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Our Ref: O-0048298 Revision 3

9<sup>th</sup> September 2024

Hannah Silva National Trust

Dear Ms Silva

#### Re: 2 Willow Road, Hampstead NW3 1TH (Main Roof)

Thank you for the opportunity to provide an IKO roofing specification for the above project. The proposals are based on current information, if any aspects need to be revised prior to construction, or you require any additional details, I would be happy to amend or update the specification proposals provided.

The service and technical support offered to the industry by **IKO** is an integral part of our product supply, and forms the cornerstone a partnership between manufacturer, installer, specifier and building owner. No other manufacturer or supplier of waterproofing materials and associated mastic asphalt products can match the combination of comprehensive product range and assured quality, free of charge technical support, and peace of mind roofing offered by **IKO** to all parties involved with the project.

**Permaphalt Polymer Modified Roofing** is **BBA** certified achieving the highest fire performance and durability rating.

Upon successful completion of the project, this specification will qualify for a **20-year IKO Materials** and Workmanship guarantee.

I look forward to being of assistance to you on this project, and should you require any further information please do not hesitate to contact me on Mobile: 07836 350392 or the Technical Services Department at Grangemill 01257 256888.

Yours sincerely

James Eden

#### Business Manager – IKO plc Asphalt Division

Enc:



All Communications Relating To This Specification Must Include The Project Reference



# **Photographic Record**



Photo 1: Part of main field area, existing waterproofing is mastic asphalt with areas of cold applied liquid overlay as repairs. Asphalt capping detail to party wall.



Photo 2: Ponding water noted, insufficient drainage falls to outlet.

# **Photographic Record**



Photo 3: Typical outlet detail.



Photo 4: Typical asphalt upstand detail to parapet with lead flashing/DPC

# **Photographic Record**



Photo 5: failed asphalt fillet detail around services.



Photo 6: Unable to raise existing rooflights due to listed status

# **BUILDING REGULATIONS PART L**

# **Building Regulations**

- It is the responsibility of the client or their representative to ensure compliance of the proposed specification with all relevant Building Regulations by consultation with Building Control. In the event of any doubt about the interpretation or application of the Building Regulations in relation to any particular new build or refurbishment works, clarification must be sought directly from Building Control.
  - The Approved Documents of the Building Regulations (England and Wales):
    - Part B: Fire Safety
    - Part E: Resistance to the passage of sound
    - Part F: Ventilation
    - Part H: Drainage disposal
    - Part L: Conservation of fuel and power.
    - Part M: Access to and use of building
- The Building (Scotland) Regulations Building Standards Technical Handbook

The calculation of thermal transmittance, or U-Values, for a roof is controlled by the above mentioned regulations. There are different procedures according to whether the roofing work is for new-build or refurbishment. Where the refurbishment works is part of a change of use of the building, the works should comply with the latest Building Regulations and any revision thereof.

In all circumstances, it is recommended that advice be sought from your local Building Control Office, as to the compliance requirements for this particular project.

IKO roofing specifications are prepared on the basis of that to meet the current Approved Documents of the Building Regulations. Where it has been specified a thermal insulation thickness to which will not comply with current standards, it should be assumed that IKO have acted on the instruction of the client or their representative in this regard.

# **Permaphalt Roofing Specification** (20 Year Materials & Workmanship Guarantee)

Project	2 Willow Road, Hampstead NW3 1TH	
Roof Location(s):	Main Roof	
Structural Deck(s):	Concrete/screed	
Roof Pitch:	Not exceeding 5°	
Approximate Area:	Circa 80m <sup>2</sup>	



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Primary Project Contact: Name: James Eden Mobile: 07836 350392 Email: James.Eden@IKO.com

# PREPARATION

Remove all existing coverings to substrate including existing screed and cork material, carefully examine the deck for any damage or decay and replace with suitable materials to match existing. Include the replacement of any damaged kerbs, gutters, expansion joints, outlets etc to ensure the satisfactory installation of the new waterproofing system.

The building must remain weatherproof at all times, the contractor must only remove areas of existing waterproofing that can be made watertight in the same day, including the provision of day joints.

