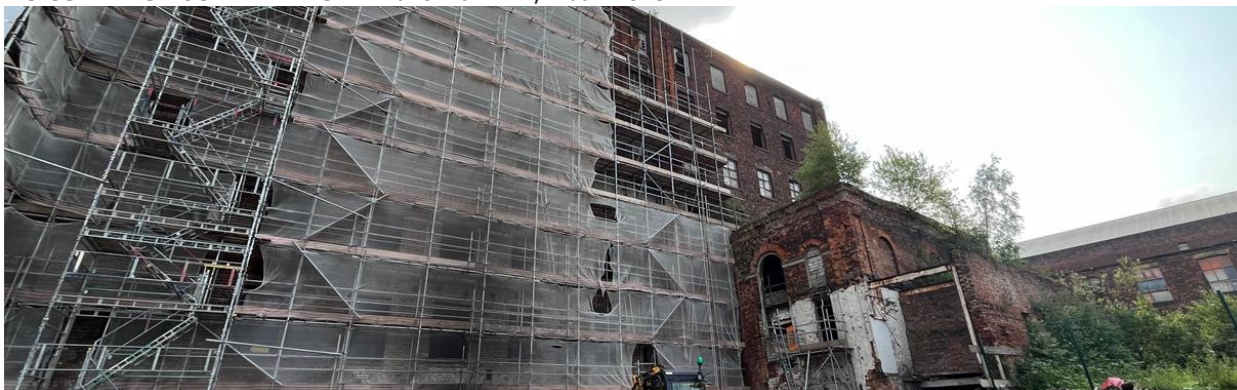




IKO CONDITION SURVEY REPORT Brunswick Mill / 4 Jun 2025



Description of the roof/area:

IKO were asked to provide a condition survey of the roof and areas listed within this IKO Survey report and to provide a summary of these observations that would enable IKO to formulate a waterproofing specification to the end user.

This IKO condition survey must be read in conjunction with an IKO specification document that would be created for the specific requirements defined within this condition survey.

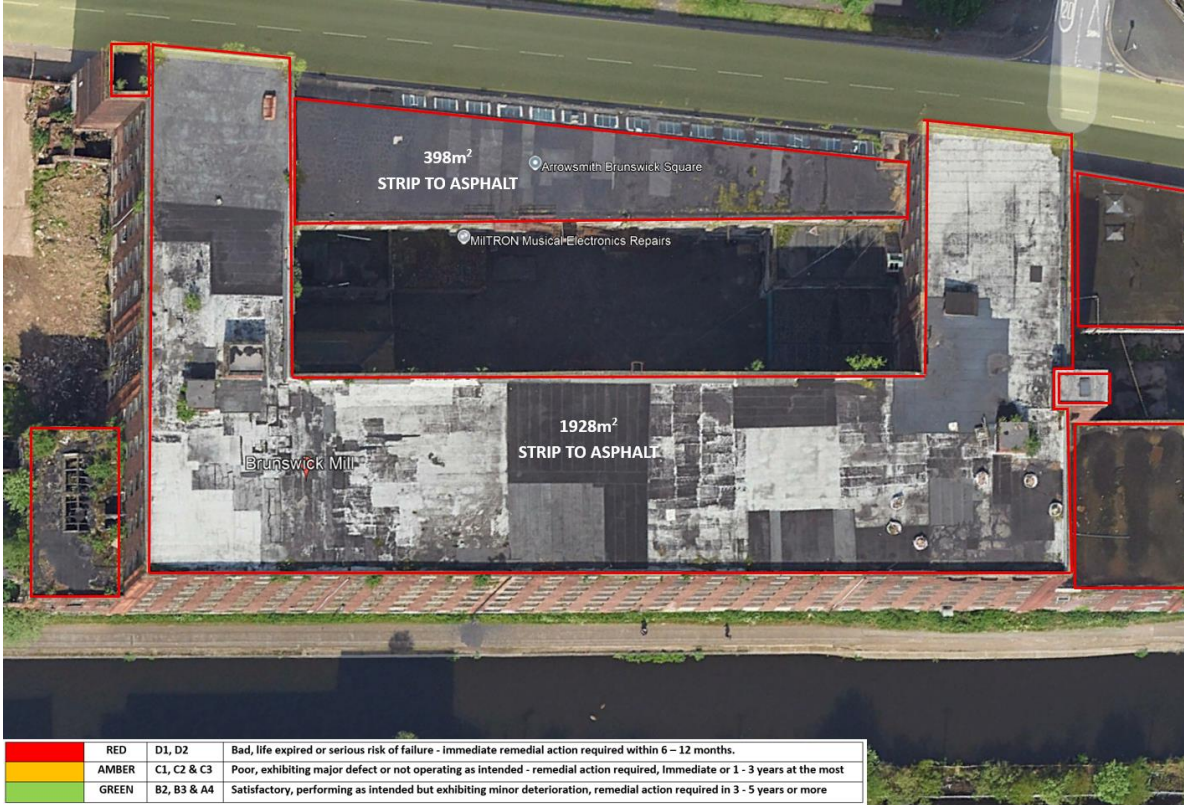
A summary of the areas that will form part of the IKO Specification document are identified below and should be validated by any persons using this report and any associated IKO Specification document that it fully meets the requirement of the main contract documents of the client or building owner representative.

