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PRELIMINARIES & SPECIFICATION FOR PHASES 2 & 3

The Gallowglass Community Centre

Kilmacrennan Road, Milford

TENDER

October 2026

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Refer also to notes on DSM Consulting Engineers drawing in relation to:

- General Notes
- Brick/Block Walling
- Steelwork
- Structural Timber
- Concrete

Refer to DMAC Consulting Engineers drawing notes and specification in relation to:

- Mechanical Services Installation
- Electrical Services Installation

A10 PROJECT PARTICULARS

- 110 THE PROJECT:
Name: The Gallowglass Community Centre – Phases 2 & 3
- 120 EMPLOYER (CLIENT): Milford & District Resource Centre
- 127 THE PRINCIPAL CONTRACTOR: The Contractor
- 140 ARCHITECT (hereinafter referred to as 'CA'):
Dedalus Architecture, Bath Terrace, Main Street, Co. Donegal
- 147 PROJECT SUPERVISOR DESIGN PROCESS (PSDP):
Dedalus Architecture, Bath Terrace, Main Street, Co. Donegal
- 148 PROJECT SUPERVISOR CONSTRUCTION STAGE (PSCS):
The contractor will be appointed to undertake this role
- 149 TEMPORARY WORKS DESIGNER:
The main contractor will undertake the role of Temporary Works Designer
- 150 QUANTITY SURVEYOR ROLE:
Dedalus Architecture, Bath Terrace, Main Street, Co. Donegal
- 160 STRUCTURAL ENGINEER:
DSM Consulting Engineers, Donegal Road, Ballybofey, Co. Donegal
- 170 SERVICES ENGINEER:
DMAC Consulting Engineers, Glenturas House, 18 Beraghmore Road, Derry

A11 TENDER AND CONTRACT DOCUMENTS

- 110 THE TENDER DOCUMENTS are: as listed on Document Issue Sheet
- 120 THE CONTRACT DRAWINGS will be the same as stated in the 'Instructions to Tenderers.'
- 160 THE PRELIMINARY HEALTH AND SAFETY PLAN is a separate document. It refers to information given in the preliminaries, specification and drawings.
- 180 INSPECTION: the site may be inspected by arrangement with:
Milford and District Resource Centre, Market Square, Milford F92 P8YD
Tel: +353 74 915 3736

A12 THE SITE/EXISTING BUILDINGS

- 110 THE SITE/ THE EXISTING BUILDING(S):
The building is the former Milford Reformed Presbyterian Church – a four-bay, double height main building with gable ends and having a single storey side/rear extension added in 2005. Its long side is roughly parallel to and set back 3-4m from the pavement along Kilmacrennan Road.

- 120 EXISTING BUILDINGS ON/ADJACENT TO THE SITE:
Refer to Preliminary Health & Safety Plan
- 140 EXISTING MAINS/SERVICES:
Refer to Preliminary Health & Safety Plan
- 220 ACCESS TO THE SITE:
Refer to Preliminary Health & Safety Plan
- 210 PARKING of the Contractor's and employees' vehicles will be restricted
Refer to Preliminary Health & Safety Plan
- 220 USE OF THE SITE:
- Do not use the site for any purpose other than carrying out the Works.
- 240 RISKS TO HEALTH AND SAFETY:
- Refer to Preliminary Health & Safety Plan
- The accuracy and sufficiency of this information is not guaranteed by the Employer or the CA and the Contractor must ascertain for himself any information he may require to ensure the safety of all persons and the Works.
- 280 SITE VISIT:
Before tendering, ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.

A13 DESCRIPTION OF THE WORK

- 120 THE WORK:
Described in outline in the “Schedule of Works” for pricing and in more detail on the drawings and this specification.
- 150 COMPLETION WORK BY OTHERS:
None specified to date.

A20 THE CONTRACT

- 310 Short Public Works Contract: The form of contract will be the Office of Government Procurement: PW-CF6 v1.15 25/11/2025 – Short Public Works Contract

Allow for the obligations, liabilities and services described therein against the heading below:

The “Employer” will be: “Milford & District Resource Centre”

The Works comprise: The Gallowglass Community Centre, Milford –
Phases 2 & 3

The Contract Drawings, specification and schedules will be as specified in section A11.

The “Employer’s Representative” will be: Dedalus Architecture

THE CONDITIONS:

Will be as set out in the:

Short Public Works Contract PW-CF6 v1.15 25/11/2025

A30 TENDERING/SUBLETTING/SUPPLY

PRICING/SUBMISSION OF DOCUMENTS

- 211 PRELIMINARIES IN THE SPECIFICATION: The Preliminaries/General conditions sections (A10-A44 inclusive) must not be relied on as complying with SMM7 or the Agreed Rules of Measurement (ARM) as applicable.
- 240 PRICING OF PERFORMANCE SPECIFIED WORK:
- Tenders must include for all associated and ancillary work shown or clearly apparent as being necessary to meet the requirements for the Performance Specified Work and its completion and proper integration with the Works generally.
 - Tenderers must price on the work and quantities which they intend to provide and will be responsible for any error therein. Where provided, quantities are indicative only.
- 301 QUANTITIES IN THE SPECIFICATION & SCHEDULES:
- Must not be relied on as complying with SMM7 or Agreed Rules of Measurement (ARM).
 - Must be priced taking account of the information given elsewhere in the tender documents, including for all associated and ancillary work shown or clearly apparent as being necessary for the complete and proper execution of the work.
- 310 SPECIFICATION WITHOUT QUANTITIES: Where and to the extent that quantities are not included in the specification, 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.
- 320 PRICING OF SPECIFICATION: Alterations and qualifications to the specification must not be made without the written consent of the CA. Tenders containing unauthorised alterations or qualifications may be rejected. Costs relating to items in the specification which are not priced will be deemed to have been included elsewhere in the tender.
- 460 A CONTRACT SUM ANALYSIS must be submitted
The Analysis must comprise a breakdown of the Contract Sum into the following categories:
- To correspond to the breakdown listed in the "Schedule of Work"
- 472 ERRORS IN THE CONTRACT SUM ANALYSIS will be dealt with in accordance with the 'Instruction to Tenderers' issued with the tender package
- 480 PROGRAMME: The Contractor's proposed programme as specified in Section A32 or a summary thereof showing the sequence and timing of the principal parts of the Works, periods for planning and design, and itemising any work which is excluded must be submitted
- 510 ALTERNATIVE METHOD TENDERS:
- In addition to and at the same time as his tender for the Works as defined in the tender documents, the Contractor may, at his discretion, submit alternative method(s) of

construction for consideration. Alternatives which would involve significant changes to other work will not be considered.

- Such alternative(s) will be deemed to be alternative tender(s) and each must include a complete and precise statement of the effects on cost and programme.
- Carry out a health and safety risk assessment for each such alternative and where appropriate provide a safety method statement suitable for incorporation in the Health and Safety Plan.

516 ALTERNATIVE TIME TENDERS:

- In addition to and at the same time as his tender based upon the date or period specified in section A20, the Contractor may, at his discretion, submit an alternative tender based upon a different date for completion or period.
- If any such tender is accepted the date for completion inserted in the Appendix to the Contract will be the date stated in the alternative tender or determined from the period stated in the alternative tender.

535 SUBSTITUTE PRODUCTS: If the Contractor wishes to substitute products of different manufacture to those specified, details must be submitted with the tender giving reasons for each proposed substitution. Substitutions which have not been notified at tender stage may not be considered. Substitutions sanctioned by the CA will be subject to the verification requirements of clause A31/200.

540 QUALITY CONTROL RESOURCES: On request a statement must be submitted describing the organisation and resources which the Contractor proposes and undertakes to provide to control the quality of the Works, including the work of subcontractors. The statement must include the number and type of staff responsible for quality control, with details of their qualifications and duties.

551 HEALTH AND SAFETY INFORMATION: On request a statement must be submitted describing the organisation and resources which the contractor proposes and undertakes to provide to safeguard the health and safety of operatives, including those of subcontractors and of any person who may be affected by the works, including:

- A copy of the contractor's health and safety policy document, including risk assessment procedures.
- Accident and illness records for the past five years.
- Records of previous Health and Safety Executive/ Health & Safety Authority enforcement action.
- Records of training and training policy.
- The number and type of staff responsible for health and safety on this project with details of their qualifications and duties.

571 AN OUTLINE CONSTRUCTION PHASE HEALTH AND SAFETY PLAN must be developed and submitted immediately post tender for review at the first/ pre-contract meeting and is to include the following and items listed in the Preliminary Health & Safety Plan for the project:

- Method statements related to the construction hazards identified in the preliminary health and safety plan and/or statements on how the hazards will be addressed and other significant hazards identified by the contractor.
- Details of the management structure and responsibilities.
- Arrangements for issuing health and safety directions.
- Standards of health and safety to be applied.
- Procedures for informing other contractors and employees of health and safety hazards.
- Selection procedures for ensuring competency of other contractors, the self-employed and designers.

- Procedures for communications between the project team, other contractors and site operatives.
- Arrangements for co-operation and co-ordination between contractors.
- Procedures for managing design work carried out during the construction phase.
- Procedures for carrying out risk assessment and for managing and controlling the risk.
- Emergency procedures including those for fire prevention and escape.
- Arrangements for ensuring that all accidents, illness and dangerous occurrences are recorded.
- Arrangements for welfare facilities.
- Procedures for ensuring that all persons on site have received relevant health and safety information and any training.
- Arrangements for consulting with and taking the views of people on site.
- Arrangements for preparing site rules and drawing them to the attention of those affected and ensuring their compliance.
- Arrangements for collecting and collating information for the health and safety file.
- Monitoring procedures to ensure compliance with site rules, selection and management procedures, health and safety standards and statutory requirements.
- Review procedures to obtain feedback.

SUBLETTING/SUPPLY

The Contractor must not sublet any item of work without prior approval.

A31 PROVISION, CONTENT AND USE OF DOCUMENTS

DEFINITIONS AND INTERPRETATIONS

- 110 DEFINITIONS: The meaning of terms, derived terms and synonyms used in the preliminaries/general conditions and specification is as defined below or in the appropriate European Standard or Irish Standard glossary.
- 120 CA means the person nominated in the Contract as Architect or “Employer’s Representative”.
- 130 IN WRITING: When required to advise, notify, inform, instruct, agree, confirm, obtain information, obtain approval or obtain instructions do so in writing.
- 140 APPROVAL (and words derived therefrom) means the approval in writing of the CA unless specified otherwise.
- 150 PRODUCTS means materials (including naturally occurring materials) and goods (including components, equipment and accessories) intended for permanent incorporation in the Works.
- 180 CROSS-REFERENCES TO THE SPECIFICATION:
- Where a numerical cross-reference to a specification section or clause is given on drawings or in any other document the Contractor must verify its accuracy by checking the remainder of the annotation or item description against the terminology used in the referred to section or clause.
 - Where a numerical cross-reference is not given the relevant section(s) and clause(s) of the specification will apply, cross-reference thereto being by means of related terminology.

- Where a cross-reference for a particular type of work, feature, material or product is given, relevant clause(s) elsewhere in the referred to specification section dealing with general matters, ancillary products and workmanship also apply.
 - The Contractor must, before proceeding, obtain clarification or instructions in relation to any discrepancy or ambiguity which he may discover.
- 200 EQUIVALENT PRODUCTS:
- Where the specification permits substitution of a product of different manufacture to that specified and such substitution is desired, before ordering the product notify the CA and, when requested, submit for verification documentary evidence that the alternative product is equivalent in respect of material, safety, reliability, function, compatibility with adjacent construction, availability of compatible accessories and, where relevant, appearance. Submit certified English translations of any foreign-language documents.
 - Any proposal for use of an alternative product must also include proposals for substitution of compatible accessory products and variation of details as necessary, with evidence of equivalent durability, function and appearance of the construction as a whole. If such substitution is sanctioned, and before ordering products, provide revised drawings, specification and manufacturer's guarantees as required by CA.
- 201 EQUIVALENT PRODUCTS: Wherever products are specified by proprietary name and the phrase 'or equivalent' is not included, it is to be deemed included.
- 270 SIZES: Unless otherwise stated:
- Products are specified by their co-ordinating sizes.
 - Cross section dimensions of timber shown on drawings are nominal sizes before any required planing.
- 280 FIX ONLY means all labours in unloading, handling, storing and fixing in position, including use of all plant.
- 290 SUPPLY AND FIX: Unless stated otherwise all items given in the schedule of work and/or on the drawings are to be supplied and fixed complete.

