

**Abstract**

The following report describes works carried out to existing windows at Avro.

**Urbansplash
Construct Report**

Existing Window Works

Completion Report

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Principal Contractor - Urbansplash Construct (USC)

Architect - Stephenson's Studio Limited

Brownsfield Mill – Existing name of the building.

Avro – New name of the building

Section 1: Report Outline

The purpose of this report is to outline the extent of works carried out on the existing windows at Avro (Brownsfield Mill). The report describes refurbishment and repair works to the existing windows to improve weathering, functionality and acoustic performance in line with dBx Acoustics report recommendations. The report identifies each element of work under different sections. The Appendices have supporting photos. Where further information is required on works please refer to the drawings and specifications that have been produced by Stephenson's Studios. The report only covers work carried out between 2017 – 2021 whilst USC were on site.

The existing windows are of a timber construction with varied number of existing double-glazed units in each. They range from size and shape depending on the elevation. They have had all ironmongery fit on them including internal seals and have previously been painted white by others. It is known that the windows have been in Brownsfield mill for just over 10 years.

This report does not cover the new manufactured windows that have been specified and installed. The same sealing and acoustic treatment of the window surrounds have also been carried out to new timber pivot windows and to Crittal-style slimline steel framed windows.

Section 2: Construction Drawings

USC have been issued a set of drawings outlining the Client's requirements to the refurbishment works of existing windows at Avro Mill. USC have used these drawings as part of their scope of works to ensure the clients expectations were met.

As works have been underway, USC highlighted issues with the existing windows and the scope of works changed as a result. In line with the new information, the Construction Drawings had been updated with the draughting of new sketches which outlined further requirements.

The below table outlines the drawing number, the revision USC has worked to followed by a short description within the second column for ease of reading.

7376-AL(31)0001 – Revision 7 7376-AL(31)0002 – Revision 6 7376-AL(31)0003 – Revision 7 7376-AL(31)0004 – Revision 6	<u>For Each Elevation:</u> Glazing types specified Protection Bar Requirements Trickle Vent Requirements Hinge Replacement Requirements Secure By Design Glazing Requirements Outline of New Window Installation
7376-AL(31)0010 – Revision 3	<u>For Each Existing Window to Be Refurbished</u> Outline of Overall Works to Existing Window (Section Detail)
7376-AL(31)0016 – Revision 1	<u>For Each Existing Window to Be Refurbished</u> Elevation of window outlining reveal requires, protection bar intent, Trickle Vent Requirement
7376-SK-0470 – Revision 2	<u>For Each Existing Window to Be Refurbished</u> Outline of Overall Works To Existing Internal Cill (Section Detail)

7376-SK-0475 – Revision 3 7376-SK-0510 – Revision 1 7376-SK-0511 – Revision 1	<u>For Each Existing Window to Be Refurbished with a Trickle Vent</u> Section detail for the installation of trickle vents.
7376- burnt_sand_window_mastic_spec_SSL_20191108	<u>For Each Existing Window to Be Refurbished</u> Application of Burnt Sand mastic

Section 3: Survey Works

Whilst undertaking the works USC carried out several surveys on the existing windows to help inform design updates and changes.

- Condition survey outlining number of failing existing glazing units.
- Condition Survey outlining extent of any area of window decay and repair extent requirements.
- Weight of Existing windows.
- Condition Survey of the functionality of existing window handles.

Section 4: Maintenance/Renewal

USC sub-contracted window renewal works to others to turn and service existing windows and leave them in full working order. This was generally one operative spending one hour on a window to renew it to full working order.

Works involved:

- Plane windows
- Lubricate Hinges
- Adjustment of keepers

Section 5: Repairs

During the construction phase, some localised areas of decay in the existing windows became apparent. This effected various elements of the window including transoms, rails, beading and mullions. USC procured new like for like timber sections to match the existing and replaced them where required.

Works involved:

- Cut out old rotting timber and spliced with new timber to match existing.
- Beading taken out and new beading pinned back in place.

Section 6: Glazing

The original design specification outlined the requirements for USC to carry out alterations to the existing glazing units. The scope of works included retaining existing glazing and replacing glazing units with either Pilkington, Guardian or St George Glass in line with the Construction Drawings detailed in Section 2.

During the construction phase, USC highlighted that several existing glazing units were failing (Condensation building up within the double-glazed units). To rectify this issue, USC sub-contracted a further scope of works to carry out the procurement and installation of like for like glazing units to existing windows.

Section 7: Window Hinges

Whilst refurbishing the existing windows it was discovered that some of the existing hinges were failing. Further investigation determined that the hinge did not have enough capacity to carry the weight of the window. This led to the conclusion that the existing hinges were too unsafe to keep in place.

As a result, USC sub-contracted a further updated scope of works. This included the removal of window sashes to enable the replacement of the hinges. The existing hinges were changed in line with the Construction Drawings detailed in Section 2.

Section 8: Handles

Following the renewal of existing windows, it was noted that most of the window handles did not function and/or had keys missing. Therefore, they were not fit for purpose. In response to this, USC sub-contracted a further updated scope of works to install new internal window handles to all existing windows.

Section 9: Trickle Vent

USC subcontracted a scope of works in line with the Construction Drawings detailed in section 2. The works involved installing Triton V75/V50 trickle vents to specified windows. A frame-wide cover cap was installed the external side of the window to ensure visual uniformity.

Works involved:

- Router out slot for trickle vent, fix in place bedded on silicone

Section 10: Perimeter & internal proprietary seals

To meet the requirements of dBx Acoustics report and recommendations, perimeter seals to the existing windows have been replaced and additional internal proprietary seals installed to improve general sealing and acoustic performance.

