

H92 RAINSCREEN CLADDING:

To be read with Preliminaries/General conditions.:

TENDERING:

10 INFORMATION TO BE PROVIDED WITH TENDER:

Submit the following cladding particulars:

- Typical plan, section and elevation drawings at suitable scales.
- Typical detailed drawings at large scales, including [Clients representatives requirements] .
- Technical information and certification demonstrating compliance with specification of proposed incorporated products and finishes, including [BBA Certificate, CWCT compliance, manufacturing in accordance with relevant BS or equivalent European standards] .
- Certification, reports and calculations demonstrating compliance with specification of proposed cladding.
- Proposals for connections to and support from the primary support structure.
- Proposals for primary support structure additional to that shown on preliminary design drawings.
- Schedule of builder's work, special provisions and special attendance by others.
- 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 specification.

TYPE(S) OF RAINSCREEN CLADDING:

120 Terracotta Clay RAINSCREEN CLADDING:

Rainscreen cladding system:

- Manufacturer's UK agent: Telling Architectural Limited, Unit 7 The Dell, Enterprise Way, Four Ashes, Wolverhampton, WV10 7DF, (Tel:01902 797700)
- Distributor: [Taylor Maxwell Limited, Taylor Maxwell House, The Promenade, Clifton, Bristol, Avon, BS8 3NW, (TEL: 0117 973 7888)] .
- Installation [To be carried out by a contractor with the necessary experience, and expertise, as approved by the system distributor/manufacturers agent]
- Type: [ArGeTon] .

Rainscreen panel:

- Manufacturer: [ArGeTon Oldenburger Allee 26, D-30659 Hanover, Germany] .
Product reference: [ArGeTon® rainscreen façade system] .
- Material: [Terracotta clay] .
- Thickness: [30mm & 35mm, twin skinned] .
- Panel Size: [Standard module heights of 150mm*, 162.5mm*, 175mm*, 187.5mm*, 200mm, 212.5mm, 225mm, 237.5mm, 250mm, 300mm, 350mm & 400mm in 30mm thick with 450mm & 500mm in 35mm thick. Standard module lengths up to 1500mm, (900mm for module heights referenced *)
- Finish: [Smooth, Terzo, Lineo, Wire dragged, Riven, Brushed, Glazed, Engobe]
- Colour: [Salmon Pastel Red, Tuscan Red, Natural Red, Tizian Red, Burgundy, Light Brown, Coffee, Brick Red, Chocolate, Bright Grey, Silver Grey, Light Grey, Platinum Grey, Granite Grey, Iron Grey, Ferro Grey, Basalt, Volcano Grey, Volcano Black, Glacier Blue, Pearl White, Cream, Carrara White, Apricot Beige, Sand, Sahara Yellow – or in colour glaze / engobe finish to

match sample provided by clients representatives] .

- Fasteners: [Anodised aluminium tile clips] .
- Number and location: [Each tile is to be held in place by the use of 2nr tile clips, acting as support to the tile above, and restraint to the tile below, thus ensuring each tile is held in place at its four extremities. Each tile clip is to be mechanically fixed back to the vertically spanning extruded aluminium profiles] .
- Vertical joint type: [Open, incorporating polyester powder coated aluminium water management / drainage profile, which also acts as a baffle medium preventing subsequent rattle of installed tiles] .
- Vertical joint width: [8mm] .
- Horizontal joint type: [Labyrinth, as described by CWCT] .
- Horizontal joint width: [12mm]

Air gap: [minimum 30mm in accordance with requirements of DIN, or minimum 38mm in accordance with NHBC & CWCT] .

Secondary support/framing system: [Vertically spanning ‘T’ section with aluminium cleats (onto traditional masonry backgrounds) with the addition of Horizontally spanning, extruded aluminium profiles of top-hat section (onto LWS infill walling background), or aluminium cleats, plain Tee sections, and horizontal support rails, which can be used onto backgrounds of LWS, or traditional masonry] .

