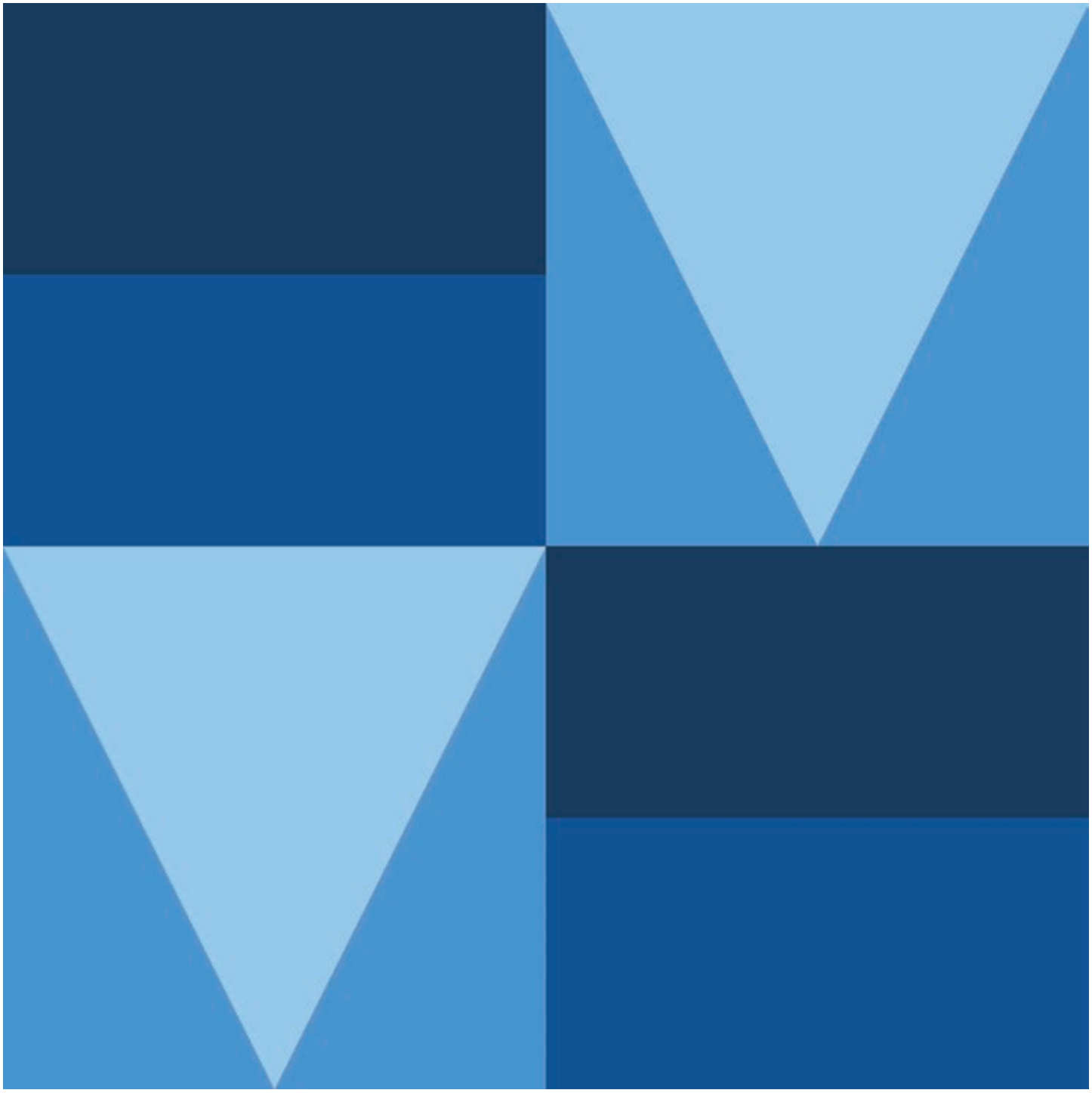
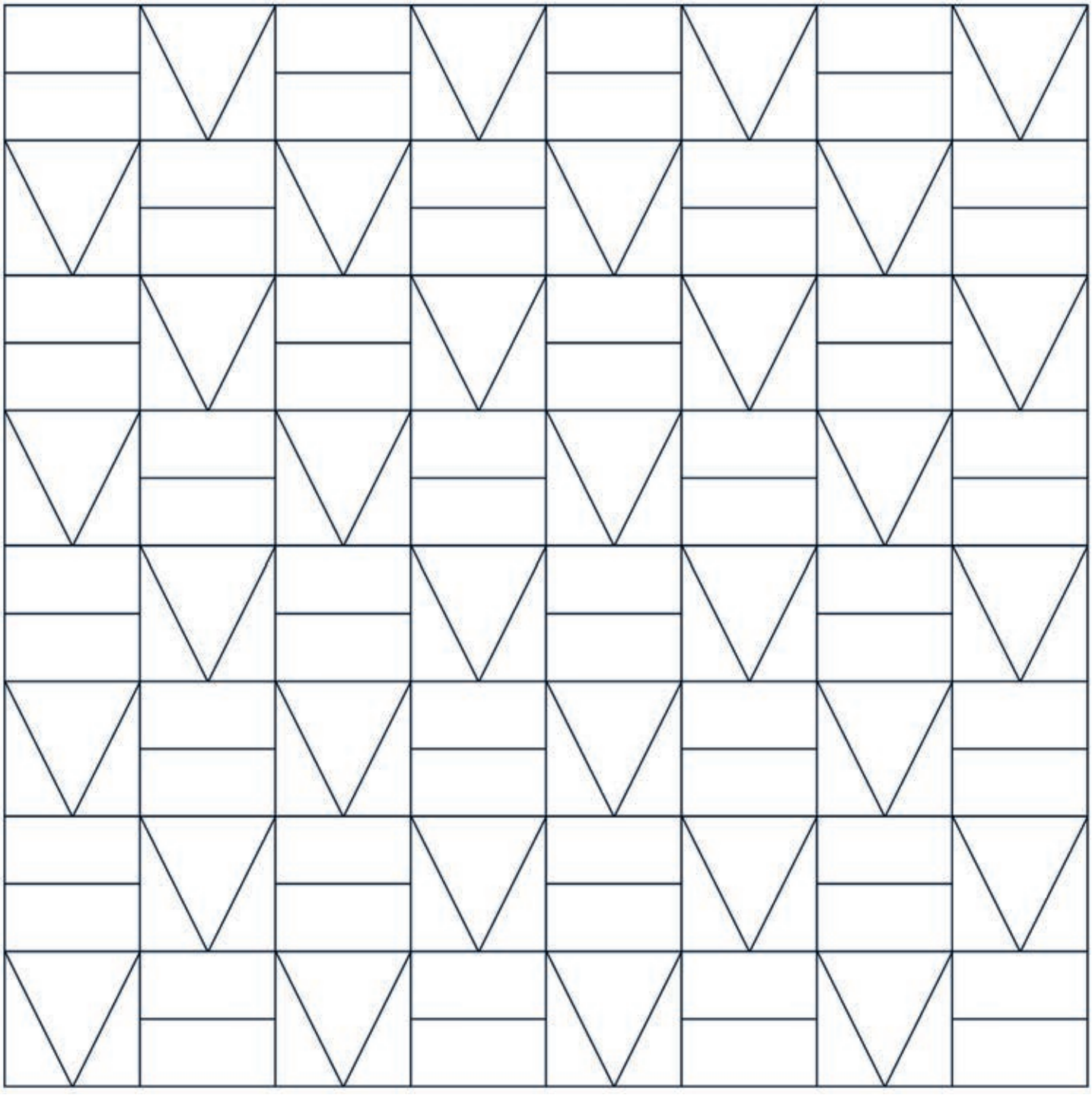
Holmes Miller

