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1 0432490-A MAIN ROOF AREA - SIKASHIELD PRO TECHNICAL SPECIFICATION

1.1 DISCLAIMER

This specification is intended to provide information solely relating to proposal(s) for a new roof, or the refurbishment of an existing roof. The information has been compiled using due care, skill and diligence, however the following points should be noted;

- i. This document is provided freely and in good faith based on the information provided to Sika Ltd by the user at the time of writing. This specification is deemed to be valid for a period of **12 months** from the date of issue, after which all documents should be reviewed by Sika Ltd to ensure that the proposed solution remains fit for purpose. Sika Ltd accept no responsibility for user errors, inaccuracies or omissions of the information provided to Sika.
- ii. Any alteration or variance to the proposed design, products or systems listed in the specification must be agreed by Sika Ltd in writing before works begin.
- iii. It must be noted that our proposal(s) include measures to ensure that any standing water is minimised where possible. Due to working on an existing structure however, the possibility that any standing water may occur due to the lines and levels of the existing building still exists and Sika Ltd can accept no liability in this regard.
- iv. Sika Ltd offer no guarantee nor accept any liability for the condition or performance of either the new or existing structural deck, any retained or existing elements of the building, or the existing roofing system. For advice on the suitability of a structural deck further information should be sought from a suitably qualified person.
- v. It is the responsibility of the installing contractor, to review this specification and all relevant documentation relating to the project and undertake any additional site visits to familiarise themselves with specific on-site conditions or limitations that may have impact on the works.
- vi. Where the roof waterproofing works form part of a wider construction project, the Architect or design professional should be consulted to confirm the suitability of this specification when considered in the context of the whole construction project.

1.2 SYSTEM SCHEDULE

COMPONENT	PRODUCT
Primer	SikaRoof® Primer-610 Spray
Underlay	SikaShield® E54 PE 3 mm
Capsheet	SikaShield® HB79 MG 4 mm
Exclusion Zone	SikaShield® E79 MG SA 4 mm
Accessories	SikaShield® Lightning Conductor Clip

Draft Specification - Please note this specification has been marked as a draft specification. This could be, but not limited to incomplete information being provided (or being available) at the time of writing; examples of this include Pullout and/or adhesion test results, limited information regarding the state or condition of the existing roof build up or non-standard construction types.

For more information regarding the status of this specification, please consult the Sika Roofing Technical department.

1.3 SPECIFICATION DETAILS

Specification Details: Main Roof Area	
Roof size (m2):	4000
Roof height (m):	25
Degree of Roof Pitch (°):	-
Profile of Roof:	Curved
Hipped:	No
Longest Building Length (m):	-
Type of eaves:	Drip Edge
Building use:	-
Humidity class:	1
U Value:	-
The criteria above must be checked by the Specifier. The Sika Roofing Technical Department should be notified of any discrepancy.	

1.4 THE CODE FOR CONSTRUCTION PRODUCT INFORMATION (CCPI)



The Code for Construction Product Information (CCPI) was created to promote an urgent and positive culture and behaviour change in the way the construction product manufacturing industry manages and provides information on their products. The CCPI was initiated by the Construction Product Association (CPA) as a direct response to Dame Judith Hackitt's review of Building Regulations and Fire Safety set up in the wake of the Grenfell Tower tragedy.

There are 11 Clauses within the CCPI assessment which cover a wide range of matters from responsibility for product information, to transparency of performance, proof of stated claims, general information and competency. The CCPI is built around five 'acid tests' - product information must be 'Clear, Accurate, Up-to-date, Accessible and Unambiguous'. The 11 clauses are also underpinned by a requirement to demonstrate the highest levels of integrity, ethics, leadership and culture around product information governance and competence.

The Code for Construction Product Information (CCPI) will help organisations drive higher standards in the presentation of construction product information, prioritising building safety.

Whether written in a specification, brochure, a presentation, on a website or social media, the CCPI will seek to provide assurance that users of product information have the necessary facts when making decisions about specifying or installing their verified products.

The CCPI will assure independent and robust verification, working to build more confidence with the public and external stakeholders and setting the market for UK construction products ahead of others.

1.5 SAFE2TORCH GUIDANCE

Safe2Torch Guidance – The NFRC have published a Safe2Torch advice document which advises in the use and application of Torch on products. Guidance can be found here; - [Safe2Torch\(nfrc.co.uk\)](https://www.nfrc.co.uk/safe2torch)

Note: It is the responsibility of the roofing contractor to carry out a risk assessment on all aspects of the contract.