TERMS USED IN REFURBISHMENT/CONSERVATION

- 311 REMOVE means disconnect, dismantle as necessary and remove the stated element, work or component and all associated accessories, fastenings, supports, linings and bedding materials, and dispose of unwanted materials if directed.
- 321 KEEP FOR REUSE means:
- During removal prevent damage to the stated components or materials, and clean off bedding and jointing materials.
 - Stack neatly, adequately protect and store until required by the Employer or for use in the Works as instructed.
- 331 REPLACE means:
- Remove the stated existing components, features and finishes.
 - Provide and fit in lieu new components, features or finishes which, unless specified otherwise, must match those which have been removed.
 - Make good as necessary.
- 341 REPAIR means carry out local remedial work to components, features and finishes as found in the existing building. Re-secure or refix as necessary and leave in a sound and neat condition. It does not include:

- Replacement of components or parts of components.
 - Redecoration.
- 351 MAKE GOOD means carry out local remedial work to components, features and finishes which have been disturbed by other, previous work under this Contract and leave in a sound and neat condition. It does not include:
- Replacement of components or parts of components.
 - Redecoration.
- The meaning of the term shall not be limited by this definition where used in connection with the defects liability provisions of the Contract.
- 361 EASE means make minor adjustments to moving parts of the stated component to achieve good fit in both open and closed positions and ensure free movement in relation to fixed surrounds. Make good as necessary.
- 371 TO MATCH EXISTING means use products, materials and methods to match closely all visual characteristics and features of the existing work, with joints between existing and new work as inconspicuous as possible, all to approval of appearance.

DOCUMENTS PROVIDED ON BEHALF OF EMPLOYER

- 410 ADDITIONAL COPIES OF DRAWINGS: Two copies of drawings (not counting any certified copy of the Contract Drawings) will be issued to the Contractor free of charge. Additional copies will be issued on request but will be charged to the Contractor.
- 430 ADDITIONAL COPIES OF SPECIFICATION: After execution of the Contract, two copies of the Specification will be issued to the Contractor in accordance with the Contract. Additional copies will be issued on request, if available, but will be charged to the Contractor.
- 440 DIMENSIONS: The accuracy of dimensions scaled from the drawings is not guaranteed. Obtain from the CA any dimensions required but not given in figures on the drawings nor calculable from figures on the drawings.
- 450 THE MEASURED QUANTITIES: For purposes of ordering products and constructing the Works:
- The accuracy and sufficiency of the measured quantities is not guaranteed.
 - The specification and drawings shall take precedence over the measured quantities.
- 460 THE SPECIFICATION: All sections of the specification must be read in conjunction with Main Contract Preliminaries/General conditions.

A32 MANAGEMENT OF THE WORKS

GENERALLY

- 110 SUPERVISION: Accept responsibility for co-ordination, supervision and administration of the Works, including all subcontracts. Arrange and monitor a programme with each subcontractor, supplier, local authority and statutory undertaker, and obtain and supply information as necessary for co-ordination of the work.
- 120 INSURANCE: Before starting work on site submit documentary evidence and/or policies and receipts for the insurance required by the Conditions of Contract.

Note: This project is funded by Donegal County Council (Phase 2). Both DCC plus any subsequent funder for Phase 3 and Milford & District Resource Centre are to be indemnified on the Contractor's insurance policies.

- 140 CLIMATIC CONDITIONS: Keep an accurate record of:
- Daily maximum and minimum air temperatures (including overnight).
 - Delays due to adverse weather, including description of the weather, type(s) of work affected and number of hours lost.
- 150 OWNERSHIP: Materials arising from the alteration work are to become the property of the Contractor except where otherwise stated. Remove from site as work proceeds.
- 160 RECYCLED MATERIALS: Materials arising from deconstruction work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with the site waste management plan.

PROGRAMME/PROGRESS

- 211 PROGRAMME:
- As soon as possible and before starting work on site prepare in an approved form a master programme for the Works, which must make allowance for:
 - Work resulting from instructions issued in regard to the expenditure of provisional sums
 - Work by or on behalf of the Employer and concurrent with the Contract, the nature and scope of which, the relationship with preceding and following work and any relevant limitations are suitably defined in the Contract Documents.
 - Where and to the extent that the programme implications for work which is not so defined are impossible to assess the Contractor should exclude it from his programme and confirm this when submitting the programme.
- 220 THE PROGRAMME must show earliest and latest start and finish dates for each activity, and identify all critical activities.
- 230 SUBMISSION OF PROGRAMMES will not relieve the Contractor of his responsibility to advise the CA of the need for further drawings or details or instructions.
- 240 COMMENCEMENT OF WORK: Inform the CA at least 14 working days before the proposed date for commencement of work on site, to allow time for submission and validation of Commencement Notice.
- 250 MONITORING: Record progress on a copy of the programme kept on site. If any circumstances arise which may affect the progress of the Works put forward proposals or take other action as appropriate to minimise any delay and to recover any lost time.
- 260 CA'S SITE MEETINGS:
- The CA will hold regular site meetings to review progress and other matters arising from the administration of the Contract. Meetings will normally be held weekly.
 - Ensure the availability of accommodation at the time of such meetings.
 - Attend all meetings and inform subcontractors and suppliers when their presence is required.
 - The CA will chair the meetings and take and distribute minutes.

- 264 **CONTRACTOR'S PROGRESS REPORT:** Submit a progress report to the CA 2 days prior to each CA's site meeting. Notwithstanding the Contractor's obligations under the Contract the report must include:
- A progress statement by reference to the master programme for the Works.
 - Details of any matters materially affecting the regular progress of the Works.
 - Any requirements for further drawings or details or instructions to enable the CA to fulfil his obligations under Clause 3.2 of the Conditions of Contract.
- 270 **CONTRACTOR'S SITE MEETINGS:** Hold meetings with appropriate subcontractors and suppliers shortly before main site meetings to facilitate accurate reporting of progress.
- 300 **ADVERSE WEATHER:** Use all reasonable and suitable building aids and methods to prevent or minimise delays during adverse weather conditions.
- 360 **INSURANCE CLAIMS:** 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, forthwith give notice in writing to the Employer, the CA and the Insurers. Indemnify the Employer against any loss which may be caused by failure to give such notice.

CONTROL OF COST

- 410 **CASH FLOW FORECAST:** As soon as possible and before starting work on site submit to the CA a forecast showing the gross valuation of the Works at the date of each Interim Certificate throughout the Contract period and based upon the programme for the Works.
- 420 **EXISTING WORK:** The extent and location of renewal of existing work must be agreed, at least on a provisional basis, with the CA before the work is started. Remove existing work in ways which will reasonably minimise the amount of removal and renewal.
- 440 **MEASUREMENTS:** Give reasonable notice to the Quantity Surveyor before covering up work which the Quantity Surveyor requires to be measured.
- 450 **DAYWORK VOUCHERS:** Give reasonable notice to the commencement of any work for which daywork vouchers are to be submitted. Before being delivered, each voucher must be:
- Referenced to the instruction under which the work is authorised, and
 - Signed by the person in charge as evidence that the workmen's names, the time spent by each, the plant and materials shown are correct.
- 460 **INTERIM VALUATIONS:** At least 3 days before the end of each established Period for interim valuations submit to the details of amounts due under the Contract together with all necessary supporting information.
- 470 **UNFIXED MATERIALS:** At the time of each valuation disclose which of the unfixed materials and goods on site are free from, and which are subject to, any reservation of title inconsistent with passing of property, together with their respective values. When requested provide evidence of freedom from reservation of title.
- 475 **LISTED OFF-SITE MATERIALS OR GOODS:** The information submitted to the CA in accordance with the Conditions of Contract as reasonable proof that the property in 'listed items' is vested in the Contractor must include:
- For items 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 listed items are not subject to any encumbrance or charge.

- For items purchased from a supplier by a subcontractor or manufactured or assembled by any subcontractor:
A copy 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 PLANT RETURNS: At the beginning of each week provide for verification by the CA records showing, for each day of the previous week:

- The number and description of craftsmen, labourers and other persons employed on or in connection with the Works, including those employed by subcontractors.
- The number, type and capacity of all mechanical and power-operated plant employed on the Works.

A33 QUALITY STANDARDS/CONTROL

MATERIALS AND WORK GENERALLY

110 GOOD PRACTICE: Where and to the extent that materials, products and workmanship are not fully detailed or specified they are to be:

- Of a standard appropriate to the Works and suitable for the functions stated in or reasonably to be inferred from the project documents, and
- In accordance with relevant good building practice.

120 GENERAL QUALITY OF PRODUCTS:

- Products to be new unless otherwise specified.
- For products specified to a European Standard obtain certificates of compliance from manufacturers and retain on file to produce when requested by CA.
- Where a choice of manufacturer or source of supply is allowed for any particular product, the whole quantity required to complete the work must be of the same type, manufacture and/or source unless otherwise approved. Produce written evidence of sources of supply when requested by CA.
- Ensure that the whole quantity of each product required to complete the work is of consistent kind, size, quality and overall appearance.
- Where consistency of appearance is desirable ensure consistency of supply from the same source. Unless otherwise approved do not use different colour batches where they can be seen together.
- If products are prone to deterioration or have a limited shelf life, order in suitable quantities to a programme and use in appropriate sequence. Do not use if there are any signs of deterioration, setting or other unsatisfactory condition.

130 PROPRIETARY PRODUCTS:

- Handle, store, prepare and use or fix each product in accordance with its manufacturer's current printed or written recommendations/instructions. Inform CA if these conflict with any other specified requirement. Submit copies to CA when requested.
- The tender will be deemed to be based on the products specified and recommendations on their use as described in the manufacturer's literature.
- Obtain confirmation from manufacturers that the products specified and recommendations on their use have not been changed since that time. Where such change has occurred, inform CA and do not place orders for or use the affected products without further instructions.
- Where Agreement certified products are used, comply with the limitations, recommendations and requirements of the relevant valid certificates.

- 140 CHECKING COMPLIANCE OF PRODUCTS: Check all delivery tickets, labels, identification marks and, where appropriate, the products themselves to ensure that all products comply with the project documents. Where different types of any product are specified, check to ensure that the correct type is being used in each location. In particular, check that:
- The sources, types, qualities, finishes and colours are correct, and match any approved samples.
 - All accessories and fixings which should be supplied with the goods have been supplied.
 - Sizes and dimensions are correct. Where tolerances of components are critical, measure a sufficient quantity to ensure compliance.
 - The delivered quantities are correct, to ensure that shortages do not cause delays in the work.
 - The products are clean, undamaged and otherwise in good condition.
 - Products which have a limited shelf life are not out of date.
- 150 PROTECTION OF PRODUCTS:
- 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, until immediately before they are used.
 - Wherever possible retain protective wrappings after fixing and until shortly before Practical Completion.
 - Ensure that protective measures are fully compatible with and not prejudicial to the products/materials.
- 160 SUITABILITY OF RELATED WORK AND CONDITIONS: Ensure that all trades are provided with necessary details of related types of work. Before starting each new type or section of work, ensure that:
- Previous, related work is appropriately complete, in accordance with the project documents, to a suitable standard and in a suitable condition to receive the new work.
 - All necessary preparatory work has been carried out, including provision for services, openings, supports, fixings, damp proofing, priming and sealing.
 - The environmental conditions are suitable.
- 170 GENERAL QUALITY OF WORKMANSHIP:
- Operatives must be appropriately skilled and experienced for the type and quality of work.
 - Take all necessary precautions to prevent damage to the work from frost, rain and other hazards.
 - Inspect components and products carefully before fixing or using and reject any which are defective.
 - Fix or lay securely, accurately and in alignment.
 - Where not specified otherwise, select fixing and jointing methods and types, sizes and spacings of fastenings in compliance with section Z20. Fastenings to comply with relevant European Standards.