- Manufacturer: [As designed and approved by Telling Architectural Limited, Unit 7 The Dell, Enterprise Way, Four Ashes, Wolverhampton, WV10 7DF] .

- Material: [Aluminium] .

- Fasteners: [To be determined by Telling Architectural Limited, and dependant on secondary support system/background utilised] .

Number and location: [To be determined by Telling Architectural Limited] .

Backing wall: [] .

- Vapour control layer: [As clause 780] .

- Thermal insulation: As clause 776.

- Breather membrane: [As clause 785] .

Accessories: [Continuous closer clip, base clips for use at the base of the installation, aluminium corner profiles, spring support profiles] .

130 MAJOR NONSTANDARD COMPONENTS: [Flashings]

Manufacturer: [T be sourced by the installation contractor.] .

- Product reference: [N/A] .

Material: [Aluminium] .

Finish: [Polyester powder coated] .

Fixing: [As necessary, in consideration of good practice] .

GENERAL REQUIREMENTS/PREPARATORY WORK:

210 DESIGN:

Rainscreen cladding system and associated features: Complete detailed design in accordance with this specification and the preliminary design drawings and submit before commencement of fabrication.

Related works: Coordinate in detailed design.

215 DESIGN PROPOSALS:

Submission of alternative proposals: Preliminary design drawings indicate intent. Other reasonable proposals will be considered.

220 SPECIFICATION:

Compliance standards: The Centre for Window and Cladding Technology (CWCT) 'Standard for walls with ventilated rainscreens' and 'Standard for testing of ventilated rainscreens'.

Reference information: For the duration of the contract, keep available at the design office, workshop and on site copies of:

- The Centre for Window and Cladding Technology (CWCT) 'Standard for walls with ventilated rainscreens'.
- The Centre for Window and Cladding Technology (CWCT) 'Standard for testing of ventilated rainscreens'.
- Publications invoked by the Centre for Window and Cladding Technology (CWCT) 'Standard for walls with ventilated rainscreens' and 'Standard for testing of ventilated rainscreens'.
- In compliance with BBA Certification; Certificate No. 08/4516.

225 INFORMATION TO BE PROVIDED WITH TENDER

: Submit to the CA the following rainscreen cladding particulars:

Typical plan, section and elevation drawings at suitable scales.

Typical detailed drawings at large scales, including [REDACTED]

Technical information and certification demonstrating compliance with the specification of proposed incorporated products and finishes, including [BBA Certification; Certificate No. 08/4516. Testing report prepared by UKAS accredited testing agent, proving compliance with the requirements of CWCT. Testing reports proving compliance with DIN18516, and DIN456, or other recognised European standards relating to the use of façade tiles in a non-load bearing, and back ventilated rainscreen installation, and consistency of composition]

Certification, reports and calculations demonstrating compliance with the specification of the proposed rainscreen cladding.

Proposals for connections to and support from the primary support structure.

Proposals for any primary support structure additional to that shown on preliminary design drawings.

Schedule of builder's work, special provisions and special attendance by others.

Examples of standard documentation from which the 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.

230 INFORMATION TO BE PROVIDED DURING DETAILED DESIGN:

Submit the following cladding particulars:

- A schedule of detailed drawings and dates for submission for comment.
- A schedule of loads that will be transmitted from the rainscreen cladding to the structure.
- Proposed fixing details and systems relevant to the structural design and construction with methods of adjustment and tolerances.
- A schedule of fabrication tolerances/ size tolerances.
- 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.
- A quality plan in compliance with the CWCT 'Guide to good practice for facades', Section 6.
- Proposals to support outstanding applications for Building Regulation consents or relaxations.

235 INFORMATION TO BE PROVIDED BEFORE COMMENCEMENT OF

TESTING OR MANUFACTURE OF RAINSCREEN CLADDING SYSTEM:

Submit the following cladding 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 rainscreen cladding.
- Recommendations for spare parts for future repairs or replacements.
- Recommendations for safe dismantling and recycling or disposal of products.

