PROJECT PROPOSAL

PROPOSAL
Start date to be week commencing - **06.02.2019**
Completion date to be - **19.04.19**
Liquidated damages to be £1000 per week.

The proposal is to provide a fully warranted, seamless waterproofing solution. The system is to be a robust and seamless cold applied liquid membrane which must include all the performance criteria as listed below.

PERFORMANCE CRITERIA

The system

This is to be a seamless, cold applied, liquid membrane waterproofing system, which is not just component, but system tested and approved for BBA Certification and Fire Redundancy. The system must have a proven low maintenance track record in UK climatic conditions to match the warranty period offered. Further the manufacturer must demonstrate the suitability of the materials to be installed in weathers limited only by Health & Safety considerations and Industry Best Practice. The system must be cold applied and not involve the use of heat or naked flames.

THE GUARANTEE

- The guarantee should offer a single point of responsibility, and ensure that the client is protected against the failure of watertightness caused by incorrect design, defective materials or poor workmanship.
- The manufacturer must be the originator of the guarantee and final inspection certificate.
- The guarantee & inspection certificate should be for the benefit of the Customer and cover included all products supplied by the manufacturer including membrane, roof trims, etc.
- The guarantee should cover incorrect design
- The guarantee & inspection certificate should be supported by workmanship assurances provided by the manufacturer approved contractor to the Customer for the period of the guarantee.
- A clear maintenance plan should be provided by the manufacturer.
- The waterproofing system must be inspected periodically and minor maintenance works undertaken. The inspection should be carried out by the manufacturer's dedicated Applications Department and with the Client where possible.
- Terminations and ancillaries to be sourced from the waterproofing system manufacturer and covered by the manufacturer's Guarantee for labor and materials.
- The guarantee should cover against an insolvent contractor.
- The manufacturer must be able to provide Public Indemnity Insurance of sufficient value to cover the requirements of the project

THE SPECIFICATION & SERVICE

- The system should be installed by trained operatives
- The details contained within the manufacturers' specification must ensure that it covers the installation of cold liquid applied waterproofing materials and the preparation work necessary to provide a suitable substrate.
- A method of work statement and programme of works should be agreed with the Contractor before the commencement of the works
- The requirements of all relevant British Standards, Industry Codes of Practice and manufacturers guidelines should be complied with at all times by the contractor and manufacturer
- The installation should be installed In accordance with BS 6229:2003 Flat Roofs with Continuously Supported Coverings – Code of Practice it is recommended that the substrate should have a Design Fall of 1:40 to achieve a Minimum Finished Fall of 1:80

The manufactures specification is to include guidance on the following:-

- Substrate Requirements
- Priming Requirements
- Top Coat Build-up

The waterproofing system to be installed is to abide by the Manufacturers provided specification and design, and shall meet the following requirements as set by the Client:-

ROOFING SYSTEM ACCREDITATIONS

- BBA Certification on the cold applied liquid waterproofing system

MANUFACTURERS ACCREDITATIONS – MANUFACTURING AND ENVIRONMENTAL

- BS EN ISO 9001:2008 Quality management systems
- BS EN ISO 14001 Environmental management systems
- OHSAS 18001: Occupational health and safety management systems
- Manufactured in UK

SYSTEM COMPONENTS

Waterproofing Performance and Guarantee – 15 Year System

Cold Applied Liquid Waterproofing Properties

- Two component Polymethylmethacrylate.
- The product must not exhibit the 'H332: Harmful if inhaled' (formerly R20: Harmful by inhalation) hazard warning classification.
- The product must not exhibit the 'H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled' (formerly R42: May cause sensitisation by inhalation) hazard warning classification.
- The product must have a flashpoint of greater than 35 degrees Celsius.
- The product must have accompanying independent testing to demonstrate that UK Workplace. Exposure Limits will not be breached during installation (including works in confined/sheltered areas in hot and still weather conditions).
- Applicable at ambient air temperatures ranging between -5 and +35 degrees Celsius.
- Rain resistant within 30 minutes of application
- The system must be entirely seamless and reinforced with polyester fleece
- British Board of Agrément (BBA) certified
- Fire Resistance External Fire Exposure to EN 13501-5:2005: BROOF (t4)
- Seamless, fully bonded waterproofing cap-sheet

Life Cycle Assessment

The manufacturer should be able to provide a LCA, using GaBi 6.0 software to demonstrate the impact of the system on a 30 year life cycle, for GWP, POCP & CED, using CML 2001 - Nov 2010 impact assessment method.

CONTENTS

1 – SYSTEM SCHEDULE

AREA	MATERIAL
Guarantee Level	Material Guarantee & Final Inspection Certificate
System Type	Coating
Substrate	Asphalt waterproofing
Coating	single component, seamless, cold applied, liquid membrane waterproofing system
Substrate Condition 1	Intermediate
Application Type	Roller

The following specification is to be read in conjunction with the project condition report, drawings and project specific documentation where included, and all points should be considered as part of the scope of works.

2.3 – GUARANTEE

Material Guarantee and Final Inspection Certificate

Specified Solution must provide for a 15 year guarantee.

Summary of Guarantee

Partnership between system manufacturer and the Quality Assured Contractor.

Should water ingress occur during the guarantee period due to defective materials or poor installation, they will repair the defect or at the option pay the reasonable cost of repair or replacement of the defective part or parts of the Materials.

