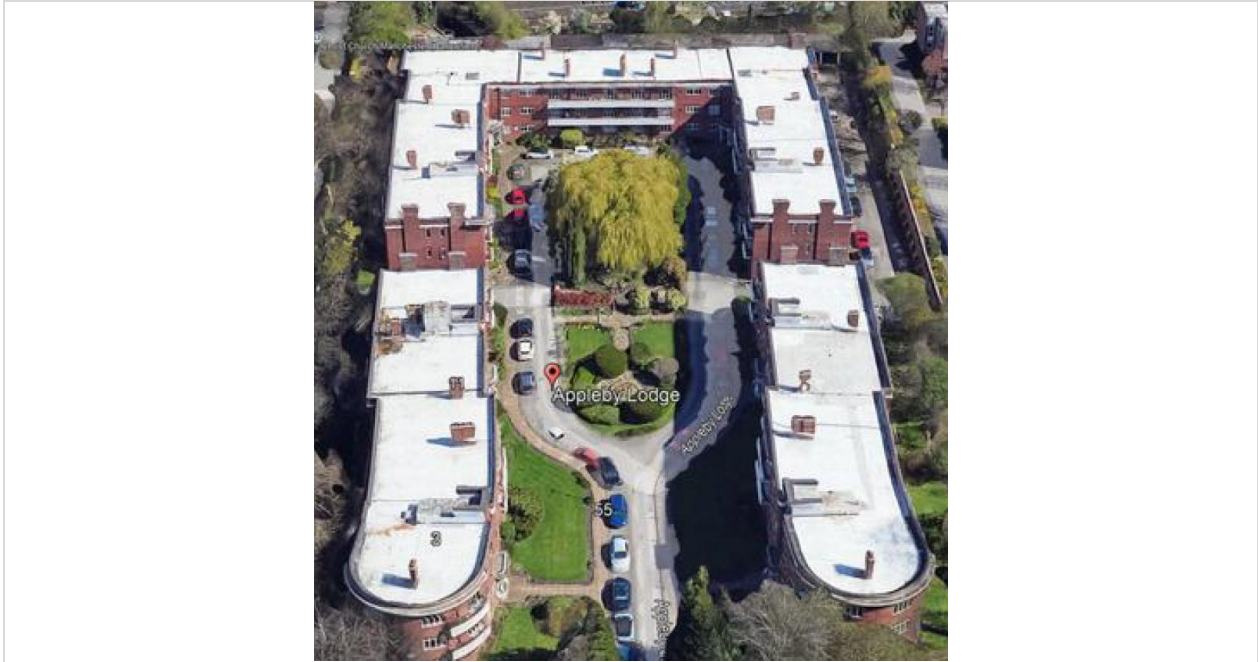




IKO Polymeric Armourplan Specification Proposal



Project Name: Appleby Lodge Remedial

Address:

Appleby Lodge,
Wilmslow Road,
Manchester,
M14 6HG

IKO Specification Reference Number:

SPEC-2020-0706-5003

Date of issue: 17/04/2025

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

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IKO PROJECT CONTACTS

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WATERPROOFING

IKO Polymeric Armourplan: is a range of high performance PVC membrane that can be mechanically fastened, adhered or ballasted providing maximum system flexibility, it comes in a range of colours; light grey RAL7047 mid grey (RAL 7046) and slate grey (RAL 7015).

The waterproofing system specified meets the minimum performance criteria as listed below:

- **Independent approval:** BBA 05/4287
- **Durability statement:** in excess of 40 years
- **Fire performance:**
 - enables **unrestricted use** within Part B of the Approved Documents of the Building Regulations
- **NHBC standards:** installed, used and maintained in accordance with IKO recommendations and to NHBC Standards Chapter 7.1 Flat Roofs and Balconies
- **CE marked membranes:** in accordance with harmonised European Standard BS EN 13707:
- **Manufactured:** all components manufactured within the UK
- **Installation:** adhered or mechanically fastened
- **System components:** available to be sourced through IKO including
 - IKO Enertherm Insulation
 - IKO Adhesives, primers and fixings
 - IKO Internal rainwater outlets
- **Approved Contractor:** Installing contractor operatives must be IKO Polymeric Armourplan Approved

PROJECT STARTS

As part of the guarantee requirements, all project starts and/or pre-start meetings must be notified by the installing contractor a minimum of 10 working days before the project starts to customersupport@iko.com. Failure to notify IKO may invalidate any guarantee offer.

IKO SPECIFICATION PROPOSAL - SUMMARY

Note: This table provides an outline summary of the proposed specification for this project. It is not intended to be fully comprehensive and must be read in conjunction with the full specification.