Project Name	Brunswick Mill
Project Address	Bradford Road Manchester M40 7EZ
Conducted on	04.06.2025 07:34 BST
Prepared by	Mark Taylor
Contact Details	Mark Taylor - mob: 07836 311740
Weather Conditions	Dry
Specifier Company details Crescent Roofing Media City Manchester	
Specifier contact name and contact Mike Smith	
Client Brief Contractor looking to appraise existing roof coverings in order to determine a remedial specification for the areas identified	

INSPECTION OVERVIEW

Any appointed roofing contractor must undertake their own survey to validate these findings and any discrepancies must be raised prior to undertaking works. IKO will not be held liable for any discrepancies once the works have started.

Site Roof Plan – Brunswick Mill



Roof Area Overviews & Information – Brunswick Mill

General overview images of the areas assessed during attendance, the existing waterproofing systems are a combination of the original asphalt waterproofing that is in excess of 35 years or more and a bitumen membrane, applied as remedial repairs to the asphalt substrate, the areas are at the end of their serviceable lifespan and any relevant guarantee period so should be considered for upgrade as part of the wider site refurbishment and redevelopment.



Photo 3



Photo 4



Photo 5



Photo 6

Condition & Defect Report – Brunswick Mill.

As highlighted the existing asphalt waterproofing and associated details is age deteriorated and failed so should be considered for upgrade.

During attendance, defects noted through the areas were the following items.

- Delamination of asphalt waterproofing to perimeter upstands due to age and reduction of bond strength from the substrate, as such the leading edge is wide open allowing wind driven rainwater and draining surface rainwater to enter at the rear of the waterproofing.
- Creasing within the bitumen membrane applied as repairs, associated with poor quality preparation, lack of heat applied and or water penetration through side and head lap joints of the repairs that are able to penetrate cracks within the asphalt layer.
- Split, cracked and open sections of the original asphalt waterproofing, solar coatings have deteriorated through erosion under standing water or due to inability to re-apply, as such the asphalt layer has been subject to uneven expansion and contraction through weather cycles causing splits that can allow water penetration.
- Weak, partially open and open lap joints within bitumen felt repairs applied to the surface of the asphalt waterproofing due to age of the original system, the felt repairs have been installed to prevent water ingress through the asphalt, which do not appear to be a sufficient repair to prevent ingress.
- Creasing and blistering within the asphalt layer, can be associated with uneven expansion and contraction of the substrate, allowing delamination from the screed layer, over time these items are able to expand in warmer climates, rupturing the asphalt waterproofing allowing ingress.



