

## WINDOW REPLACEMENT

### (2025/26 Version - Highlighted clauses are revisions following consultations)

L10 Windows/ Rooflights/ Screens/ Louvres

To be read with Preliminaries/ General conditions and, for Tendering purposes, associated drawings

NOTE: AT STAGE 1 (Pricing):

- ALLOWANCE TO BE MADE TO MAKE GOOD, PATCH, REPAIR, PREPARE & REDECORATE ANY SURFACES DISTURBED DURING WORKS TO PROPERTIES BOTH INTERNALLY AND EXTERNALLY.

#### GENERAL

##### 100 MANUFACTURING STANDARDS

- The manufacturing process of the windows should achieve BS 7412:2007, BS 7950:1997, PAS 23-1:1999, PAS 24:2022, BS EN ISO 9001:2015 and be BFRC approved.

##### 105 WINDOW PERFORMANCE STANDARDS

- The performance of windows shall be in accordance with BS 7412:2007 and BS 6375 Parts 1 and 2 test method for windows and achieve BS EN ISO 14001:2015, BS EN ISO 12608:2016.
- New windows should also comply to all requirements of the Building Regulations Approved Documents B, F, J, K, L, M and Q including latest 2022 revisions

##### 110 EVIDENCE OF PERFORMANCE

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

##### 121 SITE DIMENSIONS AND SURVEY

- Procedure: Before starting work on designated items take internal and external site dimensions, record on shop drawings and use to ensure accurate fabrication. Provide design drawings to be approved by client.
- The internal and external condition will be surveyed to highlight any apparent defects. Any defects shall be noted in writing and action agreed to rectify the problem.

##### 122 WEATHER RESISTANCE To achieve exposure category 1200

Air permeability: When tested in accordance with BS EN 1026 they shall meet the performance requirements of BS 6375 Part 1 table 1 for a severe rating of 200pa.

ii) Water tightness: When tested in accordance with BS EN 1027 to meet severe rating 200pa. Performance requirements of BS 6375 Part 1.

iii) Wind loading: When tested in accordance with BS EN 12211 they shall meet the performance requirements of BS 6375 Part 1 table 1 for severe rating of 1200pa. Wind loads to be determined in accordance with BS 6375 Part 1 or BS 6399 Part 2.

##### 123 THERMAL PERFORMANCE

- Shall be in accordance with BS EN ISO 12567-1 and must meet the 'U' values required in the Building Regulations Approved Document L Volume 1 (2021) which came into force in June 2022.

##### 124 SECURITY

- Shall be to PAS24: 2022 (formally BS 7950).

## 125 VENTILATION

- Permanent or adjustable ventilation is to be provided to all windows, to comply with current building regulations and current gas board regulations. Trickle ventilators minimum equivalent areas to be in accordance with Table 1.7 of Building Regulations Approved Document F (2021). Ventilator must have test data for compliance to Approved Document J and BS 5440:2000.
- Ventilator to deflect air upwards as standard. Mechanical affixed options will not be considered. Vents must be fitted in strict accordance with manufacturers recommendations and glazing height must be reduced as necessary to accommodate the vent.
- Trickle vent to be inserted into the top of each opening light.

## 140 WINDOW REINFORCEMENT

- All windows must be reinforced in accordance with BS 7412:2007. Sashes and outer frames must be reinforced with an extruded, PVCu based, recycled composite material.
- All window transoms and mullions must be fully reinforced according to static calculations. Reinforcing will be galvanised mild steel to BS EN 10327.

## PRODUCTS

### 351 PVC-U WINDOWS

- Manufacturer: Contractor's choice - Standards:
    - Manufactured to BS 7412, PAS 24 :2022 (formerly) BS 7950, BS 6375.
    - Window suppliers must be registered with the British Fenestration Rating Council. All windows must be fitted with the relevant Energy Rating Label to show compliance.
    - PVCu profiles have obtained registration with the British Standards Institution in accordance with ISO 9001 (formerly BS 5750) quality assurance scheme.
    - Manufactured for minimum dimensions of clear openings for escape purposes refer to BS Code of Practice 5588 Part 1 and Building Regulations Part B.
    - Colour:
      - Option 1 – White external and internal. The system is to be through coloured.
      - Option 2 – Anthracite external / white internal.
      - Option 3 – Rosewood external (timber effect to match existing as close as possible) / white internal.
    - PVCu profiles are manufactured from high impact modified PVCu and has a front to back frame depth of 67 - 70mm. The profile will consist of five chambers with a minimum external thickness of 3mm.
    - Corners and jointing are to be hot plate welded with mitred joints grooved and transom / mullion joints grooved to match mitres. No adhesive bonding.
    - Glazing details: All glazing complies to BS 6262 & glazing unit should meet the specification of BS EN 1279
- Glass:
- Glazing to all windows coming within 800mm of floor level shall be safety glass (toughened or laminated) as standard and should comply with Building Regulations Approved Document K.
  - Insulating glass units to have an BFRC Energy Rating of grade C incorporating a double-glazed unit comprising 'K' glass (or similar), argon gas fill, warm edge spacer bar, float glass configuration.
  - Obscure glazing: Pilkington stippolyte (or similar and approved). To be fitted to all bathroom, W.C. windows, top half of doors and where previously fitted. Pattern to be approved by client prior to manufacture.
  - Beading: Internal. Corners shall be neatly mitred. Some fixed panels may require external beading where internal services prevent internal glazing. Units shall be retained using a security bead that is not easily removable from the outside.
  - Gasket: All gaskets and seals are extruded from EPDM (Ethylene Polypropylene Diene Monomer) and comply with BS 4255. Double seals are provided to all casements.