# 4687 - City Halls & Fruitmarket Repairs Project

## Outline Specification + Photographic Record of Damage

18 February 2021





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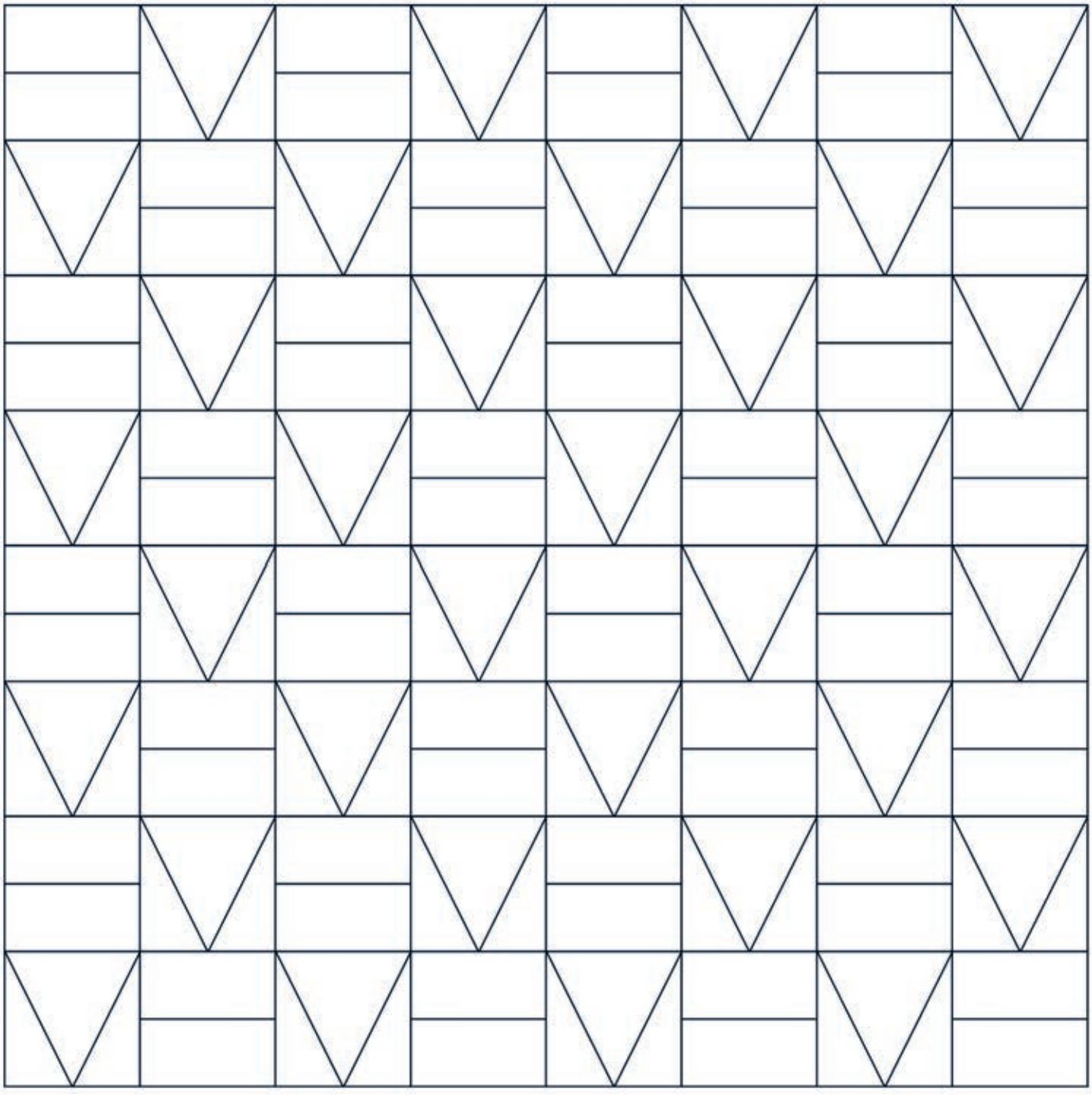


# 1 Outline Specification

# Conservation Outline Specification (COS) - February 2021

It is advised that the following reports are commissioned prior to tender action:-

- 'Refurbishment & Demolition' Asbestos report
- Rot report
- The Planning Department are also likely to request bat & habitat reports

THE FOLLOWING SPECIFICATION ITEM NUMBERS ARE REFERRED TO IN THE SCOPE OF WORKS SCHEDULES AS "COS x", WHERE 'x' IS THE SPECIFICATION ITEM NUMBER.

**1.0 EXTERNAL WALLS**

**Preparation**

1.1 Remove all vegetation; hack out roots and remove all soil & other debris. Repoint in a lime-based mortar to finish once open areas have been hosed clean.

Remove algae and mould: Brush excess mould and lichen off using a bristle brush. Walls then to be washed using the high temperature, low pressure DOFF cleaning system.

1.2 Prior to any repairs to external walls, all extraneous and redundant cables, wiring, lights, electrical equipment, boiler flues, metal brackets, etc. to be removed and/or re-routed inside.

1.3 Prior to any repairs to external walls, all rainwater goods to be repaired (even temporarily) and walls, roofs and gutters to be cleared of all plant growth.

**Repairs**

1.4 Allow for stone repairs as per locations noted on CHF Scope of Works spreadsheets. Stone to be utilised for replacement blocks or indents to be petrographically and visually matched to the existing stone. A small stone sample from the building is to be analysed by British Geological Survey (BGS) who will provide a report on which quarries can provide suitable stone for the repairs. It is anticipated that there will be the following types of stone repair:-

1) Stone indents - depth of indent to be at least 50mm. Indent to be secured using epoxy resin and austenitic stainless steel 6mm dowels (at least 2 per indent).

2) Brushing back of friable or spalling stonework to a sound base. This is to be carried out using a stiff bristle brush AND a wooden spatula. If the amount of stone that comes away is more than 50mm in depth then an indent is required. There may be prominent locations where this 50mm is not reached but for aesthetic reasons indentation is deemed to be the correct approach.

3) 'Plastic' repairs to stonework using 'ST.one' lime-mortar repair system by Masons Mortar.

4) Cracked stones to be repaired using stainless steel threaded dowels and epoxy resin as recommended by structural engineer. After repair, crack to be pointed in a lime-based mortar using crushed existing stone as a fine aggregate.

5) Previous stone repairs in cement or linostone will be damaging the surrounding stone. These cement repairs to be carefully removed and the stone underneath brushed back as per item 2 above and repaired either using 'plastic' repair noted in item 3 or indented as per item 1.

1.5 All cement pointing and friable pointing to be raked out to a depth of at least 25mm (depth to be at least twice the width of the joint). Joints to be washed out ensuring all joints are clean. All new pointing to be in a lime-based mortar. Sample of existing mortar to be sent to The Scottish lime Centre for analysis. Replacement mortar to be based on this analysis. Where deep voids are found, these should be filled with mortar and packed and tamped with stone or clay pinnings to tightly fill the joint and compress mortar back into the depths of the masonry. Ensure masonry surfaces are protected during repointing works. In joints greater than 10mm thick, course sand to be used. Fine sand to be used on thinner joints. It is essential that all work using lime-based mortar is suitably protected (especially at night) and not allowed to dry out.