1.6 EXISTING BUILD-UP & PREPARATION

Structural Integrity – The structure is to be checked by a suitably qualified agent. Structural requirements are beyond the scope of this specification.

Existing Roof Build-up - The existing roof build up is believed to be as shown below. However should this be found not to be the case, Sika Limited should be consulted as this is likely to effect the specification.

Felt Waterproofing Bituminous Coating Concrete Deck

Existing Concrete: Inspect the concrete and carry out as follows: suspect areas are to be hammer tested, and areas found to be hollow or defective must be removed and made good using an appropriate polymer-modified mortar, before then being allowed to cure for a minimum period of 72 hours prior to overcoating, in accordance with standard concrete repair procedures.

A recommended repair mortar for small voids or hollows is Sika® Rapid Repair Mortar, R4 fast setting cementitious repair mortar. Application of this repair mortar as per data sheet.

The surface finish must be smooth, even, and free from deformation and sharp deviations in level and profile (i.e. similar to a pan or skip float finish).

Outgassing: The concrete must be carefully assessed for moisture content, air entrapment, and surface finish prior to installation of the specified system. Any requirement for priming must also be considered. Installing the membrane either when the concrete temperature is falling or stable can reduce outgassing.

Protection of Exposed Roof Decks – Removal of the existing waterproofing systems may need to be phased so that only areas that are waterproof or, otherwise suitably protected from water ingress, are exposed.

Existing Roof Preparation – Existing felt surfaces that are blistered should be star-cut and heated where practical in line with Safe2Torch Guidance.

Ensure the remaining felt is suitably adhered to provide a smooth and level surface for the installation of the new waterproofing system.

Exposed Metal Surfaces – Exposed metal surfaces to be included in the membrane schedule are to be wire brushed or mechanically abraded to remove rust/scale or oxidation. Return to a clean, bright metal wherever possible and prime accordingly.

Surface Lying Debris – Prior to the initial cleaning of the roof, all surface lying debris should be removed by conventional methods.

Note: *Outlet leaf grates and or protection should be fitted in all cases to ensure that no debris enters the drainage system.*

Initial Cleaning – All surfaces to be overlayed are to be thoroughly cleaned by conventional means. Ensure that surfaces are free from visible moisture and that surface lying dust, dirt and other forms of contamination are removed.

1.7 SUBSTRATE PREPARATION

Removal of Vegetation/Growths – Visible growths or vegetation should first be removed. Thoroughly rinse off any cleaning agents and allow surfaces to dry before continuing with the application.

Galvanized Surfaces – Exposed galvanized surfaces are to be degreased using a proprietary solvent based degreaser. Work well into surfaces, allow to react and then thoroughly wash down with fresh water. Treatment is to be in accordance with the manufacturer's instructions. Allow surfaces to dry before continuing.

Note: *Exercise any precautions issued by the Manufacturer.*

SikaRoof® Primer-610 Spray – Apply a coat of SikaRoof® Primer-610 Spray to the prepared surface prior to the installation of the specified system with a 25% overlap to ensure correct coverage. Leave to dry for approximately 30 minutes or until it is no longer tacky.

Note: *Consumption depends on the roughness and absorbency of the substrate and ranges from 75g/m² to 125 g/m². One single canister can cover from 150 to 200m² depending on application and substrate.*

Application, storage and use of the product should be done so in strict accordance with the product & material safety data sheets.

1.8 HUMIDITY CLASSIFICATION

Consideration should be given to BS 5250:2021 Management of Moisture in Buildings - Code of Practice.

1.9 PRE-WATERPROOFING

Final Cleaning: Immediately prior to application, ensure that all surfaces are free from visible dampness and that surface lying dust, dirt and other forms of contamination are removed.

1.10 TECHNICAL DETAILS

1.10.1 SIKASHIELD® RBM - SPECIFICATION - DETAILING - UPSTANDS

Upstand - Flashing Detail - Membrane Only

- Strip out the existing upstand detail and prepare the underlying structure for treatment.
- Inspect and carry out all necessary maintenance work to the upstand details.
- Cut a new chase into brickwork upstands. The chase is to be a minimum of 25mm deep and 150mm above the finished surface level.
- Install a suitable cover-flashing, this is to be base clipped and suitably plugged at 300mm centres. Lengths of code 4 Lead or suitable lead replacement should not exceed 1.5 linear metres and laps should be not less than 150mm.
- Apply primers to the upstands,.
- Install the membrane as specified up the upstand and dress into the new pre-cut chase detail ensuring a finish of a minimum height of 150mm above the finished waterproofing level.
- Brush the chase clean and seal the detail with Sikaflex®-508.