Guarantee is required to cover the following:

- All materials supplied by system
- manufacturer Workmanship due to Contractor Insolvency
- Direct consequential loss for a successful claim limited to the contract value Workmanship

For this guarantee to be issued, the system must be installed by a fully trained Liquid Plastics Quality Assured Contractor. The workmanship cover from system manufacturer would come into effect should the installing contractor become insolvent, until this time, the workmanship is covered by the QA Contractor.

2.4 – PREPARATION

Asphalt: Inspect the asphalt, gas blisters are to be flattened, slump or sag reinstated, damaged asphalt removed and significant cracks filled. Use an appropriate polymer modified mortar or other suitable approved compatible material. Repairs are to be allowed to cure prior to application, all as per manufacturers requirements
Substrate Assessment: The asphalt must be carefully assessed for moisture and/or air entrapment, grade and surface finish prior to any coating works being carried out. Any priming requirement must also be considered.

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

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

Initial Power Wash: All surfaces are to be initially power washed in order to reveal a clean surface suitable for inspection and repair, use manufacturers recommended psi for preparation according to the equipment used and the surfaces being cleaned. At no time should the pressure jet be so high as to cause damage to the substrate being cleaned. Adjust pressure to clean away contamination and friable material from the surface. Note: Exercise suitable precautions when using high pressure equipment and check for any roof leaks and drainage for adequate flow.

Brickwork: Inspect associated brickwork, spalling, flaking or other damage is to be repaired using compatible materials to match surroundings or replace as necessary.

Mortar Joints: Inspect the mortar joints, all hollow or defective areas are to be made good using compatible materials to match surrounding.

Paints/Coatings: Existing paint surfaces must be prepared as per manufacturers requirements.

Existing coatings:- Any friable material must be removed back to a sound firmly adhered edge.

Cracks in Existing Substrate: Small surface cracks & joints are to be primed as specified and filled with Filler Compound as per manufacturers requirements

Cracks & Joints - Upstands: Small surface cracks & joints are to be primed as specified and filled with Filler Compound as per manufacturers requirements

Loose friable material and weak concrete must be completely removed and surface defects such as blowholes and voids must be fully exposed.

Repairs to the substrate, filling of joints, blowholes/voids and surface levelling must be carried out using appropriate products. High spots must be removed by e.g. grinding.

Old frequently trafficked surfaces may contain a lot of ingrained contamination, rubber, oils, etc. Ensure by testing if necessary that preparation is sufficient to produce a good adhesion.

2.5 – PRE-TREATMENTS

Known or Stubborn Growths - Absorbent Surfaces/Brickwork-Blockwork - Masonary - Concrete etc: Visible growths or vegetation should first be removed. Treat remaining adhered growths (and/or where active spores are suspected) by liberally applying a water/bleach solution (maximum dilution 7:1). Allow to act before removing the affected material using appropriate tools. Repeat the procedure if necessary. Thoroughly rinse off and allow surfaces to dry before applying an aqueous solution of quaternary ammonium compound, as a surface biocide, used in the treatment of microbial contamination prior to application of a coating system, by brush or spray apparatus, at a maximum spread rate to manufacturers recommendations. Allow to dry on the surface and leave to react before continuing with the application.

Note: Check Health & Safety data before use. Quaternary ammonium compound must not be allowed to enter the water drainage system.

Surface Filling – a two component polymethylmethacrylate (PMMA) resin and catalyst Compound, quick curing paste that can be applied to primed surfaces to fill small cracks and joints and smooth over areas of minor unevenness including fleece overlaps if necessary. It can be used in combination with the joint system and waterproofing

2.6 – PRIMING

All relevant surfaces should be primed in accordance with product data sheets.

Asphalt/Bituminous Substrates - Asphalt Primer

Priming - Concrete/Timber/Other Absorbent Surfaces - Cementitious Primer

- Apply evenly by roller to ensure a film-forming coat. Avoid creating pools of primer. Avoid areas that may be thinner than the prescribed coverage - these may struggle to cure correctly.

Once the coating has cured, apply a second coat if necessary to cover any defects (bubbles, areas not fully coated).

However, small the areas to be treated, use the correct primer for the surface.

2.7 – PRE-WATERPROOFING

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

Levelling Coat: Mask off any sections not to be treated if necessary forming small retainers on steps etc. as this material will be around 4mm deep and is mobile. Temporarily fix (and mask-off) step nosings if being used. Alternatively use a timber former to replicate where the nose will be fixed. For any temporary former or masking remove whilst the system is wet.

Apply a three component polymethylmethacrylate (PMMA) resin, powder and catalyst as a protective layer at a minimum spread rate as per manufacturers requirements.

2.8 – LOCALISED REINFORCEMENTS

Localised Re-inforcement-Movement Joints/Cracks: If existing expansion joints or live cracks have to be waterproofed, rake out if necessary and apply a de-bonding tape (eg duct tape) along the centre of the joint and then two layers of PMMA liquid applied roof waterproofing membrane or with Fleece reinforcement, if required.

2.9 – DETAILING

Generally - Prepare as per manufacturers recommendations

Internal Corners:- Prepare as per manufacturers recommendations

External Corners:- Prepare as per manufacturers recommendations

Change In Level - Prepare as per manufacturers recommendations

Existing Penetrations:- Prepare as per manufacturers recommendations

Existing Fixed Items:- Any fixed item which is not to be included in the coating schedule, including wires, cables, etc., must either be totally removed or, in order to allow access, be suspended from the surfaces to be coated. Such items should not be removed without proper authority or deference to safety. The waterproofing coating should be allowed to cure for the required minimum period before replacement of these fixtures.

