

CMETB Castleblayney Youthreach Building Fabric Upgrade Works– Architectural Specification

June 2026

Tender Issue - Rev A

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Preliminaries

A10 PROJECT PARTICULARS

110 THE WORKS

- Name: Youthreach Castleblayney
- Nature: Existing learning centre.
- Location: Drumillard Big, Co. Monaghan
- Length of time for completion of construction work: 6 weeks.

120 EMPLOYER (CLIENT)

- Name: Castleblayney Youthreach.
- Address: Drumillard Big, Co. Monaghan A75 YP08.
- Contact: Sarah Gilsenan
- Telephone: 049 4331044
- Email: sarahgilsenan@cmetb.ie

130 PROJECT SUPERVISOR CONSTRUCTION STAGE

- Project Supervisor Construction stage: The contractor.
- Appointment: Collateral agreement to the building contract.
- Insurance: Produce evidence with tender.

140 PERSON EMPOWERED BY THE CONTRACT TO ACT ON BEHALF OF THE EMPLOYER

- Title: Employer's Representative.
- Name: Ronan Fitzpatrick MRIAI.
- Address: Craftstudio Architecture Ltd, Old Train Station, North Road, Monaghan, H18 YK54.
- Contact: Ronan Fitzpatrick.
- Telephone: 047 71568.
- Email: ronan@craftstudio.ie.

150 PROJECT SUPERVISOR DESIGN PROCESS

- Name: Francis Moran.
- Address: Craftstudio Architecture Ltd, Old Train Station, North Road, Monaghan, H18 YK54.
Telephone: 047 71568.

200A COST CONSULTANTS

- Description: Quantity Surveying.
- Name: **McQuillan Consulting Surveyors Ltd**
- Contact: Noel McQuillan
- Address: Monaghan Office: Newbliss Digi Hub, Office 3
- Telephone: **086 380 9124**
- E-mail: info@mcquillancs.com

200B BUILDING SERVICES CONSULTANTS

- Description: Mechanical & Electrical Engineering.
- Name: **Bernard Smith Consulting Engineers**
- Contact: Jishind Vadakkumpatt
- Address: Bracetown Business Park, Clonee, Dublin 15
- Telephone: **01 – 801 4127**
- E-mail: jishind@bernardsmith.ie

200D LOCAL AUTHORITY/ PLANNING AUTHORITY/BUILDING CONTROL

- The Local Authority / Planning Authority is Monaghan County Council

A11 TENDER AND CONTRACT DOCUMENTS

110 TENDER DRAWINGS

- The tender drawings are: are listed in the drawing register included in the tender documentation and as per other consultant's documentation.

120 CONTRACT DRAWINGS

- The contract drawings: Same as the tender drawings.
- Exceptions: none.

130 QUANTITIES DRAWINGS

- The drawings from which the pricing document were prepared are the tender drawings.
- Exceptions: none.

160 PRELIMINARY SAFETY AND HEALTH INFORMATION

- Location: Information for insertion in the Safety and Health Plan is included in these preliminaries in section A34. It refers to information given elsewhere in the preliminaries, specification, and drawings.

A12 THE SITE/ EXISTING BUILDING

110 THE SITE

- Description: existing education centre
 - The site consists of an existing two-storey, brick and insulated panel clad public education centre with limited on-site parking, oil storage tanks; demolition of existing windows is required.

140 EXISTING UTILITIES AND SERVICES

- Drawings: (Information shown is indicative only): To be inspected on site by contractor
- Other information: none.

200 ACCESS TO THE SITE

- Description: The entrance to the existing development has sufficient sightlines to provide a compliant vision splay along the road. Given the nature of the development, it is not expected to contribute any traffic issues locally.
- Limitations: to be confirmed and agreed as part of Contractor's Safety and Health Plan. Access will remain the responsibility of the contractor. All access will be influenced by the convenience of occupants to the adjacent lands/buildings and the maintained retention of unobstructed and safe travel on or beside the highway. All necessary signage, watching and lighting is essential for the duration of the works.

Restriction of footpaths or roads will require full licensing in accordance with local authority bye-laws.

The contractor is referred to any identified folio burdens, in particular to active rights of way, wayleaves or the like demarcated thereon - Refer to Preliminary Safety and Health Plan Appendix I: Burdens and Easements. The contractor will be obliged to extend all privileges enjoyed by the users of those rights. The contractor must maintain unobstructed use of the rights of way. Any temporary impediment introduced to the widths or heights of the access during the works must be agreed in writing with the users, in advance of commencement on site, and recorded with the Contracting Authority and the Employer's Representative.

210 PARKING

- Restrictions on parking of the Contractor's and employees' vehicles: Parking limited during college times.

220 USE OF THE SITE

- General: Do not use the site for any purpose other than carrying out the Works.

230 SURROUNDING LAND/ BUILDING USES

- General: Adjacent or nearby uses or activities are as follows:

- Active commercial properties are on the opposite side of the public road and to the west of the site.

240 HEALTH AND SAFETY HAZARDS

- Information: The accuracy and sufficiency of this information is not guaranteed by the Employer, Architect or Project Supervisor (Design). Ascertain if any additional information is required to ensure the safety of all persons and the Works.
- Site staff: Draw to the attention of all personnel working on the site the nature of any possible contamination and the need to take appropriate precautionary measures.

250 SITE VISIT

- Assessment: Ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.
- Arrangements for visit: The sites can be viewed from public road, access to the building will be set out in the invitation to tender if applicable.

A13 DESCRIPTION OF THE WORK

120 THE WORKS

Roof Remediation Works – works to include:

- Replacement of damaged fascias and soffits.
- Rainwater goods replacement.
- Barge, ladder framing and rafter equipment.
- Flat roof waterproofing.
- Replacement tiles.
- Replacing damaged roof tile cement.

Building Regulations

100A INTRODUCTION

The Builder shall have fully read, understood and be conversant in its duties under the above law including understanding its role as set out in the Code of Practice for Inspecting and Certifying Building and Works.

110B GENERAL NOTE

The Builder shall comply with its duties and responsibilities set out in the Building Regulations.

The Builder's role in this regard is of paramount importance as the primary driver and agent for delivering a "high quality" project. To this end, the Builder is specifically reminded of its obligations to construct the Works in accordance with Part D of the Building Regulations as set out in Section A33 Clause 101 hereafter. This section of the Building Regulations relates inter alia to the proper use of materials which are fit for purpose, of merchantable quality and to the proper workmanship on a building site. Where the Contract documentation requires that the Builder construct the Works to a more stringent or demanding tolerances than the Building Regulations, the Builder shall follow the Contract documentation. In short, Part D of the Building Regulations is the minimum standard applicable.

Further to discharging its own obligations vis-a-vis the compliant building of the Works, the Builder shall also comply with its obligations including the orderly and proper submission of all Certificates, Forms, Notices and other such documents as required of it (such as the specialist subcontractor certificates).

120 EMPLOYER'S REPRESENTATIVE ROLE

Shall be as defined in the Conditions of Contract. The Builder shall comply with the instructions and directions issued by the Employer's Representative in accordance with the conditions of contract.

125 BUILDER'S OBLIGATIONS

The Builder shall carry out the Works in accordance with the contract documents, contractual documentation and comply with all statutory requirements including The Building Control Regulations,

The Building Regulations, The Safety, Health and Welfare at work (Construction) Regulations, and The Construction Products Regulations.

The Builder's obligations, as set out in this document, form part of the Works Requirements and are included in the Builder's tender either as a line item and / or within its rates. The Builder shall cooperate and coordinate with the Employer's Representative at all times. The Builder shall do all of the following during the course of the works:

- ii. take careful note of all drawings, specifications and documents
- iii. based on the Contract Period set out in the Contract Documents, plan and agree the execution, Inspection milestones, sequence and programme of works with the Employer's Representative
- iv. ensure competent person(s) are assigned to oversee the general construction works and specialist works. Critical to this shall be the appointment of skilled and competent foreman.
- v. appoint subcontractors for whom the Builder is responsible
- vi. co-operate at all times with the Employer's Representative and design team,
- vii. ensure that the workmanship complies with the requirements of the Building Regulations and with the requirements of the Contract Documents, whichever is more onerous;
- viii. ensure that materials which they select and for which they are responsible comply with the requirements of the Building Regulations - particularly the requirements of Part D of the Building Regulations;
- ix. ensure that all products incorporated into the works are properly CE Marked (where required) in accordance with the Construction Products Regulations 2013 (the CPR 2013). Contractor to ensure compliance with performance criteria specified under the CPR 2013 by the Architect (and others including Engineers, specialist subcontractors etc). At all times the Builder is to make available, on request by the ER, a copy of a Declaration of Performance supplied by the Manufacturer for CE Marked products incorporated into the Works. The declarations of performance are to be supplied with the material / product submittals provided prior to incorporation into the Works. Where National Annex requires minimum standards under CPR 2013 Contractor is required to comply with these standards. [A list of these standards is available from the NSAI]
- x. provide written confirmations and supporting documentation at interim payment stages and understand that failure to provide the requested information may affect valuation of a Certificate at the sole discretion of the Employer's Representative.
- xiii. coordinate and provide all test certificates and confirmations to the the Employer Representative.
- xiv. co-ordinate the work of all specialist sub-contractors and sub-contractor designers to ensure the coordination and provision of all test certificates and confirmations of substantial compliance of elements of works which they have designed or constructed/installed with Building Regulations.

127 BUILDER'S CERTIFICATES

The Builder is to refer to Appendix Z54 for the list Certificates to be provided by the Builder' subcontractors for this Contract. The Builder shall be responsible for coordinating and obtaining all signed Certificates from its subcontractors.

Certificates from the Builder's subcontractors are required on an interim basis as the certificates relate to confirmations from the subcontractors that their works have been completed satisfactorily – an issue which is highly relevant to the ER's monthly interim payment certificates.

The list of certificated scheduled in Appendix Z54 is not exhaustive and may be added to, modified or omitted by the Employer's Representative.

The model forms which the Builder's subcontractors are to sign are included in Appendix Z55. The specific names of the various Builder's certifier identified therein are to be confirmed by the Builder as the Works proceed.

129A COLLATERAL WARRANTIES

Builder's Certifiers are required to provide a signed and sealed Collateral Warranty upon completion. For subcontractors signing collateral warranties, evidence of the appropriate professional indemnity insurance is required to be provided to the Assigned Certifier prior to the design commencing for the package of work.

129C INTERIM AND FINAL CERTIFICATES OF PAYMENT

Interim & Final Certificates for Payments shall be issued in accordance with the conditions of contract. In advance of each interim payment application by the Builder, the Builder shall provide to the ER the confirmations and/or documentation relevant to that stage of the construction.

The Employer's Representative may elect, at its sole discretion, to withhold payment from the Builder for works (subcontract or otherwise) in the event that the certification and / or documentation is not completed and provided in line with the above. The value of the payment to be withheld from the interim certificate shall be solely determined by the ER as the greater of either: (a) 5% of the value of the related subcontract works from the Builder's Pricing Document or (b) the cost of obtaining the missing certificate and / or documentation from another Contractor and / or subcontractor.

129D DELAYS / ADDITIONAL EXPENSE

The Contractor shall not have any entitlement to claims for delay and / or compensation from:

- delays by the Builder in notifying inspections
- delays in completing Builder's inspections,
- delays caused by re-inspections due to incomplete or non-compliant work; or
- delays in providing Certificates, Declarations of Performance, records &

documentation as set out the Contract including those at completion of the project - noting the requirement for the final forms to be issued four weeks in advance of Substantial Completion.

129E FAILURE TO PRODUCE CERTIFICATION

Should the Builder refuse or neglect to provide records, A Certificates, or any related documentation set out in this document, the Employer may employ and pay other persons to provide such records, certificates or confirmations and all costs incurred in connection therewith shall be

recoverable from the Builder or may be deducted from any money due or to become due to them, irrespective of the Builders tender price for same. The Builder is to take note that if the Employer has to obtain certification from a third party, the costs (and therefore deductions from monies due to the Contractor) for same are likely to be substantial.

Failure to produce certification and / or the related documentation when required in line with Clause 150 above may be considered as grounds for a default under Clause 12.1 of the Conditions of Contract.

145 INSPECTIONS

The Builder shall coordinate the inspections and provision of records of the Employers Representative for which he is responsible in accordance with the 'Code of Practice for Inspecting and Certifying Buildings and Works'.

Project Specific Identified Risk Elements

- i) Firestopping / cavity barriers
- ii) Access controls and egress requirements
- v) Suspended Ground Floor slab levels
- vii) Ceiling levels and coordination of ceiling mounted services

Project Specific Tests Requirements

- i) Fire alarm test including sounder test.
- ii) Access Control testing of all doors and gates

175 INSPECTION PROTOCOLS

The inspection requirements set out in this document do not in any way relieve, replace, or reduce the Builder's responsibilities to supervise the Works

180 ADVANCE NOTICE FOR INSPECTIONS

Due consideration shall be given by the Builder for inspection notices as identified in the PIP / INF. The Contractor shall not be entitled to any claims for extension of time or compensation due to delays arising out of the inspection or reinspection requirements and protocols set out in the Contract Documents / Works Requirements.

The Builder shall ensure advance notifications are issued with respect to works to be inspected . It is not acceptable to simply 'assume' that the Architect will show up; likewise - it is not acceptable for the Architect to simply 'assume' that a scheduled inspection is safe, complete and readily accessible. It is

anticipated that there is cooperation between the Builder and the Architect. The Builder is to take responsibility, in the first instance, to notify the Architect if the scheduled inspection is ready to go ahead.

The minimum notice by the Builder of an upcoming inspection shall be 5 working days.

180A RE-INSPECTIONS / FOLLOW UP INSPECTIONS AND INCOMPLETE WORK

The minimum notice required for re-inspection of items of works not complete or requiring remedial works shall be 5 working days.

The Builder shall diligently ensure that all incomplete areas of given a milestone are completed in full and that such works are kept available for re-inspection by the Architect or the relevant Employers Representative. The Builder shall diligently ensure that all issues of non-compliance are rectified and that such works are kept available for re-inspection by the Architect or the relevant Employers Representative. The Builder is expressly not at liberty to proceed and cover up work without offering it to the relevant Certifier for inspection.

The Builder shall ensure all tests and certificates for materials, components and assemblies listed in the in the Contract Documentation (e.g. Engineer's specifications) are undertaken in a timely way. Any test failure shall immediately be made known to the Employer's Representative. The materials / Works in question shall be replaced / rectified and re-tested.

In the event of 'incomplete work', 'non-compliant work' or materials, components or assemblies which fail a test, the Builder shall not proceed with any subsequent work until the non-conforming / defective / incomplete works are fully rectified.

It is the responsibility of the Builder to coordinate and supervise the works and no claim for delay or loss and expense shall arise from the tender requirement to re-inspect incomplete or non-conforming work.

180B NON-CONFORMANCE

Non-conformance of the materials and workmanship, with the tender drawings, specifications, and works requirements shall be dealt with as set out in the Conditions of Contract.

The Builder shall note that missed Inspections, for whatever reason, will ultimately be recorded as incomplete / missed inspections on the completed Preliminary Inspection Plan that is registered with the Building Control Authority at completion.

The Builder's attention is drawn to the Bill of Quantities preliminaries which sets out the Employer's rights to charge the Builder for the certifier's time for re-inspections, including travel time from the office of the relevant Certifier.

180C FAILURE TO EVIDENCE CONFORMITY

Should the Builder refuse or neglect to provide records, Ancillary Completion Certificates, or any related documentation set out in this document, the Employer may employ and pay other persons to provide such records, certificates or confirmations and all costs incurred in connection with same shall be recoverable from the Builder or may be deducted from any money due or to become due to the Builder, irrespective of the Builder's tender price for same.

See also requirements set out in Clause 165 above.

180D RECORD KEEPING

The Builder's obligations for the retention of records and record keeping are set out in the Certificates and Forms included in Appendix Z55; SI 9 2014 and the Code of Practice for Inspecting and Certifying Building and Work.

The Builder shall maintain progress records and inspection records including those prepared by the Employers Representatives listed in Appendix Z54 in accordance with the Code of Practice for Inspecting and Certifying Building and Work. These records shall be prepared in accordance with the Method Statement as per Clause 500 below of this Section; and shall at all times be up to date and available for review on site.

The Builder shall include in its tender the costs for the provision of progress records as the Works proceed.

The Builder shall also retain in his own central office all records prepared by the Builder and the Employers Representatives for a minimum period of 6 years after the issue of the Final Certificate or in the alternative, if the Contract is signed under seal for a period of 12 years.

181 METHOD STATEMENT FOR IMPLEMENTATION OF INSPECTION REGIME

The Builder shall provide a method statement for how it intends to comply with the inspection regime on site for the Employer's Representative's approval. The Builder shall comply with its approved method statement at all times. The method statement is to address - at a minimum - the following items:

- i. How the Builder proposes to supervise the works,
- ii. Method of validation of compliance of the works for which the Builder is responsible,
- iii. Method for recording and supervising works,
- iv. Method of provision of progress records coordinated with the Inspection Notification Framework and the Contractors Programme,
- v. Proposed technology / method for recording the progress of the works; and,
- vi. Proposed technology / method for recording Builder and ER site inspections

182 SUBSTANTIAL COMPLETION

The Builder's attention is drawn to Section 1.1 of the Conditions of Contract 'Definitions' for Substantial Completion of the Works - and in particular section (5). As defined under clause (3) of said definition for Substantial Completion, the Builder is to provide the documentation to the Employer's Representative including, but not limited to, the following:

- i. As-built drawings - refer to Section A31 Clause 692
- ii. Completed Safety File - to the extent to the Builder has complied with the directions of the PSDP to furnish information and documents
- iii. Signed Part A of the Certificate of Compliance on Completion
- iv. Signed Certificates for subcontractors listed in Appendix Z54
- v. Test records of all tests required under the Contract - and confirmation that they have passed.
- vi. Signed Collateral Warranties as required in the Contract Documents

The Builder shall provide 4 weeks in advance of the nominated completion date the completed documentation, forms, Certificates of Compliance on Completion and other confirmations, drawings, tests for which the Builder is responsible for under Contract to the Employer's Representative to enable the Certificate of Compliance to be drafted by the ER.

Notwithstanding any statutory duty to retain same, in advance of project completion, the Builder shall issue to the Employers Representative a copy of all inspection records retained by the Builder during the course of the project.

CF6 PUBLIC WORKS CONTRACT FOR SHORT FORM OF CONTRACT

PUBLIC WORKS CONTRACT FOR SHORT FORM OF CONTRACT

- The contract: Public Works Contract for short form of contract, document reference PW-CF6 v1.15 25/11/2025
- Requirement: Allow for the obligations, liabilities and services described.

CONDITIONS

1 - THE CONTRACT

2 – THE SITE, STARTING AND COMPLETING THE WORKS

3 – THE WORKS

4 – THE PRICE AND PAYMENT

5 – REPRESENTATION AND COMMUNICATIONS

6 – CONTRACTOR'S PERSONNEL

7 – PAY AND CONDITIONS OF EMPLOYMENT OF WORKERS

8 – LOSS AND DAMAGE TO THE WORKS

9 – INDEMNITY FOR CLAIMS AND DAMAGE

10 - INSURANCE

11 - PROPERTY

12 - TERMINATION

13 – ETHICS IN PUBLIC OFFICE

14- PROJECT SUPERVISOR FOR THE CONSTRUCTION STAGE

15-LAW, JURISDICTION AND DISPUTES

16- COVID-19 MANDATORY CLOSURE

17- LIMIT ON LIABILITY

18- PRICE VARIATION

A30 TENDERING/ SUBLETTING/ SUPPLY

110 SCOPE

- General: These conditions are supplementary to those stated in the Invitation to Tender and on the form of tender.

160 EXCLUSIONS

- Inability to tender: Immediately inform if any parts of the work as defined in the tender documents cannot be tendered.
- Relevant parts of the work: Define those parts, stating reasons for the inability to tender.

170A ACCEPTANCE OF TENDER

- The Employer and Employer's representatives:
 - Offers no guarantee that any tender will be recommended for acceptance or be accepted.
 - Will not be responsible for any cost incurred in the preparation of any tender.

190 PERIOD OF VALIDITY

- Period: After submission or lodgement, keep tender open for consideration (unless previously withdrawn) for not less than that stated in the form of tender.

PRICING/ SUBMISSION OF DOCUMENTS

250 PRICED DOCUMENTS

- Alterations: Do not alter or qualify the priced documents without written consent. Tenders containing unauthorised alterations or qualifications may be rejected.
- Measurements: Where not stated, ascertain from the drawings.
- Deemed included: Costs relating to items, which are not priced, will be deemed to have been included elsewhere in the tender.
- Submit: With tender.

310 TENDER

- General: Tenders must include for all work shown or described in the tender documents as a whole or clearly apparent as being necessary for the complete and proper execution of the Works.

435A BILL OF QUANTITIES

- Bill of Quantities (unpriced): Included with the tender documents. The Contractor may insert additional items. All items must be fully priced.
- Fully priced copy: Submit both hard copy and electronic copy.

480 PROGRAMME

- Programme of work: Prepare a summary showing the sequence and timing of the principal parts of the Works and periods for planning and design. Itemize any work which is excluded.
- Submit: With tender.

500 TENDER STAGE METHOD STATEMENTS

- Method statements: Prepare, describing how and when the following is to be carried out:
 - The contractor should offer a summary approach to the execution of the particular works, referencing procedures for the procurement of the project, including site management, traffic management and a project-specific methodology for ensuring the health and safety of site operatives and members of the public. The purpose of this request is to confirm a genuine understanding of the project's particular requirements and methodology approach to the carrying out of works in a urban environment within the time frame offered.

