centre of the barrier at distances no greater than 250mm from each end, using a stainless steel screw, with a head diameter between 12 and 14mm maximum width (no washer required). The depth of the screw should be sized according to the substrate to which the screw will be anchoring in to but must allow for the screw head to be compressed 5-10mm into the surface of the NVFB barrier. Ensure that NVFB pieces are tightly abutted together and are aligned flush with each other. Point in any small gaps (up to 5mm) with intumescent sealant if required. The main Stone Wool insulation is to be installed over the NVFB fire barrier, the NVFB must be adequately compressed.

Application of Stone Wool Insulation Boards
Position and securely fix the Stone Wool insulation boards to the RagRail Cavity Spacers ensuring they are line and level. The boards should be tightly butt jointed, laid with staggered joints and overlapped at building corners. Board joints should not occur within 200mm of the corners of openings. Where the insulation butts up against dissimilar materials, supply and install WBS Sealing Tape and ensure the boards are fitted tight against the seal, ensuring full compression of the tape. All NFVB fire barrier in the cavity must be compressed by the Stone Wool insulation.

Fixing of Insulation Boards
Fix boards mechanically to the RagRail Cavity Spacers using approved WBS fixings in accordance with the fixing pattern located at the back of this document (subject to pull-out / wind load calculations). Fixings shall be installed so that the fixing head embeds 1-2mm in to the face of the insulation board surface. Where required, additional fixings should be installed to ensure a maximum of 300mm centres at either side of building corners and around all openings.

Protective Scrim Adhesive Coat (If Required)
Apply a protective scrim coat at 1-2mm where required to prevent water ingress into the Stone Wool insulation. The board edges must be protected to ensure no water ingress into the Stone Wool insulation. Where boards are to be left exposed, a 1-2mm tight coat is to be applied over the face of the Stone Wool Insulation. The insulation must be fully dry before basecoat is applied.

Movement Bead / Slip Joints
Fix movement beads / slip joints at agreed locations using WBS approved fixings. Structural movement joints must be mirrored through the EWI system.

Surface Mounted Render Beads
Fix surface mounted render beads directly to the insulation board at required locations using WBS Firtree Fixings. A continuous bead of WBS Fire Rated Silicone Sealant must be applied to seal the surface mounted render stop beads.

Existing Air Vents, Grilles etc.
Identify live or used air vents, grilles etc. and extend through the insulation system as work progresses.

Angle Bead
Fix by bedding into first pass of scrim adhesive, aluminium angle beads with glassfibre mesh reference WBS 9075 to all external building corners, window / door jambs and heads.

APU Beads (where required)
Install APU beads around openings where required. Beads must be applied to a clean surface to ensure optimum adhesion.

Alkali Resistant Glassfibre Scrim Coat
Trowel apply a 4-6mm thick coat of scrim adhesive to the entire surface of the insulation boards. Lightly run a notched trowel through the scrim adhesive at a 45 degree angle to ensure the correct thickness of adhesive is applied. Bed WBS Alkali Resistant Scrim Cloth into top third of the wet adhesive, overlapping joints by 75mm minimum. The scrim cloth must be overlapped around building corners and returned into all reveals and heads. All beads must be fully scrimmed in. Install additional 500mm x 250mm minimum pieces of scrim cloth diagonally across corners of all wall openings. Install secondary fixings through the wet scrim adhesive and WBS Alkali Resistant Scrim Cloth whilst adhesive is wet. 100mm x 100mm scrim patches to be installed over each secondary fixing head. Finally smooth out scrim adhesive using a spatula.

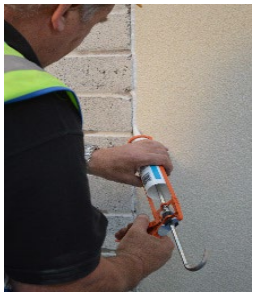
Scrim Adhesive Coat (Second Application)
When initial layer of scrim adhesive has hardened, trowel apply a further 2-3mm coat of scrim adhesive ensuring all alkali resistant mesh is covered. Level the scrim adhesive using a spatula / damp sponge float to achieve a uniform flat and even surface ready to receive the WBS final finish.

Allow sufficient drying time before applying the Primer. Cold conditions and high humidity will result in the basecoat taking longer to dry / cure. The basecoat must be fully hardened with no signs of moisture visible. Moisture trapped in the basecoat can potentially damage the curing of the Primer / Silicone Render causing failure after completion of the system.

Silicone Primer
Apply Wetherby Primer with a brush or lamb's wool roller as per manufacturer's printed instructions. Allow Primer to fully dry, minimum 12 hours.

Silicone Render Finish
Mix and apply Wetherby Silicone Textured Finish strictly in accordance with the manufacturer's printed instructions. The top coat should be applied with a stainless steel trowel to the thickness of the grain and finished with a plastic float. Apply in a continuous application always working to a wet edge and in the same direction to ensure consistency of finish. Wherever possible, entire elevations should be completed in a single operation to avoid joint marks in the finish. This can often be achieved by working to natural breaks in the building or working to breaks in colour or texture.

Do not apply Wetherby Silicone Textured Finish with differing batch numbers on the same elevation. Care should be taken to avoid texture changes at different levels. Prior to setting, polish render with plastic float to give an even texture and remove all trowel marks.



Silicone Sealant
Gun apply a continuous bead of Wetherby Fire Rated Silicone Sealant at points where the renders will butt up against other materials, e.g. window frames, door frames, eaves, fascia's, projecting wall vents, gas and electric meter boxes etc. ensuring water tightness. Surfaces must be clean and suitable for the application of the Silicone Sealant which must be installed as per manufacturers guidance.

Cleaning
Wipe clean all exposed PVC nosing, cills etc., at each work stage whilst render is still wet.

Application Videos
Wetherby have detailed application videos available online, please see http://www.wbs-ltd.co.uk/videos/.

420 ADVERSE WEATHER

- Materials / Surfaces: Do not use frozen materials and do not apply materials to frost bound substrates.
- Adhesives / Mortars / Renders: Do not apply when air temperature is at or below 5°C. Render products may be applied where temperatures are above 3°C on a rising thermometer and are forecast to stay above 5°C for an extended period on the same day.
- Adhesives / Mortars / Renders: Do not apply when relative humidity is equal to or greater than 90%.
- Do not apply materials when the air temperature or wall surface is in excess of 30°C without protection of the surface.
- Temperature of the work: Maintained above minimum level recommended by manufacturer until adhesive / mortar / render has fully hardened.
- Drying Times: Drying times of decorative finishes, particularly pre-mixed water based materials, may be greatly extended during periods of low temperature and / or high relative humidity 90% and above.
- Newly rendered surfaces: Protect newly rendered surfaces against rain, snow or other precipitation. Ensure that material is protected from frost, wash-offs etc.
- Application of renders, mortars or decorative finishes shall not be carried out on elevations where summer strength sunlight is hitting the area square on for prolonged periods without affording protection.
- Coatings damaged by rain or frost: Remove and replace.

440 ON SITE PULL OUT TESTS ON FIXING PINS

- Objective: To prove suitability of structural substrate and determine size and number of fixings required.

490 CONSTRUCTION / MOVEMENT JOINTS / SLIP JOINTS

- Location: As shown on drawings.
- Formation: Accurately to detail.
- Modifications to joint locations / design: Agree revisions before proceeding.
- All structural movement joints must be mirrored through the EWI system.

500 FLUES, CHIMNEYS AND COMBUSTION AIR VENTILATORS

Reference to be made to CIGA's Technician's Best Practice Guide to Flues, Chimneys and Combustion Air Ventilators, or similar, so that the performance and safety of fuel burning appliances is not compromised by the installation of the EWI measure.

- The combustion air supply must be isolated and air ventilator continuously sleeved through the wall.
- Flueless gas fires require a ventilator that provides a free air area of 10,000 mm². Under PAS 2030, both surveyor and installer have strict responsibilities placed upon them when it comes to the identification and safeguarding of essential ventilation requirements. Failure to comply will result in PAS 2030 being revoked. Please refer to Wetherby document **WBS-VENTINFO-01**.

With regards to gas flues there are two methods of installation, either a clear gap is left around the flue (300mm for fanned draught flues / 600mm for natural draught flues) or a 200mm non-combustible insulation slab installed around an extended flue. While WBS includes both alternatives in their detail drawings, main contractors and installers must ensure the chosen method is approved in conjunction with the boiler manufacturer's specification.

520 SUPPORTS FOR SERVICES / FITTINGS

- Supports for soil and rainwater pipes, signs, CCTV cameras etc. Provide in locations shown on the drawings.
- Sleeved fixings shall be installed into the load-bearing background after completion of the render works in accordance with Wetherby recommendations.
- No load is to be transferred to the insulated render system.

528 POWER CABLES

- External power cables must not be covered over by the EWI system or cover plates in any circumstances. Power cables must be relocated, left open and visible or suitably & safely enclosed with guidance from the power distribution authority.
- Installers must be aware of any cables / utilities hidden within the frame and ensure there is no risk of coming into contact with these during the installation of the Wetherby System.

530 SEALANT JOINTS

- Sealant: WBS Fire Rated Silicone Sealant.
- Joints: Formed in accordance with section Z22 and system manufacturer's recommendations using any necessary joint fillers, backing strips etc.

540 STORAGE OF MATERIALS

- Adequate dry weatherproof and ventilated storage shall be provided for materials.
- All materials shall be protected against frost.
- Insulation boards must be kept dry at all times.
- Cementitious products shall be stored off the floor.
- Renders to be stored in temperatures of at least 5°C.
- Materials should be protected from prolonged exposure to sunlight.

550 INSPECTION OF COMPLETED INSTALLATION

- Timing: As soon as possible after completion of the work and before removing scaffolding.
- Notice for inspection (minimum): 7 working days.
- Defects: Report immediately.
- Onsite inspections for high rise projects are imperative. Each installation stage must be checked, signed off and documented or the Wetherby warranty will be void.

570 MATERIALS AND SITE CONDITIONS

- All materials shall be provided for the proper and efficient execution and completion of the works.
- Materials shall be mixed, applied and fixed in accordance with the relevant clauses of the specification and the manufacturer's instructions.
- A clean, fresh supply of water shall be provided for the works, via the management contractor.
- Suitable scaffolding that has a minimum gap of 300mm (all scaffold items) from the elevation surface in order to facilitate application requirements, shall be provided, erected, maintained and later removed for the proper and efficient execution and completion of the works.
- All necessary temporary supports for drains, water pipes, gas pipes, electrical cables and telephone cables shall be provided and maintained until the permanent supports are reinstated.
- Temporary flexible tubing shall be provided for the efficient discharge of rainwater from the buildings to protect the system during the progress of the works.

580 CLEANLINESS OF WORKS

- Protect all existing works, approaches and adjacent surfaces including windows and doors etc. using suitable sheeting, boards, covers etc.
- Remove all splashes, droppings etc. from completed works immediately and before drying takes place.

590 CONTROL OF POLLUTION

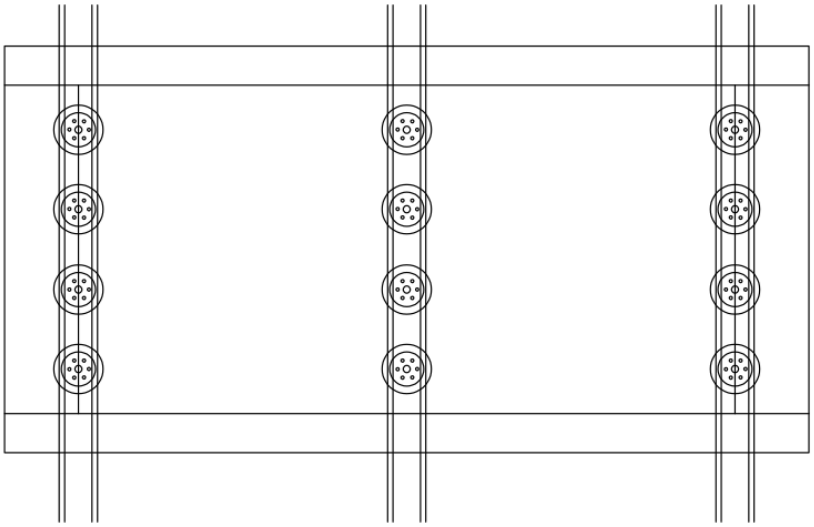
- All debris and rubbish arising from the works shall be removed off site from time to time to keep the site and works clean and tidy. All measures shall be taken to control the noise levels produced by the operatives on site to comply with the Control of Pollution Act. Precautions should be taken to prevent pollution of any river watercourse, reservoir, drainage or the like by the operatives on site.

600 MAINTENANCE

- An initial inspection should be made within 12 months and regularly thereafter to include:
  - visual inspection of the render for signs of damage. Cracks in the render exceeding 0.2 mm must be repaired. Impact damage much be repaired to prevent moisture ingress into the system.
  - visual inspection of architectural details designed to shed water to confirm that they are performing properly.
  - visual inspection to ensure that water is not leaking from external downpipes or gutters, as such leakage could stain or penetrate the rendering.
  - Sealant joints at window and door frames, etc which must be replaced as required.
- Maintenance schedules must be created and maintained for the building, which should include any repairs undertaken and the replacement and resealing of joints (for example, between the insulation system and window and door frame).
- The render may become discoloured with time, the rate depending on the initial colour, the degree of exposure and atmospheric pollution, as well as the design and detailing of the wall. In common with traditional renders, discoloration by algae and lichens may occur in wet areas and can be removed simply with a biocidal wash.
- Damaged areas must be repaired using the appropriate components and procedures detailed in the Certificate holder's installation instructions and in accordance with BS EN 13914-1: 2005. Please see Wetherby O&M Manual and Wetherby High Rise Maintenance Information for further details.

Wetherby EWI Fixing Pattern

(Subject to Wind Load Calculations and Pull-Out Tests)



8 mechanical fixings & KWL washers required, 4 fixings through the board centre line and 4 half fixings down each side installed into the RagRail

RagRails to be installed at 600mm centres max

Rails to be fixed down one side at 300mm centres and through the middle at 300mm centres max

wetherby
creating a greener future

Specification

Design House, Manchester

Technical Helpline: 0800 1073299 01942 717100 wbs-ltd.co.uk
Wetherby Building Systems Ltd: 1 kid glove rd | golborne enterprise park | greater manchester | wa3 3gs

BBA APPROVED – 09/4625 – PS5
WBS EPSITEC STONE WOOL
EWI SYSTEM

Project Specification

Project Name:	Design House, Manchester
System:	Wetherby 25mm RagRail Cavity Spacer Stone Wool System
Substrate:	Steel Frame Sheathed in 12mm A Rated Cement Particle Board.
Insulation:	80mm Stone Wool Insulation
System Finish:	WBS HECK Silicone 'K' 1.5mm Textured Finish
Technical Sales Manager:	Pat Stanley
Tel:	07703 974663
E-mail:	pat.stanley@wbs-ltd.co.uk
Technical Support Manager:	Matt Cawley
Tel:	07568 129677
E-mail:	matt.cawley@wbs-ltd.co.uk

WETHERBY BUILDING SYSTEMS

Wetherby Buildings Systems are the UK's market leading EWI system supplier, providing quality products and systems and unrivalled technical and on-site project support. We aim to provide environmentally responsible and sustainable building products of the highest quality, continually improving on our quality and system accreditations to ensure that optimum standards are met.

WETHERBY PREMIUM CERTIFIED PRODUCTS

Wetherby Buildings Systems products and EWI systems are tested to the highest level with an unrivalled range of BBA, BDA and ETA certificates available for use on projects in the UK. All testing achieves the highest European standards, ensuring long term durability, strength and premium performance. BBA/BDA approved systems provide a minimum life expectancy of 30 years. BRE Fire Certification has also been achieved for a large number of systems, with certain certification extending to 60-year life expectancy.

UK MANUFACTURING

Here at Wetherby, we take our responsibility to 'Buy British' extremely seriously. All of our current and potential suppliers undergo a rigorous annual assessment. Each supplier is reviewed over a number of areas including responsible procurement, product suitability, commitment to sustainability, quality etc. Only when we are completely satisfied are they included on our Supply Chain Database.

ISO 9001, ISO 14001, & ISO 45001

Wetherby Building Systems have a strong pro-active approach to internal Quality Systems, Environmental Management Systems and Health and Safety.
Our ISO Integrated System is regularly audited internally by qualified auditors and annually by independent external auditors, Alcumus ISOQAR. This ensures consistency in the supply and quality of our materials and services, and our environmental responsibilities and targets which we take very seriously. This includes our ongoing commitment to recycle, re-use, reduce GHG's and improve products and systems alongside our partners and suppliers. The main aim is to maximise sustainability for all products and systems across our extensive range. We have a strong pro-active approach to Health and Safety. We manage all risks associated with our activities by regularly monitoring our premises, revising Risk assessments, Safe Systems of work, and Method Statements when required. We strive to provide the best training, support, and management on all our projects providing knowledge and experience throughout the task being undertaken.