1.6 All lathe and plaster to internal face of walls to be repaired as necessary. Small areas of damage to be repaired using timber lathes and lime-based plaster applied in 10-15mm coats until it is flush with existing plaster face.

Large areas of damage to be repaired using 12.5mm plasterboard fixed to metal framing system secured to masonry wall.

1.7 Stainless steel cramps to be used for coping stones as recommended by structural engineer. Cramps to be set below top of stone and infilled with lime-based mortar or molten lead.

1.8 Existing spalling or damaged cement render to be removed carefully. Where deep voids are found, these should be filled with lime-based mortar and packed and tamped with stone or clay pinnings to tightly fill the joint and compress mortar back into the depths of the masonry. Ensure masonry surfaces are protected during these works. The above mortar to be allowed to semi-cure for approx 2 weeks. Thermocromex ready-mixed self-coloured lime-based mortar (Mason's Mortar) to be applied to inside of wall and given a smooth finish.

1.9 Where large or deep voids are found, these should be filled with lime-based mortar and packed and tamped with stone or clay pinnings to tightly fill the joint and compress mortar back into the depths of the masonry. Ensure masonry surfaces are protected during these works. Once complete, gap to be infilled with a 2-part polysulphide mastic coated in stone dust.

**2.0 ROOF**

**Preparation**

2.0 All lead flashings, zinc flashings, concrete ridge and hip tiles, slate and underfelt to be removed from roof no.4. All sound slates to be retained, re-sized and re-holed for re-use. Any damaged sarking boards to be replaced using treated softwood (probably 22mm thick).

Allow time for rot inspection of sarking and make necessary repairs (clear all debris uncovered in the process).

**Repairs**

2.1 Remove all lagging from external pipes and insulation from external ducts. Proprietary external quality mineral wool lagging and insulation to be secured around all pipes and ducting. Insulation and lagging to have waterproof and UV resistant outer cover.

2.2a New 'Type 1F' underslating roofing felt to be secured to sarking throughout any new slaterwork with additional 450mm reinforcement strips at ridge, eaves, verge and valleys. Re-sized slate to be used on the more visible and prominent pitches. The shortfall is to be made up with SIGA 120 New Welsh slate which is a good match to the traditional rustic Scottish Ballachullish slate. All slate to be laid in random widths and diminishing courses. Every fourth course to be double nailed using copper nails.

Where roof passes over a party wall, the sarking is to be replaced with 19mm Supalux. Party wall to extend up to Supalux – with Linear Firestop 2A by Rockwool and 10mm fibre cement board at junction.

Install 300mm mineral wool quilt in loft space (where possible) over ceiling incorporating 25mm vent trays at roof edge to maintain ventilation. This to be done in 2 layers, 1 laid between timbers and the second layer laid perpendicular across top of timbers.

2.2b All broken, cracked or slipped slates to be carefully removed (without damaging adjacent slates) and replaced with SIGA 120 New Welsh slate. Slate to be sized to fit into the gap left by the damaged slate. Slates to be secured using 2 no. copper nails.

2.3a New lead valley and hip flashings to be in code 7 lead. Existing ridge tiles to be removed and replaced with code 8 lead flashings and to be secured with terne-coated stainless steel clips. Any abutment and cover flashings to be in code 6 lead.

2.3b Renew all mastic and mortar sealant to all flashing raggles into stonework using a 2-part polysulphide mastic, coated in stone dust. Ensure all abutment details have a cover flashing over and ensure these are securely fixed into raggles. These will be located where wallheads extend above roof.

2.4a Timber fascias/so**f**its which are damaged or suffering from rot to be removed. Any new fascia/so**f**its to match profile of existing and be spliced into the sound remaining ones. Timber to be used to be preservative treated and to be Douglas Fir or Baltic Redwood or Larch. Fascias/so**f**its to be secured to substrate using treated timber battens. Fascias/so**f**its to be prepared and painted as per item 5.3.

2.4b Remove existing damaged exposed timber kerb and replace with 18mm WBP ply upstand (nominal 150mm high above top of roof). Investigate thickness of existing roof insulation - height from roof substrate to top of upstand to be 300mm. Install new single ply membrane upstand and 25mm thick insulation (as recommended by single ply manufacturer), around new kerb upstand. Single ply upstand to be welded to existing single ply roof. Proprietary metal flashing to be secured to duct - to seal any gaps between the single ply upstand and the duct.

2.5a Code 5 lead sacrificial flashings to be incorporated at base of slate roof pitches as they meet wide lead gutters.

2.5b Lead saddle behind parapet stones on Roof 4 to be removed. Substrate to be reformed using 18mm WBP ply supported on timber firring pieces. Ply to be laid in a double-pitched slope (the ridge being centred on the parapet stone). The slopes will prevent pigeons roosting and vegetation growing. Code 7 lead to be used as the new saddle gutter. Lead to be lapped under slates and up wall of parapet by 100mm. Apron flashing (code 6) to be raggled into stone and to have at least a 75mm overlap with the saddle flashing.

2.5c New lead slate pieces (code 6) to be installed around all roof penetrations.

2.5d Full length of stone cornice below north gable of Roof 1B to be cleaned. Code 7 lead sheet to be laid on top of cornice and formed over edge. Edge of lead to be wrapped around a continuous stainless steel cleat which will form a rigid drip. Lead to wrap up wall by 75mm. Code 6 apron flashing to be lapped over main cornice flashing and raggled into the masonry wall, secured by lead wedges. Raggle to be 25mm wide and infilled with 2-part polysulphide mastic coated with stone dust.

2.5e Existing asphalt coating to cornice to be removed. Cornice to be cleaned of all debris and new asphalt applied. Proprietary metal edge trim flashing to be raggled into wall above cornice.

2.5f Existing lead to be uplifted at area of lead gutter which doesn't have an adequate drip (lowest 2 levels of gutter). Existing (assumed) ply substrate to be replaced if damaged and either replaced with a thinner sheet of ply or have an additional sheet laid on top - in order to attain a drip height of at least 50mm. Once drip is formed, New code 7 lead to be formed around new gutter and formed into outlet. Ensure lead is fitted under existing apron flashings.

2.5g Investigate flashing at west parapet wall of Roof 3A. Assuming that this flashing does not extend up rear of metal cladding, remove flashing carefully. Base of cladding panel to be temporarily removed to allow a code 6 lead flashing to be installed - it will extend up wall by 150mm and taken up behind bottom 2 rows of slates. Flashing to be applied to 18mm WBP ply substrate. Carefully secure cladding panel back to wall.

2.5h A preformed code 7 lead capping piece to be made off-site from a template or mould made on site. Capping piece to be made large enough so it can cover the adjacent existing ridge and skew flashings.

2.5i Lead caps and skirts to the raised parapet stones on Roof 4 to be carefully removed. New code 7 cap to be installed over top of cap with a central 50mm high timber roll centred on cap. Lead to be laid on top of 18mm WBP ply substrate which is drilled into stone. Edges of cap to be dressed into the moulding of the stonework.

New code 7 lead to be cut and dressed around base of stone and dressed under slates at sides. Rear saddle of lead to be formed as per item 2.5b. Front part of skirt to be lapped over stone parapet and secured using lead clips.