240 PRODUCT SAMPLES:

General: Before commencing detailed design, submit labelled samples of the following: [Façade tile in specified colour] .

250 SAMPLES OF FIXINGS:

General: During detailed design, submit labelled samples of each type of fixing, together with manufacturers' recommended torque figures.

270 MOCK-UP:

General: Construct during detailed design work in an agreed location. Satisfy purpose and obtain approval of appearance before proceeding. Retain undisturbed until completion of cladding installation.

Extent: [Provide a sample of approximately 1m², to be inclusive of a minimum of 2 vertical and 2 horizontal joints] .

Purpose: [Demonstration of system installation, and control] .

DESIGN/PERFORMANCE REQUIREMENTS:

310 CWCT 'STANDARD FOR WALLS WITH VENTILATED RAINSCREENS':

General: Comply with Section 2 - Performance Criteria unless specified or agreed otherwise. Project performance requirements specified in this subsection: Read in conjunction with CWCT performance criteria.

320 HORIZONTAL ZONING OF WIND PRESSURE:

Reference heights: As follows: [] .

330 INTEGRITY OF VENTILATED RAINSCREEN CLAD WALLS:

Requirement: Determine sizes and thickness of panels, sizes, number and spacing of fixings, configuration and location of secondary support systems and incorporation of other accessories and fittings to ensure the cladding system, primary support structure and other elements forming the rainscreen wall will resist factored dead, imposed and design live loads, and accommodate deflections and movements without damage.

Wind loads: Calculate to BS 6399-2, Standard Method appropriate to location, exposure, height, building shape, and size taking account of existing and known future adjacent structures.

- Basic wind speed (Vb): [] .
- Altitude factor (Sa): [] .
- Direction factor (Sd): [] .
- Seasonal factor (Ss): 1.
- Probability factor (Sp): 1.
- Terrain and building factor (Sb): [] .
- External and internal size effect factors (Ca): 1.

- External pressure coefficients (Cpe): As determined from BS 6399-2, clauses 2.4 and 2.5.
- Internal pressure coefficients (Cpi): As determined from BS 6399-2, clause 2.6.

- Dominant opening: [REDACTED].

Impact loads to CWCT technical note 75 & 76:

- Location and category: [REDACTED].

Temporary imposed loads: [REDACTED].

335 INTEGRITY OF VENTILATED RAINSCREEN CLAD WALLS:

Requirement: Determine sizes and thickness of panels, sizes, number and spacing of fixings, configuration and location of secondary support systems and incorporation of other accessories and fittings to ensure the cladding system, primary support structure and other elements forming the rainscreen wall will resist factored dead, imposed and design live loads, and accommodate deflections and movements without damage.

Wind loads: Calculate to BS 6399-2 appropriate to location, exposure, height, building shape and size, taking account of existing and known future adjacent structures.

Impact loads to BS 8200:

- Location and category: [REDACTED].

Temporary imposed loads: [REDACTED].

340 INTEGRITY OF VENTILATED RAINSCREEN CLAD WALLS:

Requirement: Determine sizes and thickness of panels, sizes, number and spacing of fixings, configuration and location of secondary support systems and incorporation of other accessories and fittings to ensure the cladding system, primary support structure and other elements forming the rainscreen wall will resist factored dead, imposed and design live loads, and accommodate deflections and movements without damage.

Minimum design wind pressures: [REDACTED].

Design wind pressure: [REDACTED].

External pressure coefficient (Cpe): [REDACTED].

Impact loads: To CWCT technical note 75 & 76:

- Location and category: [REDACTED].

Temporary imposed loads: [REDACTED].

Other design parameters: [REDACTED].

350 DEFLECTION UNDER WIND LOAD:

Requirement: For listed components, at positive and negative applications of the design wind pressure, normal deflections are not to exceed: $[L/360]$.