Certificate Number 16512
ISO 9001
ISO 14001
ISO 45001

Certificate Number 16512
ISO 9001
ISO 14001
ISO 45001

TECHNICAL SERVICES

Wetherby offer a wide range of technical services to support project design and system installation. In depth NBS Specifications, project specific CAD drawings, photographic overlays, U-values and condensation / humidity risk analysis documents are all readily available via our Technical Support Team. For **Technical Enquires** please contact on **0800 1073299** or technical@wbs-ltd.co.uk

TRAINING SERVICES AND TRAINED APPLICATORS

We provide a variety of in-depth training courses, covering all systems, to ensure that installations are completed to the highest possible standards.
For training enquires please contact: 01942 529336.
For information on our Trained Applicators please contact your Area Sales Manager as per details on page 2 of this specification.

SITE SUPPORT, PULL OUT TESTS AND INSPECTIONS

Wetherby Building Systems offer unrivalled site support for EWI projects with 8 Site Supervisors strategically positioned across the UK. Pull out testing, product information, detailing advice and application assistance are all available from our experienced team.

SAMPLE SERVICE

We provide a FREE sample service for all of our products and systems.
To access this service, contact our sample department on 0800 1073288 or alternatively e-mail Angela Naylor who will be more than happy to assist you with your enquiry: angela.naylor@wbs-ltd.co.uk

GUARANTEES

Wetherby can provide a guarantee covering defects in materials on Wetherby BBA / BDA / ETA approved EWI systems installed by Wetherby recognised contractors, for the first 10 years of the system lifespan*. Extended guarantees are available for government backed schemes provided by carefully selected third party insurance partners such as SWIGA and GDGC*. Please contact Wetherby for further information.
(*conditions apply)

CDM REGULATIONS 2015

Wetherby Building Systems provide technical support as a supplier of façade systems and we hold the position of 'designers' according to the CDM Regulations 2015. Wetherby have a number of legal responsibilities in this role when preparing or modifying designs, to eliminate, reduce or control foreseeable risks that may arise during construction, maintenance and use of a building once built. We are also obligated to provide timely information to other members of the project team to help them fulfil their duties.
Further information is contained in our CDM document (WF224) which is applicable to all designs and is available on our web site (www.wbs-ltd.co.uk/xpagex) or on request

WETHERBY 25MM RAGRAIL CAVITY SPACER STONE WOOL SPECIFICATION

M21
Insulation with rendered finish

To be read with Preliminaries/General Conditions.

This specification is valid for 6 months from issue date, due to the changing industry regulations and requirements.
For an updated version of the specification please contact the relevant technical sales manager.

This specification is specifically for the named project and is not transferable to other projects, projects require specific custom specifications, please contact Wetherby Technical departments for further information.

GENERAL / SYSTEM REQUIREMENTS

120 SURVEY OF EXISTING WALLS

- Timing: Before starting work covered in this section.
- Objective: To confirm suitability for application of external wall insulation system.
- Survey report: Submit, covering all relevant matters listed below:
  - The form and condition of the structural substrate.
  - A schedule of repairs and / or additional works necessary to render the substrate suitable to receive the system.
  - A schedule of services, fixtures and fittings requiring removal to facilitate installation of the system.
  - Proposals for treatment of potential cold bridges e.g. reveals, concrete floor edges.
  - Remove existing rainwater pipes and re-direct away from work surface whilst work proceeds. Ensure all rainwater from the roof area is carried away from the work area by means of temporary fixed rainwater goods.
  - Remove, extend beyond the surface of the proposed system and securely re-fix, to the satisfaction of the supervising officer, soil stacks, waste water pipes, overflows, vent pipes etc.
  - Any other information considered relevant.

150 WIND LOADING

- When installed on suitable walls, the system can adequately transfer to the wall the self-weight and negative (suction) and positive (pressure) wind loads normally experienced in the United Kingdom.
- Wetherby or the fixing manufacturer will undertake fixing pull out tests on site to verify the adequacy of the fixings.
- Wetherby will provide information on the system dead load weights on request to allow an independent check to be made of the substrates adequate strength and suitability.
- On projects where higher wind load coefficients are expected, wind load calculations are required in order to establish the minimum number of fixings required per m^2 to resist the maximum wind loads acting on the building. In order to do this, wind loads must be calculated by a suitably qualified and experienced structural engineer in accordance with BS EN 1991-1-4:2005 and provided to Wetherby. Wetherby will then confirm an adequate fixing pattern for the project.

160 REMEDIAL WORK

- Remedial work shown to be necessary by survey: Employer's responsibility.

Certificate Number 16512
ISO 9001
ISO 14001
ISO 45001

180 STRUCTURAL SUBSTRATE

- Description: Steel Frame Sheathed in 12mm A Rated Cement Particle Board.

- Preparation:
  - All sheathing boards must achieve minimum pull out requirements to be suitable for the system application.
  - All sheathing boards must achieve minimum A2-s1,d0 to BS EN 13501-1 for fire performance on high rise projects over 18 metres in height.
  - The substrate to receive the WBS system must be completely dry and not damaged by rain / frost to reduce the board performance in any way. The board manufacturer should be consulted and pull out tests redone before continuing if rain / frost damage is evident.
  - The substrate shall be clean and structurally sound.
  - Sheathing boards / panel substrates should be line and level ensuring Cavity Spacer Rails can be installed flush to the substrate. Slight variances in the substrate can be overcome by using WBS metal packers to ensure the system is installed line and level.
  - All sheathing boards must be securely fixed, correctly jointed and sealed (where required) as per the board manufacturer's instructions.
  - If the walls are not line and level, the fixing lengths must be checked to ensure adequate embedment into the sheathing board / frame substrate. This will need to be confirmed on site prior to the installation of the Wetherby system. Sizing of flashings, trims and beads may also require alterations.
  - A Breather Membrane is advised to protect the building structure, subject to project designer requirements.

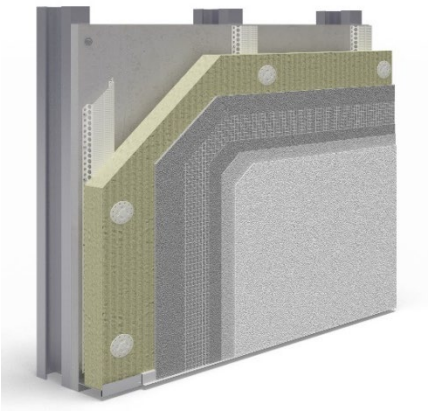
- Treatment to Substrate
  - Remove any defective areas of the existing substrate and where required make repairs ensuring the surface is ready to receive the EWI system. The existing walls are to be cleaned to the satisfaction of the Contract Administrator, to remove any friable material, algae or lichen. WBS Biocidal Wash can be used to treat areas of moss, algae and mould growth.

  - Wetherby Biocidal Wash
    Where required, apply one coat of Wetherby Biocidal Wash to the entire surface by roller or knapsack spray and allow to dry. Brush the surface to remove all signs of growth before work commences.

210A EXTERNAL WALL INSULATION SYSTEM

- **Manufacturer**:
  Wetherby Building Systems Ltd.
  1 Kid Glove Road
  Golborne Enterprise Park
  Golborne
  Greater Manchester
  WA3 3GS
  Tel: 01942 717100
  Fax: 01942 717101
  Email: info@wbs-ltd.co.uk
  Web: www.wbs-ltd.co.uk

- System Reference: **Wetherby Epsitec Cavity Spacer Rail Stone Wool System**.



- Cavity Spacer Rail: 25mm RagRail Cavity Spacer.
  - Cavity Spacer Rail Fixing: WBS LS 5.5 x 38mm / WBS R-QCP x 50mm rail fixing to be installed down one side of rail (300mm cts) and through the centre of rail (300mm cts) hitting the stud in all scenarios.
  - Fixing type, length and frequency subject to substrate type, pull out tests and wind load calculations.
  - Cavity Spacer Rail Layout: Max. 600mm centres.
  - Fixing type, length and frequency all subject to pull out tests, substrate type and wind load calculations.
  - Fixings must achieve a minimum pull out of 1.0kN.

- Deflector Bead: WBS 625SS 25mm Stainless Steel Deflector Bead.

- Insulation: WBS Stone Wool Insulation Boards.
  - Thickness: 80mm.
  - Board Size: 1200 x 600mm.
  - Minimum Compressive Strength: 10 kPa.
  - Thermal Conductivity: 0.036 Wm^2/K.
  - Performance in Relation to Fire:
    - Class A1 (BS EN 13501-1:2002).
    - Non-combustible.
  - Environmental:
    - CFC / HCFC Free.
    - Zero ODP.
    - GWP Less Than 5.

- Insulation Board Fixing: Mechanical into 25mm RagRail Cavity Spacer.
  - Fixing Type: TiT/FiN Washer and 90mm TKR Screw
  - 8 fixings per board into RagRail. (Subject to Pull Out Tests / Wind Load Calculations).
  - Fixing Retaining Plate: KWL 90PP.
  - Fixings must achieve a minimum pull out of 1.0kN.

- Protective Scrim Adhesive Coat (If Required).
  - Reinforcement Adhesive: WBS Heck K+A Scrim Adhesive.
  - All board edgers must be protected to prevent water ingress into the Stone Wool insulation.
  - Where boards are to be left exposed, 1-2mm tight coat to be applied over all Stone Wool Insulation on the day of the board being fixed, ensuring all Stone Wool Insulation is coated and protected from moisture.
  - Stone Wool insulation must be fully dry before basecoat is applied.

- Movement Joints: As Per Drawings.
  - Vertical Movement Joint Ref: WBS 79/79SS 6mm Stainless Steel Movement Joint.
  - Horizontal Movement Joint Ref: WBS RCJT & RCJB 6mm Horizontal Compression Joint.
  - Movement joints must be used to replicate any structural movement in the existing substrate to be adequately designed for the building's movement as per site survey / Structural Engineers report.
  - All beads must be fully meshed in.

- Intumescent Strips: Required.
  - Intumescent Strip: WBS FF 102/50 Intumescent Strip.
  - Intumescent Strip Fixing: WBS 50mm TKE Stainless Steel Screw (subject to pull out tests).
  - Intumescent strips are required on all projects 2 storeys and above as per BRE Report BR135:2013.
  - If packing out of the rail is required and/or the cavity exceeds 25mm then the application of the Intumescent Strip will need to be amended. A1 CPB 100mm wide strips can be used to pack out behind the intumescent strip (subject to agreement from all parties). Please contact WBS for further information.
  - Intumescent Strip positioning to be confirmed by Building Control.

- Cavity Closer Detail: Required vertically at party walls and around all openings.
  - Cavity Closer Insulation: Tenmat NVFB Non-Ventilated Fire Barrier 80mm x 27mm.
  - Board Size: 27mm x 80mm x 1000mm.
  - NVFB Fixing: JT3-FR6 x 50mm Stainless Steel Screw (subject to pull out tests).
  - Thermal Conductivity: 0.035 W/Mk.
  - System cavity closer detail positioning to be confirmed by Building Control.

- Reinforcement: WBS Alkali Resistant Scrim Cloth incorporated into top third of the WBS Heck K+A Scrim Adhesive.
  - Reinforcement Adhesive: WBS Heck K+A Scrim Adhesive

  - Stainless Steel Secondary Fixing: Required at a rate of 1 per m².
  - Stainless Steel Fixing Type: 140mm TKE S/S Screw and MKC-A2 x 60mm S/S Washer.
  - Fixing type, length and frequency subject to substrate type, pull out tests / wind load calculations.
  - Secondary mechanical fixings are required on all projects 2 storeys and above as per BRE Report BR135:2013.
  - NHBC require in all cases that a minimum of one non-combustible fixing is installed through the reinforcement mesh per insulation board, in addition to other fixings.

- Decorative Finish.
  - Wetherby Primer: Solvent free pigmented bonding primer in a colour to match the finish coat.
  - Wetherby Finish Coat: HECK Silicone 'K' 1.5mm Textured Finish.
  - Colour: TBC.

- Beads / Trims / Accessories.
  - Full System Beads / Trims:
  - Wetherby Starter Track Ref: WBS 9150 (90610) 100mm Aluminium Base Rail with WBS 9124 6mm Profile Clip.
  - Wetherby Full Depth Stop Bead Ref: WBS 9250 (93310) 100mm Aluminium Full System Stop Profile.
  - Mechanical Fixing: WBS LS 5.5 x 38mm Bead Fixing.

  - Wetherby Roof Detail: TBC.
  - Specialist flashing or WBS 781 type trim to be used subject to roof design, ensuring a minimum 40mm overhang and a long-lasting watertight detail (approval required from Wetherby).
  - The top of the system must be protected at all times during installation, using temporary capping protection where required.

  - Wetherby Cills: Type TBC.
  - Specialist Cills to be designed and installed to provide a minimum 40mm overhang.
  - Cill manufacturer to design and advise on Cill type, end caps and fixing.

  Surface Render System Beads:
  - Wetherby Corner Bead Ref: WBS 9075 Aluminium Corner Bead with mesh.
  - Wetherby Render Bellcast Bead Ref: WBS 410SS 10mm Stainless Steel Bellcast Bead.
  - Wetherby Render Stop Bead Ref: WBS 79SS 6mm Stainless Steel Stop Bead.
  - Wetherby Movement Joint Ref: WBS 79/79SS 6mm Stainless Steel Movement Joint
  - Wetherby APU Frame Seal Ref: WBS APU 37909 PVC Frame Seal.

- Accessories:
  - WBS Sealing Tape: Pre-compressed, expanding waterproof sealing tape.
  - WBS Firtree Fixings.
  - WBS Fire Rated Silicone Sealant.

N.B. Beads / trims may need to be altered depending on site inspections and job specific detailing / application.

310 DESIGN

- Complete the detailed design of system and associated features shown on drawings:
  Complete to meet requirements of this specification. Refer to Wetherby detail drawings.
- Please note all compliance needed to meet Building and Fire Regulations is the responsibility of the principle designer/ main contractor.
- Detailing of system junctions & ancillary items are to be agreed by all parties.

320 INTEGRITY

- Installation Requirements:
  - Weathertight under all anticipated conditions.
  - Capable of resisting all dead loads and design live loads, including impact and wind loads, and accommodating all thermal movements without damage.

330 IMPACT LOADING

- Impact Resistance of Finished Walls: Resistance to hard body impacts (3 joules to 10 joules) and to perforation.

340 WIND LOADING

- Design Wind Loads: The system shall be designed to withstand all design wind loads.

360 SAMPLES

- Procedure: Submit samples / examples of designated items for approval. Keep approved samples on site for the duration of the contract for inspection / comparison purposes.
- Designated items: Textured sample of Wetherby Silicone Finish.

370 UNIFORMITY OF COLOUR AND TEXTURE

- Type / proportion of constituent materials: Unchanged once samples of coatings have been approved.
- Supplies of materials: Sufficient to give consistent and uniform colour and texture.
- All materials shall be manufactured and supplied in accordance with BS EN ISO 9001: 2008.
- WBS renders and mortars are pre-blended during the manufacturing process by the supplier, although care should be taken to ensure colour uniformity between individual batches of material.

380 LIGHTNESS

- It is advised that Silicone Textured Render Systems for application over insulated render backgrounds shall be selected in colour(s) with a lightness factor of >20. Should the lightness factor of the selected colour(s) be <20, please contact the Wetherby Technical Support Team for further information.

390 AVOIDANCE OF COLOUR SHADING

- To minimise the risk of variations in colour shade and to avoid dry line jointing, decorative finishes should be applied continuously without a break.
- Where breaks are unavoidable, they should be made where services or architectural features such as the lines of doors, windows, reveals or drainpipes help to conceal the position of the joint. Surface render beads can be used to provide a clean break in the render.
- Material sharing the same batch number should be used to complete an entire elevation where possible.
- Material with different batch numbers should be checked for colour consistency.

410A INSTALLATION

- Installer: The system shall be installed by a specialist contractor approved for the project by Wetherby Building Systems.

415A 25MM RAGRAIL CAVITY SPACER EWI SYSTEM APPLICATION

Base Bead

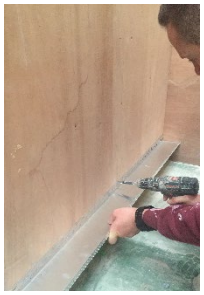
Securely fix Wetherby starter track with profile clip above DPC level at base of the system. Mechanically fix starter track at max. 300mm centres, 50mm from each end. WBS 3756 base rail connectors should be used to join the tracks, packing shims may be required to ensure the starter track is true to line and level. Drainage holes must be drilled into the back of the starter track to allow the cavity to drain. Install 8mm holes at 300mm centres to allow for drainage and partial ventilation. Any gaps behind the basetrack allowing free air movement behind the insulation should be sealed appropriately.