- Provide suitable, tight packings at screwed and bolted fixing points to take up tolerances and prevent distortion. Do not overtighten fixings.
 - Adjust location and fixing of components and products so that joints which are to be finished with mortar or sealant or otherwise left open to view are even and regular.
 - Ensure that all moving parts operate properly and freely. Do not cut, grind or plane prefinished components and products to remedy binding or poor fit without approval.
- 180 BS 8000: BASIC WORKMANSHIP:
- The work is to comply with BS 8000 to the extent that the recommendations therein define the quality of the finished work.
 - Where BS 8000 gives recommendations on particular working methods or other matters which are properly within the province and responsibility of the Contractor, compliance therewith will be deemed to be a matter of general industry good practice and not a specific requirement of the CA under the Contract.
 - If there is any conflict or discrepancy between the recommendations of BS 8000 on the one hand and the project documents on the other, the latter will prevail.
- 190 WATER FOR THE WORKS: Clean and uncontaminated. If other than mains supply is proposed provide evidence of suitability. Test to BS 3148 if instructed.

SAMPLES/APPROVALS

- 210 APPROVAL OF PRODUCTS: Where approval of a product is specified the requirement for approval relates to a sample of the product and not to the product as used in the Works. Submit a sample or other evidence of suitability. Do not confirm orders or use the product until approval of the sample has been obtained. Retain approved sample in good, clean condition on site. Ensure that the product used in the Works matches the approved sample.
- 220 SAMPLES OF FINISHED WORK: Where a sample of finished work is specified for approval, the requirement for approval relates to the sample itself (if approval of the finished work as a whole is required this is specified separately). Obtain approval of the stated characteristic(s) of the sample before proceeding with the Works. Retain approved sample in good, clean condition on site. Ensure that the relevant characteristic(s) of the Works match the approved characteristic(s) of the sample. Remove samples which are not part of the finished Works when no longer required.
- 230 APPROVALS: Where and to the extent that products or work are specified to be approved or the CA instructs or requires that they are to be approved, the same must be supplied and executed to comply with all other requirements and in respect of the stated or implied characteristics either:
- To the express approval of the CA or
 - To match a sample expressly approved by the CA as a standard for the purpose.
- 240 APPROVALS: Inspection or any other action by the CA must not be taken as approval of products or work unless the CA so confirms in writing in express terms 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.

ACCURACY/SETTING OUT GENERALLY

- 310 ACCURACY OF INSTRUMENTS: Use instruments and methods described in BS 5606, Appendix A
- 320 SETTING OUT: Submit details of methods and equipment to be used in setting out the Works.
- 340 APPEARANCE AND FIT:
- Arrange the setting out, erection, juxtaposition of components and application of finishes (working within the practical limits of the design and the specification) to ensure that there is satisfactory fit at junctions, that there are no practically or visually unacceptable changes in plane, line or level and that the finished work has a true and regular appearance.
 - Wherever satisfactory accuracy, fit and/or appearance of the work are likely to be critical or difficult to achieve, obtain approval of proposals or of the appearance of the relevant aspects of the partially finished work as early as possible.
 - Without prejudice to the above and unless specified otherwise, tolerances will (where applicable) be not greater than those given in BS 5606, Tables 1 and 2.

SERVICES GENERALLY

- 410 SERVICES REGULATIONS: Any work carried out to or which affects new or existing services must be in accordance with the Bye Laws or Regulations of the relevant Statutory Authority.

SUPERVISION/ INSPECTION/DEFECTIVE WORK

- 510 SUPERVISION: In addition to the constant management and supervision of the works provided by the Contractor's person in charge, all significant types of work must be under the close control of competent trade supervisors to ensure maintenance of satisfactory quality and progress.
- 520 PERSON-IN-CHARGE: Give maximum possible notice to CA before changing the person-in-charge.
- 555 ACCESS FOR INSPECTION: Give CA not less than 7 days notice before removing scaffolding or other facilities for access.
- 560 TIMING OF TESTS AND INSPECTIONS: Agree dates and times of tests and inspections with CA several days in advance, to enable the CA and other affected parties to be present. On the previous working day to each such test or inspection confirm that the work or sample in question will be ready or, if not ready, agree a new date and time.
- 565 TEST CERTIFICATES: Submit a copy of each certificate to CA as soon as practicable and keep copies of all certificates on site.
- 570 PROPOSALS FOR RECTIFICATION OF DEFECTIVE WORK/PRODUCTS:
- As soon as possible after any part(s) of the work or any products are known to be not in accordance with the Contract or appear that they may not be in accordance submit proposals to CA for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution.
 - Such proposals may be unacceptable to the CA and he may issue contrary instructions.
- 580 MEASURES TO ESTABLISH ACCEPTABILITY: 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, and
- will not be considered as grounds for extension of time.

590 **QUALITY CONTROL:** Establish and maintain procedures to ensure that the Works, including the work of all subcontractors, comply with specified requirements. Maintain full records, keep copies on site for inspection by the CA, and submit copies of particular parts of the records on request. The records must include:

- Identification of the element, item, batch or lot including location in the Works.
- The nature and dates of inspections by the Contractor or CA, tests and approvals.
- The nature and extent of any nonconforming work found.
- Details of any corrective action.

WORK AT OR AFTER COMPLETION

610 **GENERALLY:**

- Make good all damage consequent upon the work.
- Remove all temporary markings, coverings and protective wrappings unless otherwise instructed.
- Remove all splashes, deposits, efflorescence, rubbish and surplus materials consequent upon the execution of the work.

A34 SECURITY/SAFETY/PROTECTION

GENERALLY

110 **THE PRELIMINARY HEALTH AND SAFETY PLAN** is separate from the project Preliminaries, and includes but is not restricted to the sections set out below. The Contractor will be formally appointed to undertake the duties of Project Supervisor Construction Stage as defined in the Safety, Health & Welfare at Work (Construction) Regulations 2013; all costs arising will be deemed to be included within the Contract Preliminaries.

117 **HEALTH HAZARDS** arising from the specified construction materials include those identified below. Common place hazards which should be controlled by good management and good site practices are not listed.

- Hazard: None identified

120 **THE CONSTRUCTION PHASE HEALTH AND SAFETY PLAN**, developed from the Preliminary Health and Safety Plan (see section A30) must be submitted to the CA before the proposed date for start of construction work.

125 **HSA APPROVED CODES OF PRACTICE:** Comply with the following:

- Management of health and safety at work.
- Managing construction for health and safety.

520 **PUBLIC SAFETY:**

- Protect the public by erection of temporary fences, hoardings, etc. before starting work.
- Ensure that means of escape from adjoining property in the event of fire are maintained for the duration of the Works.

130 **SECURITY:** Adequately safeguard the site, the Works, products, materials, plant, and any existing buildings affected by the Works from damage and theft. Take all reasonable precautions to prevent unauthorised access to the site, the Works and adjoining property.

- 140 STABILITY: Accept responsibility for the stability and structural integrity of the Works during the Contract, and support as necessary.

PROTECT AGAINST THE FOLLOWING:

- 221 NOISE:
- The Contractor shall implement best practicable means in accordance with BS 5228-1:2009+A1:2014, including the control of noise at source, selection of low-noise plant, maintenance of equipment, site management measures and liaison procedures, to minimise noise arising from the works.
 - Do not use or permit employees to use radios or other audio equipment in ways or at times which may cause nuisance.
- 230 POLLUTION: Take all reasonable precautions to prevent pollution of the site, the Works and the general environment including streams and waterways. If pollution occurs, inform the appropriate Authorities and the CA without delay and provide them with all relevant information.
- 235 USE OF PESTICIDES:
- Use only where specified or approved, and then only suitable products as listed in the UK Pesticide Guide.
 - Where work is near water, drainage ditches or land drains, comply with the MAFF 'Guidelines for the use of herbicides on weeds in or near water courses and lakes'.
 - Observe all precautions recommended by the manufacturer and remove containers from site immediately they have been emptied or are no longer required.
 - Operatives must hold a BASIS Certificate of Competence or equivalent, or work under the supervision of a Certificate holder.
- 240 NUISANCE: Take all necessary precautions to prevent nuisance from smoke, dust, rubbish, vermin and other causes.
- 265 BURNING ON SITE of materials arising from the work or from any other source will not be permitted.
- 280 MOISTURE: Prevent the work from becoming wet or damp where this may cause damage. Dry out the Works thoroughly.
- 290 WASTE:
- Remove rubbish, debris, surplus material regularly and keep the site and Works clean and tidy.
 - Ensure that non-hazardous material is disposed of at a tip approved by a Waste Regulation Authority.
 - Remove all surplus hazardous materials and their containers regularly for disposal off site in a safe and competent manner as approved by a Waste Regulation Authority and in accordance with relevant regulations.
 - Retain waste transfer documentation on site.
- 305 LASER EQUIPMENT:
- Install, use and store construction laser equipment in accordance with BS EN 60825-1 and the manufacturer's instructions.
 - Use either Class 1 or Class 2 laser equipment ensuring that the laser beam is not set at eye level and is terminated at the end of its useful path.

- The use of Class 3A and Class 3B laser equipment will not be permitted without the approval of the CA and subject to the submission of a method statement on its safe use.

PROTECT THE FOLLOWING:

- 410 **WORK IN ALL SECTIONS:** Adequately protect all types of work and all parts of the Works, including work carried out by others, throughout the Contract. Wherever work is of an especially vulnerable nature or is exposed to abnormal risks provide special protection to ensure that damage does not occur.
- 440 **RETAINED TREES/HEDGES/SHRUBS/GRASSED AREAS:**
- Adequately protect and preserve, except those which are to be removed.
- 450 **EXISTING FEATURES:** Prevent any damage whatsoever to existing buildings, fences, gates, walls, roads, paved areas and other site features. Include for provision of protection to protection sections of the monument that are likely to be damaged by abrasion during the course of the works; provide protection at the very least to the areas identified in the in the drawings and any other areas identified in the development of the contractor's method statement.
- 481 **ADJOINING PROPERTY:** Prevent trespass of workpeople. Take all reasonable precautions to prevent damage to adjoining property. Obtain permission as necessary from the owners if requiring to erect scaffolding on or otherwise use adjoining property, and pay all charges. Remove and make good on completion or when directed. Bear the cost of repairing any damage arising from execution of the Works.
- 490 **EXISTING STRUCTURES:**
- Provide and maintain during the execution of the Works all incidental shoring, strutting, needling and other supports as may be necessary to preserve the stability of existing structures on the site or adjoining, which may be endangered or affected by the Works.
 - Support existing structure as necessary during cutting of new openings or replacement of structural parts.
 - Do not remove supports until new work is strong enough to support the existing structure. Prevent overstressing of completed work when removing supports.

A35 SPECIFIC LIMITATIONS ON METHOD/SEQUENCE/TIMING

- 110 **SCOPE:** The limitations described in this section are supplementary to limitations described or implicit in information given in other sections or on the drawings. The site is limited both in terms of working space and space for site facilities, preparation and storage of materials. The contractor should provide details of their proposals for the site set up and the extent to which this will be located off site.
- 130 **METHOD/SEQUENCE OF WORK:**
To be agreed with the Employer to suit ongoing use of the building.
- 140 **ACCESS TO THE SITE:** See section A12.
- 150 **USE OF THE SITE:** See section A12.
- 155 **SCAFFOLDING:** Ensure that standing scaffolding is erected early enough and/or dismantled late enough to suit the programmes of all subcontractors and allow for inspection and recording by the architect or other consultants.

A36 FACILITIES/TEMPORARY WORK/SERVICES

GENERALLY

- 110 LOCATIONS: Inform CA of the intended siting of all spoil heaps, temporary works and services.
- 120 MAINTAIN, alter, adapt and move temporary works and services as necessary. Remove when no longer required and make good.

ACCOMMODATION

- 210 ROOM FOR MEETINGS: Existing building to be used.
- 260 SANITARY ACCOMMODATION: The existing toilets may be used and should be maintained in clean condition.

TEMPORARY WORK

- 346 TEMPORARY PROTECTION:
Existing finishes or features in close proximity to the work should be protected from damage.
- 360 NAME BOARD: Obtain approval for and provide a suitable temporary name board displaying:
- Title of project.
 - Name of Employer.
 - Name of funding bodies.
 - Names of Consultants as follows:
Architect: Dedalus Architecture
Structural Engineer: DSM Engineers
Mechanical & Electrical Consultant: DMAC Consulting Engineers
 - If the Contractor wishes, names of Contractor and Subcontractors.

