



Specification of Workmanship and Materials

Flat Roof Renewal & External Maintenance to:

Block 1 – 35 & 36 - 70
Wimbledon Hall
Derby Road,
Bournemouth,
BH1 3PP

Aster Group Limited 2018

Location

Wimbledon Hall, Derby Road, Bournemouth BH1 3PP

NB: The flat blocks will be tenanted throughout the course of the works.

Scope of Works – Phase 1

1. Scaffolding

The Principle Contractor will arrange for designed scaffolding with suitable netting attached when and where necessary, this must enable safe, secure and unhindered access to all floor levels, making the site ready to deliver all identified works to both of the flat blocks.

To successfully achieve the scope of works, each of the sub-contractors will need to be consulted on their individual requirements.

The scaffold shall be designed to suit each programmed work phase, it should only necessitate adjustment once all phases dependent on its lift configuration have been successfully completed, and fully inspected to Aster's satisfaction.

To ensure safe load transfer down from the proposed rear elevation scaffolding, and to reduce the stress onto the rear communal car park flat roofs, the scaffold design will need to incorporate internal propped support to the underside of these roofs.

Care must be taken to prevent the smoke vent windows, boiler flues and service vents from being impeded in any way by scaffolding; this will ensure that they operate in the event of an emergency.

Once the scaffold has been erected it must be signed off with all necessary certification and regularly inspected using the scaff-tag system.

NB: The scaffolding for both blocks will be priced on a fixed fee basis for the duration of the contract.

Skips & waste management

Provide skips for the removal of rubbish as necessary including all safety lighting and warning cones.

Allow for waste chutes to be attached to the scaffold, ensure that they are positioned so that they discharge safely into the skips enabling the removal of any unlicensed redundant materials and brick rubble efficiently.

2. Communal TV Aerial & private Satellite dish connections

The Principle Contractor will arrange for a specialist Aerials company to disconnect all of the private satellite dishes, remove and dispose of all externally surface laid TV/Satellite cabling including any associated redundant services.

At present this cabling is wrapped around roof vents and trailing across the main roofs on both of the blocks, so this initial decommissioning phase must happen prior to the commencement of the main roof refurbishment works.

Reinstatement of the TV/Satellite services will require new cabling to be re-positioned so that it is fixed away from the surface of the main roofs in advance of the old system being withdrawn. (The repositioning must not hinder the new roof installation or repointing and jointing work).

Both residents and leaseholders will need to be consulted in advance of their Sky/TV signal being temporarily switched off.

Testing and commissioning of interrupted Sky/TV aerials and signals will follow upon the completion of all new cabling installations, and then checked once again on completion of the project.

3. Roofing refurbishment works – IKO warm & cold roofs

The opening phase of the project will involve stripping back the existing roof system to expose the asphalt, this will then be primed with a quick drying bitumen and the new vapour control layer installed ready for additional insulation to cover the main flat roofs making up Wimbledon Hall's two blocks numbered 1 – 35 & 36 – 70.

The main roof decks will need to be re-engineered to form a full perimeter parapet complete with water check, new insulation will be added to improve the thermal performance and the drainage falls will need adjustment in preparation to receive a IKO reinforced bitumen membrane upgrade.

Upper and lower level roofing work will include replacing the flat roofs covering the lift motor rooms, lower level front entrance porches, and recessed areas under the smoke release windows, both front and rear car park roofs and the communal bin store.

The communal bin store will require a new white uPVC fascia, guttering and downpipe with rainwater shoe, including fixtures to match existing.

The car park roofs will require light coloured pea gravel or crushed rock protection layer, not less than 10mm normal size graded, as single sized aggregate for felt roofing; for approval by Aster

Flashings

Lead free cover flashings will be introduced under the IKO specification, but should any traditional lead-work or flashings need to be replaced, then they must adhere to the following standards:

All new "Code 4" lead cover flashings shall be cut and dressed neatly and accurately.

To provide fully waterproof coverings/flashings shall be free from ripples, kinks, buckling and cracks.

Ensure that finished lead-work is fully supported, adequately fixed to resist wind uplift and accommodate thermal movement without distortion and stress.

An application of patination oil shall be applied to all visible lead-work upon finishing.

IKO Main Roofs & Lift Over Runs (both blocks)

SPECIFICATION No: BUR2003.2017

RECOMMENDATIONS

Main roofs

Strip mineral felt to Asphalt.

Remove unidentified flues (if confirmed to be redundant)

Install IKO Refurbishment Rain Water Outlets

Install New High Performance IKO Weatherproofing system.

Car Park Roofs

Remove existing stone chippings.

Overlay Asphalt with new IKO High Performance Weatherproofing system.

Main Roofs

Proposed Roof Build Up:

Systems T-O VCL

120mm IKO enertherm ALU Insulation bonded in IKOpro Sprayfast IBA

Systems S-A Underlay

Ultra PrevENT T-O Cap Sheet

Lift Over Runs (both blocks) & Car Park Roofs

Proposed Roof Build Up:

IKO Base Quadra T/F Underlay

Ultra PrevENT T-O Cap Sheet

Refer to specification for full proposed roof build up, including preparation works, primers, detailing materials and any flame free zones.

Due to continual development, this report is only valid for a period of 12 months from the date of survey.

SPECIFICATION No: BUR2003.2017

SECTION TWO

WATERPROOFING

Ultra PrevENT is a high performance Elastomeric built up roofing system guaranteed against faulty design, materials and workmanship. Ultra PrevENT offers the specifier and the client the most advanced flat roofing remedy for new build and refurbishment projects.

BBA (with durability statement)

The Ultra PrevENT roofing system has been independently approved by the British Board of Agreement, certificate number 91/2671.

The BBA certificate 91/2671 states

Durability - *under normal conditions the systems will have a service life in excess of 30 years.*

LPCB (listed within red book)

Ultra PrevENT is listed within the LPCB Red book under certificate 626a/10.

The LPCB Red Book is a key reference for specifiers, regulators, designers and end users of fire and security products and services. Every product and service listed in the Red

Book has been robustly checked by independent experts to ensure that it delivers and will continue to deliver the performance expected.

The Red Book is the LPCB list of *Approved Fire & Security Products and Services*. LPCB is the approval brand that BRE Global operates for fire and security products and services. LPCB listings are accepted throughout the UK and around the world.

FIRE RETARDANT WATERPROOFING CAP SHEET (fire rating)

Ultra PrevENT high performance bitumen membrane flat roofing system incorporates the prevent Graphite Fire Wall Technology and has been independently tested at Warrington Fire Research to BS 476: Part 3 external fire exposure roof test and achieves the highest performance designation of **EXT.F.AA**.

Ultra PrevENT high performance waterproofing system – **no penetration of the roof system within 1 hour**.

Ultra PrevENT high performance bitumen membrane flat roofing system incorporates the prevent Graphite Fire Wall Technology and achieves the highest UK and European fire performance which enables **unrestricted use** within Part B of the Approved Documents of the Building Regulations. Graphite Firewall Technology video.

<http://www.ikogroup.co.uk/2017/07/23/iko-graphite-technology-bituminous-reinforced-membrane-fire-test/>

NHBC STANDARDS

The NHBC accepts the use of Ultra PrevENT high performance waterproofing system, provided it is installed, used and maintained in accordance with this specification, in relation to NHBC standards, Chapter 7.1 *Flat roofs and balconies*.