Code 7 lead apron flashings to be raggled into existing raggle secured by lead wedges. Ensure raggle is 25mm wide and clean prior to being infilled with 2-part polysulphide mastic coated with stone dust.

**Roof Access Works**

2.6 New proprietary Safety Line system to be fitted to top of barrel vault roof of Roof 1A (on both sides of clerestorey glazing). Wires to be fixed to adjacent walls at each end of roof. System re-certified for use.

2.7 New proprietary Safety Line systems to be fitted to slate roofs of 1C, 3C and 4 utilising roof anchors at prescribed centres. Code 6 lead flashings to be formed over anchors. Existing Safety Line system on roof 1C to be removed and holes in stone made good as per item 1.4.3.

2.8 New proprietary Safety Line systems to be fitted to metal roof 2, utilising roof anchors at prescribed centres. Proprietary aluminium flashings to be formed over anchors.

2.9a Existing access ladder and cage to be assessed. If it doesn't pass certification, it is to be replaced with a matching item, secured into the wall using resin anchors. The exact type and number of fixings to be specified by a structural engineer.

2.9b New 'Fixed Ladder with Safety Cage' to be installed in locations shown on drawing 4687-XX-RF-DR-A-12108. There are to be 4 no. such ladders - to access Roof 1C from 1B; to access Roof 4 plant; to access 'GUTTER A' from walkway and to access Roof 3C from 3B.

2.10a New 750mm wide proprietary metal 'Inclined Walkway' access walkway to be provided (to sub-contractor's design) to afford safe access at the following areas:-

1. 'GUTTER A' to top of Roof 1A.
2. Each end of 'GUTTER C' rising up metal roof
3. East end of 'GUTTER E' rising up to ridge of metal roof
4. 5 no. locations on the slated pitched roof of Roof 1B
5. Rear pitch of Roof 3B
6. Rear pitch of Roof 3C

In locations 1,2,3 & 6 the walkway is to be against a wall so will only require a 1.1m high metal handrail on one side. The walkways in locations 4 & 5 will require handrails on both sides.

2.10b New 750mm wide proprietary metal 'Flat Walkway' access walkway to be provided (to sub-contractor's design) to afford safe access at the following areas:-

1. 'GUTTER A' to top of inclined walkway at west end of 'GUTTER C'.
2. Along 'GUTTER C'
3. Along 'GUTTER E'

In locations 1 & 2 the walkway is to be against a wall so will only require a 1.1m high metal handrail on one side. The walkway in location 3 will require handrails on both sides.

2.11 Existing Safety Line system on Roof 3A to be tested by a mansafe specialist. Code 6 lead flashings to be formed over anchors.

**3.0 RAINWATER GOODS & SOIL PIPES**

**Preparation**

3.1 All uPVC gutters, downpipes and soil pipes to be removed whilst temporarily managing rainwater run-off from affected roofs. Rod/jet all drain lines to ensure running clear.

All cast iron rainwater goods to be removed and taken off site, taking care not to cause damage to them, their holderbatts or the stone.

3.2 Any obviously damaged goods to be discarded. All remaining goods to be shot-blasted to remove rust and old paint. Once this has been carried out, other damage may become apparent and those goods are also to be discarded.

Ensure all redundant soil pipes are removed and fixing holes in masonry repaired as per item 1.4.

**New Rainwater Goods & Soil Pipes**

3.3 New and refurbished cast iron downpipes (square & circular section), soil pipes (circular section), holderbats, gutters, hoppers (all to match existing profiles) and fixing straps to be primed and painted prior to re-fitting on site. Existing holes in walls to be utilised for the holderbats which are to be secured with lime-based mortar and, if necessary, clay pinnings.

Paint gutters inside and out with micaceous iron oxide primer, paint external faces of all rainwater goods and soil pipes with one coat undercoat and two coats gloss finish.

3.4 Connection between outlets and actual rainwater pipe, in many instances is poor. Outlet to be removed and proprietary connection seal is to be inserted between new 100mm dia. outlet and RWP. New domed grating to be fitted to outlet. Silt trap to be fitted to outlet in item 3a on Roof 1B.

3.5 Gutters in metal roof 2 (Fruitmarket) to be re-lined. Thoroughly clean out gutter and install new proprietary EPDM bonded steel gutter lining - Unifold Gutter System. Lining to have expansion joints as per manufacturer's recommendations. Provide new 25mm Ø overflow pipe with insect mesh, located halfway up gutter depth. Overflow pipe to connect to new wall mounted identifiable tundish at visible location indicated on plans. Tundish to connect to existing drainage system via trap.

3.6a Existing flashings to be removed where Roof 1A meets the walls at north & south. Install new code 6 lead flashing AND apron flashing. Form curved chase (25mm deep) to gable walls (scribed to radius of roof) to suit 150mm high apron flashing from curved roof. Apron flashing to be tucked in and secured with clips & wedges, and sealed with a 2-part polysulphide mastic coated in stone dust. Main flashing to extend across roof by 300mm and up wall by 100mm, ensuring at least a 75mm overlap between main and apron flashings.

3.6b Existng flashing to be removed along GUTTER D and to be replaced with either a proprietary aluminium flashing or a code 6 lead flashing. If using a lead flashing, it will require a code 6 apron flashing as well.

Form raggle (25mm deep) to parapet wall so that either aluminium flashing or lead apron flashing can be tucked in and secured with clips & wedges, and sealed with a 2-part polysulphide mastic coated in stone dust. Main flashing to extend up slope under the roof covering by 300mm (if possible) and up wall by 100mm, ensuring at least a 75mm overlap between main and apron flashings.

3.7 Drainage pipe removed from southern end of Roof 1B and hole infilled using clay or brick pinnings secured with lime-based mortar. A new proprietary 'Parapet Outlet' to be inseted at base of parapet wall. Existing lead gutter at end of gutter to be replaced with code 7 sheet and formed into outlet.

3.8 Damaged tell-tale pipe removed from southern end of Roof 4 (above Roof 1C) and replaced with a new preformed stainless steel pipe without damaging the lead parapet gutter behind and sealed using 2-part polysulphide mastic brushed with stone dust.

**4.0 WINDOWS**

4.1 Existing windows that require repairing: Cut out defective timbers at an angle. Cut out 100mm beyond last visible defect. Splice new timber into remaining timbers (ensuring the section and moulding matches). Timber to be preservative treated and to be Douglas Fir or Baltic Redwood or Larch. Any new cill to sit on DPC. Entire window to be repainted as per spec 5.3. Ensure all timber surfaces are primed before delivery to site, DPC to be installed between any new timber and stone, expanding foam seal to prevent air leakage around junction of case to stone.

4.2 Fit brass sash pulls (2 no.) to each lower sash and simplex swing open fittings for cleaning and brass sash locks to all windows that require any work.

Fit Ventrolla type draught sealing internally to all windows that require any work.

4.3 Strip old sand mastic, mortar and paint from around the window openings. Fill gaps with expanding foam; apply polypropylene rod; and apply new burnt sand/linseed oil mastic to all window surrounds. Renew all cill bedding in lime-based mortar.

Paint full windows on completion as per item 5.3.

4.4 Stained glass and leaded glass units to be carefully removed, repaired and cleaned by a specialist restorer.

4.5 Existing rooflight on Roof 1B to be removed and replaced with a Conservation Rooflight - allow for size – 517x828mm, code CR09-2 from The Rooflight Company or equal and approved.