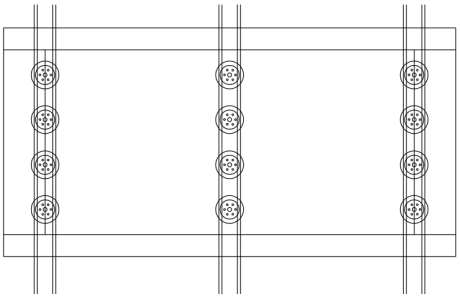
Full System Stop Bead
Securely fix Wetherby full system stop beads on WBS Sealing Tape to the extent of the system and its abutment to untreated areas i.e. meter boxes, rising service supplies or any other untreated abutment. Stop beads are to be fixed at max. 300mm centres, 50mm from each end. A continuous bead of WBS Fire Rated Silicone Sealant must be applied to seal the stop bead to the substrate.

Roof Detail
The EWI system must be sealed against a suitably stable & water tight roof junction/ flashing to ensure the system is adequately protected.

Where the existing roof does not provide an adequate overhang to the EWI system (minimum 40mm), a specialist roofing profile or flashing must be installed to provide adequate protection. All flashings must be correctly jointed and fixed, ensuring no weak points or potential areas for water ingress. Where required, temporary capping protection must be provided to protect the insulation from moisture until flashings / roof trims are in place. The EWI system must be sealed to the roofing profile using WBS Sealing Tape and Silicone Sealant.

Cills
Securely fix cills, ensuring they are secure and provide a water tight detail to protect the EWI system. Sealing tape & silicone sealant are required where the EWI system abuts the cill. Install end caps and apply Wetherby Fire Rated Silicone Sealant where required. All cills must be correctly jointed and fixed, ensuring no weak points or potential areas for water ingress.





RagRail Cavity Spacer
Mechanically fix Cavity Spacer Rail down one side of the rail at 300mm cts and through the centre of rail at 300mm cts hitting the stud in all scenarios, ensuring the rails are secure. Rails should be installed vertically at 600mm centres and around openings ensuring the insulation boards are fully supported. The rails may need packing out with suitable packers to ensure the system is installed true to line and level. If rails require packing out, the fixing sizes, cavity fire barriers, beads, trims and flashings may require alterations.

Drainage Deflector Bead
Mechanically fix drainage deflector beads above all openings at a 10 degree minimum fall, ensuring all moisture is channelled away from the opening below. Deflector beads should be installed at 300mm centres, 50mm from each end and bedded on Fire Rated Silicone sealant.

Intumescent Strip
Mechanically fix WBS Intumescent Strips at agreed locations to form horizontal cavity fire breaks. Intumescent strips should be screw fixed in place at 250mm max centres, using a non-combustible screw with a head of no more than 11.5mm diameter. Where the cavity exceeds 25mm, A1 CPB 100mm wide strips are to be used to pack out the intumescent strip ensuring the distance between the CPB and Stone Wool is max. 25mm (subject to agreement from all parties).

Vertical Cavity Closer Detail / Cavity Closers Around Openings – Tenmat NVFB Non-Ventilated Fire Barrier
Mechanically fix the NVFB through the centre of the barrier at distances no greater than 250mm from each end, using a stainless steel screw, with a head diameter between 12 and 14mm maximum width (no washer required). The depth of the screw should be sized according to the substrate to which the screw will be anchoring in to but must allow for the screw head to be compressed 5-10mm into the surface of the NVFB barrier. Ensure that NVFB pieces are tightly abutted together and are aligned flush with each other. Point in any small gaps (up to 5mm) with intumescent sealant if required. The main Stone Wool insulation is to be installed over the NVFB fire barrier, the NVFB must be adequately compressed.

Application of Stone Wool Insulation Boards
Position and securely fix the Stone Wool insulation boards to the RagRail Cavity Spacers ensuring they are line and level. The boards should be tightly butt jointed, laid with staggered joints and overlapped at building corners. Board joints should not occur within 200mm of the corners of openings. Where the insulation butts up against dissimilar materials, supply and install WBS Sealing Tape and ensure the boards are fitted tight against the seal, ensuring full compression of the tape. All NFVB fire barrier in the cavity must be compressed by the Stone Wool insulation.

Fixing of Insulation Boards
Fix boards mechanically to the RagRail Cavity Spacers using approved WBS fixings in accordance with the fixing pattern located at the back of this document (subject to pull-out / wind load calculations). Fixings shall be installed so that the fixing head embeds 1-2mm in to the face of the insulation board surface. Where required, additional fixings should be installed to ensure a maximum of 300mm centres at either side of building corners and around all openings.

Protective Scrim Adhesive Coat (If Required)
Apply a protective scrim coat at 1-2mm where required to prevent water ingress into the Stone Wool insulation. The board edges must be protected to ensure no water ingress into the Stone Wool insulation. Where boards are to be left exposed, a 1-2mm tight coat is to be applied over the face of the Stone Wool Insulation. The insulation must be fully dry before basecoat is applied.

Movement Bead / Slip Joints
Fix movement beads / slip joints at agreed locations using WBS approved fixings. Structural movement joints must be mirrored through the EWI system.

Surface Mounted Render Beads
Fix surface mounted render beads directly to the insulation board at required locations using WBS Firtree Fixings. A continuous bead of WBS Fire Rated Silicone Sealant must be applied to seal the surface mounted render stop beads.

Existing Air Vents, Grilles etc.
Identify live or used air vents, grilles etc. and extend through the insulation system as work progresses.

Angle Bead
Fix by bedding into first pass of scrim adhesive, aluminium angle beads with glassfibre mesh reference WBS 9075 to all external building corners, window / door jambs and heads.

APU Beads (where required)
Install APU beads around openings where required. Beads must be applied to a clean surface to ensure optimum adhesion.

Alkali Resistant Glassfibre Scrim Coat
Trowel apply a 4-6mm thick coat of scrim adhesive to the entire surface of the insulation boards. Lightly run a notched trowel through the scrim adhesive at a 45 degree angle to ensure the correct thickness of adhesive is applied. Bed WBS Alkali Resistant Scrim Cloth into top third of the wet adhesive, overlapping joints by 75mm minimum. The scrim cloth must be overlapped around building corners and returned into all reveals and heads. All beads must be fully scrimmed in. Install additional 500mm x 250mm minimum pieces of scrim cloth diagonally across corners of all wall openings. Install secondary fixings through the wet scrim adhesive and WBS Alkali Resistant Scrim Cloth whilst adhesive is wet. 100mm x 100mm scrim patches to be installed over each secondary fixing head. Finally smooth out scrim adhesive using a spatula.

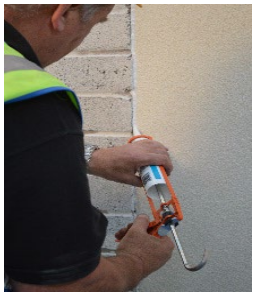
Scrim Adhesive Coat (Second Application)
When initial layer of scrim adhesive has hardened, trowel apply a further 2-3mm coat of scrim adhesive ensuring all alkali resistant mesh is covered. Level the scrim adhesive using a spatula / damp sponge float to achieve a uniform flat and even surface ready to receive the WBS final finish.

Allow sufficient drying time before applying the Primer. Cold conditions and high humidity will result in the basecoat taking longer to dry / cure. The basecoat must be fully hardened with no signs of moisture visible. Moisture trapped in the basecoat can potentially damage the curing of the Primer / Silicone Render causing failure after completion of the system.

Silicone Primer
Apply Wetherby Primer with a brush or lamb's wool roller as per manufacturer's printed instructions. Allow Primer to fully dry, minimum 12 hours.

Silicone Render Finish
Mix and apply Wetherby Silicone Textured Finish strictly in accordance with the manufacturer's printed instructions. The top coat should be applied with a stainless steel trowel to the thickness of the grain and finished with a plastic float. Apply in a continuous application always working to a wet edge and in the same direction to ensure consistency of finish. Wherever possible, entire elevations should be completed in a single operation to avoid joint marks in the finish. This can often be achieved by working to natural breaks in the building or working to breaks in colour or texture.

Do not apply Wetherby Silicone Textured Finish with differing batch numbers on the same elevation. Care should be taken to avoid texture changes at different levels. Prior to setting, polish render with plastic float to give an even texture and remove all trowel marks.



Silicone Sealant
Gun apply a continuous bead of Wetherby Fire Rated Silicone Sealant at points where the renders will butt up against other materials, e.g. window frames, door frames, eaves, fascia's, projecting wall vents, gas and electric meter boxes etc. ensuring water tightness. Surfaces must be clean and suitable for the application of the Silicone Sealant which must be installed as per manufacturers guidance.

Cleaning
Wipe clean all exposed PVC nosing, cills etc., at each work stage whilst render is still wet.

Application Videos
Wetherby have detailed application videos available online, please see http://www.wbs-ltd.co.uk/videos/.

420 ADVERSE WEATHER

- Materials / Surfaces: Do not use frozen materials and do not apply materials to frost bound substrates.
- Adhesives / Mortars / Renders: Do not apply when air temperature is at or below 5°C. Render products may be applied where temperatures are above 3°C on a rising thermometer and are forecast to stay above 5°C for an extended period on the same day.
- Adhesives / Mortars / Renders: Do not apply when relative humidity is equal to or greater than 90%.
- Do not apply materials when the air temperature or wall surface is in excess of 30°C without protection of the surface.
- Temperature of the work: Maintained above minimum level recommended by manufacturer until adhesive / mortar / render has fully hardened.
- Drying Times: Drying times of decorative finishes, particularly pre-mixed water based materials, may be greatly extended during periods of low temperature and / or high relative humidity 90% and above.
- Newly rendered surfaces: Protect newly rendered surfaces against rain, snow or other precipitation. Ensure that material is protected from frost, wash-offs etc.
- Application of renders, mortars or decorative finishes shall not be carried out on elevations where summer strength sunlight is hitting the area square on for prolonged periods without affording protection.
- Coatings damaged by rain or frost: Remove and replace.

440 ON SITE PULL OUT TESTS ON FIXING PINS

- Objective: To prove suitability of structural substrate and determine size and number of fixings required.

490 CONSTRUCTION / MOVEMENT JOINTS / SLIP JOINTS

- Location: As shown on drawings.
- Formation: Accurately to detail.
- Modifications to joint locations / design: Agree revisions before proceeding.
- All structural movement joints must be mirrored through the EWI system.

500 FLUES, CHIMNEYS AND COMBUSTION AIR VENTILATORS

Reference to be made to CIGA's Technician's Best Practice Guide to Flues, Chimneys and Combustion Air Ventilators, or similar, so that the performance and safety of fuel burning appliances is not compromised by the installation of the EWI measure.

- The combustion air supply must be isolated and air ventilator continuously sleeved through the wall.
- Flueless gas fires require a ventilator that provides a free air area of 10,000 mm². Under PAS 2030, both surveyor and installer have strict responsibilities placed upon them when it comes to the identification and safeguarding of essential ventilation requirements. Failure to comply will result in PAS 2030 being revoked. Please refer to Wetherby document **WBS-VENTINFO-01**.

With regards to gas flues there are two methods of installation, either a clear gap is left around the flue (300mm for fanned draught flues / 600mm for natural draught flues) or a 200mm non-combustible insulation slab installed around an extended flue. While WBS includes both alternatives in their detail drawings, main contractors and installers must ensure the chosen method is approved in conjunction with the boiler manufacturer's specification.

520 SUPPORTS FOR SERVICES / FITTINGS

- Supports for soil and rainwater pipes, signs, CCTV cameras etc. Provide in locations shown on the drawings.
- Sleeved fixings shall be installed into the load-bearing background after completion of the render works in accordance with Wetherby recommendations.
- No load is to be transferred to the insulated render system.

528 POWER CABLES

- External power cables must not be covered over by the EWI system or cover plates in any circumstances. Power cables must be relocated, left open and visible or suitably & safely enclosed with guidance from the power distribution authority.
- Installers must be aware of any cables / utilities hidden within the frame and ensure there is no risk of coming into contact with these during the installation of the Wetherby System.

530 SEALANT JOINTS

- Sealant: WBS Fire Rated Silicone Sealant.
- Joints: Formed in accordance with section Z22 and system manufacturer's recommendations using any necessary joint fillers, backing strips etc.

540 STORAGE OF MATERIALS

- Adequate dry weatherproof and ventilated storage shall be provided for materials.
- All materials shall be protected against frost.
- Insulation boards must be kept dry at all times.
- Cementitious products shall be stored off the floor.
- Renders to be stored in temperatures of at least 5°C.
- Materials should be protected from prolonged exposure to sunlight.

550 INSPECTION OF COMPLETED INSTALLATION

- Timing: As soon as possible after completion of the work and before removing scaffolding.
- Notice for inspection (minimum): 7 working days.
- Defects: Report immediately.
- Onsite inspections for high rise projects are imperative. Each installation stage must be checked, signed off and documented or the Wetherby warranty will be void.

570 MATERIALS AND SITE CONDITIONS

- All materials shall be provided for the proper and efficient execution and completion of the works.
- Materials shall be mixed, applied and fixed in accordance with the relevant clauses of the specification and the manufacturer's instructions.
- A clean, fresh supply of water shall be provided for the works, via the management contractor.
- Suitable scaffolding that has a minimum gap of 300mm (all scaffold items) from the elevation surface in order to facilitate application requirements, shall be provided, erected, maintained and later removed for the proper and efficient execution and completion of the works.
- All necessary temporary supports for drains, water pipes, gas pipes, electrical cables and telephone cables shall be provided and maintained until the permanent supports are reinstated.
- Temporary flexible tubing shall be provided for the efficient discharge of rainwater from the buildings to protect the system during the progress of the works.

580 CLEANLINESS OF WORKS

- Protect all existing works, approaches and adjacent surfaces including windows and doors etc. using suitable sheeting, boards, covers etc.
- Remove all splashes, droppings etc. from completed works immediately and before drying takes place.

590 CONTROL OF POLLUTION

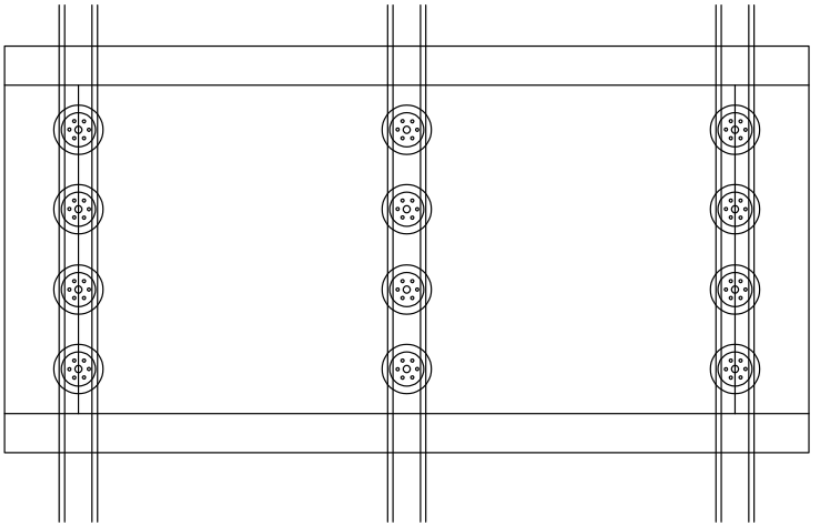
- All debris and rubbish arising from the works shall be removed off site from time to time to keep the site and works clean and tidy. All measures shall be taken to control the noise levels produced by the operatives on site to comply with the Control of Pollution Act. Precautions should be taken to prevent pollution of any river watercourse, reservoir, drainage or the like by the operatives on site.

600 MAINTENANCE

- An initial inspection should be made within 12 months and regularly thereafter to include:
  - visual inspection of the render for signs of damage. Cracks in the render exceeding 0.2 mm must be repaired. Impact damage much be repaired to prevent moisture ingress into the system.
  - visual inspection of architectural details designed to shed water to confirm that they are performing properly.
  - visual inspection to ensure that water is not leaking from external downpipes or gutters, as such leakage could stain or penetrate the rendering.
  - Sealant joints at window and door frames, etc which must be replaced as required.
- Maintenance schedules must be created and maintained for the building, which should include any repairs undertaken and the replacement and resealing of joints (for example, between the insulation system and window and door frame).
- The render may become discoloured with time, the rate depending on the initial colour, the degree of exposure and atmospheric pollution, as well as the design and detailing of the wall. In common with traditional renders, discoloration by algae and lichens may occur in wet areas and can be removed simply with a biocidal wash.
- Damaged areas must be repaired using the appropriate components and procedures detailed in the Certificate holder's installation instructions and in accordance with BS EN 13914-1: 2005. Please see Wetherby O&M Manual and Wetherby High Rise Maintenance Information for further details.