#### CONTRACTOR NOTE

On exposing the deck, if the contractor is dissatisfied with the condition of the existing deck, and considers this will have a detrimental effect on the finished waterproofing system, this must be brought to the attention of IKO and the client immediately.

Lay a single layer of **IKO Glass Fibre Tissue** isolating layer loose laid with 50mm laps. (see AVCL section). Lay **Permascreed** proprietary asphalt roof screed over Glass Fibre Tissue with falls and cross falls. **Permascreed** should be float finished and provide minimum finished roof fall of 1 in 80. **Permascreed** should be laid in layers no greater than 60mm. If greater depths are required, then the first coat should be allowed to cool to ambient temperature before overlaying

# Note: It is the responsibility of the contractor to calculate the quantities of Permascreed required for each specific project. See the material section for guidance.

Lift or remove existing lead flashing to enable correct formation of asphalt upstand details.

Remove all existing waterproofing to details.

Remove existing lead flashings to plinths to enable the correct formation of upstands.

Temporarily remove or divert all roof mounted plant, pipe, cables, ductwork and equipment etc, and set aside to allow access for installation of waterproofing. Temporarily divert lightning conductor strips. (Any roof opening must be protected) The removal and replacement of plant, equipment and cables from the roof should be carried out in conjunction with the building occupier by competent and electrically qualified personnel.

Upstand details to remain like for like due to listed status, unable to raise in accordance with roofing good practice, except for chimney stack(s), suitable height upstand detail to be applied.

Chases should comply with BS8000 Pt 3 Clause 5.6.10 and BS 8218:1998 Clause 6.14. A 25mm x 25mm chase to be cut or formed into the brickwork or concrete upstand, at a minimum height of 150mm above the finished level of roofing. The position of a new chase must always be carefully considered to ensure the position of existing DPCs and cavity trays is not compromised. The lower edge of the chase should be splayed in order to maintain the full thickness of asphalt at this point. Remove all dust and dirt from the chase, surfaces must be clean smooth and dry, and primed with **IKOpro High Bond Primer.** 

Contractor to install a tanalised timber batten, 100mm x the thickness of insulation, adjacent to all exposed edges to the insulation at all eaves/aprons/gutter edges, sumps/gulleys and changes in level to protect the edges of the insulation. Batten to be mechanically fixed at minimum 300mm centres to the roof substrate.

If found to be suitable to receive **IKO Permaphalt**, wire brush existing rainwater outlets, apply light brush application of **IKOpro High Bond Primer** and allow to dry. Alternatively, install new **Roof Outlets** designed for use with mastic asphalt, fitted with clamping rings and chipping guards, securely fixed to the deck and correctly connected to existing down pipes. Wire brush, apply light brush application of **IKOpro High Bond Primer** and allow to dry.

Securely fix Galvanised Expanded Metal Lathing (EML) over **IKO Black Sheathing Felt** to all vertical and un-insulated sloping timber surfaces over 10° to receive **Permaphalt**. EML to be not less than 10mm short way of mesh and not less than 0.46mm thick and be fixed with large headed galvanised clout nails or staples at maximum 150mm centres in both directions.

Existing soil vent pipes, collar/upstand heights to go back like for like due to listed status. Include for separate weatherproofing collar attached to the pipe and a wire basket leaf guard for the pipe opening.

Prime all brick and cementitious upstands, slopes etc with **IKOpro High Bond Primer** and allow to dry. Ensure that primer is continued in to any chases.

Prime all metal pipes, stanchions etc with **IKOpro High Bond Primer** and allow to dry.

Surfaces to receive the new waterproofing system should be clean, smooth and dry.

# AIR & VAPOUR CONTROL LAYER (AVCL)

Loose lay **IKO Glass Fibre Tissue** isolating layer with 50mm laps. Apply **Permascreed** proprietary asphalt roof screed to falls and cross falls. **Permascreed** should be minimum 13mm thick, float finished and provide minimum finished roof fall of 1 in 80. **Permascreed** should be laid in layers no greater than 60mm. If greater depths are required then the first coat should be allowed to cool to ambient temperature before overlaying

The **Permascreed** is acting as the vapour control layer. To be sand rubbed to aid adhesion of rubber crumb protection layer.

Note: It is the responsibility of the contractor to calculate the quantities of Permascreed required for each specific project. See the material section for guidance.

