



Trade Package – 390

Windows & Facades:

Shopfront Glazing & External Doors,
[contractor design element]

Job Title: 22007GA : SHURGARD - TOTTENHAM

Date: 10th February 2023

Revision:

Reference: 22007GA-TP390

Scope of Works Reference Documents.

- **Appendix A:** Threesixty Architecture Drawing Issue Register:
[Trade Package focused extract below]
- **Appendix B:** NBS specification clause H11 – Curtain Walling



SHURGARD – TOTTENHAM

Summary

The proposed Shurgard Self Storage facility to be located at Garman Road is a new build stand alone 7 storey development which, as part of the assembly, will require the undernoted glazing & external door access / egress installations.

- **Ground Floor Glazed Shopfrontage & glazed access door to customer Shop.**
along Grid lines A & 3, at Ground floor level facing Garman Road & the Courtyard car park.

Refer to drawing no.'s 22007GA-20-003 & 22007GA-31-002

Fenestration colour: RAL 3020

Mastic & perimeter infill: Silicone seal to perimeter of frame (colour TBC)



IMAGE: Typical Shurgard Shopfrontage; Chingford

- **SHOP Shopfrontage:** [drawing no.'s 22007GA-31-002].
- Cill flashing – Trade Package 390 Colour: RAL 3020
- Head & Jamb flashings by the Wall Cladding contractor.
- **Shop entrance door ironmongery:**
 - Locking: 2no. Hook locks and 1no. electric latch lock [to allow locking & unlocking remotely from reception : on / off security switch connected to desk].
All 3 locks to have suited eurocylinders keyed both sides.
 - Stainless steel Pad pull / push handle.
 - Overhead Self closer.
 - Weatherproof steel threshold.
 - colour: RAL 3020

- **Shopfront & associated door Glazing:**

Construction Manager Choice; double glazed to achieve an overall maximum U-value (inc. frame) = 1.6 W/m²K [+ G-value of 0.4.]

- **Ground floor external doors:**

- **TYPE E-01:**

Emergency exit doors to stairs 1 & 2 + storage zone to front.

Refer to Threesixty Architecture Drawing no. 22007GA_20_003 & 31_001 / 005

Colour: to match the surrounding wall cladding:

Stair No. 1; RAL 7016 – anthracite.

Stair No. 2; RAL 7016 – anthracite.

- **TYPE E-02:**

WC access door.

Refer to Threesixty Architecture Drawing no. 22007GA_20_003 & 31_001 / 006.

Colour: RAL 080 70 05 – Goosewing Grey.

- **TYPE E-03:**

Customer Access doors to Lift Lobbies.

Refer to Threesixty Architecture Drawing no. 22007GA_20_003 & 31_001 / 007.

Colour: RAL 3020 – Traffic Red

- **TYPE E-04:**

Access to cleaners cupboard.

Refer to Threesixty Architecture Drawing no. 22007GA_20_003 & 31_001 / 008.

Colour: RAL 080 70 05 – Goosewing Grey.

APPENDIX A

Threesixty Architecture drawing schedule

22007GA: Tender Issue

20 - series drawings – General Arrangement.

	Title	scale	size	
001	Location Plan, As Proposed			
002	Site Plan, As Proposed			
003	Ground Floor Plan			
011	East & West External Elevations			
012	North facing External Elevation			

31 - series drawings – External Openings.

	Title	scale	size	
001	SCHEDULE: External Doors			
002	DETAIL: Ground floor shopfront			
003	DETAIL: Stair lobby smoke louvres			
004	External Door; Type E-01			
005	External Door; Type E-02			
006	External Door; Type E-03			
007	External Door; Type E-04			

- Refer to consultant structural engineer design / specification, and / or Steelwork Fabrication sub-contractor design with regard to all aspects associated with structural steel.

APPENDIX B

Curtain Walling NBS

H11 CURTAIN WALLING

To be read with Preliminaries/ General Conditions.