Contract administration of the Public Works Contract

Stakeholder management

Management of the defects period.

- Statements: Submit with the tender.

530 SUBSTITUTE PRODUCTS

- Details: If products of a different manufacturer to those specified are proposed, submit details with the tender giving reasons for each proposed substitution. Substitutions, which have not been notified at the tender stage, may not be considered.
- Compliance: Substitutions accepted will be subject to the verification requirements of clause A31/200.

570 SAFETY AND HEALTH INFORMATION

- Content: Describe the organisation and resources to safeguard the safety and health of operatives, including those of subcontractors, and of any person whom the works may affect.
- Include:
 - A copy of the contractor's safety and health policy document, including risk assessment procedures.
 - Method statements on how risks from hazards identified in the preliminary safety and health plan will be addressed.
 - Arrangements for ensuring that all accidents, illness and dangerous occurrences are recorded.
 - Accident, sickness and enforcement action records for the past five years.
 - Relevant construction knowledge and experience of managing, coordinating and monitoring others.
 - Experience in preparing and monitoring compliance with safety plans/ files.
 - The number and type of staff available for this project with details of their training, skills, experience and duties.
 - Proposed site organization including emergency procedures, fire prevention and escape and arrangements for welfare facilities.
 - Review procedures to obtain feedback.
- Submit: With tender.

590A WASTE MANAGEMENT PLAN

- Person responsible for drafting the Plan: The Contractor.
- Content: Include details of:
 - Principal Contractor for the purposes of the regulations.
 - Location of the site.
 - Description of the project.
 - Estimated project cost.
 - Types and quantities of waste that will be generated.
 - Resource management options for these wastes, including proposals for minimisation/ reuse/ recycling.
 - The use of appropriate and licensed waste management contractors.
 - Record keeping procedures.
 - Waste auditing protocols.
- Submit prior to commencement

The following is the Environmental Report by Monaghan County Council, which is to be complied with in full.

1. A Waste Management Plan (WMP) shall be prepared for this development and submitted to Monaghan County Council for assessment and agreement prior to the submission of a Commencement Notice. The Applicant shall notify the Environment Section prior to the Commencement of Demolition.
2. The site shall be surveyed by a competent person to determine the presence or otherwise of hazardous materials on the above development e.g. asbestos cement sheeting, asbestos insulation, asbestos slates, PCB's.
3. Asbestos materials are classified as hazardous and require specialist handling procedures. The removal of Asbestos shall only be conducted by a Specialist/Competent Contractor, with the necessary training and relevant permit, after the Health and Safety Authority (HSA) has been notified. Asbestos waste must be collected by a Specialised Permitted Waste Collector for ultimate disposal and transported in accordance with the Waste Management (Movement of Hazardous Waste) Regulations, 1998 as amended.
4. A method statement shall be included with the WMP.
5. The WMP shall be prepared using "Best Practice Guidelines on the Preparation of Waste Management Plans for Construction and Demolition Projects" - Department of the Environment, Heritage and Local Government, July 2006.

6. Facilities shall be provided for the collection and segregation of recyclable waste. Wastes shall be collected for recycling/reuse whenever feasible or otherwise disposed of in accordance with the Waste Management Act 1996 as amended.

7. Any waste oils and any other hazardous waste materials (drums or tins containing hazardous chemicals, oil based paints, varnishes, pesticides, batteries, fluorescent tubes etc) shall be separated and treated as hazardous waste, stored appropriately and collected, recovered or disposed of in accordance with the Waste Management Act 1996 as amended and records of such shall be kept on site. Hazardous Waste Shall be collected by a Specialised Permitted Waste Collector.

8. Any Construction and Demolition waste or excess soil generated during the construction phase which cannot be reused on site shall be disposed / recovered at an appropriately permitted facility in accordance with the requirements of the Waste Management Act 1996 as amended.

9. Where further infilling material is imported onsite, the site will require appropriate authorisation from Monaghan County Council in line with Planning Permission Legislation and Environmental Legislation namely the Waste Management (Facility Permit and Registration) Regulations 2007 as amended.

10. Extra precaution is required to ensure no invasive species is transferred off-site without the correct treatment prior to its removal or destruction.

A31 PROVISION, CONTENT AND USE OF DOCUMENTS

DEFINITIONS AND INTERPRETATIONS

110 DEFINITIONS

- Meaning: Terms, derived terms and synonyms used in the preliminaries/ general conditions and specification is as defined below or in the appropriate referenced document.

120 COMMUNICATION

- Definition: Includes advise, inform, submit, give notice, instruct, agree, confirm, seek or obtain information, consent or instructions, or make arrangements.
- Format: In writing to the person named in clause A10/140 unless specified otherwise.
- Response: Do not proceed until a response has been received.

130 PRODUCTS

- Definition: Materials, both manufactured and naturally occurring, and goods, including components, equipment and accessories, intended for the permanent incorporation in the Works.
- Includes: Goods, plant, materials, site materials and things for incorporation into the Works.

135 SITE EQUIPMENT

- Definition: Apparatus, appliances, machinery, vehicles or things of whatsoever nature required in or about the construction for the execution and completion of the Works, but not materials or other things intended to form or forming part of the Permanent Works.
- Includes: Construction appliances, vehicles, consumables, tools, temporary works, scaffolding, cabins and other site facilities.
- Excludes: Products and equipment or anything intended to form or forming part of the permanent works.

145 CONTRACTOR'S CHOICE

- Meaning: Selection delegated to the Contractor, but liability to remain with the specifier.

150 CONTRACTOR'S DESIGN

- Meaning: Design to be carried out or completed by the Contractor and supported by appropriate contractual arrangements, to correspond with specified requirements.

155 SUBMIT PROPOSALS

- Meaning: Submit information in response to specified requirements.

160 TERMS USED IN SPECIFICATION

- Remove: Disconnect, dismantle as necessary and take out the designated products or work and associated accessories, fixings, supports, linings and bedding materials. Dispose of unwanted

materials. Excludes taking out and disposing of associated pipework, wiring, ductwork or other services.

- Fix: Receive, unload, handle, store, protect, place and fasten in position and disposal of waste and surplus packaging, including all labour, materials and site equipment for that purpose.
- Supply and fix: As above, but including the supply of products to be fixed. All products to be supplied and fixed unless stated otherwise.
- Keep for reuse: Do not damage designated products or work. Clean off bedding and jointing materials. Stack neatly, adequately protect and store until required by the Employer/ Purchaser or for use in the Works as instructed.
- Make good: Execute local remedial work to the designated work. Make secure, sound and neat. Excludes redecoration and/ or replacement.
- Replace: Supply and fix new products matching those removed. Execute work to match the original new state of that was removed.
- Repair: Execute remedial work to designated products. Make secure, sound and neat. Excludes redecoration and/ or replacement.
- Refix: Fix removed products.
- Ease: Adjust moving parts of designated products or work to achieve free movement and a good fit in open and closed positions.
- Match existing: Provide products and work of the same appearance and features as the original, excluding ageing and weathering. Make joints between existing and new work as inconspicuous as possible.
- System: Equipment, accessories, controls, supports and ancillary items, including installation, necessary for that section of the work to function.

170 MANUFACTURER AND PRODUCT REFERENCE

- Definition: When used in this combination:
 - Manufacturer: the person or legal entity under whose name or trademark the particular product, component or system is marketed
 - Product reference: the proprietary brand name and/ or identifier by which the particular product, component or system is described.
- Currency: References are to the particular product as specified in the manufacturer's technical literature current on the date of the invitation to tender.

200A USE OF NAMED PRODUCTS AND THE TERMINOLOGY 'OR EQUIVALENT' FOR PRODUCT NAMES

• In general, the specifications have stated the performance characteristics for the materials without the use of product names. By the Tenderer's submission of a Tender, it confirms that it has priced for items, products, materials, systems and assemblies that meet the performance and functional requirements of the Contract Specifications. Prior to the use of any such items, products, materials, systems or assemblies, the Contractor shall submit 'technical proposals' for approval to the Architect under the RFA system described below and by providing evidence that each of the criteria in the specification have been met or bettered. These technical proposals shall be reviewed by the Architect noting the Bill of Quantities reference to the Employer's right to charge the Builder for said technical proposals.

- There are instances however, where a sufficiently precise and intelligible description of the product or system is not possible. Therefore, a particular system or product has been named as stated “or equivalent” due the technical difficulty of describing such a system in a fulsome manner for the purposes of a GCCC Contract.
- If the Consultant states the name of a manufacturer’s product in the specification, it is to be taken as read “or equivalent”. In these instances, the Contractor is entitled to forward to the Consultant a Request for Approval (RFA) of alternative product(s) meeting the specification and the Consultant shall respond reasonably to such requests basing their decision on the technical specifications and their professional judgement which may include aesthetic criteria. These equivalency proposals shall be reviewed by the Architect noting the Bill of Quantities reference to the Employer’s right to charge the Builder for said equivalency proposals.
- The Consultant’s basis for assessment of equivalent products shall be in respect of material, safety, reliability, fitness for purpose, design life, technical performance / support, warranties / guarantees including availability of site technical inspections by manufacturers, compatibility with adjacent construction, availability of compatible accessories, spare parts, dimensional size and, where relevant, visual / aesthetic appearance – all as stated in the specifications and by reference to the manufacturer’s information. Any submitted foreign language documents must be accompanied by certified translations into English.
- The Contractor shall issue Requests for Approval in a timely manner and allow for a reasonable period of time for the Consultant to assess the requests before ordering or requiring any such materials on site. The Contractor shall provide the Consultant with the requested documentation at the Consultant’s sole discretion as to scope and adequacy. For example, this will typically involve the Contractor marking up the Architect’s drawings and specifications with the proposed material and indicating how the proposed product will work based on the project specific requirements. Such output requirements might include a requirement for a test or Agrément Certificate or Insurance backed guarantee or other means of proof of compliance all at the Contractor’s expense to satisfy the Architect / Engineer. If a substitution is accepted, all Manufacturers’ guarantees must be submitted before ordering products.
- The Contractor shall not unduly burden the Architect / Engineer with excessive requests for approval.

200B CONTRACTORS DESIGN

- The Contractor is to be aware in making a proposal be it for an equivalent product or otherwise; that it is taking on the role of the Designer for said product, system, material or assembly of components; and the Contractor shall specifically reassure the Architect that they have fully considered the change as well as any consequences arising out of the change from the original specification and / or design intent to the one identified in the Contractor’s proposal. In formulating its proposals, the Contractor shall take particular care to understand how its proposals may impact or be impacted by adjacent or adjoining circumstances, products, materials, systems or assemblies.

200C REQUESTS FOR APPROVAL OF EQUIVALENCY / CONTRACTOR PROPOSALS (RFAs)

- A Request for Approval (and words derived therefrom) means the approval in writing of the Architect unless specified otherwise. All approvals for Contractor’s proposals or otherwise are to be sought from the Architect in good time prior to the works needing to be executed on site. The Architect’s comments

on the submitted documentation shall relate to the general performance, aesthetic and overall functional issues and not to the detailed function, construction, fabrication or assembly of the components which shall remain the complete and sole responsibility of the Contractor.

- The Architect's / Engineer's responses to the requests for approvals shall be classified as:

RFA–A: no further adverse comments,

RFA–B: comments made: resubmission is necessary taking on board Architect's comments or

RFA–C: submission rejected / not accepted.

- In the event of an 'RFA–A' classification, the Contractor is being advised by the Architect that he / she has no further adverse comments to the Contractor's proposal and the Contractor may so proceed on the basis of its proposal.
- In the event of a 'RFA–B' classification, the Contractor shall address the Architect's concerns identified in the response and re-submit the request for approval for the Architect's consideration. The Contractor shall not proceed with the proposal until an 'A' classification is obtained from the Architect unless specifically so stated by the Architect.
- In the event of an 'RFA–C' classification, the request for approval is considered to be unacceptable and the Contractor shall not proceed with such a request, drawings or proposal. If the Contractor so chooses to investigate another alternative, it shall do so in good time and submit to the Architect a new request for approval.
- Requests for Approval shall be numbered by the Contractor and tracked on an appropriate register which is to be included in the Contractor's report at the site meetings.

200D APPROVAL OF INSTALLATION DRAWINGS (i.e. SHOP DRAWINGS)

• Installation (or shop) drawing approvals (and words derived therefrom) means the approval in writing of the Architect unless specified otherwise. All approvals for installation (or shop) drawings or otherwise are to be sought from the Architect in good time prior to the works needing to be executed on site. The Architect's comments on the submitted documentation shall relate to the general performance, aesthetic and overall functional issues and not to the detailed function, construction, fabrication or assembly of the components which shall remain the complete and sole responsibility of the Contractor.

- The Architect's / Engineer's responses to the requests for approvals shall be classified as:

IDA–A: no further adverse comments,

IDA–B: minor comments: resubmission is not necessary provided comments taken on board or

IDA–C: submission unapproved and returned with substantial comments and revised drawings / documentation is required.

- In the event of an 'ID–A' classification, the Contractor is being advised by the Architect that he / she has no further adverse comments to the Contractor's installation drawings and the Contractor may so proceed on the basis of its installation drawings.
- In the event of a 'ID–B' classification, the installation drawings are considered acceptable provided that the Architect's comments are taken on board. The Contractor shall address the Architect's concerns identified in the response by amending the documents and then proceed with the works in line with the amended installation drawings. The Contractor does not need to re-submit the installation drawings again for approval in this instance; however, the Contractor shall provide the Architect, in good time, with a record copy of the installation drawings for monitoring the work on site.

- In the event of an ‘ID–C’ classification, the installation drawings are considered to be unapproved and the Contractor shall not proceed with the works in line with the installation drawings submitted. The Contractor shall address the comments made by the Architect in his / her response and re-submit the whole installation drawing package again for approval.
- Approval of Installation Drawings shall be numbered by the Contractor and tracked on an appropriate register which is to be included in the Contractor’s report at the site meetings. The Contractor shall issue installation drawings for review in a timely manner and allow for a reasonable period of time for the Consultant to assess the drawings before ordering or requiring any such materials on site.

210 CROSS REFERENCES

- Accuracy: Check remainder of the annotation or item description against the terminology used in the cited section or clause.
- Related terminology: Where a numerical cross-reference is not given the relevant sections and clauses of the specification will apply.
- Relevant clauses: Clauses in the cited specification section dealing with general matters, ancillary products and workmanship also apply.
- Discrepancy or ambiguity: Before proceeding obtain clarification or instructions.

210A REFERENCES TO LRV

- are to the Light Reflectance Values for particular surfaces (walls, floors, doors, ironmongery, etc.) as set out in Part M of the Building Regulations and defined under the Technical Guidance Document The amount of light a surface reflects is known as the Light Reflectance Value (LRV). The range of LRV is 0 (black) to 100 (white). The larger the difference between the LRV of each surface the greater the visual contrast is and the easier it is for someone with a low visual contrast sensitivity to perceive the difference. BS8300: 2009 Annex B provides several methods for measuring LRV and provides guidance on acceptable LRV differences between adjoining surfaces. BS 8493: 2008 provides LRV measurements for certain colours (as specified in BS 4800: 1989).

220 REFERENCED DOCUMENTS

- Conflicts: Specification prevails over referenced documents.

240 SUBSTITUTION OF STANDARDS

- Specification to Irish or European Standard: Substitution may be proposed complying with a grade or category within a national standard of another Member State of the European Community or an international standard recognised in Ireland.
- Before ordering: Submit notification of all such substitutions.
- When requested: Submit for verification documentary evidence as detailed in clause A31/200. Any submitted foreign language documents must be accompanied by certified translations into English.

250 CURRENCY OF DOCUMENTS AND INFORMATION

- Currency: References to published documents are to the editions, including amendments and revisions, current on the date of the Invitation to Tender.

260 SIZES

- General dimensions: Products are specified by their coordinating sizes.
- Timber: Cross section dimensions shown on drawings are:
Target sizes as defined in IS EN 336 for structural softwood and hardwood sections.
Finished sizes for non-structural softwood and hardwood sawn and further processed sections.

DOCUMENTS PROVIDED ON BEHALF OF EMPLOYER

410 ADDITIONAL COPIES OF DRAWINGS/ DOCUMENTS

- Copies: Two of each contract drawing and contract document will be issued free of charge (not counting any certified copies).
- Additional copies: Issued on request and charged to the Contractor.

420 ELECTRONIC ISSUE OF DRAWINGS

Drawings and documentation issued during the project shall be issued electronically to the Contractor as .pdf files via email. The Contractor is to ensure that they have the facility to accept drawings and documents by email on site during the construction of the project. The Consultants will consider requests from the Contractor to issue drawings in.dwg or other requested CAD digital formats.

The.pdf files must be used by the Contractor to view how the drawings are intended to be seen and are to be considered for Contract purposes as 'The Drawings'. The.pdf files take precedence over the.dwg files.

Only figured dimensions are to be used – which is a CRITICAL point if the Contractor is using the.dwg file. For example, in order to get CAD drawings to 'read' well when printed taking into account line weights and the scale of a drawing, it is sometimes necessary to separate elements visually within the electronic CAD drawing when in reality the particular components are right next to one another. Therefore, one CANNOT scale off the CAD drawings. TO REITERATE, the Contractor shall use FIGURED DIMENSIONS ONLY and if additional dimensions or figures are necessary - it shall seek those dimensions and figures from the Architect.

440 DIMENSIONS

- Scaled dimensions: Do not rely on.

450 MEASURED QUANTITIES

- Ordering products and constructing the Works: The accuracy and sufficiency of the measured quantities is not guaranteed.
- Precedence: The specification and drawings shall override the measured quantities.

460 THE SPECIFICATION

- Coordination: All sections must be read in conjunction with Main Contract Preliminaries/ General conditions.

470 DIVERGENCE FROM THE STATUTORY REQUIREMENTS

- Divergence: Between the drawings or specification and the requirements of the Building Regulations, other Statutes, statutory undertakers and other regulatory authorities.
- Action: Inform immediately.

DOCUMENTS PROVIDED BY CONTRACTOR/ SUBCONTRACTORS/ SUPPLIERS

555A SUBMISSION OF INFORMATION

- General: Provide the detailed design and/ or complete the design of products and executions in accordance with the specification.
- Provide:
 - Works proposals based on the drawings, specification and other tendering information.
 - Liaison to ensure coordination of the work with related building elements and services.
- Master programme: Make reasonable allowance for completing design/ production information, submission (including requirements under health and safety legislation), comment, inspection, amendment, resubmission and reinspection.
 - When preparing the master programme, the Contractor is to make reasonable allowance for the approval process of the subcontractor / supplier's documents by the design team - including a period of time for review, corrections, resubmissions and so on. In some instances, this approval process can take several iterations before the final set of drawings is agreed upon and the Contractor is encouraged to commence and progress with this process in good time.
 - The Builder shall obtain all the information which the subcontractors are required to provide in time to meet the programme. The Builder is to thoroughly check the information available, that dimensions are correct with the as-built
 - condition on site, that account is taken of all related work and that construction is practicable.
- Design/ production information: Submit two copies, one could be returned with comments. If amendments are necessary ensure that these are done without delay and resubmit unless it is confirmed that it is not required.
- The Architect will note his comments on one copy, then return to the Contractor - refer to Clause 202 above. Inspection and any comments made by the Architect will not relieve the subcontractor of responsibility for design and documentation, where applicable. Ensure that any necessary amendments are made without delay. The Architect will note his comments on one copy, then return to the Contractor - refer to Clause 202 above. Inspection and any comments made by the Architect will not relieve the subcontractor of responsibility for design and documentation, where applicable. Ensure that any necessary amendments are made without delay.
- Changes to Works Requirements: Submit, supported by all relevant information, if proposals differ from the Works requirements or require changes at the interface with adjacent work.
- Information from Subcontractors/ Suppliers:
 - Obtain in time to meet the programme.
 - Check dimensions are correct, account is taken of all related work, and construction is practicable.

- Note any comments on one copy of the design/ production information, then submit with the required number of additional unmarked copies. Such checking will not relieve the specialist or the subcontractors/ Suppliers of their respective responsibilities for design, co-ordination and documentation.
- The Builder is to obtain a final version of the information and submit to the Architect a record copy as well as providing a record copy for the Safety File. Distribute additional copies as appropriate to all affected subcontractors and other and keep at least one copy on site.

Submit: Two copies of final version of proposals. Distribute copies to all affected parties and keep one copy on site.

615 PRODUCTION INFORMATION

- shop drawings must be provided by the Contractor / Domestic Subcontractors as follows, where the following items are relevant:
 - Structural steel elements
 - Windows and doors including glazing
 - Rooflights
 - External timber doors including glazed elements
 - Internal timber doors and fire doors including certificates for door and frame where required
 - Balustrades
 - Fencing and gates
 - Fitted kitchens
 - Co-ordinated and builder's work drawings as detailed in the Services Engineer's specifications.
 - Shop drawings for specific elements noted in the Civil and Structural Engineer's specifications
- It is expected that the Builder shall review all installation drawings itself, prior to submittal to the Design Team to ensure that they are satisfied, in their capacity as the Builder, with their subcontractor's work (e.g. has the subcontractor done what the Builder has told him to do).
- Submit:
 - For comment and make any necessary amendments.
 - Sufficient copies of final version for distribution to all affected parties.