# INSULATION

Kingspan OptimR VIP Insulation system, (see drawing Ref: PEU-0143433)

consisting of 20mm OptimR panel and 25mm Thermaroof TR27 PIR insulation and 20mm PIR infill sections (flex board).

#### 3mm rubber crumb protection layer to be site bonded to VCL prior to insulation being laid

Boards should be set back from all abutments to allow for a solid **Permaphalt** support plug. The width of the support plug should be at least 25mm.

Contractor to ensure that the installed vapour control layer is dry, thoroughly cleaned and free from any debris or sharp objects that will prevent the uniform installation of the insulation or damage the subsequently applied waterproofing system.

Insulation boards to be closely butted to prevent cold bridging and laid so as to break the joints, and covered immediately with the waterproofing system.

Insulation board materials should be stored under cover in dry conditions on a flat platform or level bearers to protect against wetting, mechanical damage and contamination. NB. The plastic shrink-wrap or stretch-wrap packaging that the boards are supplied in, must not be considered sufficient weatherproof protection for storage on site.

#### WATERPROOFING

Lay **Permaphalt** nominal 20mm thick in 2 X 10mm coats on **IKO Black Sheathing Felt** separating membrane loose laid with minimum 50mm side and end laps. The surface of the final coat to be rubbed with clean coarse sand mostly passing a 600 micron sieve and mostly retained on a 212 micron sieve.

#### DETAILS

Lay **Permaphalt** nominal 13mm thick in 2 coats on primed brick or concrete upstands not exceeding 300mm high. Form 2 coat solid **Permaphalt** angle fillet at base.

Dress **Permaphalt** into the chase provided and point as soon as possible with low shrinkage cement/sand mortar containing a suitable polymer admixture such as styrene butadiene rubber or acrylic.

Lay **Permaphalt** capping nominal 20mm thick in 2 X 10mm coats on primed brick or concrete base. The surface of the final coat to be rubbed with clean coarse sand mostly passing a 600 micron sieve and mostly retained on a 212 micron sieve.

At party wall, strap capping detail with felt membrane as IKO detail.

Lay **Permaphalt** nominal 20mm thick in 3 coats on EML on **IKO Black Sheathing Felt** over all timber/plywood. Also any surface that causes excessive blowing. Form 2 coat solid **Permaphalt** angle fillet at base, form fair edge at top.

Lay **Permaphalt** collar to primed metal pipe nominal 13mm thick in 2 coats. Form 2 coat solid **Permaphalt** angle fillet at base. The **Permaphalt** collar should if achievable extend at least 150mm above finished roof level and the top edge protected by an independent apron flashing fixed to pipe.

Form **Permaphalt** bullnose edge to primed lead chute.

Dress **Permaphalt** down into the throats of the primed internal rainwater outlets.

#### SURFACE PROTECTION

Apply White Solar Reflective Coating to all exposed **Permaphalt** strictly in accordance with the manufacturer's instructions. The solar reflective coating should comply with the requirements of BS8218:1998 5.17. i.e. be free from materials deleterious to mastic asphalt, such as metallic pigments, non-compatible solvents or water-based emulsions.

# ADDITIONAL WORKS

On completion of the waterproofing, the following items should be attended to:-

All outlets and drainage pipes should be checked on completion to ensure that they are free flowing.

The structural decks should comply with Code of Practice BS 6229:2203. (Flat roofs with continuously supported coverings) and our BBA certificate.

This proposal specification is valid for a period of 12 months from the above date of issue. In the event that the project is not completed during this period, contact should be made with IKO Technical Services Department prior to the commencement of the works.

**Permaphalt** should be installed by **IKO** approved contractors in accordance with BS 8000:Part 4:1989, BS 8218:1998 and **IKO** installation instructions.

The laying temperature of **Permaphalt** should not exceed 240°c

Angle fillets should be applied in 2 coats after warming and cleaning interfaces and should measure not less than 40mm across the face.

Maintain full thickness of **Permaphalt** around external angles.

Gas torches shall not be permitted, except for drying substrates.

Each coat of **Permaphalt** should be followed by the succeeding coat without undue delay, as contamination may result in inter-layer blistering.