010 INFORMATION TO BE PROVIDED WITH TENDER

- Submit the following curtain walling particulars:
 - Typical plan, section and elevation drawings at suitable scales.
 - Typical detailed drawings at large scales, including head, cill and jamb assembly proposals.
 - Technical information and certification demonstrating compliance with specification of proposed incorporated products and finishes.
 - Certification, reports and calculations demonstrating compliance with specification of proposed curtain walling.
 - Proposals for connections to and support from the building structure and building components.
 - Proposals for amendments to primary supporting structure and for secondary supporting structure additional to that shown on preliminary design drawings.
 - Schedule of builder's work, special provisions and special attendance by others. (if felt necessary)
 - Examples of standard documentation from which project quality plan will be prepared.
 - Preliminary fabrication and installation method statements and programme.
 - Proposals for replacing damaged or failed products.
 - Areas of non-compliance with the specification.

110 CURTAIN WALLING

- Supporting structure:
 - Drawing References: Refer to Trade Package Scope of work works 390, Appendix A (above)
- Curtain walling system
 - Schueco UK Limited, Whitehall Avenue, Kingston, Milton Keynes. MK10 0AL
 - Phone number 01908 282 111 Fax number 01908 282 124
 - E-mail address: msmith@schueco.com
 - Website: <http://www.schueco.com/uk/>
 - Fabricated and installed by an agreed Schueco UK Account Holder
 - Product reference: **Schueco FWS 60** thermally broken curtain walling system.
 - Type: Stick system Pressure equalised Mullion drained
 - Three level drainage system.
- Performance
 - Overall average 'U' value calculated in accordance with BS EN ISO 10077 shall achieve 1.6w/m2K.
 - Curtain Wall system to meet EN1627 RC1 / RC2 / RC3.
- Internal framing member:
 - Material: Aluminium as clause 710.
 - All aluminium RAL 3020 powder coated
 - Standard PPC minimum 40-70 Microns depending upon project requirement as Z31 Powder Coatings.
- External cover cap:
 - External mullion cover cap: Schueco 20mm reference 434 460 cover cap profile.
 - External transom cover cap: Schueco 15mm reference 162 180 cover cap profile.
 - Material: Aluminium as clause 710.
 - All aluminium RAL 3020 powder coated
 - Standard PPC minimum 40-70 Microns depending upon project requirement as Z31 Powder Coatings.

- Glazing:
 - Glass description as L40.
 - Inner pane: 6mm clear toughened,
 - Cavity: 16mm Argon filled,
 - Outer pane: 6mm clear toughened Low E soft coat,
- Panel/ facing type:
 - External material: 1.5mm thk. aluminium,
 - External finish: Polyester Powder Coated; Colour: RAL 3020,
 - Internal material: 1.5mm thk. aluminium,
 - Internal finish: Polyester Powder Coated; Colour: RAL 3020,
 - Core insulation: 25mm Celotex thermal insulation core (or e & a),
- Glazing system:
 - Gaskets as clause 760.
 - System to be reference 477 620 aluminium pressure plate fixed.
- Other requirements:
 - All Schueco UK Limited products are to be installed in complete accordance with the information published by Schueco and exclusively by Schueco UK Limited authorised fabricators.

150 MATERIALS SPECIFICATION:

- Minimum 'BRE Green Guide to Specification Online' rating: [A].

GENERAL REQUIREMENTS/ PREPARATORY WORK

210 DESIGN

- Curtain walling and associated features: Complete the detailed design. Submit before commencement of fabrication.
- Related works: Coordinate in the detailed design.

215 DESIGN PROPOSALS

- Alternative proposals: Preliminary design drawings indicate intent. Other reasonable proposals will be considered.