620A AS BUILT DRAWINGS AND INFORMATION

- Description of work: must be provided by the Builder to the Architect not less than 4 weeks before the anticipated date for Substantial Completion. The record drawings provided by the Builder are to include at a minimum:
- Provide: Drawings/ information:

- any other as-built drawings as identified in the relevant engineer's specifications / drawings.

630 TECHNICAL LITERATURE

- Keep on site for reference by all supervisory personnel:
 - Manufacturers' current literature relating to all products to be used in the Works.
 - Relevant IS Standards and Codes of Practice.
- Copies: To be lodged in Building Manual.

640 MAINTENANCE INSTRUCTIONS AND GUARANTEES

- Components and equipment: Obtain or retain copies, register with manufacturer and hand over on or before Practical Completion.
- Emergency call out services: Provide subcontractors' telephone numbers for use after completion.
- Copies: To be lodged in Building Manual.

A32 MANAGEMENT OF THE WORKS

GENERALLY

110A SUPERVISION

- General: Accept responsibility for coordination, supervision and administration of the Works, including subcontracts.
- Coordination: Arrange and monitor a programme with each subcontractor, supplier, local authority and public service company/ authority. Obtain and supply information as necessary for coordination of the work.
- Description of work: must be provided by the Builder to the Architect not less than 4 weeks before the anticipated date for Substantial Completion. The record drawings provided by the Builder are to include at a minimum:
 - Provide: Drawings/ information where relevant:
 - the drawings as required for the safety file (e.g. record copy of all installation drawings, glass supply drawings, etc.)
 - as-built architectural plan, elevation and detail drawings of the Works with any amendments made as were scheduled and included in the Commencement Notice. These as-built architectural drawings will be uploaded with the Completion Certificates to the Local Authority on the building registry. The as-built architectural drawings are to confirm setting out dimensions and the levels provided thereon as well as record any changes on the drawings made (e.g. window changes, etc.)
 - any other as-built drawings as identified in the relevant engineer's specifications / drawings and any trade that requires co-ordination with the work. The Builder shall keep records of all such meetings to include attendees and a summary of the main issues. These records shall be made available to the Contract Administrator/ Employer Representative and Assigned Certifier upon request.
- Before any work starts, the Builder shall obtain from all subcontractors the names of the subcontractor's appointed suitably qualified and competent supervisors. The Builder shall be responsible for ensuring that its subcontractor's supervisors are competent and suitably qualified. No work of the Sub-Contractor shall be carried out unless one of the appointed supervisors is present at the place where the work is physically being carried out.
- All work shall be carried out in accordance with the terms and requirements of the Works Requirements and approved submissions and samples.
- The Builder shall facilitate with its suppliers the Architect, Assigned Certifier or the Employers Representatives to make random or periodic visits to suppliers' premises to ensure that standards of manufacture and quality control are to their satisfaction.

130 INSURANCE CLAIMS

- Notice: If any event occurs which may give rise to any claim or proceeding in respect of loss or damage to the Works or injury or damage to persons or property arising out of the Works,

immediately give notice to the Employer, the person administering the contract on behalf of the Employer, Project Supervisor Design stage and the Insurers.

- Failure to notify: Indemnify the Employer against any loss, which may be caused by failure to give such notice.
- Health and Safety: Advise the HSA of any notifiable occurrence.

140 CLIMATIC CONDITIONS

- Information: Record accurately and retain:
 - Daily maximum and minimum air temperatures (including overnight).
 - Delays due to adverse weather, including description of the weather, types of work affected and number of hours lost.

150 OWNERSHIP

- Alteration/ clearance work: Materials arising become the property of the Contractor except where otherwise stated. Remove from site as work proceeds.

PROGRAMME/ PROGRESS

240 COMMENCEMENT OF WORK

- Notice: Before the proposed date for commencement of work on site give minimum notice of two weeks
- Prior to Commencement the Traffic and Construction Management Plan is to be agreed with the Employer's Representative and the PSDP, and Planning Authority, respectively in turn, refer to Section A12.

245 CONSTRUCTION PROGRAMME

- Works to be completed within the Time for Completion as defined in the tender documentation.
 - Contractor to note Clauses 2.6, 2.7, 4.5 and 4.6 of the contract in relation to Liquidated damages, extensions of time and Compensation Events.

250 MONITORING

- Progress: Record on a copy of the programme kept on site.
- Avoiding delays: If any circumstances arise which may affect the progress of the Works submit proposals or take other action as appropriate to minimize any delay and to recover any lost time.
- Key Performance Indicators:
 - Details: General assessment of programme, detailed assessment of progress, health and safety, RFIs / RFAs, Off-site productions including drawings, procurement, cost and labour and plant records.
 - Performance: Record progress against each KPI.
 - Corrective action: If performance falls below target, submit proposals as soon as possible.

260 SITE MEETINGS

- General: Site meetings will be held to review progress and other matters arising from administration of the Contract.
- Frequency: Every two weeks.
- Location: Contractor to provide and maintain temporary office accommodation for site meetings.
- Accommodation: Ensure availability at the time of such meetings.
- Attendees: Attend meetings and inform subcontractors and suppliers when their presence is required.
- Chairperson (who will also take and distribute minutes): Employer's representative.

290 NOTICE OF COMPLETION

- Requirement: Give notice of the anticipated dates of completion of the whole or parts of the Works.
- Associated works: Ensure necessary access, services and facilities are complete.
- Period of notice (minimum): six weeks.

CONTROL OF COST

420 REMOVAL/ REPLACEMENT OF EXISTING WORK

- Extent and location: Agree before commencement.
- Execution: Carry out in ways that minimize the extent of work.

440 MEASUREMENT

- Covered work: Give notice before covering work required to be measured.

450 VERIFICATION CERTIFICATES

- Use: To verify work that is costed on a day by day basis (dayworks).
- Before commencing work: Give reasonable notice to person countersigning verification certificates.
- Content: Before delivery each certificate must be:
 - Referenced to the instruction under which the work is authorized.
 - Signed by the Contractor's person in charge as evidence that the operatives' names, the time daily spent by each and the equipment and products employed are correct.
- Submit: By the end of the week in which the work has been executed.

460 INTERIM VALUATIONS

- Applications: Include details of amounts requested under the Contract together with all necessary supporting information.
- Submission: At least seven days before established dates.

470 PRODUCTS NOT INCORPORATED INTO THE WORKS

- Ownership: At the time of each valuation, supply details of those products not incorporated into the Works which are subject to any reservation of title inconsistent with passing of property as required by the conditions of contract, together with their respective values.
- Evidence: When requested, provide evidence of freedom of reservation of title.

475 PRODUCTS STORED OFF SITE

- Evidence of title: Submit five working days prior to the period of interim certificates stated within the appendix to the contract.
- Include for products purchased from a supplier:
 - A copy of the contract of sale and a written statement from the supplier that any conditions of the sale relating to the passing of property have been fulfilled and the products are not subject to any encumbrance or charge.
- Include for products purchased from a supplier by a subcontractor or manufactured or assembled by any subcontractor:
 - Copies of the subcontract with the subcontractor and a written statement from the subcontractor that any conditions relating to the passing of property have been fulfilled.

480 LABOUR AND EQUIPMENT RETURNS

- Records: Provide for verification at the beginning of each week in respect of each of the previous seven days.
- Records must show:
 - The number and description of craftsmen, labourers and other persons directly or indirectly employed on or in connection with the Works or Services, including those employed by subcontractors.
 - The number, type and capacity of all mechanical, electrical and power-operated equipment employed in connection with the Works or Services

500 Claims / adjustments of the Price or Time for Completion

- If adjustments are required to the Price or Time for Completion either as the result of a proposed instruction, contractor claim or employer/ ER claim then the contractor is to make reference to Clause 4 (The Price and payment) of the contract and specifically Clauses 4.6 through to 4.9.

Claim Notice is to state prominently that the document is a claim notice:

- Details of a claim for a compensation event must include at a minimum the following:
 - clear description of the claim including all relevant facts to explain the heads of quantum
 - identification of the instruction (by reference to correspondence and date) and / or events giving rise to the claim
 - breakdown of the quantum being claimed.
 - annotated measure to clearly describe how the measurements are being claimed.
 - where the claim is based on bill rates, identification of the bill rate used in the claim.

- where modified bill rates are being claimed, explanation for why modified bill rates are applicable and a calculation / explanation for how the modified rate was arrived at.
- where fair valuation is being claimed, explanation for why fair valuation is applicable and calculation as to how the fair value was computed including copies of any invoices, quotations or other supporting documents necessary to explain the figures being claimed.
- identification of any corresponding credits in the pricing document for omitted relevant work to the claim.
- Details of a claim for a delay event must include at a minimum the following:
 - clear description of the delay event being claimed
 - identification of which section(s) of Schedule 1K the delay claim is being claimed under
 - all relevant facts to explain how the delay occurred
 - clear explanation as to why the event has affected the critical path of the project.
 - identification of the associated quantum of delay costs being claim in accordance with the conditions of contract and Form of Tender Schedule.

A33 QUALITY STANDARDS/ CONTROL

STANDARDS OF PRODUCTS AND EXECUTIONS

100 FORM OF CONTRACT

The Contractor's attention is particularly drawn to Clause 3 of the Contract with regards to The Works and quality.

105 PART D: MATERIALS AND WORKMANSHIP OF THE SECOND SCHEDULE OF THE BUILDING REGULATIONS

The Builder shall ensure that the Works comply with Part D of the Building Regulations which states that,

“D1 - Materials and Workmanship: All works to which these Regulations apply shall be carried out with proper materials and in a workmanlike manner.

D3 - Definition for this part: In this Part, “proper materials” means materials which are fit for the use for which they are intended and for the conditions in which they are to be used, and includes materials which:

- (a) bear a CE Marking in accordance with the provisions of the Construction Products Directive; or
- (b) comply with an appropriate harmonized standard, European technical approval or national technical specification as

defined in article 4(2) of the Construction Products Directive; or

- (c) comply with an appropriate Irish Standard or Irish Agrément Board Certificate or with an alternative national technical specification of any State which is a contracting party to the Agreement on the European Economic Area, which provides in use an equivalent level of safety and suitability.

‘Agreement on the European Economic Area’ means the Agreement on the European Economic Area between the European Communities, their Member States and the Republic of Austria, the Republic of Finland, the Republic of Iceland, the Principality of Liechtenstein, the Kingdom of Norway, the Kingdom of Sweden and the Swiss Confederation, as published in the Official Journal of the European Communities (OJ L1/9 of 3rd January, 1994).”

107 CERTIFICATE OF COMPLIANCE UPON COMPLETION - PART A

The Contractor in signing Part A of the Certificate of Compliance on Completion shall be confirming that all of the materials and / or systems supplied, installed and used in the Contract comply with Part D of the Building Regulations as noted in Clause 101 above and as set out in the Technical Guidance Documents relevant at the time associated with said Part of the Building Regulations.

110 INCOMPLETE DOCUMENTATION

- General: Where and to the extent that products or work are not fully documented, they are to be:
 - Of a kind and standard appropriate to the nature and character of that part of the Works where they will be used.
 - Suitable for the purposes stated or reasonably to be inferred from the project documents.

Contract documents: Omissions or errors in description and/ or quantity shall not vitiate the Contract nor release the Contractor from any obligations or liabilities under the Contract.

120 WORKMANSHIP SKILLS

- Operatives: Appropriately skilled and experienced for the type and quality of work.
- Registration: With FAS Construction Skills Certification Scheme or equivalent programme recognised by FAS.
- Evidence: When requested, operatives must produce a card containing the following details:
 - Name of the registering body.
 - Registration number.
 - Expiry date.
 - Contact details of issuing body.
 - Holder's name and photograph.

130 QUALITY OF PRODUCTS

- Generally: New. (Proposals for recycled products may be considered).
- Supply of each product: From the same source or manufacturer.
- Whole quantity of each product required to complete the Works: Consistent in kind, size, quality and overall appearance.
- Tolerances: Where critical, measure a sufficient quantity to determine compliance.
- Deterioration: Prevent. Order in suitable quantities to a programme and use in appropriate sequence.

135 QUALITY OF EXECUTION

- Generally: Fix, apply, install or lay products securely, accurately, plumb, neatly and in alignment.
- Colour batching: Do not use different colour batches where they can be seen together.
- Dimensions: Check on-site dimensions.
- Finished work: Not defective, e.g. not damaged, disfigured, dirty, faulty, or out of tolerance.
- Location and fixing of products: Adjust joints open to view so they are even and regular.

140 COMPLIANCE

- Compliance with proprietary specifications: Retain on site evidence that the proprietary product specified has been supplied.
- Compliance with performance specifications: Submit evidence of compliance, including test reports indicating:
 - Properties tested.
 - Pass/ fail criteria.
 - Test methods and procedures.
 - Test results.
 - Identity of testing agency.
 - Test dates and times.
 - Identities of witnesses.

- Analysis of results.

150 INSPECTIONS

- Products and executions: Inspection or any other action must not be taken as approval unless confirmed in writing referring to:
 - Date of inspection.
 - Part of the work inspected.
 - Respects or characteristics which are approved.
 - Extent and purpose of the approval.
 - Any associated conditions.

155 PROTECTION OF THE WORKS INCLUDING ALL PRODUCTS

The Works including all products shall be protected including:

- Prevent over-stressing, distortion and any other type of physical damage.
- Keep clean and free from contamination. Prevent staining, chipping, scratching or other disfigurement, particularly of products exposed to view in the finished work.
- Keep dry and in a suitably low humidity atmosphere to prevent premature setting, moisture movement and similar defects. Where appropriate store off the ground and allow free air movement around and between stored products.
- Prevent excessively high or low temperatures and rapid changes of temperature in the products.
- Protect adequately from rain, damp, frost, sun and other elements as appropriate. Ensure that products are at a suitable temperature and moisture content at time of use.
- Ensure that sheds and covers are of ample size, in good weatherproof condition and well secured.
- Keep different types and grades of products separately and adequately identified.
- So far as possible keep products in their original wrappings, packings or containers, with unbroken seals, until immediately before they are used.
- Wherever possible retain protective wrappings after fixing and until shortly before Substantial Completion.

160 RELATED WORK

- Details: Provide all trades with necessary details of related types of work. Before starting each new type or section of work ensure previous related work is:
 - Appropriately complete.
 - In accordance with the project documents.
 - To a suitable standard.
 - In a suitable condition to receive the new work.
- Preparatory work: Ensure all necessary preparatory work has been carried out.

170 MANUFACTURER'S RECOMMENDATIONS/ INSTRUCTIONS

- General: Comply with manufacturer's printed recommendations and instructions current on the date of the Invitation to tender.
- Changes to recommendations or instructions: Submit details.
- Ancillary products and accessories: Use those supplied or recommended by main product manufacturer.

180 WATER FOR THE WORKS

- Mains supply: Clean and uncontaminated.
- Other: If proposed, provide evidence of suitability.

SAMPLES/ APPROVALS

210A SAMPLES

- Products or executions: Comply with all other specification requirements and in respect of the stated or implied characteristics either:
 - To an express approval.
 - To match a sample expressly approved as a standard for the purpose.
- Provide the following samples (in addition to the ones identified in Clause 215 below and elsewhere in the Works Requirements)
 - Proposed ironmongery
 - Skirtings
 - Swatch samples of floor sheet coverings
 - Natural slate – where additional slates are required (if existing reclaimed slates are not sufficient to finish the roof then samples of the proposed slate to be presented in view next to existing slates).

The Contractor shall provide samples of specific materials and components as stipulated in the specific specification sections / clauses (e.g. Section F10, M20, etc).

210B SPECIFIC COMPOSITE SAMPLES TO BE PROVIDED BY THE CONTRACTOR FOR REFERENCE PURPOSES

- The Contractor shall construct the following composite sample panels which are to be constructed early in the project and retained for the duration until such time as the Architect directs that they can be removed. The purpose of the composite samples is to demonstrate quality control and installation measures for elements where there is an overlap of trades:
 - SAMPLE 'A': sample detail showing a sample/ first section of the external insulation added to the existing wall and proposed external render.

- SAMPLE 'B': first section of roof finish replacement including felt, battens and slates (reclaimed from site).

220 APPROVAL OF PRODUCTS

- Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
- Approval: Relates to a sample of the product and not to the product as used in the Works. Do not confirm orders or use the product until approval of the sample has been obtained.
- Complying sample: Retain in good, clean condition on site. Remove when no longer required.

230 APPROVAL OF EXECUTION

- Submissions, samples, inspections and tests: Undertake or arrange to suit the Works programme.
- Approval: Relates to the stated characteristics of the sample. (If approval of the finished work as a whole is required this is specified separately). Do not conceal, or proceed with affected work until compliance with requirements is confirmed.
- Complying sample: Retain in good, clean condition on site. Remove when no longer required.

ACCURACY/ SETTING OUT GENERALLY

320 SETTING OUT

- General: Submit details of methods and equipment to be used in setting out the Works.
- Levels and dimensions: Check and record the results on a copy of drawings. Notify discrepancies and obtain instructions before proceeding.
- Inform: When complete and before commencing construction.

330 APPEARANCE AND FIT

- Tolerances and dimensions: If likely to be critical to execution or difficult to achieve, as early as possible either:
 - Submit proposals; or
 - Arrange for inspection of appearance of relevant aspects of partially finished work.

340 CRITICAL DIMENSIONS

- Critical dimensions: Set out and construct the Works to ensure compliance with the tolerances stated.
- Location: Detailed on drawings

The required tolerances for the various trades are set out in the technical guidance referred to in the specification clause; however, it should be noted that following dimensions are critical:

- Internal door widths
- Internal walls
- Window ope fit
- Flatness and level of floors.

350A LEVELS FLOORS

- Maximum tolerances for designed levels to be:
 - Floors to be self-finished, and floors to receive sheet or tile finishes directly bedded in adhesive: 3mm. Floor junction between kitchen and living space to have self-levelling compound applied where required.

SERVICES GENERALLY

410 SERVICES REGULATIONS

- New or existing services: Comply with the Byelaws or Regulations of the relevant Statutory Authority.

420 WATER REGULATIONS/ BYELAWS NOTIFICATION

- Requirements: Notify Local Authority responsible for the water supply of any work carried out to or which affects new or existing services and submit any required plans, diagrams and details.
- Consent: Allow adequate time to receive all necessary consent before starting work. Inform immediately if consent is withheld or is granted subject to significant conditions.

450 MECHANICAL AND ELECTRICAL SERVICES

- Final tests and commissioning: Carry out so that services are in full working order at completion of the Works.
- Confirmation: All systems must be commissioned in accordance with approved procedures.
- Records: Copies to be lodged in Safety File.

SUPERVISION/ INSPECTION/ DEFECTIVE WORK

540 DEFECTS IN EXISTING WORK

- Undocumented defects: When discovered, immediately give notice. Do not proceed with affected related work until response has been received.
- Documented remedial work: Do not execute work which may:
 - Hinder access to defective products or work; or
 - Be rendered abortive by remedial work.

560 TESTS AND INSPECTIONS

- Timing: Agree and record dates and times of tests and inspections to enable all affected parties to be represented.
- Confirmation: One working day prior to each such test or inspection. If sample or test is not ready, agree a new date and time.
- Records: Submit a copy of test certificates and retain copies on site.

570A AIR PERMEABILITY

- Testing Organization: INAB Accredited.
- Method: Pressure test to IS EN ISO 9972:2015.

Permeability:

- Air changes per hour: 0.15
- Air leakage rate (maximum): 3.0 m³/hr/m² @ 50Pa.

Results: Submit no later than seven days following final test.

- Content: Include test results and all supporting data.
- Format: pdf by email.
- Number of copies: 1 Include also in building manual.

595 BUILDING ENERGY RATING

- Assessment: Undertaken by a person registered with the National Register of BER Assessors. Submit registration details and evidence of qualifications when requested.
- Building Type: Dwelling.
- Certificate: To be lodged in Safety File.
- Submit: Before the date for completion stated in the contract.

620 MEASURES TO ESTABLISH ACCEPTABILITY

- General: Wherever inspection or testing shows that the work, materials or goods are not in accordance with the contract and measures (e.g. testing, opening up, experimental making good) are taken to help in establishing whether or not the work is acceptable, such measures:
 - Will be at the expense of the Contractor.
 - Will not be considered as grounds for revision of the completion date.

WORK AT OR AFTER COMPLETION

710 WORK BEFORE COMPLETION

- General: Make good all damage consequent upon the work.
- Temporary markings, coverings and protective wrappings: Remove unless otherwise instructed.
- Cleaning: Clean the works thoroughly inside and out, including all accessible ducts and voids. Remove all splashes, deposits, efflorescence, rubbish and surplus materials.
- Cleaning materials and methods: As recommended by manufacturers of products being cleaned, and must not damage or disfigure other materials or construction.
- Minor faults: Touch up in newly painted work, carefully matching colour and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.
- Moving parts of new work: Adjust, ease and lubricate as necessary to ensure easy and efficient operation, including doors, windows, drawers, ironmongery, appliances, valves and controls.

720 SECURITY AT COMPLETION

- General: Leave the Works secure with, where appropriate, all accesses closed and locked.
- Keys: Account for and adequately label all keys and hand over together with an itemized schedule, retaining duplicate schedule signed as a receipt.

730 MAKING GOOD DEFECTS

- Remedial work: When defect reported, arrange with Employer's Representative. Contractor to submit remedial proposal for approval. Once approved, undertake remedial work and offer element of the Works to the relevant designer (ER, Engineer, etc) for assessment BEFORE proceeding with subsequent trades..
- Rectification: Give reasonable notice for access to the various parts of the Works.
- Completion: Notify when remedial works have been completed.

