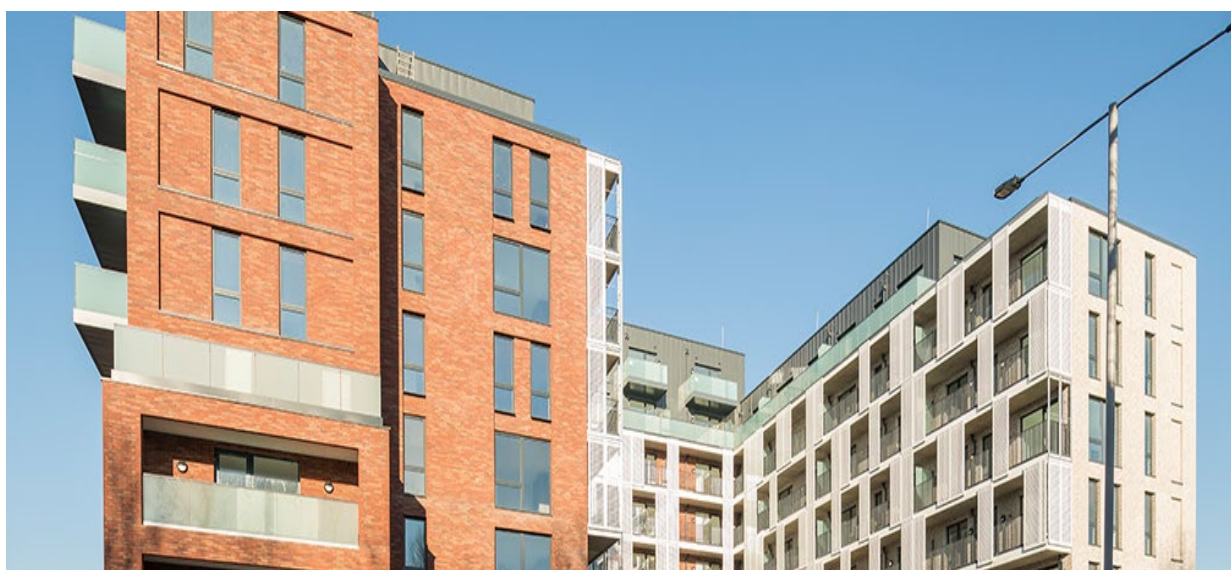


## Direct Fix to Timber Framed Structures

### Typical Project Specification



**SPS Envirowall Ltd**

Lonsdale Chambers

Lonsdale Street, Stoke-on-Trent

Staffordshire

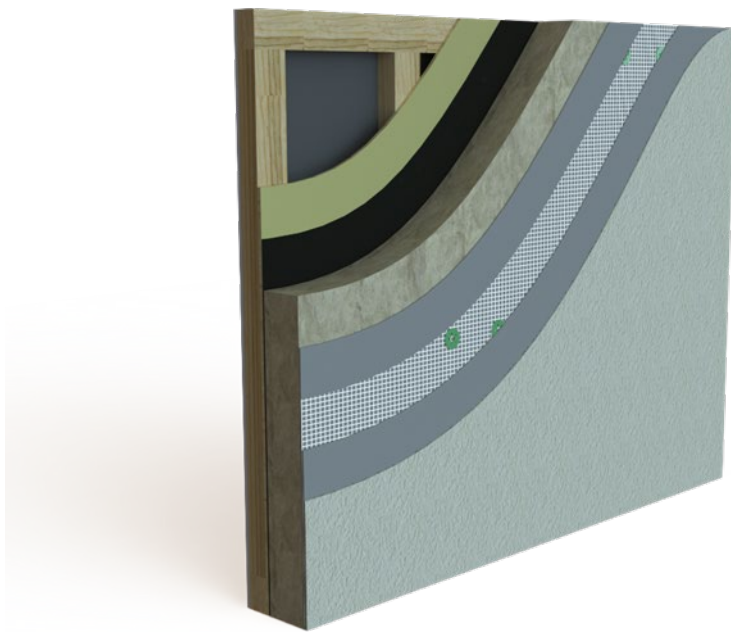
ST4 4BT

[technical@spsenvirowall.co.uk](mailto:technical@spsenvirowall.co.uk)