220 SPECIFICATION

- Compliance standard: The Centre for Window and Cladding Technology (CWCT) 'Standard for systemised building envelopes.
- Reference information: For the duration of the contract, keep at the design office, workshop and on site copies of:
 - The CWCT "Standard for systemised building envelopes"
 - Publications invoked by the CWCT "Standard for systemised building envelopes"

230 INFORMATION TO BE PROVIDED DURING DETAILED DESIGN STAGE

- Submit the following curtain walling particulars:
 - A schedule of detailed drawings and dates for submission for comment.
 - A schedule of loads that will be transmitted from the curtain walling to the structure.
 - Proposed fixing anchor details relevant to structural design and construction.
 - A detailed testing programme in compliance with the Main Contract master programme.
 - A detailed fabrication and installation programme in compliance with the Main Contract master programme.
 - Proposals to support outstanding applications for Building Regulation consents or relaxations.

232 QUALITY PLAN

- Requirement: Submit during detailed design.
- Content: In accordance with BS 5750, BS EN ISO 9001 and including the following:-
 - Name of the Quality Manager.
 - Quality assessment procedures.
 - Inspection procedures to be adopted in checking the work.
 - Stages at which check lists will be used and samples of the lists.
 - List of work procedures on the correct use of materials or components, both off site and on site.
 - List of product information with latest revisions.
 - Subcontractors involved in the work.
 - Subcontractors' quality plans.
 - Storage, handling, transport and protection procedures.
 - Procedure for registering and reporting non compliances.
 - Maintenance procedures and calibration records.
 - Certification that completed work complies with specification.
 - Check list register to ensure all items have been inspected and non-compliances discharged.

235 INFORMATION TO BE PROVIDED BEFORE COMMENCEMENT OF TESTING OR FABRICATION OF CURTAIN WALLING

- Submit the following curtain walling particulars:
 - Detailed drawings to fully describe fabrication and installation.
 - Detailed calculations to prove compliance with design/ performance requirements.
 - Project specific fabrication, handling and installation method statements.
 - Certification for incorporated components manufactured by others confirming their suitability for proposed locations in the curtain walling.
 - Recommendations for spare parts for future repairs or replacements.
 - Recommendations for safe dismantling and recycling or disposal of products.

250 PRODUCT SAMPLES

- General: Before commencing detailed design, submit labelled samples of Transom mullion sections,

260 SAMPLES OF FIXINGS

- General: During detailed design, submit labelled samples of each type of fixing anchor, including casting-in restraints and shims, together with manufacturers' recommended torque figures.

DESIGN/ PERFORMANCE REQUIREMENTS

305 CWCT 'STANDARD FOR SYSTEMSIED BUILDING ENVELOPES'

- General: unless specified or agreed otherwise comply with:
- Part 2 – Loads, Fixings and Movement
- Part 3 – Air, Water & Wind Resistance
- Part 4 – Operable components, additional elements & means of access.
- Part 5 – Thermal, moisture & acoustic performance
- Part 6 – Fire performance
- Part 7 – Robustness, durability, tolerances & workmanship.
- Project performance requirements specified in this subsection: Read in conjunction with CWCT performance criteria.

312 INTEGRITY

- Requirement: The curtain walling must resist wind loads, dead loads and design live loads, and accommodate deflections and movements without damage.
- Design wind pressure: Calculate in accordance with BS 6399-2, Standard Method:

320 DEFLECTION UNDER DEAD LOADS

- Requirement: Framing members parallel to the curtain-walling plane must not:
 - Reduce glass bite to less than 75% of design dimension.
 - Reduce edge clearance to less than 3 mm between members and immediately adjacent glazing units, panel/ facing units or other fixed units.
 - Reduce clearance to less than 2 mm between members and movable components such as doors and windows.