A34 SECURITY/ SAFETY/ PROTECTION

SECURITY, HEALTH AND SAFETY

120A EXECUTION HAZARDS

- Common hazards: Not listed. Control by good management and site practice.
- Significant hazards: The design of the project includes the following:
 - Hazard: Refer to the preliminary health and safety plan and associated risk assessments.

130 PRODUCT HAZARDS

- Hazardous substances: Site personnel levels must not exceed occupational exposure standards and maximum exposure limits stated in Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001.
- Common hazards: Not listed, controlled by good management and site practice.
- Significant hazards: Specified construction materials include the following:
 - Hazard: Refer to the preliminary health and safety plan and associated risk assessments. .
 - Material: Refer to the preliminary health and safety plan and associated risk assessments. .
 - Specification reference: n/a .

140 SAFETY AND HEALTH PLAN CONSTRUCTION PHASE

- Submission: Present to the Employer/ Client no later than one week before commencement on site.
- Confirmation: Do not start construction work until the Employer has confirmed in writing that the Safety and Health Plan for the construction stage includes the procedures and arrangements required by the Safety, Health and Welfare at Work (Construction) Regulations.
- Content: Develop the plan from and draw on the Outline Construction Phase Safety and Health Plan, clause A30/570, and the information communicated by the Project Supervisor Design process.

COVID 19 REQUIRMENTS

In this section, "Covid-19 Requirements" means any and all public health measures for the purpose of preventing, limiting, minimising or slowing the spread of Covid-19 or to deal with public health risks arising from the spread of Covid-19, including but not limited to, measures enacted pursuant to the Health (Preservation and Protection and other Emergency Measures in the Public Interest) Act 2020 and any and all legislation pursuant thereto (including but not limited to the Health Act 1947 (Section 31A–Temporary Restrictions) (Covid-19) Regulations 2020), as may be amended, modified or extended from time to time, and any relevant guidance or documentation issued in respect of the foregoing public health measures by the government of Ireland (or any department thereof), by public authorities or by statutory bodies. The Contractor shall, without adjustment to the Contract Sum or extension of time and without limiting the Contractor's other obligations, comply with all Covid-19

Requirements and all reasonable directions of the Employer or the Employer’s Representative given in relation to or in furtherance of the Covid-19 Requirements in respect of the Works.

The Contractor confirms that it has allocated and will continue to allocate sufficient resources to enable itself to comply with the Covid-19 Requirements and with its obligations under this section and confirms that it has made sufficient provision in both its Contract Sum and its programme for its compliance with these obligations.

Strictly without prejudice to the generality of the foregoing, the Contractor shall:

- Ensure that its safety statements, risk assessments and method statements comply with the Covid-19 Requirements;
- Implement social distancing, or physical distancing, by maintaining a physical distance between persons on Site and reducing the number of times persons come into close contact with each other;
- Implement appropriate measures on Site to protect the Contractor, the Contractor’s Personnel and, where applicable, its Subcontractors and ensure that all persons understand how to work safely and in compliance with the Covid-19 Requirements;
- Provide and maintain of adequate hygiene and welfare facilities with satisfactory provisions for breaks/meal times which comply with Covid-19 Requirements;
- Ensure that there is adequate oversight and supervision of the Works to monitor compliance with health and safety requirements (including the Construction Regulations), the Works Requirements and Building Control Regulations;
- Monitor and maintain adequate supply chains for materials, plant, Works Items and Contractor’s to ensure that the Works are executed and completed in accordance with all the requirements of the Contract in order to achieve Substantial Completion of the Works and each Section by its Date for Substantial Completion.”

SAFETY AND HEALTH PLAN CONSTRUCTION PHASE

150 SECURITY

- Protection: Safeguard the site, the Works, products, materials, and any existing buildings affected by the Works from damage and theft.
- Access: Take all reasonable precautions to prevent unauthorized access to the site, the Works and adjoining property.
- Special requirements: none.

160 STABILITY

- Responsibility: Maintain the stability and structural integrity of the Works and adjacent structures during the Contract.
- Design loads: Obtain details, support as necessary and prevent overloading.

210 EMPLOYER'S REPRESENTATIVE SITE VISITS

- Safety: Submit details in advance, to the Employer or the person identified in clause A10/140, of safety provisions and procedures (including those relating to materials, which may be deleterious), which will require their compliance when visiting the site.
- Protective clothing and/ or equipment: Provide and maintain on site for the Employer and the person stated in clause A10/140 and other visitors to the site.

PROTECT AGAINST THE FOLLOWING

330 NOISE AND VIBRATION

- Standard: Comply with the provisions of the Safety Health and Welfare at Work (General Application) Regulations during the execution of the Works.
- Percussion tools and other noisy appliances: Do not use without consent during the hours of 18:00 until 09:00 the following day, Monday to Friday, exclusive of Public holidays / Bank holidays.
- Radios or other audio equipment: Do not use or permit employees to use in ways or at times that may cause nuisance.

340 POLLUTION

- Prevention: Protect the site, the Works and the general environment including streams and waterways against pollution.
- Contamination: If pollution occurs inform immediately, including to the appropriate Authorities and provide relevant information.

350 PESTICIDES

- Use: Not permitted.

370A ASBESTOS CONTAINING MATERIAL- None identified – refer to Asbestos Survey

- Whilst no Asbestos Containing Materials were identified during the survey the contractor is to note the areas that weren't tested and to be aware when uncovering hidden materials in particular in case any suspected materials are discovered.
- Duty: Report immediately any suspected materials discovered during execution of the works.
 - Do not disturb.
 - Agree methods for safe removal or encapsulation.
- Notification: To the HSA 28 days before any asbestos is removed.

371 DANGEROUS OR HAZARDOUS SUBSTANCES

- Duty: Report immediately suspected materials discovered during execution of the Works.
 - Do not disturb.
 - Agree methods for safe removal or remediation.

380 FIRE PREVENTION

- Duty: Prevent personal injury, death, and damage to the Works or other property from fire.

- Standard: Comply with Joint Code of Practice 'Fire Prevention on Construction Sites', published by Construction Industry Publications and The Fire Protection Association (The "Joint Fire Code").

390 SMOKING ON SITE

- Smoking on site: Not permitted.

400 BURNING ON SITE

- Burning on site: Not permitted.

410 MOISTURE

- Wetness or dampness: Prevent, where this may cause damage to the Works.
- Drying out: Control humidity and the application of heat to prevent:
 - Blistering and failure of adhesion.
 - Damage due to trapped moisture.
 - Excessive movement.

420 INFECTED TIMBER/ CONTAMINATED MATERIALS

- Removal: Where instructed to remove material affected by fungal/ insect attack from the building, minimize the risk of infecting other parts of the building.
- Testing: carry out and keep records of appropriate tests to demonstrate that hazards presented by concentrations of airborne particles, toxins and other micro organisms are within acceptable levels.

430A WASTE INCLUDING THE REQUIREMENTS OF MONAGHAN COUNTY COUNCIL ENVIRONMENTAL SECTION

- Includes: Rubbish, debris, spoil, surplus material, containers and packaging.
- General: Minimize production. Keep the site and Works clean and tidy.
- Handling: Collect and store in suitable containers. Remove frequently and dispose off site in a manner approved by the Local Authority by holders of:
 - A waste collection permit issued by the Waste Management Authority.
 - A license issued by the Environment Protection Agency for specified waste recovery and disposal activities.
 - A permit from a local authority or certificate of registration from the EPA/ local authority.
- Recyclable material: Sort and dispose at a Materials Recycling Facility approved by the Waste Management Authority.
- Voids and cavities in the construction: Remove rubbish, dirt and residues before closing in.
- Waste transfer documentation: Retain on site.

440 ELECTROMAGNETIC INTERFERENCE

- Duty: Prevent excessive electromagnetic disturbance to apparatus outside the site.

460 POWDER ACTUATED FIXING SYSTEMS

- Use: Not permitted.

470 INVASIVE SPECIES

- General: Prevent the spread of species (e.g. plants or animals) that may adversely affect the site or Works economically, environmentally or ecologically.
- Special precautions: none.
- Duty: Report immediately any suspected invasive species discovered during execution of the Works.
 - Do not disturb.
 - Agree methods for safe eradication or removal.

PROTECT THE FOLLOWING

510 EXISTING SERVICES

- Confirmation: Notify all service providers, statutory authorities and/ or adjacent owners of proposed works not less than one week before commencing site operations.
- Identification: Before starting work, check and mark positions of utilities/ services. Where positions are not shown on drawings obtain relevant details from service providers, statutory authorities or other owners.
- Work adjacent to services:
 - Comply with service provider's/ statutory authority's recommendations.
 - Adequately protect, and prevent damage to services: Do not interfere with their operation without consent of service providers/ statutory authorities or other owners.
- Identifying services:
 - Below ground: Use signboards, giving type and depth.
 - Overhead: Use headroom markers.
- Damage to services: If any results from the execution of the Works:
 - Immediately give notice and notify appropriate service provider/ statutory authority.
 - Make arrangements for the work to be made good without delay to the satisfaction of service provider/ statutory authority or other owner as appropriate.
 - Any measures taken to deal with an emergency will not affect the extent of the Contractor's liability.
- Marker tapes or protective covers: Replace if disturbed during site operations to service provider's/ statutory authority's recommendations.

520 ROADS AND FOOTPATHS

- Duty: Maintain roads and footpaths within and adjacent to the site and keep clear of mud and debris.
- Damage caused by site traffic or otherwise consequent upon the Works: Make good to the satisfaction of the Employer, Local Authority or other owner.

540 RETAINED TREES/ SHRUBS/ GRASSED AREAS

- Protection: Preserve and prevent damage, except those not required.
- Replacement: Mature trees and shrubs if uprooted, destroyed, or damaged beyond reasonable chance of survival in their original shape, as a consequence of the Contractor's negligence, must be replaced with those of a similar type and age at the Contractor's expense.

555 WILDLIFE SPECIES AND HABITATS

- General: Safeguard the following: all wildlife species and habitats.
- Protected habitats and species: Upon discovery immediately advise. Do not proceed until instruction is received.
- Education: Ensure employees and visitors to the site receive suitable instruction and awareness training.

560 EXISTING FEATURES

- Protection: Prevent damage to existing buildings, fences, gates, walls, roads, paved areas and other site features, which are to remain in position during execution of the Works.
- Special requirements: -.

570 EXISTING WORK

- Protection: Prevent damage to existing work, structures or other property during the course of the work.
- Removal: Minimum amount necessary.
- Replacement work: To match existing.

580 BUILDING INTERIORS

- Protection: Prevent damage from exposure to the environment, including weather, flora, fauna, and other causes of material degradation during the course of the work.

620 ADJOINING PROPERTY

- Permission: Obtain as necessary from owners if requiring to erect scaffolding on or otherwise use adjoining property.

630 EXISTING STRUCTURES

- Duty: Check proposed methods of work for effects on adjacent structures inside and outside the site boundary.
- Supports: During execution of the Works:
 - Provide and maintain all incidental shoring, strutting, needling and other supports as may be necessary to preserve stability of existing structures on the site or adjoining, that may be endangered or affected by the Works.
 - Do not remove until new work is strong enough to support existing structure.
 - Prevent overstressing of completed work when removing supports.
- Adjacent structures: Monitor and immediately report excessive movement.

640 MATERIALS FOR RECYCLING/ REUSE

- Duty: Sort and prevent damage to stated products or materials, clean off bedding and jointing materials and other contaminants.
- Storage: Stack neatly and protect until required by the Employer or for use in the Works as instructed.

A35 SPECIFIC LIMITATIONS ON METHOD/ SEQUENCE/ TIMING

130 METHOD/ SEQUENCE OF WORK

- Specific Limitations: Include the following in the programme:

There are no limitations on the sequence / timing or methods of work provided same complies with the Works Requirements, Conditions of Contract and the contractors approved methodology.

- Phasing to be agreed in advance with Employer's Representative.

140 SCAFFOLDING

- Standing scaffolding: Make available to subcontractors at all times.

170 WORKING HOURS

- Specific limitations: The Works shall be carried out between 8.00am and 6pm Monday to Friday and 8:00-2pm on Saturdays. No night or Sunday work or work on Public Holidays / Bank Holidays permissible without prior written consent of the local authority and the ER.

A36 FACILITIES/ TEMPORARY WORK/ SERVICES

GENERALLY

110 SPOIL HEAPS, TEMPORARY WORKS AND SERVICES

- Location: Give notice and details of intended siting.
- Maintenance: Alter, adapt and move as necessary. Remove when no longer required and make good.

ACCOMMODATION

210 ROOM FOR MEETINGS

- Facilities: Provide suitable temporary accommodation for site meetings, adequately heated and lit. The room may be part of the Contractor's own site offices.
- Furniture and Equipment: Provide table and chairs for 10no. people.

260 SANITARY ACCOMMODATION

- Requirement: Provide sanitary accommodation for the Employer/ Purchaser, and other members of the consultant team, either separate or shared with the Contractor's supervisory staff. Maintain in clean condition and provide all consumables.

290 PARKING

- Provide and maintain exclusively for use by Employer's representatives: 3no..

TEMPORARY WORKS

320 TEMPORARY WORKS

- Employer's specific requirements: Provide: If any of the demolition/ removal of existing elements requires temporary support during construction then the contractor will be required to retain a suitably qualified Structural Engineer to provide temporary support designs and calculation to the Employer's Representation, in advance of execution. The designs will require a supplemental and detailed method statement confirming (as a minimum) the following:
 1. Photographic survey of the existing building in advance of demolition
 2. Risk assessment on building and risk avoidance measures
 3. Photographic survey of the adjacent retained building – permission required
 4. Direction on the interference with shared drainage, water, electrical, telecommunication services and a detailed narrative on the avoidance or limitation of interference with the utilities on adjacent properties during the works.
 5. Modus operandi of proposed designs, detailing interference with adjacent building
 6. Risk analysis based on proposed design and methods employed to limit / mitigate or avoid damage to adjacent building structures.
 7. Method of continued execution of building works, adapting support and removal on completion

8. Agreement with the adjacent land owner (or their agent, if one is appointed) that the proposed solution has been clearly detailed and explained.
9. Active communication procedures for the adjacent land owner in the event of need
 - 10. Adequate health and safety documentation
 - 11. Programming of works and integration in the main program with lead-in times noted. Any licences, utility relocation applications, service users' notifications should be identified on the program (with a note as to the responsibility for application being delivered in a timely manner)

Methodology for Temporary Support

The contractor is responsible for the design and implementation of all temporary supports.

SERVICES AND FACILITIES

410 LIGHTING

- Finishing work and inspection: Provide temporary lighting, the intensity and direction of which closely resembles that delivered by the permanent installation.

420A LIGHTING AND POWER

- Supply: Electricity from the existing mains may be used for the Works to be arranged by the Contractor for the site.

Continuity: No responsibility will be accepted for the consequences of failure or restriction in supply.

430A WATER

- Supply: The existing mains may be used for the Works to be arranged by the Contractor for the site.
- Continuity: No responsibility will be accepted for the consequences of failure or restriction in supply.

440 MOBILE TELEPHONES

- Direct communication: As soon as practicable after the start on site:
 - provide the Contractor's person in charge with a mobile telephone.
 - pay all charges reasonably incurred.

470 E-MAIL AND INTERNET FACILITY

- General: As soon as practicable after the start on site provide a suitable e-mail facility on site, with a separate dedicated telephone line, for the use of the Contractor, Subcontractors and those acting on behalf of the Employer.
- Use on behalf of Employer: Allow for the cost of a reasonable number of transmissions made by those acting on behalf of the Employer.

520 USE OF PERMANENT HEATING SYSTEM

- Permanent heating installation: May be used for drying out the Works/ services and controlling temperature and humidity levels.
- Installation: If used:
 - Take responsibility for operation, maintenance and remedial work.
 - Arrange supervision by and indemnification of the appropriate Subcontractors.
 - Pay costs arising.

530 BENEFICIAL USE OF INSTALLED SYSTEMS

- Permanent systems: Unless specific permission is given by the Employer and installer, do not use for any purpose other than running in, testing and commissioning.
- Other uses: If permission is given for any other use of a system before Practical Completion of the Works it must be subject to a separate written agreement between the parties

540 METER READINGS

- Charges for service supplies: Where to be apportioned ensure that:
 - Meter readings are taken by relevant authority at possession and/ or completion as appropriate.
 - Copies of readings are supplied to interested parties.

550 THERMOMETERS

- General: Provide on site and maintain in accurate condition a maximum and minimum thermometer for measuring atmospheric shade temperature, in an approved location.

570 PERSONAL PROTECTIVE EQUIPMENT

- General: Provide for the sole use of those acting on behalf of the Employer, in sizes to be specified:
 - Safety helmets to IS EN 397, neither damaged nor time expired. Number required: 4no..
 - High visibility waistcoats to IS EN 471 Class 2. Number required: 4no.
 - Safety boots with steel insole and toecap to IS EN ISO 20345. Pairs required: 4no.
 - Disposable respirators to IS EN 149.FFP1S.
 - Eye protection to IS EN 166.
 - Ear protection - muffs to IS EN 352-1, plugs to IS EN 352-2
 - Hand protection - to IS EN 388, 407, 420 or 511 as appropriate.

A37 OPERATION/ MAINTENANCE OF THE FINISHED WORKS

GENERALLY

105 THE BUILDING MANUAL

- Responsibility: To be produced by the Contractor and provided to the PSDP.
- General: Obtain and provide comprehensive information for owners and users of the completed Works including all buildings and their systems, to enable efficient and safe operation and maintenance.
- Content:
 - Building fabric: Design criteria for contractor designed elements, manufacturer's instructions for cleaning, repair and maintenance of products.
 - Building services: Description and operation of systems, diagrammatic drawings, record drawings, identification of services, product details, equipment settings, maintenance schedules, consumable items, spares and emergency procedures.
 - Documentation: Guarantees, warranties, maintenance agreements, test certificates and reports.
- Specific requirements: -.
- Format: Hard copy in lever arch files and electronic scanned copy.
- Number of copies: 1 hard copy and electronic copy on CD per unit.
- Delivery to: Project Supervisor Design Process by (date) 4 weeks prior to handover.

110 SAFETY FILE

- Purpose: To provide information about the structure or materials used, which might affect the health or safety of anyone if construction works, (including cleaning, maintenance, alterations, refurbishment and demolition) is carried out.
- Content: Obtain or prepare the following and submit to the Project Supervisor Design Process:
 - Construction drawings, specification and pricing documents used and produced throughout the construction process for all design work the Contractor is responsible for.
 - Maintenance facilities, procedures and requirements for the structure.
 - The nature, location and markings of utilities and services, including emergency and fire fighting.
 - Manuals and certificates produced by specialist contractors and suppliers which outline operating and maintenance procedures and schedules for products and equipment installed as part of the structure (typically lifts, electrical and mechanical installations, pressure vessels, control and instrumentation systems, window cleaning facilities).
 - Manuals, certificates and instructions for dismantling and removal of products, equipment and systems.
 - Details of hazards associated with products and executions used in the construction.
 - Access requirements/ restrictions.
 - Authorities and statutory undertakers plus copies of consents and approvals.

- Contractors, subcontractors, suppliers and manufacturers including name and number of individuals to be contacted in case of emergency.
 - The fire safety strategy for the buildings and site: Include drawings showing fire appliance routes, emergency escape routes, fire resisting doors, location of emergency and fire fighting systems, services shut-off valves, switches, etc.
- .
- Submit: Within two weeks of request from Project Supervisor Design Process.

210 INFORMATION FOR COMMISSIONING OF SERVICES

- General: Submit relevant drawings and preliminary performance data to enable the building user's staff to familiarise themselves with the installation.
- Time of submission: At commencement of commissioning.

220A TRAINING AND INDUCTION

- Objective: Before completion, explain and demonstrate to the Employer's maintenance staff and occupants of the units the purpose, function and operation of the installations including items and procedures listed in the Safety File.
- Contractor to allow for a minimum of 4no. training and induction days over the course of two weeks, the scheduling of which is to be agreed with the employers representative. Induction to cover each individual unit and landlord areas.

C

Demolition/ Alteration/ Renovation

C20

Demolition

C20 Demolition

To be read with Preliminaries/ General conditions

GENERAL REQUIREMENTS

110 DESK STUDY/ SURVEY

Scope: Before starting deconstruction/ demolition work, examine available information, and carry out a survey of:

the structure or structures to be deconstructed/ demolished,
the site on which the structure or structures stand, and
the surrounding area.

Report and method statements: Submit, describing:

Form, condition and details of the structure or structures, the site, and the surrounding area.

Extent: As indicated on architects drawings

Condition report upon adjacent properties to be carried out.

Type, location and condition of features of historical, archaeological, geological or ecological importance.

Type, location and condition of adjoining or surrounding premises that might be adversely affected by removal of the structure or structures, or by noise, vibration and/ or dust generated during deconstruction/ demolition.

Identity and location of services above and below ground, including those required for the Contractor's use, and arrangements for their disconnection and removal.

Form and location of flammable, toxic or hazardous materials, including lead-based paint, and proposed methods for their removal and disposal.

Form and location of materials identified for reuse or recycling, and proposed methods for removal and temporary storage.

Proposed programme of work, including sequence and methods of deconstruction/ demolition.

Details of specific pre-weakening required.

Arrangements for protection of personnel and the general public, including exclusion of unauthorized persons.

Arrangements for control of site transport and traffic.

Special requirements: Site waste management plan development and proposals and Structural calculations in support of method statements.

Format of report: electronic submission.