Ensure the finished detail is neat and has sufficient overlap as described to provide the necessary strength throughout the system. Once detailing is complete allow to dry before surface application of seamless, crack-bridging and joint-bridging waterproofing membrane with fleece to the whole area.

Fixed Safety Rail Penetrations:- Inspect each penetration to ensure security. Repair as required and prepare in order to accept the coating.

2.10 – TOP COATS

Apply a single component, seamless, cold applied, liquid membrane waterproofing system for exposed balcony's and roofs, based on a (PMMA) technology with a curing time between 30-40 minutes as per manufacturer's instructions

Details and Sloping Areas: To all vertical detail areas and areas with a slope of greater than 10 degrees, apply PMMA liquid applied roof waterproofing membrane at the coverage rates stated in manufacturers requirements.

Balcony Surfaces - Base Coat: Apply an initial coat of PMMA liquid applied roof waterproofing membrane to the prepared, sound surfaces, using a minimum quantity as per manufacturers requirements and whilst wet, strengthen by inserting fleece reinforcement, use a sheepskin roller to remove any air bubbles - reposition fleece quickly if required. Overlap adjacent areas already laid as per manufacturers recommendations.

Ensure that work is neat and free from lumps, runs and slops of material. Smooth out as work proceeds.

Completion of Waterproofing Works: On completion of waterproofing works, check the finish for pinholes, voids, damage etc. and spot treat to rectify.

Step Nosings:– To highlight the step nosings, neatly mask the edge leaving an area of a minimum of 70mm horizontally and 50mm vertically and apply an additional coat of Pigmented Sealer in a contrasting colour, to conform with Building Regs(K&M) BS8300:2009+A1:2010. Remove the masking tape before the additional coat has dried. Alternatively, install suitable proprietary nosing's, taking care not to penetrate the waterproofing during installation.

2.11 – INSULATION

External Stairs - Heavy Duty Structured Coating to be applied asper manufacturer's instructions.

Protective Levelling Coat and Wearing Layer: Prepare as per manufacturers recommendations

Hard Edges: In order to avoid damage to the insulation at changes in levels, gutters, sumps etc., a continuous tanalised timber batten (insulation thickness minus 5mm) should be mechanically fixed at a minimum of 600mm centres.

Insulation: Prepare existing surfaces as per manufacturers requirements and install tapered insulation in accordance with the manufacturers requirements.

The insulation is to be laid with all boards lightly butt jointed and level, fastened with stainless steel fasteners, pressure plates and thermally broken tubes.

Mechanical Fixing: Install mechanical fixings as per manufacturers recommendations.

The number of specified fixings will need to be confirmed after satisfactory pull out tests which must be carried out by a manufacturer's representative. All fixings and washers must be in an even pattern and located >50mm and <150mm from the edges and corners of the board and not overlap board joints in accordance with BRUFMA

guidelines.

Note: Once delivered to site, insulation materials should be stored inside a building and protected from mechanical damage. If outside storage is unavoidable, insulation should be stored off the ground and totally covered with a waterproof sheet. Packaging alone cannot under any circumstances be relied upon to provide protection from moisture. Night joints should be sealed at the end of each working day.

Plywood Overlay to Insulation: Overlay insulation with 9mm ply marine grade suitable for external use to BS EN 636 or a bond Class 2 or better, complying with BS EN 314 or equivalent OSB board.

Fix through full system to concrete deck as per manufacturers requirements.

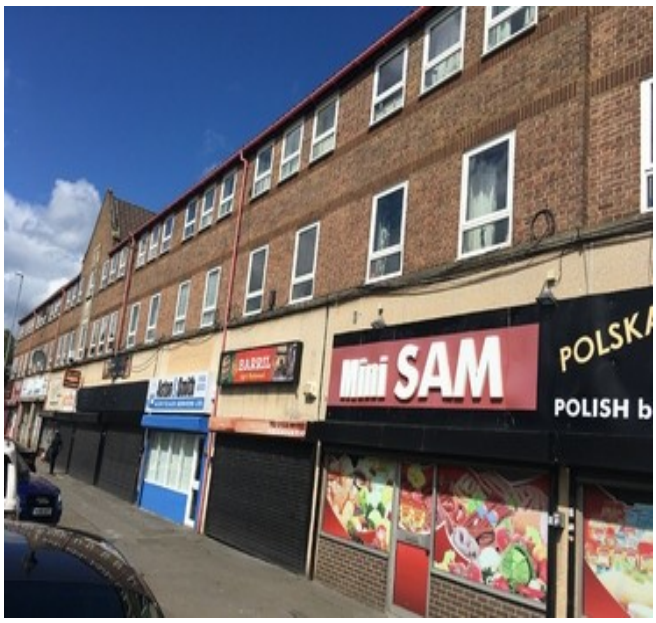
Overlay with cross boarded pattern 9mm ply as above at 300mm centre grid. Screwed and glued to the mechanically fixed board ensuring fixing is staggered with no board joint repeating through the two layers.

Mask the joints of the plywood with 25mm tape before applying the coating.

2. CONDITION REPORT - 80 - 106

2.1 CONDITION REPORT

2.1.1 OVERVIEW OF EXISTING ROOF



General Overview: The balcony walkways at 80 - 106 Rockingham Road are currently comprised of a concrete deck with an asphalt waterproofing layer.