As the works proceed, night joints should be provided to seal the edges of the new roofing and ensure no water enters the building or damages the newly installed system.

Sand rubbing should be carried out using a wooden float. Brushing the sand is not sufficient.

Surface protection should be applied as soon as practicable.

Adequate protection must be afforded the newly installed roofing system against damage caused by following trades. Failure to provide this protection may require additional works to be undertaken before any guarantee is issued for the works.

Unless specifically approved by ourselves prior to placement, **IKO** cannot accept responsibility for the performance of the completed **Permaphalt** roofing, affected by any additional items placed on the roof following completion of the **Permaphalt** installation.

#### MATERIAL INFORMATION

# PERMAPHALT

Permaphalt is a polymer modified mastic asphalt roofing consisting of polymer modified bitumen and graded limestone aggregates. Permaphalt is covered by BBA Certificate No 89/2299. Nominal Block Weight: 20kg.

Permaphalt Fire Performance Testing

Contact Technical services

#### **IKO BLACK SHEATHING FELT**

**IKO Sheathing Felt** is a separating membrane for use beneath mastic asphalt roofing, consisting of jute fibre impregnated with bitumen. Maximum Roll Weight: 17kg Roll size: 20m<sup>2</sup> **Product Code:** 14260000

**IKO Glass Fibre Tissue** is a separating membrane for use beneath mastic asphalt roofing, paving and flooring. Nominal Roll Weight: 7kg & 14kg Roll size: 100m x 1m. **Product Code:** 1m 14280000

# **IKOPRO HIGH BOND PRIMER**

**IKOpro High Bond Primer** is a brush applied modified rubber latex emulsuion priming solution for the preparation of concrete, brickwork, GRP and metal surfaces to receive the direct application of mastic asphalt waterproofing.

Coverage:	4-6 m²/litre		
Container sizes:	5 Kg	Product Code :	5kg 2317000

# PERMASCREED

**Permascreed** mastic asphalt screed is manufactured from selected bitumens, limestone filler and specially graded aggregates. It is designed to provide drainage falls as well as a stable base for the specified roof waterproofing system. **Permascreed** can be applied at a wide range of thicknesses and falls, usually on in-situ and pre-cast concrete bases. It is suitable for insulated warm roofs, inverted roofs, green roofs, balcony/terrace applications and carpark/HGV service decks.

**Permascreed** is supplied directly to site in purpose built hot charge transporters capable of holding up to 18 tonnes of material.

It is available in 3 grades, light and medium duty on trafficked roofs, heavy duty grade for car parks and HGV loading areas,

	Product Code	Recommended	Typical Usage
		Thickness Range	
Permascreed L	Block 44220000	10-25mm	Roofs, Balconies,
(Light Duty)	Hot Charge 5422000A		Walkways
Permascreed M	Block 44200000	20-40mm	Roofs, Balconies,
(Medium Duty)	Hot Charge 54200000		Walkways
Permascreed H	Block 44210000	35mm + (maximum	As above Plus Car parks &
(Heavy Duty)	Hot Charge 54210000	single coat 60mm)	HGV Service Decks

#### **Properties**

For estimation and load calculation purposes the mass can be taken to be 2.32kg/m2 per mm of thickness.

#### TABLE OF WEIGHTS (approximate)

Average Asphalt Thickness	Kg/m <sup>2</sup>	M <sup>2</sup> per Tonne
10mm	23	43
13mm	30	33
15mm	35	28
20mm	46	21
25mm	58	17
30mm	70	14

# Kingspan OptimR VIP Insulation system

(see drawing, Ref: PEU-0143433) consisting of 20mm OptimR vacuum sealed panels 30mm Thermaroof TR27 PIR insulation and infill sections. 3mm rubber crumb protection layer

# GUARANTEE

An IKO guarantee is available on this project and includes the following and is subject to:

**Inspection and Sign Off:** An IKO Technical Engineer may at the discretion of the IKO Technical Services department visit site to monitor the workmanship and correct use of the IKO materials and carry out a final site inspection of the installation.

- Guarantee 20 year: Materials and Workmanship covering:
  - IKO Waterproofing material failure
  - Workmanship underwritten by the installing contractor

# SPECIFICATION NOTES

**Permaphalt** should be installed by **IKO** approved contractors in accordance with BS 8000:Part 4:1989, BS 8218:1998 and **IKO** installation instructions.