120 EXTENT OF DECONSTRUCTION/ DEMOLITION

General:

- Removal of existing window & door units
- Dismantling of frames, trims, sills
- Potential need to retain or protect reveals or lintels
- Openings to be prepared to receive new aluminium-framed units.

- All debris to be removed from the site.
- Structural openings to remain unaltered unless noted otherwise on drawings.
- Removal & extension of existing electrical services internally and placed on new finished walls
- Careful removal of perimeter joinery along external walls to allow for drylining and reconfiguring and reinstatement of units on completion of works
- Removal of entire heating system and distribution heaters.
- Removal of ceiling tiles

SERVICES AFFECTED BY DECONSTRUCTION/ DEMOLITION

210 SERVICES REGULATIONS

Work carried out to or affecting new and/ or existing services: Carry out in accordance with the byelaws and/ or regulations of the relevant Statutory Authority.

220 LOCATION OF SERVICES

Services affected by deconstruction/ demolition work: Locate and mark positions.

Mains services marking: Arrange with the appropriate authorities for services to be located and marked.

Marking standard: In accordance with National Joint Utilities Group 'Guidelines on the positioning and colour coding of underground utilities' apparatus'.

230 SERVICES DISCONNECTION ARRANGED BY CONTRACTOR

General: Arrange with the appropriate authorities for disconnection of services and removal of fittings and equipment owned by those authorities prior to starting deconstruction/ demolition.

240 DISCONNECTION OF DRAINS

General: Locate, disconnect and seal disused foul and surface water drains.

Sealing: Permanent, and within the site.

250 LIVE FOUL AND SURFACE WATER DRAINS

Drains and associated manholes, inspection chambers, gullies, vent pipes and fittings:

Protect; maintain normal flow during deconstruction/ demolition.

Make good any damage arising from deconstruction/ demolition work.

Leave clean and in working order at completion of deconstruction/ demolition work.

Other requirements: Post completion camera survey.

260 SERVICE BYPASS CONNECTIONS

General: Provide as necessary to maintain continuity of services to occupied areas of the site on which the deconstruction/ demolition is taking place and to adjoining sites/ properties.

Minimum notice to adjoining owners and all affected occupiers: 72 hours, if shutdown is necessary during changeover.

270 SERVICES TO BE RETAINED

Damage to services: Give notice, and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction/ demolition.

Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner.

DECONSTRUCTION/ DEMOLITION WORK

310 WORKMANSHIP

Standard: Demolish structures in accordance with BS 6187.

Operatives:

Appropriately skilled and experienced for the type of work.

Holding, or in training to obtain, relevant CITB Certificates of Competence.

Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

320 GAS OR VAPOUR RISKS

Precautions: Prevent fire and/ or explosion caused by gas and/ or vapour from tanks, pipes, etc.

330 DUST CONTROL

General: Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.

Lead dust: Submit method statement for control, containment and clean-up regimes.

340 HEALTH HAZARDS

Precautions: Protect site operatives and general public from hazards associated with vibration, dangerous fumes and dust arising during the course of the Works.

350 ADJOINING PROPERTY

Temporary support and protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.

Defects: Report immediately on discovery.

Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.

Support to foundations: Do not disturb.

380 DANGEROUS OPENINGS

General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.

Access: Prevent access by unauthorized persons.

390 ASBESTOS-CONTAINING MATERIALS – None Known

General: Materials containing asbestos were not identified in the survey. Asbestos report included in the Volume D Information Pack

Removal: If any identified during the works, by contractor licensed by the Health and Safety Executive, and prior to other works starting in these locations.

391 ASBESTOS-CONTAINING MATERIALS – UNKNOWN OCCURRENCES

Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.

Removal: Submit statutory risk assessments and details of proposed methods for safe removal.

410 UNFORESEEN HAZARDS

Discovery: Give notice immediately when hazards such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.

Removal: Submit details of proposed methods for filling, removal, etc.

442 SITE SURFACE AT COMPLETION

Levels: Grade the site to follow the levels of adjacent areas.

450 SITE CONDITION AT COMPLETION

Debris: Clear away and leave the site in a tidy condition.

Other requirements: none.

MATERIALS ARISING

510 CONTRACTOR'S PROPERTY

Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided. All items removed as part of the demolition works are to be approved for removal off site due to the heritage nature of the buildings.

Action: Remove from site as work proceeds where not to be reused or recycled for site use.

K10

Gypsum board dry linings/ partitions/ ceilings

K10 Gypsum board dry linings/ partitions/ ceilings

To be read in conjunction with all drawings, schedules, preliminaries and general specification sections.

125B INSULATED DRYLINING TO INTERNAL PERIMETER WALLS

Location

As indicated on drawings and schedules, including both ground floor and first floor external wall types.

Existing Wall Types

Wall Type 1 – Existing Masonry Cavity Wall

- External brick leaf.
- 40 mm cavity.
- 60 mm existing insulation board.
- 215 mm hollow core block inner leaf.

Wall Type 2 – Existing First Floor Panel Wall

- 100 mm Kingspan KS1000 insulated wall panel.
- Approximate 270 mm cavity.
- Existing internal plasterboard lining.

Proposed System

Provide an internally insulated drylining system comprising:

- 102.5 mm Kingspan Kooltherm K18 Insulated Plasterboard comprising 90 mm rigid phenolic insulation bonded to 12.5 mm tapered edge plasterboard.
- British Gypsum GyPLYNER UNIVERSAL adjustable wall lining system.
- Proprietary brackets, channels, studs, fixings, tapes, sealants, beads and accessories necessary to complete the installation.
- Installation strictly in accordance with the manufacturers' current recommendations.

Manufacturers

Insulated plasterboard:

- Kingspan Kooltherm K18 or equivalent approved.

Drylining framework:

- British Gypsum GyPLYNER UNIVERSAL or equivalent approved.

Thermal Performance

The completed wall upgrade system shall achieve a calculated elemental U-value of:

Not worse than 0.15 W/m²K

This requirement shall apply to all wall types.

Prior to commencement, the Contractor shall submit manufacturer-backed U-value calculations for each wall type demonstrating compliance with the specified performance.

Calculations shall include allowance for:

- Existing wall construction.
- Proposed insulated drylining system.
- Existing and proposed cavities.

- Mechanical support systems.
- Brackets, rails and fixings.
- Thermal bridging corrections.
- Surface resistances.

No alternative insulation product shall be accepted where it results in a wall U-value greater than 0.15 W/m²K.

Performance Requirements

Provide a complete insulated lining system to:

- Improve thermal performance of existing external walls.
- Minimise thermal bridging.
- Minimise uncontrolled air leakage.
- Provide a true, plumb and level finished surface suitable for skim plaster finish.
- Maintain continuity of insulation at junctions, reveals, returns and abutments.

Existing Substrate

Prior to installation:

- Inspect existing wall surfaces and linings.
- Report dampness, instability, contamination, damaged linings or defects likely to affect performance.
- Remove loose material and projections that may interfere with installation.
- Confirm substrate suitability for the proposed mechanical levelling system.
- Do not commence installation until defects have been rectified.

Framework Installation

Install British Gypsum GyPlYner UNIVERSAL framework, or equivalent approved, comprising proprietary adjustable brackets, channels, studs and associated components.

Framework shall:

- Be mechanically fixed to suitable structural substrate.
- Accommodate substrate irregularities.
- Provide a plumb and level support system.
- Be suitable for supporting 102.5 mm insulated plasterboard.
- Be installed in accordance with the manufacturer's recommendations.

Maximum bracket centres, stud centres and fixing centres shall comply with the manufacturer's recommendations.

Fixings shall be selected to suit the substrate type.

First Floor Panel Wall Installation

At first floor KS1000 panel wall locations:

- Verify existing construction, cavity depth and fixing substrate prior to commencement.
- Agree fixing methodology with the drylining system manufacturer.
- Do not fix into panel facings unless confirmed suitable by the panel manufacturer or specialist contractor.
- Maintain existing cavity configuration unless otherwise approved.
- Ensure the proposed lining does not adversely affect the integrity or performance of the existing wall panel system.

Insulated Plasterboard Installation

Fix insulated plasterboard to the framework using proprietary fixings recommended by the board and framework manufacturers.

Boards shall be:

- Closely butted.
- Fixed without distortion.
- Aligned to provide a continuous plane.
- Installed in accordance with manufacturer's recommendations.
- Protected from moisture and damage.

Damaged boards shall not be incorporated into the works.

Window and Door Reveals

Provide:

- 37.5 mm Kingspan Kooltherm K18 insulated plasterboard to window and door reveals unless otherwise noted.

Installation:

- Mechanically fix reveal boards.
- Maintain continuity of insulation between wall lining and reveal insulation.
- Form neat, square and true openings.

Where reveal dimensions do not permit installation of the specified thickness, submit alternative proposals for approval prior to installation.

Thermal Bridging

Provide:

- Minimum 37.5 mm Kingspan Kooltherm K18 insulated plasterboard extending not less than 400 mm along adjoining internal walls at junctions with external walls.
- Continuous insulation around structural penetrations and other thermal bridges.

Insulation shall be tightly butted with no gaps.

Seal all gaps using approved airtightness products, flexible sealants or low-expansion polyurethane foam.

Airtightness

Provide continuous airtight seals at:

- Floor junctions.
- Ceiling junctions.
- Window and door frames.
- Service penetrations.
- Board perimeters.
- Interfaces with adjoining construction.
- Junctions between differing wall types.

All seals shall be continuous and free from gaps.

Ceiling Junctions

Trim or remove existing ceiling finishes locally where required to permit continuity of insulation to the wall head.

Maintain continuity of insulation and airtightness at all wall-to-ceiling interfaces.

Make good disturbed finishes on completion.

Joint Treatment and Finishing

Treat all board joints using proprietary tapes and jointing compounds recommended by the plasterboard manufacturer.

Apply gypsum skim finish:

- Thickness: 2–3 mm.

Finished surfaces shall be:

- Smooth.
- Flat.
- Free from hollows, trowel marks and abrupt changes in level.
- Suitable to receive decoration.

Tolerances

Maximum deviations measured in accordance with BS 8212:

- Across board joints: 3 mm.
- External corners: 4 mm.
- Internal corners: 5 mm.

Workmanship

Store materials dry and protected from damage.

Do not install moisture-damaged materials.

Complete installation in a neat and workmanlike manner.

Leave surfaces clean and ready for decoration.

Access Panels

Provide access panels where required for maintenance of concealed services.

Coordinate locations with the Architect prior to installation.

Provide additional framing and support as necessary.

L

Windows/Doors

L10

Windows

L10 Windows

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.

112 COMPETENCY

- The Contractor shall only employ a competent and highly skilled external glazing subcontractor to undertake the subcontract works.

114 DESIGN

- The subcontractor shall complete the detailing and design of the glazing package exercising reasonable skill, care and diligence and base their detail design on the performance criteria set out on in this specification and on the Architect's drawings and details.

114A WARRANTIES

The subcontractor shall sign and seal a Collateral Warranty with the Employer for the aluminium glazing works (windows and doors). The form of Warranty shall be the model form in the Project Particulars. The Warranty shall be provided upon completion of the glazing package and prior to Substantial Completion.

114B ANCILLARY CERTIFICATE

- Requirement: The subcontractor shall provide a signed ancillary certificate for the aluminium windows and doors, including all glazing.
- Form of Ancillary Certificate: Sd, Si and Sc Ancillary Certificate and Annex Schedule 1 and 2
- Element: Aluminium windows and doors, including all glazing.
- Commissioned by: (TBC)
- Specialist skill: External glazing specialist subcontractor
- Professional Indemnity Insurance Date: Insert date of renewal and attach details of cover

Specification Sections: L10, L40 & Z40

Drawings: Architect's window schedules and GA drawings series, Elevations drawings 1, and Detail Drawings

Building Regulations Part A1

Building Regulations Part B6

Building Regulations Part C4

Building Regulations Part D1 and D3

Building Regulations Part F1

Building Regulations Part L1 and L3

Building Regulations Part M1

Manufacturer's typical details, requirements and installation procedures

- Associated Design Undertaken by Subcontractor to be listed in Annex Schedule 2:
 - Completion of the detailed design of the external glazing systems including all interfaces, fixings, weathering, structural resistance, stability based on the Works Requirements
- Timing: Completed Sd Certificate including supporting documentation must be issued prior to fabrication. Completed Si and Sc Certificates including supporting documentation must be issued within 2 weeks of subcontract works being completed.
- Installation and / or Shop Drawings: Required for each and every junction of the system with its surrounds
- Collateral Warranty: Required

114C VENTILATION

Humidity sensitive air inlet to be installed to 1no. window in each habitable room in accordance with Clause U90 110A forming part of a demand control ventilation system.

Product: Aereco EMM2 or equivalent (EHM1275)

Thickness: 31mm

Width: 460mm

Opening Area: 3600mm²

Acoustic attenuation 33db

3 modes, minimum, automatic or maximum to adapt the airflow to the occupant's needs.

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: none.

130 SHOP DRAWINGS

A full set of shop drawings are to be completed and issued to the design team for approval, which shows all interfacing details with the building structure.

These details should indicate the specific aluminium system being used and the location where it is being used. The details are to show how water is kept out, drained, how the system is insulated, fixed, supported and made airtight. The details should take particular care to ensure that no risk of cold bridging exists. Appropriate thermal analysis software, such as Bisco or Flixo, is to be used to confirm the thermal efficiency of all interfacing details, aluminium profiles and glazing materials. All isolators and barriers are to be called up on these drawings, which are being used to prevent bimetallic corrosion. The air tightness tape and barrier line shall be clearly identified on the shop drawings. All the details are to be fully labelled, dated and revisions noted and approval of the design team shall be obtained prior to works commencing.

CONTROL SAMPLES

After finalising all details, prepare a sample window, fixed and top–hung, complete with all ironmongery, as part of the quantity required for the project, and obtain approval of appearance and workmanship by the Architect before proceeding with manufacture of the remaining quantity.

145 TESTING REQUIREMENTS AND BASIS FOR ASSESSMENT OF EQUIVALENCY PROPOSALS

- The Contractor is entitled to propose during the Contract an equivalency proposal for the named glazing systems. All references in Section L10 to a manufacturer are to be read as named “or equivalent”.
- The system has been named due the technical complexity of describing such a system which is not possible of doing in a complete manner without reference to the manufacturer's details, section profiles, thermal breaks, recommended fixings, preparation materials / methods, etc. The basis for the Architect's assessment for an equivalency proposal shall be on the following criteria / characteristics. In other words, this section of the specification sets out the performance criteria which an equivalent system must meet by way of Codes of Practice, classifications, test results, etc. An equivalency proposal must also meet all of the specific requirements of the specification as well.

- (A) The windows and glazed elements as drawn have been checked by the named manufacturer. Any proposed equivalent manufacturer must confirm that they have construct the glazed elements as drawn by the Architect with particular reference to the fenestration pattern and sight lines as drawn on the window schedules.
- (B) Details: Specified manufacturer's technical services has checked the Architect's current design details. Proposed equivalent system technical services to mark–up the Architect's design details with any proposed amendments as part of the equivalency assessment process.
- (C) CE Marking: System and all materials to have a CE marking.
- (D) The proposed window, rebate doors and curtain wall systems is to be fully independently tested to the following standards by a UKAS registered test laboratory using CWCT sequence of testing for building envelopes to the following minimum requirements. Test Reports to be made available on request by the architect. Window Minimum Test Standards for the window and glazing systems to be compliant with:

Tilt and turn window system:

Tested to BS 6375-1: 2015 & PAS 24:2016.

Air Classification – A4: 600 Pa.

Water Tightness – E1050: 1050 Pa.

Wind Resistance – E2400: 2400 Pa.

Security Test PAS 24: 2016 enhanced security test

Rebate door system open out doors:

Tested to BS 6375-1, PAS 23 and Pas 24.

Air Classification – Class 4: 600 Pa.

Water Tightness – Class E750: 750Pa.

Wind Resistance – Class E2400: 2400 Pa.

PAS 24-1: 2007+A1: 2009-Clause A.4

PAS 23-1: 1999- Clause 6.11&6.14

Pas 23 -1: 1999

Pas 24-1: 2007+A1: 2009

EN 1191: 2000, 1,000,000 cycles opening &closing and locking and unlocking

Tested to Pas 24: 2007 + A1: 2009, Enhanced security performance requirements for door assemblies

PRODUCTS

205A MATERIALS SPECIFICATION

- All profiles to be extruded from aluminium alloy 6060 T6, T5 or T4 to BS EN 12020–2; 2001 / BS 755–9; 2001. All windows shall be manufactured to comply with BS 4873.
- Structure: all structural profiles to be designed by the subcontractor so as the maximum deflection of any member shall not exceed L/175 of its span with any evidence of any permanent deformation once the load has been removed. The loading of the glazing system is to be communicated.
- The window, louver, screen installation will include all products, fixings, and interface components necessary to provide a weatherproof and airtight (Class A4) enclosure in accordance with the design requirements and contract conditions.
- Minimum Exposure category (Design wind load): Uniform horizontal pressure over the whole wall of 1.75 Kn/m² or higher if deemed necessary by BS6399 – Part 2: 1997.
- Window U –value: based on design size: based on design size: 1230mm wide x 11480mm high window with a Tilt & Turn opening sash full size, with a triple glazed unit having a centre U-value of 0.8 W/m²K, to have a thermal performance of 1.08 W/m²K or better when treated as a single element.
- Manufacturer to provide documentation evidence the combined U–value total of all the fully tripled glazed windows and doors shall not be greater than an average of 1.2 Wm²/K, glazed with triple glazed units having an average centre u value of 0.6 W/m²K.
- Test reports on the system and BFRC Energy Rating Calculations to be made available when requested by the Architect.
- Work to be fabricated in accordance with BS 4873: 2009, BS 6375–2 2009 & BS6375–3 2009.

207 GLASS AND GLAZING

- Glazing to be designed, fabricated and installed in accordance with Section L40 General Glazing clause 110.
- Safety Glazing (internal and external): All glazing to be classified as 'safety glass' but no Georgian wire glass shall be used - that is, the glass is to be clear safety glass (laminated or toughened as required). This requirement is in addition to any stated requirement for glass thickness or type as noted above. See Architect's Specifications Section L40.
- Glazing System: All triple–glazed units, panels and inserts shall be supported continuously along all four edges by specialised glazing support blocks. All windows shall be dry glazed using external 'snap in'

extruded aluminium beads with captive 'E' gaskets externally and wedge gasket internally. The corners of the gaskets shall be accurately mitred together and sealed to ensure an effective joint. Setting blocks and location pieces shall be fitted in accordance with BS 6262 in order to ensure the windows are maintained square and rigid. All to window system suppliers recommendations.

- See also Architect's schedule drawings for further information on glass types and specification.

209 OPAQUE GLAZING

- Specifications for opaque glass are noted in Section L40 clause 200.

330A ALUMINIUM WINDOWS

- Manufacturer: Architectural Metal Systems Ltd. or equivalent (AMS)
- Product references:
 - AMS XT66 Casement and Tilt and Turn Window system or equivalent
- Aluminium window construction:
 - The window profiles to have a minimum front to back depth of 66mm with a 49mm polyurethane thermal barrier.
 - Window frame members shall be mitre cut at 45 degree and corners reinforced with extruded aluminium corner cleats and chevrons along with the insertion of a two part epoxy adhesive.
 - The proposed window system to incorporate open in tilt and turn window sashes with espagnolette locking system which are to provide a night ventilation locking position.
 - Mullions and transoms over 1500mm should be checked for IX/IY stability utilising the design loading provided by the specifier or BS 6399 and where necessary bulb mullions to be utilised.
 - All assembly screws to be high quality stainless steel.
 - Opening sections to be designed to be glazed to inside.
 - Vulcanised corners gaskets to be fitted to all corners of window and door sashes.
- Finish as delivered:
 - Powder-coated finishes to be as per L10/700 and Z31 of the Architect's specifications.
 - All window frames are to be thermally broken, powder-coated to match existing window colour from RAL Classic range, unless noted otherwise.
 - All extruded powder-coated cills are to be powder-coated Architect's selection from RAL Classic range, note this colour may be a different selection from the colour of the frames.
- Perimeter seals: double perimeter seal as per system
- Glass and Glazing: triple glazing as per L10/310 and L40/380, opaque glazing as per L10/311
- Thermal performance (U-value maximum):
 - Window system to meet to the following minimum U-Values: based on design size: 1230mm wide x 11480mm high window with a Tilt & Turn opening sash full size, with a triple glazed unit having a centre U-value of 0.577 W/m²k, to have a thermal performance of 1.08 W/m²K or better when treated as a single element.

- the combined U-value total of all the fully tripled glazed windows and doors shall not be greater than an average of 1.2 Wm²/K.

- Ironmongery/ Accessories:

- Tilt and turn gear as per system manufacturer's recommendations, tilt and turn to be fully concealed within the window frame, to required opening vent sizes on schedule drawings.

- First floor escape windows are noted in the Window schedule drawings, escape windows are to be fitted 'boa' style window restrictors.

- Fixing: as per manufacturers recommendations

332 EXTERNAL ALUMINIUM DOORSETS

- Manufacturer: Architectural Metal Systems Ltd. or equivalent (AMS)

- Product references:

- Doorset: AMS TS66 Rebate Door system or equivalent

- Extruded riser and threshold cill: AMS XT66 system or equivalent

- Locations: Refer to drawings

- Aluminium door construction:

- Doors are to be manufactured utilising the AMS TS66 Rebate Door system or equivalent system, should not be any less than 66mm front to back, having a minimum of 32mm wide polyurethane thermal barrier fitted with face mounted pivot arm non hold open door closers, 5-point lever operated lock and handle or panic latch as per the existing hardware by the Architect.