360 WIND RESISTANCE - CYCLIC LOADING:

Requirement: No reduction in the performance of the rainscreen cladding must occur after the maximum effective wind pressure has been applied for 10,000 cycles.

370 APPEARANCE AND FIT:

Requirement: Design rainscreen wall:

- To ensure position and alignment of all parts and features as shown on preliminary design drawings.

- To accommodate deviations in the primary support structure.

Maximum permitted component and installation tolerances: [Façade tiles to be within $\pm 2.0\text{mm}$ of specified length, and height].

380 GENERAL MOVEMENT:

Requirement: Rainscreen cladding must accommodate anticipated building movements as follows: [] .

390 AIR PERMEABILITY GENERALLY:

Requirement: Average air leakage rate through the listed walls at a differential pressure of 50 Pascals must not exceed: [in accordance with CWCT, and project engineers requirements] .

400 AIR PERMEABILITY THROUGH AIR BARRIER:

Requirement: Maximum design value for air leakage through the air barrier at a differential pressure of 50 Pascals is [] .

410 AIR PERMEABILITY:

Requirement: No regions of concentrated air flow through the air barrier, its closures or interfaces with windows, doors or other penetrations through the wall at a test pressure of: [] .

420 WATER PENETRATION:

Requirement: Moisture must not penetrate onto internal surfaces, or into cavities not designed to be wetted, when the rainscreen wall is subjected to a test pressure of: [] .

430 THERMAL PROPERTIES:

Method for calculating the thermal transmittance (U-value) of the rainscreen wall: [Combined, in accordance with BS EN ISO 6946] .

Average U-value of rainscreen wall: [] .

440 AVOIDANCE OF CONDENSATION:

Requirement: Psychrometric conditions under which condensation must not form within or on the interior surface of the rainscreen wall or any surface of the wall that is on the warm side of insulation are:

- Notional outdoor [Hygrothermic](#) conditions as [BS5250:2002](#) and method of calculation as [BS EN ISO 13788:2002](#), utilising relevant building use types, and geographic information provided by the meteorological office

450 VAPOUR CONTROL LAYER:

Interstitial condensation risk of rainscreen wall: Determine using the method described in BS 5250 Annex D. If necessary, provide a suitable vapour control layer to ensure that damage and nuisance from interstitial condensation does not occur.

460 SOUND TRANSMITTANCE BETWEEN INTERIOR AND EXTERIOR OF RAINSCREEN CLAD WALL:

Minimum sound reduction indices (R) to BS EN ISO 140-3:

One third octave band

centre frequency (Hz) R(dB)

[] []

465 SOUND TRANSMITTANCE BETWEEN ADJOINING FLOORS ABUTTING RAINSCREEN CLAD WALL:

Minimum sound reduction indices (R) to BS EN ISO 140-3:

One third octave band
centre frequency (Hz) R(dB)
[] []

470 SOUND TRANSMITTANCE BETWEEN ADJOINING ROOMS ABUTTING RAINSCREEN CLAD WALL:

Minimum sound reduction indices (R) to BS EN ISO 140-3:

One third octave band
centre frequency (Hz) R(dB)
[] []

480 FIRE RESISTANCE OF BACKING WALL TO BS 476- 21:

Minimum periods and criteria: [] .

485 INTERNAL SURFACE SPREAD OF FLAME OF BACKING WALL TO BS 476-7:

Class: [] .

490 CAVITY FIRE BARRIERS TO BS 476-20:

Requirement: To resist the passage of flame and smoke for not less than [] .

TESTING:

510 COMPARISON (TYPE) TESTING:

Commencement of fabrication and installation of rainscreen cladding: Not until test results and reports showing compliance with this specification have been submitted.

515 PROJECT TESTING (LABORATORY):

Timing of testing: At an agreed stage in detailed design work arrange for laboratory testing of specimens of rainscreen cladding and components in accordance with relevant clauses of this specification.