SPECIFICATION No: BUR2003.2017

CE MARKING

The membranes within this specification have CE marking, in accordance with harmonised European Standards BS EN 13707: 2013.

APPROVED CONTRACTOR APPLICATION

IKO Technical Services maintain a national list of approved contractors for each of our waterproofing systems. All of the contractors have been specially selected for their standards of workmanship and professional integrity. Together with top class materials and superior design service, good workmanship enables IKO roofing specifications to complete the quality triangle, which is so important to a high performance installation.

ON SITE MONITORING

As part of our ongoing service commitment, all works will be monitored by an **IKO Technical Engineer** and the works must be 'signed off' by the **IKO Technical Engineer** prior to the guarantee being issued to the installing contractor upon satisfactory completion of the roofing works.

ELECTRONIC SITE INSTALLATION REPORTS WITH PHOTOGRAPHIC HISTORY

All site inspection reports will be undertaken electronically and issued to all parties throughout the term of the waterproofing works. Each report will contain a written and photographic record of each inspection undertaken.

PROJECT START

In line with this system offer **IKO Technical Services** Guarantees Department **MUST BE NOTIFIED** of all **PROJECT STARTS** and/or pre start meetings to ensure the IKO inspection requirements can be undertaken in accordance with the guarantee offer. Failure to notify IKO in advance may compromise or delay the issue of any guarantee being offered.

Once the **IKO Approved Contractor** has been appointed it is their duty to provide adequate notification of the **PROJECT START DATE** in advance to guarantees.uk@iko.com

FINAL INSPECTION AND SIGN OFF REPORT

Upon completion of the works, an **IKO Technical Engineer** will carry out a final inspection of the roofing works to ensure that they have been completed in accordance with this

specification, and agree any necessary remedial works prior to the 'signing off'. These must be agreed and actioned prior to the release of any guarantee.

The installing contractor must ensure they liaise with the **IKO Technical Engineer** to ensure this 'sign off' is undertaken and safe access is provided at all times.

INSURANCE BACKED GUARANTEE COVERING APPROVED CONTRACTOR INSOLVENCY

A **25 YEAR SINGLE POINT IKO GUARANTEE with INSURANCE BACKING** is available on this contract subject to the works being completed in accordance with the IKO specification document and the works being undertaken by one of the IKO approved contractors who are approved to install the specified waterproofing system using operatives whom have undertaken the IKO product induction programme.

This guarantee is an assurance to the building owner that should the roof fail to remain watertight due to defective materials manufactured and marketed by IKO, due to details designed by IKO Technical Services or due to faulty workmanship by the approved contractor, IKO will reinstate the roof to a watertight condition at no expense to the building owner.

SPECIFICATION No: BUR2003.2017

Summary of Guarantee Cover:

Insurance backed by AIG

Material failure

Design detail failure

Workmanship

Contractor Insolvency

Consequential loss

Consequential damage

Professional indemnity

Applying for the guarantee

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

SPECIFICATION No: BUR2003.2017

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

Main Roofs

Lift Over Runs & Car Park

Roofs (both blocks)

Substrate Preparation

Strip to asphalt

Deck not being exposed

Strip to asphalt

Deck not being exposed

Priming

IKOpro Quick Dry Bitumen

Primer

IKOpro Quick Dry Bitumen

Primer

Vapour Control Layer Systems T-O VCL N/A**Insulation**

120mm IKO enertherm ALU

Insulation bonded in IKOpro

Sprayfast IBA

N/A

Underlayer Systems S-A Underlay IKO Base Quadra T/F Underlay**Cap Sheet** Ultra PrevEnt T-O Cap Sheet Ultra PrevEnt T-O Cap Sheet**Detailing Materials** Ultra PrevEnt T-O detailing Ultra PrevEnt T-O detailing**Replacement Rain Water****Outlets**

IKO 3.2mm Aluminium

Refurbishment Outlet

N/A

Flame Free Zones

This proposal specification has been created with due regard to compliance with the NFRC Safe2Torch guidance for the safe installation of torch-on reinforced bitumen membranes.

To the best of our knowledge any potential hazards have been identified and this specification designed to minimise any such associated risk.

Should during the installation of these works the installing contractor identify unforeseen potential risk they should notify both the clients representative and the IKO technical department immediately.

The installing contractor is reminded that they have a duty of care and responsibility to carry out their own risk assessment of the proposed works and pre-hot works checks as outlined in the NFRC Safe2Torch guidance. These must consider both site preparation works such as drying roofs and installation of reinforced bitumen membranes. Safe working practices must be introduced to minimise identified risks. All installing operatives and contractors must adhere to the guidance set out in the NFRC Safe2Torch guidance.

SPECIFICATION No: BUR2003.2017**Existing Deck - Woodwool Slabs**

The existing deck has been determined as woodwool slabs. This type of roof deck is regarded as a fragile material under the guidance in document "HSG33: Health and safety in roof work" published by the Health and Safety Executive.

Wherever possible, such fragile roof decks should be replaced with a non-fragile alternative, or possibly over-decked with a quality timber based panel in order to remove or minimise future risks.

Where the proposal is to retain woodwool decks, the structure must be confirmed as suitable for additional loadings; it must resist dead, live and wind loads, including storms. It must also be suitable for the proposed roofing system including any proposed over deck, and subsequent use and the decision made by the client and/or his surveyor, structural engineer or other professional/competent persons, and a safe procedure and method of work adopted.

The contractor and installer must ensure a safe and suitable method of work, together with a full risk assessment and associated method statement must be developed and agreed before commencement, in accordance with HSG33 Health and safety in roof work.

SPECIFICATION No: BUR2003.2017**FIELD AREA MATERIALS****Main Roofs****BITUMEN PRIMER****IKOpro QUICK DRY BITUMEN PRIMER**

A bituminous priming solution for the preparation of porous and dusty surfaces prior to the application of bitumen waterproofing membranes.

Size: 25 litres

Coverage: dependent upon substrate: apply as two coats.

Product code: MW646408

VAPOUR CONTROL LAYER

SYSTEMS T-O VAPOUR CONTROL LAYER

High Performance, SBS modified, polyester reinforced vapour control layer with aluminium foil laminate core and torch on film to the underside. Used beneath insulation to prevent penetration of water vapour into the roof build up and minimise the risk of interstitial condensation.

Roll size: 12m x 1m

Roll weight: 37 kg

Surfacing: sanded

Product code: 62120000

INSULATION BONDING ADHESIVE

IKOpro SPRAYFAST IBA

A single component, high foaming, spray applied, solvent free polyurethane adhesive developed to bond a wide range of insulation boards to most substrates. The adhesive uses a canister system, enabling rapid and more accurate application compared to hand-poured adhesives. The application system consists of a lance and 3m hose minimising operative discomfort and allowing 1 square metre to be covered in 2-3 seconds. The adhesive foams immediately to compensate for undulations in the substrate and allowing an immediate grab of the insulation being adhered. Coloured green for easy identification.

Size: 17.6kg (23.7kg including canister)

Product Code: 58800102

Coverage: up to 250m²/canister, depending on surface porosity. Coverage rate should be doubled to all perimeter and exposed edges.