Wetherby EWI Fixing Pattern

(Subject to Wind Load Calculations and Pull-Out Tests)



8 mechanical fixings & KWL washers required, 4 fixings through the board centre line and 4 half fixings down each side installed into the RagRail

RagRails to be installed at 600mm centres max

Rails to be fixed down one side at 300mm centres and through the middle at 300mm centres max

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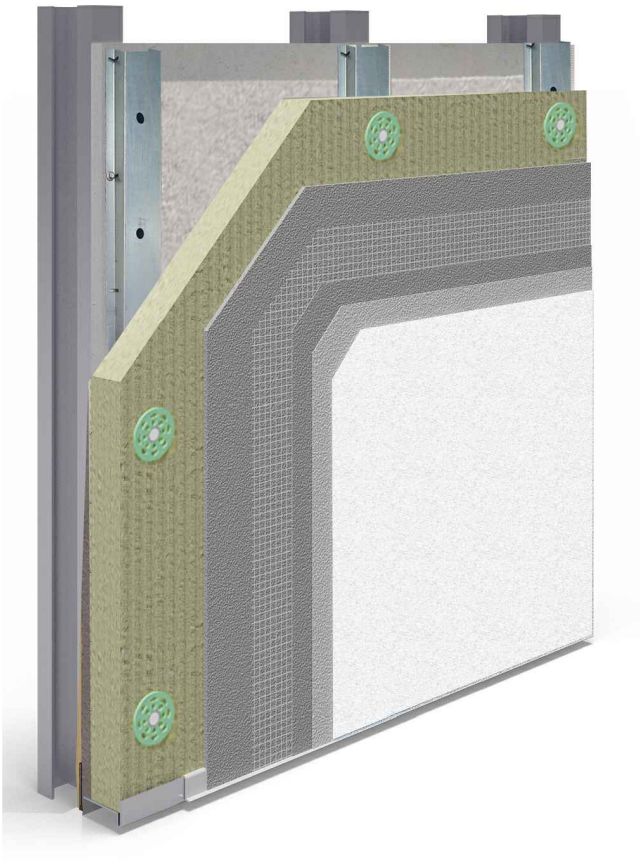
External Wall Insulation Detail Drawings
Insulation & Silicone Render Finish



The following Wetherby EWI detail drawing set is generic and is not be used for a specific project. Please contact Wetherby Technical to obtain a project specific detail drawing set.

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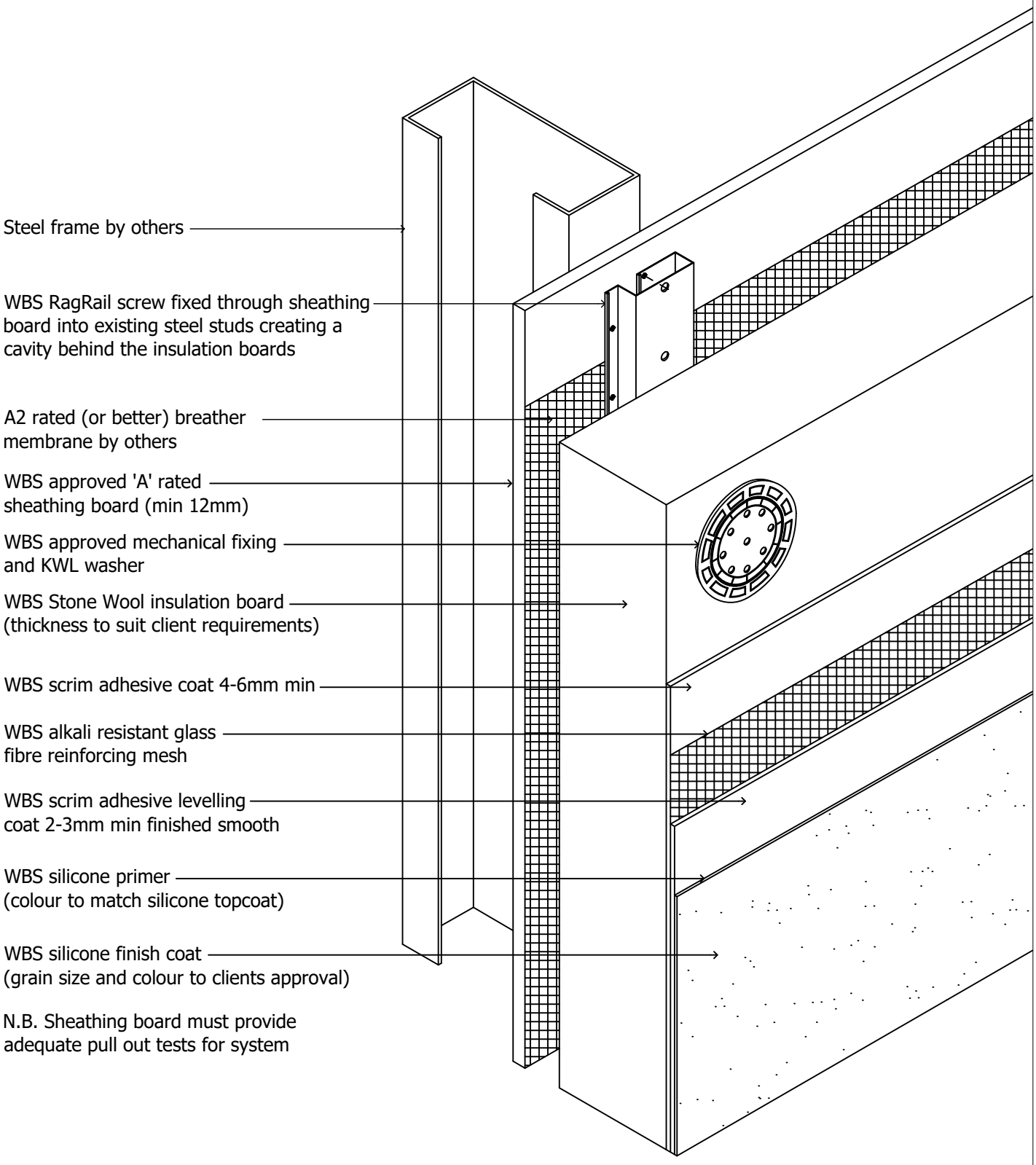

drawing description. Isometric - System Build Up Detail	drawn by. LS	Wetherby Building Systems Ltd
	checked by. RT	
drawing no. SFS-BM-RAGRAIL-SW-SILICONE-01	revision. -	
	scale. nts	
project name. Generic Detail Drawings	date. 07.02.2023	
	dwg set. 38	

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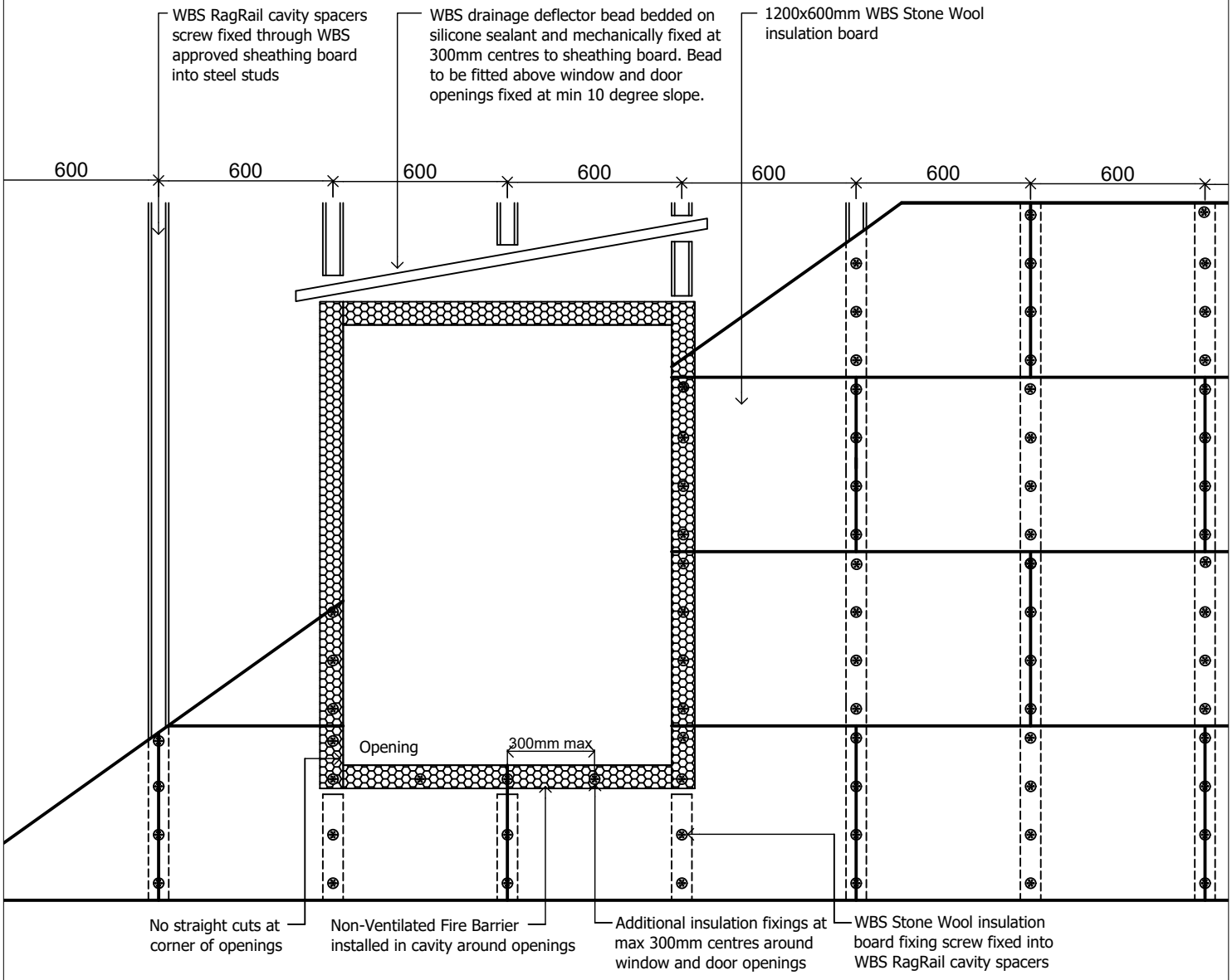
N.B. Fixing arrangement subject to project specific wind load calculations & pull out tests



- 8 fixings required through each board, 4 fixings through the board centre line and 4 half fixings down each side

WBS stainless steel secondary fixings to be installed through the scrim coat and mesh at a rate of 1 per m² in accordance with project specification

RagRail cavity spacers to be installed at 600mm centres

RagRail cavity spacers to be fixed down the side and through the centre at 300mm centres

In areas where the board is not fully supported, horizontal RagRail cavity spacers to be installed where appropriate

WBS approved sheathing boards to be fixed and jointed to manufacturers instructions

drawing description. Fixing arrangement	drawn by. LS	Wetherby Building Systems Ltd
	checked by. RT	
drawing no. SFS-BM-RAGRAIL-SW-SILICONE-02A	revision. -	
	scale. nts	
project name. Generic Detail Drawings	date. 07.02.2023	
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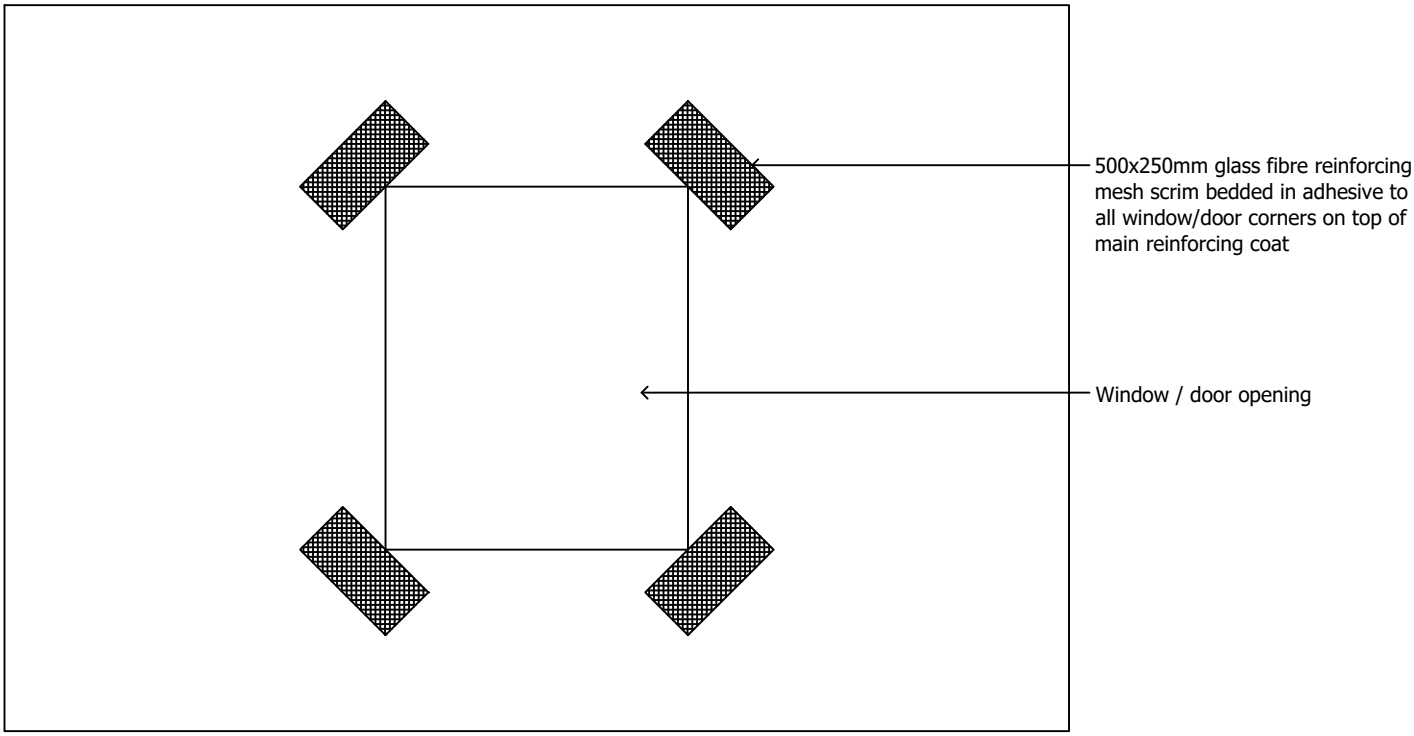

drawing description. Fixing arrangement	drawn by. LS checked by. RT	Wetherby Building Systems Ltd	wetherby creating a greener future 1 Kid Glove Road, Golborne Enterprise Park, Golborne, Greater Manchester, WA3 3GS Tel: 01942 717100 Fax: 01942 717101 Web: www.wbs-ltd.co.uk E-mail: technical@wbs-ltd.co.uk
drawing no. SFS-BM-RAGRAIL-SW-SILICONE-02B	revision. - scale. nts		
project name. Generic Detail Drawings	date. 07.02.2023 dwg set. 38		