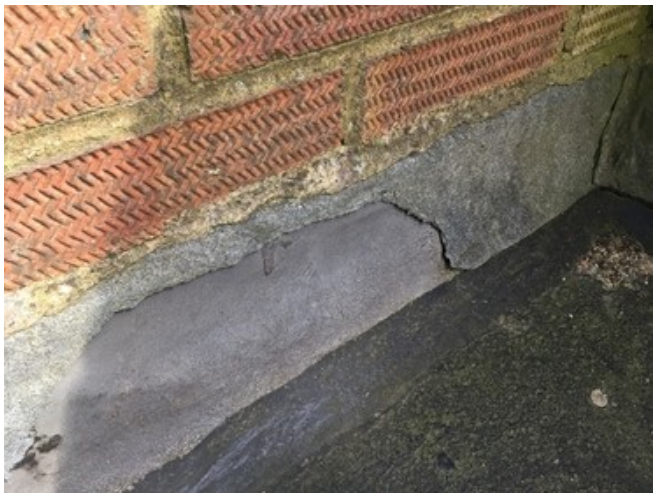
This waterproofing has now reached the end of its serviceable life and is in need of refurbishment.

There are several visible cracks in the waterproofing as well as poor perimeter detailing around brickwork chases.

There are areas where this had lead to freeze thaw cracking which has allowed vegetation and trees to start growing. If this is not addressed soon it could begin to effect to structural integrity of the building.

External Stairs: The stairs at this area are also to be treated using Heavy Duty Structured Coating.

2.1.2 PREVIOUS REPAIRS

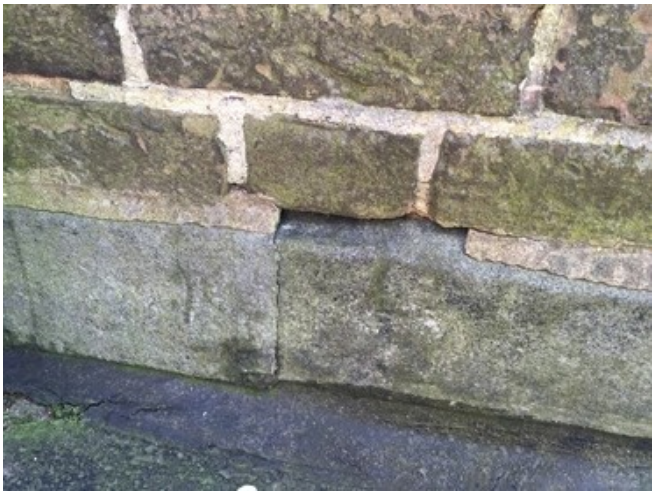


Short Term Repairs: Repairs have been carried out to the existing waterproofing. Individual repairs should be assessed for integrity and removed where necessary.

2.1.3 CRACKING

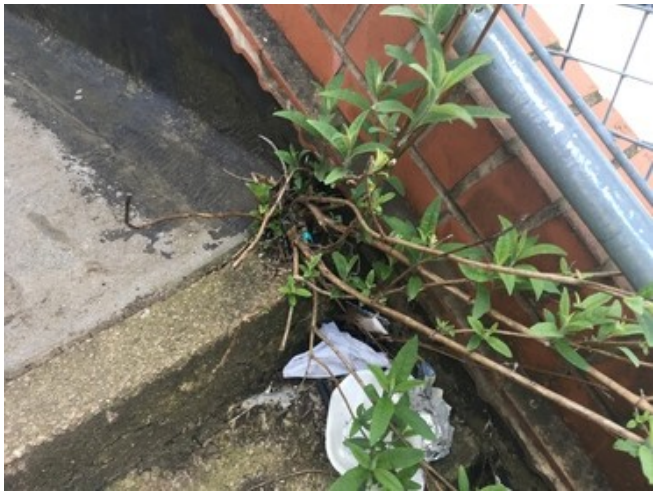
Cracking: Cracks are evident within the existing waterproofing. The cause of the cracks may require further investigation and all necessary action taken to eliminate reoccurrence.

2.1.4 UPSTANDS



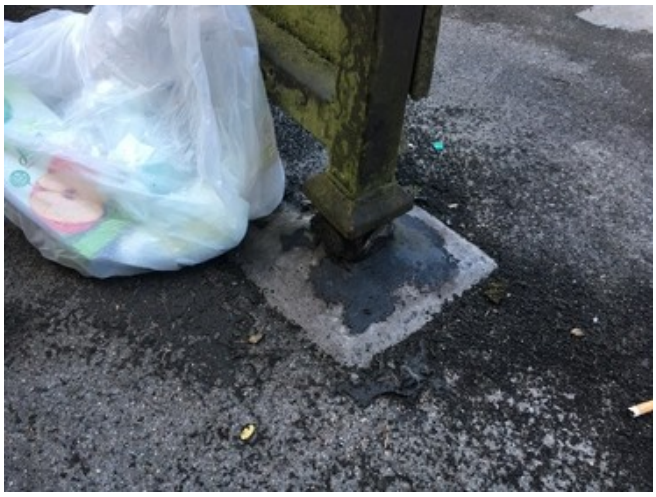
Upstands - Brickwork: The existing brickwork chase has been patch repaired using a felt material. This has now failed and ripped in several places. There are areas where the chase mortar has blown allowing moisture to enter the internal structure. This is to be repaired prior to coating.