4.6 Existing clerestory glazing to be removed from above roof 1A. The glazed panels only are to be removed - all structure and substrate is to be repaired as necessary and retained. Glazing system is to be Reynaers Slim-line 38 or equal and approved by architect and planning authority. Glazing pattern to match the existing one, i.e. 12 bays of 3 panes. The central pane in every other bay is to be top hung inward-opening, operated electronically by remote control. PPC 2mm thick aluminium preformed cill to be installed on both facades of glazing. PPC 2mm thick aluminium flashings should be allowed for on each vertical spar between window bays. DPCs to be installed around each window. Internal plasterboard and finishes to be made good once installation has been completed.

4.7 Broken panes of glass in the large rooflight above the main City Halls foyer to be carefully removed and replaced with matching sizes of glass (assume 6mm thick Georgian Wire). New panes to be inserted into existing patent glazing mullions. Any poor leadwork to be replaced using code 6 lead. Lead at ends of glazing to form a 'secret gutter' at junction with slates.

**5.0 INTERNAL**

5.1 Timber floor of Patrons' Bar to be sanded (diagonally across the boards). Any gaps less than 5mm wide to be filled using a mixture of sawdust (collected from sanding process) mixed with a clear resin filler. For gaps wider than 5mm, use pine slivers from "The Old Pine Company" or equal and approved. These have a wedge cross section and can be hammered into the gaps as far as they will go. Any excess is sanded down. Whole floor to be coated in 2 coats of wood stain - to be slip-resistant and flame-retardant and to be classed as 'A+' regarding emission of volatile pollutants.

5.2 Some ceiling lining boards in the Fruitmarket are missing or suffering from rot. New t+g timber boards to match profile and cross section of existing boards to be installed in place of the damaged or missing ones. Boards to be screwed in place through the tongue using stainless steel screws through pre-drilled holes. Paint fully on completion as per item 5.3.

5.3 Painting

• Prior to painting, report any defective base material for further instruction on repairs.

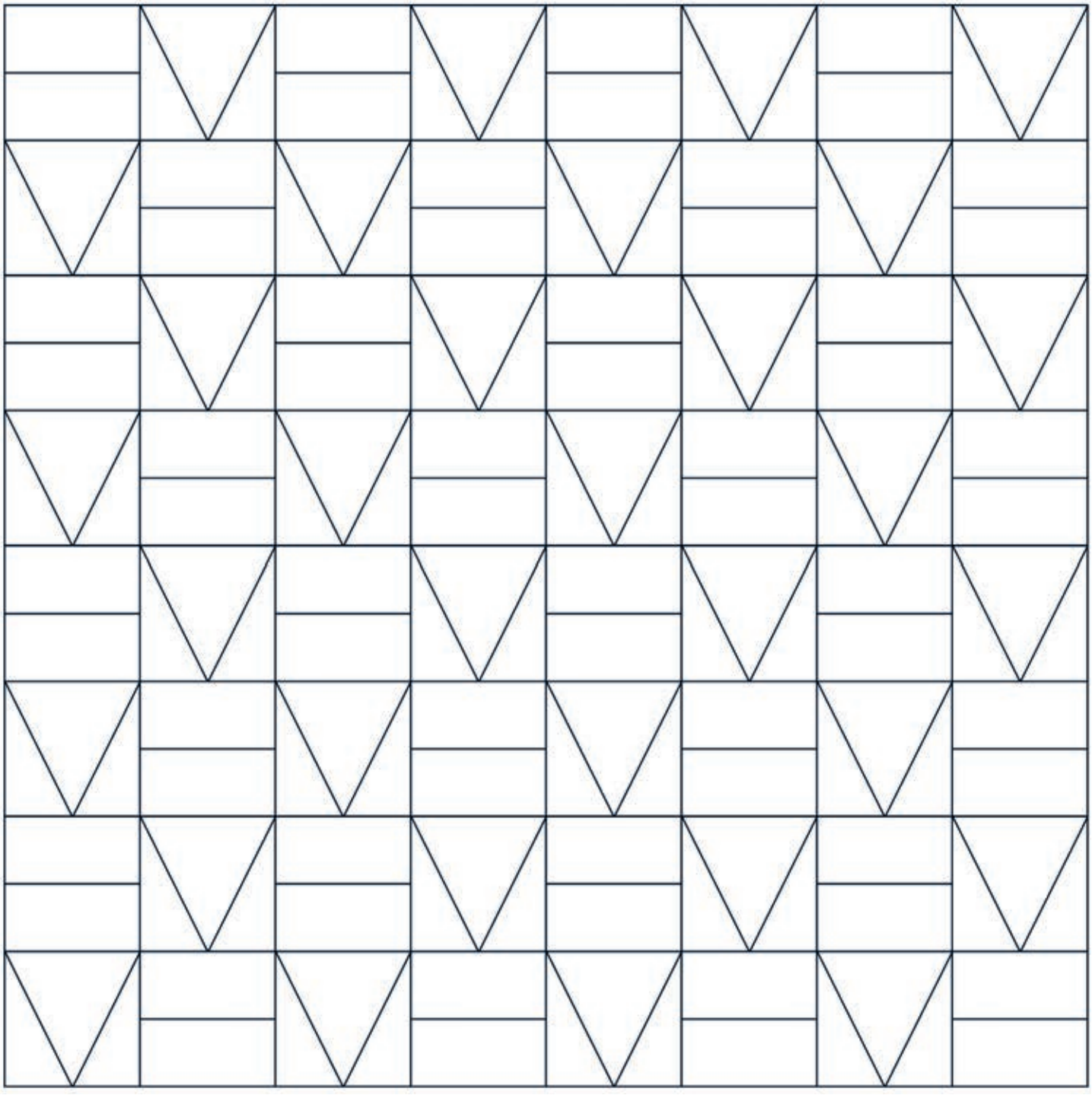
• Steel + Cast Iron: Thoroughly prepare steel/cast iron by wire brushing to remove all friable material (particularly rust); remove all protruding matter; sand for key. One coat zinc oxide primer to bare/rusted areas, undercoat, two coats gloss finish, colour: black. Columns in Patrons' Bar to have a matt finish.

• External Timber: Thoroughly prepare timber by scraping to remove all friable material; remove all protruding matter; fill depressions with wood filler; sand for key. One coat exterior oil based primer to bare areas, undercoat, two coats microporous gloss finish, colour: TBA.

• Internal Timber: Thoroughly prepare timber by scraping to remove all friable material; remove all protruding matter; fill depressions with wood filler; sand for key. One coat interior water-based primer to bare areas, undercoat, two coats gloss finish, colour: TBA.