CONTRACTORS'S GENERAL COST ITEMS

A40 CONTRACTOR'S GENERAL COST ITEMS: MANAGEMENT AND STAFF

- 110 MANAGEMENT AND STAFF

A41 CONTRACTOR'S GENERAL COST ITEMS: SITE ACCOMMODATION

- 110 SITE ACCOMMODATION

A42 CONTRACTOR'S GENERAL COST ITEMS: SERVICES AND FACILITIES

- 110 POWER
- 120 LIGHTING

- 130 FUELS
- 140 WATER
- 150 TELEPHONE AND ADMINISTRATION
- 160 SAFETY, HEALTH AND WELFARE
- 170 STORAGE OF MATERIALS
- 180 RUBBISH DISPOSAL
- 190 CLEANING
- 200 DRYING OUT
- 210 PROTECTION OF WORK IN ALL SECTIONS
- 220 SECURITY
- 230 MAINTAIN PUBLIC AND PRIVATE ROADS
- 240 SMALL PLANT AND TOOLS

A43 CONTRACTOR'S GENERAL COST ITEMS: MECHANICAL PLANT

- 110 CRANES
- 130 PERSONNEL TRANSPORT
- 140 TRANSPORT

A44 CONTRACTOR'S GENERAL COST ITEMS: TEMPORARY WORKS

For details of temporary works required or made/not made available by the Employer see section A36.

- 120 TEMPORARY WALKWAYS
- 130 ACCESS SCAFFOLDING
- 140 SUPPORT SCAFFOLDING AND PROPPING
- 150 HOARDINGS, FANS, FENCING, ETC.
- 170 TRAFFIC REGULATIONS

BUILDING CONTROL REGULATIONS AND ASSIGNED CERTIFIER

All development works must be designed and built in accordance with the Building Regulations. For the purpose of the regulations all reference to Builder in the regulations shall be deemed to mean the Contractor. The Contractor shall make provisions in his tender to facilitate all Contractor & builder requirements detailed under the Building Regulations and Code of Practice.

BCAR Roles & Duties - Contractor Obligations

- a) The contractor shall undertake the role of 'Builder' as defined in BCAR and shall comply with the requirements of the 'Builder' as described in BCAR including the revised S.I. No. 9 of 2014 (refer to the Code of Practice for Inspecting and Certifying Buildings and Works) and have regard to these in accordance with the requirements of the Building Regulations. The contractor as 'Builder' shall carry out the works in accordance with the plans and specifications of the professional design team, their specialists and sub-consultants as necessary and have regard to these in accordance with the requirements of the Building Regulations. The contractor shall comply with the requirements of the Preliminary Inspection Plan and Inspection Notification Framework as co-ordinated and agreed with the Assigned Certifier.
- b) All the obligations of the Contractor as set out in this document are deemed to form part of the works requirements/ building contract and are to be included in the Tenderer's tender costs unless expressly stated otherwise in the Contract.

The Contractor shall:

- c) Accept from the building owner (Employer) the assignment to build and supervise the works and sign the Undertaking of Builder statutory forms identified in the Commencement Notice.
- d) Plan and agree the execution, inspection milestones, sequence and programme of works with the Assigned Certifier in advance of commencement of works
- e) Give notice for any inspection as set out in the Inspection Notification Framework.
- f) The Contractor shall be responsible for all delays and cost as a result of late inspection notification or inspections which have to be repeated where works are not fully ready for inspection or unsatisfactory.
- g) Ensure Competent Person(s) are assigned to oversee the general construction works and/or specialist works.
- h) Ensure that materials which they select and for which they are responsible comply with the requirements of the Building Regulations.
- i) Provide written confirmations and supporting documentation at interim payment stages when requested to do so by the E.R. Where requested within 5 working days of a payment claim date the Contractor shall provide an ancillary certificate or test result for works for which payment is requested.
- j) Co-operate with the Assigned Certifier, through the E.R in the lodgement of supplementary documentation to the Building Control Authority during the course of the works and take careful note of the drawings, specifications and documents lodged with the Commencement Notice or as subsequently uploaded onto the online system as the works proceed.
- k) Co-ordinate the Works of specialist subcontractors and designers and ensure that Ancillary

Certificates of Compliance are provided.

- l) Undertake to construct, to fully cooperate with the Assigned Certifier, and to sign the Certificate of Compliance on Completion as required under the Building Control Regulations, supported by Ancillary Certificates from other members of the design team and by certificates from specialist sub-contractors. Note: The building cannot be occupied or used until the works are entered on the Register of the Building Control Authority.

COMMENCEMENT STAGE

- a) Notice of Assignment of Builder by the Building Owner
- b) Form of Undertaking by the Builder

CONSTRUCTION STAGE INSPECTION

- a) The Assigned certifier and other persons nominated to undertake necessary inspections will adopt an appropriate Inspection Plan which takes account of relevant factors for the builder's work concerned.
- b) The Builder shall co-operate fully with the Assigned Certifier and assist with the formulation of the Inspection Plan and at all times during the course of the works.
- c) Co-operate with the Assigned Certifier, through the E.R in the lodgement of supplementary documentation to the Building Control Authority during the course of the works and take careful note of the drawings, specifications and documents lodged with the Commencement Notice or as subsequently uploaded onto the online system as the works proceed.

INSPECTION NOTIFICATION FRAMEWORK

- a) The Assigned Certifier shall, as part of the Inspection plan and before the commencement of work on site, agree with the Employer and the Builder an INF.
- b) The Contractor will identify all those elements which the Ancillary Certifier is required to inspect, when they are to inspect, and if records are required. The Contractor will fully coordinate the Inspection Notification Framework within their tender program.

COMPLETION STAGE

- a) At Completion Stage, Sign the Certificate of Compliance (completion) with the Assigned Certifier, and fully cooperate and assist with any Completion procedure required.

Miscellaneous: Contractor to carry out detailed photographic and other records as required as part of their obligations under the BC(A)R requirements throughout the duration of the project to record the progress of the works.

- b) "Practical Completion" means that the Works have been carried to such a stage that they can be taken over and used by the Employer for their intended purpose and that any items of work or supply then outstanding or any defects then patent are of a trivial nature only and are such that their completion or rectification does not interfere with or interrupt such use. **Where the building regulations require that a completion certificate be included on the Statutory Register before the building can be opened, occupied or used, Practical Completion shall not be deemed to take place until the Certificate of Compliance on Completion has been submitted to the building control authority and relevant particulars thereof have been included on the Register maintained under Part IV of the Regulations.**

SPECIFICATION OF MATERIALS AND WORKMANSHIP

C51 REPAIRING/ RENOVATING/ CONSERVING TIMBER

140 ASSESSMENT FOR REUSE – EXISTING INTERNAL TIMBER

Purpose: Assess all existing internal timber for reuse.

Extent: All floorboards and joists for reuse or reference.

Retained building structure/ fabric: Do not damage or destabilize.

150 TIMBER PROCUREMENT

Timber (including timber for wood-based products): Obtained from well-managed forests and/ or plantations in accordance with:

The laws governing forest management in the producer country or countries.

International agreements such as the Convention on International Trade in

Endangered Species of wild fauna and flora (CITES).

Documentation: Provide either in accordance with the chain of custody certification scheme requirements:

documentary evidence (that has been or can be independently verified) regarding the provenance of all timber supplied; or

evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.

Chain of Custody Certification scheme: Forest Stewardship Council (FSC), Grown in Britain (GiB) or Programme for the Endorsement of Forest Certification (PEFC)

160 TIMBER SUPPLIER

Contractor's choice

C52 FUNGUS/BEETLE ERADICATION

230 INSECT INFESTATION:

- Probe timber, drilling if necessary, to determine extent of damage.
- Remove timber agreed with the CA as being structurally unsound.
- Scrape and trim back all friable parts of otherwise sound timber.
- Remove infected material immediately from the building and dispose of safely at a tip approved by a Waste Regulation Authority.

250 CLEANING: Thoroughly clean down all surfaces in affected areas. Remove all loose material, dust and debris and remove from site without delay.

310 PRESERVATIVES/FUNGICIDES:

- To be approved and registered by the Health and Safety Executive (HSE) and listed in the 'Pesticides (Reference Book 500)' and the 'Pesticides Register' current at the time of tendering.
- Apply in strict accordance with statutory conditions of approval given on product labels.

315 TREATMENT METHODS GENERALLY:

- Select treatment method(s) from those specified, ensuring suitability for the type, scale and location of the fungal/insect attack.
- Where treatment involves drilling timber, agree the number, sizes and locations of holes with the CA.
-

323 TIMBER PRESERVATIVE TREATMENT

- All new timber to be treated, existing timbers which are to be retained are to be inspected and treated locally if needed. Only borax based chemicals for site treatments are to be used unless agreed with the architect.

320 BRUSH/SPRAY TREATMENT:

- Manufacturer: Safeguard Europe Ltd. Redkiln Close, Horsham, West Sussex, RH13 5QL. Tel: 01403 210204. Email: info@safeguardeurope.com Web: www.safeguardeurope.com
- Product reference: ProBor DB Timber Preservative Treatment. Treatment method: Coarse spray at a rate of 0.25 l/m². Brush applied in three liberal coats
- ProBor 20 Gel (HSE No. 6422)
- ProBor 20 Gel is a low odour, brush applied gel formulation, for large section timber. It is suitable for surface application, particularly effective against Deathwatch Beetle and for dry and wet rot treatment. Consult Safeguard Europe Ltd technical literature for details. Safeguard Europe Ltd can also provide a design and specification service and it is recommended that they are consulted early in the design process.

330 PASTE TREATMENT:

- ProBor 50 Paste (HSE No. 5596)
- Probor 50 is supplied as a clear, odourless, viscous gel-like formulation, pre-loaded into a ready-to-use cartridge to fit a standard mastic gun. It is injected into pre-drilled holes, deep into the timber, ensuring complete distribution of the Boron preservative. The product is suitable for the treatment against rot and insects. Consult Safeguard Europe Ltd technical literature for details. Safeguard Europe Ltd can also provide a design and specification service and it is recommended that they are consulted early in the design process.

D20 EXCAVATING AND FILLING

CLEARANCE/EXCAVATING

- 210 MATERIALS ARISING from the excavations and surplus to requirements for filling are to be removed from the site.
- 230 BENCHING: Surfaces of excavations with a gradient greater than 1 in 5 which are to receive filling must have horizontal benches cut to match the depths of compacted layers of filling.
- 250 ACCURACY: Permissible deviations from formation levels:
- Beneath mass concrete foundations: +/- 25 mm
 - Beneath ground bearing slabs and r.c. foundations: +/- 15 mm
 - Embankments and cuttings: +/- 50 mm
 - Ground abutting external walls: +/- 50 mm, but such as to ensure that finished level is not less than 150 mm below dpc.
- 260 FORMATIONS GENERALLY:
- Make advance arrangements with CA for inspection of formations.
 - Remove the last 150 mm of excavations just before inspection. Trim excavations to required profiles and levels, and remove all loose material.
 - Unless otherwise instructed seal formations within 4 hours of inspection with concrete or other specified fill.
- 270 FOUNDATIONS GENERALLY: Obtain instructions if:
- A natural bearing formation of undisturbed subsoil is not obtained at the depth shown on the drawings.
 - The formation contains soft or hard spots or highly variable material.
- 290 FOUNDATIONS IN MADE UP GROUND: Excavate down to a natural formation of undisturbed subsoil. Obtain instructions if this is at a lesser depth than that shown on the drawings.
- 310 UNSTABLE GROUND: Inform CA without delay if any newly excavated face will not remain unsupported sufficiently long to allow the necessary earthwork support to be inserted. If the instability is likely to affect adjacent structures or roadways, take appropriate emergency action until instructions are obtained.

330 UNRECORDED FEATURES: Where old foundations, beds, voids, basements, filling, tanks, pipes, cables, drains, manholes, watercourses, ditches, etc. not shown on the drawings are encountered, do not disturb or enter and obtain instructions before proceeding.

360 EXCESS EXCAVATION: Backfill any excavations taken:

- Wider than required with the material specified for backfilling.
- Deeper than required with well graded granular material or lean mix concrete.

DISPOSAL OF MATERIALS

443 SURPLUS SUBSOIL: Remove from site surplus excavated material not specified to be spread and levelled or stockpiled.

450 WATER: Keep all excavations free from water until formations are covered and below ground constructions are completed.

454 GROUND WATER LEVEL: Inform the CA immediately if it is considered that the excavations are below the water table so that the ground water level can be determined.

