L10 Windows/ Rooflights/ Screens/ Louvres

To be read with Preliminaries/ General conditions.

50 SCOPE OF WORKS

- This section of the Specification, when read in conjunction with the Design Drawings, provides particular requirements with respect to the following:
- Windows:
  - Refurbished Timber Windows and shutters throughout.
  - Aluminium Secondary Glazing.
  - Conservation Rooflight to main roof access cabin.
  - New Rooflight to rear addition.
- Ensure that all interfaces are co-ordinated before commencement.

SAMPLES, PROTOTYPES AND QUALITY BENCHMARKS

60 POST CONTRACT SAMPLES

- Provide the following post contract samples:
  - Samples of sill members, minimum 300mm long in the proposed colour and finish.
  - Samples of typical ironmongery components in the proposed material and finishes, samples to include operating handles, hinges and locking devices.

61 BENCHMARKING

- Provide the following quality benchmark:
  - The first fully completed part of the works.

TESTING

65 TESTING REQUIREMENTS

- Include for testing by an accredited independent testing specialist or provide independently certified test data to demonstrate compliance with the Specification.

67 SITE HOSE TESTING

- Carry out a Site water hose test in accordance with the recommendations of CWCT Standard for Systemised Building Envelopes. Test Methods for Curtain Walling/Cladding (clause 7).
- Remedial work and re-testing:
  - Wherever leakage has occurred, make joints watertight to satisfy the requirements of the Specification.
  - After all necessary remedial work has been completed and the required curing time, if any, has elapsed, re-test all repaired joints following the same procedure as before. Should leakage still be found, take further remedial measures and repeat testing until all joints in the designated area are found to be satisfactory.
- Extent of testing: A minimum of 5% by length of all critical joints, at locations agreed with the Architect.

GENERAL

- When calculating loads the worst combinations are to be considered, taking account of the fact that the pressure coefficients at various locations may determine more than one design criterion.

71 DEFLECTION

- The allowable deflection of any element of the works, when carrying full design loads, is not to exceed 15mm or 1/125 for single glazing and 15mm or 1/175 for double glazing of its clear span in a direction normal to the plane of that element, whichever is the lesser value

72 WIND LOADS

- Generally: The works to be designed to withstand without permanent deformation, the effects of
  wind loads. The works not to depart from fixings under the design wind loads.

73 INERTIAL LOADS

- The works to be capable of accommodating inertial loads arising due to the acceleration/deceleration of moving sections including opening lights, doors and vents of the building or enclosure. Consult the Architect regarding the motion requirements for such elements.

ENVIRONMENTAL

80 THERMAL MOVEMENT

- All components to be designed to resist thermal movement resulting from the maximum and minimum surface temperatures occurring. The design is to cater for all temporary and permanent conditions envisaged for the works.
- The service temperature range for components of the works to be taken as -25°C and +90° C.

81 MOISTURE MOVEMENT

- The works to withstand movement without permanent deformation or any reduction in the specifiied performance.
  - Due to changes in the moisture content of their components, resulting from variations in the moisture content of theair.
  - Due to the expansion of absorbed or retained moisture caused by freezing.

82 THERMAL PERFORMACE REQUIREMENTS NEW ROOFLIGHTS

- Avoid cold bridging in any area of the system. The maximum thermal permitted transmittance (U-value) to be as follow:
  - Existing windows with secondary glazing - **1.95 W/m²K**
  - New double glazed rooflights - **1.6 W/m²K**
- No cold bridging is to occur through the framing elements of the work.
- Submit thermal calculations for the various components and the average themal performance.
- Thermal movements are not to result in audible noise.

83 WEATHER AND WATER PENETRATION RESISTANCE

- The works to be absolutely weatherproof and watertight, ensuring the prevention of water leakage onto the internal face of the works.
- The works, including flashings and junctions with adjacent parts of the building, to be fully weatherproof and watertight under all conditions with full allowance made for deflections and other movements.
- The Detailed Design and construction of the works to be such that all rigid or fixed joints remain rigid and accommodate all thermal, building structure or other movements and any applicable loads without compromising their watertightness. All movement joints are also to be finally designed and constructed to accommodate such loads or movements without compromising the glazing's watertightness.