4 x 30mm minimum width continuous beads per 1200 x 1000mm board at 200-300mm centres to main roof.

8 x 30mm minimum width continuous beads per 1200 x 1000mm board at 150mm centres to perimeter edges.

Application Temperature: 5 - 30°C

Open time: 1-10 mins at 20°C

Curing time: dependant on ambient temperature and humidity but is typically - 15 mins at 20°C

MUST BE USED IN CONJUNCTION WITH APPLICATION LANCE & HOSE

SPECIFICATION No: BUR2003.2017

INSULATION

IKO enertherm ALU

High performance, rigid polyisocyanurate (PIR) foam, CFC/HCFC free insulation board with a composite aluminium facing on both sides. Used in high performance cold applied waterproofing system applications. Must be bonded to the VCL using PU adhesive or by mechanical fastening using recommended tube fasteners and fixings.

Thermal conductivity: 0.022W/mK

Insulation Thickness: 120mm

Target U-Value: 0.18 W/m².k. (for the whole flat roof build-up)

UNDERLAY

SYSTEMS S-A UNDERLAY

Specially formulated, self-adhesive, SBS modified, polyester reinforced underlay, used as a cold applied underlay. The product has a upper surface designed for receiving the torch applied cap sheet and a release film backing on the selvedge and lower surface that protects the self-adhesive coating prior to installation. The selvedge width is 75mm. End

and side laps are to be hot air welded. It can be applied directly to **IKO PIR/ALU Insulation Board** when used in conjunction with a torch applied cap sheet.

Roll size: 16m x 1m

Roll weight: 36 kg

Surfacing: fine green mineral

Product code: 62161000

CAP SHEET

ULTRA PreVENT T-O CAP SHEET

SBS modified with fire retardant properties, listed in the LPCB Red Book, certificate number 626a/10 and tested to BS476 part 3 (external fire exposure roof test) to achieve the highest designation of EXT.F.AA. A high performance, polyester reinforced membrane used as a torchon Cap Sheet within the Ultra PreVENT built-up roofing system.

Roll size: 8m x 1m

Roll weight: 40 kg

Product Codes: Green – 66940000; Brown – 66950000; Black – 66951000

Lift Over Runs & Car Park Roofs (both blocks)

BITUMEN PRIMER

IKOpro QUICK DRY BITUMEN PRIMER

A bituminous priming solution for the preparation of porous and dusty surfaces prior to the application of bitumen waterproofing membranes.

Size: 25 litres

Coverage: dependent upon substrate: apply as two coats.

Product code: MW646408

UNDERLAY

IKO BASE QUADRA T/F PARTIAL BONDED T-O UNDERLAY

IKO Base Quadra is a high performance underlay, with a built in vapour diffusion layer and thermofusible margin consisting of a polyester base coated with flexible APP modified bitumen and finished with sand on the top surface. IKO Base Quadra allows a two layer refurbishment option, whereby the underlay has the built in vapour diffusion layer and a compatible modified torch applied cap sheet can be fully bonded over the top.

Roll size: 7.5m x 1m

Roll weight: 34.5 kg

Product code: 01514013

SPECIFICATION No: BUR2003.2017

CAP SHEET

ULTRA PreVENT T-O CAP SHEET

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Roll size: 8m x 1m

Roll weight: 40 kg

Product Codes: Green – 66940000; Brown – 66950000; Black – 66951000

DETAILING MATERIALS

TORCH-ON DETAILING

BITUMEN PRIMER

IKOpro QUICK DRY BITUMEN PRIMER

A bituminous priming solution for the preparation of porous and dusty surfaces prior to the application of the waterproofing membranes.

Size: 25 litres

Coverage: dependent upon substrate: apply as two coats.

Product code: MW646408

ANGLE FILLETS

IKO UNIVERSAL ANGLE FILLETS

To be used at all horizontal and vertical abutments.

Size: 1200mm x 50mm x 50mm

Product code: 27300000

UNDERLAY

SYSTEMS T-O UNDERLAY

SBS modified high performance polyester reinforced membrane used as a Torch on Underlay within built up roofing systems.

Roll size: 12m x 1m

Roll weight: 36 kg

Surfacing: sanded

Product code: 62150000

CAP SHEET

ULTRA PrevENT T-O CAP SHEET

SBS modified with fire retardant properties, listed in the LPCB Red book, certificate number 626a/10 and tested to BS476 part 3 (external fire exposure roof test) to achieve the highest designation of EXT.F.AA. A high performance polyester reinforced membrane used as a Torch on Cap Sheet within the Ultra PrevENT built up roofing system.

Roll size: 8m x 1m

Roll weight: 40 kg

Product Codes: Green – 66940000; Brown – 66950000; Black – 66951000

SPECIFICATION No: BUR2003.2017

ANCILLARY COMPONENTS

EDGE TRIM

IKO GRP ROOF EDGE TRIMS are manufactured from pultruded glass fibre reinforced polyester resin. The trims are thermally inert with a low coefficient of expansion. Units supplied in 3.0m lengths, with 40mm, 65mm, 100mm, 150mm or 200mm drips. Colours: Black, White and Grey Matching 90°, 240mm x 240mm internal/external corners available.

INSULATION STOP

IKO INSULATED HARD EDGE A stop batten which acts as both an incompressible perimeter edge or gutter termination, and a barrier to cold bridging. IKO Insulated Hard Edge can be used with all of IKO's warm roof waterproofing systems.

Sizes:

1200mm (length) x 118 mm (nominal width)

Available heights/Product codes;

LEAD FREE COVER FLASHING

IKOFLASH is a 3.5mm thick lead free flashing which can be used in areas where traditional lead flashing would be used such as chimney and abutment flashings, around rooflights and pitched valley linings. Where being used as a cover flashing into a chase, standard fixing clips can be used to hold firmly into place. Apply a continuous bead of **IKOpro STICKALL** mastic to the chase. Only IKOpro STICKALL is to be used in conjunction with IKOFLASH

IKOFLASH is made from a modified polyethylene compound with integral aluminium mesh reinforcement, enabling the product to be worked and formed in the same way as lead.

The product is faced with a fine grey mineral.

Can be worked and formed in the same way as lead.

Significantly lighter than lead making it easier to handle.

Non toxic

Size: 12m x 150mm, 12m x 250mm, 12m x 300mm, 12m x 400mm, 12m x 645mm
(also available in 6m lengths)

Colour: Grey

MODIFIED BITUMEN MASTIC SEALANT

IKOpro STICKALL is used to seal the chase, joints and cracks to the cover flashing detail.

IKOpro STICKALL is a dense elastomer modified bituminous sealing mastic that Remains plastic under normal temperatures and adheres well to most building surfaces. IKOpro STICKALL has good UV stability and resistance to sagging at high temperatures.

Size: 310ml cartridge

Overall Depth Product code:

110mm 34010110

120mm 34010120

130mm 34010130

140mm 34010140

150mm 34010150

SPECIFICATION No: BUR2003.2017

PLANT SUPPORTS

IKO ROOF PLANT SUPPORT SYSTEMS are designed to provide dependable secure supports for roof mounted plant including air handling units, refrigeration units and cable support systems.