2.1.5 PERIMETERS



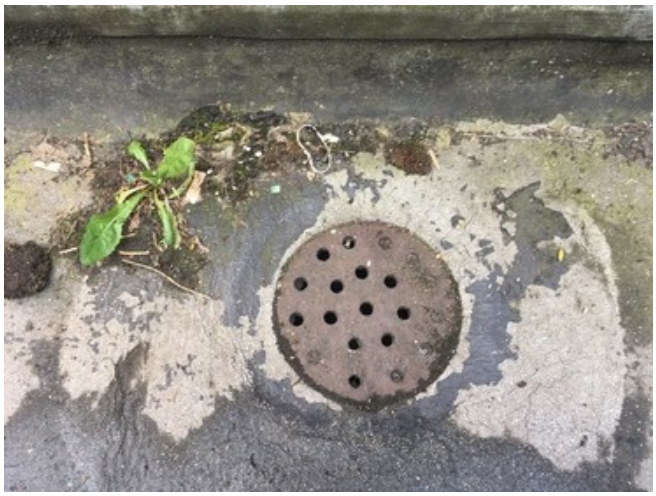
Perimeters - Vegetation Growth: There are several areas where trees and plants have taken root in the brickwork due to poor detailing and failure of the waterproofing system. All to be removed and areas treated as per manufacturers requirements .

2.1.6 PENETRATIONS



Penetrations: There are penetrations that have failed and will need to be addressed prior to any works commencing at this site.

2.1.7 DRAINAGE

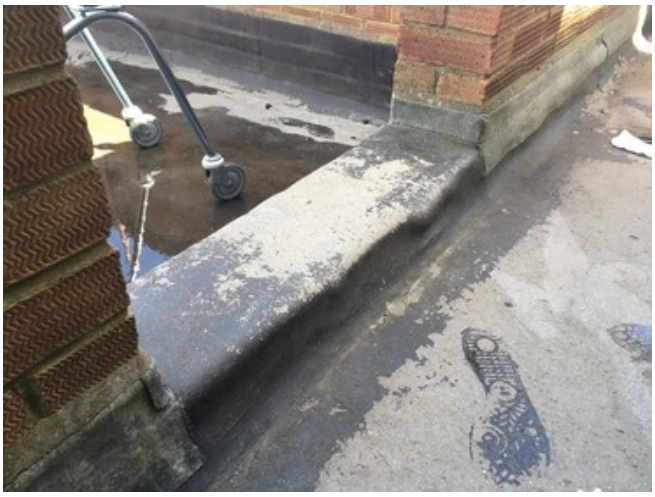


Outlets: Remedial work required prior to the application of the waterproofing system involving cutting back, levelling and removing obstructions to allow efficient drainage.

3. CONDITION REPORT - 80 - 106 DRYING AREA

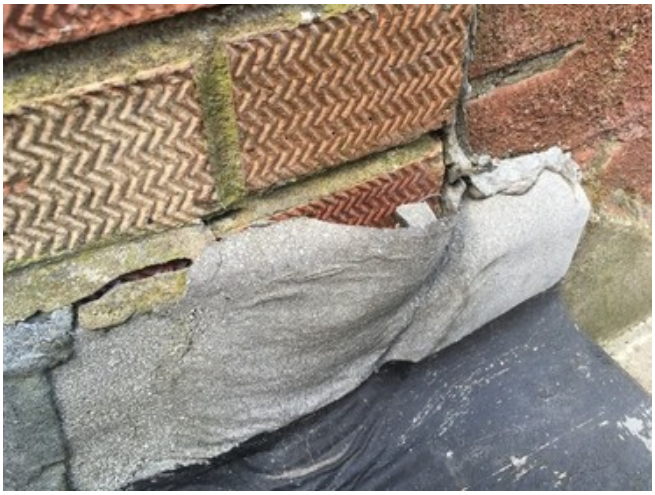
3.1 CONDITION REPORT

3.1.1 OVERVIEW OF EXISTING ROOF



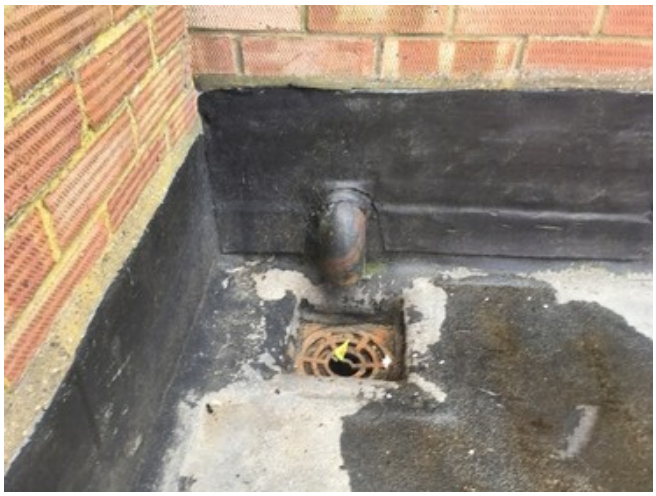
General Overview: The small drying area on this section of the flats is suffering from major deck deflection, meaning water is ponding in the middle and not able to reach the outlet in the corner.

3.1.2 SUBSTRATE DETAILS



Asphalt Upstands: The asphalt has slumped on the vertical surfaces and should therefore be removed and repaired to match adjacent areas.