- Materials

- Door leaves to be hung to swing on heavy duty hinges.

- Doors to be supplied with additional thermally broken powder coated aluminium riser sections, with extruded cill sections, from AMS XT66 system or equivalent.

- Materials as per L10/200

- Refer to Architect's schedules and drawings for ironmongery requirements.

- Doorsets to be executed and installed as per L20 Windows.

- Finish as delivered:

- Powder-coated finishes to be as per L10/700 and Z31 of the Architect's specifications.

- All door frames are to be powder-coated to Architect's selection from RAL Classic range, unless noted otherwise.

- All extruded powder-coated cills are to be powder-coated Architect's selection from RAL Classic range, note this colour may be a different selection from the colour of the frames.

- Ironmongery:

- Double SAA lever handle with thumb turn /cylinder inside with key cylinder outside. Lever handle design to be similar to that described in P21/611. Matching SAA lever roses and escutcheons, design to be similar to that described in P21/611 and P21/519.

- Cylinder with high security 6 pin oval profile.

- 3 point safety espagnolette.

- Latch / deadbolt and 2 hooks with adjustable keepers
- Door leaves to be hung to swing on heavy duty hinges from door manufacturer's system.

Hinges to receive covers to match powder-coating of door frames.

- Perimeter seals: double perimeter seal as per system
- Glass and Glazing: triple glazing as per L10/310 and L40/380, opaque glazing as per L10/311
- Thermal performance (U-value maximum): the combined U-value total of all the fully tripled glazed windows and doors shall not be greater than an average of 1.2 Wm²/K.
- Fixing: as per manufacturers recommendation

FINISHES

- Powdercoated - refer to Section Z30.
- Finish: Polyester Powder coating Interpon D, Du Pont or Bekkers or equivalent (not a mixture) applied by Qualicoat approved applicator using a standard RAL colour in matt finish to EN12206-1 (2004).
- Prior to the application of the polyester power coating the aluminium profiles are to be pre-treated using an 8-stage process of acid etching, chromate free primer and water rinsing. A guarantee of 25 years must be applied for in advance of starting the project on site. Where applicable due to location a marine guarantee to be provided.
- It will be the responsibility of the fabricator/installer to ensure that all profiles, panels, flashings, pressings and other necessary trims associated with his works are processed in one batch to ensure continuity of finish.

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.

740 CORROSION PROTECTION

Surfaces to be protected: aluminium alloy components in contact with timber treated with copper or zinc treated timber, iron and steel unless galvanised, copper or copper alloys, cementitious plasters, and certain hardwood timbers.

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.

765 WINDOW INSTALLATION GENERALLY

Installation: Into prepared existing openings.

Gap between frame edge and surrounding construction:

Minimum: 5mm.

Maximum: 8mm.

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.

810A SEALANT JOINTS to perimeters of all external window, door and curtain wall installations, and to other locations noted on Architect's detail drawings

Sealant:

Manufacturer: to perimeters of all external window, door and curtain wall installations, and to other locations noted on Architect's detail drawings.

Product reference: Submit proposals.

Colour: RAL colour of the silicon sealant to seal frame to wall to match the colour of the render adjacent.

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.

L40

General glazing

L40 General glazing

To be read with Preliminaries/ General conditions.

GENERAL REQUIREMENTS

100 ANCILLARY CERTIFICATES

- The subcontractor(s) shall provide a signed ancillary certificate for all glazed elements arising out of the Contract Specifications and with specific regard to the sections of the Building Regulations applicable. The form of Ancillary Certificate shall be as set out in the S.I. 9 BC(A)R 2014. The Certificate shall be provided upon completion of the package and a minimum of 4 weeks prior to Substantial Completion. The specifications for the specialist works are to be read in the context of the whole Contract Specifications and the Builder's attention is specifically drawn to Section A14 on BC(A)R 2014 and S.I. 9.
- The basis for the ancillary certificate for the aluminium windows, doors and curtain walling installation is as per the Architect's specifications Section L10 and L40 together with the Architect's drawings which show the aluminium windows, doors and curtain walling systems. The Ancillary Certificate is to confirm compliance with the Building Regulations Parts B, D, K, L and M as it relates to the aluminium windows, doors and curtain walling installation as identified above.

150 WORKMANSHIP AND POSITIONING GENERALLY

Glazing generally: In accordance with BS 6262 series.

Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.

Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.

Materials:

Compatibility: Glass/ plastics, surround materials, sealers, primers and paints/ clear finishes to be used together to be compatible. Avoid contact between glazing panes/ units and alkaline materials such as cement and lime.

Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.

152 PREPARATION

Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing; ensure compliance with any certified installation requirements.

155 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 1748-1 for borosilicate glass.

BS EN 1748-2 for ceramic glass.

BS EN 1863 for heat strengthened soda lime silicate glass.

BS EN 12150 for thermally toughened soda lime silicate safety glass

BS EN 12337 for chemically strengthened soda lime silicate glass.

BS EN 13024 for thermally toughened borosilicate safety glass.

BS EN ISO 12543 for laminated glass and laminated safety glass.

Panes/ sheets: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects.

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.

165 HEAT SOAKING OF THERMALLY TOUGHENED GLASS

Standard: To BS EN 14179-1 and -2.

Holding period (minimum): 2 hours.

Certified evidence of treatment: Submit.

Designated locations: as per architects drawings.

180 BEAD FIXING WITH PINS

Pin spacing: Regular at maximum 150 mm centres, and within 50 mm of each corner.

Exposed pin heads: Punched just below wood surface.

181 BEAD FIXING WITH SCREWS

Screw spacing: Regular at maximum 225 mm centres, and within 75 mm of each corner.

TYPES OF GLAZING

370A BEAD FIXED INSULATING GLASS UNITS TO EXTERNAL ALUMINIUM WINDOWS AND DOORS

- Refer to Section L10: WINDOWS
- Generally windows and curtain walling to be fitted with a minimum specification of 44mm triple glazed units, low “e” argon filled, 4/16/4/16/4mm, comprising 4mm clear glass outer pane, 16mm argon gas filled cavity, 4mm low E clear glass middle pane, 16mm argon gas filled cavity, 4mm low E clear glass inner pane, but at all times to comply with full specification requirements for safety and loading. The triple glazed unit U-value shall not be greater than 0.6Wm²/K
- Safety glass to be in accordance with BS 6262 & BS6201– Glass in Buildings. All glazing must be installed in accordance with BS 6262 and the double glazed unit manufacturer’s and system supplier’s instructions.
- All windows shall contain sealed units, which shall be manufactured in accordance with DIN EN ISO10077–2: 2003 , DIN EN 10077–1: 2006 and BS 5713, EN1279 Parts 2 and 3, hermetically sealed, Kite mark certified and carry the necessary and appropriate guarantee.
- The total solar transmittance of the window shall not be greater than 60%
- The glazing light transmittance factor shall not be less than 70%

- U-value: The centre pane “U” Value of each sealed unit should achieve a figure not greater than $0.6\text{Wm}^2/\text{K}$. Each fabricator/installer must demonstrate compliant glass choice. All glazing shall conform to BS6262. Use thermally broken warm edge spacers to increase thermal efficiencies.
- Any perimeter taping must be transparent to permit inspection of unit edge condition.
- Glazing System: All triple-glazed units, panels and inserts shall be supported continuously along all four edges by specialised glazing support blocks. All aluminium windows shall be dry glazed using external ‘snap in’ extruded aluminium beads with captive ‘E’ gaskets externally and wedge gasket internally. The corners of gaskets shall be accurately mitred together and sealed to ensure an effective joint. Setting blocks and location pieces shall be fitted in accordance with BS 6262 in order to ensure the windows are maintained square and rigid. All to window system suppliers recommendations.
- Locations requiring a frosted glass finish are noted on the Architect’s Schedule drawings. Frosted glazing to be achieved via sand blasted finish to one face of triple glazed unit..
- See also Architect’s Schedule drawing for additional information on glass types and specification

M

Surface finishes

GENERALLY/ PREPARATION

210 SUITABILITY OF SUBSTRATES

General:

Suitable for specified levels and flatness/ regularity of finished surfaces. Consider permissible minimum and maximum thicknesses of screeds.

Sound and free from significant cracks and gaps.

Concrete strength: In accordance with BS 8204-1, Table 2.

Cleanliness: Remove plaster, debris and dirt.

Moisture content: To suit screed type. New concrete slabs to receive fully or partially bonded construction must be dried out by exposure to the air for minimum six weeks.

215 SURFACE HARDNESS OF SUBSTRATES TO RECEIVE POLYMER MODIFIED WEARING SCREEDS

General: Substrates must restrain stresses that occur during setting and hardening of wearing screeds.

Test for surface hardness: To BS EN 12504-2 using a rebound hammer with compliance values as follows:

Rebound hammer value (minimum):

Screed thickness 15 mm or less: 25.

Screed thickness greater than 15 mm: 30.

Report: Submit details of areas where substrate surface hardness does not comply with these values.

220 PROPRIETARY LEVELLING/ WEARING SCREEDS

General: Materials, mix proportions, mixing methods, minimum/ maximum thicknesses and workmanship must be in accordance with recommendations of screed manufacturer.

Standard: In accordance with BS 8204-3.

251 CONDUITS CAST INTO OR UNDER SCREEDS

Reinforcement: Overlay with reinforcement selected from:

500 mm wide strip of steel fabric to BS 4483, reference D49, or

Welded mesh manufactured in rolls from mild steel wire minimum 1.5 mm diameter to BS 1052, mesh size 50 x 50 mm.

Placing reinforcement: Mid depth between top of conduit and the screed surface.

Width of reinforcement (minimum): 300 mm.

Screed cover over conduit (minimum): 50 mm.

280 UNBONDED CONSTRUCTION

Separation: Lay screed over a suitable sheet dpm or a separating layer.

Type: Resilient layer to be overlaid with polyethylene sheet, minimum 125 micrometres thick (500 gauge).

Installation of separating layer: Lay on clean substrate. Turn up for full depth of screed at abutments with walls, columns, etc. Lap 100 mm at joints.

INTERNAL PLASTERING

710 APPLICATION GENERALLY

Application of coatings: Firmly and in one continuous operation between angles and joints. Achieve good adhesion.

Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.

Accuracy: Finish to a true plane, to correct line and level, with angles and corners to a right angle unless specified otherwise, and with walls and reveals plumb and square.

Drying out: Prevent excessively rapid or localised drying out.

715 FLATNESS/ SURFACE REGULARITY

Sudden irregularities: Not permitted.

Deviation of plaster surface: Measure from underside of a straight edge placed anywhere on surface.

Permissible deviation (maximum) for plaster not less than 13 mm thick: 3 mm in any consecutive length of 1800 mm.

720 DUBBING OUT

General: Correct substrate inaccuracies.

New smooth, dense concrete and similar surfaces: Dubbing out prohibited unless total plaster thickness is within range recommended by plaster manufacturer.

Thickness of any one coat (maximum): 10 mm.

Mix: As undercoat.

Application: Achieve firm bond. Allow each coat to set sufficiently before the next is applied. Cross scratch surface of each coat.

725 UNDERCOATS GENERALLY

General: Rule to an even surface. Cross scratch to provide a key for the next coat.

Undercoats on metal lathing: Work well into interstices to obtain maximum key.

Undercoats gauged with Portland cement: Do not apply next coat until drying shrinkage is substantially complete.

777 SMOOTH FINISH

Appearance: A tight, matt, smooth surface with no hollows, abrupt changes of level or trowel marks.

Avoid water brush, excessive trowelling and over polishing.

PRODUCTS

215 METAL LATH

Internal applications: Flat, corrugated and ribbed expanded lath to BS EN 13658-1.

External applications: Flat, corrugated and ribbed expanded lath to BS EN 13658-2.

Galvanized steel: To BS EN 10346 and BS EN 10143.

Stainless steel: To BS EN 10088-1 and -2, number 1.4301 (name X5CrNi18-10).

235 WIRE

Zinc coated mild steel wire:

Wire ties: Soft annealed steel tying wire.

Wire: To BS EN 10218-2.

Zinc coating: To BS EN 10244-2.

Stainless steel wire: To BS EN 10088-3, number 1.4301 or 1.4541 (name X5CrNi18-10 or X6CrNiTi18-10).

265 BUILDING PAPER

Type: Water resistant breather paper.

285 FIXINGS

Nails: 38 x 2 mm galvanized steel clout nails to BS 1202-1.

Staples: 32 x 2 mm galvanized steel.

GENERAL REQUIREMENTS

210 WORKMANSHIP GENERALLY

Base condition after preparation: Rigid, dry, sound, smooth and free from grease, dirt and other contaminants.

Finished coverings: Accurately fitted, tightly jointed, securely bonded, smooth and free from air bubbles, rippling, adhesive marks and stains.

330 COMMENCEMENT

Required condition of works prior to laying materials:

Building is weathertight and well dried out.

Wet trades have finished work.

Paintwork is finished and dry.

Conflicting overhead work is complete.

Floor service outlets, duct covers and other fixtures around which materials are to be cut are fixed.

Notification: Submit not less than 48 hours before commencing laying.

340 CONDITIONING

Prior to laying: Condition materials by unpacking and separating in spaces where they are to be laid.

Maintain resilient flooring rolls in an upright position. Unroll carpet and keep flat on a supporting surface.

Conditioning time and temperature (minimum): As recommended by manufacturer with time extended by a factor of two for materials stored or transported at a temperature of less than 10°C immediately prior to laying.

350 ENVIRONMENT

Temperature and humidity: Before, during and after laying, maintain approximately at levels which will prevail after building is occupied.

Ventilation: Before during and after laying, maintain adequate provision.

PREPARING BASES

410 NEW BASES

Suitability of bases and conditions within any area: Commencement of laying of coverings will be taken as acceptance of suitability.

430 NEW WET LAID BASES

Base drying aids: Not used for at least four days prior to moisture content testing.

Base moisture content test: Carry out in accordance with BS 5325, Annex A or BS 8203, Annex A.

Locations for readings: In all corners, along edges, and at various points over area being tested.

Commencement of laying coverings: Not until all readings show 75% relative humidity or less.

440 SUBSTRATES TO RECEIVE THIN COVERINGS

Trowelled finishes: Uniform, smooth surface free from trowel marks and other blemishes. Abrade suitably to receive specified floor covering material.

COMPLETION

820 FINISHING LINOLEUM FLOORING

Cleaning operations:

Wash floor with water containing neutral (pH 6-9) detergent. If necessary, lightly scrub heavily soiled areas.

Rinse with clean water, removing surplus to prevent damage to adhesive. Allow to dry.

Emulsion polish: Two coats of a type recommended by covering manufacturer.

880 WASTE

Spare covering material: Retain suitable material for patching. On completion submit pieces for selection. Hand over selected pieces to Employer.

M60

Painting/ clear finishing

M60 Painting/ clear finishing

To be read with Preliminaries/ General conditions.

COATING SYSTEMS

110A EMULSION PAINT Matt emulsion finish to all internal walls.

- Manufacturer: Submit proposals.

Product reference: Submit proposals.

- Surfaces: All New interior walls.

Preparation: Dry lining:

All surfaces to be clean, dry and free from anything that will interfere with the adhesion of the materials to be applied. Fill any small surface defects with Ready Mixed Filler as appropriate. Allow to dry. Rub down with a fine grade abrasive paper. Remove all dust.

Gypsum plastering:

All surfaces to be clean, suitably dry, free from plaster fines and anything that will interfere with the adhesion of the materials to be applied. Remove any loose material or efflorescence by scraping and dry bristle brushing. Fill any small surface defects with Ready Mixed Filler. Allow to dry. Rub down with a fine grade abrasive paper. Remove all dust.

- Initial coats: Water-borne primer.

Number of coats 1.

- Undercoats: 1 no. coat of Matt or equivalent over primed walls

Apply a mist coat of paint in accordance with the manufacturer's instructions, over all areas to be decorated. Allow a minimum drying time of 4 hours in normal drying conditions.

Surface filling - following priming or mist coat:

Fill any surface imperfections with Ready Mixed Filler as appropriate. Allow to dry. Rub down with a fine grade abrasive paper. Remove all dust and touch in the filled areas with the priming or mist coat, thinned as for main areas..

Number of coats: 1.

- Finishing coats: Matt Emulsion.

Number of coats: 2 coats

Apply by synthetic brush, roller or airless spray. Stir well before use. Allow a minimum drying time of 4 hours between coats in normal drying conditions.

Do not apply coatings when the air or substrate temperatures are likely to fall below 5°C (solvent-borne primer) or 8°C (water-borne primer and finishing coats) or when the relative humidity is above 80% during application or the drying period.

Colours to be confirmed by Architect

Paint Composition (nominal) :

Pigment: Lightfast Pigments.

Binder: Acrylic Copolymer Emulsion.

Solvent: Water.

GENERAL

215 HANDLING AND STORAGE

Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.

Materials from more than one batch: Store separately.

250 SURFACES TO BE CLEANED BUT NOT COATED

radiator valves and stop valves .

280 PROTECTION

'Wet paint' signs and barriers: Provide where necessary to protect other operatives and general public, and to prevent damage to freshly applied coatings.

PREPARATION

400 PREPARATION GENERALLY

Standard: In accordance with BS 6150.

Refer to any pre-existing CDM Health and Safety File.

Refer to CDM Construction Phase Plan where applicable.

Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.

Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.

Substrates: Sufficiently dry in depth to suit coating.

Efflorescence salts: Remove.

Dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.

Surface irregularities: Remove.

Joints, cracks, holes and other depressions: Fill flush with surface, provide smooth finish.

Dust, particles and residues from preparation: Remove and dispose of safely.

Water based stoppers and fillers:

Apply before priming unless recommended otherwise by manufacturer.

If applied after priming: Patch prime.

Oil based stoppers and fillers: Apply after priming.

Doors, opening windows and other moving parts:

Ease, if necessary, before coating.

Prime resulting bare areas.

420 FIXTURES AND FITTINGS

Removal: Before commencing work remove: cover plates, grilles and other surface mounted fixtures

.

Replacement: Refurbishment as necessary, refit when coating is dry.

425 IRONMONGERY

Removal: Before commencing work remove ironmongery from surfaces to be coated.

Hinges: Do not remove.

Replacement: Refurbish as necessary; refit when coating is dry.

471 PREPRIMED WOOD

Areas of defective primer: Take back to bare timber.

481 UNCOATED WOOD

General: Provide smooth, even finish with arrises and moulding edges lightly rounded or eased.

Heads of fasteners: Countersink sufficient to hold stoppers/fillers.

Resinous areas and knots: Apply two coats of knotting.

500 PREPRIMED STEEL

Areas of defective primer, corrosion and loose scale: Take back to bare metal. Reprime as soon as possible.

511 GALVANIZED, SHERARDIZED AND ELECTROPLATED STEEL

White rust: Remove.

Pretreatment: Apply one of the following:

Mordant solution to blacken whole surface.

Etching primer recommended by coating system manufacturer.

570 UNCOATED MASONRY/ RENDERING

Loose and flaking material: Remove.

580 UNCOATED PLASTER

Nibs, trowel marks and plaster splashes: Scrape off.

Overtrowelled 'polished' areas: Key lightly.

590 UNCOATED PLASTERBOARD

Depressions around fixings: Fill with stoppers/ fillers.

601 UNCOATED PLASTERBOARD - TO RECEIVE TEXTURED COATING

Joints: Fill, tape and feather out with materials recommended by textured coating manufacturer.

APPLICATION

711 COATING GENERALLY

Application standard: In accordance with BS 6150, clause 9.

Conditions: Maintain suitable temperature, humidity and air quality during application and drying.

Surfaces: Clean and dry at time of application.

Thinning and intermixing of coatings: Not permitted unless recommended by manufacturer.

Overpainting: Do not paint over intumescent strips or silicone mastics.

Priming coats:

Thickness: To suit surface porosity.

Application: As soon as possible on same day as preparation is completed.

Finish:

Even, smooth and of uniform colour.

Free from brush marks, sags, runs and other defects.

Cut in neatly.

Doors, opening windows and other moving parts: Ease before coating and between coats.

N General fixtures/ furnishings/ equipment

N10 Window blinds

N10 General fixtures/ furnishings/ equipment - Window blinds Rev A

To be read with Preliminaries/ General conditions.

GENERAL

110 SCOPE

Design, manufacture, supply and install complete commercial-grade internal translucent roller blind systems to the windows scheduled below. Include rollers, fabric, brackets, operating mechanisms, safety devices, bottom rails, supplementary fixing grounds, fixings and all accessories necessary for a complete installation.

The blinds are to provide effective control of glare and solar brightness while retaining useful natural daylight within this post-primary education setting.

120 DESIGN AND PERFORMANCE REQUIREMENTS

Department of Education requirements: Comply with SDG 02-03 Post-Primary School Design Guide, including Sections 6.3(f) and 7.1(d), TGD-020 General Design Guidelines for Schools and TGD-021 Construction Standards for Schools.

Glare control: Provide translucent roller blinds that control glare while minimising reduction of natural daylight.

Teaching displays: Blind fabric is to permit satisfactory use of interactive whiteboards, projectors and LED teaching displays under normal daylight conditions.

Window operation: Blinds and controls must not obstruct window handles, opening lights, restrictors, permanent ventilation, natural ventilation paths or access required for cleaning and maintenance.

Blind divisions: Align joints between adjacent blinds with window mullions wherever practicable.