Glass filled nylon with UV protection units with anti-vibration mat provided for each foot.

Foot moulding sizes: 305mm, 450mm and 600mm

Supports loading: upto 15 tons

REFURBISHMENT RAINWATER OUTLETS

IKO 3.2mm ALUMINIUM REFURBISHMENT OUTLETS are formed as a one-piece 3.2mm thick spun aluminium body, including an extra large 445mm diameter flange, giving an excellent membrane bond area, and with a depressed sump to facilitate roof drainage. The IKO 3.2mm ALUMINIUM REFURBISHMENT OUTLET is designed to suit a range of membrane types and thicknesses. The outlet comes complete with a patented expanding seal to prevent water backing up and accessing between the down-pipe and the outlet spigot, in the event of a blockage. The spigot seal is easily activated using a special hand held or drill bit screwdriver, available from IKO as an approved accessory.

IKO 3.2mm ALUMINIUM REFURBISHMENT OUTLET is primarily used during re-roofing operations, allowing a totally secure connection between the new waterproofing system and existing rainwater drainage systems.

The outlets are available in the following sizes to fit the varying internal diameters of down-pipes, and come complete with a clamping ring and aluminium or superdome leaf-guard.

Outlet Size

(mm)

Existing Pipework

Internal Diameter (mm)

Max Diameter

of Flange (mm)

Spigot

Length

(mm)

Flow

Rate

(l/s)*

Product

Code

75 72.39 – 84.33 445 305 3.12

584075001

584200752

100 95.00 – 110.49 445 305 3.40

584100001

584201002

150 146.30 – 168.40 445 305 3.72

584150001

584201502

*Flow rates are in litres per second @ 35mm water depth.

1with Aluminium Leafguard, 2with Superdome Leafguard

SPECIFICATION No: BUR2003.2017

Note: Refer to notes regarding Risk Assessments in Section Three, prior to works commencing.

ENABLING WORKS

CABLES

Temporarily remove or divert existing cabling to allow necessary roofing works. This should be carried out in conjunction with the building owner by a qualified engineer. Where being replaced on completion it should be secured by the application of membrane straps at 1m centres. Alternatively a proprietary cable fixing can be utilised.

UPSTAND BELOW DOOR THRESHOLD

The upstand height of the finished roof covering will be above the level of the existing door threshold. It will therefore be necessary to raise the door threshold level by replacing or adjusting the door frames and doors at these locations to accommodate the required roof covering thickness and minimum waterproofing upstand height of 150mm above the level of the finished waterproofing. Refer to separate client's instructions for further details of this installation. Allowance should be made during this work for the inclusion of a new IKOfash or code 4 lead cover flashing, to be dressed over the new waterproofing upstand. The guarantee offered for this project will be compromised if minimum waterproofing upstand heights cannot be achieved.

WALL ABUTMENT - RAISE DPC/CAVITY TRAY (PROVISIONAL)

Further investigation is required to determine whether a D.P.C. or cavity tray exists in the wall abutments to the roof. If these features are present, and at a level in the wall which will be exceeded by the proposed new waterproofing upstands, it will be necessary to insert a new D.P.C./Cavity tray into the wall abutment at a level above the top of the proposed new upstand flashing to accommodate the required roof covering thickness and minimum waterproofing upstand height of 150mm above the level of the finished waterproofing. Proprietary cavity tray units or IKO Hyload Original D.P.C. may be utilised for this application. The client should issue further instructions regarding this installation if applicable. Allowance should be made during this work for the inclusion of a new IKOfash or code 4 lead cover flashing, to be dressed over the new waterproofing upstand. The guarantee offered for this project will be compromised if minimum waterproofing upstand heights cannot be achieved.

OUTLETS - REFURBISHMENT OUTLETS

Clean & prepare existing outlet to receive new IKO REFURBISHMENT OUTLET, according to "Materials Schedule". Ensure refurbishment outlet has adequate seal to existing outlet/downpipe to prevent water back-up under roof covering in the event of blocked pipes/drains.

SPECIFICATION No: BUR2003.2017

ROOF PREPARATION

All Roof Areas

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. Such contingency is 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.

This specification is for the overlay of the existing asphalt substrate with new roof covering materials. The IKO guarantee offer is conditional upon the existing asphalt being suitable

for this purpose, and must be confirmed as such by the IKO Technical Services Field Engineer (Singlepoint Guarantees) or the installing contractor (Linked Guarantees) prior to the commencement of roofing works. The client is advised that should the existing asphalt be deemed unsuitable for a roofing overlay, it will be necessary to strip and remove the defective materials in order to maintain the guarantee offer. Remove existing roofing system and all associated details down to existing asphalt layer, and remove from site. Remove asphalt upstand skirtings and all associated details, to form a neat clean edge. Care is to be taken not to cause undue damage to the existing asphalt surface during removal of the existing roofing system. Carefully inspect the existing asphalt, making good or infill any defective areas to achieve a smooth level surface free from any projections.

CONTRACTOR NOTE

On exposing the asphalt, if the contractor is dissatisfied with the condition of the existing layer, 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. The client / contractor should satisfy themselves regarding the existing deck condition prior to roofing refurbishment works.

Main Roofs & Lift Over Runs

This specification is for the overlay of the existing substrate with new roof covering materials, retaining the existing woodwool slab deck. The future structural integrity of the decking or any roof waterproofing defects caused as a direct result of failure of the existing deck will not be covered by the IKO Guarantee.

The existing woodwool slab deck must be considered as a fragile material. The contractor and installer must ensure a safe and suitable method of work, together with a full risk assessment and associated method statement must be developed and agreed before commencement, in accordance with HSG33 Health and safety in roof work.

A structural engineer must confirm that the existing structure and deck is capable of withstanding the additional weight loading of the new waterproofing system.

The IKO guarantee offer is conditional upon the existing substrate being suitable for overlay, and must be confirmed as such by the IKO Technical Services Field Engineer (Single-point

Guarantees) or the installing contractor (Linked Guarantees) prior to the commencement of

SPECIFICATION No: BUR2003.2017

The client is advised that should the existing substrate be deemed unsuitable for a roofing overlay, it will be necessary to strip and remove the defective materials in order to maintain the guarantee offer.

PRIOR TO THE APPLICATION OF THE WATERPROOFING

Prior to the installation of the waterproofing system, thoroughly clean surfaces to receive the new waterproofing system. Remove all debris and sharp objects likely to damage the waterproofing membrane, and ensure the substrate is even and dry.

INSTALLATION OF FIELD AREA MATERIALS

Main Roofs

BITUMEN PRIMER

The substrate is to be thoroughly cleaned off and primed with two coats of **IKOpro QUICK DRY BITUMEN PRIMER** applied by brush, roller or spray and allowed to dry thoroughly. All surfaces must be clean, dry and free from grease, oil, dirt and loose material and structurally sound. All areas to which the waterproofing system is to be bonded must be prepared and primed accordingly.

VAPOUR CONTROL LAYER

Install **SYSTEMS T-O VAPOUR CONTROL LAYER** to the prepared substrate as soon as possible after the **IKOpro QUICK DRY BITUMEN PRIMER** is dry.