ROOF AREA NAME	Main Roof Remedial
IKO SYSTEM COMPONENTS	IKO Waterproofing system components and requirements
Substrate Preparation	Ensure substrate is clean, dry, and smooth.
Priming	N/A
Air and Vapour Control Layer	N/A
Insulation fixing method	N/A
Insulation	N/A
Waterproofing membrane	Armourplan P over Spectratex Fleece
Waterproofing fixing method	Mechanically Fastened, Pullout Test Required

PRELIMINARY NOTES

All reasonable care has been exercised in the undertaking of this specification to make it as comprehensive as possible. However it is not uncommon for situations on site to arise that may not have been immediately apparent and/or have been unforeseen during any survey. Such situations should normally be covered by way of a contract contingency sum allowance to provide protection to all contract parties against what may be termed a risk item. In the event such a 'risk' occurs on this project, it should be treated as a contract variation and be valued in accordance with the stipulated contract terms.

Installation

- All works must be undertaken in accordance with the IKO Specification, current Building Regulations, British Standards Code of Practice and NHBC standards to provide a sound and secure, free draining and completely watertight waterproofing system. These include, but are not limited to:
 - BS 6229 - Flat roofs with continuously supported coverings.
 - BS 8217 - Reinforced bitumen membranes for roofing. Code of practice.
 - BS 5250 - Code of practice for control of condensation in buildings.
 - BS EN 1991-1-4 Eurocode 1 - Actions on structures. General actions. Wind actions.
 - BS EN 12056-3 - Gravity drainage systems inside buildings. Roof drainage, layout and calculation.
 - SPRA Design guide.

Falls

- Falls should be in accordance with BS6229 where the **minimum finished falls including internal gutters are 1:80**.
- To ensure a minimum finished fall of 1:80 is achieved, allowing for construction tolerances, and deflection under load new substrates should be designed to 1:40.
- Allowance should be made to remove any backfalls, hollows, depression or deflections prior to the application of the waterproofing.

Drainage

- Drainage must be secure, free draining and weathertight at all times.
- Protect outlets and apertures from ingress of debris and remove protection to outlets during non-operating periods.
- Ensure rainwater outlets are adequately sealed and connected to the pipework.
- All rainwater outlets and drainage should be checked upon completion of the works to ensure that they are free flowing.

Construction and weight loading

- Any retained components from the existing structure must be sound and capable of accepting the imposed loading of the new waterproofing system and associated installation procedures. This should be confirmed by a suitably qualified person or structural engineer.

Moisture content and suitability of substrate

- Must not impair waterproofing integrity.
- Moisture readings and adhesion tests should be undertaken by the installing contractor at locations over the whole area to ensure all areas are suitable for the application.
- A record of all test samples should be logged throughout the application process.

Upstands, sills and thresholds

- All waterproofing to upstands, sills and thresholds must achieve a **minimum height of 150mm above the finished roof level**. The finished roof level is the top surface of any additional finishes such as tiles, paving slabs, decking etc.
- Attention should be paid to window sills and door thresholds, brick and rendered upstands, cladding and tile abutments, plant and rooflight kerbs, pipes, retained fixed guardrails etc

- On balconies and terraces with designed accessible thresholds a 75mm waterproofing upstand to a sill is acceptable where the design meets NHBC standards and IKO requirements.
- IKO cannot take responsibility for water ingress over waterproofing details below the minimum height.

DPCs and cavity trays

- All DPC/cavity trays must be a minimum 150mm above the finished roof level and above the termination of the waterproofing detailing.

Glazing and rooflights

- Waterproofing upstands to glazing and rooflight kerbs must achieve a **minimum height of 150mm above the finished roof level.**
- Where drip edge/check kerb is used please refer to System Installation Guidelines for fixing spacing and face fixing rules.

NFRC Safe2Torch guidance & use of gas torches

- The client/main contractor should ensure that the building works are sequenced so as to minimise risks from hot works during installation of reinforced bitumen membranes.
- The installing contractor is responsible for carrying out their own risk assessment of the proposed works and pre-hot works checks as outlined in the NFRC Safe2Torch guidance.
- The risk assessment must consider both site preparation works such as drying substrates alongside the proposed installation methods and safe working practices must be introduced to minimise identified risks.
- Where a requirement for Flame Free Zones where no hot works must be carried out, has been identified by the installing contractors risk assessment then suitable materials must be used – contact IKO for details if in doubt.
- The full extent of any Flame Free Zones must be identified/confirmed by the installing contractor according to the NFRC Safe2Torch guidance.
- Naked flames must not be applied directly to any timber substrate, including decks, upstands, perimeters and fillets.
- Only operatives familiar with the safe use of gas and gas torches and ones familiar with the correct installation methods for each waterproofing component are permitted to install the waterproofing components.
- A hot works permit must also be in place where the use of gas torches has been allowed for.

Site storage

- Insulation boards must be stored under cover in dry conditions, off the ground and covered by a tarpaulin; insulation boards must not be installed if wet or damaged.
- Self-adhesive membranes must be stored above 5°C for 24 hours prior to use. Self-adhesive membranes must not be stored on the roof overnight or during hot weather conditions.
- Adhesives and liquid products must be stored between 5 and 25°C and out of direct sunlight. Application performance will be improved if stored above 10°C before use.