- Ironmongery: See section P21 for ironmongery specification. All ironmongery to be manufactured from Austenitic 304 stainless steel (high corrosion resistance).
- Fixing:
  - Fixings to be sized to penetrate a minimum of 25mm into timber, or 40mm into plugged holes into brick, block, masonry, and steel lintels, with appropriate thread cutting screws. Fix all four sides, secured as follows:
    - Corner fixings between 150mm and 250mm from external corner.
    - No fixing should be less than 150mm from the centreline of a mullion or transom.
    - Intermediate fixings at centres no greater than 600mm.
    - A minimum of two fixings on each jamb.
    - The heads of all fixing screws are covered with appropriate coloured plastic cover caps.
- Additional requirements:
  - Window catches and similar fittings are located within easy reach of occupants with exception of security / restrictor stays.
  - Lockable night vent keep facility.
  - Cills are either 180mm or 150mm. Ensure that all cills have a 40mm clear overhang from building face and cill endcaps are provided.
  - Where stone cills are present, stub cills may be used but must be approved by the client prior to manufacture.
  - Packers to be used adjacent to fixings. They should be resistant to compression, rot and corrosion and must span the full depth of the frame.
  - Where metal profiles are used as a reinforcing medium, they comprise of galvanised mild steel to BS 2989, Grade G 275N.
  - Drainage slots are formed in all windows to permit free drainage. All slots are concealed so far as drainage via the underside of the cill section. No drainage discharge via the face of the frame.
  - Each window is permanently labelled in an unobtrusive position not visible when the opening light is closed with an identifying mark detailing the manufacturers name, date of manufacture and extrusion to be identified without removal of the window. On a fixed light the markings are under the bead.
  - The frame is resistant to chemicals, does not support fungal growth, vermin proof and resistant to attack by cement mortars and other materials used in building construction.

## EXECUTION

### 711 PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry floored and covered storage. Adequate protection is provided by adhesive tapes / protective packings to ensure frames are not scratched.
- Stored components: Stack vertical or near vertical on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.
- Completion: On completion of the work all protection will be removed, and the frames and glass will be cleaned with household detergents (solvent cleaners are not permitted) and all hinges and window furniture will be lightly oiled and checked to ensure correct operation.

### 715 REVEALS

- Where required chop off existing render / pebbledash for installation of window and make good.

### 730 PRIMING/ SEALING

- Wood surfaces inaccessible after installation: Prime or seal as specified before fixing components.

### 732 COVER TRIMS

- No cover trims to be installed unless prior agreement with client is obtained.

#### 734 PERIMETER GAPS

- All perimeter gaps to be foam filled. After curing, cut the foam back to a depth of 9mm from the face of the PVCu frame to receive an appropriate polyurethane mastic sealant. External mastic sealant colour to match the external window frame colour.

#### 736 IRREGULARITIES ON SUBSTRATES

- Allow for add on sections to cater for all irregularities on substrates.

#### 755 PVC-U WINDOW INSTALLATION

- Standard: In accordance with clause 783 and British Plastics Federation 'Code of practice for the survey and installation of windows and external doorsets'.

#### 758 WINDOW / DOOR COMBINATIONS

- Where PVCu window / door combinations are to be installed, a suitable coupling bar is to be used. Exact dimensions, locations and fixing details are to be agreed with the contractor and manufacturer prior to installation

#### 759 PORCH CORNER POST

- Porches to have 7739 corner posts with 4004 steel.

#### 765 WINDOW INSTALLATION GENERALLY

- Installation: Into prepared openings.
- Gap between frame edge and surrounding construction: - Minimum: 8mm. - Maximum: 10mm.
- 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.

#### 785 FIXING OF PVC-U FRAMES

- Standard: See previous clause 351 above and as section Z20.
- Spacing: See previous Clause 351.

#### 789 REPLACEMENT GLAZING

- Windows shall be such that glazing or re-glazing on site is possible without the need to remove the outer frame from the structure of the building.

#### 820 IRONMONGERY

- Fixing: 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.

#### 825 EXISTING CABLES

- Provision should be made for the re-clipping of any cables running through the frame that are removed to enable the new window installation.

#### 830 INSPECTION

- All windows will be inspected by the client to check for correct installation and possible damage incurred to the frame and glazing. Any damaged PVCu windows will be replaced with a new window. It shall be at the sole discretion of the client as to whether any repair to a damaged window is acceptable.

#### 835 RECYCLING

- Provide written evidence to the client on the recycling of all materials arising from the renewal of the windows to include glass, PVCu frames, gaskets, seals, and ironmongery.