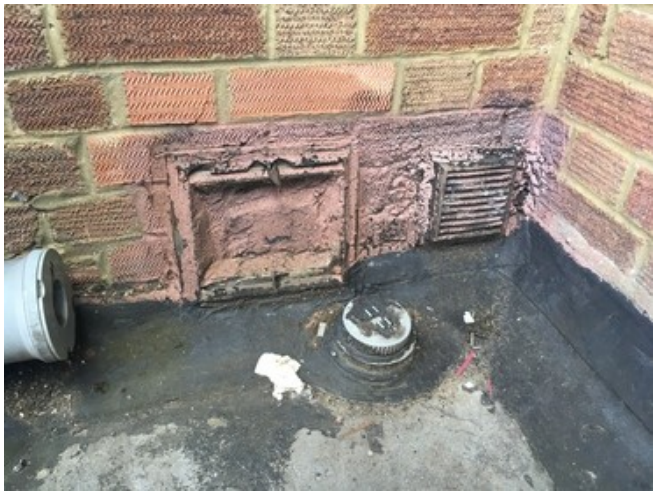
3.1.3 PONDING WATER



Ponding: Standing water is an issue in places, increasing the likelihood of water ingress via defects in the existing waterproofing.

The cause of the ponding should be investigated further and all necessary action taken to eliminate recurrence.

3.1.4 DRAINAGE



Outlets: Remedial work may be required prior to the application of the waterproofing system involving cutting back, levelling and removing obstructions to allow efficient drainage.

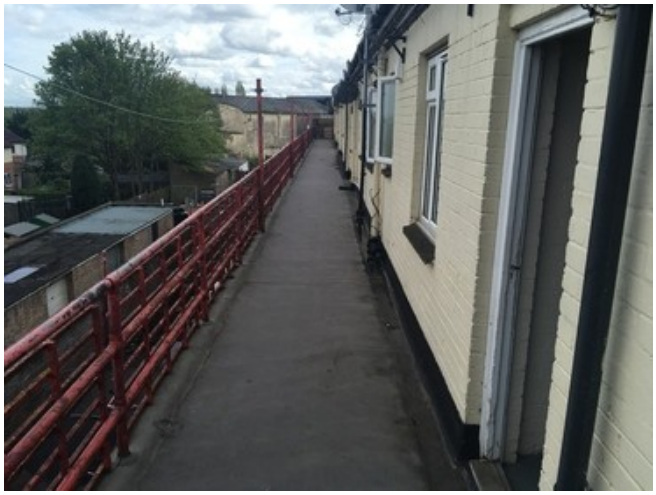
4. CONDITION REPORT - 54 - 76 HIGH LEVEL

4.1 CONDITION REPORT

4.1.1 OVERVIEW OF EXISTING ROOF

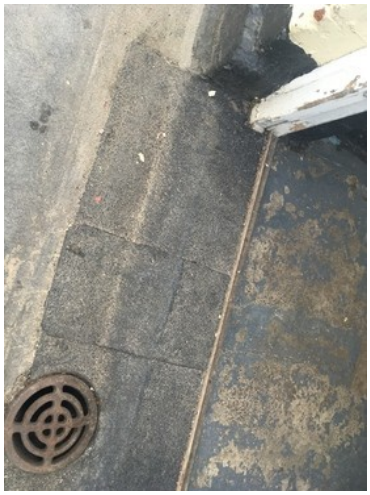
General Overview: The balcony walkways and drying areas of 54 - 76 Rockingham Road are in a similar state of disrepair to 80 - 106. The art-deco balustrade is corroded and there are cracks in the existing asphalt waterproofing.

4.1.2 SUBSTRATE DETAILS



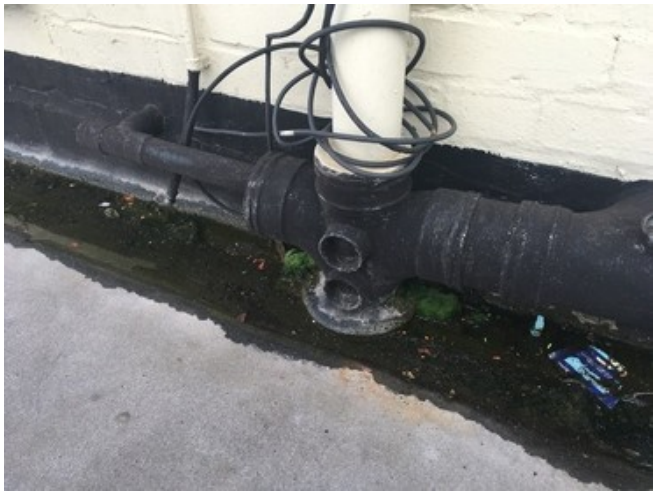
Asphalt Condition: The existing asphalt has failed and is no longer an effective waterproofing although it is considered suitable for overlay.

4.1.3 CILLS / DOOR THRESHOLD



Door threshold: A termination point for this detail is to be agreed by specified manufacturer and the installing Contractor prior to the commencement of works.

4.1.4 PENETRATIONS

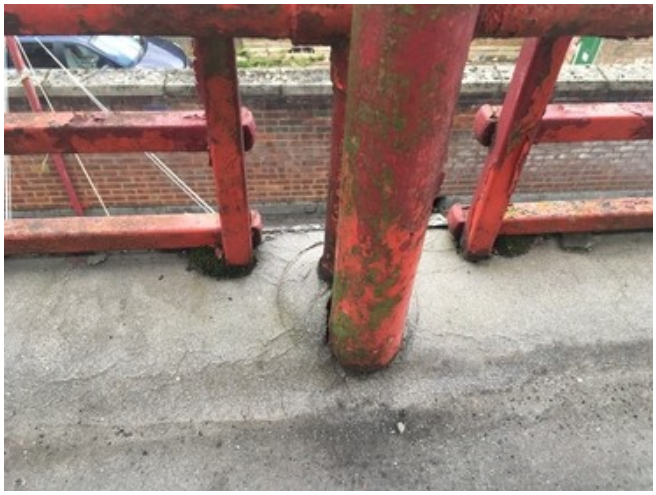


Penetrations: Remedial work will need to be carried out to all penetrations prior to works starting as currently they are not in a fit state to be coated with the new system.

