

# **Piccadilly Warehouse Refurbishment Project NBS Specification**

**11 April 2021**

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**L**

**Windows/Doors/Stairs**

**L10**

**Windows/ Rooflights/ Screens/ Louvres**

## **L10 Windows/ Rooflights/ Screens/ Louvres**

To be read with Preliminaries/ General conditions.

### **GENERAL**

#### **110 EVIDENCE OF PERFORMANCE**

- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.

#### **115 TIMBER PROCUREMENT**

- Timber (including timber for wood based products): Obtained from well managed forests and/ or plantations in accordance with:
  - The laws governing forest management in the producer country or countries.
  - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
  - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied.
  - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.
- Certification scheme: Forest Stewardship Council (FSA).
  - Other evidence: None.

#### **120 SITE DIMENSIONS**

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
- Designated items: All existing and new openings within walls, floors and ceilings are to be site measured and fabrication drawings to be produced for approval by the Clients Agents prior to fabrication commencing.

#### **140 CONTROL SAMPLES**

- Procedure:
  - Finalise component details.
  - Fabricate one of each of the following designated items as part of the quantity required for the project.
  - Obtain approval of appearance and quality before proceeding with manufacturer of the remaining quantity.
- Designated items: L10/580A Secondary Glazing and L10/650 Metal Louvres.

#### **160 POTENTIAL FOR NATURAL VENTILATION**

- Submit design plan and elevation drawings, and calculations confirming the following: as indicated within the Parker Wilson Tender Information.

## PRODUCTS

### 490A ROOF VENTILATORS MECHANICAL SMOKE SHAFT VENT IN BLOOM STREET AND MINDEL HOUSE

- Manufacturer: M&E Sub-contractor to propose the product for the AOV which is to be in accordance with the Hydrock Fire Strategy, CFD Modelling, Parker Wilson Tender Information, the M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
  - Product reference: M&E Sub-contractor to propose the product for the AOV which is to be in accordance with the Hydrock Fire Strategy, CFD Modelling, Parker Wilson Tender Information, the M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Type: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Controls: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Materials: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
  - Finish as delivered: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Seals: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Guards: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Typical U-value: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Fire/ smoke control performance: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Accessories/ Special features: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Fixing: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.

As mentioned in Section 3.4.2 of the Hydrock Fire Strategy, it is intended to ventilate the common corridor on each level of Bloom Street and Mindel House via a mechanical ventilation system, using the specified ventilation shafts on drawings listed in Table 1.

BS9991:2015 states that mechanical ventilation is to meet the following requirements:

" The top of the lobby or corridor vent should be located as close to the top ceiling of the lobby or corridor as is practicable, and should be at least as high as the top of the door connecting the lobby or corridor to the stairwell;

" The lobby or corridor vents, in the closed position, should have a minimum fire and smoke resistance performance of 30 minutes, and integrity no greater than 360m<sup>3</sup>/h/m<sup>2</sup> when tested in accordance with BS EN 1366-2;

" No services other than those relating to the smoke shaft should be contained within the smoke shaft;

" The smoke shaft should be located at the remoted end of the corridor away from the staircase.

Prior to formally placing the order with the M&E sub-contractor for the Smoke Vent System & AOV the Main Contractor is to confirm via the Architectural Project Lead all discharge of conditions relating to the Smoke Vent System & AOV have been approved by Manchester

City Council Planning and Conservation Officer.

490B ROOF VENTILATORS AOV TO THE HEAD OF STAIR 1 IN BLOOM STREET AND MINDEL HOUSE

- Manufacturer: M&E Sub-contractor to propose the product for the AOV which is to be in accordance with the Hydrock Fire Strategy, CFD Modelling, Parker Wilson Tender Information, the M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
  - Product reference: M&E Sub-contractor to propose the product for the AOV which is to be in accordance with the Hydrock Fire Strategy, CFD Modelling, Parker Wilson Tender Information, the M&E Sub-contractor is to provide a Technical Submission of the AOV for approval by the Design Team.
- Type: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Controls: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Materials: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
  - Finish as delivered: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Seals: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Guards: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Typical U-value: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Fire/ smoke control performance: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Accessories/ Special features: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.
- Fixing: M&E Sub-contractor is to provide a Technical Submission of the AOV system for approval by the Design Team.