Temporary weathering

- Day/night joints must be applied to all details and waterproofing areas, to ensure the building is kept watertight at all times and where the waterproofing integrity may be compromised due to the progress of the works or inclement weather.
- This temporary waterproofing seal should be provided to protect the building and any insulation from water ingress.

Weather conditions

- Do not undertake the works in poor weather conditions, where the wind speeds are in excess of 7m/s or temperatures are below 5°C.
- Works in severe or continuously wet weather conditions should be suspended unless an effective temporary roof is provided over the working area.
- Progress of the works is to be organized to maintain the waterproofing integrity of the new system.

Waterproofing protection

- No solvents or other chemicals which could damage the waterproofing should be allowed to come into contact with the waterproofing system.
- Ensure that finished areas are adequately protected from damage by subsequent building operations and other trades.
- Failure to provide sufficient protection may result in additional works being necessary before any guarantee is issued.
- Where access is required for the maintenance of plant items etc. additional protection should be provided in the form of maintenance walkways.
- Where the area to be waterproofed is to be regularly accessed e.g. on a balcony or terrace, the new waterproofing must be adequately protected by the provision of paving slabs, promenade tiles etc. or other wearing surface.

Services, pipes, cables & lightning conductors

- Cables should be secured with a proprietary cable fixing or cable tray system.
- Services and pipework should be positioned on a proprietary services support system.
- Lightning conductors should be secured using IKOStrike Lightning Conductor Clips at 1m centres.

Plant & machinery

- Provide kerbs of sufficient height allowing for the proposed insulation thickness and a waterproofing upstand which must achieve a minimum height of 150mm above the finished roof level.
- Where plant items are being placed directly onto the new waterproofing a proprietary plant support system should be utilised ensuring the new waterproofing is adequately protected and the weight distributed sufficiently so as to not be detrimental to the waterproofing.

Prior to the application of the waterproofing

- Any hollows, depressions, deflections, back falls etc. found in the substrate must be rectified prior to installation of the waterproofing system.
- Thoroughly clean surfaces, remove all debris and sharp objects likely to damage the waterproofing membrane, and ensure the substrate is even and dry.

Application of the waterproofing

- The installing contractor must use installing operatives that are competent with the use and installation requirement of the waterproofing components listed within the specification.
- Only installers who have undertaken and passed the IKO product induction programme should be undertaking the installation of the waterproofing components.

Waterproofing details

- All waterproofing details are to be formed in accordance and agreement with IKO installation recommendations. All waterproofing details should be detailed in accordance with IKO standard details or those issued by IKO as part of this specification.
- IKO cannot be responsible for any details not formed in accordance with IKO recommendations.

IKO SPECIFICATION PROPOSAL

J42 SINGLE LAYER POLYMERIC SHEET ROOF COVERINGS

To be read with Preliminaries/General conditions and the IKO Polymeric technical and installation guidelines in conjunction with detailed design drawings.

This specification details the installation of the **IKO Polymeric Armourplan PVC roofing system** comprising of waterproofing membrane installed over the substrate as detailed below.

TYPES OF COVERING

110 WARM ROOF COVERING Main Roof Remedial

- Substrate: As clause 621
- Falls: existing falls sufficient
- Finished falls to be in accordance with BS6229 – see preliminary notes
- Preparation: Ensure substrate is clean, dry, and smooth.
- Roof covering system: **IKO Armourplan PVC**
- Manufacturer: IKO Polymeric, Coney Green Road, Clay Cross, Chesterfield, S45 9HZ
Tel: 01257 488000, email:
Lower protective layer (loose laid): N/A
- Air & Vapour Control Layer (AVCL): **Existing as Clause 621**
- Insulation: **Existing as Clause 621**
- Insulation to upstands: Where required as Clause 425U
- Separating layer (loose laid): **Spectratex Fleece**
- Waterproof membrane: **IKO Armourplan P** As per clause **710 and 711**
UK Manufactured to BES 6001, ISO 9001 and ISO 14001
 - Width: 2120mm
 - Thickness: 1.2mm
 - Colour: TBC
- Upper protective layer (loose laid): Temporary protection required during works for following trades
 - Surface finish: N/A

ACCESSORIES

Armourplan Coated Metal

- Material: 0.6mm PVC/0.6mm Steel
- Dimensions: 3m x 1m or 2m x 1m Flat Sheet
- Colour: Same as roof covering

Armourplan PVC Sealant

- Material: Neutral Cure Silicone
- Cartridge Size: 310ml
- Colour: Grey
- Joint Size: 6mm – 25mm (50mm multiple applications)

IKO Strike Lightning Tape Clip

- Material: PVC
- Dimensions: 100mm x 100mm,
- Tape Type: Uncoated 25mm x 3mm
- Colour: Mid Grey

PERFORMANCE

210 ROOF PERFORMANCE

- Roof covering: Secure, free draining and weathertight.