325 DEFLECTION UNDER WIND LOADS

- Requirement: to CWCT "Standard for systemised building envelopes" clause 3.5.2 and the following additional requirements
- Additional stiffness to CWCT "Standard for systemised building envelopes" clause 3.5.4.2

332 APPEARANCE AND FIT

- Requirement: Design Curtain Walling system:
 - To ensure position and alignment of all parts and features as shown on preliminary design drawings
 - To accommodate deviations in the primary support structure
- Primary support structure: Before commencing installation of curtain walling system, carry out survey sufficient to verify the required accuracy of erection can be achieved
 - Give notice if the structure will not allow the required accuracy or security of erection.
 - Design tolerances:[design contractor to advise].

335 THERMAL MOVEMENT - SERVICE TEMPERATURE RANGES:

- Requirement: To CWCT 'Standard for systemised building envelopes' clause 2.7.2 amended.

340 AIR PERMEABILITY

- Requirement: Permissible air leakage rates of $1.5\text{m}^3/\text{hr}/\text{m}^2$ for fixed lights, must not be exceeded when the curtain walling is subjected to a peak positive test pressure.
 - Permeability class to BS EN 12152.

350 WATER PENETRATION

- Watertightness class to BS EN 12154.

370 THERMAL PROPERTIES

- Method for calculating the thermal transmittance (U-value) of curtain walling/ each zone of curtain walling: Weighted U-value.
- Average U-value of curtain walling [$1.6\text{w}/\text{m}^2\text{K}$],
- Curtain Walling interfaces: Co-ordinate to achieve required U-value
- Method for assessing thermal transmittance (U-value) of assemblies: [contractor choice].

380 SOLAR AND LIGHT CONTROL

- Total solar energy transmission:
 - Maximum g-value - glazing only: 0.4,

385 THERMAL STRESS IN GLAZING

- Glass panes/ units: Must have adequate resistance to thermal stress generated by orientation, shading, solar control and construction.

440 DURABILITY

- Design life of the curtain walling system: minimum 25 years.
- Secondary components: Submit details together with required maintenance regime, replacement periods and methods of replacement.

450 SAFETY

- Finished surfaces of curtain walling: Accessible internal and external areas must not:

- □ Have irregularities capable of inflicting personal injury.
- □ Release irritant or staining substances.

460 STRUCTURAL SEALANT GLAZING REQUIREMENTS:

- Structural sealant glazing units: Installable, removable and replaceable without site application of structural bonding sealant.
- Structural sealant glazing design: Must limit design tensile stress of sealants to 138 kPa.

TESTING

510 COMPARISON (TYPE) TESTING

- Requirement: To CWCT 'Standard for systemised building envelopes', Part 8.
- Test results and reports: Before commencement of curtain walling fabrication and installation, submit proof of compliance with this specification.

530 TESTING AUTHORITY:

- Requirement: Project testing must be carried out by a United Kingdom Accreditation Service (UKAS) approved independent laboratory.

635 SITE HOSE TEST

- Requirement: To CWCT 'Standard for systemised building envelopes', 'Standard test methods for building envelopes' Section 9.
 - Joints to be tested:

660 STRUCTURAL SEALANT GLAZING TESTS:

- Product samples: Provide the structural bonding sealant manufacturer with framing profiles, glass, gaskets, assembly/ weathering sealants and other curtain walling products that are proposed for contact with structural bonding sealant.
- Testing: By sealant manufacturer to determine compatibility and adhesion of structural bonding sealant under specified design loadings.
- Modification of product to enable compliance with test criteria: Details must be recorded in the sealant manufacturer's project specific approval.

PRODUCTS

710 ALUMINIUM ALLOY FRAMING SECTIONS

- Standard: To relevant parts of BS EN 515, BS EN 573, BS EN 755 and BS EN 12020.
- Alloy, temper and thickness: Suitable for the application and specified finish.
- Structural members: To BS 8118.

712 ALUMINIUM ALLOY SHEET

- Standards: To relevant parts of BS EN 485, BS EN 515 and BS EN 573.
- Alloy, temper and thickness: Suitable for the application and specified finish.