0800 6124662



Project:	Typical Specification
Project Reference:	Generic Specification
Specification Number:	Generic Specification
System:	Direct Fix Mineral Wool External Wall Insulation (EWI)
Substrate:	Timber Frame with Sheathing Board
Insulation:	Dual Density Mineral Wool EWI Slab
Thickness	190mm
Method of Fixing:	Mechanical fixing
System Finish:	EnviroSil Silicone Topcoat Finish
Accreditation:	BBA certificate 17/5447 product sheet 3



Typical Section through EWI System onto Timber

**Key Contact Details**

Regional Sales Manager: Generic Specification

Technical Support: SPS Envirowall Ltd  
 E-mail: [technical@spsenvirowall.co.uk](mailto:technical@spsenvirowall.co.uk)  
[samples@benx.co.uk](mailto:samples@benx.co.uk)  
 Tel: 0800 6124662

Supporting Links [Technical Downloads](#)  
[NBS Plus – SPS Envirowall](#)  
[NBS Plus – RCM](#)

Date of Issue: 31/10/2023  
 Prepared by: SPS Envirowall Technical Services

Project Specification Revision Record (for use on project specific specifications)

Version Number	Date of Issue	Key Revision Amendments / Additions	Requested By	Prepared By	Checked By

**Quality Assurance Note :-**

The following specification should be read in conjunction with Benx Quality Assurance documentation, best practice, and installation guidelines.

**Benx ISO CERTIFICATION**

- ISO 14001 - ENVIRONMENTAL REGISTERED COMPANY CERTIFICATE No. SP240368
- ISO 9001 - REGISTERED COMPANY CERTIFICATE No. SP240367
- ISO 45001 - HEALTH & SAFETY CERTIFICATE
- ISO 50001 - ENERGY MANAGEMENT

**M21**

**Please note, due to the changing nature of construction regulations this specification is valid for 6 months unless written confirmation from the Benx technical team is provided.**

**INSULATION WITH RENDERED FINISH – Framed Structures**

This specification is intended as a design and performance specification and as a preliminary support document to the project specifier. To be read with Preliminaries/General Conditions and in accordance with SPS Envirowall Installation instructions and good practice guidelines for alternative systems.

**GENERAL / SYSTEM REQUIREMENTS****110 SURVEY OF STRUCTURAL SUBSTRATE (Design Considerations)**

As part of the design process and onsite survey prior to site works the following must be considered and incorporated into the design of the structure and External Wall Insulation System.

- Adequacy of continual thermal support, considering any potential thermal bridges.
- Structural support of the SPS Envirowall EWI system, sheathing board, and any other associated components.
- Weather resistance in the interim period prior to final weather proofing layer of there EWI system
- Pullout of the sheathing board and or masonry support subject to project design.
- Wind and localised impact on the SPS Envirowall EWI system.
- Any other design considerations prior to application on site to be agreed with, principal designer, installing contractor and SPS Envirowall Ltd.

**PRE-APPLICATION INFORMATION**

If the survey returns the requirement for removal of the existing external cladding and replacement timber frame stud work this must be undertaken prior to any system application. A minimum requirement is for an 11mm Oriented Strand Board to be applied, overlaid with a suitable breather membrane. If the sheathing is not being re-clad then a breather membrane is not required.

**120 SURVEY OF STRUCTURAL SUBSTRATE (Structural frame / Sheathing Board)**

Timing: Before starting work covered in this specification.

Responsibility: Client / Contracts Administrator / SPS Envirowall Appointed Registered Contractor

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 insulate and render the substrate suitable to receive the system.

A schedule of services, fixtures and fittings requiring removal to facilitate installation of the system.

Check line and level. The system can only deal with localised variations, reference should be made to SPS Envirowall Technical guidance documents in the event the system varies outside of these requirements.

Proposals for treatment of cold bridges that may occur because of installing the system, e.g., at door and window reveals, concrete floor edges, movement joints.

Any other relevant information.

Remove temporary and or 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.

To confirm suitability of new substrate (Frame, Sheathing board, and Masonry) for application of specified external wall insulation system and to coincide with recommendations and allowable system tolerances as stated in this SPS Envirowall specification.