Commencement of fabrication and installation of rainscreen cladding: Not until test results and reports showing compliance with this specification have been submitted.

520 PROJECT TESTING (SITE):

Timing of testing: At an agreed stage during preliminary installation on site arrange for testing of a section of rainscreen cladding in accordance with relevant clauses of this specification.

Continuation of installation of general areas of rainscreen cladding: Not until site test results and reports showing compliance with this specification have been submitted.

530 TESTING AUTHORITY:

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

535 TESTING AUTHORITY:

Requirement: Project testing must be carried out by the rainscreen cladding manufacturer/ contractor and is to be witnessed/ certified by: [] .

560 TEST SEQUENCE - STANDARD TESTS:

Requirement: To CWCT 'Standard for testing ventilated rainscreens', Table 2 as follows:

- Air permeability: As clause [] .

- Weathertightness/water penetration: As clause [REDACTED].
- Windloading: As clause [REDACTED].

610 WEATHERTIGHTNESS/ WATER PENETRATION TESTS, LARGE

SPECIMEN: Provide documentary evidence that the system has been tested independently to comply with:

Requirement: To CWCT 'Standard for testing of ventilated rainscreens', clause 3.4.

- Test pressure: As clause 410.

615 WEATHERTIGHTNESS/ WATER PENETRATION TESTS, SMALL SPECIMEN:

Requirement: To CWCT 'Standard for testing of ventilated rainscreens', clause 3.4.

- Test pressure: As clause 410.
- Test method: Using [Sparge bar test as per clause 680].

620 WINDLOADING TEST, LARGE SPECIMEN - AIR BARRIER: Provide documentary evidence that the system has been tested independently to comply with:

Requirement: To CWCT 'Standard for testing of ventilated rainscreens', clause 3.5.1.

- Test pressures: As clause 410.
- Loading directions: [REDACTED].
- Allowable elastic deformation: [REDACTED].
- Allowable residual deformation: [REDACTED].

625 WINDLOADING TEST - RAINDSCREEN: Provide documentary evidence that the system has been tested independently to comply with:

Requirement: To CWCT 'Standard for testing of ventilated rainscreens', clause 3.5.2.

- Test pressures: As clause 410.
- Loading directions: [REDACTED].
- Allowable elastic deformation: [REDACTED].
- Allowable residual deformation: [REDACTED].

645 SPARGE BAR TEST, LARGE SPECIMEN:

Requirement: To CWCT 'Standard for testing of ventilated rainscreens', clause 3.10.3.

650 HOSEPIPE TEST, LARGE SPECIMEN:

Requirement: To CWCT 'Standard for testing of ventilated rainscreens', clause 3.10.4.

661 IMPACT TEST: Provide documentary evidence that the system has been tested independently to comply with:

Requirement: To CWCT 'Standard for testing of ventilated rainscreens', clause 3.12.1 and CWCT technical note 75 & 76.

- Wall category: [REDACTED].
- Test impact for retention of performance: [REDACTED].
- Acceptable damage without impairment of performance: [REDACTED].
- Test impact to ensure safety to persons: [REDACTED].

670 DESTRUCTIVE TESTING OF FIXINGS TO DETERMINE ULTIMATE LOAD:

Number and location of test fixings: [REDACTED].

Test method: To BS 5080-1 and Construction Fixings Association guidance note 'Procedure for site testing construction fixings'.

672 SITE FIXINGS TEST:

Number and location of test fixings: [REDACTED].

Test method: To BS 5080-1 and Construction Fixings Association guidance note 'Procedure for Site testing construction fixings'.

680 SITE SPARGE BAR TEST:

Requirement: To CWCT 'Standard for testing of ventilated rainscreens', clause 3.10.3.

685 SITE HOSEPIPE TEST:

Requirement: To 'Standard for testing of ventilated rainscreens', clause 3.10.4.

- Joints to be tested: [REDACTED].