SYSTEMS T-O VAPOUR CONTROL LAYER is to be finished and sealed at the perimeters to enable linking with the waterproofing system by a minimum of 50mm.

Fully bond SYSTEMS T-O VAPOUR CONTROL LAYER using the torch on technique ensuring minimum side and end laps of 75mm and 100mm respectively. All laps are to exude a bead of bitumen from the joint to ensure a watertight seal.

When approaching an angle where the sheet will change from a horizontal to a vertical configuration, press the membrane firmly into position into the angle ensuring a full bond is achieved throughout the detail.

HIGH PERFORMANCE INSULATION

Install **IKO enertherm ALU**, bedded in **IKOpro SPRAYFAST IBA**. All joints are to be staggered and tightly butted to avoid gaps. The insulation boards must be installed into wet PU adhesive at the specified coverage rate and prior to the adhesive 'skinning' (between 1-10mins).

All insulation boards must be protected from moisture prior to installation by storing off the ground and covered with a tarpaulin.

Any hollows, depressions, deflections, back falls etc. found in the deck either before or after stripping should be rectified prior to installation.

IKOpro SPRAYFAST IBA is a high performance spray applied PU adhesive, for bonding the insulation boards to a suitable substrate. Surfaces must be clean, dry and free from dirt, debris, grease and dust. Thoroughly sweep the area, prior to the application of the adhesive and insulation.

SPECIFICATION No: BUR2003.2017

The adhesive is supplied in a canister and must be used in conjunction with the **IKOpro SPRAYFAST LANCE** and **IKOpro SPRAYFAST BRAIDED HOSE** to allow dispensing and accurate application of the adhesive with minimum effort and without waste.

The installing contractor must utilise the correct method of application.

Apply the adhesive in a continuous 30mm minimum width bead at 200-300mm centres, doubling up this coverage rate at all perimeter edges. Locate the insulation board into the wet adhesive and apply even pressure to ensure full contact with the adhesive. About 10 minutes after laying, check that boards have not uplifted due to the foaming action of the adhesive. The adhesive must be allowed to fully cure for a minimum of 15 minutes before undertaking any further works.

Do not stand on the boards or allow any application of waterproofing layers to the insulation board until this cure has been achieved.

Refer to IKOpro Sprayfast IBA literature for details on setting up the canister, maintenance and cleaning of the application equipment and emptying and disposal of the canisters.

On inclined roofs apply additional insulation stops for anchoring the waterproofing system against slippage, at intervals according to the slope as necessary.

No hot works must be used in the installation of **IKO ALU** or the subsequent underlay.

UNDERLAY

Ensure the substrate is free of dust, debris or moisture that will impair the bond.

Install **SYSTEMS S-A UNDERLAY**, dressed to the perimeter details to allow for linking with the specified vapour control layer by 50mm minimum.

The underlay is applied directly to the insulation boards without the need for priming. The application of the capsheet by torching then enhances the adhesion of the underlay to the board.

(It should be noted that where no priming of the substrate is being carried out, the underlay will not achieve a full bond to the insulation until the cap sheet is applied by torching.

Where the application of the cap sheet is to be undertaken as a separate item, priming the top surface of the insulation board with **IKOpro SYSTEMS BONDING AGENT**, **IKOpro SPRAYFAST SAP** or **IKOpro SA BITUMEN PRIMER** will be necessary to provide an initial bond.)

Remove the release film and progressively advance the roll whilst applying even downward pressure to bond the underlay to the insulation surface ensuring no air is trapped.

All laps must be hot air welded and pressure rolled ensuring a visible bead of bitumen is exuded from all side and end laps. **DO NOT ALLOW NAKED FLAMES NEAR THE SURFACE OF THE INSULATION BOARDS OR USE A TORCH TO SECURE THE LAPS.**

CAP SHEET

Apply **ULTRA PrevEnt T-O CAP SHEET** fully bonded to the underlayer by the torch on technique with 75mm minimum side laps and 100mm minimum end laps and lay to break joints.

The cap sheet should be finished at the top edge of the angle fillet to allow for linking with the detailing cap sheet. Ensure a visible bead of bitumen is exuded (5mm –15mm) from all side and end laps.

SPECIFICATION No: BUR2003.2017

TEMPORARY WEATHERING (Day/Night joint)

To ensure waterproofing integrity is maintained during the installation, (where the works need to be temporarily suspended due to dayworks or inclement weather), a temporary waterproofing seal is required from the new to the existing to ensure the building is kept watertight.

This temporary waterproofing seal should be provided to protect any insulation from water ingress. An underlay or equivalent should be lapped and sealed by linking the vapour control layer to the waterproofing layers.

Day/night joints must be applied to all details and main roof areas, where waterproofing integrity may be compromised due to the progress of the works or inclement weather.

Lift Over Runs & Car Park Roofs(both blocks)

BITUMEN PRIMER

The substrate is to be thoroughly cleaned off and primed with two coats of **IKOpro QUICK DRY BITUMEN PRIMER** applied by brush, roller or spray and allowed to dry thoroughly. All surfaces must be clean, dry and free from grease, oil, dirt and loose material and structurally sound. All areas to which the waterproofing system is to be bonded must be prepared and primed accordingly.

UNDERLAY

Apply **IKO BASE QUADRA T/F PARTIAL BONDED T-O UNDERLAY** bonded to the main roof area by the torch on technique with 80mm minimum side and end laps. Care should be taken and sufficient heat applied to ensure a visible bead of bitumen (5mm – 15mm) is exuded from all side and end laps.

Note: IKO BASE QUADRA T/F PARTIAL BONDED T-O UNDERLAY must be installed so as to be fully bonded for 450mm at all perimeter edges.

CAP SHEET

Apply **ULTRA PrevEnt T-O CAP SHEET** fully bonded to the underlayer by the torch on technique with 75mm minimum side laps and 100mm minimum end laps and lay to break joints.

The cap sheet should be finished at the top edge of the angle fillet to allow for linking with the detailing cap sheet. Ensure a visible bead of bitumen is exuded (5mm –15mm) from all side and end laps.

TEMPORARY WEATHERING (Day/Night joint)

To ensure waterproofing integrity is maintained during the installation, (where the works need to be temporarily suspended due to dayworks or inclement weather), a temporary waterproofing seal is required from the new to the existing to ensure the building is kept watertight.

This temporary waterproofing seal should be provided to protect any insulation from water ingress. An underlay or equivalent should be lapped and sealed by linking the vapour control layer to the waterproofing layers.

Day/night joints must be applied to all details and main roof areas, where waterproofing integrity may be compromised due to the progress of the works or inclement weather.

SPECIFICATION No: BUR2003.2017

INSTALLATION OF DETAILING MATERIALS

TORCH ON DETAILING

BITUMEN PRIMER

The detail is to be thoroughly cleaned off and primed with sufficient coats of **IKOpro QUICK DRY BITUMEN PRIMER**, being applied by brush, roller or spray and allowed to dry thoroughly.

The surface must be clean, dry and free from grease, oil, dirt and loose material and structurally sound. All areas that the waterproofing system is to be bonded to must be prepared and primed accordingly.

ANGLE FILLETS

IKO UNIVERSAL ANGLE FILLETS are to be used at all horizontal and vertical abutments. Apply with the facing upper side most, tightly butted to the horizontal and vertical abutment.