All relevant standards for framed structures and masonry or concrete supporting structures where relevant:

**Timber structures** – BS EN 1995-1-1 : 2004 and BS EN 1995-1-2 : 2004 and their respective UK National Annexes and exterior grade in accordance with BS EN 338 : 2016 and BS EN 14081-1 : 2016 and dry-graded and marked in accordance with BS 4978 : 2007

**Masonry** – BS 5628 Part1,2 & 3 – Code of practice for use of masonry.

**Concrete Structures** – BS 8110 Part 1 & 2 / Eurocode 2, BS EN 1992, *Design of concrete structures, Part 1-1, General rules for buildings*

BS 6093:2006 Design of joints and jointing in building construction in line with commentary notes within SPS Envirowall BBA certificate 17/5447 product sheet 3

Where relevant for reclad or remediation projects relevant assessments should refer to **PAS 9980:2022** Fire risk appraisal of external wall construction and cladding of existing blocks of flats, Code of practice.

All other relevant codes of practice deemed relevant must be given reference at this point.

Reference must be given to any relevant NHBC guidance in-particular in relations to clauses

- 6.11 in relation to good practice for application of Render and EWI systems.
- 9.1.2 in relation to line and level of substrate and appropriate finished render & brick slip systems

**N.B.** Any other information considered relevant prior to commencement on site and final specification issued.

### 160 REMEDIAL WORKS

Remedial work shown to be necessary by survey (clause 120) and to meet requirements of this specification:

Contracts Administrator / Registered Contractor responsibility (See cluses 450 onwards)

Prior to contract commencement the appointed contractor should walk site and where appropriate note any issues that may hinder or obstruct the installation of the SPS Envirowall system and or may influence any necessary design changes.

Any variations to the structure or project design must and reflected in a revised specification and be agreed with SPS Envirowall Technical services prior to the final installation stage.

### 180 STRUCTURAL SUBSTRATES

Description: Framed Structures (Timber Framed Structures / Concrete Frames Structures)

Preparation: All preparation to follow this suite of clauses and as follows:

Where applicable, the frame should be installed with an appropriate sheathing board (RCM Y-Wall or similar performance) ready to receive SPS Envirowall Direct Fix Timber Frame EWI System

All necessary repairs to the structure must be conducted by suitably qualified contractors and be complete prior to the application of SPS Envirowall EWI System.

EXTERNAL WALL INSULATION SYSTEM: -

**Supplier:**

SPS Envirowall Ltd  
 Lonsdale Chambers,  
 Lonsdale Street,  
 Stoke-on-Trent,  
 Staffordshire, ST4 4BT  
[technical@spsenvirowall.co.uk](mailto:technical@spsenvirowall.co.uk)  
 0800 6124662

**System reference:**

**SPS Envirowall Wall System 1 to timber frame EWI System**

Directly fixed External Wall Insulation (EWI) system

The system is suitable for installation on external sheathed Timber frame supporting walls.

**Supporting Structure:**

Structural timber frame and associated concrete

Exterior grade in accordance with BS EN 338 and BS EN 338

The timber structure should be no less than 37mm thick with a minimum width of 72mm or 0.026 times the panel height in mm whichever is the greater.

**Sheathing Boards:**

*Sheathing Board Requirements: minimum 11mm, 600 kg/m<sup>3</sup> Exterior Grade OSB OR*

**Sheathing Boards:**

12mm Benx RCM Y-Wall Sheathing board (Equal or approved)

Fire Classification: A1– BS EN 13501-1 : 2018

Modulus of elasticity in bending = 4000 MPa.

Manufactured to BS EN 12467 : 2012 Class 2

Minimum density of 1200 kg.m<sup>3</sup>

Sizes : 1200mm x 2400mm x 12mm thickness (subject to project)

Typical Pullout : 1.2 K/N (EWI fixing to board – EOTA 034)

Pull-through values : 976 N (Frame to sheathing board BS EN 1383 : 2016)

Method of Fixing: Fix005 4.2x42mm fixing

Spacing : 300mm centers unless otherwise specified by Benx RCM

**Other board thicknesses available subject to suitability**

**Breather Membrane:**

100g.m<sup>2</sup> mass per unit

0.093m<sup>3</sup> resistance to air permeability

Suitability to be determined by designer in conjunction with BBA Certificate 17/5447 product sheet 3

**Insulation:**

Dual Density Mineral Wool Ref. RDD190mm

Thickness: 190x1200x600mm

Density: 110kg/m<sup>3</sup> subject to project requirements

Reaction to fire: A1 BS EN 13501-1: 2018

Lambda Value: 0.036 W/m<sup>2</sup>K

Compressive Strength: 20kN<sup>2</sup>/ 50 (at 10% compression)

Vapour permeability (Sd[m]): 0.11 to ETAG 004 and EN ISO 7783-3

Water vapour diffusion resistance:  $\mu = 1$

Mineral Wool densities are influencing the thermal performance Lambda values of the insulation board. The Dual Density EWI board types have a nominal average density that is higher at the front face of the boards making it robust and suitable for rendering and fixings to sit on the denser face, then travelling through the middle to the back of the board with a lower density to achieve its Lambda value. The High density Mineral Wool boards are “Mono” density meaning they have a consistent density through its’ thickness and as such has a higher Lambda value than its Dual Density counterpart.