Section 11: Reveals

Around the perimeter of the window frame where the timber meets the brick wall, USC subcontracted a scope of works out that included the installation of an MDF boxing around the window that was mineral wool insulation. This was in line with the Construction Drawings. Please note here that this enabled the retention of existing window fixings.

Section 12: Internal Cill Repairs

In line with the Construction Drawings, USC Sub-contracted a scope of works that included the renewal of the existing brickwork cills. This involved installed matching brick work to the cills, sat on Airguard and pointed with conservation approved mortar.

Section 13: Protection Bar

To comply with building regulations the Construction Drawings outlined the requirement for USC to install a metal bar to the internal of the apartments in front of the windows. These were fixed to the existing brickwork and therefore did not impact on the existing windows.

Section 14: Sealants

In line with conservation requirements and manufacturers recommendation, USC Sub-contracted works that involved the application of Burnt Sand Mastic Mortar to the external gaps of the windows.

Internally, USC subcontracted a scope of works that involved the application of a Grey silicone sealant to fill gaps between the timber reveals and the brickwork.

Section 15: Painting

Windows are primed with a water-based Dulux primer. Then 2 topcoats of quick dry weather seal satin paint. (RAL 7039). The timber is also filled and sanded in-between coats.

Appendix



Figure 1 Example of localised decay in window opening light

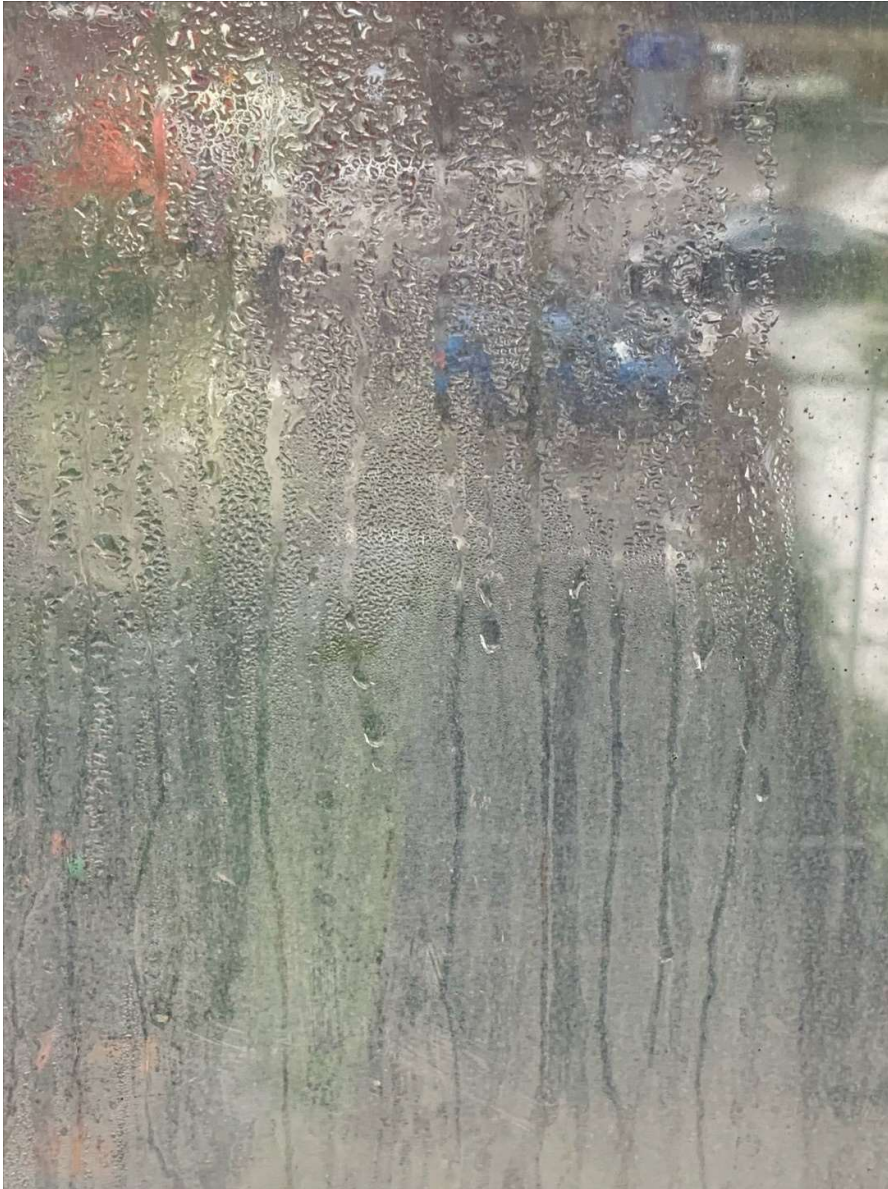


Figure 2 Example of failed existing glazing unit



Figure 3 Example of new hinge installed and Burnt Sand Mastic



Figure 4 Example of new window handle installed to match existing



Figure 5 Example of window with trickle vent installed, windows repairs carried out, new glazing and painting.



HEAVY DUTY SCREW FIX AROUND DOOR SEAL

Suitable for Inward Opening Doors

01SR023 (Available in retail and contract packaging)

- Excellent performance under severe weather conditions
- Draught proofing strips bridge the gap between the door and the frame and wind pressure increases the efficiency of the system
- Seals gaps up to 10mm
- Slotted fixing holes for easy adjustment when fitting
- Quick and easy to fit
- Can be used as a 'cold smoke seal'
- Can be cut to size

Additional Images



Figure 6 Additional Internal proprietary seal product



Figure 7 Internal window reveals pre-boarded



Figure 8 Internal cill repairs



Figure 9 Window reveal painted and sealant applied internal