As the works proceed, the contractor is to ensure water tightness of the roof at all times. Proper day joints must be formed at the end of each working day to seal the edges of the new roofing and ensure no water enters the building or damages the newly installed system. Loose covers or mopping of bitumen is not permitted. Materials used from the day joint, which are not part of the **IKO** waterproofing system must be cut away and removed prior to continuation of the works.

Membranes are to be stored carefully on end on a clean level surface under cover.

Insulation materials are to be stored on a clean level surface, and protected from direct sunlight and weather. The packaging that insulation is supplied with does not constitute adequate protection for site storage.

All preliminary work including alterations to detail items must be complete and satisfactory.

Prior to works commencing, identify in conjunction with the client, redundant roof mounted equipment, cables, pipes and rooflights. Make good any openings to provide a satisfactory surface to receive new waterproofing.

It must be ensured that any retained components of the existing structure are sound and capable of accepting the imposed loading of the new system and associated installation procedures.

Before the works proceed the roofing contractor must ensure that the surfaces to receive the waterproofing are acceptable and that the specification conforms to the requirements.

Works must comply with the requirements of the Health and Safety at Work Act and any additional requirements of the Client. The contractor must ensure that the works are carried out in accordance with written method statement for the project and that the appropriate risk assessments have been undertaken.

Prior to commencing work, the contractor must liaise with the client or building occupier to establish whether any hazards exist (e.g. microwave transmitters) or whether any gases or noxious/flammable fumes are vented at roof level. If a hazard exists, an agreed working pattern must be adopted in accordance with health and safety requirements.

The contractor must liaise with the client with respect to any air intake points at roof level, to minimise the risk of any fumes or smoke from the roofing works entering the building. In the event of air intakes being present, a working pattern agreed with the client/building occupier must be agreed prior to works commencing.

The contractor is responsible for providing adequate fire fighting equipment for the works he is carrying out on site. Fire fighting equipment must be appropriately positioned adjacent to where works are being undertaken. Equipment must be in good working order and inspected/approved by competent personnel in accordance with the agreed inspection schedule.

When loading materials onto the roof, the authorised contractor must comply with the requirements of the client's representative to prevent overloading and possible disturbance to the building structure.

At the pre-tender roof inspection stage, the roofing contractor should allow for the extent, volume and degree of difficulty in stripping and carting away from site existing waterproofing /insulating materials and debris (or surface chippings and detail work items in an overlay specification).

Raise the level of all wall and/or parapet DPC/cavity trays to ensure a minimum of upstand height of 150mm above the finished roof level of the new system. The position of DPCs and cavity trays must always be carefully considered when adding insulation. The installation of new DPCs and cavity trays must be carried out to the manufacturer's recommendation, in conjunction with the client's detailed specification.

All rainwater outlets, pipe inlets and openings to the building interior should be protected during periods of the roofing works. Liaise with the building occupier to ensure essential services are not disturbed or decommissioned unnecessarily. <u>NB. Protection to outlets must be removed during non-operating periods.</u>

Roofing materials can be heavy. Note the Handling Weight detailed in the Material Information section of this specification and on the packaging, to correctly assess the risk, and take the relevant precautions when lifting.

For latest Health and Safety Data Sheets (COSHH), regarding the specified products visit <u>www.ikogroup.co.uk</u> and click on full literature library to download information. Alternatively, contact IKO plc. Head Office.

The roofing works to be carried out may need to comply with the requirements of Building Regulations Part L (Revision October 2010). In all circumstances, it is recommended that advice be sought from your local Building Control Office, as to the compliance requirements for this particular project.

In accordance with BS 8217: 2005 'Cold Roof' specifications are not recommended, and as such **IKO** would always advise the use of a warm roof or inverted roof construction. However, if there is no alternative than to install a 'Cold Roof' system, the space between the roof deck and the ceiling must be adequately ventilated, in accordance with BS 6229:2003 paragraph 10.3.3

#### **CONTRACTOR NOTE**

To ensure consistency of quality and the issue of an unqualified guarantee upon completion of the contract, the materials listed in the "Material Information" section of this specification must be used throughout.