720 STAINLESS STEEL SHEET

- Standards: To relevant parts of BS EN 10029, BS EN 10048, BS EN 10051, BS EN 10095 and BS EN ISO 9445
- Grade: To BS EN 10088-2, austenitic 1.4301 (304) generally, 1.4401 (316) when used externally or in severely corrosive environments.
- Thickness: Suitable for the application.

730 MECHANICAL FIXINGS

- Stainless steel: To BS EN ISO 3506, grade A2 generally, grade A4 when used in severely corrosive environments.

- Carbon steel: To BS 4190 and suitable for galvanizing or other protective coating.
- Aluminium brackets, rivets and shear pins: To relevant parts of BS EN 755.

732 ADHESIVES

- General: Not degradable by moisture or water vapour.

735 FIXING ANCHORS

- Type and use: Reviewed and approved by fixing manufacturers. Submit confirmatory information on request.
- Dimensions: Not less than recommended by their manufacturers.
- Adjustment capability: Sufficient in three dimensions to accommodate building structure and curtain walling fabrication/ installation tolerances.

737 GLASS GENERALLY

- Standards: To BS 952 and relevant parts of:
 - BS EN 572 for basic soda lime silicate glass.
 - BS EN 1096 for coated glass.
 - BS EN 1748 for borosilicate glass.
 - BS EN 1863 for heat strengthened soda lime silicate glass.
 - BS EN 12150 for thermally toughened soda lime silicate glass.
 - BS EN 13024 for thermally toughened borosilicate glass.
 - BS EN ISO 12543 for laminated glass.
- Glass quality: Clean and free from obvious scratches, bubbles, cracks, rippings, dimples, and other defects.
- Glass edges: Generally undamaged. Shells and chips not more than 2 mm deep and extending not more than 5 mm across the surface are acceptable if ground out.

739 DIMENSIONAL TOLERANCES ON GLASS:

- Measurement of tolerances: Before any thermal toughening/ heat strengthening.
- Pane dimensions less than 1500 mm:
 - For 3 to 6 mm thick glass: ± 1.0 mm.
 - For 8 to 12 mm thick glass: ± 1.5 mm.
 - For 15 mm thick glass: ± 2.0 mm.
 - For 19 mm and 25 mm thick glass: ± 2.5 mm.
- Pane dimensions more than 1500 mm:
 - For 3 to 6 mm thick glass: ± 1.5 mm.
 - For 8 to 12 mm thick glass: ± 2.0 mm.
 - For 15 mm thick glass: ± 2.5 mm.
 - For 19 mm and 25 mm thick glass: ± 3.0 mm.
- Pane squareness: Not more than 4 mm difference in diagonal measurements.

741 DISTORTIONAL TOLERANCES ON GLASS

- Measurement of tolerances: After any thermal toughening/ heat strengthening.
- Maximum bow: 0.2% of pane dimension.
- Maximum roller wave:
 - For 3 to 5 mm thick glass: 0.5 mm.
 - For 6 to 10 mm thick glass: 0.3 mm.
 - For 12 mm and thicker glass: 0.15 mm.
- Maximum edge dip:
 - For 3 to 5 mm thick glass: 0.8 mm.
 - For 6 to 10 mm thick glass: 0.5 mm.
 - For 12 mm and thicker glass: 0.25 mm.

745 INSULATING GLASS UNITS

- Standard and labels for hermetically sealed units: To BS EN 1279.
- Label: Each pane.
- Perimeter taping: Not to be used.

- Perimeter seals:
 - Resistant to UV light degradation on exposed edges.
 - Compatible with structural, assembly and weather sealants.

747 GLASS EDGE CONDITION FOR STRUCTURAL SEALANT GLAZING:

- Bonded, unframed outer edges: Flat ground with a small arris suitable for open jointing or for weatherseal jointing.