240 ATTACHMENT

- Requirement: Determine methods of attachment to resist wind loads. Provide for relative movement of materials and effects of vapour pressure. Do not reduce performance of Air & Vapour Control Layer (AVCL).
- Wind loads: Calculate to National Annex to BS EN 1991-1-4:2005, Standard Method.
 - For detailed figures please refer to wind uplift calculation.

PRODUCTS

325 ADHESIVE (PVC CONTACT)

- Type: Solvent Based Contact Adhesive
- Application: Bonding **Armourplan P** to upstands and details
 - Bonding Armourplan G and D membrane to complex details
- Manufacturer: IKO Polymeric
- Product reference: **Armourplan Contact Adhesive**
- Colour: Blue
- Application: Roller or brush applied to achieve a full even coat to both surfaces
- Coverage Rate: 3.4 – 5.6m²/l per surface dependent on porosity of the substrate/detail element and ambient/substrate temperature
- Notes:
 - Do not use in temperatures below 5 °C.
 - PIR insulation board joints must be taped with foil tape prior to application of adhesive

330 TIMBER FOR TRIMS, ETC

- Quality: Planed. Free from wane, pitch pockets, decay, and insect attack except ambrosia beetle damage.
- Moisture content at time of covering (maximum): 22%.
- Preservative treatment: Aqueous Based

341 PREFORMED TRIMS

- Type: **Armourplan Coated Metal**
- Manufacturer: IKO Polymeric
- Product reference: **Armourplan Coated Metal Flashings**
- Colour: To match roof covering

355 **MECHANICAL FASTENERS, WASHERS, PRESSURE PLATES, ETC**

- Type: Carbon steel fasteners to secure **Toothed Flatbar**
- Manufacturer: IKO Polymeric
- Product reference: **IKOfix Universal Fixings**
- Type: Fasteners and pressure plates to secure Armourplan Membrane (Cold Roof System)
- Manufacturer: IKO Polymeric
- Product reference: **IKOfix Universal Roof Fixings with Membrane Pressure Plates (HS)**

380 **PROTECTION AND SEPARATION LAYER:**

- Type: polyester protection fleece
- Manufacturer: IKO Plc
- Product reference: **IKO Spectratex 300**
- Sizes:
 - 300gsm (2m x 50m)
- Laps: 150mm side and end laps
- Installation: loose laid

480 **PIPE COLLARS**

- Type: Armourplan PVC
- Manufacturer: IKO Polymeric
- Product reference: Bespoke IKO Polymeric or site formed from **Armourplan D** or **G** membrane
 - Colour: To match roof covering

EXECUTION GENERALLY

510 **ADVERSE WEATHER**

- General: Do not lay membrane in wet or damp conditions unless effective temporary cover is provided over working area. In colder weather conditions care should be taken to observe minimum installation temperatures of adhesives, sealants and primers.
- Unfinished areas of roof: Keep dry and protect edges of laid membrane from wind action.

520 **INCOMPLETE WORK**

- End of working day: Provide temporary seal to prevent water ingress to the laid waterproofing system or existing roof structure.
- On resumption of work: Cut away tail of membrane from completed area and remove from roof.

SUBSTRATES/ VAPOUR CONTROL LAYERS/ WARM ROOF INSULATION

610 **SUITABILITY OF SUBSTRATE**

- Surfaces to be covered: Firmly fixed, clean, dry, smooth, free from frost, contaminants, voids and protrusions.
- Preliminary work: Complete, including grading to correct falls and formation of upstands, kerbs, box gutters, sumps, grooves, chases, expansion joints and fixing of battens, fillets, anchoring plugs/ strips, etc.
- Moisture content and stability of substrate: Must not impair integrity of roof.

620 **TIMBER DECKS**

- Plywood (WBP) & Oriented Strand Boards/OSB (Grade 3) to be minimum 18mm
- Timber boarding to be a minimum of 25mm thick
- Timber decking should be clean, dry and free from contamination
- Timber decking should be fixed using annular ring shanked nails or suitable screws, punched or countersunk flush or below the surface of the deck
- Care should be taken when drying off timber decks, the use of gas torches is not recommended

621 **EXISTING ROOF CONSTRUCTION AND PREPARATION**

- Existing Substrate: Timber Board
- Existing Air & Vapour Control Layer (AVCL): **SA VCL**
- Existing Insulation: **Enertherm MG**
- Existing Waterproof membrane: IKO Permaphalt
- Preparation: Ensure substrate is clean, dry, and smooth.
- Notes:
 - IKO remedial waterproofing of existing Permaphalt