NB. Adequate protection must be afforded the newly installed Permaphalt roofing system against damage caused by following trades. Failure to provide this protection may require additional works to be undertaken before any guarantee is issued for the works.

The performance of flashings, mortar pointing, sealants and reflective surface coatings is subject to regular maintenance and these items are not covered by the waterproofing guarantee.

When installing a new outlet or drainage sleeve, as part of a re-roofing system, good roofing practice dictates that a positive connection is made between the existing down-pipe and the new outlet. This will prevent problems with water backing up within the drainage system and entering the building between the outlet spigot and the existing down pipe. It is recommended that a purpose made refurbishment outlet is incorporated in this situation, featuring an expanding seal at the base of the outlet spigot, or a rubber "O" ring surrounding the spigot to ensure a watertight seal is achieved.

N.B. Unless this specification includes for a new screed or a tapered insulation scheme, it makes no allowance for changes to the existing drainage. Existing falls will remain and some ponding of water may occur.

# **CDM REGULATIONS 2015**

# **Construction (Design & Management) Regulations 2015**

The Construction (Design and Management) Regulations (CDM) are the main set of regulations for managing the health, safety and welfare of construction projects.

The 2007 CDM Regulations have been replaced to help workers, contractors, designers and clients work together to improve health and safety.

From Monday 6 April 2015, the Construction (Design and Management) Regulations 2015 require small and medium size construction businesses to plan and manage health and safety

CDM applies to **all** building and construction work and includes new build, demolition, refurbishment, extensions, conversions, repair and maintenance.

#### Key changes of the new CDM Regulations 2015

- The revised Regulations apply to all projects including domestic client jobs
- All projects must have a written **construction phase plan**
- The role of **CDM co-ordinator** in the previous CDM Regs 2007 has been removed and replaced with a new role of **principal designer**
- There is a duty to make sure all persons doing the job have the right skills, knowledge, training and experience
- A Principal designer and principal contractor must be appointed on projects that will have more than one contractor.

The HSE have produced guidance '<u>Managing health and safety in construction</u> - <u>Construction</u> (<u>Design and Management</u>) <u>Regulations 2015</u> - (<u>L153</u>) on the legal requirements for CDM 2015. They have also revised their construction webpages, produced a short client leaflet and a new construction phase plan template for small projects.

# HEALTH & SAFETY GUIDANCE NOTES

The Contractors nominated in conjunction with this specification are approved to install IKO materials and will be in possession of the Health & Safety data sheets relating to any hazardous products manufactured and marketed by IKO which have been included within this specification. It is assumed that the Contractor/s will be working to the guidelines of the relevant British Standard Codes of Practice (in particular BS 8000: 1989) and that relevant Health & Safety information will be obtained from the manufacturers of any roof components which are not manufactured by IKO.

# **RISK ASSESSMENTS** - GENERAL

Works must comply with the requirements of the Health and Safety at Work Act and any additional requirements of the Client. The contractor must ensure that the works are carried out in accordance with a written method statement for the project, which should be based on a project specific risk assessment. Prior to commencing work, the contractor must liaise with the client or building occupier to establish the nature of any hazards which exist, and agree a system of work for adoption in accordance with health and safety requirements. In addition to the normal hazards associated with roofing work at height and hot works, we recommend that particular attention be

paid to the following aspects, although this list is not intended to be exhaustive and contractors & clients must assure themselves that all potential risks have been accounted for;

**Gas flues**. Determine whether flues are live, and if so establish working method to ensure that flues are not covered or obstructed in any way.

**Microwave transmitters**. Establish safe working method to prevent personnel from being exposed to microwave radiation.

**Air-intakes**. Precautions should be taken to prevent the ingress of any fumes from the roofing works entering the building.

# Isocyanurates (PU based products)

As of 24 August 2023, training is required for professional and industrial users of polyurethane adhesives, sealant and waterproofing products within the EU and UK.

# • REACH

New REACH labelling and training regulations are being introduced for diisocyanates; the chemical building blocks for polyurethane (PU) products, including foam products and roofing adhesives. Labelling regulations are to be implemented by February 2022 and training regulations by 24th August 2023. The regulations address industrial and professional use, targeting unsafe handling, whilst allowing adhesives and sealants to remain widely available. It does not impact the DIY market.