Maximum individual blind width: Generally 2000 mm. Wider blinds may only be used where supported by the blind manufacturer's technical data and project-specific warranty.

Operation: Each blind is to be independently operable unless otherwise agreed with the Employer's Representative.

130 SUBMITTALS

Before ordering: Submit manufacturer's technical literature, proposed blind layout, fixing details, fabric samples, colour range, optical and solar performance data, flame-retardance certification and warranty details.

Site survey: Verify every opening, mullion position, suitable fixing background, control position and potential conflict before manufacture. The scheduled dimensions are overall nominal window sizes and must not be used as manufacturing dimensions.

Working drawings: Show blind widths, divisions, control sides, bracket positions and any supplementary support or fixing grounds required.

140 SAMPLES AND MOCK-UP

Samples: Provide representative samples of fabric, roller, bracket, operating chain, chain-retaining device, bottom rail and exposed finishes for approval.

Mock-up: Before final selection of fabric colour and opacity, install a full-size trial blind in a representative south-facing teaching room. Assess the blind with the interactive whiteboard, projector or LED teaching display operating under normal daylight conditions.

Approval: Final fabric colour, openness factor and visible light transmission are subject to approval by the Employer's Representative and school authority following assessment of the mock-up.

PRODUCTS

310 TRANSLUCENT ROLLER BLINDS

Type: Heavy-duty contract roller blind system suitable for intensive use in a post-primary education facility.

Manufacturer and product reference: Submit proposals.

Fabric: Woven translucent solar-control screen fabric; dimensionally stable and resistant to fraying, stretching, fading, moisture, mould and normal cleaning agents.

Fabric openness factor: Nominally 3-5%, subject to approved samples and full-size teaching-room mock-up.

Fabric weight: Minimum 400 g/m².

Colour: Light to mid-tone neutral colour selected by the Employer's Representative from the manufacturer's standard contract range.

Flame retardance: Fabric to be flame-retardant and independently tested to I.S. EN 13773, Class 1, or an equivalent European classification accepted by the Employer's Representative. Submit current certification.

Environmental preference: PVC-free fabric where an equivalent product meeting the specified durability, cleaning and performance requirements is available.

Roller tube: Extruded aluminium or zinc-coated steel tube of sufficient diameter, wall thickness and stiffness to prevent visible sagging, rippling or deflection.

Minimum roller diameter: 40 mm for smaller blinds and 50 mm for blinds exceeding approximately 1800 mm wide, or greater where required by the manufacturer.

Brackets: Heavy-duty powder-coated steel or aluminium brackets with positive roller-retention devices.

Bottom rail: Rigid aluminium bottom rail, fully enclosed within a securely formed fabric pocket or otherwise securely attached in accordance with the manufacturer's tested system.

Exposed metal components: Polyester powder-coated finish. Colour selected by the Employer's Representative.

Operating mechanism: Heavy-duty geared side-chain mechanism selected to suit the blind dimensions and fabric weight. Operation is to be smooth, quiet and without excessive effort.

Maintenance: Roller, control mechanism, safety device and other wearing components are to be replaceable without removal of the complete installation.

320 SAFETY

Standard: Complete blind system to comply with I.S. EN 13120, including applicable safety requirements for operating cords and chains.

Continuous-loop controls: Permanently retain under tension using the blind manufacturer's proprietary safety tensioning device, mechanically fixed to the reveal or adjacent wall. Loose, free-hanging or accessible loops are not acceptable.

Control positions: Locate clear of furniture and potential climbing points and, so far as practicable, outside the normal reach of students.

Safety device fixings: Adhesive-only fixing is not acceptable.

WINDOW SCHEDULE

410 OPENINGS AND INDICATIVE BLIND DIVISIONS

The quantities below indicate the anticipated minimum number of independently operated blind units. Final divisions must be coordinated with the actual window mullions and the approved manufacturer's dimensional limits.

- W1.01: Overall window 930 x 1534 mm; 1 No. blind.
 - W1.02: Overall window 2769 x 1534 mm; 2 No. blinds.
 - W1.03: Overall window 4153 x 1248 mm; 3 No. blinds.
 - W1.04: Overall window 4153 x 1228 mm; 3 No. blinds.
 - W1.05: Overall window 1391 x 1228 mm; 1 No. blind.
 - W1.06: Overall window 4153 x 1228 mm; 3 No. blinds.
 - W1.07: Overall window 4153 x 1228 mm; 3 No. blinds.
 - W1.08: Overall window 3692 x 1540 mm; 2 No. blinds.
 - W1.09: Overall window 1391 x 1540 mm; 1 No. blind.
 - W1.10: Overall window 929 x 617 mm; 1 No. blind.
 - W1.11: Overall window 929 x 617 mm; 1 No. blind.
 - W1.12: Overall window 4043 x 1534 mm; 3 No. blinds.
 - W1.13: Overall window 2775 x 1534 mm; 2 No. blinds.
 - W2.01: Overall window 5232 x 1690 mm; 3 No. blinds.
 - W2.02: Overall window 5232 x 1690 mm; 3 No. blinds.
 - W2.03: Overall window 4309 x 1690 mm; 3 No. blinds.
 - W2.04: Overall window 1547 x 1378 mm; 1 No. blind.
 - W2.05: Overall window 1547 x 1378 mm; 1 No. blind.
 - W2.06: Overall window 4309 x 1378 mm; 3 No. blinds.
 - W2.07-W2.15: Overall window each 1085 x 1690 mm; 1 No. blind to each opening; 9 No. total.
 - W2.16-W2.17: Overall window each 1085 x 767 mm; 1 No. blind to each opening; 2 No. total.
 - W2.18-W2.19: Overall window each 4309 x 949 mm; 3 No. blinds to each opening; 6 No. total.
 - W2.20-W2.22: Overall window each 4244 x 949 mm; 3 No. blinds to each opening; 9 No. total.
 - W2.23-W2.24: Overall window each 4309 x 942 mm; 3 No. blinds to each opening; 6 No. total.
 - W2.25: Overall window 4199 x 1690 mm; 3 No. blinds.
- Total: 38 No. window openings comprising approximately 75 No. individual blind units.

EXECUTION

610 FIXING

Backgrounds: Fix blinds to sound structural backgrounds. Do not fix solely into plasterboard, suspended ceiling components, cover trims or other non-structural finishes.

Fixings: Use proprietary anchors appropriate to the substrate and imposed loads. Coordinate with Section Z20.

Supplementary grounds: Provide plywood, timber or metal support grounds where adequate structural fixing is not otherwise available.

Window frames: Do not drill or fix into window frames without prior approval.

Appearance: Conceal fixings wherever practicable and make good disturbed finishes following installation.

620 INSTALLATION

General: Install square, level and parallel with the window framing in accordance with the manufacturer's written instructions.

Adjacent blinds: Align roller levels and blind drops. Keep gaps between adjacent blinds to the minimum required for reliable operation and position gaps over window mullions.

Controls: Coordinate control sides with window handles, adjacent walls, room layouts and safe access for operation.

Protection: Protect blinds from contamination and damage during the remaining works.

630 COMPLETION

Adjustment: Adjust every blind for smooth, balanced and reliable operation through its full travel.

Cleaning: Remove labels and packaging and clean fabric and exposed components using methods recommended by the manufacturer.

Defects: Replace blinds that are damaged, marked, creased, distorted, excessively deflected or do not track and roll correctly.

Demonstration: Demonstrate correct operation and all safety features to the school representative.

Handover information: Provide cleaning and maintenance instructions and details of replacement fabric, chains, mechanisms and safety devices.

Warranty: Provide a minimum five-year manufacturer's warranty covering the complete blind system and installation.

P

Building fabric sundries

P10

Sundry insulation/ proofing work

P10 Sundry insulation/ proofing work

SUNDRY INSULATION/ PROOFING WORK

To be read with Preliminaries/ General conditions

12 AIRTIGHTNESS

General Requirements

The designers have designed the building and tested the design to ensure that the appropriate airtightness can be achieved. The contractor will ensure that the works are built in accordance with the building regulations, in particular Parts D and K to ensure that this airtightness is achieved.

The airtightness of the works will be measured by means of the blow door test, a standard industry-norm test. The contractor will carry out two blow door tests on the units, one after all first-fix works have been installed, before the first coat of plaster is applied. The purpose of this test will be to allow the contractor to identify any leaks, holes in the construction, tears or punctures in the tapes and membranes before they are covered up. The second test will be done near completion of the works.

Airtightness Performance: The building shall achieve an air permeability value of 3m³/hr/m² at a test pressure of 50 Pa, when tested in accordance with the requirements BS EN 13829:2001 'Determination of air permeability of buildings, fan Pressurisation method' and ATTMA TSL1 Issue 2010 'Measuring air permeability of building envelopes'.

Airtightness Specialist/Accreditation: The Contractor shall appoint a recognised building airtightness specialist approved by the Architect/design team who shall be accredited by INAB (The Irish National Accreditation Board) to ISO 17025 as a testing laboratory for residential building airtightness testing. The specialist must demonstrate prior experience of works on projects of similar size and complexity. The main contractor is to ensure that a copy of the specialists INAB accreditation certificate to ISO 17025 is submitted to the architect & the design team for approval before the airtightness specialist is appointed for the works at tender stage.

The contractor will carry out all remedial works to achieve this result in the event that this minimum is not achieved. The contractor will also allow for precautions to be taken during site works to prevent accidental or wilful damage to the airtightness of the dwellings. This will require careful coordination of trades, supervision of their works and careful briefing in advance by the foreman. Most of the trades involved with the works will have an impact on the airtightness of the completed works. The following are suggested as a minimum: -

- identify who will do what work
- identify who will coordinate that work

set up a flip chart for each trade in the site office identifying what each will do at various stages to avoid the air tightness of the building being compromised.

all puncturing of the membranes and tapes will be forbidden without the prior consent of the foreman.

brief all trades and operatives and train them in advance how the works will be programmed and how to avoid damaging the airtightness.

Ensuring the buildings airtightness is a key element of the low energy strategy applied in the design of this building. Care has been taken by the architect to provide building details that are capable of achieving the level of air permeability set out below.

If the integrity of the airtightness barrier is broken then it must be repaired. Particular care must be taken when constructing joints and junctions in the building envelope to ensure continuity of the airtightness barrier. Repairs using tape, Rockwool and expanding foam are not acceptable. Tape, Rockwool and expanding foam are ineffective in maintaining a durable and airtight seal and shall not be used to maintain continuity of the air tightness barrier at junctions and between construction elements.

Approved BBA certified Airtightness tapes & Primer to be used around all windows & doors to provide the airtightness required.

In addition to the airtightness barrier continuity care must be exercised at all envelope penetrations and junctions for windows doors, services, cables etc applying appropriate sealing and draught barriers and sealing junctions between the airtightness layer and these elements.

For the airtightness strategy to be successful it is vital that all site workers are aware of the importance of maintaining the integrity of the airtightness barrier. All subcontractors are to be briefed on the airtightness strategy and encouraged to report damage of the airtightness barrier on a "no fault" basis.

The Contractor shall take overall responsibility for maintaining continuity of the air tightness barrier. One member of the Contractor's site team will be nominated to oversee all details of the airtightness barrier and to maintain quality control in reproducing the design details accurately.

The Contractor shall seek clarification from the Architect of any construction details junctions where the method of maintaining airtightness is not clear to him before construction of the elements takes place. The Contractor shall ensure coordination of work between different work packages/specialist subcontractors in defining responsibility for sealing at junctions between different construction elements.

Areas critical in maintaining airtightness include but are not limited to;

- o At the roof eaves and gable end junctions
- o Wall to roof junction.
- o Continuity at intermediate floor wall/floor junctions
- o At window/door wall junctions.
- o At service penetrations
- o Blockwork to be plastered around first floor joists

o Any specific areas of concern should be notified to the architect/design team before covering takes place.

Any penetrations for mechanical, electrical, or drainage services must be effectively sealed through the ground floor slab.

EXTERNAL WINDOWS AND DOORS

The Main Contractor shall ensure ALL the external glazing (windows and doors) components & airtightness installation works comply with the required airtightness specification. Glazing sections generally provide high levels of airtightness if tested to relevant British Centre for Window and Cladding Technology standards. An EPDM air seal is required on all glazing. This EPDM is sealed from the pressure plates and window sections within the transoms & mullions & effectively air sealed back into the building. The subcontractor shall specifically identify on its shop drawings the air tightness barrier in its detailing.

Once windows & doors are installed, the Contractor shall apply an IAB certified airtightness tape as described in Section P14 from the frame of the window to the blockwork/concrete reveals & head. Ensure a proprietary primer is applied to the blockwork & concrete before the tape is applied, if so required, to ensure that the tape adheres to the blockwork/ concrete effectively. Care must be taken when applying the airtightness tape to ensure the tape is fitted into the corners in order to prevent damage when window liners and plaster finishes are being installed. A sample test will be performed to assess the above works during construction & all remedial works where appropriate are to be checked & made good by the specialist subcontractor.

Thresholds on external doors must be protected during construction as in many cases they are damaged excessively & can result in excessive airleakage. An airtight seal must be applied between the threshold and the floor, the requirements of the tape to achieve this seal is described in Section P14.

Ensure that ALL external windows are fully snagged before the airtightness test in order to ensure the following:

- (a) All thresholds installed, any debris removed & threshold air sealed ahead of FINAL test.
- (b) All closing mechanisms installed & locked for the FINAL test
- (c) Lock bolts to be installed & aligned adequately ahead of FINAL test.
- (d) All seals on all windows & doors to be checked & made good ahead of FINAL test
- (e) Alignment on all external doors & windows to be checked & made good ahead of FINAL test.
- (f) All debris & dust to be removed from trickle ventilators & vents are fitted 100% airtight back to the window frame.
- (g) The closing mechanisms on trickle vents are to be snagged & made good ahead of FINAL test. Where windows incorporate trickle ventilators are glazed into the window frame and with special care is required to ensure continuity of gaskets at the corners. The trickle ventilators must provide an airtight seal when in the closed position. It is noted that the trickle vents are CLOSED for the test and NOT temporarily sealed

- (i) All brush seals between doors to be checked & ensure continuity ahead of FINAL test.
- (j) All open sash windows are closing effectively.

22 AIRTIGHTNESS TESTING

Contractor shall include for testing of all 21no. Units, 2no. tests per unit.

The units shall be subject to an airtightness test at a point in the construction programme when all elements of the external envelope/airtightness barrier are complete including all penetrations, but before internal finishes have been applied in order that remedial works can be carried if necessary with minimal disruption. The test must be completed at least three weeks before practical completion.

A detailed testing method statement shall be provided to the Architect a minimum of one month before the proposed test date. The building shall be pressure tested to ensure compliance with the airtightness specification. The test shall be carried out by an INAB

accredited airtightness testing specialist in accordance with the following

" CIBSE TM 232001

" BS EN 13829 2000.

" ATTMA TSL1 2010

In the event that the specified level of air leakage is not achieved then the Contractor shall carry out a whole building leak audits and further tests at the Contractors expense shall be carried out until the specified values are achieved.

The contractor shall include for all necessary attendances during each test which will typically include;

- a) All external windows, trickle vents, smoke vents and doors must be closed
- b) Trickle vents can be artificially sealed for the test where applicable.
- c) All internal doors must be wedged open
- d) All drainage traps must be filled with water. If traps have not been fitted then drainage pipes must be sealed with tape.
- e) All mechanical ventilation systems must be shut down and intake/exhaust louvers sealed with tape/solid sheeting/corriboard. This is most effectively achieved by sealing the intake and exhaust louvers for each fan or system
- f) Any combustion appliances within the airtight building envelope should be turned off and their flues sealed
- g) The ground floor internal and external area within 5m of the fan equipment/doorway must be level, clean and clear of all loose material. Vehicular access is required to within 3.0m of entrance doorway
- h) The contractor must ensure that no external doors/windows/trickle vents are opened for the duration of the test
- i) Some temporary minor carpentry works may be required to the doorway in which the fan equipment is mounted to accommodate the fan equipment

j) Notices must be posted at all entry and exit points to the building; "AIRTIGHTNESS TEST IN PROGRESS DO NOT OPEN"

k) The Contractor will be required to provide 3 no 32amp 110volt power sockets in the region of the doorways being used to mount the equipment, each fed from a separate transformer box.

The Main Contractor shall issue to the Architect a certificate of compliance from the testing agency for each unit upon successful completion of the tests.

TYPES OF INSULATION

140A INSULATION FITTED AT RAFTER LEVEL

- Description: Semi -rigid Mineral wool slabs, Rockwool RWA45 or Equivalent. Insulation for rafter level with high recycled content, a vapour permeable breathable insulation with excellent acoustic and fire safety properties.

- Material: mineral wool to BS EN 13162

- Recycled content: minimum 50% to BS EN ISO 14021

- Thickness:

Typical thickness: 50mm composed of one layer,

Nominal density 45kg/m³

- Fire rating: Euroclass A1 fire rating

- Thermal Properties:

Thermal performance of the product must be calculated and certified.

Thermal Conductivity of insulant: 0.035 W/m.K.

Overall minimum U-Value to be achieved for the buildup: 0.11 W/m²K

- Installation requirements:

Installation: first layer to be laid tightly between joists, friction fit in place, second layer to laid perpendicular starting at eaves and working inwards, third layer to be laid as second layers are laid, installed at eaves and rolled inwards. Airtightness membrane, and services, to be installed under ceiling joists prior to laying of insulation. Care to be taken not to perforate or damage membrane.

Insulation widths: widest practical - note that ceiling joists are at evenly spaced centres and thus will not comply with standard 400 and 600mm centres, thus all insulation laid between joists will need to be cut to fit.

Joints: Butted, no gaps.

Insulation at perimeter: Carried over wall plates as per Architect's details. Open spaces between ceiling joists and parallel walls are to be filled with mineral wool cut to fit.

Eaves ventilation: unobstructed using proprietary rafter roll.

Service holes: Sealed, and debris removed before laying insulation.

310A VAPOUR CONTROL LAYER TO ceilings.

Manufacturer: Submit proposals.

Product reference: polyethylene copolymer; Fleece and reinforcement layer: polypropylene..

Material: 1000 gauge virgin polyethylene.

Minimum vapour resistance: 250 MN s/g.

Installation requirements:

Setting out: Joints minimized.

Method of fixing: To manufacturers standard installation details.

Staples Fixing should be 10 mm wide and 8 mm long and set at a max. distance of 10-15 cm.

Once the vapour check is fitted, it has to be sealed. The membranes should be sealed at overlaps without strain or loading, using

Compatible airtightness adhesive tape (100mm wide strip of tape). Creases in the overlap area must not be over-taped; they must be cut off and re-sealed. The tape should be applied centrally and pressed down firmly...

Joints: At supports only, lapped 150 mm minimum.

Openings: Membrane fixed to reveals.

Joints and edges: Sealed with double sided tape with vapour resistivity not less than the vapour control layer.

Penetrations: Sealed.

Other requirements: Connection between ceiling membrane and walls:

Plaster sealing tape gives a secure, airtight transition. The tape is first attached to the smooth side of the vapour check using its self-adhesive strips. The white airtight fleece with the integrated blue plaster reinforcement mesh is then pushed back and fixed as far as possible into the corner, using a few dabs of system approved adhesive on the masonry. If the wall is subsequently plastered, then tape should be embedded in the middle layer of the plaster. To do this, push back the fleece and reinforcement, apply plaster to the wall behind tape, lay the fleece and reinforcement in the fresh layer of plaster and then complete the plaster work. Finished. Plasters containing gypsum have a sufficient adhesive strength.

If pipes or cables go through the airtightness layer, they must be securely sealed with appropriately sized grommets

320 BREATHER MEMBRANE

Manufacturer: Submit proposals.

Product reference: Submit proposals.

Installation requirements:

Setting out: Joints minimized. Membrane to form a continuous barrier to prevent water, snow and wind blown dust reaching the substrate.

Method of fixing: Galvanized large head nails at 300 mm centres into timber .

Joints: Lapped 100 mm minimum horizontally and 150 mm minimum vertically.

Openings: Membrane fixed to reveals.

Bottom edges: Membrane lapped over flashings, sills, etc. to allow free drainage to the exterior.

Penetrations: Sealed.

P20

Unframed isolated trims/ skirtings/ sundry items

P20 Unframed isolated trims/ skirtings/ sundry items

To be read with Preliminaries/General conditions

120 Pre-primed MDF TO WINDOW CILLS

Quality of wood and fixing: To BS 1186-3.

Species: solid hardwood, durability class I sustainably sourced Iroko, Sapele Mahogany, or other species to Architect's approval, of a high durability and having a density greater than 630kg/m³, with clear seal to M60/180, nosings to be pencil rounded to 8mm..

Class: 1.

Moisture content at time of fixing: 9-13%.

Preservative treatment: Not required.

Fire rating: To BS 476-7, Class 1.

Profile: nosings to be pencil rounded to 8mm.

Finished size: 30mm finished thickness, typically 175mm depth,.

Finish as delivered: Prepared and primed as section M60.

Fixing: Plugged, screwed and pelleted at required centres.

200 MEDIUM DENSITY FIBREBOARD Skirtings and Architraves

Manufacturer: Submit proposals.

Product reference: Submit proposals.

Standard: To BS EN 622-5.

Type: MDF.

Formaldehyde class: To BS EN 622-1, Class E1.

Fire rating: To BS 476-7, Class 1.

Thickness: 12 mm typically, 100mm deep with pencil edge.