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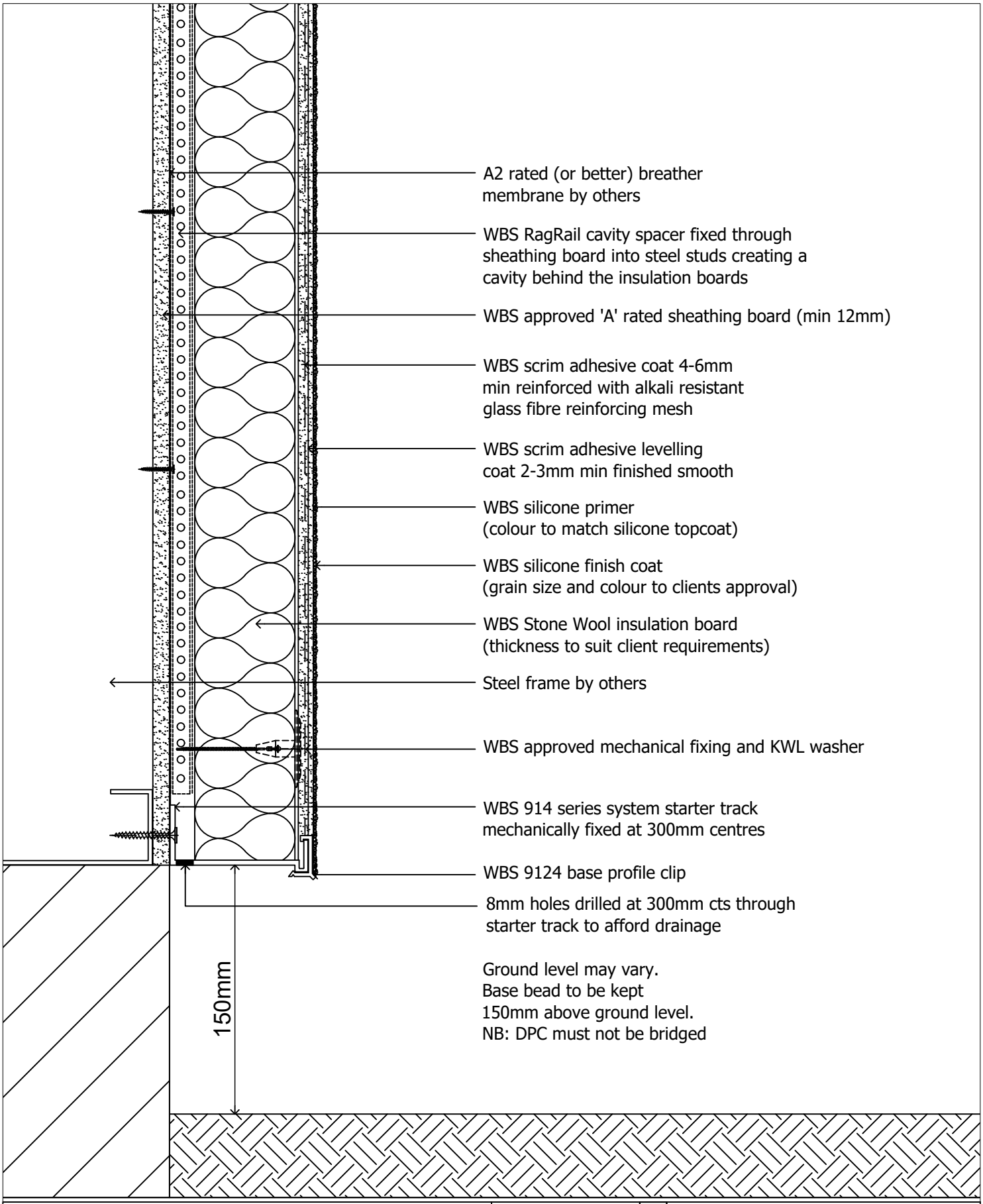

drawing description.
Base bead detail

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-03

project name.
Generic Detail Drawings

drawn by. LS
checked by. RT
revision. -
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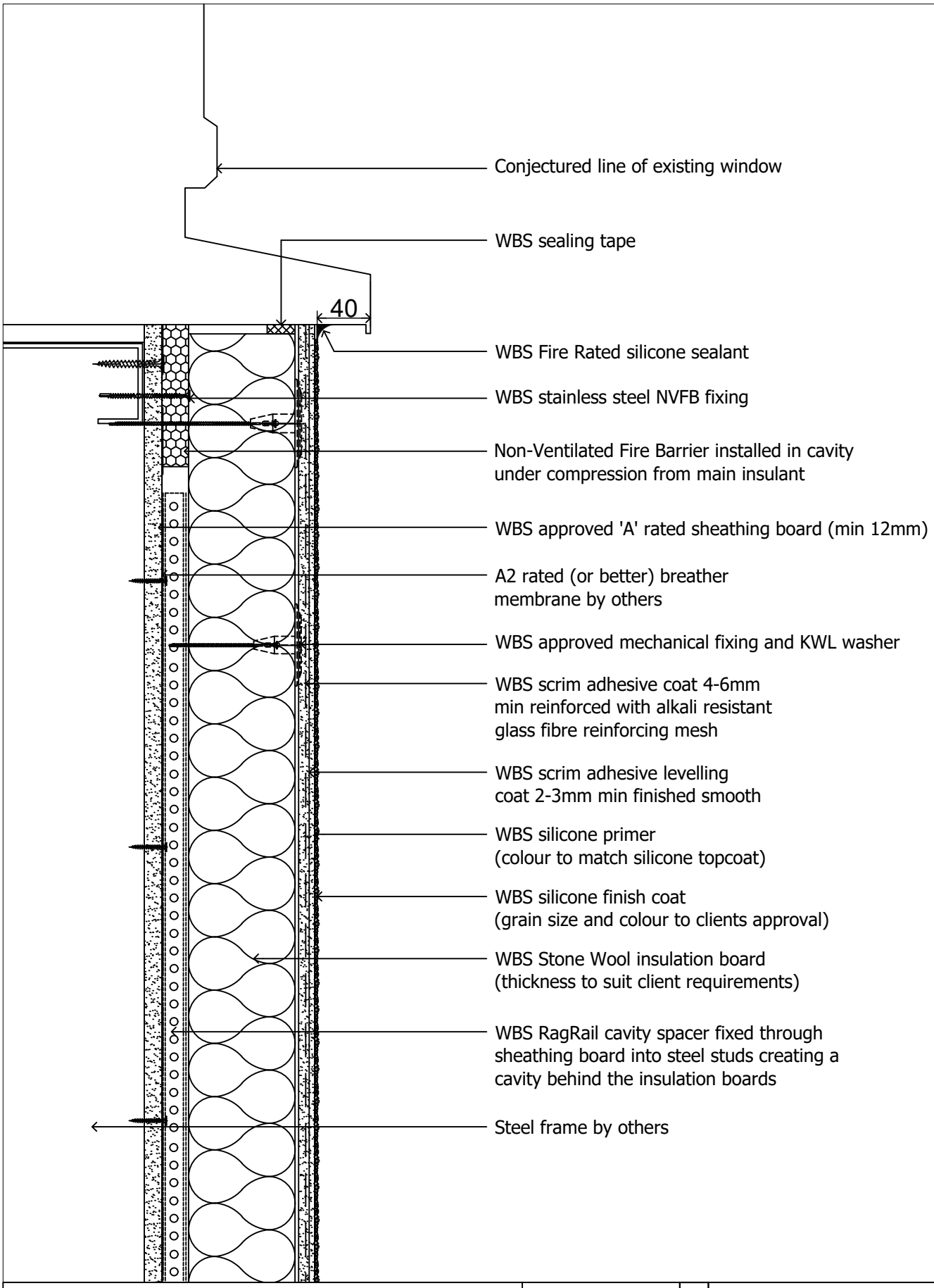

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drawing no. **SFS-BM-RAGRAIL-SW-SILICONE-04**	revision. - scale. nts		
project name. **Generic Detail Drawings**	date. 07.02.2023 dwg set. 38		

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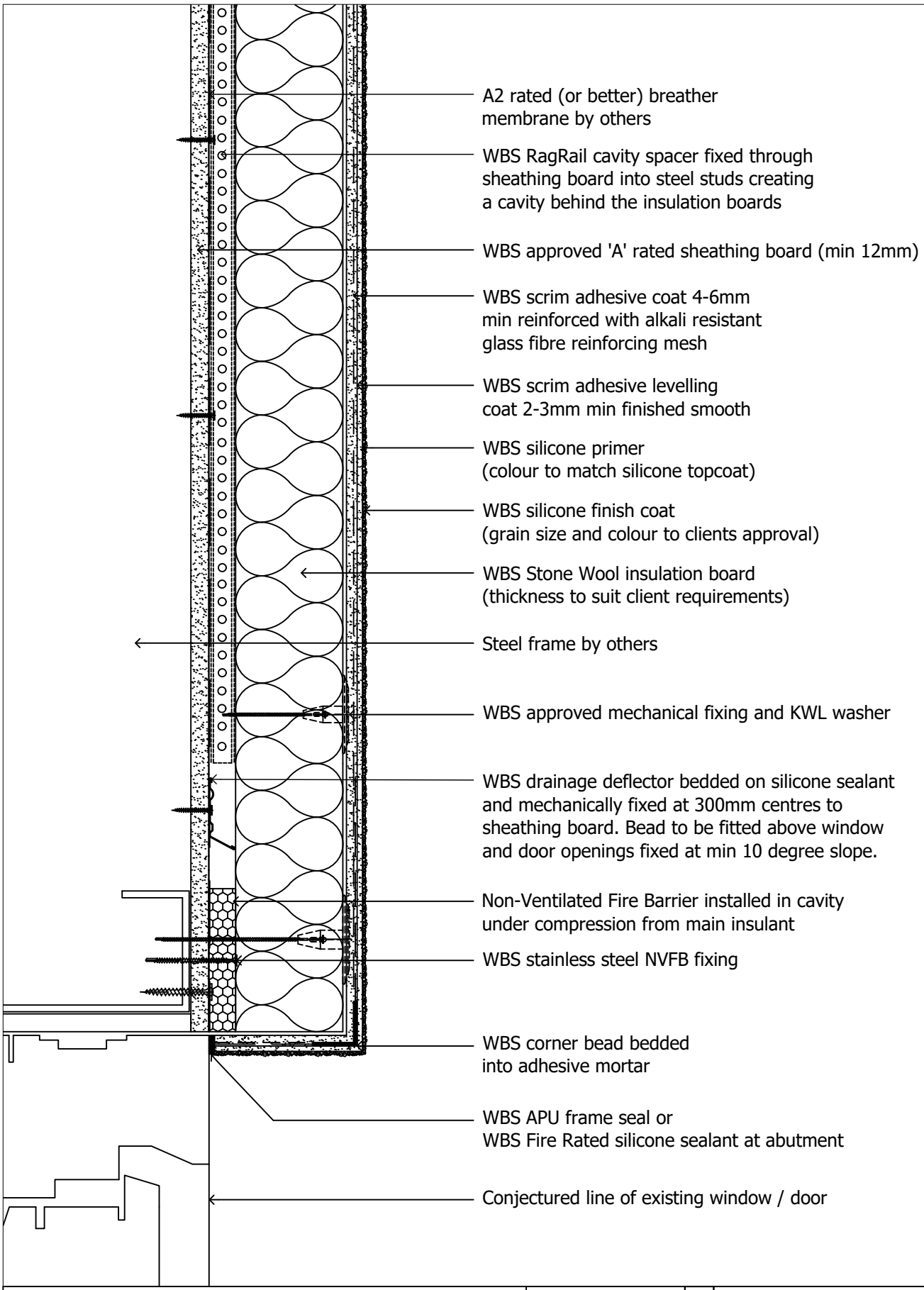

drawing description.
Window / Door head detail (1 of 2)

drawn by. LS

checked by. RT

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-05A

revision. -

scale. nts

project name.
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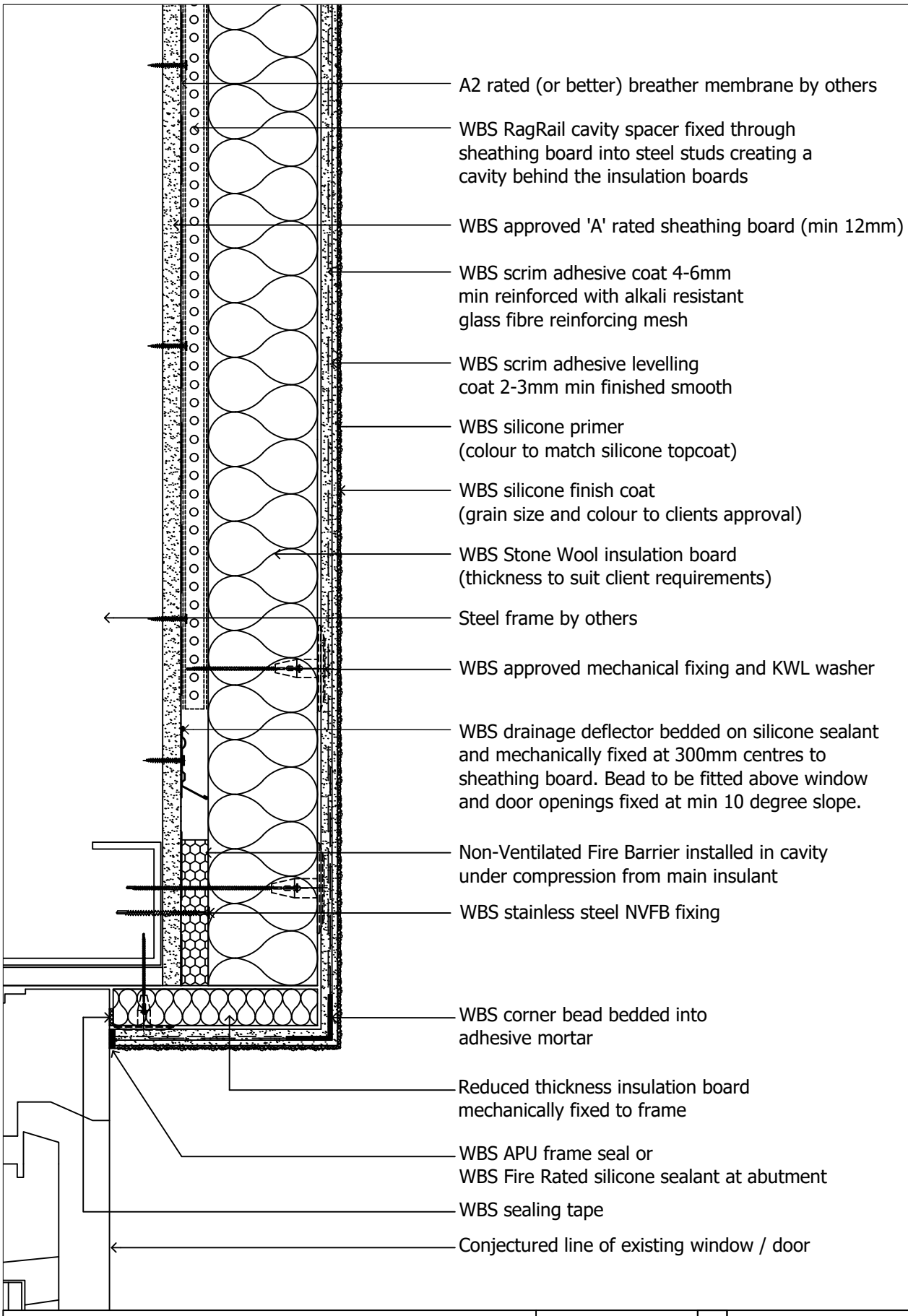

drawing description.
Window / Door head detail (2 of 2)

drawn by. LS

checked by. RT

drawing no.
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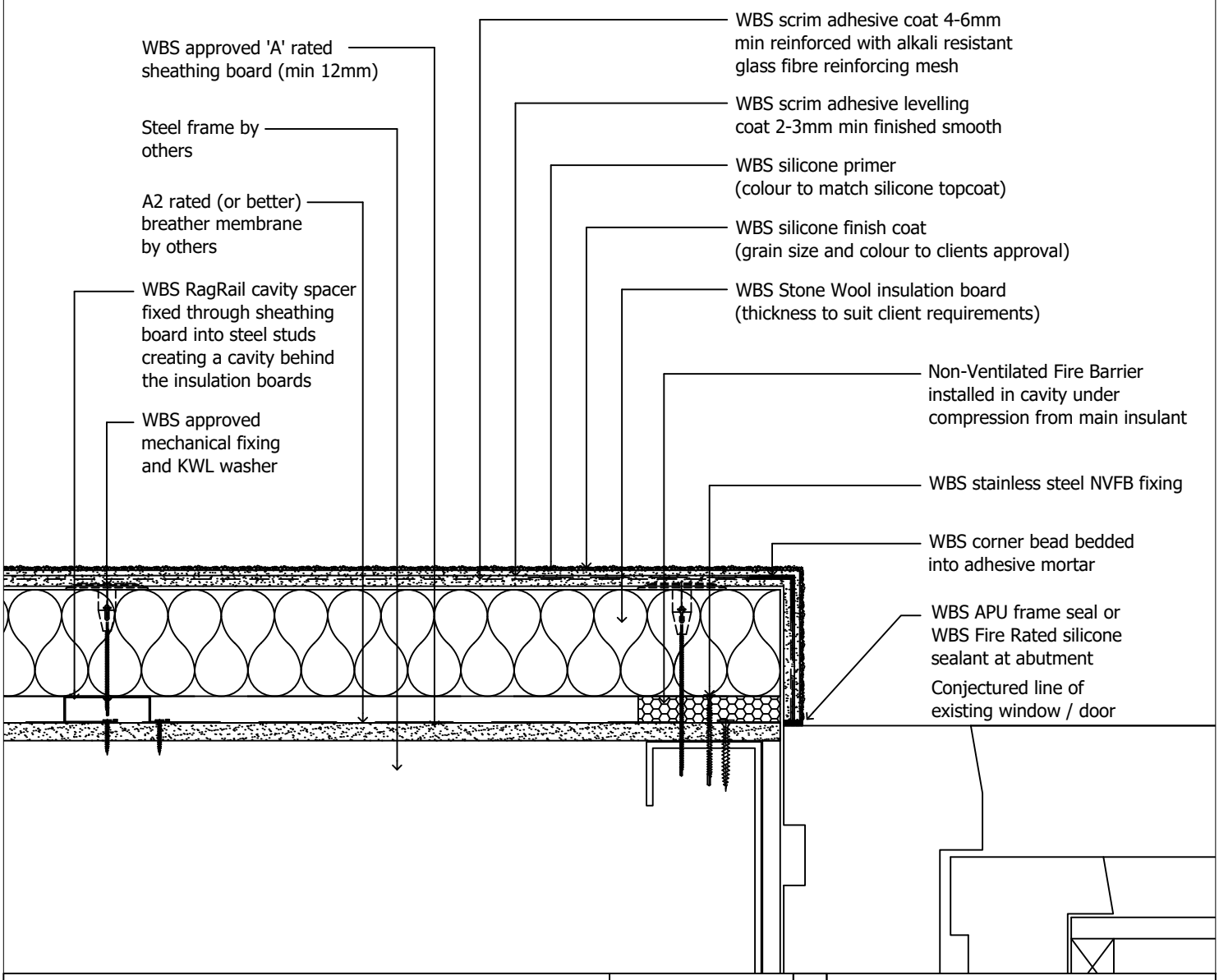

drawing description.
Window / Door jamb detail (1 of 2)