457 PUMPING:

- Do not disturb excavated faces or the stability of adjacent ground or structures.
- Avoid flooding of the site, or adjoining property, by disposal of pumped water.
- Construct sumps clear of the excavations and fill as specified on completion.

FILLING

510 HAZARDOUS, AGGRESSIVE OR UNSTABLE MATERIALS:

- Do not import or use fill materials which would, either in themselves or in combination with other materials or ground water, give rise to a health hazard, damage to building structures or instability in the filling.

530 PLACING FILL GENERALLY:

- Ensure that excavations and areas to be filled are free from loose soil, rubbish and standing water.
- Do not use frozen materials or materials containing ice. Do not place fill on frozen surfaces.
- Take all necessary precautions to avoid overloading of adjacent structures and to ensure stability. Place and compact fill against structures, membranes or buried services in a sequence and manner which will ensure stability and avoid damage.
- Plant employed for transporting, laying and compacting must be suited to the type of material.
- Lay differing materials separately so that only one type of material occurs in each layer.

700 BACKFILLING TO FOUNDATIONS:

- Under oversite concrete and pavings: Hardcore as clause 710.

710 HARDCORE:

- Granular material, free from harmful matter and excessive dust, well graded, passing a 75mm BS sieve and to comply with SR21:2014+A1 :2016 Annex E:
 - Crushed hard rock or certified recycled aggregate
- Spread and level both backfilling and general filling in layers not exceeding 150 mm. Thoroughly compact each layer with a vibratory roller, vibrating plate compactor, vibro- tamper, power rammer or other suitable means.

715 VENTING HARDCORE LAYER:

- Clean granular material, well graded, passing a 75 mm BS sieve but retained on a 20 mm BS sieve and in any one layer only one of the following:
 - crushed hard rock
 - crushed concrete, crushed brick or tile, free from plaster, timber and metal
 - gravel.

- Spread and level both backfilling and general filling in layers not exceeding 150 mm. Thoroughly compact each layer using a vibrating roller, vibrating plate compactor, vibro-tamper, power rammer or other suitable means.

730 **BLINDING:**

- Surfaces to receive sheet overlays or concrete to have sufficient sand, fine gravel, PFA or other approved fine material applied to fill interstices and provide a close smooth surface.
- Permissible deviations on surface level: +0 -25 mm.

TOPSOIL AREAS

840 **IMPORTED TOPSOIL FOR PLANTING BEDS**

- Provide as necessary to complete the work.

850 **CONTAMINATION:** Unless specified otherwise:

- Do not use topsoil contaminated with subsoil, rubbish or other materials that are:
 - Corrosive, explosive or flammable
 - Hazardous to human or animal life
 - Detrimental to healthy plant growth.
- In areas to receive topsoil, do not use subsoil contaminated with the above materials.
- Inform the CA if any evidence or symptoms of soil contamination are discovered on the site, or in topsoil to be imported.

855 **HANDLING TOPSOIL:** When importing to site:

- Select and use plant to minimize disturbance, trafficking and compaction.
- Avoid contamination by subsoil, stone, hardcore, rubbish or material from demolition work.
- Handle topsoil in the driest condition reasonably possible. Do not handle topsoil during or after heavy rainfall

F10 BRICK/BLOCK WALLING

Refer to notes on DSM Consulting Engineers drawing

F30 ACCESSORIES/ SUNDRY ITEMS FOR BRICK/BLOCK WALLING

5 **CAVITIES**

- Concrete fill to base of cavity:
- Concrete generally:
 - Designated concrete: GEN1 or Standard mix ST2 with high workability.
 - Extent: Maintain 75 mm between top of fill and external ground level and a minimum of 225 mm between top of fill and ground level dpc.
- Cleanliness: Keep cavity faces, ties and dpcs free from mortar and debris.

7 **PERPEND JOINT WEEP HOLES**

- Form: Open clear perpend joint.
- Locations: Through outer leaf, 75 mm above top of cavity fill at base of cavity.
- Provision: At not greater than 1000 mm centres.

17 **VENTILATION DUCTS IN EXTERNAL WALLING**

- Placement: Across wall, sloping away from inside; well-sealed round with no voids.

18 **CAVITY CLOSERS**

- Manufacturer: Contractor's choice.
 - Type: PVC-u extrusion with core of premium performance rigid thermoset modified resin insulant
 - Thermal conductivity 0.022W/mK

- Accessories: Slot-in PVC-u fixing ties .
- 20 CAVITY WALL TIES GENERALLY
- Stainless steel cavity wall ties:
- To BS EN 845-1, Type 2, Grade 304 stainless steel unless otherwise noted; length to suit cavity width
- 28 FIXING TIES IN MASONRY CAVITY WALLS
- Embedment in mortar beds (minimum): 50 mm.
 - Placement: Sloping slightly downwards towards outer leaf without bending. Drip centred in the cavity and pointing downwards.
 - Spacing: Staggered in alternate courses.
 - Horizontal centres: 750 mm .
 - Vertical centres: 450 mm .
 - Provision of additional ties: Within 225 mm of reveals of unbonded openings At not more than 300 mm centres vertically .
- 39 WALL STARTERS/ CONNECTORS
- Manufacturer: Contractor's choice, CE certified
 - Material/ finish: Austenitic stainless steel.
 - sliding wall ties within fixing strip, 225mm centres, design resistance 1.7kN/m
 - Insert foam sealing strip between wall and wall starter
- 44 DAMP PROOF COURSE AND CAVITY TRAYS
- Standard: CE certified.
 - Manufacturer: Contractor's choice.
 - High-bond strength, flexible bitumen polymer DPC
- 66 INSTALLATION OF HORIZONTAL DPCS
- Placement: In continuous lengths on full even bed of fresh mortar, with 100 mm laps at joints and full laps at angles.
 - Width: At least full width of masonry leaf. Edges of dpc not covered with mortar or projecting into cavity.
 - Overlying construction: Immediately cover with full even bed of mortar to receive next masonry course.
 - Overall finished joint thickness: As close to normal as practicable.
 - Ground level dpcs joint with damp proof membrane: Continuous and effectively sealed.
 - Low level dpcs in external walls: Install not less than 150 mm above adjoining finished ground level.
 - Sill dpcs form and placement: In one piece and turned up at the back when the sill is in contact with inner leaf.
 - Dpcs crossing cavity: Provide support to prevent sagging.
- 68 SEALING DPCS GENERALLY
- Overlaps and junctions: Seal with Adhesive recommended by dpc manufacturer .
- 74 INSTALLATION OF VERTICAL DPCS
- Form: In one piece wherever possible.
 - Joints: Upper part overlapping lower not less than 100 mm.
 - Dpcs to jambs of openings: Fully lap behind cavity tray/ lintel at head and over horizontal dpc at sill. Project not less than 25 mm into cavity and maintain full contact with frames.
 - Fixing of jamb dpcs to back of built in timber frames: Secure using galvanized clout nails or staples.
- 83 PRECAST CONCRETE LINTELS
- Standard: To BS EN 845-2.
 - Manufacturer: Contractor's choice.
 - Product reference: Contractor's choice.
 - Types: Single.
 - Sizes: Clear span up to 900 mm: 150 mm deep x width of wall, bearing: 150 mm at both

- ends.
- Clear span 900 mm to 1800 mm: 150 mm deep x width of wall, bearing: 225 mm at both ends. .
- Placement: Bed on mortar used for adjacent work.
 - Bearing length (minimum): 100 mm.

G20 CARPENTRY/ TIMBER FRAMING/ FIRST FIXING

2 TIMBER PROCUREMENT

- Timber (including timber for wood based products): Obtained from well managed forests/ plantations in accordance with:
 - The laws governing forest management in the producer country or countries.
 - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
 - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied, or
 - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood based products.

5 STRUCTURAL SOFTWOOD

Refer to notes on DSM Consulting Engineers drawing

10 UNGRADED SOFTWOOD FOR INTERNAL NON-STRUCTURAL USE

- Quality of timber: Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section.
- Surface finish: Regularized.
- Treatment: None required.

30 SELECTION AND USE OF TIMBER

- Timber members damaged, crushed or split beyond the limits permitted by their grading: Do not use.

32 NOTCHES, HOLES AND JOINTS IN TIMBER

- Notches and holes: Position in relation to knots or other defects such that the strength of members will not be reduced. Prior approval of the Engineer needed for structural timbers.
- Scarf joints, finger joints and splice plates: Do not use without approval.

35 PROCESSING TREATED TIMBER

- Cutting and machining: Carry out as much as possible before treatment.
- Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
- Surfaces exposed by minor cutting/ drilling: Treat with two flood coats of a solution recommended by main treatment solution manufacturer.

40 MOISTURE CONTENT

- Moisture content of wood and wood based products at time of installation: Not more than:
 - Covered in generally unheated spaces: 24%.
 - Covered in generally heated spaces: 20%.
 - Internal in continuously heated spaces: 20%.

H11 CURTAIN WALLING.

The following specification shall be read in conjunction with Architect's Drawings:

— General:

- Where clearly indicated on Architect’s drawings, the vertical and sloped roof-glazing shall be manufactured from **Metal Technology’s System 17 Curtain Wall Vertical and Sloped Roof-Glazing System**.
- The system shall be a stick system and mullion drained.
- The system is available in a single or dual colour Marine Grade polyester powder coated finish and shall be able to contain double glazed units and inserts as described in their appropriate specification.
- The enhanced thermal performance of the curtain walling and their respective inserts, in conjunction with the appropriate glazing specification, shall be capable of meeting the current approved Building Regulations.
- **System shall utilise Metal Technology’s foil backed tape on all mullions and transoms.**

- **System Supplier:**
 - Metal Technology Ltd., Steeple Road Industrial Estate, Steeple Road, Antrim, Co. Antrim, Northern Ireland, BT41 1AB. Tel: 028 9448 7777.
 - Email: sales@metaltechnology.com or Web: www.metaltechnology.com

- **Accreditations:**
 - The Systems Company must have and comply with ISO 9001 Quality Management Standard.
 - The Systems Company must have and comply with EN 14001:2015 Environmental Management System Standard.
 - The Systems Company must have and comply with BES 6001 Responsible Sourcing Standard
 - The Systems Company must have and comply with ISO 45001 Occupational Health and Safety Standard

- **Installation Partners:**
 - A list of specific and approved fabrication partners for this installation is provided at the end of this specification.
 - The fabricator shall make provision for producing construction drawings for approval prior to commencing works.

- **Installation:**
 - The ‘CWCT Standard for Systemised Building Envelopes’ is to be used as a reference for all projects containing curtain walling/windows/doors.
 - All glazed elements within this package should be installed by experienced and qualified personnel, possessing a recognised installer’s qualification.

- **Product Reference:**
 - **System 17 Curtain Wall Vertical & Sloped Roof-Glazing.**

- **Materials:**
 - All profiles to be extruded from aluminium alloy 6060 T6, T5 or T4 to BS EN 12020-2; 2001 / BS 755-9; 2001.
 - Aluminium profiles to be manufactured and extruded from **RecycAL 4.0 Low-Carbon Billet**.