# Labelling

Products sold within the EU and UK with a total monomeric diisocyanate concentration greater than 0.1% by weight, either as a substance or in a mixture, intended for professional or industrial use must have the statement below on the product container label by 24th February 2022:

'As from 24th August 2023, adequate training is required before industrial or professional use'.

# Training

- Training and certification for product users, which involves passing an examination, **must be completed by 24 August 2023**. Records of the training given to employees must be maintained by employers. Every five years, renewal of the training will be necessary.
- FEICA (the Association of the European Adhesive & Sealant Industry, in coordination with several other bodies within the polyurethane industry, have been developing a comprehensive training programme to ensure the safe use of diisocyanates for producers and professional users all over Europe.

A PU Training Platform has therefore been launched for product users within the EU and UK and can be reached via: <u>www.safeusediisocyanates.eu</u>.

- The Restriction requires employers or the self-employed to ensure that industrial or professional users have successfully completed training on the safe use of diisocyanates prior to the use of the substance or mixture. There is no requirement for an accreditation or certification scheme to be put in place for the training. Training will need to be adequate, appropriate to the use of the substance (which includes any specific circumstances as to where it is used i.e., in GB) and in line with the restriction. (The training requirements are set out in paragraphs 4 and 5 of Annex XVII 1 of the restriction).
- Suppliers must ensure that training relevant to the particular products they are supplying is available, but suppliers do not need to deliver or pay for the training themselves.
- The legal duty remains on employers to ensure that all users have successfully completed the required training before using the substance.
- Any record that shows the user has successfully completed the required training before using the substance will help demonstrate compliance. However, providing information, instruction and training should be reviewed and updated whenever significant changes are made to the type of work carried out or to the work methods used.

# **RISK ASSESSMENTS** - FLAME TORCHES

Where the roofing specification stipulates the use of torch-applied materials, it is assumed that the roofing contractor will carry out his own risk assessment, particularly in respect of vulnerable areas of the roof such as abutments to cladding, abutments to pitched roofs and naked timber areas. When the risk of torching to these kinds of details is deemed unacceptable, IKO recommend that the use of flame-free waterproofing materials should be adopted for these areas.

IKO Technical Services can provide detailed instructions for the installation of flame-free materials at specific vulnerable details. These are available on request by the client or contractors.

# **ROOFLIGHTS/OPENINGS**

The Construction (Design and Management) Regulations places a duty on designers and Specifiers to give proper consideration to eliminating or reducing risks at the design stage.

Unless there is definite information to the contrary, existing rooflights (which may be constructed from glass, GRP or polycarbonate) should be assumed to be fragile and all appropriate measures taken to prevent people falling though them. The contractor for the works is required to provide a Risk assessment and Method Statement for the safe working of personnel around existing rooflights or openings.

Any installed rooflights should be assumed to be fragile, and all appropriate measures taken to prevent people falling though them, or through deck openings. The contractor for the works is required to provide a Risk assessment and Method Statement for the safe working of personnel around rooflights/openings.

HSG 33 *health and safety in roof work* draws attention to the responsibilities of those specifying rooflights.

HSG 33 states that where rooflights are required, designers should consider.

- Specifying rooflights that are non-fragile.
- Fitting rooflights deigned to project above the plane of the roof and which cannot be walked on (these reduce the risk but they should be capable of withstanding a person falling onto them)
  - Protecting rooflights, e.g. by means of mesh or grids fitted above or below the rooflight.
- Specifying rooflights with a design life that matches that of the roof, taking account of the likely
  deterioration due to ultraviolet exposure, environmental pollution and internal and external
  building environment.

We would recommend that all fragile roof lights be replaced with new **IKO Superlite Rooflights**, a range of high quality PVCu 3-cell kerb and frame modules, combined with individually glazed UV stable, triple skin polycarbonate domes. The **IKO Superlite Rooflight** is fully compliant with the requirements of Part L of the Building Regulations 2010 and has been independantly tested and approved by the **BBA under certificate no 10/4714**, in that the whole unit U Value is at least or better than, 1.8 W/m<sup>2</sup>K, including the roof mounting. **IKO Superlite Rooflights** conform to **Class B Non Fragile** to ACR [M] 001:2000 (Test for Fragility for Roofing Assemblies). The fire performance of the rooflights is to be **Class 1 to BS476 Pt 7**.