Note: The sealant used in this detail is a maintenance item and therefore subject to routine maintenance checks. Patination oil should be applied in accordance with the lead manufacturer's instructions.

Ensure that any cavity trays discharge above the finished level of waterproofing.

Internal Angles: Install new angle fillets which are to be suitably adhered to all internal angles and prepared to receive the new SikaShield® system.

Note: Internal Angle fillets are a guarantee requirement for all angles of 90 degrees.

Upstand – New Termination Bar:

- Strip out the existing upstand details and prepare the underlying structure/substrate.
- Apply SikaRoof® Primer 600/610 to the upstands as specified.
- Install the SikaShield® membrane(s) as specified up the upstand ensuring a minimum height of 150mm above the finished waterproofing level.
- Install SikaShield® termination bar to secure the membrane to the face of the upstand fixed at minimum 150mm centres with suitable screw fasteners.
- Ensure the area is clean and free from debris and seal the upper lip of the termination bar with Sikaflex®-508.

Note: Please note that termination bars are only suitable for areas where it is not practical or possible to install a chase and counterflashing.

▣ **Asphalt upstands must be fully removed prior to works starting to the upstand.**

1.10.2 SIKASHIELD® RBM - SPECIFICATION - DETAILING (PARAPETS & KERBS)

Parapet – Replace/New Trim:

- Remove the existing trims/capping/copings and dispose of accordingly.
- Strip out the existing parapet details and prepare the underlying structure/substrate.
- Raise the parapet if required or applicable to at least 150mm above the finished roof level of the new waterproofing.
- Inspect and carry all necessary repair work to the parapet substructure.
- Apply SikaRoof® Primer 600/610 to the parapets as specified.
- Install the SikaShield® Underlay membrane as specified finishing at the outside edge of the parapet.
- Install suitably sized SikaShield® GRP trims fixed through the underlay membrane at 150mm centres using suitable fasteners.
- Install the SikaShield® cap sheet as specified finishing tight into the return of the top of the trim ensuring a consistent extrusion of bitumen is achieved.

Note: Please note that nails are not suitable for restraining trims, screws must be used.

1.10.3 SIKASHIELD® RBM - SPECIFICATION - DETAILING (PERIMETERS)

Perimeter – Watercheck:

- Remove the existing trims and dispose of accordingly.
- Strip out the existing watercheck details and prepare the underlying structure/substrate.
- Ensure the watercheck is at least 50mm above the finished roof level of the new waterproofing.
- Inspect and carry all necessary maintenance work to the underlying structures.
- Apply SikaRoof® Primer 600/610 to the parapets as specified.
- Install the SikaShield® Underlay membrane as specified finishing to the outside edge of the watercheck.
- Install suitable SikaShield® GRP edge trims fixed through the underlay membrane at 150mm centres.
- Install the SikaShield® cap sheet as specified finishing tight into the return of the top of the trim ensuring a consistent extrusion of bitumen is achieved.

Note: Please note that nails are not suitable for restraining trims, screws must be used.

1.10.4 DETAILING (PENETRATIONS)

Penetrations –

- Install the specified SikaShield® underlay up to the right angle at the base of the penetration.
- Install the code 5 lead sleeve, complete with a base plate with the plate primed using Sika® 600/610 primer.
- Install the specified SikaShield® cap sheet, lapping onto the primed lead, and terminated at the base of the penetration ensuring a continuous extrusion of bitumen is achieved to complete the detail.
- Where a penetration is complex or requires a bitumen rather than a lead solution, this should be completed with a stainless-steel jubilee clip at the head of the membrane and securely sealed using SikaFlex®-508

Note: For larger penetrations (such as air ducts etc) these can be detailed using the membranes mentioned above, but require a site applied counter flashing to be installed to complete the detail.