640 **FIXING TIMBER TRIMS**

- Fixing centres (maximum): As per specifiers instructions
- Fasteners: Countersunk screws or ring shanked nails

WATERPROOF COVERINGS/ ACCESSORIES

710 **MECHANICAL FIXING OF WATERPROOF MEMBRANE (PULL OUT TEST REQUIRED)**

- Setting out: Strictly in accordance with the IKO Polymeric wind uplift calculation
- Laying: Loose lay, do not wrinkle or stretch.
 - Membrane rolls to be installed at 90 degrees to metal deck troughs if applicable
- Installing fasteners:
 - Use manufacturer's recommended methods and equipment.
 - Insertion: Correct and consistent.
- Tube Washers / Pressure plates:
 - Distance from fixed edge (minimum): 30 mm.
 - Fixing: Flush with membrane.
- Sheet overlaps: Extend beyond previous sheet by minimum 120mm
- Surface condition at completion: Fully sealed, smooth, weatherproof and free draining.

711 **ARMOURPLAN MECHANICALLY FASTENED APPLICATION (PULL OUT TEST REQUIRED)**

- Unroll and position **Armourplan membrane** (at 90 degrees to deck troughs if a metal deck is used) without stretching and hot air weld all end laps.
- Mechanically fasten 2120mm wide **Armourplan membrane** with **IKOfix Universal Fixing with Membrane Pressure Plate** along the edge of the membrane, set 30mm in from the membrane edge.
- For zone dimensions and fixings requirement please refer to wind uplift calculation
- Intermediate rows of fasteners (if applicable) to be weathered with a 150mm wide strip of Armourplan welded to the field sheet.
- NOTE: For zone dimensions please refer to the attached IKO Polymeric wind load calculation.

- Install fastenings using manufacturer's recommended equipment, fitted with bit stop, etc. to ensure correct and consistent insertion.
- Overlap subsequent sheets by a minimum of 120 mm to cover fasteners and washers and hot air weld the lap.
- The fasteners are to project below timber decks by a minimum 15mm, metal decks by a minimum 20mm and achieve a minimum embedment in to concrete decks of 35mm (subject to pull-out tests).

730 **WELDED JOINTING (NON FLEECE BACKED MEMBRANE)**

- Laying: Loose lay, do not wrinkle or stretch.
- Side and end joints:
 - Side Laps (minimum): 120mm
 - End Laps: (minimum): 60mm
- Preparation: Clean and dry surfaces for full width of joint in accordance with IKO Polymeric instructions. Test welds must be undertaken at the start of each work period and retained for inspection by IKO Polymeric Field Services Engineer.
- Sealing: Hot Air Weld together using suitable Automatic welding machine or hand held hot air guns
- Condition at completion: Fully sealed, smooth, weatherproof and free draining.

760 **PERIMETER OF MEMBRANE (MF/LL SYSTEM)**

- General: Secure membrane at roof edge conditions, changes of plane, curb flashings, upstands to roof lights, etc. with **IKO Polymeric Toothed Flatbar** or **Armourplan Coated Metal** fastened using suitable IKOfix fasteners fixed at maximum 150mm centres.

765 **PERIMETER DETAILS USING ARMOURPLAN COATED METAL FLASHINGS**

- Upstands, edge trims, drips, kerbs, etc. Secure preformed **Armourplan coated metal** sections to roof structure with suitable **IKOfix fasteners** at maximum 150mm centres.
- Roof membrane: Dress over perimeter profile. Overlap beyond fasteners by minimum 40mm
- Sealing: Hot Air Weld

770 **PERIMETER DETAILS FORMED USING ARMOURPLAN MEMBRANE**

- Upstands, kerbs, etc. Form flashings from **Armourplan P membrane** material.
- Edge trims, drips etc. Form flashings from **Armourplan Coated Metal**.
- Roof membrane: Terminate in horizontal or vertical plane with **Toothed Flatbars** immediately adjacent to change in direction and secure with mechanical fasteners.
- Flashings: Dress over perimeter profile. Overlap horizontal roof membrane beyond **Toothed Flatbar** by minimum 50mm
- Sealing: Hot Air Weld together

780 **ROOF PENETRATIONS THROUGH ARMOURPLAN MEMBRANES**

- Roof membrane: Cut around penetrations and secure to deck.
- Type: Bespoke prefabricated IKO details or site fabricated using **Armourplan D** non reinforced membrane
- Installation: Dress over and around penetration.
- Roof membrane overlap to flange (minimum): 50 mm beyond fasteners.
- Sealing: Weld flange to roof membrane.
- Protection to top edge of sleeve: Stainless steel jubilee clip and **Armourplan PVC sealant**.

COMPLETION

910 **INSPECTION**

- Interim and final roof inspections: Submit roof covering manufacturer's reports.