Adhered and bonded in **IKOpro PU ADHESIVE or IKOpro STICKALL** bituminous mastic sealant.

UNDERLAY

The underlay must be dressed to the detail to allow for linking with any specified vapour control layer. Apply **SYSTEMS T-O UNDERLAY** being fully bonded by the torching technique and lapped onto the main roof area by a minimum 125mm and dressed to the detail as specified.

Ensure a visible bead of bitumen is exuded from all side and end laps.

CAP SHEET

Apply **ULTRA PrevEnt T-O CAP SHEET** being fully bonded by the torching technique being lapped onto the main roof area by a minimum 150mm. Ensure a visible bead of bitumen is exuded from all side and end laps.

All 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 and those set out in BS8217. If a detail is not able to be formed in accordance with IKO recommendation, IKO Technical Services must be contacted for further advice.

IKO cannot be responsible for any details not formed in accordance these British Standards or IKO recommendations.

This specification should be read in conjunction with the detailing drawings found in section four of this document.

Should any variation to this specification occur prior to or during the progress of the works, then these must be notified immediately to both the IKO Technical Services Department and the clients representative.

No variation should be undertaken until such time that both IKO has approved any such variation and has been agreed by the client's representative in writing to all parties.

SPECIFICATION No: BUR2003.2017

SECTION THREE

C.D.M. & SAFETY

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.

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 *Managing health and safety in construction – Construction*

(Design and Management) Regulations 2015 – (L153) 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.

SPECIFICATION No: BUR2003.2017

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.

NFRC SAFE2TORCH GUIDANCE & USE OF GAS TORCHES

This proposal specification has been created with due regard to compliance with the NFRC Safe2Torch guidance for the safe installation of torch-on reinforced bitumen membranes. To the best of our knowledge any potential hazards have been identified and this specification designed to minimise any such associated risk. However should during the installation of these works the installing contractor identify unforeseen potential risk they should notify both the clients representative and the IKO technical department immediately.

The installing contractor is reminded that they have a duty of care and responsibility to carry out their own risk assessment of the proposed works and pre-hot works checks as outlined in the NFRC Safe2Torch guidance. These must consider both site preparation

works such as drying roofs and installation of reinforced bitumen membranes. Safe working practices must be introduced to minimise identified risks. All installing operatives and contractors must adhere to the guidance set out in the NFRC Safe2Torch guidance.

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 through 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.

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 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 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

SPECIFICATION No: BUR2003.2017

the requirements of Part L of the Building Regulations 2010 and has been independently 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/m²K, 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.

DESIGN ADVICE

BUILDING REGULATIONS - PART L- THERMAL INSULATION (OUTLINE GUIDANCE)

The roofing works to be carried out will need to comply with the requirements of Building Regulations 2010, Part L (and subsequent revisions) in England & Wales, or The Building (Scotland) Regulations 2004, Section 6 of the Building Standards Technical Handbook in Scotland.

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 refurbishment specifications are prepared on the basis of current Building Regulations. Where we have specified a thermal insulation thickness which will not comply with current standards, it should be assumed that we have acted on the instruction of the client in this regard.

DRAINAGE & ROOF FALLS

The minimum recommended fall for a flat roof, according to BS6229, is 1:80, but the Code also advises better falls than this, to counteract the effects of movement within the roof and deflections. Where a roof specification does not incorporate measures to improve or enhance roof falls (e.g. by use of designed insulation schemes), the installation of a roof covering and flat thermal insulation boards – or just the roof covering alone – will not make any improvement to the drainage of the roof. If a roof which is being refurbished experiences ponding of rainwater currently, it can be expected to continue to experience water ponding following refurbishment unless specific measures are taken to alleviate the matter.

The insulation section of the Schedule of Materials within this specification will advise whether measures have been included for the improvement of roof drainage, by way of a designed tapered insulation scheme for the project.

SPECIFICATION No: BUR2003.2017

GENERAL NOTES

THE SPECIFIED IKO ROOFING SYSTEM IS ONLY TO BE LAID BY AN IKO APPROVED

ROOFING CONTRACTOR.

IKO products as specified within the materials schedule must be used throughout and installed in accordance with IKO recommendations. Products not specified and approved by IKO will not be covered within the guarantee.

Where this document is to be included within the clients/clients representative own specification documentation, a copy of such document must be forwarded to IKO Technical Services Department for final approval before commencement of the works. Before the works commence, the roofing contractor should ensure that the surfaces to receive the new roofing system are acceptable and that the specification conforms to the 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.

The installing contractor is to liaise with the client's representative to establish if any hazards exist (e.g. microwave transmitters) or whether gases or noxious/flammable fumes are vented at roof level. If hazards exist, an agreed working pattern must be adopted in accordance with health and safety requirements.

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 must be undertaken and recorded by the installing contractor.

Any retained components from the existing structure must be sound and capable of accepting the imposed loading of the new roofing system and associated installation procedures.

Insulation boards must be stored under cover in dry conditions, off the ground and being covered by a tarpaulin when not being used; insulation boards must not be installed if wet or damaged.

Where the new roofing system includes a tapered insulation or an increase in insulation thicknesses, allowance must be made for the raising of upstands, cills and DPC/cavity

trays to a minimum height of 150mm above the finished roof level, as required by the code of practice.

Failure to raise these details to this requirement may compromise the guarantee being offered.

Progress of the works is to be organised to maintain the waterproofing integrity of the roofing system and to ensure that the finished roof area(s) are adequately protected from damage by subsequent building operations. Failure to undertake this may result in additional works being necessary before any guarantee is issued.

Works in severe or continuously wet weather conditions should be suspended unless an effective temporary roof is provided over the working area.

Self-adhesive membranes should be stored above 5°C for 24 hours prior to use. It is not recommended that self-adhesive membranes be stored on the roof overnight or during hot weather conditions.

SPECIFICATION No: BUR2003.2017

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). Suspend work in severe or continuously poor weather unless an effective temporary roof is provided.

Daywork joints in warm roof decks should be protected with a lapped and fully bonded strip of underlayer felt.

No petroleum based solvents or other chemicals harmful to bitumen should be allowed to come into contact with the roofing system.

Protect outlets and apertures from ingress of debris and remove protection to outlets during non-operating periods. All rainwater outlets and drainage should be checked upon completion of the works to ensure that they are free flowing.

External works - Phase 2

4. Re-pointing / jointing & brick replacement summary

The second phase of the project will involve investigating mainly the fifth floor level elevation areas, and some lower, localised levels where the pointing is showing evidence of weather erosion; these include the garages and communal bin store.

The areas that have been identified at high level, form approximately a 1.000m - 2.000m deep perimeter band from parapet down, this is more pronounced on the rear elevations of the blocks, but there are areas on the other elevations that will require attention, an estimated total area of 240m² will need further investigation and possible attention.

As a part of this refurbishment project Aster's M&E team will be removing any redundant gas fire flues, leaving areas of brickwork in need of repair.

Once the overall condition of the pointing has been assessed, the failed areas will need to be raked out to a depth of 20mm and re-pointed using a matching coloured mortar with a hand jointed and pointed finish.