PRODUCTS:

710 ALUMINIUM ALLOY FRAMING SECTIONS:

Standards: To BS EN 755 alloy EN AW-6063 and suitable for the specified finish.

Structural members: To comply with BS 8118.

712 ALUMINIUM ALLOY SHEET:

Standards: To BS EN 485, BS EN 515 and BS EN 573 in an alloy, temper and thickness suitable for the application and specified finish.

715 MILD STEEL FRAMING SECTIONS/ REINFORCEMENT:

Standards: To the relevant parts of BS 7668, BS EN 10029, BS EN 10113, BS EN 10137, BS EN 10155 and BS EN 10210, in a thickness suitable for the application, and for galvanizing or other protective coating.

720 STAINLESS STEEL SHEET:

Standards: To the relevant parts of BS EN 10029, BS EN 10048, BS EN 10051, BS EN 10095, BS EN 10258, BS EN 10259 and BS EN 10088-2, austenitic, grade 1.4301 (304) generally, grade 1.4401 (316) when used externally or in severely corrosive environments, and in a thickness suitable for the application.

730 MECHANICAL FIXINGS - MECHANICAL REQUIREMENTS:

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

Mild steel: To BS 4190 and suitable for galvanizing or other protective coating.

Aluminium: To BS EN 755.

732 ADHESIVES:

General: Not degradable by moisture or water vapour.

735 FIXINGS AND FASTENERS: To be of approved type, and manufactured from non-ferrous materials

Dimensions: Not less than recommended by their manufacturers.

Adjustment capability: Sufficient in three dimensions to accommodate primary support structure and rainscreen cladding fabrication/ installation tolerances.

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.

Reaction to contact products and finishes: Stable and compatible.

775 THERMAL INSULATION:

Material: [REDACTED].

- Properties: Durable, rot and vermin proof and not degradable by moisture or water vapour.

Fixing: Attached to the outer face or supported within the backing wall so as not to bulge, sag, delaminate or detach during installation or in situ during the life of the rainscreen cladding.

776 THERMAL INSULATION:

Material: [REDACTED].

- Manufacturer: [REDACTED].

Product reference: [REDACTED].

- Thickness: Not less than [REDACTED].

Fixing: Attached to the outer face or supported within the backing wall so as not to bulge, sag, delaminate or detach during installation or in situ during the life of the rainscreen cladding.

780 VAPOUR CONTROL LAYER:

Material: [REDACTED].

- Minimum vapour resistance: [REDACTED].

- Manufacturer: [REDACTED].

Product reference: [REDACTED].

Continuity: No breaks and with the minimum of joints.

- Penetrations and abutments: Seal to vapour control layer. If necessary, prime substrates to achieve full bond.

- Sheet laps: Not less than 150 mm, seal with tape. Prime substrates as necessary to achieve full bond.

Sheet tape: Double sided sealant with vapour resistivity not less than the vapour control sheet.

- Size (width and thickness): [REDACTED].

Sheet repairs and punctures: Seal with lapped patch of vapour control membrane and continuous band of sealant tape along edges.

785 BREATHER MEMBRANE:

Material: [REDACTED].

Manufacturer: [REDACTED].

- Product reference: [REDACTED].

Continuity: No breaks. Minimize joints.

- Penetrations and abutments: Attach to breather membrane with tape. Achieve full bond.

- Laps: Not less than 150 mm, bond with tape. Achieve full bond.

Tape: As recommended by breather membrane manufacturer.

Repairs: Lapped patch of breather membrane material secured with continuous band of tape on edges.

Junctions at flashings, sills, gutters etc. Overlap and allow free drainage to exterior.

FINISHES:

**810 PROTECTIVE COATING OF MILD STEEL FRAMING SECTIONS/
REINFORCEMENT:**

Treatment: All surfaces to one of the following:

- Hot dip galvanized to BS EN ISO 1461.
- An appropriate equivalent coating to BS 5493, BS EN ISO 12944 and BS EN ISO 14713.