• Plaster/plasterboard: Thoroughly prepare by scraping to remove all friable material; remove all protruding matter; fill depressions with polyfilla; sand for key. One coat stain block, undercoat, two coats diamond matt finish, colour: white

• Roof overflow pipes projecting over gutter – paint black



# 2 Photographs

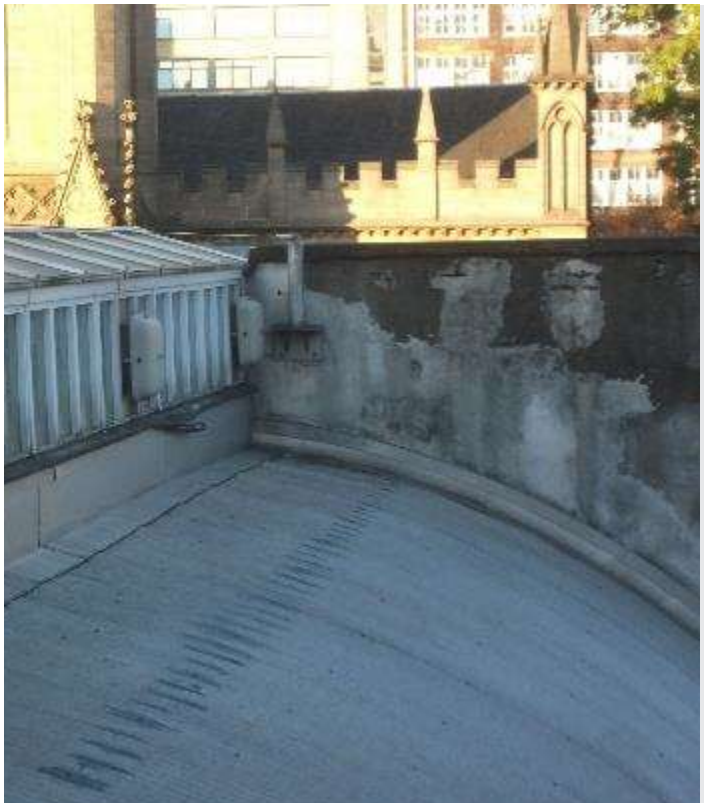
Clerestorey glazing above bar

Refer to item 2 in Scope of Works CHF-1A

## Roof 1A


North-west corner of bar

Refer to items 3 & 4 in Scope of Works CHF-1A



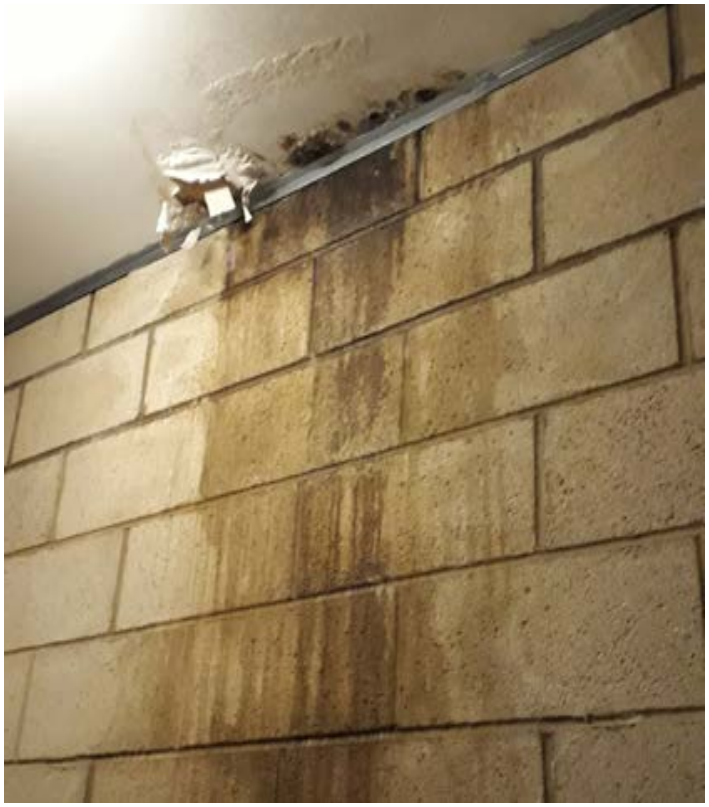
North wall above bar

Refer to items 4 & 6 in Scope of Works CHF-1A

## Roof 1A

Gutter 'A' between Roofs 1A & 2

Refer to item 5 in Scope of Works CHF-1A



Ceiling of north fire escape

Refer to item 11 in Scope of Work CHF-1A

## Roof 1A

SE corner of roof 1A

A permanent safe access system is required here.
Brackets from earlier system can still be seen.

Refer to item 7 in Scope of Work CHF-1A

SE corner of roof 1A

The walkway shown has since been removed. The proposed walkway is to follow this route. A caged ladder will provide access from the walkway down to the gutter between roofs 1A & 2 - 'GUTTER A'.

Refer to item 7 in Scope of Work CHF-1A

## Roof 1A

Underside of roof 1A

Timber cill in poor condition

Refer to item 1 in Scope of Work CHF-1B

## Roof 1B

Gap at corner between buildings

Refer to item 2 in Scope of Work CHF-1B

Outlet in poor condition - water ingress below.

Refer to item 3a in Scope of Work CHF-1B

## Roof 1B

Lead cornice below north parapet

Refer to item 18 in Scope of Work CHF-1B

Northern end of skylight above grand staircase

Refer to item 6 in Scope of Work CHF-1B

## Roof 1B

Poor stonework at top

Refer to item 8 in Scope of Work CHF-1B

Vegetation at parapet level

Refer to item 7 in Scope of Work CHF-1B

## Roof 1B

Linostone to south elevation at high level

Refer to item 10 in Scope of Work CHF-1B


Damaged stone to central  parapet

Refer to item 8 in Scope of Work CHF-1B

Poor fascia to plant room

Refer to item 11 in Scope of Work CHF-1B

## Roof 1B

Poor fascia to plant room

Refer to item 11 in Scope of Work CHF-1B

Vegetation and poor lagging to all external pipes and ducts - top 2 photos

Refer to items 13 & 22 in Scope of Work CHF-1B

## Roof 1B

Poor flashing to skylight

Refer to item 14 in Scope of Work CHF-1B

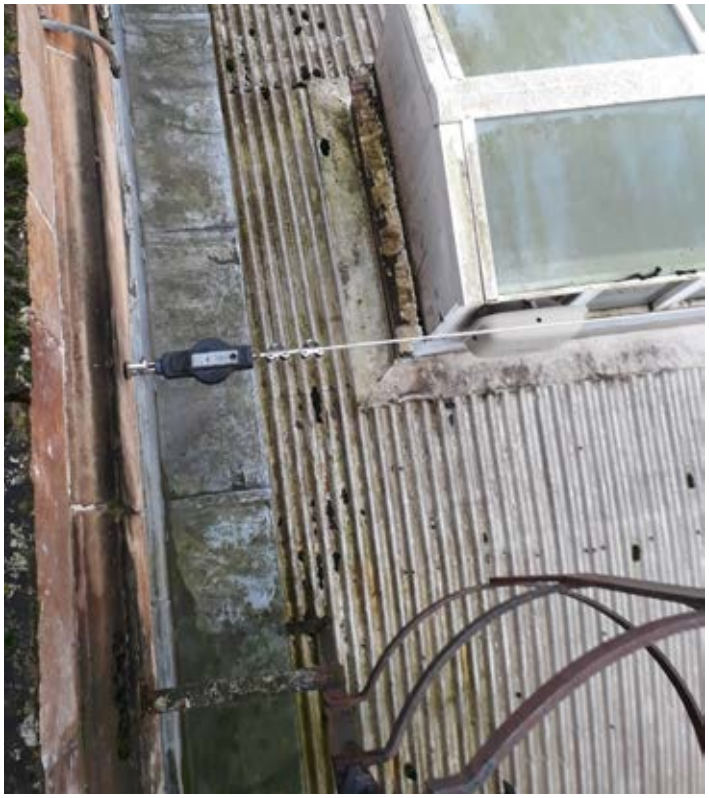
Ridge tiles to be replaced with lead ridge