750 INFILL PANELS/ FACINGS

- Tolerances:
 - Deviation in size (maximum): ± 1 mm.
 - Deviation in flatness from plane per 2 m length (maximum): ± 1 mm.
- Rigidity: Adequate to comply with design/ performance requirements.

760 GASKETS

- Material:
 - Noncellular rubber to BS 4255-1.
 - Cellular rubber to ASTM-C509.
- Continuity: Outer gaskets of single front sealed curtain walling systems and inner gaskets of drained and ventilated or pressure equalized curtain walling systems must be formed in a complete frame with sealed joints. Vulcanized rubber gaskets must have factory moulded corner joints.
- Durability: Resistant to oxidation, ozone and UV degradation.

770 GENERAL SEALANTS

- Selection: In accordance with BS 6213 from:
 - Silicone to BS 5889.
 - One part polysulfide to BS 5215.
 - Two part polysulfide to BS 4254.
 - One or two part polyurethane.
- Classification and requirements: To BS EN ISO 11600.
- Reaction to contact products and finishes: Stable and compatible.

785 VAPOUR CONTROL LAYER

- Acceptable materials:
 - Aluminium alloy.
 - Carbon steel, galvanized or protective coated.
 - Stainless steel.
 - Reinforced membranes: Foil, plastics or rubbers, protected both sides by rigid facings/ linings.
- Location: Warm side of thermal insulated spandrel panels.
- Integrity: Continuous, free from gaps and sealed at joints.

FABRICATION AND INSTALLATION

910 GENERALLY

- Electrolytic corrosion: Prevent. Submit proposed methods.
- Fixings: Concealed unless indicated on detailed drawings. Where exposed they must match material and finish of the products fixed.
- Fabrication: Machine cut and drill products in the workshop wherever possible.
- Identification of products: Mark or tag to facilitate identification during assembly, handling, storage and installation. Do not mark surfaces visible in the completed installation.

930 ASSEMBLY

- General: Carry out as much assembly as possible in the workshop.
- Joints (other than movement joints): Rigidly secured, reinforced where necessary and fixed with hairline abutments.
- Displacement of components in assembled units: Submit proposals for reassembly on site.

955 FIXING ANCHOR INSTALLATION

- Site drilling or cutting into structure: Submit proposals for positions other than shown on detailed drawings.
- Concrete supporting structure:
 - Cast-in inserts: Provide detailed locational information. Protect cavities in inserts from entry of concrete.
 - Edge fixing distances: Not less than recommended by fixing anchor manufacturers.
- Corrective fabrication: Minimize. Where necessary, submit proposals.

970 CURTAIN WALLING INSTALLATION

- Securing to fixing anchors: Through holes formed during fabrication only.
- Tightening mechanical fasteners: To manufacturer's recommended torque figures. Do not overtighten fasteners intended to permit differential movement.
- Protective coverings: Remove only where necessary to facilitate installation and from surfaces that will be inaccessible on completion.

980 INTERFACES

- Flashings, closers, etc: Locate and form correctly to provide weathertight junctions with the curtain walling.

985 MAINTENANCE

- Maintenance manual: Incorporate details within the Building Manual in accordance with CWCT 'Standard for systemised building envelopes' clause 7.6.1.
 - Materials certification and test reports to be included.
 - Contact details for subcontractors and suppliers.
 - Design criteria for the curtain wall system.
 - Product information for components and materials including manufacturers' literature, COSHH data sheets and recommendations for cleaning maintenance and repair.
 - Copies of material, components and finishes certification and test report
 - A full set of construction drawings, updated to include any changes made up to the time of completion.
 - The terms and conditions of any guarantee.
 - Method statement for means of access for maintenance and for use of any permanent equipment.
 - Method statement covering the procedures for replacement of parts that have a design life less than the design life of the curtain wall system.
 - Recommendations for routine maintenance and cleaning, including suitable cleaning agents and lubrication/ adjustments to working parts.
 - Record book for listing defects, maintenance and repairs.