The critical performance data is its Tensile strength perpendicular to its faces and its compressive strength making both types fit for purpose in its use as an EWI insulation slab, supported by the manufacturers Declaration of

Performance documents and confirmation that these boards have been specifically developed for use in external wall insulation systems.

Pullout Over/through Value : Average 7.76 kN/m<sup>2</sup> when installed with recommended fixing pattern through reinforced base coat (Tested in line with ETAG 004:2013)

Method of fixing: Mechanical Fixings

1<sup>st</sup> Fixing Layer – 1 fixing per board into Y Wall Sheathing Board

Fixing Reference: WX-58T 250mm with the KC-60 washer and KWL-090PP spreader washer

2<sup>nd</sup> Fixing layer – 7 fixings per m<sup>2</sup> through main reinforcing mesh into sheathing board/substrate

Fixing Reference: WX-58T 250mm and KC-60 washer

N.B. 7 No per m<sup>2</sup> based on Design Wind Speed of 2.60 kN/m<sup>2</sup>

Refer to project wind loading requirements

Fire Fixings: Stainless Steel 1 Fixing per m<sup>2</sup> through the main reinforcing mesh

Fixing Reference: R-WX-48T240-A4 and MKC-A2-060 washer

FOR FIXING BACK TO RC FRAME PLEASE SWITCH TO THE BELOW FIXINGS, WHERE APPROPRIATE, WHILE MAINTAINING THE APPROPRIATE FIXING PATTEN.

CONCRETE FIXINGS: TFIX 8S 255MM

FIRE FIXINGS: MBA-SS-08-250

#### **BASECOAT & REINFORCEMENT**

Base Coat Render : SPS Envirowall Envirorend Base Coat Ref.ESPS/EXG-BC

Liquid Water Absorption W24 [kg/m<sup>2</sup>\_h]: < 0.06 to ETAG004 Clause 5.1.3.1.

Vapour Permeability (Sd[m]): ,0.09 to ETAG 004 and EN ISO 7783-3.

Water vapour diffusion resistance:  $\mu = 15$

Thickness: 3 to 6mm

Size: 25kg bag

Reinforcement: SPS Envirowall High Performance Reinforcement Mesh Ref.ESPSM100

Areas: Standard areas

Method of application: Bedded in top third of Envirorend base coat

Weight: 180g/m<sup>2</sup>

Dimensions / Weight : 4mm x 4mm / 180g/m<sup>2</sup>

Tensile Strength (nominal): 2000/2200n

Roll size: 50 x 1m

Reinforcement: SPS Envirowall High Impact Reinforcement Mesh

Areas: High Impact / High Traffic Areas

Method of fixing: Bedded in top third of Envirorend base coat (butt jointed)

Weight: 210g/m<sup>2</sup>

Dimensions / Weight : 10mm x 10mm / 210g/m<sup>2</sup>

Tensile Strength (nominal): 2000/2500 N/8cm

Roll size: 25 x 1m

Primer: EnviroSil Silicone Primer (same colour as topcoat finish)

Resin bonded primer comprising of quartz with special adhesive additives.

Supplied in 25L Plastic containers

Density: 1,79 kg/dm<sup>3</sup>

Size: 25kg drum

## FINISHES

Decorative finish: EnviroSil Silicone Topcoat  
 Density approx. 1,72 kg/dm<sup>3</sup>  
 Vapour Permeability (Sd[m]): ,0.09 to ETAG 004 and EN ISO 7783-3.  
 Water vapour diffusion resistance:  $\mu = 60$   
 Water absorption coefficient  $w \leq 0.1 \text{ kg}/(\text{m}^2\text{h}0,5)$   
 Thickness: 1.5mm  
 Coverage: 10m<sup>2</sup>  
 Size: 25kg drum  
 Colour: White – TBC Subject to client approval