A minimum of 1.0m<sup>2</sup> (free area) automatic opening vent is to be provided at the head of each of the Stair 1 in Bloom Street & Mindel Hosue.

Operate on detection of smoke within any of the protected corridors or protected lobbies directly adjacent to the staircase enclosure, or on detection of smoke within the stair enclosure itself.

AOVs opening to outside air should conform to BS EN 1210-2.

Stair 2 in Bloom St and Stair 2 in Mindel House each have a door leading to external within the stairwell. It is proposed to ventilate these stairs in the same way as Stair 1 in both buildings, with an AOV above each respective door.

Prior to formally placing the order with the M&E sub-contractor for the Smoke Vent System & AOV the Main Contractor is to confirm via the Architectural Project Lead all discharge of conditions relating to the Smoke Vent System & AOV have been approved by Manchester City Council Planning and Conservation Officer.

#### 580A SECONDARY GLAZING

Manufacturer: The Specialist Secondary Glazing Sub-contractor is to submit proposal including Technical Datasheets of their preferred system following the arranged tender site visit to review the project and also a review of the Tender Documents.

- Product reference: The Specialist Secondary Glazing Sub-contractor is to submit proposal including Technical Datasheets of their preferred system following the arranged tender site visit to review the project and also a review of the Tender Documents.
- Size: For tender purposes please refer to the Beech Design & Build Secondary Glazing Schedule and Drawings for the Design Intent, however the Specialist Secondary Glazing Sub-contractor is to submit their own schedule and details on completion of their site survey.
- Frame finish: Polyester powder coated, bronze to blend in with the colour of the exposed internal brickwork.
- Special features: Refer to the Beech Design & Build Secondary Glazing Schedule and Drawings for the Design Intent.
- Glazing:
  - Type: To achieve the requirements stated within the Sandy Brown Acoustic Report for the secondary glazing requirements issued as part of the Secondary Glazing Tender Package.
  - Thickness: To achieve the requirements stated within the Sandy Brown Acoustic Report for the secondary glazing requirements issued as part of the Secondary Glazing Tender Package.
- Ironmongery: Specialist Secondary Glazing Sub-contractor to submit proposal including Technical Datasheets based on the Beech Design Intent Details.
- Grounds/ Sub frame: The Specialist Secondary Glazing Sub-contractor to produce details on completion of their site survey in respect of what is required for the Grounds / Sub frame.
- Trims: As required to complete the system installation.
- Fixing: Screwed to the wood subframe with colour matching screws, wood subframes requirements are to be confirmed by the Specialist Secondary Glazing Sub-contractor.
- Accessories:
  - Ventilators: Not required.
  - Blinds: Not required.
  - Acoustic reveal liners: To achieve the requirements stated within the Sandy Brown Acoustic Report for the secondary glazing requirements issued as part of the Secondary Glazing Tender Package.

Prior to formally placing the order with the Secondary Glazing sub-contractor for the secondary glazing the Main Contractor is to confirm via the Architectural Project Lead all discharge of conditions relating to the secondary glazing have been approved by Manchester City Council Planning and Conservation Officer.

#### 650 METAL LOUVRES

- Manufacturer: Contractor's choice.
  - Product reference: Submit proposals.
- Material: Aluminium.
  - Finish as delivered: Powder coated, colour to be confirmed.
- Fire resistance rating: To be in accordance with the Hydrock Fire Strategy and Parker Wilson Construction Information.
- Number of louvre banks: To be in accordance with the Parker Wilson Construction Information.
- Louvre blade pitch and angle: To be in accordance with the Parker Wilson Construction Information.
- Blanking panels: Not required.
- Accessories/ Other requirements: Stainless steel bird mesh.
- Fixing: To be in accordance with manufacturers details and specification for fixing into the associated substrate

Prior to formally placing the order the Main Contractor is to confirm via the Architectural Project Lead all discharge of conditions relating to the M&E and External Penetrations have been approved by Manchester City Council Planning and Conservation Officer.