920 **ELECTRONIC ROOF INTEGRITY TEST**

- Required for all buried waterproofing roof finishes.
 - Including green/blue roofs podiums, terraces and walkways where the waterproofing is in an inverted or buried application.
- Testing authority: RAWTA (The Roofing and Waterproofing Test Association) or one that is recognised by IKO.
- Timing of test: Upon completion of waterproofing, prior to finishes being applied
- Condition of roof prior to testing:
 - Complete to a stage where integrity can be tested.
 - Surface: Clean.
- Test results and warranty: Waterproofing tested and PASSED to be confirmed within the report. Submit on completion of testing to IKO technical services department. Test report to provide no breaches within the waterproofing.

940 **COMPLETION**

- Roof areas: Clean and cleared
 - Outlets: Clear
 - Work necessary to provide a weathertight finish: Complete.
 - Storage of materials on finished surface: Not permitted.
 - Completed membrane: Do not damage. Protect from chemicals, traffic and adjacent or high level working. Provide protection from follow on trades.
 - Reduce access to the roof from all parties not associated with its installation, inspection or maintenance.
- Protection:
 - Protect the roof during the installation process and upon completion roof areas are adequately protected from damage by subsequent building operations.
 - The roof is not used as a working platform unless fully protected to the satisfaction of the CR.
 - No petroleum based solvents or other chemicals harmful to bitumen are allowed to come into contact with the roof surface.
 - No building materials are stored on the roof.
 - Prevent unauthorised access to the roof upon and after completion.

- Provide a detailed risk assessment and method statement to any person accessing the roof within the term of the guarantee.
 - Ensure no unauthorised works to or affecting the waterproofing is undertaken without prior written consent from the guarantor.
- Final Inspection: IKO technical engineer to undertake a final inspection of the completed waterproofing, prior to the issue of the guarantee.

NOTES

Specification

- All works are to be installed in accordance with the IKO Polymeric Specification and recommendations, by an IKO Armourplan Approved Contractor for the specified waterproofing system.
- Installers must be competent in the installation requirements of the system specified.

Materials

- Manufactured and marketed by IKO.
- Only materials within this specification and supplied by IKO will be covered by the IKO guarantee.
- Any system component that is used for this project that is not supplied or approved by IKO, will not be covered by the IKO guarantee, and will either be an exclusion within it, or the guarantee offer will be reduced or withdrawn.

Design

- Only waterproofing details approved by IKO will be covered by the IKO guarantee.

Specification

- IKO specification must be followed.
- A copy of the IKO specification must be held on site by the installing contractor.
- IKO waterproofing details must be followed.

Specification variations

- The appointed installing contractor must ensure that the waterproofing specification proposal meets the clients brief, is fully compliant with Building Regulations requirement and that the proposal meets the project requirements.
- IKO must be notified where any element of the proposed specification does not meet the project requirements. IKO will not be held liable for any design undertaken outside the scope of this proposal.
- Any element of the IKO specification that is not followed or changed without prior written consent from IKO, will constitute that under CDM they will become the designer and take responsibility for the design of waterproofing. This will include compliance with the Approved Documents of the Building Regulations, specifically relating to fire performance and thermal performance.
- Any changes made to the IKO specification before or during the undertaking of the works must be brought to the attention of IKO and the client/client's representative immediately.
- Variations to this proposal must be agreed in writing, by both the client's representative and IKO technical department. Where this has not been notified and agreed in writing, then the IKO guarantee offer may be withdrawn.
- Any costs incurred or saved due to variations must be agreed by all parties and the work not undertaken until agreed by all parties.

Project start notification

- As part of the IKO guarantee requirements, all project starts and/or pre start meetings must be notified by the installing contractor a minimum 10 working days before the project starts to polymeric.technical.uk@iko.com.
- Failure to notify IKO through this email address may invalidate any guarantee offer proposed with this specification proposal.

Workmanship

- IKO Contractor is responsible for their workmanship and the installation of the waterproofing materials throughout the term of the guarantee.

Installation

- Must be undertaken by a competent person who is familiar with the correct application techniques required to install the waterproofing system components in accordance with IKO recommendations.
- The works must comply with the requirements of the Health and Safety at Work Act and specific requirements as set out by the client. All risk assessments and method statements must be undertaken and recorded by the installing contractor.
- Before the works commence, the installing contractor should ensure that the surfaces to receive the new waterproofing system are acceptable and that the specification conforms to the clients requirements.
- Allowance should be made by the installing contractor for the extent of, volume and degree of difficulty in stripping and removal from site the existing waterproofing and associated build up.
- Any retained components from the existing structure must be sound and capable of accepting the imposed loading of the new waterproofing system and associated installation procedures.
- Where the installation has been undertaken that is not in line with either IKO recommendations or that of good practice, these items will not be covered by the IKO guarantee.

Project completion

- It is the responsibility of the **IKO Contractor** to advise the IKO Technical Engineer when the waterproofing works are ready for final inspection. Notice must be a minimum of 5 working days prior to completion and safe access must be provided to allow IKO to undertake any necessary final inspection.