84 CONDENSATION

- Condensation is not to form, either on internal or external surfaces of framing members, glazing, solid panels, or interstitially within the construction of infill panels forming a part of the works, such that it may lead to damage or staining.
- Interstitial cavities within the construction, where condensation may occur, are to be adequately drained and ventilated to the outside, such that the formation of such condensation is not detrimental to the performance nor causes damage or staining of the works.

DURABILITY

89 GENERAL

- The performance criteria are to be satisfied for the full design life of the works, as stated in specification, provided always that the maintenance has been carried out as specified.

90 IMPACT AND ABRASION RESISTANCE

- Generally, surfaces to be sufficiently hard to resist heavy impacts from hald-held objects without any noticable change to the surface appearance. The works to resist abrasion from cleaning methods and maintenance systems without noticeable change in surface appearance.
- Impact tests to be carried out on all works assemblies in accordance with the recommendations to BS 8200. Tests to conform to category B requirements.
- The extent of any damage determined through testing is to be recorded and, where possible, quantified. Samples to be submitted to the Architect.

91 DEMOUNTABILITY

- Elements of the works to be individually and independently removable ensuring access for maintenance.
- The removal of units is not to affect the performance or safety of any other part of the, or adjacent, works.

116 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.

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: New Rooflights and all secondary glazing .

PRODUCTS

208 OVERHAUL EXISTING WINDOWS EXISTING SASH AND CASEMENT WINDOWS THOUGHOUT

- Drawing reference: 14113-20-201 - 204, 14113-20-225 & 226, 14113-30-900
- Contractor: Preferred sub-contractor: Ventrolla Sash Window Specialist
  - Tel: 0800 378 278
  - Web: www.ventrolla.co.uk
- Species:
  - Existing frames - repairs to be carried out in timbers to match exisitng frames
  - Cills - Replacement cills agreed with Architect after site inspection to be in hardwood
- Finish: All repairs to be finished to match existing windows.
- Glazing: Any glazing replacements as required to be in Single pane laminated glass to match existing unless specified seperately.
- Beading: To match existing.
- Ironmongery / Accessories: Ironmongery to renewed to all windows as per window/ironmongery schedules
  - supplier: Zoo Architectural Hardware Ltd, Unit B, Dukes Drive, Kingsmoor Park North, Carlisle, Cumbria. CA6 4SH
  - tel: 01228 672900
  - Email: sales@zoo-hardware.co.uk
  - Web: www.zoohardware.co.uk

- Method: All works to be agreed CA, Architect and sub-contractor.
- Overhaul existing timber sash windows:
  - Carefully remove defective sash cords as agreed and replace with new sash cords.
  - All existing fixed timber shutters to be fully restored and made operational.
  - Dilapidated sashes/casements to be replaced with timber to match existing.
  - Unless directed existing single glazing to be retained
  - Allow to re-putty in glazing beads to 100% of existing windows.
  - Replace cills where rot is greater than 250 cubic cm.
  - Fit brush pile draught proofing system.
- Overhaul existing timber sash windows:
  - Remove excrssive paint build build up where it impedes operation
  - Repair rot upto 100 cubic cm per casement
  - Repair exisiting frames carrying out all necessary timber repairs
  - Fill small areas of rot with two part filler
  - splice in new timber liners where rotten
  - realign the casements
  - Replace cills where rot is greater than 250 cubic cm.
  - Fit brush pile draught proofing system.
- Draught proofing system:
  - Air permeability - BS EN 12207 Class 3 and BS 6375 (600 Pa)
  - Air permeability reduced to 0.4 air-changes per hour
  - Weather fin pile manufactured to EN 29009 and designed to BS 7386:1990
  - Sound insulation: Falls within 6 to 10dB noise reduction range
- Other requirements:
  - Making good to plaster, brickwork and decorations by main contractor
    -Sealing around the frame and removal or replacing of any putty by main contractor
  - No works to be carried out with express instruction by CA.
  - Window W1-01 at First Floor level to have all existing glazing removed and cleared away.
  - Reglaze Window W1-01 as follows:
    - Manufacturer: Slimlite Double Glazing (Edin) Ltd, Unit 2, Forth Industrial Estate. EH5 1RF
    - Tel: 0131 551 2931