4.1.5 DRAINAGE

Outlets: Remedial work will be required prior to the application of the waterproofing system involving cutting back, levelling and removing obstructions to allow efficient drainage.

4.1.6 MISCELLANEOUS (PLANT ETC)

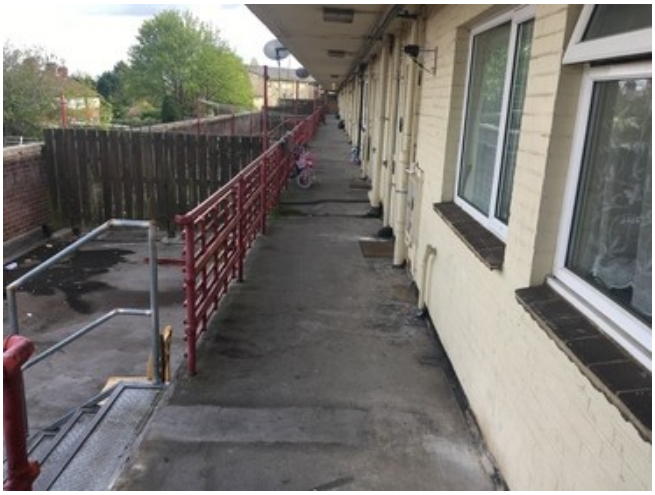


Balustrade: Remedial work will need to be carried out on the existing balustrade prior to application.

5. CONDITION REPORT - 54 - 76 LOW LEVEL

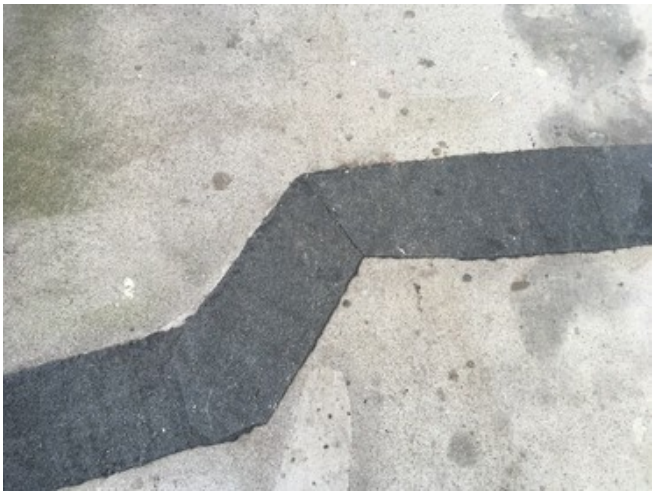
5.1 CONDITION REPORT

5.1.1 OVERVIEW OF EXISTING ROOF



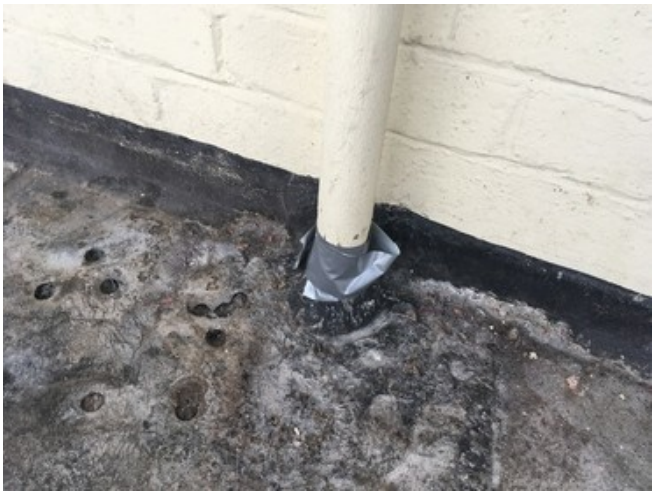
General Overview: The waterproofing on these walkways is in a similarly poor state to the other areas. There are several areas where old cracks have been patch repaired and pipework has been also patched.

5.1.2 SUBSTRATE DETAILS



Asphalt Condition: The existing asphalt has failed and is no longer an effective waterproofing although it is considered suitable for overlay.

5.1.3 PENETRATIONS

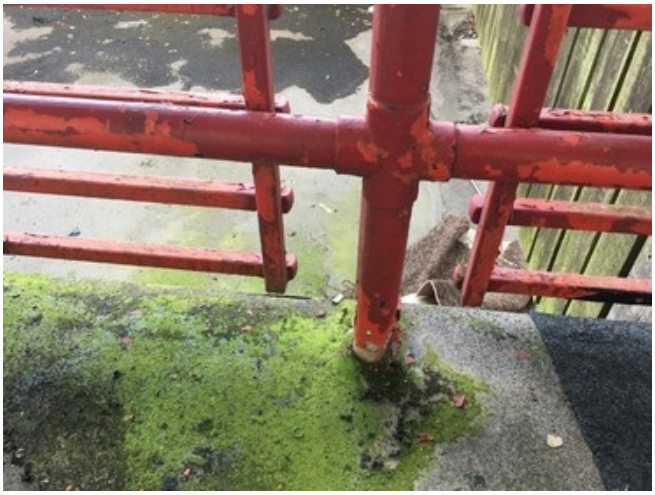


Penetrations: Remedial work will need to be carried out to all penetrations prior to works starting as currently they are not in a fit state to be coated with the new system.