## BEADS/TRIMS/PROFILES/RAILS:

### Description:

#### Full System Beads

Length: 2.5m  
 Aluminum Base bead Ref. ABP-D190  
 To be used in conjunction with 6mm PVC Clip mesh bead Ref ESPS2191  
 Full depth stop bead Ref FSS-190  
 Vertical movement bead Ref.ESPS/3036  
 Vertical movement bead (Internal Corner) Ref.ESPS/3035  
 Vertical movement bead (Flush façade) 2-piece Horizontal Movement Bead Ref: ESPS-RCHM  
 Horizontal movement bead combination- Ref:ABP-D190 Plus Clip on bead Ref.ESPS/9182 Plus Lower base angle Ref.ESPS/9181  
 N.B – the above Horizontal movement bead must be used in conjunction with the specified starter track.

#### Surface Mounted Beads

Material: PVC with prebonded mesh reinforcement  
 Length: 2.5m  
 PVC Meshed External corner bead Ref: ESPS1023  
 6mm APU Bead with Mesh 2.4m Length Ref.ESPS1060 (All Openings & Aperture Sealing bead)  
 6mm Stop Bead with Mesh Ref.ESPS2051  
 6mm Overhead Drip Bead with Mesh Ref.ESPS2030  
 Vertical expansion bead up to 3mm movement Ref.ESPS/MJ6p up to 5mm Ref.ESPS/3035.  
 Expanding Sealing Tape – 3-7mm Ref.ESPS-SEAL 15/3-7 to all openings (windows, doors, etc.)



### **System Performance: Direct Fix (Frame Structure)**

System certification: BBA certificate 17/5447 product sheet 3

Testing: ETAG004 Guideline for European Technical Approval of EWI Systems

Fire: A2-s1, d0 reaction to fire classification to BS 13501-1 2018 (**EnviroSil Silicone**)

Y Wall sheathing board (9 to 15mm) - A1 BS 13501-1 2018 for sheathing board to main structure (where applicable and approved subject to project requirements)

Approved above Up to and exceeding 18m

Effective/Design Life: 30 years (60 years subject to approval & agreed maintenance schedule)

Thermal performance - U-Value: TBC Refer to SPS Envirowall U-Value Calculations

Impact resistance: Hard body & Soft Body impact resistance tests to ISO 7892 in accordance with ETAG 004 Hard body impact - Category I & II (subject to finish)

Soft body impact - No damage at 300 Joules

Assessed in accordance with Technical Notes EOTA 034 & 004

Pullout Over/through Value : Average 7.76 kN/m<sup>2</sup> when installed with recommended fixing pattern through reinforced base coat (Assessed in line with ETAG 004:2013)

Note : High Impact areas or high traffic areas above the tested results (above) it is recommended to include SPS Envirowall High Impact (Armor mesh 210 g/m<sup>2</sup>)

### **DESIGN & COMPLETION - SPECIFICATION NOTES**

#### **FIRE DESIGN AND FIRE BARRIERS**

Final locations must be agreed by project administrator / designed with consultation with the project fire engineer.

Reference must be made to and cross referenced to the following fire standards and the scope of the tested SPS Render EWI system through the design stage and as the project progresses.

Where the requirements exceed the minimum requirement of Approved Document B, please consult SPS Envirowall technical services for alternative system options.

- Building fire strategy subject to building type and risk category.
- BS 9999 : Code of practice for the fire safety in the design, management, and use of buildings.
- Where the requirements exceed the minimum requirement of Approved Document B, please consult SPS Envirowall technical services for alternative options.
- BS 9991:2015 Fire safety in the design, management, and use of residential buildings. Code of practice
- BR 135 Fire performance of external thermal insulation for walls of multistorey buildings, third edition (BR 135 - 2013)

When the EWI system is used in conjunction with Y wall it is possible to achieve a timed fire resistance of between 60 – 120 minutes dependent upon the overall build up. Please consult Benx technical for validation and to receive any relevant fire testing.

#### **DESIGN WIND LOADS**

Wind loads greater than 3.30kN/m<sup>2</sup> – Additional fixings will be required and additional sacrificial fixings across the centre line of the insulation at a frequency of 2 per slab using the KWL-090PP spreader washer.

The figures quoted in the main body of this specification are typical values. The system shall be designed to have sufficient strength to withstand wind action loads in accordance with BS EN 1991-1-1-4.