- **Finish:**
 - The finish to all aluminium profiles shall generally be Marine Grade Polyester Powder Coated to BS EN 12206 in a standard RAL colour to satisfy a corrosion classification as defined by the powder manufacturer.
 - Powder coat shall be applied to an average thickness of 60 microns.
 - All powder coating shall be supported by a manufacturers/applicator guarantee for a standard grade finish subject to the applicator’s approval.
 - Project requirements must be clearly identified by the design team responsible.
 - **Internal Finish: Marine Grade Colour RAL tbc**
 - **External Finish: Marine Grade Colour RAL tbc**

- **Performance:**
 - Class III weather tightness to BS 6375 Part 1 and BS 5368.
Dynamically tested in accordance with the CWCT test regime using a representative two-storey test sample.
Static Air Permeability - $<1.5\text{m}^3/\text{hr. at } 600\text{ Pa}$
Static Water Penetration - Zero ml at 600 Pa
Dynamic Water penetration - Zero ml at 600 pa
Structural performance - 2400 Pa (140mph)
Safety Gust Performance - 3600 Pa (210mph)
Full test report details to be made available upon request.
- **Exposure:**
 - Design Wind Pressure to be determined in accordance with BS 6399 - Part 2: 1997.
- **Thermal Performance:**
 - All glazed curtain wall roof-glazing, and their respective inserts, in conjunction with the appropriate glazing specification, should be capable of meeting the current approved Building Regulation.
 - **Double-Glazed Unit Weighted Average U-value: $1.4\text{W}/\text{m}^2\text{K}$.**
 - Details/evidence of all calculations/methods of determining the required project average U-value for the curtain walling screens and their respect inserts shall be submitted by the fabricator with all tender submissions for approval by the project Architect.
- **Structure:**
 - All structural profiles shall be designed so as the maximum deflection of any member shall not show any evidence of permanent deformation once the load has been removed in line with C.W.C.T. Clause 5.5.2.2:
 - $0 \leq 3000\text{mm} = L/200$
 - $3000\text{mm} \leq 7500\text{mm} = L/300+5$
 - All vents shall be sized in accordance with the guidelines detailed in Metal Technology's technical literature.
 - All structural profiles' stability and suitability must be confirmed by the fabricators engineers.
 - Details/evidence of all calculations shall be submitted by the fabricator with for approval prior to commencing installation.
 - Any necessary secondary structural steelwork providing support shall be by others. It shall be the responsibility of the glazing contractor to clearly identify his requirements within his tender.
- **Construction:**
 - All curtain walling screens shall be manufactured, installed and glazed in strict accordance with Metal Technology's instructions and guidelines as set down in their technical literature.
 - The system shall be pressure equalised and self-draining by means of overlapping the transoms onto the mullion members.
 - Water is then channelled to the exterior of the building via the integral drainage chambers within the rafters.
 - Where the purlins join onto the rafters this connection shall be sealed by means of a purpose made transom end seal.
 - The system shall be thermally broken throughout by means of a continuous thermal isolator located between pressure plates and all structural members.
 - Butyl tapes should be applied across all joints between glazed panels to resist water ingress.
 - The pressure plate shall be retained by using Posi-pan head stainless steel self-tapping screw, tightened to a torque of 3.5Nm.

- **External Cover Cap Vertical:**
 - **Horizontally:** CW05
 - **Vertically:** CW09
- **External Cover Cap Sloped:**
 - **Horizontally:** HR5036
 - **Vertically:** CW28
- **Glazing System:**
 - Dry glazed using proprietary, high performance captive gaskets.
 - All double-glazed units, panels and inserts shall be supported continuously along all four edges by a structural member and held firmly in position by means of a screw fixed pressure plate with a snap on face cap.
 - All gasket joints within the frame shall be bonded and sealed during construction, using a suitable waterproof adhesive to ensure watertight joint at all cruciform connections.
- **Sealed Double-Glazed Units Details:**
 - Where clearly indicated, all windows shall contain sealed units, which shall be manufactured in accordance with BS EN 1279 Parts 2 and 3 and carry the necessary and appropriate guarantee.
 - **Double Glazed Units shall be 32mm.**
 - **Internal Pane:** 8.8mm Laminated “Low E” Glass
 - **Spacer Bar Unit:** 16.0mm Spacer Bar
 - **External Pane:** 8.0mm Toughened Glass
 - All glass units shall be “Low-E” Argon gas filled with warm edge spacer with exact specification determined by the “U” Value calculation.
 - **Glass shall have a minimum centre pane u-value of 1.0w/m2k.**
 - **Glass shall be heat soaked and free from Nickel Sulphide Inclusions.**
 - The Fabricator is to conduct a thermal safety check against glass fracture where required.
 - **Light Transmission:** 70%.
 - **G Factor:** 0.35
 - **Manifestation as required.**
 - **Opaque/Obscure glass shall be utilised where required on drawings and blasted onto face 3 of the glass.**
 - All glazing shall conform to BS6262 and must be in compliance with the current Building Regulations.
- **Fixings:**
 - All fixings shall be in strict accordance with Metal Technology’s instructions and guidelines as detailed in their technical literature and in accordance with the relevant British Standards.
 - All such accessories shall be manufactured from Metal Technology’s range of bracket and plate extrusions with all necessary “interlocking teeth” and slotted boltholes as detailed in their technical manual to allow for site tolerance and structural movement.
 - All fixing of the screens to the building structure shall be achieved using a suitable anchor and bracket fixing method capable of supporting all applicable loads and accommodating the relevant fabrication, installation, site, and expansion tolerances.
 - Details of the method of fixings shall be submitted to the project engineers for approval prior to installation.
 - **For Technical Support and Advice on relevant fasteners & fixings, contact Profast, Fastener & Fixings Solution Provider / Distributor - stephenclarke@profast.co.uk, (BIM, Calculation Software & Technical Data Sheets Available).**
- **Accessories:**

- All aluminium flashings, cills and other perimeter trims necessary to ensure the performance of the glazing system shall be the responsibility of the glazing sub-contractor.
- They shall be designed, fabricated, finished, install, secured and sealed in accordance the architect's details.
- Glazing contractor to take full responsibility for butt straps and end caps to all pressings.
- **Structural Steel Support Frame:**
 - A structural steel support frame shall be provided to rest the curtain wall glazing sections on at eaves, ridge levels and mid-span on rafter lengths longer than 3000mm to assist in supporting the aluminium profiles and glass units.

MT Approved Fabricator List

BH Glazing Limited,

18 Newton Place,
Strabane,
Co Londonderry,
BT82 8DS.

Tel: 028 7138 2322
Contact: Paul Robinson
Email: paulr@bhglazing.com

D Mc Brearty Window Specialists,

Unit 9,
Elagh Business Park,
Buncrana Road
Londonderry
Co Derry
BT48 8QP.

Tel: 028 7127 1263
Contact: Damien Mc Brearty
Email: damien.mcbrearty@btinternet.com

Fortress Glass Technology LLP,

6 Trench Road,
Hydepark Industrial Estate,
Newtownabbey,
Co Antrim.
BT36 4TY.

Tel: 028 9034 2655
Contact: Scott Montgomery
Email: smontgomery@fortressglass.co.uk

Innovated Aluminium Technology,

4 Longfield Road,
Eglington,
Co Londonderry.
BT47 3PY.

Tel: 028 7181 0829
Contact: Leslie Mc Clements
Email: info.iat@aol.co.uk

McMullan & O'Donnell Limited,

101 Drumflugh Road,

Benburb,
Co Tyrone,
BT71 7LF.

Tel: 028 3754 8791.
Contact: Paul McKillion.
Email: paul@mcmullanodonnell.com

Omagh Aluminium Systems Limited,

Gortrush Industrial Estate,
Great Northern Road,
Omagh,
Co Tyrone.
BT78 5EJ.

Tel: 028 8224 6871
Contact: Tony Kelly
Email: tony@oasltd.net

H71 LEAD SHEET COVERINGS/ FLASHINGS

35 COVER FLASHINGS

- Lead:
 - Thickness: 2.00 or 2.24 mm (Code 5).
- Dimensions:
 - Lengths: Not more than 2000 mm.
 - End to end joints: Laps of not less than 100 mm.
 - Cover: Overlap to upstand not less than 75 mm.
- Fixing:
 - Top edge: Lead wedges into bed joint.
 - Bottom edge: Clips.

Material: Lead.
Spacing: At laps and 500mm centres.

41 SOAKERS AND STEP FLASHINGS AT SIDE ABUTMENTS

- Lead soakers:
 - Lead:
Thickness: 1.75 or 1.80 mm (Code 4).
 - Dimensions:
Length: Slate/ tile gauge + lap + 25 mm.
Upstand: Not less than 75 mm.
Underlap: Not less than 100 mm.
- Lead step flashings:
 - Lead:
Thickness: 2.00 or 2.24 mm (Code 5).
 - Dimensions:
Lengths: Not more than 2000mm.
End to end joints: Laps not less than 100 mm.
Cover: Overlap to soaker upstands of not less than 65 mm.
Fixing: Lead wedges at every course.

62 LEADWELDING

- In situ leadwelding: Not permitted.

64 NEEDLE PUNCHED NONWOVEN POLYESTER GEOTEXTILE UNDERLAY

- Manufacturer: Contractor's choice.
 - Product reference: Submit proposals for approval by architect.
- Weight: 200-220 g/m².

- Recycled content: Contractor's choice.

76 UNDERLAY

- Handling: Prevent tears and punctures.
- Laying: Butt or overlap jointed onto a dry substrate.
 - Fixing edges: With copper or stainless steel staples or clout nails.
 - Do not lay over roof edges.
 - Turn up at abutments.
- Wood core rolls: Fixed over underlay.
- Protection: Keep dry and cover with lead at the earliest opportunity.

80 CLIPS

- Material:
 - Lead clips: Cut from sheets of the same thickness/ code as sheet being secured.
 - Copper clips: Cut from 0.70 mm thick sheet to BS EN 1172, temper R220 (soft) or R240 (half hard) depending on position, dipped in solder if exposed to view.
 - Stainless steel: Cut from 0.38 mm sheet to BS EN 10088, grade 1.4301(304), terne coated if exposed to view.
- Dimensions:
 - Width: 50 mm where not continuous.
 - Length: To suit detail.
- Fixing clips: Secure each to substrate with either two screw or three nail fixings not more than 50 mm from edge of lead sheet. Use additional fixings where lead downstands exceed 75 mm.
- Fixing lead sheet: Welt clips around edges and turn over 25 mm.

83 WEDGE FIXING INTO JOINTS/ CHASES

- Joint/ chase: Rake out to a depth of not less than 25 mm.
- Lead: Dress into joint/ chase.
 - Fixing: Lead wedges at not more than 450 mm centres, at every change of direction and with at least two for each piece of lead.
- Sealant: Low modulus, neutral cure sealant
 - Application: As section Z20.

J40 FLEXIBLE SHEET WATERPROOFING/ DAMP PROOFING

10 SOFT BLINDING TO HARDCORE BEDS

- Material: Soft sand.
 - Thickness (minimum): 25 mm.
 - Finish on completion: Smooth, consolidated bed free of sharp projections.

20 LOOSE LAID RADON BARRIER

- Substrate: Soft blinded hardcore.
- Membrane:
 - Manufacturer: Necoflex
 - Product reference: Monarflex RMB300
- Thickness/ Gauge: 0.35mm
- Joints:
 - Surfaces to be joined: Clean and dry beyond full width of joint.
 - Laps (minimum): End and side, 150 mm.
 - Sealing: Continuous strip of 30 mm wide Monobond RT™ tape

50 WORKMANSHIP GENERALLY

- Condition of substrate:
 - Clean and even textured, free from voids and sharp protrusions.
 - Moisture content: Compatible with damp proofing/ tanking.
- Air and surface temperature: Do not apply sheets if below minimum recommended by membrane

manufacturer.

- Condition of membrane at completion:
 - Neat, smooth and fully supported, dressed well into abutments and around intrusions.
 - Completely impervious and continuous.
 - Undamaged. Prevent puncturing during following work.
- Permanent overlying construction: Cover membrane as soon as possible.

60 JUNCTIONS WITH PROJECTING DPCS/ CAVITY TRAYS

- Adjoining surfaces: Clean and dry.
- Dpcs/ cavity trays: Lap and fully bond/ seal with sheeting.
 - Laps (minimum): 100 mm.
- Bonding/ Sealing: Mastic tape.

J42 SINGLE LAYER POLYMERIC SHEET ROOF COVERINGS

10A FLAT ROOF COVERING

- Substrate: Plywood deck.
- Roof covering system: Sikaplan G-18-Trocal Type S or equal & approved by architect - to EN 13956.
 - Vapour control layer: At ceiling level.
 - Protection layer (loose laid over plywood): Polyester fleece.
 - Waterproof membrane: PVC.
 - Thickness: 1.8 mm.
 - Colour: Slate Grey.
- Accessories: Rainwater outlet

15 ROOFING GENERALLY

- Surfaces to be covered: Secure, clean, dry, smooth, free from frost, contaminants, voids and protrusions.
- Adverse weather: Do not lay membrane at temperatures below 5°C, in high winds, wet or damp conditions unless effective temporary cover is provided over working area.
- Unfinished areas of roof: Keep dry and protect edges of laid membrane from wind action.
- Completed coverings: Firmly attached, fully sealed, smooth, weatherproof and free draining.

25 TIMBER TRIMS, ETC.

- Quality: Planed. Free from wane, pitch pockets, decay and insect attack except ambrosia beetle damage.
- Moisture content at time of covering (maximum): 22%.
- Preservative treatment: To WPA Commodity Specification C8.
- Fixing: Sherardized steel screws at maximum 600 mm centres.