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-06A

project name.
Generic Detail Drawings

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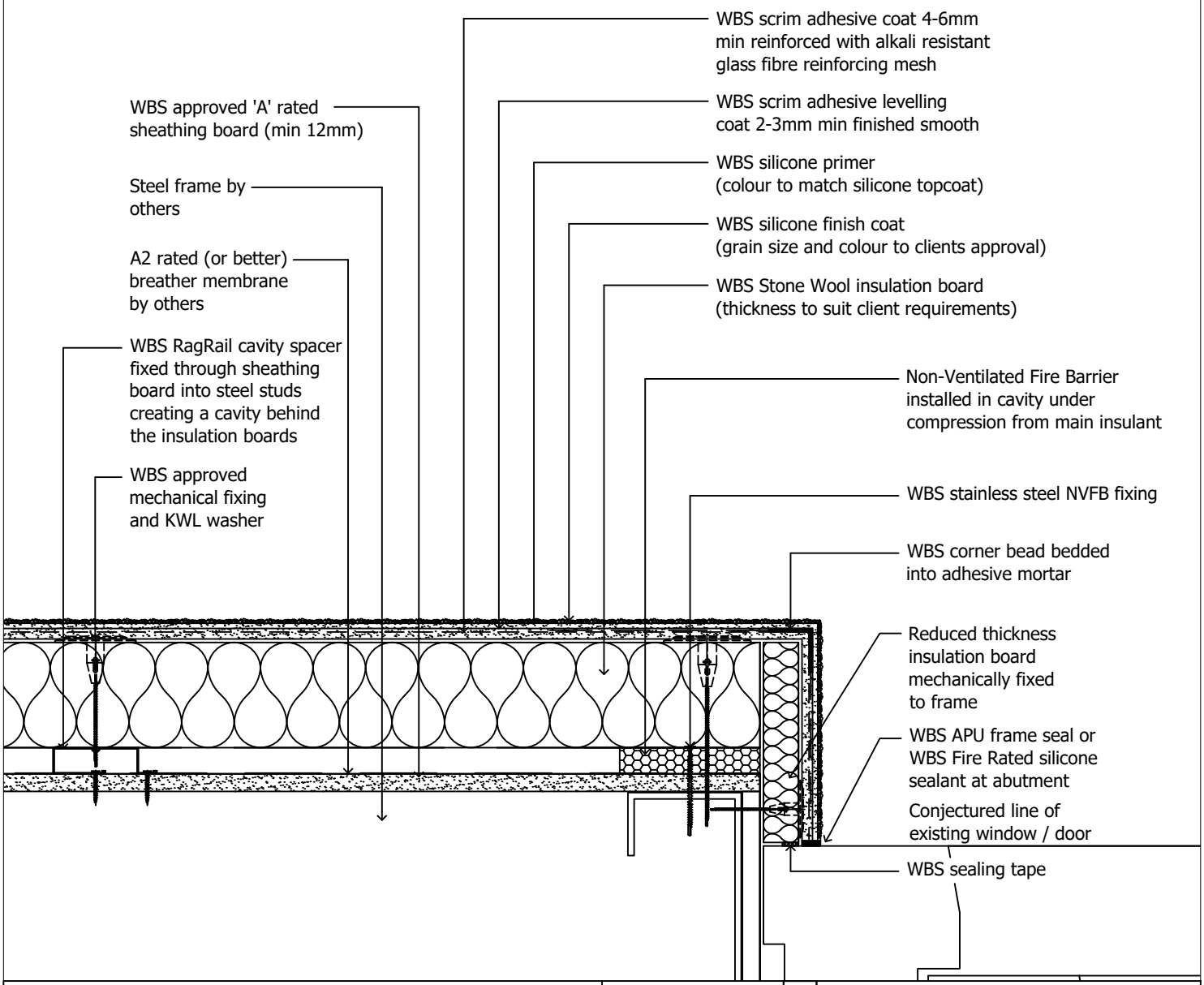

drawing description.
Window / Door jamb detail (2 of 2)

drawn by. LS

checked by. RT

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-06B

revision. -

scale. nts

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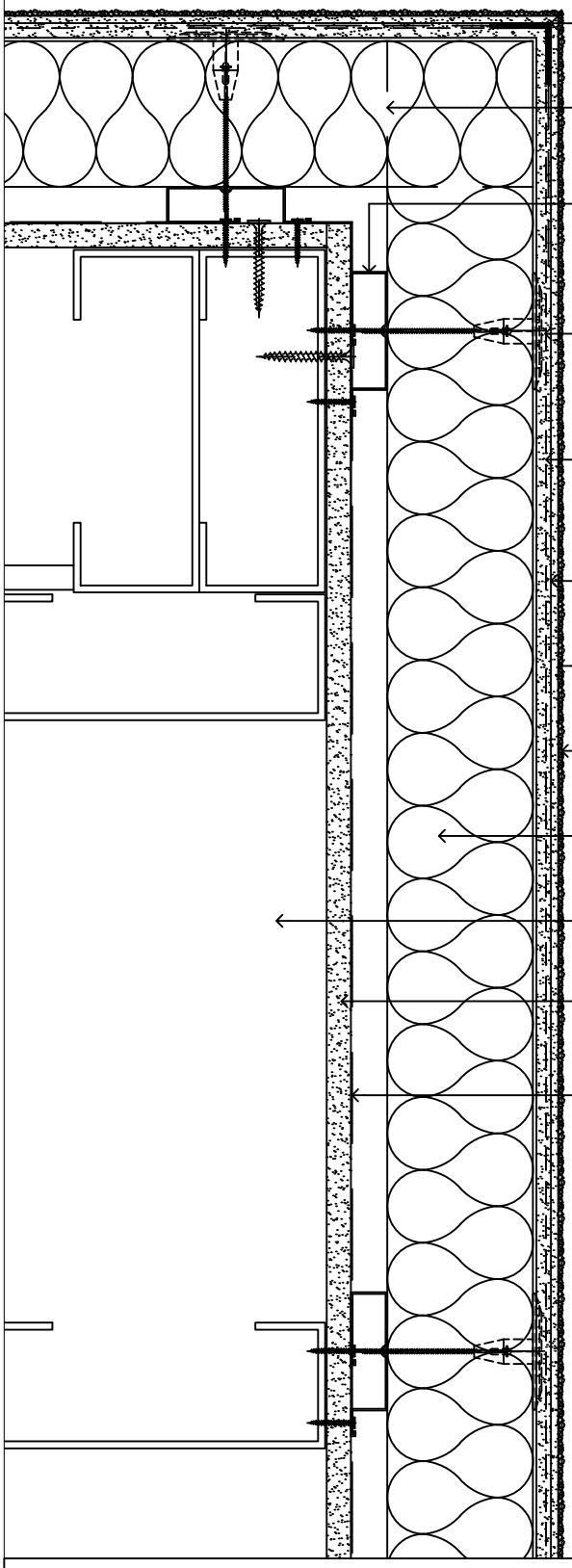

WBS corner bead bedded into adhesive mortar

Staggered insulation board joints at building corner

WBS RagRail cavity spacer fixed through sheathing board into steel studs creating a cavity behind the insulation boards

WBS approved mechanical fixing and KWL washer

WBS scrim adhesive coat 4-6mm min reinforced with alkali resistant glass fibre reinforcing mesh

WBS scrim adhesive levelling coat 2-3mm min finished smooth

WBS silicone primer (colour to match silicone topcoat)

WBS silicone finish coat (grain size and colour to clients approval)

WBS Stone Wool insulation board (thickness to suit client requirements)

Steel frame by others

WBS approved 'A' rated sheathing board (min 12mm)

A2 rated (or better) breather membrane by others

drawing description.
Building corner detail

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-07A

project name.
Generic Detail Drawings

drawn by. LS
checked by. RT
revision. -
scale. nts
date. 07.02.2023
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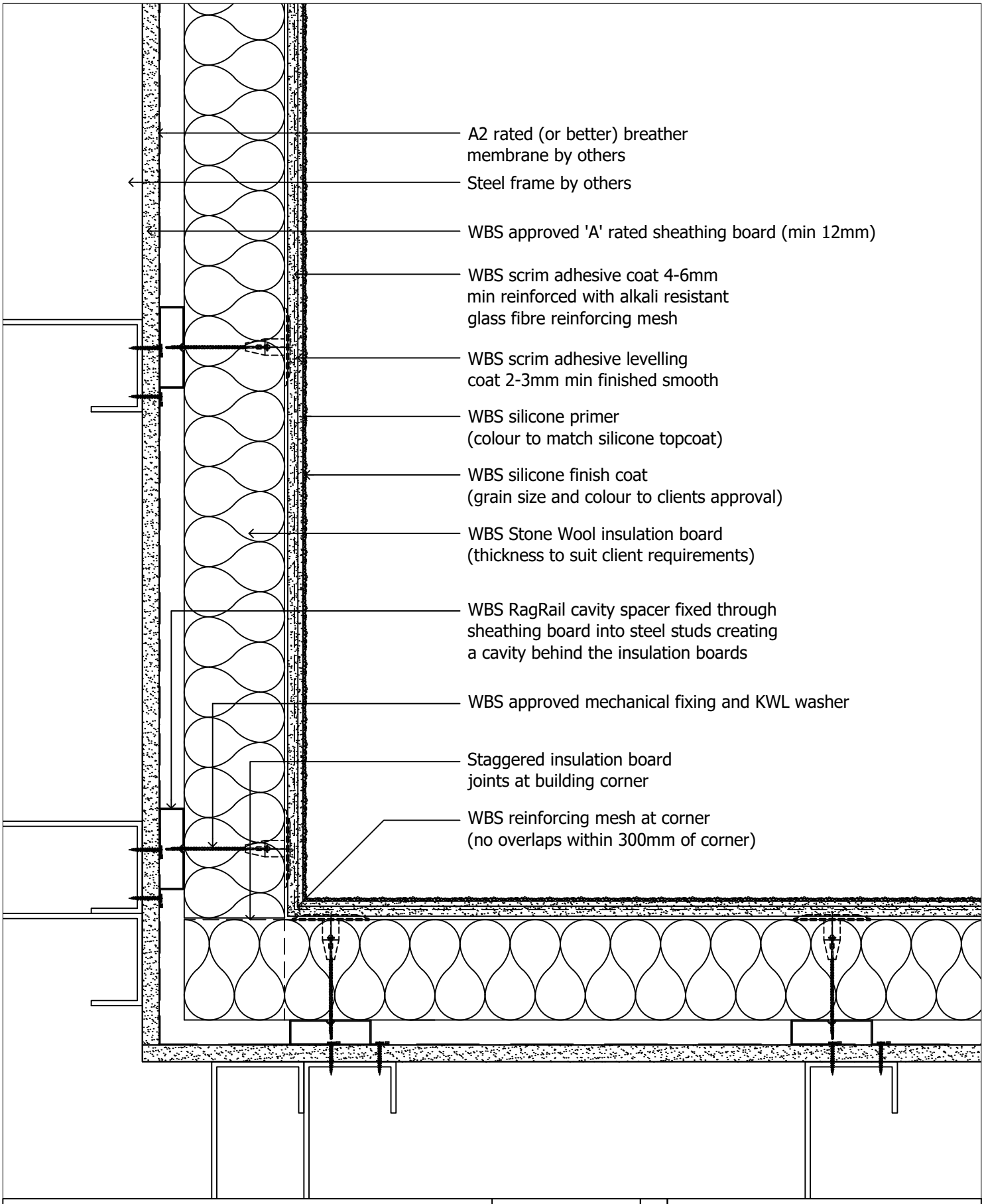

drawing description.
Internal building corner detail

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-07B

project name.
Generic Detail Drawings

drawn by. LS
checked by. RT
revision. -
scale. nts
date. 07.02.2023
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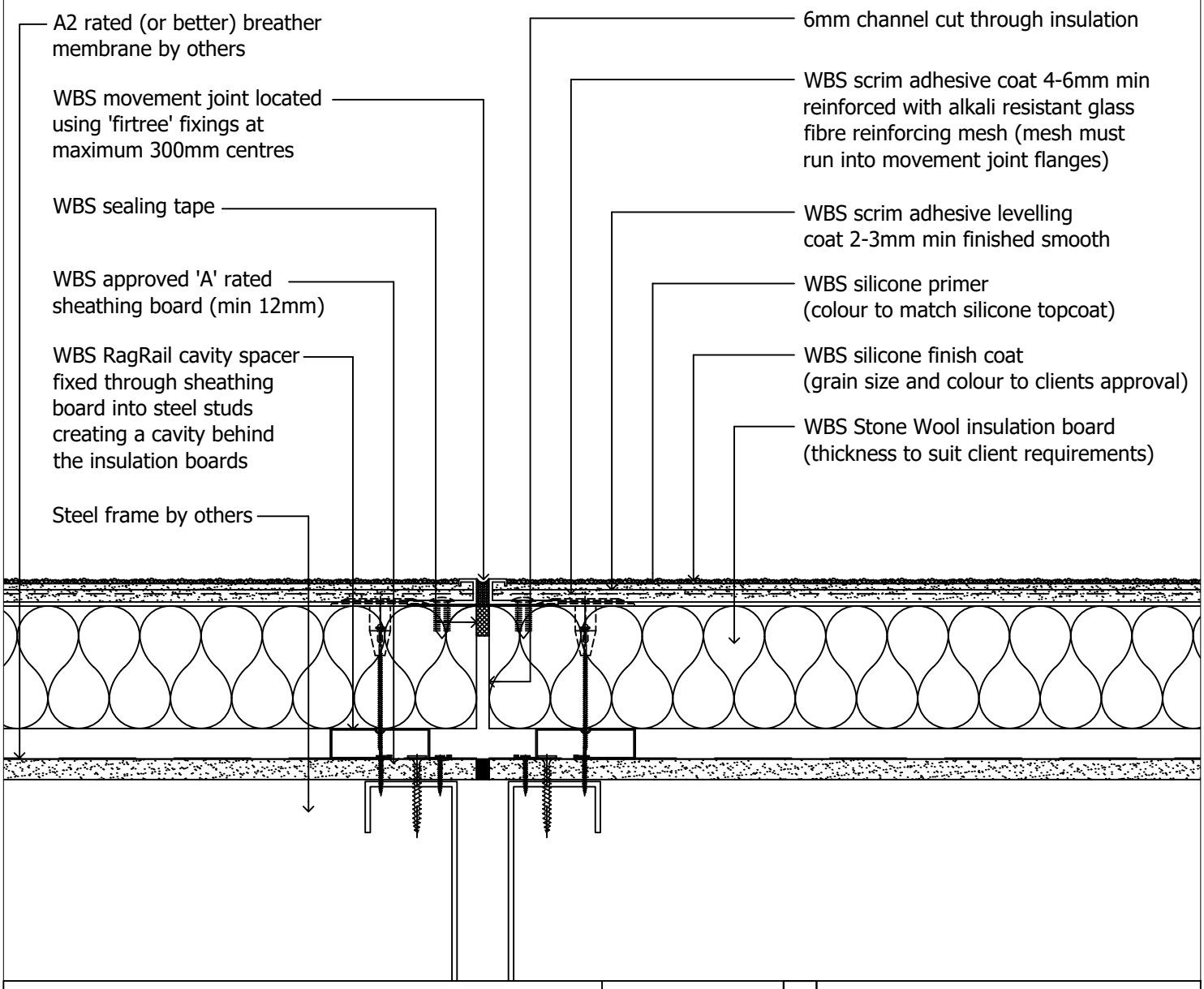

drawing description.
Vertical movement joint detail

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-08A

project name.
Generic Detail Drawings

drawn by. LS
checked by. RT
revision. -
scale. nts
date. 07.02.2023
dwg set. 38

Wetherby Building Systems Ltd

wetherby
creating a greener future

1 Kid Glove Road, Golborne Enterprise Park,
Golborne, Greater Manchester, WA3 3GS
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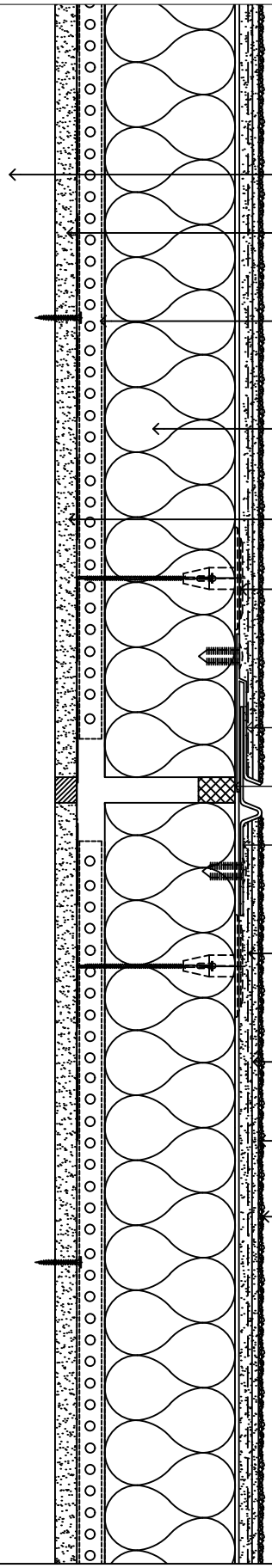