Photo 7



Photo 8



Photo 9



Photo 10



Photo 11



Photo 12



Photo 13



Photo 14



Photo 15



Photo 16

Area Reference (roof area name)	Brunswick Mill
Building use	Residential
Construction type	Roof
Roof Height (m) - Approx	9
Size (m2)	2200
Core samples taken	Yes

During this inspection survey IKO have undertaken a series of core samples on each roof area as detailed within this report to ascertain the existing roof build up. In consideration of the need to maintain waterproofing integrity sampling was kept to a minimum and IKO cannot accept liability for any areas not tested. The roofing contractor must undertake their own core samples and survey to validate these observations and IKO should be notified of any variation prior to undertaking the works

CORE SAMPLE

CORE SAMPLE 1

Build up description

CS1 | Brunswick

Concrete Deck/Screed Layer/20mm Asphalt/Solar Paint/Bitumen Felt Repairs

Client note, that wet reading was found between the applied bitumen felt repairs and the asphalt substrate therefore the existing area must be stripped back to the asphalt substrate to allow new system installation.



Photo 17



Photo 18

Condition of core sample

Wet

CORE SAMPLE 2

Build up description

CS2 | Brunswick

Concrete Deck/Screed Layer/20mm Asphalt/Solar Paint

Dry reading was attained during attendance, taken directly to and beneath the asphalt substrate just above the screed layer.



Photo 19



Photo 20

Condition of core sample

Dry

Roof void
Existing Deck

Uninsulated
Concrete

Existing Insulation Type **None – See Notes, Part L**

The existing roof construction does not contain any thermal performance element, so is in excess of 2.0w.Mk which would be consistent with the thermal performance and design requirements at the time the building was erected, or roof was last recovered.

At the time the roof is recovered, it is recommended that a tapered thermal upgrade be applied as part of the roofing works, in order to meet BS6229 requirements associated with drainage falls and to achieve minimum 0.18w.Mk in order to comply with current Part L regulations.

Client note, that the higher 0.18w.Mk requirement in this specific instance, is related to multiple occupancy dwellings despite being a residential development, the lower thermal value of 0.15w.Mk is associated with single occupancy dwellings in relation to Part L changes in a previous year.

Roof pitch **< 1 in 80**

Falls generally through the area are poor, despite evidence of these being partially created within the screed layer beneath the asphalt, it is likely that deflections and hollows have formed, either through water ingress to the cementitious layer or alternatively as a result of the imposed dead loads from standing water, compressing the screed layer allowing wider build up of standing water.

At the time the roof is recovered, a tapered insulation layer is proposed in order to reinstate and improve falls through the area to minimise standing water in line with BS6229 requirements. However if falls cannot be improved, then standing water will be present on completion of the works but would not be deemed detrimental to system performance over the term of the guarantee offered.



Photo 21



Photo 22

Drainage – See Notes & Modifications to Positions.

Internal RWO	External drainage
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Both internal and external drainage locations are present to the roof sections at the mill site, these generally are restrictive due to build up of debris around the chute locations, with a water check evident due to build up of detail materials at the mouth of the internal outlet which is impeding rainwater run off.

At the time the roof is recovered, falls are proposed to be improved utilising tapered insulation layer however would suggest that all outlets be sumped, to allow more efficient drainage, with this change the existing chute positions may need to be modified in terms of their heights and or openings to account for the increased flow through the areas.



Photo 23



Photo 24



Photo 25



Photo 26

ASSOCIATED WATERPROOFING DETAILS

Parapets – Heritage Considerations.

To be encapsulated

The existing parapets generally are in a very poor appearance, with evidence of spalled mortar joints to the butts and beneath the copings as the beddings that can allow water ingress to penetrate the building.