- Email: mail@slimliteglass.co.uk
- Web: www.slimliteglass.co.uk
- Product reference: Slimlite Ultra Clear Self Cleaning Double Glazed Units
- Thickness 12mm overall.

461 ROOFLIGHTS REAR ADDITION FLAT ROOF

- Drawing reference: 14113-20-203 and 221, 14113-21- - - - - -
- Manufacturer: The Rooflight Company, Wychwood Business Centre, Milton Road, Shipton-under-Wychwood, Oxfrodshire. OX7 6XU
  - Tel: 01993 833108
  - Email: info@therooflightcompany.co.uk
  - Web: therooflightcompany.co.uk.
  - Product reference: Bespoke Plateau Rooflight.
- Size: Overal glazed section to be 810x4225mm - Structural opening TBC.
- Colour: Black (RAL 9005)
- Glazing details: Tougned/laminated glass to meet Class 2 of the CWCT test guidelines.
- Operation: Electric openings.
- Blinds: Motorised Roller Blind.
  - Product reference: Levolux 760L or equivalent to be approved
  - Type: Tensioned fabric with side guides and extruded alumnium casing.
  - Colour: PPC RAL 9010
  - Operation: Electrically operated.
- Accessories: Flashing kit

462 ROOFLIGHTS ACCES CABIN TO MAIN ROOF

- Drawing reference: 14113-20-203 and 221, 14113-21-400, 401 + 600
- Manufacturer: The Rooflight Company, Wychwood Business Centre, Milton Road, Shipton-under-Wychwood, Oxfrodshire. OX7 6XU
  - Tel: 01993 833108
  - Email: info@therooflightcompany.co.uk
  - Web: therooflightcompany.co.uk.
  - Product reference: Bespoke Rooflight.
- Size: Overal glazed section to be 895x1080mm - Structural opening TBC.
- Colour: Umber Grey (RAL 7022
- Glazing details: 4mm SGG PLANITHERM® TOTAL + (Low E) toughened inner, 16mm argon cavity, 4mm SGG BIOCLEAN® (self clean only) toughened outer - Glass centre pane U Value: 1.2 W/m²K.
- Operation: Electric cill motor.
- Blinds: Motorised Roller Blind.
  - Product reference: Levolux 760L or equivalent to be approved
  - Type: Tensioned fabric with side guides and extruded alumnium casing.
  - Colour: PPC RAL 9010
  - Operation: Electrically operated.
- Accessories: Flashing kit

581 SECONDARY GLAZING SYSTEMS WG-01, WG-03, WG-03, W2-02, W2-03, W2-04, W2-05, W3-02, W3-03, W3-04 and W3-05

- Drawing reference: 14114-30-900 Window Schedule
- Manufacturer: Selectaglaze Ltd, Alban Park, Hatfield Road, St Albans. AL$ 0JJ
  - Email: enquiries@selectaglaze.co.uk
  - Web: www.selectaglaze.co.uk.
  - Product reference: Slimline 20 VS.
- Type: Vertical sliding.
- Framing material: Aluminium.
  - Finished as delivered: Polyester powder coated, colour: Hipca 9910 semi-gloss white.
- Thermal performance: 1.8 W/m²K.
- Track: standard.
- Fixing: to suit reveals
- Glazing details: Toughened Low E glass
  - Thickness 4 - 6,8mm to suit size of window.
- Ironmongery:
  - Running gear: Glide pads.
  - Handles: Recessed pull handles.
  - Locks: L2 lockable fitch catch
  - Finish: White.
- Accessories:
  - Ventilators: Not required
  - Acoustic reveal linings: None required
  - Blinds: None required.