45 MECHANICAL FIXING OF WATERPROOF MEMBRANE

- Setting out: Perpendicular to the deck direction.
- Laying: Loose lay, do not wrinkle or stretch.
- Installing fasteners:
 - Use manufacturer's/ supplier's recommended methods and equipment.
 - Insertion: Correct and consistent.
- Washers/ Pressure plates/ Bars:
 - Distance from fixed edge (minimum): 10 mm.
 - Fixing: Flush with membrane.
- Sheet overlaps: Extend beyond washers/ pressure plates by minimum: 50 mm.
- Surface condition at completion: Fully sealed, smooth, weatherproof and free draining.

55 JOINTING OF WATERPROOF MEMBRANE

- Side and end joints:
 - Laps (minimum): As recommended by membrane manufacturer.
 - Preparation: Clean and dry surfaces beyond full width of joint.

- Sealing: Weld together.
- Seam sealant: Even bead of liquid PVC to each joint.
- Condition at completion: Fully sealed, smooth, weatherproof and free draining.

60 PERIMETER DETAILS

- General: Secure membrane at roof edge conditions, changes of plane, curb flashings, upstands to roof lights, etc. with mechanical fasteners.
- Upstands, edge trims, drips, kerbs, etc: Secure preformed metal sections to roof structure with mechanical fasteners.
- Reinforcing strip: Not required.
- Roof membrane: Terminate and secure in accordance with manufacturer's/ supplier's recommendations.

K21 WOOD FLOORING

General/ preparation

210 WORKMANSHIP GENERALLY

- Moisture content of timber supports: 12-14%.
- Methods of fixing and fasteners: As section Z20 where not specified.
- Protection: Protect from dirt, stains and damage using suitable coverings and boards laid as the work proceeds.

260 DRYNESS OF CONCRETE/ SCREED SUBSTRATES FOR FLOORING

- Relative humidity above substrate when tested with a hygrometer to BS 8201, Appendix A (maximum): 75%.
- Test points: All corners, around perimeter, and random points over area being tested.
- Drying aids: Turned off for not less than four days before testing.

310 VAPOUR CONTROL LAYER INSTALLATION

- Location: Immediately below battens.
- Installation
 - a. Joints: Overlapped by minimum 150 mm and sealed with vapour resistant tape.
 - b. Treatment of membrane at perimeter of flooring and upstands: Turned up and sealed to top face of flooring using a method approved by the strip/ board manufacturer.
- Excess material: Trimmed off neatly after fixing skirtings/ cover beads.
- Condition of membrane before laying flooring: Clean and dry.

325 FLOORING BATTENS

- Quality of timber: Free from decay, insect attack (except ambrosia beetle damage) and with no knots wider than half the width of the section.
- Preservative treatment: As section Z12 and Wood Protection Association Commodity Specification C8.
- Moisture content at time of laying: 12-14%.

330 FIXING BATTENS

- General: Battens spaced evenly, packed or adjusted as necessary to give a true, level, finished surface, and fixed securely.

L10 WINDOWS

10 WOOD SUB-FRAMES TO METAL WINDOWS

- See elevations and details - drawing no. L05 & D05
 - Species: Accoya wood, (acetylated Pinus radiata)
 - Durability: Class 1. Very durable
 - Moisture content: less than 10%
- Finish as delivered: Factory-painted; final touch-up on site
- Glazing details: Not applicable
- Ironmongery/ Accessories: Glazed metal frames to be inset

- Fixings: corrosion resistant fixings: high quality A2 or A4 stainless steel (pH of Accoya 4-5/5)
- Adhesives for laminating: polyurethane (PU), emulsion poly isocyanate (EPI), epoxy and phenol resorcinol formaldehyde (PRF)
- Contact with metals: Refer to the latest version of the Accoya Wood Information Guide
- Coating: Two coats of end grain sealer should be used on all exposed end grain. Opaque systems to include an effective stain blocking primer. A minimum of basecoat(s) and one topcoat (but ideally the complete system) should be factory applied before exposure to moisture.
- Workmanship: Generally as BS 1186-2:1988 "Timber for and workmanship in joinery, specification for workmanship". For further guidance refer to the Accoya wood information guide, or contact Accsys via www.accoya.com

33 PROPRIETARY WINDOWS – SLENDER THERMALLY BROKEN STEEL

- Manufacturer: Jansen AG
 - Product reference: Janisol Arte 2.0. <https://www.jansen.com/en/building-systems-profile-systems-steel/products/window-systems-in-steel-aluminium-wood.html#/> Frame depth : 60mm
 - Provide manufacturer's thermal and weather performance certification
- Finish as delivered: Powder-coated
- Glazing details: 28mm insulating glass units incorporating low emissivity glass, Argon filled, warm edge spacer or equivalent to provide centre pane U value of 1.1W/m2K .
 - Beading: TBC.
- Ironmongery/ Accessories: Folding openers and pole operator for lower windows; remote operation for high level pivot windows
- Fixing: Screw fixing to timber subframe with A2 or A4 stainless steel fixings
 - Fastener spacing: As manufacturer's recommendations.
- Possible Irish fabricators:
 - Irish Door Systems <https://www.irishdoorsystems.ie>
 - KCC <https://thekccgroup.com/solution/specialist-glazing-wall-systems/>

75 SEALANT JOINTS

- Sealant:
 - Manufacturer: Contractor's choice.
 - Product reference: Polysulphide sealant.
 - Colour: To suit location; suitable for overpainting.
 - Application: To prepared joints. Finish triangular fillets to a flat or slightly convex profile.

80 IRONMONGERY

- Fixing: Assemble and fix carefully and accurately. Do not damage ironmongery and adjacent surfaces.
- Checking/ adjusting/ lubricating: Carry out at completion and ensure correct functioning.

L20 DOORS

10 TIMBER PROCUREMENT

- Timber (including timber for wood-based products): Obtained from well-managed forests and/ or plantations in accordance with:
 - The laws governing forest management in the producer country or countries.
 - International agreements such as the Convention on International Trade in Endangered Species of wild fauna and flora (CITES).
- Documentation: Provide either:
 - Documentary evidence (which has been or can be independently verified) regarding the provenance of all timber supplied.
 - Evidence that suppliers have adopted and are implementing a formal environmental purchasing policy for timber and wood-based products.

30 WOOD DOORS AND FRAMES: EXTERNAL

- See elevations - drawing no. L05
 - Species: Accoya wood, (acetylated Pinus radiata)

- Durability: Class 1. Very durable
 - Moisture content: less than 10%
 - Finish as delivered: Factory-painted; final touch-up on site
 - Glazing details: Factory glazed 24mm insulating glass units incorporating low emissivity glass, Argon filled, warm edge spacer or equivalent to provide centre pane U value of 1.1W/m²K .
 - Ironmongery/ Accessories: As scheduled
 - Fixings: corrosion resistant fixings: high quality A2 or A4 stainless steel (pH of Accoya 4-5/5)
 - Adhesives for laminating: polyurethane (PU), emulsion poly isocyanate (EPI), epoxy and phenol resorcinol formaldehyde (PRF)
 - Contact with metals: Refer to the latest version of the Accoya Wood Information Guide
 - Coating: Two coats of end grain sealer should be used on all exposed end grain. Opaque systems to include an effective stain blocking primer. A minimum of basecoat(s) and one topcoat (but ideally the complete system) should be factory applied before exposure to moisture.
 - Workmanship: Generally as BS 1186-2:1988 "Timber for and workmanship in joinery, specification for workmanship". For further guidance refer to the Accoya wood information guide, or contact Accsys via www.accoya.com
 - Frame fixing: [Plugged and screwed].
 - Spacing of fixings (frames not predrilled): Maximum 150 mm from ends of each jamb, adjacent to each hanging point and at 600 mm maximum centres.
 - Perimeter seals: [EPDM weatherseal].
 - Threshold strips: Max. 15mm high. 62mm wide inward opening or 72mm wide outward opening. To be bedded in silicone and fixed to floor with screws/plugs. Thermally broken aluminium.
- 40 WOOD DOORS AND FRAMES INTERNAL
- Materials: Generally to BS EN 942.
 - Species: Sapele (where hw specified), softwood (cupboards) or certified fire door set (where specified)
 - Type: See architect's drawings and door schedule
 - Assembly:
 - Adhesive: PVAC to BS EN 204, Class D4.
 - Joinery workmanship: As section Z10.
 - Accuracy: To BS 4787-1.
 - Preservative treatment: Not required.
 - Moisture content on delivery: 9-13%.
 - Finish as delivered: Prepared and primed, as section M60.
 - Glazing details: Factory glazed with manifestation where required; see schedule
 - Frame fixing: [Plugged and screwed].
 - Spacing of fixings (frames not predrilled): Maximum 150 mm from ends of each jamb, adjacent to each hanging point and at 600 mm maximum centres.
- 45 DOORS ALUMINIUM
- Manufacturer: Contractor's choice and as approved by architect.
 - Product reference: Thermally insulated ultra-slim thermally broken frame; 70mm frame depth; profile face width of outer frame 60mm.
 - Air permeability DIN EN 12207 - Class 3
 - Weathertightness DIN EN 12208 - 8A, 9A
 - Burglar resistance DIN V ENV 1627 to 1630 - WK 2
 - Resistance to wind load DIN EN 12210 - B3, C3 .
 - Finish as delivered: Polyester powder coated.
 - Glazing/ Infill details: 28mm clear double glazed unit.
 - Manifestation: Required
 - Beading: Internal.
 - Ironmongery: Hinges, push bar panic exit latch
- 75 FIRE RESISTING/ SMOKE CONTROL DOORS/ DOORSETS
- Gaps between frames and supporting construction: Filled as necessary in accordance with door/ doorset manufacturer's instructions.
- 80 SEALANT JOINTS

- Sealant:
 - Manufacturer: Contractor's choice .
 - Product reference: Polysulphide sealant' .
 - Colour: To suit location, suitable for overpainting .
 - Application: As section Z22 to prepared joints. Triangular fillets finished to a flat or slightly convex profile.

85 FIXING IRONMONGERY GENERALLY

- Fasteners: Supplied by ironmongery manufacturer.
 - Finish/ Corrosion resistance: To match ironmongery.
- Holes for components: No larger than required for satisfactory fit/ operation.
- Adjacent surfaces: Undamaged.
- Moving parts: Adjusted, lubricated and functioning correctly at completion.

M20 PLASTERED/ RENDERED COATINGS – LIME-BASED

WORKMANSHIP:

Refer to manufacturer/supplier's information regarding mixes and recommendations i.e. Saint-Astier.

TECHNIQUES OF LIME PLASTERING (THREE COAT WORK)

- Aim: Correct bonding with the background while striving to minimise shrinkage and rapid drying. These techniques should be followed throughout the plastering process.
- Any deep recesses or holes should be 'dubbed out' beforehand, using a stiffer (drier) mix, and allowed to dry, to avoid deep pockets in the scratch coat.
- First coat (scratch or render coat):
 - Max. thickness of 10mm using steel trowel or thrown onto the wall by a harling trowel and then flattened in by the steel trowel.
 - Mix: 1 part matured lime putty/NHL2: 2-2.5 parts washed sharp sand. Use of fibre or hair recommended to give tensile strength.
 - When the coat has firmed up but has not gone hard, the plaster is keyed up to produce a key for the following coats.
 - Keying up: Using lath scratcher or similar toothed instrument, generally in the shape of diamonds of approximately 30mm spacing . Care should be taken not to cut through the plaster coat back to the background.
 - Allow to harden for 72 hours minimum before further coats of plaster are applied. Check for shrinkage cracks and fill with plaster before proceeding
- Second (floating) coat:
 - Brush down first coat to remove any dust which may have blown onto the surface.
 - Dampen down surface.
 - Mix: 1 part mature lime putty/NHL2: 2-2.5 parts washed sharp sand. Use of fibre or hair recommended to give tensile strength.
 - Thickness - max. 10mm
 - Used to bring surface to a flat and even plane. Scour up with a timber or polyurethane float to compact the plaster and counteract shrinkage - generally required at least twice.
 - Any small holes should be filled before the finishing coat is applied.
 - Allow to dry and harden for 72 hours before applying the final coat
- Final (setting) coat
 - Dampen down the floating coat.
 - Mix: 1 part mature lime putty/NHL2:1 part Fine Silica Sand
 - Thickness: 2-5mm. Apply in two layers, coat on coat, with the trowel. Plaster should be wet enough consistency to allow a long and even spread.
 - After setting, scour in a similar manner as the floating coat. Finish: Smooth (steel trowel)

PLASTER ON TIMBER LATHS

- Cut defective laths back to supporting timbers and replace in sawn or riven larch, oak or chestnut. Pre-drill holes in laths before nailing to supports using stainless steel ring shank nails.
- Remove defective plaster by cutting back to sound undercut edges. Finish new plaster flush with existing.