Refer to item 15 in Scope of Work CHF-1B

## Roof 1B

Spalling render and poor asphalt on cornice

Refer to items 17 & 19 in Scope of Work CHF-1B



Existing roof ladder to be assessed

Refer to item 4 in Scope of Work CHF-1B

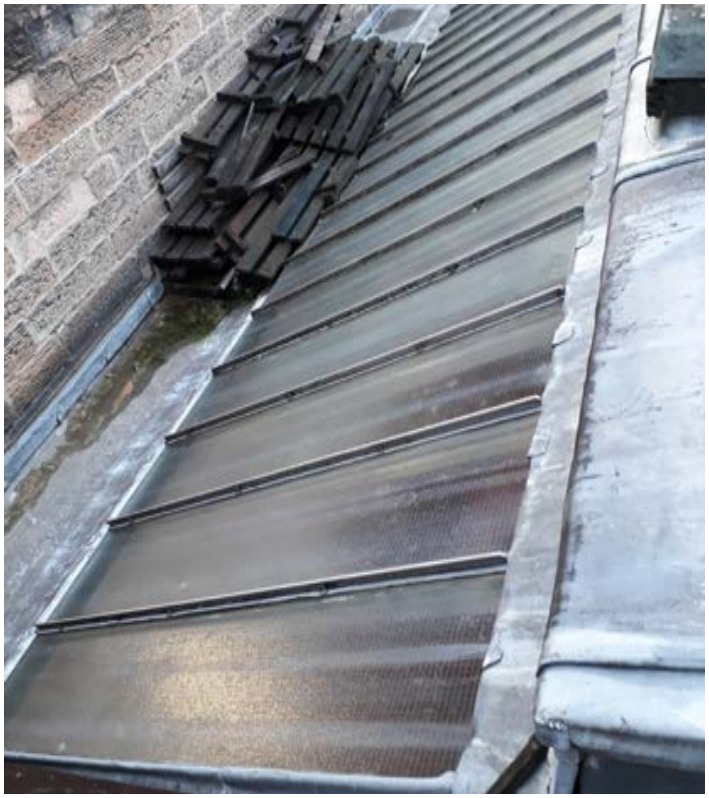
Poor render on plant room walls

Refer to item 17 in Scope of Work CHF-1B

## Roof 1B

Grating missing from outlet

Refer to item 20 in Scope of Work CHF-1B



Duckboards stored on lead gutters

Refer to items 23 in Scope of Work CHF-1B

Duckboards stored on lead gutters

Refer to items 23 in Scope of Work CHF-1B

## Roof 1B

Duckboards and other items stored on lead gutters

Refer to items 23 in Scope of Work CHF-1B

Upstands to main rooflights in poor condition

Refer to items 25 in Scope of Work CHF-1B

Rusting base of rwp

Refer to items 26 in Scope of Work CHF-1B

## Roof 1B

Gutter drip not 50mm

Refer to items 27 in Scope of Work CHF-1B

Bent flashing to rooflight

Refer to items 28 in Scope of Work CHF-1B

## Roof 1B

Poor pointing to skew leadwork

Refer to items 29 in Scope of Work CHF-1B

Suspect linostone repair

Refer to items 30 in Scope of Work CHF-1B

Staining to stairwell below gutter in southern roof

Refer to items 32 in Scope of Work CHF-1B

## Roof 1B

Outlet at end og gutter is too high

Refer to items 31 in Scope of Work CHF-1B

Poor paintwork on ledge below skylight
Refer to item 33 in Scope of Work CHF-1B

## Roof 1B

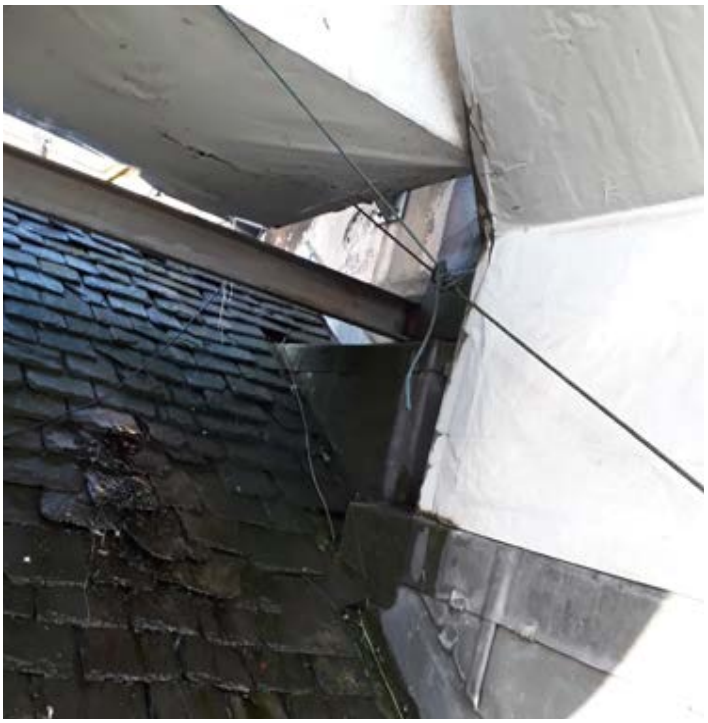
Underside of Rooflight above Main Staircase
Refer to item 33 in Scope of Work CHF-1B


Central Bay of Main Entrance to City Halls

## Roof 1B

Poor upstand to duct penetration thro' flat roof

Refer to item 1 in Scope of Work CHF-1C



Ducts close to roof - no access available over roof. New Safety Line required

Refer to items 18 in Scope of Work CHF-1C

## Roof 1C

Bent overflow pipe

Refer to item 2 in Scope of Work CHF-1C

Washed out pointing above central window

Refer to item 3 in Scope of Work CHF-1C

## Roof 1C

Poor stonework and mass of cables to East elevation. Failed safety line still in place

Refer to items 5, 6 & 18 in Scope of Work CHF-1C

Poor pointing and damaged stone above window

Refer to items 8&11 in Scope of Work CHF-1C

## Roof 1C

Poor pointing to East elevation

Refer to item 4 in Scope of Work CHF-1C

Suspect cement repair and open joint below cap

Refer to items 9 & 12 in Scope of Work CHF-1C

Poor stonework around pipe - and vegetation

Refer to items 7 & 10 in Scope of Work CHF-1C

## Roof 1C

Outlet at end of gutter (in Roof 1B) is too high. New downpipe to be fitted

Refer to item 15 in Scope of Work CHF-1C

Gutter full of debris - to be cleaned

Refer to item 13 in Scope of Work CHF-1C

## Roof 1C

Projections thro' roof have debris collecting on upper side

Refer to item 16 in Scope of Work CHF-1C

Base of duct within chair store off the Recital Room - water ingress evident

Refer to item 1 in Scope of Work CHF-1C


West elevation of Recital Room (below Roof 1C)

## Roof 1C

View looking west of Roof 2

## Roof 2

Small pitched roof at north to have Safety Line and gutter to be re-lined

Refer to items 4 & 5 in Scope of Work CHF-2

View of 'GUTTER E'. Gutter to be relined and safe access provided.