1.10.5 SIKASHIELD® RBM - SPECIFICATION - DETAILING (DRAINAGE)

The design of roof drainage should be carried out in accordance with BS EN 12056-3:2000 which specifically states the following:

General: Design of roof drainage systems shall take account of construction tolerances and settlement so as to avoid backfalls and ponding, which may adversely affect durability.

"All flat roofs should be laid to a minimum finished fall of 1:80, and to achieve this a design fall of 1:40 should be used to ensure proper drainage as recommended in BS 6229:2018."

1.10.6 SIKASHIELD® RBM - SPECIFICATION - DETAILING (MISCELLANEOUS/PLANT)

SikaShield® Lightning Conductor Clips:

- Remove any existing lightning conductors and their associated clips.
- Ensure the surface area to be applied to is thoroughly clean and dry
- Install the new SikaShield® Lightning Conductor Clip to the surface of the new SikaShield® cap sheet using either a small gas torch or hot air welder ensuring the baseplate is well adhered.
- The lightning conductor system is to be commissioned, tested and certified by a suitably qualified organisation.

1.11 PROPOSAL

1.12 SIKASHIELD® UNDERLAY

Torch Applied Underlay: Torch apply **SikaShield® E54 PE 3 mm**, onto the prepared substrate. All side laps (min 100mm) and end laps (min 150mm) should be fully supported and continuously sealed. A 5-10mm continuous extrusion of bitumen is expected from the side and head laps of the membrane. The field area of the membrane is to be fully adhered using a propane gas torch. Roll bars are required when installing any torch applied membrane to ensure adequate pressure across the surface of the membrane.

1.13 SIKASHIELD® CAPSHEETS

EXCLUSION ZONE

Waterproofing Layer: Adhere **SikaShield® E79 MG SA 4 mm**, onto the prepared substrate. All side laps (min 100mm) and end laps (min 150mm) should be fully supported and continuously sealed.

Install the **SikaShield® E79 MG SA 4 mm** using a roll bar to ensure full contact with the underlay, To achieve suitably sealed side and end laps, which should be hot air welded to achieve a 5-10mm continuous extrusion of bitumen.

When applying self-adhesive membranes, the optimum substrate or ambient air temperature is 5°C and above. When installing below 5°C safe means of heating are required to ensure an adequate bond.

Additional Restraints – For pitches above 10 degrees Head laps must be fixed at no less than 100mm centres using an appropriate fastener in conjunction with a pressure plate as per Sika Limited's guidance and recommendations.

SAFE2TORCH ZONE - Refer to Safe2Torch Guidance and Checklist Documentation

Torch Applied Cap Sheet: Torch apply **SikaShield® HB79 MG 4 mm**, onto the prepared underlay. All side laps (min 100mm) and end laps (min 150mm) should be fully supported and continuously sealed. Using a roll bar, A 5-10mm continuous extrusion of bitumen is required from the side and end laps of the membrane.

The **SikaShield® HB79 MG 4 mm** cap sheet is to be sealed onto the 100mm selvedge edge/lap of the **SikaShield® E79 MG SA 4 mm** self-adhesive cap sheet, this ensures the torch on application does not enter into the exclusion zone.

▣ **Additional Restraints** – For pitches above 10 degrees Head laps must be fixed at no less than 100mm centres using an appropriate fastener in conjunction with a pressure plate as per Sika Limited's guidance and recommendations.

1.14 GUARANTEE

1.14.1 PROPOSED GUARANTEE

Summary of 25-Year Sika Roofing Performance Guarantee

A partnership guarantee between Sika Limited and the Verified or Certified Contractor.

Sika Limited guarantee to the Owner that if, during the **25 Year** Guarantee Period, the Materials are shown to not be in compliance with their requirements as set out in the relevant Product Data Sheets, we shall subject to the terms and conditions (specimen Guarantees available on request), at our option (a) repair or replace the Materials; or (b) pay the reasonable cost of repair or replacement of the non-compliant Materials, including in either case any damage to the exterior fabric of the roof directly caused by the Materials.

Should the defect be due to a workmanship issue, the Verified or Certified Contractor agrees to return the roof to its watertight state.

What does it cover?