# EDGE PROTECTION ALERT - ROOF/PLANT MAINTENANCE

Once completed, access to the roof will be required for future inspections and maintenance to the roof.

In addition maintenance of roof outlets any plant items and services etc. will be required to ensure the long term performance of the roofing system. In accordance with the client obligations under the Management of Health & Safety at Work Regulations 1999 (and associated Health and Safety Legislation) and under the Construction (Design & Management) Regulations 2015.

IKO Technical Services department would advise that consideration should be given to providing fall protection at all roof perimeters. In addition, we would advise protection for any newly installed waterproofing membrane, by the provision of dedicated walkways.

# **ROOF MAINTENANCE NOTES**

# INTRODUCTION

As with all roofing systems, proper maintenance is essential to obtain maximum performance and ensure the longest life expectancy for the system as a whole. It is also an integral part of manufacturer's' guarantees. Any deficiencies should be reported immediately to IKO. Access to the roof must only be allowed by arrangement with and under supervision of the Building Manager or the person responsible for building maintenance, in accordance with the <u>Construction (Design & Management) Regulations 2015.</u>

All personnel given permission to access the roof must be instructed to use the dedicated access/walkways provided and be fully advised of the health and safety procedures required by the site or that of the individual roof concerned. The client or building owner is responsible for Project Name: 2 Willow Road, Hampstead NW3 1TH

Ref No: SFO-0048298 Rev 3 Date: 09/09/2024 providing safe access to and from the roof, and for suitable edge protection or fall arrest systems. Where roof works or access, other than foot traffic is required, adequate protection for the waterproofing membrane must be provided.

BS 6229: 2018 gives guidance on the content of maintenance manuals and the scope and frequency or routine maintenance inspections applicable to all flat roofing. All roofs should be inspected at least once each year. Ideally, there should be inspections in Spring and Autumn, to enable the effects of annual extremes of weather to be checked. Roofs exposed to high levels of pollution or in close proximity to trees might require more frequent inspection. Any inspection of a flat roof should include the interior of the building for signs of water penetration or condensation and for alterations, which might have affected the roof. Externally, abutting construction, which can affect the performance of the roof, should also be inspected.

Regular maintenance inspections should be in the form of a systematic check of the whole roof to record items that require attention. In addition to the more general guidance given in BS 6229: 2018, the following checklist is applicable: -

- Check that roof outlets are functioning and gratings are not blocked. Remove debris from the roof entirely, do not flush silt or dead leaves down outlets. In areas where taller trees are adjacent to the roof, inspections may be required more frequently.
- Note the general condition of the membrane finishes and report any signs of creasing/ruckling or damaged areas immediately.
- Check waterproofing to roof light kerbs. Check rooflight domes for signs of damage or deflection.
- Check perimeter details and upstands, ensuring that metal cappings, flashings, edge trims and mortar pointing to chase details are secure.
- Check flashings to expansion joints and that cappings are secure.
- Check upstand flashings to plant support legs/upstands.
- Check upstands and flashings to pipe penetrations.
- Examine all mastic seals and repair/replace as necessary.
- Check walkways and around access points to ensure damage/displacement has not occurred to walkway or concrete paving.

#### ACCIDENTAL DAMAGE

In the event of accidental damage occurring to the membrane, the installing contractor and/or **IKO** should be notified immediately in order that a practical solution to the problem can be agreed and any remedial actions taken. Failure to make contact with **IKO** and or the contractor could invalidate any guarantee offered.

#### **ROOF REPAIRS**

Roofs which are under guarantee by **IKO** should only be repaired by the installing contractor, with full design reference to **IKO Technical Services Dept**. If the existing contractor is unable to effect repairs, then a contractor approved and appointed by **IKO** must be used to ensure continuity of the guarantee. See guidance notes on the guarantee document.

Where the roof is not covered by a guarantee, Clause 11.3 of BS 8218: 1998 "Repair procedures" should be applied.

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