Where projects are in an exposed location (coastal) or it is likely in a high wind pressure location depending on height topography, etc. a wind load calculation may be required for this project. In such instances a design wind loading evaluation should be done by the client / designer. Account should be taken for the shape size and location of the building.

Please contact SPS Envirowall to arrange a project specific wind load calculation to be conducted should it be required.

**VAPOUR PERMEABILITY**

- Not less than that of the construction to which it is applied to
- Qualified by Condensation and dew point risk analysis calculations including the overall building fabric.
- SPS Envirowall Technical services can provide project specific calculations to evidence.

**BREATHER MEMBRANES**

The system is designed for use with a breather membrane and mechanical fixing is a priority for performance of the system. However, whilst every project is different, and we are not responsible for the overall design of the façade, and where the sheathing board is specified outside of the scope of this specification the further validation of the sheathing board may be required.

Where RCM Y-Wall is the primary sheathing board and substrate, we can confirm that Y-Wall has been evaluated to BS 12467 Cat A for use in applications where the board may be subjected to heat, high moisture, and severe frost. As such a membrane to protect the product is typically unnecessary.

Consideration must be given to the design and install of the sheathing board and the timescales between installation of the sheathing board and the installation of the EWI system.

**DESIGN**

The EWI system is designed within the scope of the BBA Certificate and the parameters of the Technical Notes EOTA 034 & 004 (European Organisation for Technical Assessment). Also, reference should be given to the relevant code of practice, detailed below, which refer to installation and design of Render and EWI (ETICS) systems.

It is the installing contractor and or the principal designer's responsibility to design the system and install within the scope of this certificate and guidance notes, any deviation to the principal design must be source agreement of SPS Envirowall and revised project specification issued prior to any works on site.

**EXPANSION / MOVEMENT JOINTS**

Movement joints should be formed in the SPS Envirowall system where full structural movement joints are required and where dissimilar background materials abut each other. Usually, the insulation boards can be carried across blockwork movement joints without the introduction of a movement joint within the system.

No additional joints are required for the integrity or expansion of the system.

Day joints may be required for practical reasons and the positioning of these joints should be agreed between the client contractor and SPS Envirowall prior to the commencement of the works.

Horizontal and vertical movement joints (designed to cater for the calculated degree of movement to control expansion, contraction, and cracking without reducing the stability and weathertightness of the wall) shall be carried through the system using movement beads of PVC, Powder coated galvanized steel or austenitic stainless steel as appropriate according to the project specific design.

**INSTALLATION GUIDANCE & GOOD PRACTICE SPECIFICATION NOTES****SAMPLES**

Submit SPS Envirowall A5 Samples & examples of finished render, colour, and texture of agreed finishes items for approval.

**SITE SAMPLE**

Prior to any works commencing on site as minimum 1m x 1m sample panel should be produced ONSITE by the appointed contractor and used as a control sample for finish, texture, and a representation of the agreed standard of work.

Keep approved samples on site for the duration of the contract for inspection/ comparison purpose.

### **UNIFORMITY OF COLOUR AND TEXTURE**

Once samples of coatings have been approved, do not change type or proportion of constituent materials unless agreed with Contract administrator and other relevant parties.

Ensure that supplies of materials are sufficient to give consistent and uniform colour and texture. To minimise variations in colour, avoid dry jointing and continuous surfaces must be completed without breaks.

Programming of work to coincide with elevation breaks, stoppages and weather is vital.

### **INSTALL**

Installation of SPS Envirowall System MUST Follow recommended install guidelines in line with the above specification and good normal site practice, please refer to SPS Envirowall Install and design guidance documents.

Supporting this specification is a site install and best practice guide where some of the following notes and standards are referenced plus more detailed instructions for installation.

BS EN 13914-1:2016 Part 1 AND BS 8000-0:2014

All rendering should be in accordance with the relevant recommendations of BS EN 13914-1:2016 Design, preparation and application of external rendering and internal plastering - Part 1: External rendering and BS 8000-0:2014 code of Practice for plastering and rendering, and SPS Envirowall Limited's instructions.