- All Sika Limited materials and branded products where applicable, invoiced by Sika Limited.
- Compatibility of Sika Limited products specified and supplied.
- Maximum aggregate liability £300,000 (see Guarantee terms & conditions for details).
- Workmanship cover (resulting from Sika Limited material defects).
- Guarantee supported by Public & Product Liability Insurance for the duration of the guarantee.
- Any written design and specification or written advice supplied by Sika Limited (supported by PI Insurance).
- Where specified, details waterproofed using the Liquid Detailing System (Single Ply Membranes and Reinforced Bituminous Membranes) for up to 10 years.
- For this guarantee the Sika Limited liability for the period from year 20 to the end of the guarantee is amortised over 30 years e.g. a successful claim in year 21 would be paid by Sika Limited at 10/30th of the claim, year 22 paid at 9/30th etc, subject in any event to the other terms of the guarantee including without limitation any other limits on liability.

Workmanship

For this guarantee to be issued, the system must be installed by a suitably trained Verified or Certified Contractor. The workmanship is covered solely by the installing contractor for the term of the guarantee. Insurance backed options are available through FCA (Financial Conduct Authority) approved insurers, to cover contractor insolvency. Costs will vary, based on a percentage of the contract value and the Guarantee term.

Guarantee Requirements

- Materials have been installed in accordance with the Sika Limited specification and site specific wind uplift calculation (refer to the Specification for detailed requirements including waterproofing type & thickness, fastener type, protection layers etc).
- All Sika Limited products supplied must have been paid for in full.
- Sika Limited roofing systems may only be installed by Verified or Certified Contractors, authorised and trained by Sika Limited. The Performance Guarantee is supported by workmanship assurances

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Project: Wythenshawe Bus Garage

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provided by the Verified or Certified Contractor for the period of the Guarantee and whilst the contractor is trading.

- The project must have been passed for guarantee by the Sika's Technical Site Support Department (the number of site visits is dictated by the size and complexity of the project and the experience of the installers).
- For ballasted/green roof projects an inspection must be requested and then carried out by the Sika's Technical Site Support Department prior to the covering of the waterproofing.
- Roof inspections are to be carried out by Sika's Technical Site Support Department every 5 years and any remedial works found necessary or desirable by Sika Limited would need to be properly carried out by the Verified or Certified Contractor. Power and safe access are to be provided by the Client.
- Refer to specimen Guarantee for full terms & conditions (available on request).

1.14.2 GENERAL CONDITIONS

General Disclaimer - The details contained within this proposal are based on information available at the time of writing. Sika Limited cannot be held responsible for unknown site conditions or for the performance of materials within the system other than those manufactured, supplied and branded as Sika products.

Copyright - All Intellectual Property in drawings, designs, specifications, plans, software and any other documents or materials in any medium which have been created and/or developed by Sika Limited in relation to this project remain vested with Sika Limited.

□

Specimen Guarantees: Specimen guarantees including the terms and conditions of the proposed guarantee can be supplied on request by the Sika Roofing Technical Department

Protection of the roof during construction - To prevent damage to the Sika Roofing waterproofing system, ensure that finished areas of work are not used for the storage of materials, or as access routes for other trades. Should any such use be unavoidable, adequate and appropriate protection should be provided for the entire construction period.

Inspection of Sika Roofing Waterproofing Systems – Sika roofing waterproofing systems should be inspected bi-annually and as described in the latest version of BS 5229.

Sika Limited recommend that the roof is inspected for damage after adverse weather. It is also advisable to be inspected after work is carried out on the roof by other trades.

Product Information - The Safety Data Sheets (SDS) for Sika Roofing products are according to Regulation EC No 1907/2006 (REACH) and are available upon request. All materials should be treated strictly in accordance with Sika Limited's current technical & product information and all relevant health and safety guidelines

Chemical Contamination/Spillages - In the event of chemical contamination, the area should be well washed down with a domestic detergent solution and flushed with fresh water until all traces of the chemical have been removed from the waterproofing surface. Following this, contact the Sika Roofing Technical Services Department for further advice or action.

Physical Damage - Sika Roofing waterproofing systems are liable to physical damage if abused. This damage can often be permanently repaired by a Verified/Certified Contractor. An up-to-date list of such suitable contractors can be obtained from Sika Limited (please note we recommend that the original installing contractor should be used whenever possible to avoid split responsibility for workmanship).

Under no circumstances should repairs be attempted using products not approved by Sika Limited.

SIKA ROOFING TECHNICAL SPECIFICATION



Permicoat Ltd - Preston

PROJECT: Wythenshawe Bus Garage

PROJECT REF: 0432490-A

DATE: 24 June 2025

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