#### 650A METAL LOUVRES TO NEW SUBSTATION LOCATED WITHIN THE BLOOM STREET BUILDING

- Manufacturer: The Main Contractor is to select the supplier from the approved list provided by Electricity North West.
  - Product reference: The Main Contractor is to select the supplier from the approved list provided by Electricity North West.
- Material: In accordance with Electricity North West Standard Details and Specification.
  - Finish as delivered: The Main Contractor is to select the supplier from the approved list provided by Electricity North West.
- Fire resistance rating: The Main Contractor is to select the supplier from the approved list provided by Electricity North West.
- Number of louvre banks: The Main Contractor is to select the supplier from the approved list provided by Electricity North West.
- Louvre blade pitch and angle: The Main Contractor is to select the supplier from the approved list provided by Electricity North West.
- Blanking panels: The Main Contractor is to select the supplier from the approved list provided by Electricity North West.
- Accessories/ Other requirements: The Main Contractor is to select the supplier from the approved list provided by Electricity North West.
- Fixing: To be in accordance with manufacturers details and specification for fixing into the associated substrate

Prior to formally placing the order the Main Contractor is to confirm via the Architectural Project Lead all discharge of conditions relating to the M&E and External Penetrations have been approved by Manchester City Council Planning and Conservation Officer.

### EXECUTION

#### 710 PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry floored and covered storage.
- Stored components: Stack vertical or near vertical on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

- 730 PRIMING/ SEALING
- Wood surfaces inaccessible after installation: Prime or seal as specified before fixing components.
- 740 CORROSION PROTECTION
- Surfaces to be protected: All externally exposed.
  - Protective coating: Two coats of bitumen solution to BS 6949 or an approved mastic impregnated tape.
    - Timing of application: Before fixing components.
- 750 BUILDING IN
- General: Not permitted unless indicated on drawings.
    - Brace and protect components to prevent distortion and damage during construction of adjacent structure.
- 760 REPLACEMENT WINDOW INSTALLATION
- Standard: To BS 8213-4.
- 765 WINDOW INSTALLATION GENERALLY
- Installation: Into prepared openings.
  - Gap between frame edge and surrounding construction:
    - Minimum: 8 mm.
    - Maximum: 10 mm.
  - Distortion: Install windows without twist or diagonal racking.
- 766 LOCATION OF OPENABLE WINDOWS IN NATURALLY VENTILATED BUILDINGS
- Location: Over 10 m from sources of external pollution.
- 770 DAMP PROOF COURSES IN PREPARED OPENINGS
- Location: Ensure correct positioning in relation to window frames. Do not displace during fixing operations.
- 782 FIXING OF ALUMINIUM FRAMES
- Standard: As section Z20.
  - Fasteners: In accordance with manufacturers requirements.
    - Spacing: When not predrilled or specified otherwise, position fasteners not more than 250 mm from ends of each jamb, adjacent to each hanging point of opening lights, and at maximum 600 mm centres.
- 790 FIRE RESISTING FRAMES
- Gap between back of frame and reveal: Completely fill with tightly packed mineral wool and seal with intumescent mastic.
- 810 SEALANT JOINTS
- Sealant:
    - Manufacturer: Contractor's choice.  
Product reference: Submit proposals.
    - Colour: Main Contractor to submit Technical Submission on completion of the selection of the new aluminium windows for approval by the Client Agent.
    - Application: As section Z22 to prepared joints. Finish triangular fillets to a flat or slightly convex profile.

820 IRONMONGERY

- Fixing: In accordance with any third party certification conditions applicable. Assemble and fix carefully and accurately using fasteners with matching finish supplied by ironmongery manufacturer. Do not damage ironmongery and adjacent surfaces.
- Checking/ Adjusting/ Lubricating: Carry out at Completion and ensure correct functioning.