BS EN 13500:2003

Where relevant guidance should be notes and referenced from BS EN 13500:2003 - Thermal insulation products for buildings - External thermal insulation composite systems with renders (ETICS)

BS 6150:2006 (+A1:2014) (incorporating corrigendum No.1) AND BS 8000-0:2014

All SPS Envirowall masonry paints and decorative finishes must be applied during suitable weather conditions to dry backgrounds, strictly in accordance with SPS Envirowall Limited's instructions and the relevant clauses in BS 6150:2006 Painting of buildings - Code of practice (+A1:2014) (incorporating corrigendum No. 1) and BS 8000-12:1989 Workmanship on building sites, Code of Practice for decorative wallcoverings and painting.

**NB.** BS 8000: Part 12: 1989 was partially superseded by BS 8000-0:2014 but remains current and is cited in Building Regulations. BS 8000-0:2014 Workmanship on construction sites. Introduction and general principles.

### **SITE STORAGE OF SPS ENVIROWALL MATERIALS**

Site storage and protection of SPS Envirowall materials must be in accordance with the manufacturer's instructions.

### **MIXING OF RENDERS AND ADHESIVES**

All SPS Envirowall renders are mixed using a paddle mixer in accordance with manufacturer's recommendations.

### **COATING OF NEWLY APPLIED RENDER**

The coating of newly applied render is to be delayed by a minimum of 48 hours in good drying conditions to allow basecoat to set before any further required render layers including adhesive.

### **PROGRAMMING THE WORK**

The contract administrator must ensure that the work is programmed to be carried out during suitable weather conditions, taking into consideration seasonal variations, and allowing sufficient time in the programmed for stoppages due to inclement weather.

### **PROTECTION TO NEW WORK**

The main contractor must provide protection to new work during inclement weather using a protection system suited for the worst weather conditions that can reasonably be anticipated. The main contractor must monitor local weather forecasts and if necessary, modify their protection system accordingly. Failure to carry out such protective measures must make any resulting failure in the SPS Envirowall products or systems the sole responsibility of the main contractor.

### **COVERAGE RATES**

SPS Envirowall Limited will not, under any circumstances, guarantee coverage rates quoted for products. The rates quoted are based on site experience but may vary due to site conditions, operator skills etc. Contractors quoting for contracts must ensure that coverage figures can be achieved in each particular instance. No claim against SPS Envirowall limited will be allowed relating to coverage of materials.

### **AVOIDANCE OF COLOUR SHADING**

To minimise colour shade variations and to avoid dry line jointing, continuous surfaces should be completed without a break. If breaks cannot be avoided, they should be terminated where services or architectural features, such as drainpipes, reveals or lines of doors and windows, help mask joints. Where long uninterrupted runs are planned, the material should be checked for batch numbers to safeguard colour consistency. Materials having the same batch number should be used to complete an elevation. See relevant product data sheets of any allowance of water being applied to the products.

All SPS Envirowall masonry paints and decorative finishes must be applied during suitable weather conditions to dry backgrounds, strictly in accordance with SPS Envirowall Limited's instructions and the code of practice and good practice guides to eliminate or reduce wherever possible the effect of variations in colour.

### **REPAIR TO DAMAGE**

An SPS Envirowall Approved Contractor using the appropriate components must be used to repair damaged areas and procedures detailed in the SPS Envirowall installation instructions.

Conventional rendering techniques and SPS Envirowall render materials are used to repair damage to the product.

Damage to the product should be repaired immediately and repairs should be carried out in accordance with the relevant recommendations of BS 5262: 1991 BS EN 13914-1:2016 Design, preparation and application of external rendering and internal plastering. External rendering (Incorporating corrigendum April 2017).

Regular maintenance checks should be carried out on architectural details for shedding water and on external plumbing and fittings to prevent penetration of water into the rendering.

### **HEALTH AND SAFETY**

The fibres used in SPS Envirowall renders may irritate the skin. Protective clothing should be worn to avoid contact with both dry, unmixed material and with wet mortar. Great care must be taken to avoid contact with the eyes. When mixing SPS Envirowall materials a filter respirator should be worn.

Where excessive concentrations of dust may accumulate the measures defined in the Health and Safety Executive publication EH40/2005 Workplace exposure limits for unlisted substances should be followed. Note that EH40 is published annually, and the current edition should be followed. Any concerns regarding application, use and disposal of products please request the relevant MSDS data sheets.

### **DURABILITY**

The system should remain effective for at least 30 years, provided any damage to the surface finish is repaired immediately, and regular maintenance is undertaken including checks on joints in the system and on external plumbing fittings to identify leakage of rainwater into the system, and appropriate steps are taken to correct the defects.