All remedial work required to repair the damaged brickwork will need to be matched in using bricks of the same size, style and quality, reinstating the original stretcher bond.

Re-pointing & jointing specification

Cutting out, cleaning and repairing joints:

All cables must be carefully unclipped and kept protected during the preparation work stages.

Care should be taken not to cut into pipe-work or conduit or damage the existing brickwork to ensure that remedial works are kept to a minimum.

Consideration must be given to protect gas flues and open windows when working close proximity.

All joints are to be raked /ground out to a depth of 20mm, where mortar has been washed out and joints are largely empty, the joints must be deep tamped and if required hand grouted to fill the joint to the required depth before re-pointing.

NB: Care must be taken with bricks manufactured with frogs, so not to remove too much material and undermine the structural integrity of the wall.

If a tamped or hand grouted joint comes closer to the face than 20mm then it must be cut back to the proper depth and a square face prior to pointing.

When cutting out areas of past or dense re-pointing, this should be achieved using pointing chisels and toothed masonry chisels with a two & half pound club hammer. Tools must be narrower than the joint and excessive force **must not** be used to prevent damaging the brickwork.

All cutting out must be left with a squared face at the back of the joint to provide optimum contact with the new mortar.

Start of new pointing

Prior to re-pointing clean down the face with a soft or stiff bristle brush and thoroughly flush with clean water. Dampen down the wall to control the suction of dry porous brickwork and prevent rapid drying of the mortar, shrinkage and loss of strength.

The mortar mix should be a 4:1 ratio - 4 parts sand, 1 part cement and match the existing colour.

Begin pointing from the top and proceed downwards so that the work can be cleaned as it progresses.

Press new mortar well into the joints and strike off flush leaving no voids.

Avoid letting the mortar encroach over the brick arises and keep it slightly recessed to maintain clean edges.

Removal of mortar on faces

If mortar does encroach onto the brick faces, this can be removed by washing and brushing, but if using proprietary cleaner containing acid then the masonry surfaces must be pre-wetted to limit absorption and must be washed down afterwards.

Protection

Protect finished work from the sun and the rain until it has had sufficient time to harden.

Do not carry out pointing work if there is a risk of frost (5 degrees and below) or very hot weather.

Supervision

The contractor must ensure the supervision of pointing includes the following:

- Approval of all cutting out and cleaning before re-pointing.
- The mortar mix and colour must be approved and a sample of which should be retained for reference during the job.
- Approval of all tools being used
- Approval of a test area and supervision whilst this is being undertaken

Other associated repairs should include removing any weather or structurally damaged bricks, then replacing them with matching size, style and quality bricks.

NB: All wet trade work should ensure that a weather tight and tidy finish is achieved that will be expected to last future decades of weathering.

5. Façade panels/Cladding – Trespa Meteon FR (Fire retardant grade) system

NB: For this section of the tender a provisional sum will need to be held in reserve by Aster Group.

During the consultation process it was agreed that the refurbishment of the ageing façade panels is an advantage whilst the scaffolding is available. Aster has agreed that this element of the project will be discussed and reviewed as part of the First Tier Tribunal process.

Please price this phase with the understanding that this element of work may be removed from the project following the outcome of the FTT review.

If this phase of the project does not proceed, then maintenance will be required to the existing Superlux panels, this will mean replacing some of damaged façade panels with a like-for-like product and decoration, so that the aesthetic look is not unbalanced.

Project advisory

All works associated to the façade panels must be carried out once all other wet trade work is completed, the new cladding must remain cover protected until the buildings have been cleaned of all dust and debris to avoid any damage occurring.

Leaseholder gas fire's that are still in use or other appliances with gas flues.

If the appliance is still in use and live then the new Trespa Meteon FR panel will require a core hole to be formed. The flue will then need to be reinstated, and resealed upon completion to provide a weather-tight finish.

On completion of this work the disrupted gas appliance must be tested by a Gas SAFE qualified engineer and a CP12 certificate supplied back to Aster's M&E Team.

Redundant gas appliances

If the appliance is redundant and no longer insitu, then a decision can be made whether to remove the old gas flue or not, depending on the individual circumstances. If it is decided to remove it, then there needs to be an allowance for making good the cored hole to the

inner and outer block and brick skins, including disturbed areas of plaster and internal decoration.

Car park - Pedestrian access doors and cladding

Carefully remove the existing timber panels from the metal framed garage doors, which serve both the front and side of the communal car park.

Carefully remove the timber cladding from the galvanised metal framework and timber supporting framework, this is located adjacent to the pedestrian doors and on both sides of the garage roller shutter.

Remove any rotten timber making up the supporting framework and replace where necessary using tanalised timber ready for re-cladding using the Trespa Meteon FR panel system.

Supply and fix new 8mm Trespa Meteon FR panels to the original galvanised metal & timber framework, including the access door frames, and use corner finishing profiles where needed.

External facade panel's refurbishment

Located directly below many of the windows of both blocks of flats are Superlux style cement board panels with a factory coated render finish, the panels are difficult to keep clean and will need to be replaced with a Trespa Meteon FR flush faced low maintenance panel system.

The panels look to have been originally face fixed and sealed in around the brick reveals, they are mounted on a timber sub frame with mineral wool insulation behind.

The original panels, insulation and framework will need to be removed in preparation for the replacement cladding system.

Removal of existing panels, insulation & sarking felt

Remove all of the face fixed Superlux panels located under the windows, sarking felt, and mineral wool insulation including their timber structural supporting sub framework.

Carefully remove all evidence of previous applied heavy duty weather sealant from the panel apertures, this will be done using proprietary brick cleaning agents to ensure the cleaning process is successful and doesn't risk damaging or discolouring the face of the bricks and pointing.

NB: The prepared substrate must be devoid of any contamination or damage to ensure that the finished installation of the new Trespa Meteon FR panel cladding system is perfectly presented.

Trespa Meteon FR (Fire retardant grade) Exterior Panel system

Supply and install new 8mm Trespa Meteon FR (Fire retardant grade) low maintenance exterior panel system supported on a new treated timber framework and insulated using a

75mm thick **Rockwall Non-combustible thermal Insulation** with a Tyvek (Fire curb) house wrap façade membrane for weather protection.

The contractor will need to confirm the individual aperture dimensions, and all new replacement panels must be factory cut to fit the openings replacing the original Superlux panels.

The Trespa Meteon FR (Fire retardant grade) Exterior panel system must be fitted to the requirements of the manufacturer's instructions as outlined in their TS150 Timber frame fixing guide and supplied CAD drawings.

The Rockwall must be fitted to the requirements of the manufacturer's instructions as outlined in their Rainscreen cladding Timber rail application guide.

Astro Clad ventilated fire barriers must be supplied and fixed to all panel cavity entry and exit points to prevent the possible spread of flame in the event of a fire.

NB: The colour of the new Trespa panels will need to be agreed with Aster Group prior to installation.

Maintenance to existing Superlux façade panels if retained

(Aster Surveyor to inspect and agree which panels will need to be changed, depending on their individual condition, and must have opportunity to look at the state of the supporting timber framework and mineral wool insulation prior to any remedial work being carried out)

NB: Where there is or was a gas fire or other appliance originally insitu, it will need to be checked with the resident or leaseholder to see if the appliance has been previously removed or if it is still in use.