582 SECONDARY GLAZING SYSTEMS W2-01 and W3-01

- Drawing reference: 14114-30-900 Window Schedule
- Manufacturer: Selectaglaze Ltd, Alban Park, Hatfield Road, St Albans. AL$ 0JJ
  - Email: enquiries@selectaglaze.co.uk
  - Web: www.selectaglaze.co.uk.
  - Product reference: Md-Range 25 VS.
- Type: Vertical sliding.
- Framing material: Aluminium.
  - Finished as delivered: Polyester powder coated, colour: Hipca 9910 semi-gloss white.
- Thermal performance: details to be provided by manufacturer.
- Track: standard.
- Fixing: to suit reveals
- Glazing details: Toughened Low E glass
  - Thickness 6 - 12mm to suit size of window.
- Ironmongery:
  - Running gear: Glide pads.
  - Handles: Recessed pull handles.
  - Locks:L2 lockable fitch catch
  - Finish: White.
- Accessories:
  - Ventilators: Not required
  - Acoustic reveal linings: None required
  - Blinds: None required.

583 SECONDARY GLAZING SYSTEMS ALL WINDOWS TO LOWER GROUND FLOOR

- Drawing reference: 14114-30-900 Window Schedule
- Manufacturer: Selectaglaze Ltd, Alban Park, Hatfield Road, St Albans. AL$ 0JJ
  - Email: enquiries@selectaglaze.co.uk
  - Web: www.selectaglaze.co.uk.
  - Product reference: Security 95 VS.
- Type: Vertical sliding.
- Framing material: Aluminium.
  - Finished as delivered: Polyester powder coated, colour: Hipca 9910 semi-gloss white .
- Thermal performance: 1.84 W/m²K.
- Track: standard.
- Fixing: to suit reveals
- Glazing details: Toughened Low E glass
  - Thickness 9.5 - 12mm to suit size of window.
- Ironmongery:
  - Running gear: Glide pads.
  - Handles: H10 finger pull.
  - Locks:L6 security multipoint
  - Finish: White.
- Accessories:
  - Ventilators: Not required
  - Acoustic reveal linings: None required
  - Blinds: None required.

EXECUTION

705 GENERAL REQUIREMENTS

- All works to be true to detail with continuous profiles that are free from marks, defects, flaws, steps, waves or damage of any nature.
- Store all elements on Site such that they are not damaged, distorted or weathered unevenly.
- Carefully pack all finished components in stillages or crates such that they are suitably separated and protected to prevent scratching, scuffing or other surface damage.
- Verify dimensions and levels of the structure.
- Set out the works such that all elements are installed in the correct position, within tolerance, and in the correct relationship to the building structure.
- Install all fixings in accordance with the manufacturer's recommended procedures.
- Keep materials dry until fixed.
- Obtain permission from the Architect before drilling or cutting parts of the structure, otherthan where shown on the Working Drawings.
- Set out material at evenly spaced centres, straight, parallel and truly aligned with other features where shown on the Design Drawings.
- The finished work to be square, regular, true to line, level and plane, with a satisfactory fit at all junctions.

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.

750 BUILDING IN

- General: Not permitted unless indicated on drawings.
  - Brace and protect components to prevent distortion and damage during construction of adjacent structure.

767 WINDOW INSTALLATION GENERALLY

- Install windows into prepared openings, maintaining a maximum gap of 5mm between the frame edge and the surrounding construction.
- Install windows without twist or diagonal racking.

782 FIXING OF ALUMINIUM FRAMES

- Standard: As section Z20.
- Fasteners: 25 x 3 x 150 mm galvanized carbon steel frame cramps.
  - 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.

811 SEALANT JOINTS

- Sealant manufacturer and reference: Adshead Ratcliffe Arbosil 1090.
- Colour: As window frame.
- Prepare joints and apply sealant as Section Z22. Finish triangular fillets with 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.

L20
Doors/ shutters/ hatches