5.1.4 DRAINAGE

Outlets: Remedial work may be required prior to the application of the waterproofing system involving cutting back, levelling and removing obstructions to allow efficient drainage.

5.1.5 MISCELLANEOUS (PLANT ETC)



Balustrade: Inspect and carry out remedial work to the existing balustrade prior to project commencement.

6. CONDITION REPORT - 54 - 76 DRYING AREA

6.1 CONDITION REPORT

6.1.1 OVERVIEW OF EXISTING ROOF

General Overview: The drying area on this block is also suffering from deck deflection leading to standing water. The water can't currently reach the chute outlets even though there is a fall on the area.

The abutment detail between the drying area and low level walkway is in need of remedial work as part of this project

There are several sets of steps down to the drying area that need to be replaced as part of this project.

6.1.2 SUBSTRATE DETAILS

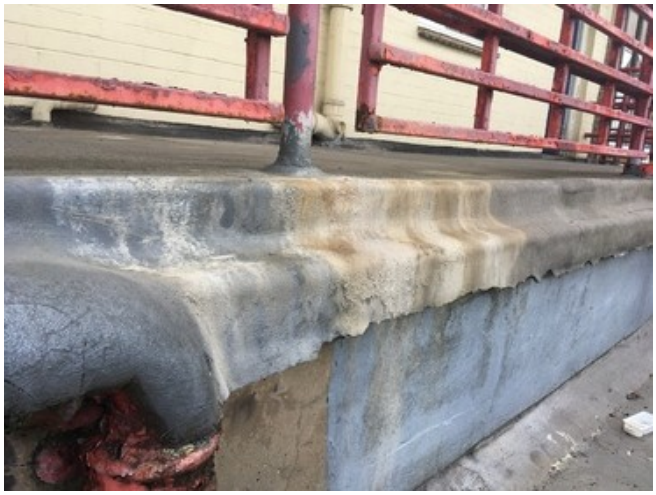
Asphalt Condition: The existing asphalt has failed and is no longer an effective waterproofing although it is considered suitable for overlay.

6.1.3 PONDING WATER

Ponding: Standing water is an issue in places, increasing the likelihood of water ingress via defects in the existing waterproofing.

The cause of the ponding should be investigated further and all necessary action taken to eliminate recurrence.

6.1.4 UPSTANDS

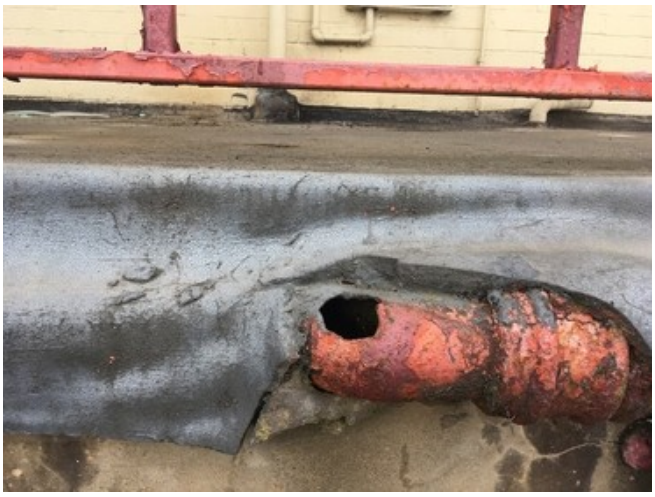


Upstand abutment detail - Plyboard: The interface between the low level walkway and the drying area needs to be remedied as part of these works. This is to include the knocking back of the original asphalt, redirection or removal of the wrought iron pipework and a ply-board face being installed.

6.1.5 PENETRATIONS

Fencing: A termination point for this detail is to be agreed by system manufacturer and the installing Contractor prior to the commencement of works.

6.1.6 DRAINAGE



Outlets: Remedial work is required prior to the application of the waterproofing system involving cutting back, levelling and removing obstructions to allow efficient drainage.

6.1.7 GUTTERS

Gutters: A gutter with sufficient drainage should be formed along the entire section of the drying area prior to the installing of the tapered fall overlay.

7. CONDITIONS

This is a Specification and should be used as guidance only. The details contained herein are based on information available at the time of writing.

Any photographs contained herein are a representation of what was seen at the time of inspection.

The contractor is to carry out their own roof survey and take his own core samples to satisfy themselves with regard to the existing roof build-up, the suitability of the specified system and ascertain the extent of work involved. No claims arising for failure to do so will be considered.

A detailed method of work statement and programme of works should be agreed with the Contractor before the commencement of the works.

The requirements of all relevant British Standards, Industry Codes of Practice and current manufacturers guidelines should be complied with at all times.

Where applicable and in accordance with BS 6229:2003 Flat Roofs with Continuously Supported Coverings – Code of Practice it is recommended that roofs should have a Design Fall of 1:40 to achieve a Minimum Finished Fall of 1:80. The specifier is advised that Agreement Certificate may be invalidated if no fall is provided, as this is in contravention of good practice – this will depend on the circumstances and the interpretation by Building Control.

If this cannot be achieved ponding may occur. However, the proposed system coating must be unaffected by standing water and this will have no detrimental effect on their waterproofing integrity, life expectancy or guarantee.