If the appliance is redundant and no longer insitu, then a decision can be made whether to remove the old gas flue or not, depending on the individual circumstances. If it is decided to remove it, then there needs to be an allowance for making good the cored hole to the inner and outer block and brick skins, including disturbed areas of plaster and internal decoration.

If the appliance is still in use then the new Superlux panel will need a core hole to accommodate the flue when being reinstated and then be resealed again.

On completion of this work the disrupted gas appliance must be tested by a Gas SAFE qualified engineer and a CP12 certificate supplied back to Aster's M&E Team.

Allow for removing and replacing damaged or cracked Superlux panels.
Once damaged panels have been removed, the contractor needs to assess the condition of the timber supporting framework and the mineral wool insulation contained within the protected cavity.

Allow for any timber repairs and replacement insulation should it have deteriorated due exposure or water ingress.

Clean & prepare all serviceable façade panels and redecorate using a Sandtex Extreme Exposure masonry paint.

NB: The new Superlux façade panel redecoration colour needs to be decided and instructed by Aster Group.

6. Cavity wall insulation

NB: This phase will be delivered by Dyson Energy Services Ltd and managed by the Principle Contractor. (Point of contact: Rob Griggs – Mob: 07717 202044)

This phase of the project will require the following:

Further to an independent specialist site survey employed to investigate the condition of the existing cavity wall insulation it was deemed to have lost its cohesion evidencing areas of void space, which have created cold spots affecting some of the internal flat walls and their thermal performance.

- A cavity wall insulation specialist to extract the existing cavity wall insulation from both of the flat blocks including a full cavity clearance and camera check with a report containing photographic evidence prior to being refilled.
- Supply and installation of a new PVA bonded “zero dew point” platinum poly bead system or equivalent product to all elevations.
- On completion of the work, the specialist contractor should undertake a thermal camera survey of all elevations of both blocks with a detailed report illustrating that the new cavity insulation improvements have successfully brought the energy performance rating up to current standards.
- This work must be certificated under CIGA with insurance backed guarantee and make use of any grant finance available to this scheme.

Site preparation

The installing technician must ensure that the property has been correctly assessed and is suitable for cavity wall insulation.

Any problems encountered during drilling process which prevent compliance with the CWI Certificate are to be reported back to the Contracts Surveyor immediately.

Essential ventilation openings providing combustion air or under floor ventilation, and all flues in the cavity wall must be checked. If adequate sleeving or other cavity closures are not present, installation must not proceed until these openings have been sleeved or otherwise modified to prevent blockage by the new cavity wall insulation.

All uncapped cavity walls should be sealed prior to installation.

General

The product is installed using an approved system either based on compressed air delivery or electric fan delivery system. The installation company provides all necessary hoses, drilling tools, equipment and materials for making good the walls after the installation.

Procedure

Holes of 22 mm or 26 mm diameter are drilled between bricks at the junction of the horizontal and vertical mortar joints. Sufficient injection holes must be drilled to ensure that the cavity will be completely filled without voids.

The holes are normally spaced not more than 600 mm horizontally apart and the top row of holes in each wall is not more than 200 mm from the top of the wall. A similar series of holes is drilled below windows and obstructions. Alternatively, a series of holes is drilled approximately 600 mm horizontally apart and 200 mm above the highest ceiling level.

Additional holes should be drilled between windows, doors and other obstacles where necessary. It is important to ensure flues are not obstructed by the installation of the product, the correct functioning of these should be checked once the installation is complete.

To prevent debris falling onto the insulation, installation should not start until the drilling has been completed on each elevation.

Installation should be conducted in accordance with the drilling pattern and should take place from the lowest injection holes up, with the product installed into the upper holes only after all of the lower holes have been filled. Care should be taken to ensure any holes drilled in the upper floor do not correspond with intermediate timber floors or that the insulation does not fill into the roof space. Any insulation that has been blown through the top of the cavity into the loft space should be removed and any points of leakage sealed.

After injection of the product, the drill holes are fully filled with a mortar mix of a similar colour, texture and weather-tightness as the existing mortar. Where a wall requires a high degree of colour matching, the level of finish matching should be agreed in writing during the survey. All the trunked air vents are checked, e.g., those providing under floor ventilation and combustion air for heating appliances. In all cases flues are carefully checked on completion of the installation by means of an appropriate test (e.g., a smoke test) to ensure that they are not obstructed by the insulation.

In some circumstances access for drilling injection holes and filling with insulation may be limited by features for example carports, conservatories, cladding or tiling. The practicability of safely accessing and making good these areas, or installing the insulation through the inner leaf, may outweigh the benefits of insulating these areas. In such situations, the surveyor should explain that heat loss through un-insulated areas will not be reduced and they will also be subject to a slightly higher risk of condensation. The assessor, therefore, should obtain written consent for omitting any areas of the wall from the party commissioning the work.

7. External decoration

All redecoration work must be fully weather resistant and presented with an aesthetically pleasing finish.

The external decoration to be addressed will include both blocks and their communal areas, which are as follows:

NB: Careful cleaning and preparation must be carried out to all component areas identified below.

Refer to Crown Paints Technical Specification supplied by Gary Johnson (Aster Group) Refer to appendix

Concrete ring beams

Decorate the concrete ring beam that divides the basement parking area from main building.

Handrails and uprights

Clean & prepare the entire timber handrail, then stain/varnish.
Clean & prepare metal posts supporting handrail and paint
Clean & Prepare metal railings
Wash down uPVC windows

Front Entrance Porches

Clean & prepare the Fascia above the front entrance porch canopy - Stained
Clean & prepare the Timber T&G boards making up the porch canopy soffit and stain/varnish.
Clean & prepare the timber front entrance doors – varnished
Clean & prepare the timber frame and windows – varnished
Clean & prepare the timber corner post – varnished

Bin Store

Clean & prepare the rendered fascia panel above the bin store access doors and redecorate using a colour matching the new Trespa Meteon panel system.

8. Gas flues & Extractor fans

(Aster in-house M&E team to manage this stage of the project)

Aster Group will require the necessary scaffold access by the Principle Contractor to deliver this phase of the programme.

This phase will involve the removal of redundant gas flues and the supply and installation of new kitchen and bathroom extractor fans where required.

Contract Requirement

The Principle Contractor shall provide Building Regulation compliance certificates to Aster Group on completion of work.

The Principle Contractor will provide a full programme with estimated timeline covering all aspects of the project for Aster's approval.

The Principle Contractor will be fully conversant with IKO & Trepsa specifications and request any information not contained therein prior to starting work on this project.

Point of contact: (IKO) - Rob Lovegrove – Mob: 07836 334199

Point of contact: (Trespa) - Simon Vicary – Mob: 07796 542978

Where suspected asbestos containing materials are found, these are to be tested prior to commencement of work to confirm type of asbestos.

Any further repair works found are to be undertaken as directed where necessary after obtaining written approval from the Contract Administrator/Surveyor.

On completion of all of the work and demobilisation of the site all disturbed areas within the grounds of Wimbledon Hall must be re-instated to their original condition.

Program period

The roofing refurbishment to both blocks of flats and all other associated external works are to be undertaken and completed during the Summer/Winter between the months of August 2018 to January 2019.