Due to heritage considerations, the proposal for the areas is that the existing copings be removed with the upstands boarded out to allow the installation of the new system, the membranes must encapsulate the cavity and at which point when the waterproofing is installed, the copings may be re-bedded on frost resistant mortar.



Photo 27



Photo 28



Photo 29



Photo 30

Additional Parapet Considerations – Stepped Brick Courses.

Client note, due the stepped course brickwork within the parapet upstands the areas may require sections of the parapet to be battened out with 25x50mm timber to allow an even substrate for the waterproofing to be applied.

Further guidance, is that any parapet subject to encapsulation above 250mm will require mechanical restraint of the side and head lap joints, sections of the parapets which have collapsed, or removed for survey purposes must be reinstated prior to waterproofing application.



Photo 31



Photo 32

Upstands

Solid Brick

Solid brick abutment upstands are present to the rear and cheeks of the plant room and stair cores, these show delaminated asphalt waterproofing that will allow wind driven and draining rainwater to bypass the leading edge of the waterproofing to areas beneath the roof.

Due to change in height at roof level associated with tapered thermal upgrade, the upstands must be raised to show a finished height of 150mm or more from the new roof level, at which point a new 25mm depth chase must be cut and a lead free cover flashing installed to act as a counter flashing to the new waterproofing system.



Photo 33



Photo 34

Upstands (requirements)

To be raised

Door and access Thresholds

To be raised

Access thresholds to the existing stair core and tank housing must be considered, due to tapered thermal upgrade proposed. Currently sill heights are level, or less than 150mm therefore at the time the roof is recovered either new sills will be required, or the existing to be raised to show a finished upstand height of 150mm or more from the new roof level.



Photo 35



Photo 36

Apertures / Demolished Tank Rooms.

See Notes

Two sections of concrete decking is present, suspected to be the remnants of tank houses or plant rooms which have been demolished that must be considered during planning and delivery of the roofing works.

Two options which are possible, are that the upstands lined with asphalt are cut away with the slab demolished back to asphalt or concrete deck level, with the area infilled and overlaid with the waterproofing system, to embed the item beneath the system.

The second, would be to create a ladder frame and kerb structure, around the area and line the top with timber as a substrate to carry the waterproofing up and over, to create a continuous detail around the item present through the existing waterproofing.



Photo 37

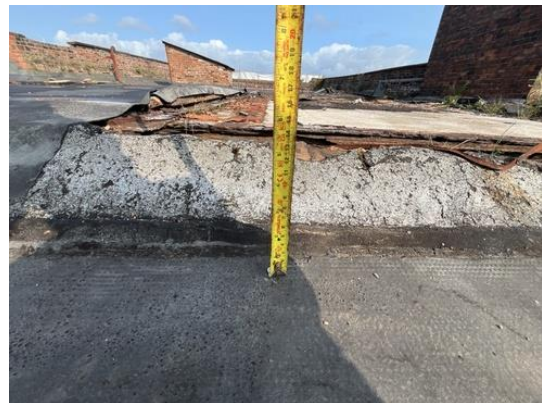


Photo 38

Pipes, Cable Entry, Ventilation Consideration

See Notes

A single services pipe is present as a penetration through the waterproofing system, this appears to be redundant as the remainder of the pipework to carry the services has been dismantled and removed, the item may be cut and removed back to roof level so that the new system is able to encapsulate.

However if this item or opening is required, for cables or ventilation within the new system then the penetration must receive either a telescopic vent extension, or snorkel which contains bitumen flange that can be linked back into the waterproofing system to form a robust continuous detail at the penetration.