Concrete stairs to communal areas. ex 250x12mm, cut to fit steps and align with top of 100mm skirting, throat depth varies from 100mm to 250mm. Thickness of 10mm locally as identified on stairs drawings.

Edges: pencil.

Finish: Prepared and primed as section M60.

Recycled content: Submit proposals.

Support/ Fixing: adhere using suitable adhesive as per Section Z20..

510 INSTALLATION GENERALLY

Joinery workmanship: As section Z10.

Metal workmanship: As section Z11.

Methods of fixing and fasteners: As section Z20 where not specified.

Straight runs: To be in one piece, or in long lengths with as few joints as possible.

Running joints: Location and method of forming to be agreed where not detailed.

Joints at angles: Mitre, unless shown otherwise.

Position and level: To be agreed where not detailed.

P21

Door/ window ironmongery

P21 Door/ window ironmongery

To be read with Preliminaries/ General conditions.

PRE-TENDER

10 QUANTITIES AND LOCATIONS

Quantities and locations of ironmongery are in the ironmongery schedule .

Fixing: As sections L10 and L20.

20 DESCRIPTION

- This document should be read in conjunction with the following:
 - Architect's External Window and Door Schedule drawings

Architect's Door and Window Specifications - Sections L10

- The provision of ironmongery for external doors will require coordination of the Contractor's specialist window and door package. The Contractor's suppliers are to confirm the proposed fittings and fixings per door are fit for purpose. The Ironmongery supplier is to refer to Architect's drawings and specifications for detailed door information. The Contractor is to consider their specific proposed ironmongery fittings, their fixing and its intended location with the overall internal door construction in order to ensure the ironmongery's fitness for purpose. It is intended that hinges, sliding gear, lock cases and mechanisms, and certain other access hardware are supplied and fitted to the doors during manufacture by the aluminium window and door supplier. It is proposed that items requiring coordination be supplied for integration during fabrication or be fitted on site.
- The Contractor's specialist ironmongery supplier is to confirm the proposed fittings and fixings per door are fit for purpose and meet the Works Requirements. The supplier is to refer to the above door schedules for door sizes, details and Architect's specifications for door technical specifications and performance requirements. The Contractor is to consider their specific proposed ironmongery fittings, their fixing and its intended location with the overall internal door construction in order to ensure the ironmongery's fitness for purpose.
- The Contractor's specialist supplier is required to provide all necessary additional parts to ensure the proper integration and function of the various specified parts together as intended for the particular doorset.
- In general, all external door ironmongery is intended to meet the following requirements:
 - Satin anodised aluminium fittings
 - Manufacturer certification of quality management system to ISO 9001: 2008 where relevant
 - CE mark for building products where relevant
- This ironmongery specification is written as a performance specification without reference to particular product names or suppliers; however, in the case of door closers and hinge guards, specific products have been listed in consideration of the serious health and safety aspects of the fitting.
- The Contractor is to submit a marked up copy of the ironmongery specification to demonstrate that each of the performance criteria has been met on a line by line basis and provide datasheets, certification, where relevant, and physical samples for approval for all ironmongery items.

GENERAL

120 IRONMONGERY RANGE SELECTED BY CONTRACTOR

Source: Single coordinated range.

Notification: Submit details of selected range, manufacturer and/ or supplier.

Principal material/ finish: Polished stainless steel, grade 1.4301 (304).

Items unavailable within selected range: Submit proposals.

140 SAMPLES

General: Before placing orders with suppliers submit labelled samples of the following: all ironmongery types .

Conformity: Retain samples on site for the duration of the Contract. Ensure conformity of ironmongery as delivered with labelled samples.

170 IRONMONGERY FOR FIRE DOORS

Relevant products: Ironmongery fixed to, or morticed into, the component parts of a fire resisting door assembly.

Compliance: Ironmongery included in successful tests to BS 476-22 or BS EN 1634-1 on door assemblies similar to those proposed.

Certification: Submit CERTIFIRE certificates .

Melting point of components (except decorative non functional parts): 800°C minimum.

180 STRENGTH CLASS OR CATEGORY OF DUTY FOR DOOR IRONMONGERY

Requirement: To BS EN 1192, Class 3.

General: Durability of ironmongery components to be compatible with stated category of duty of each door leaf.

Exclusions: Ironmongery with specific duty or 'category of use' defined elsewhere.

Documentation: Before placing orders with suppliers submit documentation showing product compliance with stated category of duty.

DOOR OPERATING DEVICES

410A OVERHEAD DOOR CLOSERS Generally

- Standard: To BS EN 1154.
- Door closing devices to fire/ smoke control doors: CE marked.
- Overhead Closers to be the following:

Closer 1: Dorma TS 92 B/G or equivalent - for doors $\leq$ 1100mm

- All closers are to be in stainless steel construction with matching satin stainless steel square edge cover boxes, "Dorma Softline" or equivalent, samples to be provided for approval, refer to sample images below (satin stainless steel cover box, cam action closer)

Criteria

- Description: All closers are required to be cam-action door closers, note rack and pinion closers will not be accepted
- Testing and general criteria: Overhead closers are required to have been independently tested and certified to meet the requirements of BS EN1154 as follows:
 - Category of use grade: 3
 - Durability grade 8: 500,000 cycles
 - Test Door Mass grade: 4 minimum
 - Suitability for fire/smoke door use grade: 1
 - Safety grade: 1
 - Corrosion resistance grade: 3
- Fire requirements:
 - Independent testing certification confirming contribution of closer to the fire resistance of the door assembly
 - Fire Tested to BS EN 1634-1: 2000
- Manufacturer certification: Quality management system to ISO 9001: 2008
- CE Marking: products to have CE mark for building products
- Drive: Linear drive and rapidly decreasing opening resistance/torque
- Closing speed: Adjustable closing speed in two independent ranges
- Mounting: Mounting backplate with universal fixing hole pattern
- Fitness for purpose: To be suitable for width, height, weight and frame design of doorsets, all closers to include associated plates and brackets for individual fixing and mounting conditions.

DOOR SECURING DEVICES

515A DOOR LOCKS CASES, LATCHES, STRIKE PLATES, GENERALLY

- General Morticed lock case requirements have been identified / quantified in the Internal Door Ironmongery Schedule in the following different situations:
 - Sashlock case - morticed sashlock case with latch and deadlock
 - Deadlock case - morticed case with deadlock only
 - Escape case - morticed sashlock case with latch and deadlock, night latch function to enable lever handle to retract the latch and projected bolt, key to outside to retract the latch and projected bolt
 - Hook latch case for sliding doors
 - Sprung roller bolt catch case
- The lock case, latches and strike plates have been specified by their performance criteria including shape and finish without specific reference to a particular manufacturer.
- Morticed lock cases should meet the following requirements:
- Lock cases are required to have been independently tested and certified to meet the requirements of BS EN12209 as follows:
 - Category of Use grade: 1

- Durability: minimum Class M, 200,000 cycles with minimum 25N load on latch bolt
- Door mass and closing force: minimum grade: 4 (up to 100kg and 25N closing force)
- Suitability for fire/smoke door use grade: 1
- Minimum corrosion resistance grade F
- Security grade: 2 minimum
- Fire requirements:
 - Independent testing certification confirming contribution of locks and latches to the fire resistance of the door assembly
 - Independent testing certification confirming contribution of emergency exit devices to the fire resistance of the door assembly (where relevant)
 - Fire Tested to BS EN 1634-1: 2000
 - Minimum FD60 Timber / FD240 Steel
- All lock cases to take europrofile cylinders unless noted otherwise
- Standard 72mm between follower and keyway centres to meet requirements of BS8300
- To include all necessary fixings, cap material to match forend and strike plate
- To include manufacturer's corresponding forends and strike plates in minimum 2mm satin stainless steel, samples to be presented as part of the ironmongery sample board for approval prior to Manufacture / purchase.
- Galvanised steel lock cases
- Sprung roller bolts to be brass, adjustable from front face-plate
- Latch bolts nickel-plated steel, minimum 38mm high
- Nickel plated steel deadbolts with anti-drill steel rollers, minimum 32mm high
- Minimum specification 8mm heavy sprung square steel followers in drawn steel brushes, minimum 9mm square followers for Escape cases.
- Maintenance-free pre-lubricated silent pattern latches
- Holes for standard countersunk fixings
- Backsets: 55mm
- Sashlock case, escape case and deadlock case deadlock projection: min. 20mm
- WC deadlock projection: min.10mm
- Forends: 235x20mm radiused satin-brushed stainless steel, min 2mm plate, countersunk slots, fixing heads to match (note hook latch and sprung roller forends may be smaller) - forend design to be similar to sample image above.
- Strike plates: min 165x24mm with additional 45mm wide flange 'lip' to receive latch and bolt, min 2mm plate, countersunk slots.

530A CYLINDERS, THUMBTURNS, ESCUTCHEONS, GENERALLY SPECIAL FUNCTION DOOR LOCKS

- All Cylinders, Thumbturns & Escutcheons should be stainless steel in a satin stainless steel finish with concealed fixings. Escutcheons, thumbturn plates and indicator plates should be consistent in finish and dimensions, of approx. 50mm diameter, and should also be consistent with the door lever rose plates. Samples are required to be approved by the Architect, and should be similar in design and appearance to the guide images below.

The cylinders, thumbturns & escutcheons have been specified by their performance criteria including shape and finish without specific reference to a particular manufacturer.

CYLINDERS CRITERIA

- Cylinders for locks are required to meet the following:
 - All cylinders to be europrofile cylinder standard
 - Visible cylinder faces should be of stainless steel, to match escutcheons and other door ironmongery
- Cylinders for locks are required to have been independently tested and certified to meet the requirements of BS EN 1303: 2005 as follows:
 - Category of use grade: 1 - keys shall resist a torque of 2.5Nm and still be usable
 - Durability grade: 25,000 cycles grade 4
 - Suitability for fire/smoke door use grade: 1
 - Corrosion resistance grade: C
 - Key security grade: 2 minimum for internal doors
 - Attack resistance grade: 1 minimum

THUMBTURNS CRITERIA

- Thumbturns are required to meet the requirements of Part M 2010 and BS 8300: 2010, that is 'it should be possible to operate all door opening furniture one-handed, without the need to grasp or twist,' thus the thumbturn must have a lever extension. An extension of 25mm is acceptable.

ESCUTCHEONS CRITERIA

- Escutcheons should meet the following requirements:
 - Projection up to 8mm
 - All escutcheons should accurately fit the cylinder / thumbturn (europrofile cylinders)
- Doorsets requiring Escutcheons are listed in the Internal Door Ironmongery Schedule. Escutcheons have been listed in the Schedule for both cylinders and thumbturns, however if thumbturns have integrated or accompanying escutcheons, it is not necessary to supply them separately, unless required for matching purposes.

DOOR FURNITURE

720A DOOR STOPS

- The precise setting out of the door stops is to be determined on site to ensure the balance between providing an appropriate stop for the door is met with the necessity for ensuring the stop does not constitute a trip hazard.

The door stops have been specified by their performance criteria including shape and finish without specific reference to a particular manufacturer.

- Materials and finish: Stops should be formed from solid milled stainless steel in stain finish with black rubber bung.
- Fixings: Stops are to be fixed to floor using stainless steel pozi drive screws through countersunk slots, with plugs in screed if required.
- Overall shape and formation: Door stops to be hemispherical in shape, of approx. 45mm diameter, of a solid piece, cut to form hood for rubber insert.
- Flush fixing: Use flush fixings with door stops to ensure fixing is flush with surface of door stop.

P31

Holes, chases, covers and supports for services

P31 Holes, chases, covers and supports for services

To be read with Preliminaries/General conditions.

299A GENERALLY

ANCILLARY CERTIFICATE (FIREPROOFING AND FIRESTOPPING)

- Requirement: The subcontractor shall provide a signed ancillary certificate for the fireproofing and firestopping installations.
- Form of Ancillary Certificate: Cs Ancillary Certificate and Annex Schedules 1 & 2.
- Description of Subcontractor's Works: fireproofing and firestopping installations including detailed design of the coatings for the intumescent paint to steelwork.
- Timing: Completed Certificate including supporting documentation must be issued within 2 weeks of subcontract works being completed.

400 METER CABINETS

Type: Inset.

Manufacturer: Submit proposals.

Product reference: Submit proposals.

Size: As drawings.

EXECUTION

710A SEALING AROUND ELECTRICAL CABLING FOR AIRTIGHTNESS & WEATHERTIGHTNESS

- Service: Electrical cabling and fittings
 - Location: External walls and airtightness membranes
 - Sealing material:
 - External walls: Soudal Silirub Colour or equivalent low modulus, high-quality, elastic, one component, silicone-based, high adhesion, UV-resistant, permanent colour, external grade sealant.
 - Airtightness membranes: use grommets as per P14/340 sealed to membranes with tape as per P14/332.
 - Method:
 - seal neatly around penetrations through masonry leaves,
 - penetrations through dpc trays and membranes to be fully taped
 - Contractor to ensure pipework and insulation sleeving do not form a path for moisture to bridge the cavity wall,
- DPC to installed to external leaf side of pipework where it comes into contact with the blockwork
- Performance requirement: Airtightness, prevention of insect ingress, weathertightness, to be painted to match surrounding renders, to be formed clean and neat.
 - Colour: RAL colour of the silicon sealant to seal joint to match the colour of the render adjacent.

730 INSTALLING ACCESS COVERS/ GRATINGS AND FRAMES

Seating: to engineers specification .

Bedding and haunching of frames: Continuously.

Material: to engineers specification.

Top of haunching: 30 mm below surrounding surfaces.

Horizontal positioning of frames:

Centred over openings.

Install square with joints in surrounding surfaces: Wherever practicable.

Vertical positioning of frames:

Level; or

Marry in with levels of surrounding surfaces.

Permissible deviation in level of external covers and frames: +0 to -6 mm.

Z

Building fabric reference specification

Z20

Fixings and adhesives

Z20 Fixings and adhesives

To be read with Preliminaries/ General conditions.

PRODUCTS

310 FASTENERS GENERALLY

Materials: To have:

Bimetallic corrosion resistance appropriate to items being fixed.

Atmospheric corrosion resistance appropriate to fixing location.

Appearance: Submit samples on request.

320 PACKINGS

Materials: Noncompressible, corrosion proof.

Area of packings: Sufficient to transfer loads.

340 MASONRY FIXINGS

Light duty: Plugs and screws.

Heavy duty: Expansion anchors or chemical anchors.

350 PLUGS

Type: Proprietary types to suit substrate, loads to be supported and conditions expected in use.

390 ADHESIVES GENERALLY

Standards:

Hot-setting phenolic and aminoplastic: To BS 1203.

Thermosetting wood adhesives: To BS EN 12765.

Thermoplastic adhesives: To BS EN 204.

410 POWDER ACTUATED FIXING SYSTEMS

Types of fastener, accessories and consumables: As recommended by tool manufacturer.

EXECUTION

610 FIXING GENERALLY

Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.

Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers/ sleeves to avoid bimetallic corrosion.

Appearance: Fixings to be in straight lines at regular centres.

620 FIXING THROUGH FINISHES

Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

630 FIXING PACKINGS

Function: To take up tolerances and prevent distortion of materials and components.

Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.

Locations: Not within zones to be filled with sealant.

640 FIXING CRAMPS

Cramp positions: Maximum 150 mm from each end of frame sections and at 600 mm maximum centres.

Fasteners: Fix cramps to frames with screws of same material as cramps.

Fixings in masonry work: Fully bed in mortar.

670 PELLETED COUNTERSUNK SCREW FIXING

Finished level of countersunk screw heads: Minimum 6 mm below timber surface.

Pellets: Cut from matching timber, match grain and glue in to full depth of hole.

Finished level of pellets: Flush with surface.

680 PLUGGED COUNTERSUNK SCREW FIXING

Finished level of countersunk screw heads: Minimum 6 mm below timber surface.

Plugs: Glue in to full depth of hole.

Finished level of plugs: Projecting above surface.

690 USING POWDER ACTUATED FIXING SYSTEMS

Powder actuated fixing tools: To BS 4078-2 and Kitemark certified.

Operatives: Trained and certified as competent by tool manufacturer.

700 APPLYING ADHESIVES

Surfaces: Clean. Adjust regularity and texture to suit bonding and gap filling characteristics of adhesive.

Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.

Finished adhesive joints: Fully bonded. Free of surplus adhesive.

Z22

Sealants

Z22 Sealants

To be read with Preliminaries/General conditions.

PRODUCTS

310 JOINTS refer to joints and sealants elsewhere in specification for type

Primer, backing strip, bond breaker: Types recommended by sealant manufacturer.

EXECUTION

610 SUITABILITY OF JOINTS

Presealing checks:

Joint dimensions: Within limits specified for the sealant.

Substrate quality: Surfaces regular, undamaged and stable.

Joints not fit to receive sealant: Submit proposals for rectification.

620 PREPARING JOINTS

Surfaces to which sealant must adhere:

Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.

Clean using materials and methods recommended by sealant manufacturer.

Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.

Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.

Protection: Keep joints clean and protect from damage until sealant is applied.

630 APPLYING SEALANTS

Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.

Environmental conditions: Do not dry or raise temperature of joints by heating.

Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.

Sealant profiles:

Butt and lap joints: Slightly concave.

Fillet joints: Flat or slightly convex.

Protection: Protect finished joints from contamination or damage until sealant has cured.

Z31

Powder coatings

Z31 Powder coatings

To be read with Preliminaries/ General conditions.

120 POWDER COATING MATERIALS

Manufacturer: Obtain from one only of the following: submit proposals.

Selected manufacturer: Submit details before commencement of powder coating including:

Name and contact details.

Details of accreditation schemes.

Technical data of product including current Agrément certificates.

210 WORKING PROCEDURES

Comply with the follow following standards.

Aluminium components: To BS 6496 or BS EN 12206-1.

Steel components: To BS EN 13438.

Safety standards: To British Coatings Federation 'Code of safe practice - Application of thermosetting powder coatings by electrostatic spraying'.

220 POWDER COATING APPLICATORS

Applicator requirements:

Approved by powder coating manufacturer.

Currently certified to BS EN ISO 9001.

Comply with quality procedures, guarantee conditions, standards and tests required by powder coating manufacturer.

Applicator to use only one plant.

Selected applicator: Submit details before commencement of powder coating including:

Name and contact details.

Details of accreditation schemes.

225 GUARANTEES

Powder coating manufacturer and applicator guarantees:

Submit sample copies before commencement of powder coating.

Submit signed project specific copies on completion of work.

310 PRETREATMENT OF ALUMINIUM COMPONENTS

Condition of components to be pretreated:

Free from corrosion and damage.

All welding and jointing completed and finish off as specified.

Free from impurities including soil, grease, oil.

Suitable for and compatible with the pretreatment process.

Conversion coating requirements:

Chromate system: To BS 6496 or BS EN 12206-1.

Chromate-free system: To BS EN 12206-1. Submit details before using.

Rinsing requirements: Use demineralized water. Drain and dry.

430 EXTENT OF POWDER COATINGS

Application: To visible component surfaces, and concealed surfaces requiring protection. Coated surfaces will be deemed 'significant surfaces' for relevant BS 6496/ BS EN 13438 performance requirements.

435 APPLICATION OF POWDER COATINGS

Surfaces to receive powder coatings: Free from dust or powder deposits.

Powder colours: Obtain from one batch of one manufacturer.

Commencement of powder coatings: To be continuous from pretreatment.

Jig points: Not visible on coated components.

Curing: Controlled to attain metal temperatures and hold periods recommended by powder coating manufacturer.

Stripping and recoating of components: Only acceptable by prior agreement of powder coating manufacturer. Stripping, pretreatment and powder coating are to be in accordance with manufacturer's requirements.

Overcoating of components: Not acceptable.

440 PERFORMANCE AND APPEARANCE OF POWDER COATINGS

For aluminium components:

Standard: To BS 6496 or BS EN 12206-1.

For steel components:

Standard: To BS EN 13438.

Visual inspection after powder coating: Significant surface viewing distances to be as specified in the relevant Standard, unless specified otherwise.

Colour and gloss levels: To conform with approved samples.

450 ALUMINIUM ALLOY FABRICATIONS

Units may be assembled:

Before powder coating.

From components powder coated after cutting to size.

Where approved, from components powder coated before cutting to size.

Exposure of uncoated background metal: Not acceptable.

Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.

470 FIXINGS

Exposed metal fixings: Powder coat together with components, or coat with matching repair paint system applied in accordance with the powder coating manufacturer's recommendations.

480 DAMAGED COMPONENTS - REPAIR/ REPLACEMENT

Before delivery to site: Check all components for damage to powder coatings. Replace damaged components.

Site damage: Submit proposals for repair or replacement.

510 PROTECTION

Powder coated surfaces of components: Protect from damage during handling and installation, or by subsequent site operations.

Protective coverings: Must be:

- Resistant to weather conditions.

- Partially removable to suit building in and access to fixing points.

Protective tapes in contact with powder coatings: Must be:

- Low tack, self adhesive and light in colour.

- Applied and removed in accordance with tape and powder coating manufacturers' recommendations. Do not use solvents to remove residues as these are detrimental to the coating.

Inspection of protection: Carry out monthly. Promptly repair any deterioration or deficiency.

535 DOCUMENTATION

Submit the following information for each batch of powder coated components:

- Supplier.

- Trade name.

- Colour.

- Type of powder.

- Method of application.

- Batch and reference number.

- Statutory requirements.

- Test certificates.

- Maintenance instructions.

540 COMPLETION

Protection: Remove

Cleaning and maintenance of powder coatings: Carry out in accordance with procedures detailed in powder coating manufacturer and applicator guarantees.