Applying for the guarantee

- Application for the guarantee is made by the IKO Contractor by completing the guarantee application form and forwarding to polymeric.technical.uk@iko.com. The guarantee will then be forwarded to the IKO Contractor for forwarding to the client.

Cover flashings

- All cover flashings and the sealants used within the chase are seen as items that require maintenance within the term of the guarantee. As such these items are not covered as part of the guarantee.

Maintenance

- Maintenance must be undertaken in accordance with the terms of the guarantee.
- The waterproofing must be protected from any follow on trades or other works that may affect the waterproofing.
- Once completed, access will be required for future inspections and maintenance. Maintenance of drainage outlets, plant items and services etc. will be required to ensure the long term performance of the waterproofing system.
- The client is to ensure safe access is provided to allow maintenance.
- Unauthorised access should be prevented from all parties not associated with the installation of the waterproofing, inspection or maintenance.
- Designated walkways should be provided for maintenance and means of escape.
- Provide a detailed risk assessment and method statement to any person accessing the area within the term of the guarantee.
- Ensure no unauthorised works to or affecting the waterproofing are undertaken without prior written consent from the guarantor. Approval from the guarantor must be confirmed prior to any works being undertaken.
- No solvents or other chemicals harmful to the waterproofing system should be allowed to come into contact with the waterproofing.

Construction (Design and 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, and are designed to help workers, contractors, designers and clients of 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 and includes all projects including domestic client projects

- The responsibilities of the client with legal duties under CDM include but are not limited to the following:
 - Appointment of a principle designer and principle contractor
 - Ensuring there are arrangements in place for managing and organising the project
 - Providing information to and communicating with the designer and contractor
 - Ensuring there is a written construction phase plan
 - Keeping a health and safety file, after the project is completed
 - Protecting members of the public, including all employees
 - Making sure all persons have the right skills, knowledge, training and experience
 - Making sure certain projects are notified to the HSE
- Refer to HSE guidance **Managing health and safety in construction – Construction (Design and Management) Regulations 2015 – (L153)** on the legal requirements for CDM 2015.

Health & safety guidance notes

- The Contractors nominated in conjunction with this specification must be approved to install IKO materials specified and therefore 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 components which are not manufactured by IKO.

Risk assessments and method statements

- 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 working 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, contractors and specifiers must assure themselves that all potential risks have been accounted for.
 - **Safe2Torch** – The installing contractor is to ensure they follow the Safe2Torch guidelines that are available from the NFRC.
 - **Gas flues** – determine whether flues are live, and if so establish working methods to ensure that flues are not covered or obstructed in any way.
 - **Microwave transmitters** – establish safe working methods to prevent personnel from being exposed to microwave radiation.
 - **Air Intakes** – precautions should be taken to prevent the ingress of fumes from the waterproofing works entering the building.

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.
- The contractor for the works is required to provide a risk assessment and method statement for the safe working of personnel around rooflights and openings.
- HSG 33 *health and safety in roof work* draws attention to the responsibilities of those specifying rooflights and designers should consider the following:
 - Specifying rooflights that are non-fragile.
 - Fitting rooflights designed 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 waterproofing system, taking account of the likely deterioration due to ultraviolet exposure, environmental pollution and internal and external building environment.

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
- IKO waterproofing specifications has been 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.

Use of products containing 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.
- Training
Training and certification for product users, which involves passing an examination. A record of the training given to employees must be maintained by employers. Every five years, renewal of the training will be necessary.

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

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.

The legal duty remains on employers to ensure that all users have successfully completed the required training before using the substance.

APPENDIXES

Project Size Approx: TBCm²

17/04/2025

V1.24

Revision table:

Revision	Date Issued	Prepared By	Checked By	Revision Overview
0	17/04/2025	Ben Quinlan	Choose an item.	



WIND UPLIFT REPORT

Project: Appleby Lodge Remedial

Project Details	WUC-SP-00-Appleby Lodge Remedial
Postcode	M14 6HG
Height (m)	10.00
Width (m)	
Length (m)	
Pitch	Flat (1:80 min)
Deck Type	Concrete
Factor of Safety	1.35

Wind Load Calculation

The Calculations have been carried out in accordance with the requirements of NA to BS EN 1991-1-4:2005 the UK National Annex to Eurocode - Actions on Structures Part 1-4:

Basic Wind Velocity

$V_b = V_{bmap} \times C_{alt} \times C_{dir} \times C_{season} \times C_{prop}$	23.6 m/s
Wind Speed (V_{bmap})	22.6 m/s
Altitude Factor (C_{alt})	1.04 Site Altitude 44m
Direction Factor (C_{dir})	1.00
Seasonal Factor (C_{season})	1.00
Probability Factor (C_{prop})	1.00