Metal stud frame by others

A2 rated (or better) breather membrane by others

WBS RagRail cavity spacer fixed through sheathing board into steel studs creating a cavity behind the insulation boards

WBS Stone Wool insulation board (thickness to suit client requirements)

WBS approved 'A' rated sheathing board (min 12mm)

WBS approved mechanical fixing and KWL washer

WBS RCJT slip joint top connector

WBS sealing tape

WBS RCJB slip joint movement piece

WBS scrim adhesive coat 4-6mm min reinforced with alkali resistant glass fibre reinforcing mesh

WBS scrim adhesive levelling coat 2-3mm min finished smooth

WBS silicone primer (colour to match silicone topcoat)

WBS silicone finish coat (grain size and colour to clients approval)

N.B. Slip joint installed subject to structural engineers calculations

drawing description. Horizontal movement joint detail	drawn by. LS checked by. RT	Wetherby Building Systems Ltd	wetherby creating a greener future 1 Kid Glove Road, Golborne Enterprise Park, Golborne, Greater Manchester, WA3 3GS Tel: 01942 717100 Fax: 01942 717101 Web: www.wbs-ltd.co.uk E-mail: technical@wbs-ltd.co.uk
drawing no. SFS-BM-RAGRAIL-SW-SILICONE-08B	revision. - scale. nts		
project name. Generic Detail Drawings	date. 07.02.2023 dwg set. 38		

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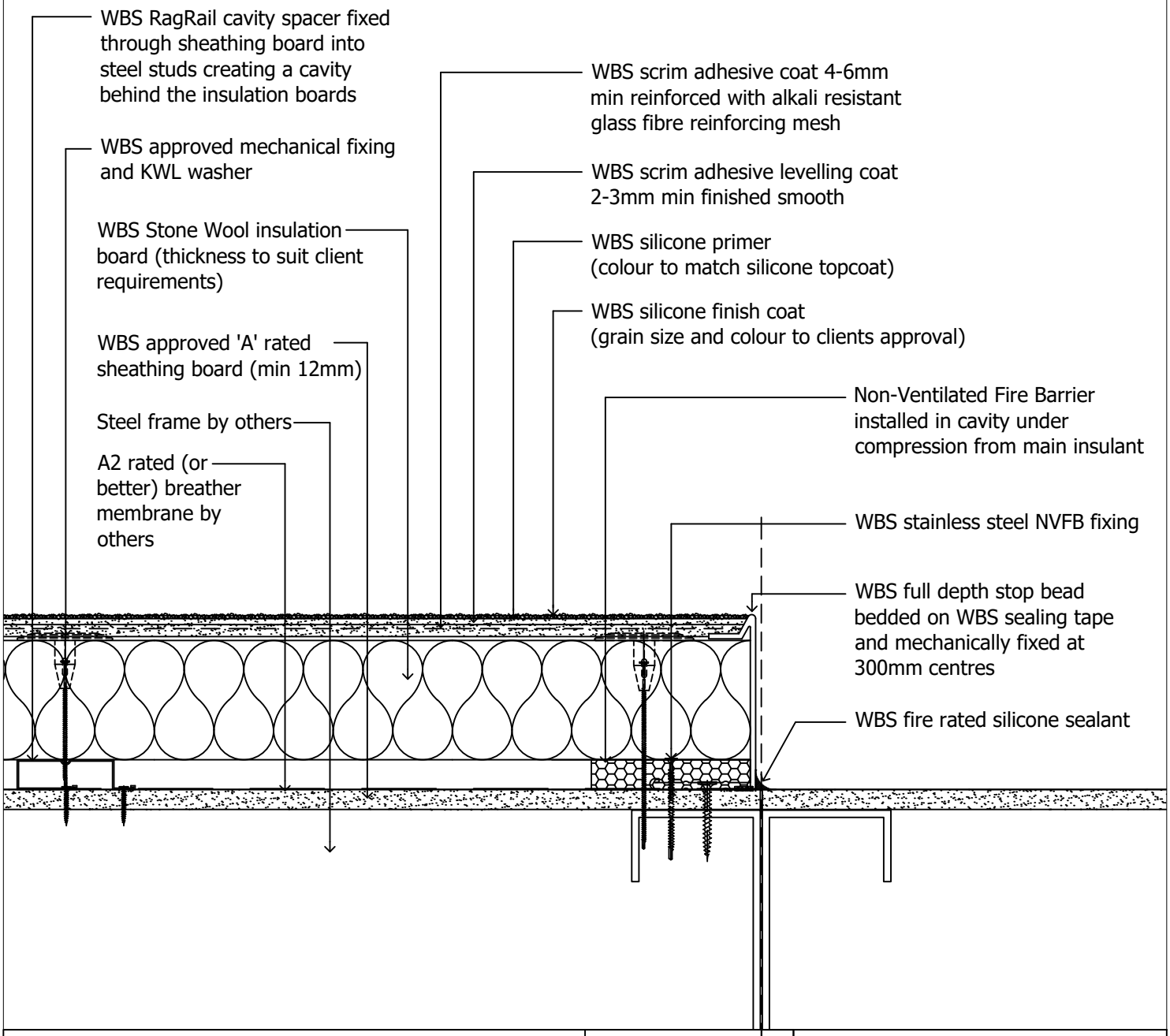

drawing description.
System termination detail

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-12

project name.
Generic Detail Drawings

drawn by. LS
checked by. RT
revision. -
scale. nts
date. 07.02.2023
dwg set. 38

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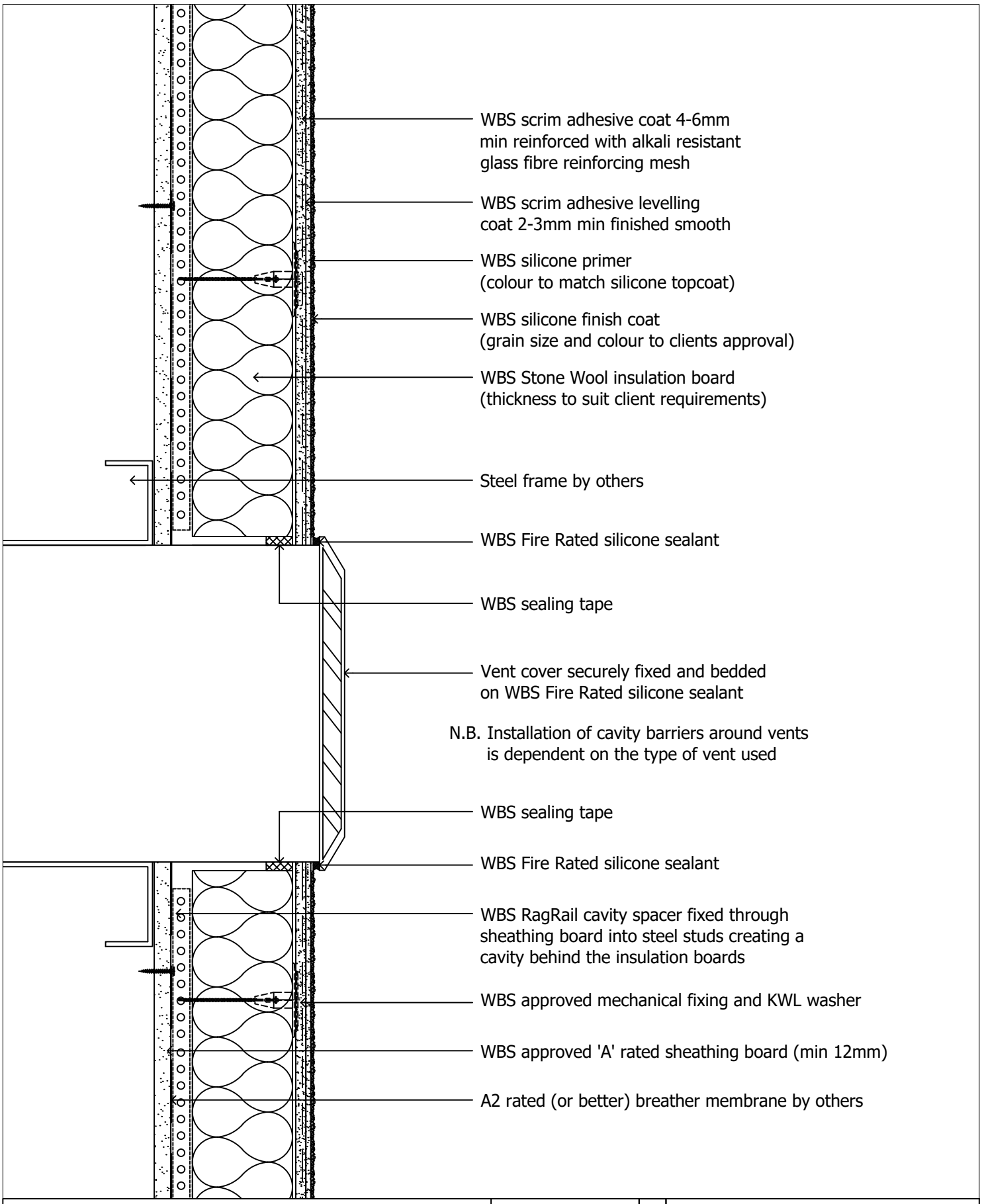

drawing description.
Air vent detail

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-13

project name.
Generic Detail Drawings

drawn by. LS
checked by. RT
revision. -
scale. nts
date. 07.02.2023
dwg set. 38

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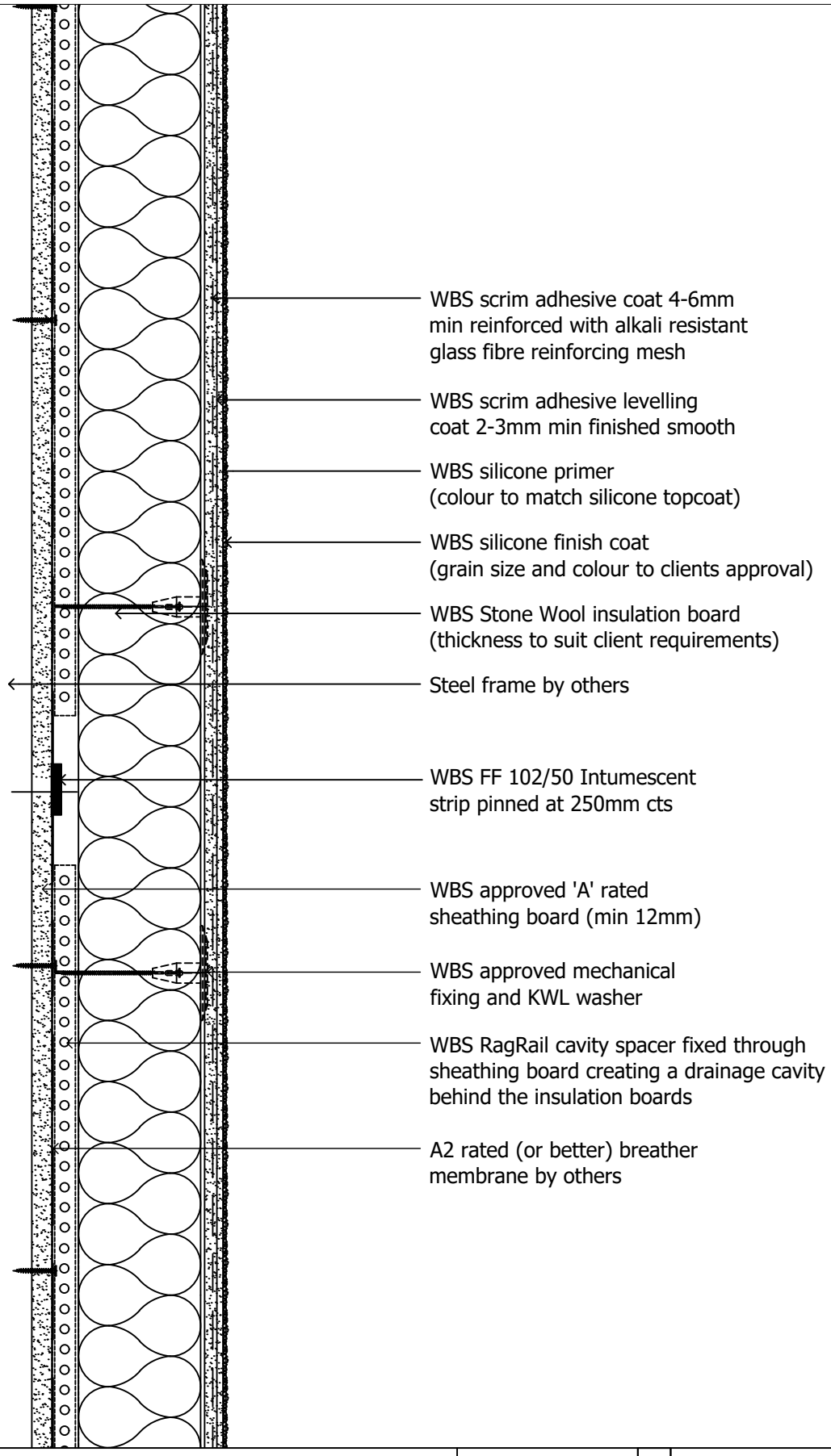