### **LIME BLOOM**

Lime is not present within the topcoat system, so lime bloom cannot occur. Some of our cementitious basecoats and topcoats do have Lime and cement content and, as such, caution must be taken in weather conditions stated in the causes below.

### **SPILLAGE OF SPS ENVIROWALL COATING MATERIALS AND MASONRY PAINTS**

SPS Envirowall render coatings and paints are highly adhesive and all necessary precautions must be taken to protect footpaths, windows, adjacent walls, roof surfaces etc. from spillage, which may cause stains. All windows and adjacent surfaces should be protected during the application of SPS Envirowall products.

### **WINDOWSILL PROJECTION**

Where window frames incorporating windowsills are to be provided by others, then the sill projection must be to a minimum of 40mm beyond the outside line of the SPS Envirowall system.

### **SCAFFOLDING**

Wherever possible independent scaffolding should be used to avoid the need to subsequently make good holes and other breaks in the work.

Where the scaffolding is required to be tied back to the building it is normal to recommend and provide access points for future scaffolding required for maintenance inspection and repairs.

The scaffolding must be arranged to enable good access to be obtained to the whole of the facade of the building and sufficient clearance for working is to be provided between the scaffolding and the finished surface of the external wall insulation system. An allowance must be included for the thickness of the finished system on the face of the building.

### **LINE AND LEVEL OF BUILDING**

The terms “line and level” used in conjunction with this specification refer only to dealing with minor localised variations in the surface to which the system is applied.

The insulation system will follow the line of the building. Therefore, the system is capable of accommodating localised deviations in the substrate and able to facilitate levelling of an elevation that deviates by up to 20mm when used in accordance with the appropriate adhesive methods.

The system cannot correct major variations in line and level over several storeys in height and over large areas of elevations, and in these cases will basically follow the line of the existing building unless these building irregularities are overcome by a treatment, prior to the applications of the External Wall Insulation system.

### **WEATHER CONDITIONS**

Application of the system must only be conducted in suitable weather conditions. SPS Envirowall renders, and adhesives must not be applied in rain, fog, or mist, at temperatures below 5°C or above 30°C or (application may start +3°C and rising and cease at +5°C and falling) or if exposure to frost is likely to occur during drying. SPS Envirowall renders must not be applied to saturated, or frost bound walls and insulation boards. In sunny weather work should commence on the shady side of the building and be continued round following the sun to prevent the rendering drying out too rapidly.

### **SERVICES AND PENETRATIONS**

Prior to any commencement of works on site a full list of any services, penetrations and or M & E services must be notified, checked, and installed before the main EWI work progresses.

### **SEALING SYSTEM**

Primary Seal - SPS Envirowall Sealing tape Ref.ESPS-SEAL 15/3-7 – 3-7mm where system abuts window and door frames. Remove self-adhesive tape and apply at windows or any other apertures.

Secondary Seal - Low Modulus Silicone Sealant to all key areas susceptible to penetration of moisture and or wind driven rain.

## **SUPPORTS / SERVICE PENETRATIONS**

Where service ducting and/or attachments penetrate the system, guidance must be sought from SPS Envirowall on the nature of the fixings and support brackets where appropriate.

In the instance of service ducting the designer and or M&E contractor the EWI systems should not be considered as fire stopping for any service penetrations into the structure.

## **GENERAL NOTES**

The purpose of these draft specifications is to assist the Project design team in producing the respective documentation for any project under consideration.

The draft specifications are provided in good faith for use at the discretion of the respective design consultants, to be amended and edited as required to suit the project requirements. As manufacturers/suppliers SPS Envirowall Technical is not privy to detailed contractual arrangements and documentation of individual projects and is therefore not in a position to co-ordinate related work by others. It is not the intention for this draft to relate to any particular project, but to provide a guide to the more common items encountered in construction assemblies incorporating Benx, SPS, and RCM products.

Whilst it is the Planning supervisor/Quantity surveyors/Project designer's responsibility to produce their respective documents and we can assist them in their duties, we cannot accept responsibility for any errors or omissions which may occur in tender or contract documents or for compliance with the requirements of the CDM and Health & Safety regulations which may be applicable.

Finally, please ensure that any amendments to SPS Envirowall Technical draft specifications represent a true interpretation of the project designer's requirements.