Refer to items 6 & 16 in Scope of Work CHF-2

## Roof 2

Gutter to be re-lined and new access walkway to be provided

Refer to items 2 & 15 in Scope of Work CHF-2

Junction between Roof 2 and Roof 1A

## Roof 2

Damage and poor paintwork to ceiling boards

Refer to items 11 & 12 in Scope of Work CHF-2


Aerial View of City Hall & Fruitmarket Complex with Roof 2 in the foreground to the right and Roof 3A, 3B & 3C in the foreground to the left.

## Roof 2

Complicated junction between Roof 3A ridge and wall of Roof 3B

Refer to item 2 in Scope of Work CHF-3A

## Roof 3A

Poor flashing at base of slate pitch

Refer to item 1 in Scope of Work CHF-3A

Suspect linostone repair and poor pointing

Refer to items 4 & 5 in Scope of Work
CHF-3A

## Roof 3A

Central valley of Roof 3A

Poor pointing in stonework

Refer to item 3 in Scope of Work CHF-3B

## Roof 3B


Poor pointing

Refer to items 4 & 5 in Scope of Work CHF-3B

View of Roof 1B

## Roof 3B

Damp stone - constantly flowing overflow from above

Refer to item 2 in Scope of Work CHF-3C

## Roof 3C

Damp stone - constantly flowing overflow from above

Refer to item 2 in Scope of Work CHF-3C

General view of Roof 3C

## Roof 3C

View down onto Roof 3C from Roof 3B.

New ladder to be installed here. Refer to item 8 in Scope of Work CHF-3C

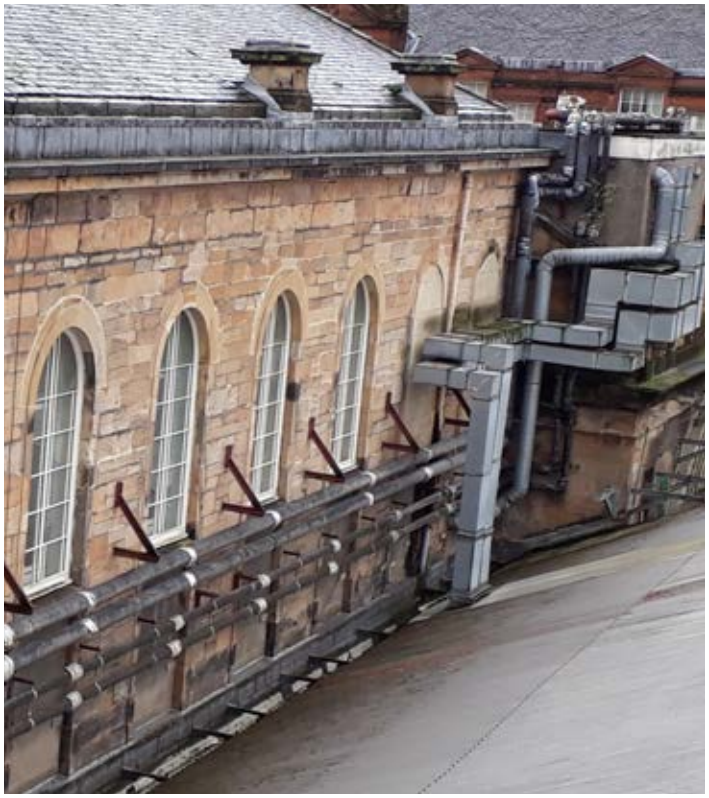
View of Parapet Stone on eaves

Refer to items 1, 2 & 3 in Scope of Work CHF-4

## Roof 4

Poor leadwork around base of parapet stones

Refer to items 2 & 3 in Scope of Work CHF-4



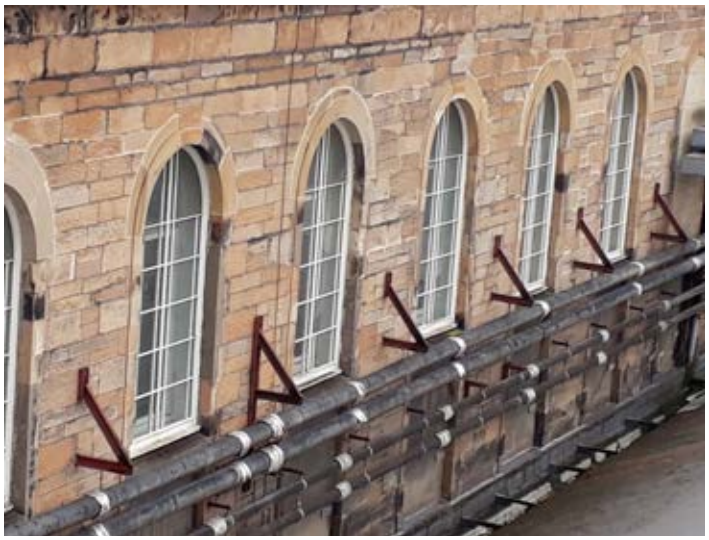
Poor pointing and some damaged rybat stones

Refer to items 6-10 in Scope of Work CHF-4

Window blocked up

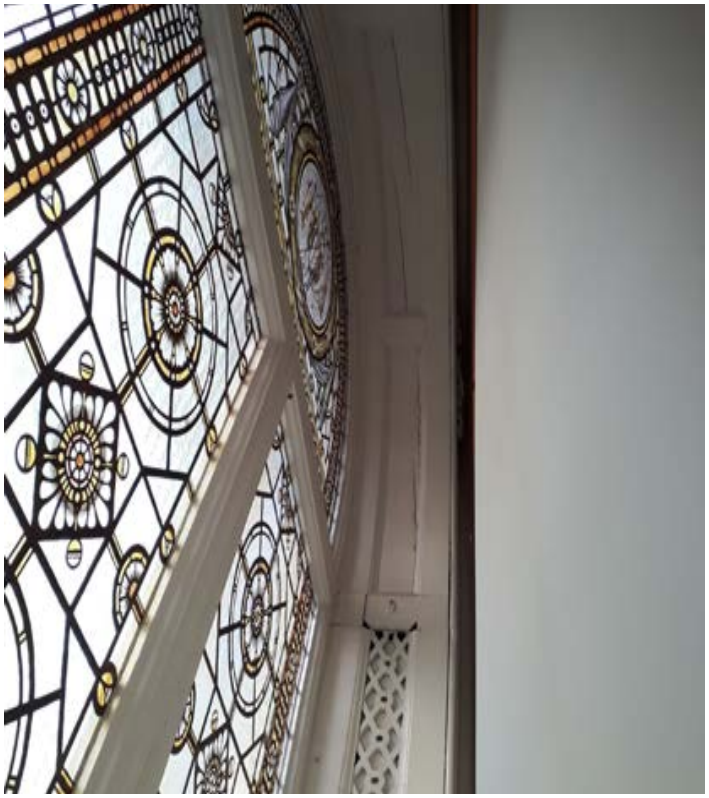
Refer to item 7 in Scope of Work CHF-4

## Roof 4



Poor pointing and some damaged rybat stones

Refer to items 6-10 in Scope of Work CHF-4



Repairs to windows

Refer to items 11 & 14 in Scope of Work
CHF-4

## Roof 4

Internal view of City Halls

Water damage to ceiling

Refer to item 14 in Scope of Work CHF-4

Water damage to ceiling

Refer to item 14 in Scope of Work CHF-4

## Roof 4

Water damage to ceiling

Refer to item 14 in Scope of Work CHF-4

Holmes Miller