drawing description.
Horizontal fire barrier detail

drawn by. LS

checked by. RT

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-17A

revision. -

scale. nts

project name.
Generic Detail Drawings

date. 07.02.2023

dwg set. 38

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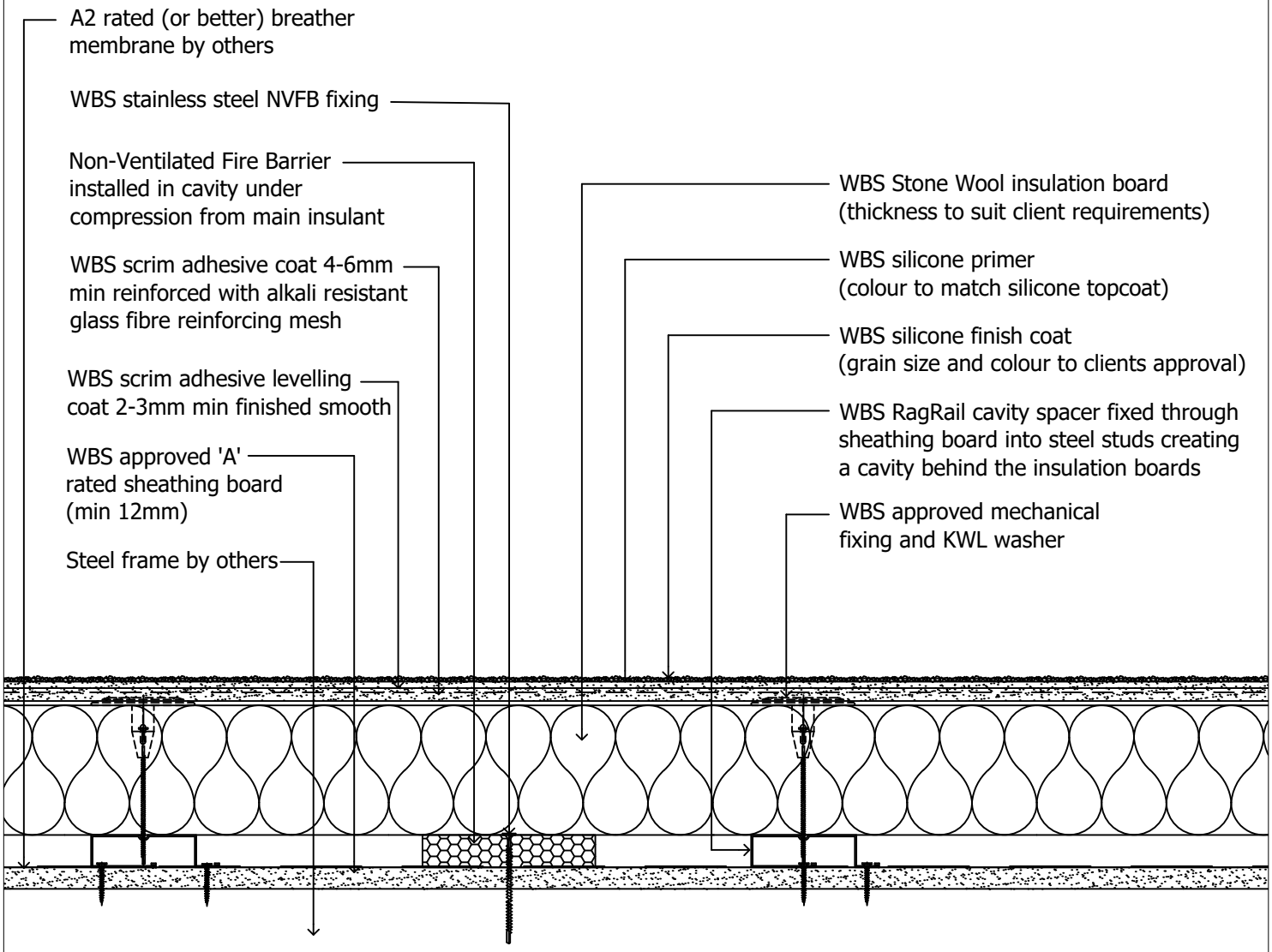

drawing description. **Vertical fire barrier detail**	drawn by. LS	Wetherby Building Systems Ltd
	checked by. RT	
drawing no. **SFS-BM-RAGRAIL-SW-SILICONE-17B**	revision. -	
	scale. nts	
project name. **Generic Detail Drawings**	date. 07.02.2023	
	dwg set. 38	

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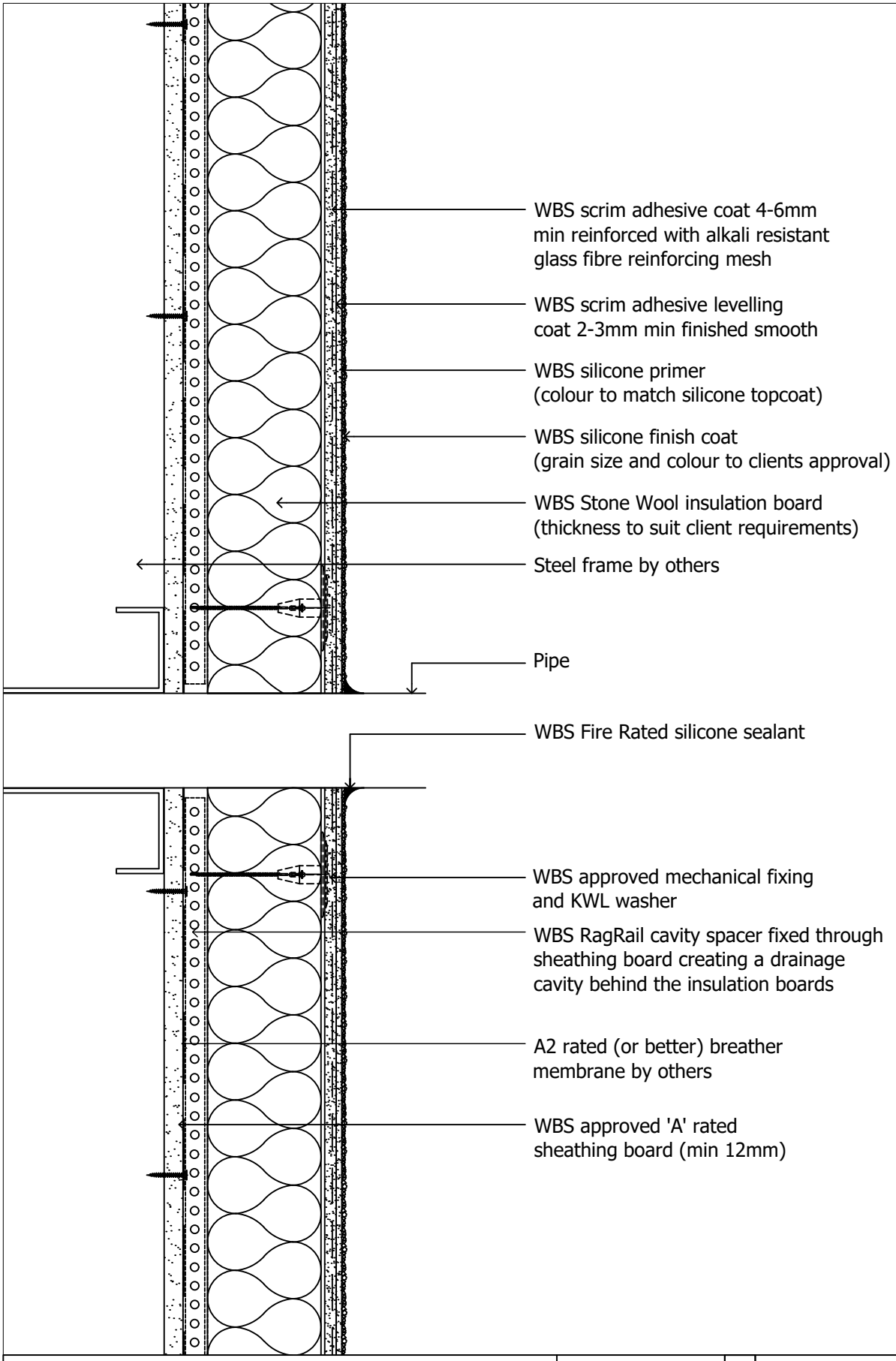

drawing description.
Pipe detail

drawn by. LS

checked by. RT

drawing no.
SFS-BM-RAGRAIL-SW-SILICONE-18

revision. -

scale. nts

project name.
Generic Detail Drawings

date. 07.02.2023

dwg set. 38

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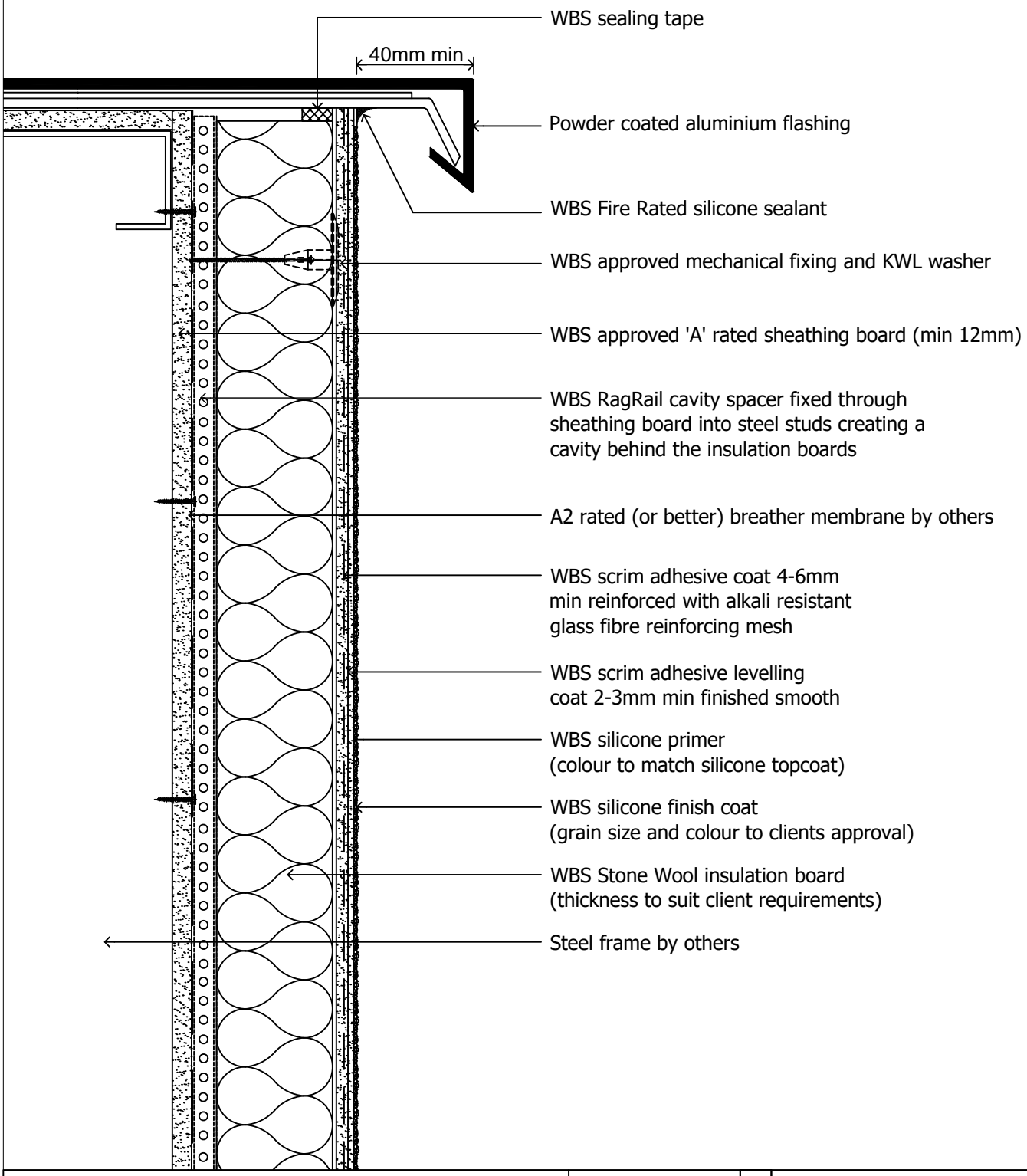

drawing description. **Parapet detail**	drawn by. LS	Wetherby Building Systems Ltd	wetherby creating a greener future
	checked by. RT		
drawing no. **SFS-BM-RAGRAIL-SW-SILICONE-21**	revision. -		
	scale. nts		
project name. **Generic Detail Drawings**	date. 07.02.2023		
	dwg set. 38		

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Testing. Advising. Assuring.

Title:

CLASSIFICATION OF REACTION TO FIRE PERFORMANCE IN ACCORDANCE WITH EN 13501-1:2007+A1: 2009.

Notified Body No:

0833

Product Name:

"Wetherby Epsitec – MW Insulation & Silicone Render"

Report No:

WF 406081

Issue No:

1

Prepared for:

Wetherby Building Systems,
1 Kid Glove Road,
Golborne,
WA3 3GS

Date:
31st October 2018

UKAS TESTING
0249

1. Introduction

This classification report defines the classification assigned to "Wetherby Epsitec – MW Insulation & Silicone Render", a render faced insulation, in accordance with the procedures given in EN 13501-1:2007+A1:2009

2. Details of classified product

2.1 General

The product, "Wetherby Epsitec – MW Insulation & Silicone Render", is defined as being suitable for construction applications.

2.2 Product description

The product, "Wetherby Epsitec – MW Insulation & Silicone Render", is fully described below and in the test reports provided in support of classification listed in Clause 3.1.

General description		Render faced insulation
Product reference of overall composite		"Wetherby Epsitec, MW & Silicone Render"
Name of manufacturer of overall composite		Wetherby System – Manufacturers Rockwool & Heck
Thickness of overall composite		195mm.
Weight per unit area of overall composite		**See Note 1 Below**
Render (test face)	Generic type	Silicone Render
	Product reference	"Wetherby Silicone Render 1.5mm"
	Name of manufacturer	Heck
	Colour reference	White
	Thickness	1.5mm
	Weight per unit area	2.2kg/m^2
	Flame retardant details	**See Note 1 Below**
Primer	Generic type	Quartz filled primer
	Product reference	"Wetherby Primer"
	Name of manufacturer	Heck
	Thickness	**See Note 1 Below**
	Weight per unit area	20g/m^2
	Curing process	**See Note 1 Below**
	Flame retardant details	**See Note 1 Below**
Scrim adhesive	Generic type	Cementitious scrim adhesive
	Product reference	"Wetherby Heck K&A Scrim Adhesive"
	Name of manufacturer	Heck
	Weight per unit area	7.25kg/m^2
	Thickness	6-8mm
	Curing process	28 days to fully cure for testing
	Flame retardant details	**See Note 1 Below**
Scrim	Generic type	Alkali Resistant Scrim Cloth
	Product reference	Wetherby Alkali Resistant Scrim Cloth
	Name of manufacturer	Saint Gobain
	Thickness	0.52mm
	Weight per unit area	1.61g/m^2
	Flame retardant details	**See Note 1 Below**

Insulation	Generic type	Mineral Wool EWI board
	Product reference	Wetherby Mineral Wool Insulation
	Name of manufacturer	Rockwool
	Thickness	150mm
	Weight per unit area	15kg/m2
	Density	Dual Density – 150kg/m2 / 90kg/m2
	Flame retardant details	**See Note 1 Below**
Brief description of manufacturing process		MW insulation fixed to metal Epsitec Rails / timber batten to create a drainage cavity. MW is rendered with 6-8mm of Heck K&A Scrim Adhesive with a layer of alkali resistant scrim cloth embedded into the top third of the scrim adhesive. A Primer is then applied and 1.5mm Silicone Render finish coat.

Note 1: The sponsor was unable to provide this information

Note 2: The sponsor was unwilling to provide this information.

3. Test reports & test results in support of classification

3.1 Test reports

Name of Laboratory	Name of sponsor	Test reports / extended application report Nos.	Test method / extended application rules & date
Exova Warringtonfire	Wetherby Building Systems	WF 404764, 404765, 404766, 402149, 402153	EN ISO 1716
Exova Warringtonfire	Wetherby Building Systems	WF 405908	EN ISO 1716 Composite Report
Exova Warringtonfire	Wetherby Building Systems	WF 405401	BS EN 13823

3.2 Test results

Test method & test number	Parameter	No. tests	Results	
			Continuous parameter - mean (m)	Compliance parameters
EN ISO 1716	Render – PCS (a)	3	2.1643 MJ/kg	Compliant
	Primer – PCS (d)		0.1083 MJ/m^2	Compliant
	Scrim adhesive – PCS (a)		0.2693 MJ/kg	Compliant
	Scrim – PCS (d)		0.0096 MJ/m^2	Compliant
	Insulation – PCS (a)		1.3197 MJ/kg	Compliant
	For the product as a whole – PCS (e)		1.0881 MJ/Kg	Compliant
EN 13823	FIGRA $_{0.2MJ}$	3	20.33	Compliant
	FIGRA $_{0.4MJ}$		18.45	Compliant
	THR $_{600s}$		2.03	Compliant
	LFS		None	Compliant
	SMOGRA		0.00	Compliant
	TSP_{600s}		20.05	Compliant
	Flaming droplets lasting more than 10s?		None	Compliant

4. Classification and field of application

4.1 Reference of classification

This classification has been carried out in accordance with clause 8 of EN 13501-1:2007+A1: 2009.

4.2 Classification

The product, "Wetherby Epsitec – MW Insulation & Silicone Render", a render faced insulation, in relation to its reaction to fire behaviour is classified:

A2 – s1, d0

The format of the reaction to fire classification for construction products is:

Reaction to fire classification: A2-s1, d0

4.3 Field of application

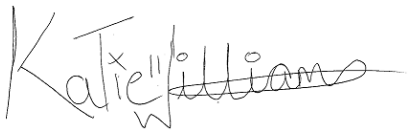
This classification is valid for the following end use applications:

i) Construction Applications

This classification is also valid for the following product parameters:

Product thickness	Any
Product composition	No variation allowed

SIGNED



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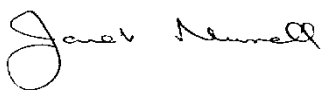
Katie Williams
Junior Certification Engineer
Technical Department

APPROVED



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Janet Murrell
Technical Manager
Technical Department
on behalf of **Exova Warringtonfire**

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