Basic Velocity Pressure

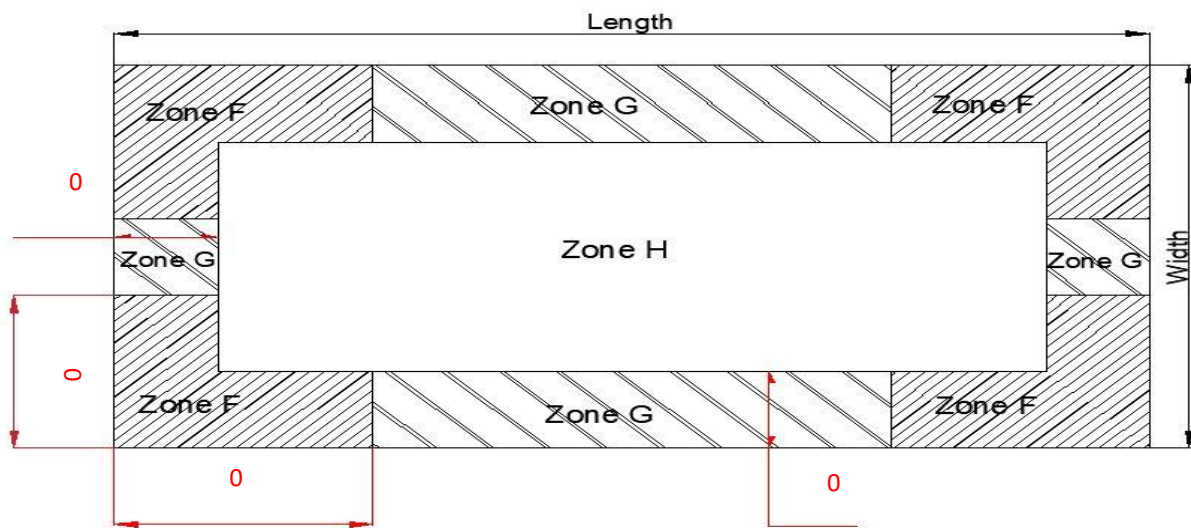
$q_b = 0.613 \times V_b^2$	0.34 kN/m ²
Orography Factor $C_o(Z)$	1.00
Exposure Factor $C_e(Z)$	2.40
Correction Factor $c_{r,T}$	0.84

Peak Velocity Pressure

q_p	0.69 kN/m ²
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Wind Loads

External Surface	Zone F	Zone G	Zone H
$p_e = q_p \times C_{pe} \times C_s$	-1.38	-0.97	-0.48
C_{pe} is the external pressure coefficient	-2	-1.4	-0.7
Internal Surface			
$p_i = q_p \times C_{pi} \times C_s$			
C_{pi} is the internal pressure coefficient			
Total Pressure kN/m ²			
$p = p_e - p_i$	-1.38	-0.97	-0.48
FoS	1.35	1.35	1.35
Total Pressure kN/m ²	-1.86	-1.30	-0.65
Minimum number of fixings per m ²	3.99	2.79	1.40

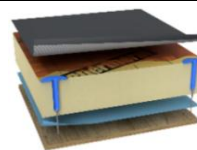


Mechanically fixed insulation and membrane basic requirement

Minimum number fixings/m ²	Zone F	Zone G	Zone H
	3.99	2.79	1.40

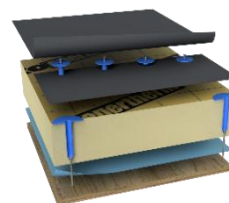
Mechanically fixed insulation and adhered membrane SG/PSG

Fixings per board	Zone F	Zone G	Zone H
2400mm x 1200mm	12	9	6
1200mm x 1000mm	5	4	4
1000mm x 1000mm	4	4	4
1200mm x 600mm	4	4	4



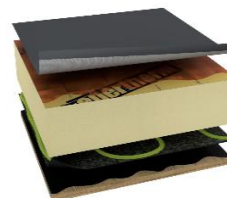
Mechanically fixed membrane SM/P

2120mm wide membrane	Zone F	Zone G	Zone H
Lap fixing spacing (mm)	125	179	358
Lap fixings per linear metre	7.98	5.59	2.79
Intermediate rows number			
Fixing rows spacing	2000	2000	2000
1060mm wide membrane	Zone F	Zone G	Zone H
Lap fixing spacing (mm)	251	358	716
Lap fixings per linear metre	3.99	2.79	1.40
Intermediate rows number			
Fixing rows spacing	1000	1000	1000



Adhered system or adhered membrane SG/PSG

	Zone F	Zone G	Zone H
Maximum allowed	-3.00	-3.00	-3.00
Total Pressure kN/m ²	-1.86	-1.30	-0.65
OK to bond			
Additional MF required			



Warm Ballasted system SM/P/SG/PSG

	Zone F	Zone G	Zone H
Ballast weight required kg/m ²	186	130	80