820 PROTECTIVE COATING OF MILD STEEL MECHANICAL FIXINGS:

Treatment: All surfaces to one of the following:

- Hot dip galvanized to BS EN ISO 1461.
- Sherardized to BS 4921, class 1 coating thickness and passivated.
- Zinc plated to BS EN 12329, coating designation of FE//Zn//C for an iridescent (yellow passivate) chromate conversion coating or FE//Zn//D for an opaque (olive green) chromate conversion coating.

830 POWDER COATING:

Requirement: As section Z31.

840 ANODIZING:

Standard: To BS 3987, subject to a local coating thickness of not less than 25 micrometres and not more than 40 micrometres on all significant surfaces.

- Processor and reference: [_____].

Preparation, anodizing, test samples, protection and damage repair: In accordance with processor's recommendations.

Coating programme: Wherever possible, anodize after fabrication is complete.

- Fabrication of prefinished lengths: Submit proposals beforehand.

Uncoated edges: Not visible in assemblies.

FABRICATION AND INSTALLATION:

910 GENERALLY:

Electrolytic corrosion: Take necessary measures to prevent.

Identification of products: Mark or tag to facilitate identification during assembly, handling, storage and installation. Do not mark surfaces visible in the complete installation.

912 METALWORK:

Requirement: As section Z11, unless specified otherwise in this section.

922 FIXINGS/ ADHESIVES APPLICATION:

Requirement: As section Z20, unless specified otherwise in this section.

925 SEALANT APPLICATION:

Requirement: As section Z22, unless specified otherwise in this section.

930 ASSEMBLY:

Location: Carry out as much assembly as possible in the workshop.

Joints: Other than movement joints and designed open joints, must be rigidly secured, reinforced where necessary and fixed with hairline abutments.

Displacement of components in assembled units: Submit proposals for reassembly on site.

935 INSPECTION:

All fabrications and assembled units must be carefully inspected for match with approved samples and for compliance with this specification and the final detailed drawings before dispatch to site.

Give adequate notice of inspection arrangements to enable the CA and/or other affected parties to be present.

940 PROTECTION:

All fabrications and assembled units must be protected against damage, corrosion and disfigurement during handling, installation and subsequent site operations.

Protective coverings must be applied before dispatch to site and must not be detrimental to rainscreen cladding products, finishes or installation procedures.

945 HANDLING AND STORAGE:

Do not deliver to site any rainscreen cladding products and units which cannot be installed immediately or unloaded into a suitable well protected storage area.

Store products and units on level bearers clear of the ground and separate with resilient spacers.

950 SUITABILITY OF SUPPORTING STRUCTURE:

Contractor's survey:

- Programme: Not less than [] weeks before commencement of cladding installation.
- Scope: Survey of supporting structure to determine suitability.
- Structure unsuitable to receive cladding: Give notice.

960 PRELIMINARY RAINSCREEN CLADDING INSTALLATION:

Requirement: Complete an area of cladding as set out below for inspection and approval of appearance.

[] .

970 RAINSCREEN CLADDING INSTALLATION:

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 which will be inaccessible on completion.

975 WELDING:

In situ welding: Not permitted.

980 INTERFACES:

Installation: Locate flashings, closers etc. correctly and neatly overlap cladding to form a weathertight junction.

985 DAMAGE:

Repairs: Do not repair cladding without approval.

- Approval: Will not be given where the proposed repair will impair performance or appearance.

Record of repairs: Prepare schedule or record on drawings for inclusion in the maintenance manual.

990 CLEANING: At Practical Completion or when otherwise agreed with the CA, remove any protective coverings and thoroughly clean rainscreen cladding areas. Cleaning agents for the purpose must be approved by the rainscreen cladding manufacturer and incorporated products manufacturers.

995 MAINTENANCE:

Maintenance manual: Incorporate details within the Building Manual in accordance with CWCT 'Guide to good practice for facades', Section 10.