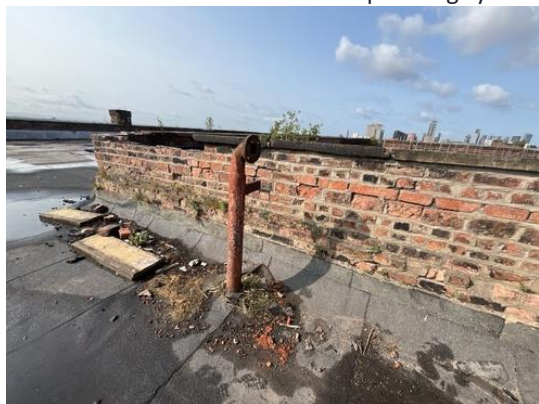


Photo 39



Photo 40

SUMMARY OF OBSERVATIONS AND PROPOSALS

SUMMARY OF OBSERVATIONS

The existing waterproofing systems are a combination of the original asphalt waterproofing that is in excess of 35 years or more and a bitumen membrane, applied as remedial repairs to the asphalt substrate, the areas are at the end of their serviceable lifespan and any relevant guarantee period so should be considered for upgrade as part of the wider site refurbishment and redevelopment.

SUMMARY OF OUTLINE PROPOSALS

From physical, visual, core and moisture sample analysis it is possible to put forwards the below proposal for the areas.

Brunswick Mill - Strip to Asphalt - Warm Roof.

- Strip existing bitumen felt repairs from field areas to expose asphalt waterproofing substrate.
- Strip existing detailing items from upstands, perimeters, abutments and dispose of from site.
- Repair any surface cracks, level off blisters and creases within the asphalt by gently heating.
- Prepare and prime the asphalt waterproofing to receive the new waterproofing system.
- Install high performance IKO Ultra Gold 20 waterproofing system through the areas.
- Incorporate tapered thermal performance upgrade, in order to meet current BS6229 requirements with the layer achieving minimum 0.18w.Mk in order to comply with Part L of the building regulations, related to refurbishment and multiple occupancy dwellings.

Client note, tapered scheme offered is based on third party information and is a provisional design, subject to IKO site measure on successful acceptance of proposal.

SYSTEM PROPOSAL		
Roof Area		Brunswick Mill
Construction Type		Roof
Build Up		Warm
Preparation		Strip to asphalt
Deck/substrate Strip existing detailing items from usptands, perimeters and abutments.		
Other associated works Encapsulate parapets, install new sills to plant room change in level.		
Primer		IKOpro Sprayfast MPP
AVCL		Ultra TO Vapour control layer
Insulation Type		Enertherm Gold
Required U Value (w/m2K)		0.18
Insulation application		IKOpro Sprayfast IBA
Insulation Preparation		Prime with IKOpro Sprayfast MPP
Flat/Tapered		Tapered System
Scheme Number		IKOET040625
Waterproofing System		Ultra Gold
Detailing		Hybrid
Outlets		IKO Refurb RWO
Type		1.6mm Aluminium
Rooflights		Not applicable
Ancillaries		
IKO Lightning Clips	IKOtrim - GRP edge trim	IKOfash
		IKOpro Stickall mastic sealant
Guarantee proposal		20 year MWD - Single point

STANDARD DETAILS DRAWING REQUEST

A - Parapet Details

A1: Parapet with Concrete Coping	A2: Parapet with coping - insulated upstand	A10: Parapet - encapsulated - Insulated upstand
		A9: Parapet - encapsulated (boxed out)

B - Upstand and Skirting Details

B1: Upstand with cover flashing	B2: Upstand with cover flashing - Insulated upstand	B5: Upstand to sill and threshold
B6: Upstand to sill and threshold - Insulated upstand	B16: Skirting to Builder kerb	B17: Skirting to builders kerb - insulated upstand

C - Check kerbs

D - Rainwater Outlets

D3: Internal rainwater outlet - Refurbishment SBS flange

E - Drip edges

F - Pipe and cable penetrations

F5: Pipe and cable penetration unit - IKO Roofport SBS

F3: Pipe penetration - IKO vent pipe covers

G - Steps/ridges and internal gutters

G1: Change in level

G2: Step

H - Plinths

J - Expansion kerbs

K - Drainage Chute

K1: Drainage Chute

L - Roof edges

Special details - please attach sketch proposal