- Refix loose but sound timber laths through plaster. Cut out plaster patches to sound, undercut edges. Screw laths back to framework using brass or stainless steel screws and large washers and mesh – metal to match screws.
- Apply plaster across the laths using sufficient pressure diagonally and in one stroke to force it through the gaps in between to form a mechanical key.
- Scratch coat is to be left longer before keying for the next coat because there is less suction from the laths than from masonry. The addition of hair for tensile strength is a necessity.
- New plaster on old lath: Lath should be in good condition and thoroughly cleaned of all old plaster, dirt and debris and well wetted beforehand.
- Replacement laths: To match the type (split or sawn), size and spacing of the existing laths.
- Joints to be staggered to avoid a continuous split.
-
- Product Specification
- Hydraulic lime mortar:
- St. Astier (from Traditional Lime Co. Ltd, Rath, Shillelagh Road, Tullow, Co. Carlow Tel: 059 9151750. Email: info@traditionallime.com. Contact: Edward Byrne)

M40 CERAMIC TILING

5A TILING TO WALLS OF G.10 & G.11 TOILETS (1.8m high)

- Tiles: Ceramic wall tiles.
 - Manufacturer/ Supplier: Contractor's choice.
 - Product reference: Submit samples for approval by architect.
 - Colour: tbc
 - Size: 600x300mm, non-bevelled, laid half lap stretcher bond.
- Background/ Base: Undercoat plaster - not skim finish plaster/ existing painted lime plaster
- Bedding: Adhesive bed notched trowel method, as clause 50.
 - Adhesive: Contractor's choice.
- Joint width: As spacer lugs.
- Grout: In accordance with tile supplier's recommendations.
- Accessories: L shaped metal tile edge trim.

5B TILING TO FLOORS

- Tiles: Porcelain tiles.
 - Manufacturer/ Supplier: Contractor's choice.
 - Product reference: Submit samples for approval by architect.
 - Colour: tbc
 - Size: Allow for 150x900mm tiles, R11 rating
- Background/ Base: Concrete screed
- Bedding: Adhesive bed notched trowel method, as clause 50.
 - Adhesive: Contractor's choice.
- Joint width: As spacer lugs.
- Grout: Epoxy resin
- Accessories: Transition trim at junction with timber floor.

15 NEW BACKGROUNDS/BASES

- Background drying times (minimum):
 - Block walls: 6 weeks.
 - Rendering: 2 weeks.
 - Gypsum plaster: 4 weeks.
- Base drying times (minimum):
 - Concrete slabs: 6 weeks.
 - Cement:sand screeds: 3 weeks.

25 NEW PLASTER

- Plaster primer: Apply if recommended by adhesive manufacturer.

30 FIXING GENERALLY

- Colour/ shade: Avoid unintended variations within tiles for use in each area/ room.
 - Variegated tiles: Mix thoroughly.
- Adhesive: Compatible with background/ base.
- Cut tiles: Neat and accurate.
- Fixing: Provide adhesion over entire background/ base and tile backs.
- Final appearance: Before bedding material sets, make adjustments necessary to give true, regular appearance to tiles and joints.
- Deviation of surface: Measure from underside of a 2m straightedge with 3 mm thick feet placed anywhere on surface. The straightedge should not be obstructed by the tiles and no gap should be greater than 6 mm, i.e. a tolerance of ± 3 mm.
- Surplus bedding material: Clean from joints and face of tiles.

35 SETTING OUT

- Joints: True to line, continuous and without steps.
 - Joints on walls: Horizontal, vertical and aligned round corners.
 - Joints in floors: Parallel to main axis of space or specified features.
- Cut tiles: Minimise number, maximise size and locate unobtrusively.
- Joints in adjoining floors and walls: Align.
- Joints in adjoining floors and skirtings: Align.

50 ADHESIVE BED - NOTCHED TROWEL METHOD TO WALLS

- Application: By 3 mm floated coat of adhesive to dry background. Comb surface.
- Tiling: Press tiles firmly onto float coat.

70 GROUTING

- Sequence: Grout when bed/adhesive has set sufficient to prevent disturbance of tiles.
- Joints: 6 mm deep (or depth of tile if less). Free from dust and debris.
- Grouting: Fill joints completely, tool to profile, clean off surface. Leave free from blemishes.
- Polishing: When grout is hard, polish tiling with dry cloth.

M60 PAINTING/ CLEAR FINISHING

14 EGGSHELL/ SATIN PAINT TO INTERNAL JOINERY

- Manufacturer: Contractor's choice and as approved by architect.
 - Product reference: Eggshell or satinwood
- Surfaces: Uncoated.
 - Preparation: As clauses 30 & 37.
- Initial coats: Aluminium wood primer.
 - Number of coats: 1.
- Undercoats: As recommended by manufacturer.
 - Number of coats: 1 trade satinwood coat .
- Finishing coats:
 - Number of coats: 1 trade satinwood coat.

16A DECORATIVE WOODSTAIN/ VARNISH TO BOARDING

- Manufacturer: Contractor's choice and as approved by architect.
 - Surfaces: Internal.
 - Preparation: As clauses 30 & 37.
- Number of coats: 2 coats of interior water-borne woodstain - sample to be approved by architect.

17A SPECIAL COATING- MINERAL PAINT

- See section M66

17B LACQUER TO G.07 & G.09 TIMBER FLOORS

- Manufacturer: Bona
 - Product reference: Classix UX primer & Traffic HD satin, 2 part water-based lacquer
- Surfaces: New and reused timber

- Preparation: As clauses 30 & 37.
 - Number of coats: 3.
Finish: Clear Matt
- 18 INTUMESCENT COATING FOR SPREAD OF FLAME RATING TO TIMBER WALL LINING
- Manufacturer: Thermoguard
 - Product reference: Fire Varnish
 - SBI rating: Euroclass B-s1, d0 standard
 - Surfaces: Interior timber.
 - Preparation: As clause 30.
 - Number of coats: 1 coat of Fire Varnish Basecoat (2 pack)
 - Finishing coat, 1 – 4 days after Basecoat is dry, apply 2 coats of Thermoguard Fire Varnish Overcoat Matt or Satin for Woodstain Colours.
 - System to be applied strictly in accordance with the manufacturer's instructions
- 25 SURFACES NOT TO BE COATED
- Radiator valves and stop valves .
- 30 PREPARATION GENERALLY
- Standard: In accordance with BS 6150.
 - Risk assessment and method statement for hazardous materials: Prepare for 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, dirt, grease and oil: Remove.
 - Surface irregularities: Provide smooth finish.
 - Organic growths and infected coatings:
 - Remove with assistance of biocidal solution.
 - Apply residual effect biocidal solution to inhibit regrowth.
 - Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.
 - Dust, particles and residues from preparation: Remove and dispose of safely.
 - Doors, opening windows and other moving parts:
 - Ease, if necessary, before coating.
 Prime resulting bare areas.
- 32 PREVIOUSLY COATED SURFACES GENERALLY
- Preparation: In accordance with BS 6150, clause 11.5.
 - Contaminated or hazardous surfaces: Give notice of:
 - Coatings suspected of containing lead.
 - Substrates suspected of containing asbestos or other hazardous materials.
 - Significant rot, corrosion or other degradation of substrates.
 - Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
 - Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
 - Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
 - Alkali affected coatings: Completely remove.
 - Retained coatings:
 - Thoroughly clean.
 - Gloss coated surfaces: Provide key.
 - Partly removed coatings: Apply additional preparatory coats.
 - Completely stripped surfaces: Prepare as for uncoated surfaces.
- 35 FIXTURES AND FITTINGS
- Risk assessment and method statement for hazardous materials: Prepare for operations,

disposal of waste, containment and reoccupation, and obtain approval before commencing work.

- Removal: Before commencing work: Ironmongery and other surface mounted fixtures.
- Replacement: Refurbish as necessary, refit when coating is dry.

37 WOOD PREPARATION

- General: Provide smooth, even finish with lightly rounded arrises.
- Degraded or weathered surface wood: Take back surface to provide suitable substrate.
- Degraded substrate wood: Repair with sound material of same species.
- Heads of fasteners: Countersink sufficient to hold stoppers/ fillers.
- Resinous areas and knots: Apply two coats of knotting.
- Defective primer: Take back to bare wood and reprime.

41 MASONRY AND RENDERING PREPARATION

- Loose and flaking material: Remove.

43 PLASTER PREPARATION

- Nibs, trowel marks and plaster splashes: Scrape off.
- Overtrowelled 'polished' areas: Provide suitable key.

52 SEALING OF INTERNAL MOVEMENT JOINTS

- General: To junctions of walls and ceilings with architraves, skirtings and other trims.
- Sealant: Water based acrylic.
 - Manufacturer: Contractor's choice and as approved by architect.
 - Product reference: Submit proposals.
 - Preparation and application: As section Z22.

61 COATING GENERALLY

- Application standard: In accordance with BS 6150, clause 9.
- Conditions: Maintain suitable temperature, humidity and air quality.
- Surfaces: Clean and dry at time of application.
- Thinning and intermixing: Not permitted unless recommended by manufacturer.
- Priming coats: Apply 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.

65 CONCEALED JOINERY SURFACES

- General: After priming, apply additional coatings to surfaces that will be concealed when component is fixed in place.
 - Components: External door frames, window frames.
 - Additional coatings: One undercoat.

68 STAINING WOOD

- Primer: Apply if recommended by stain manufacturer.
- Application: Apply in flowing coats and brush out excess stain to produce uniform appearance.

70 EXTERNAL DOORS

- Bottom edges: Prime and coat before hanging.

75 BEAD GLAZING TO COATED WOOD

- Before glazing: Apply first two coats to rebates and beads.

M66 MINERAL PAINT

5 PRODUCT DESCRIPTION

Manufacturer and product: Graphenstone Ecosphere Premium

- Long life mineral paint system for use on interior and exterior mineral surfaces – to be used in accordance with manufacturer's instructions.
- Offers water repellency, vapour permeability and forms a chemical crystalline bond with the substrate.
- Made using pure inorganic mineral fillers, earth oxide colour pigments and potassium silicate binder.

10 SUBSTRATE PREPARATION

- Thoroughly remove all loose, flaking and unstable material.
- Wash down with clean cold water to remove all surface dirt and dust.
- When all surfaces are clean, sound, wind dry, dust free and free from all surface contaminants, decorate using mineral paint system.

20 APPLICATION

- Porous substrate: Coat all surfaces with dilution coat, applied by brush and worked well into all surfaces. This will help reduce any high surface porosity and should be left for a minimum period of 12 hours before further decoration.
- Unpainted surfaces:
 - First coat: Dilute mineral paint with up to 30% by weight dilution coat, apply by brush or roller working well into all surfaces.
 - Final coat: After a minimum period of 12 hours, apply undiluted coat of mineral paint.

30 APPLICATION CONDITIONS

- Ambient and substrate temperature above 5°C and below 30°C.
- Do not apply in direct sunlight or onto sun-heated surfaces, nor if it is raining or if there is an immediate likelihood of rain.

N11 KITCHEN FITTINGS, FURNISHINGS AND EQUIPMENT

With reference to layout on Architect's schedule of work and drawing D09 Proposed Kitchen Details

310A FITTED BASE UNITS TO KITCHEN INCLUDING TALL UNITS

- Standard: To BS 6222-2 and -3, and BS EN 14749.
- Manufacturer: Submit proposals
- Structural performance: To BS 6222-2, test level H.
- Dimensions: To BS EN 1116. Refer to Architect's drawings
- Surface finishes: To BS 6222-3.
- Doors and drawer fronts:
 - Material: MDF Plastics laminate.
 - Finish and colour: Hi Gloss Reflective Surface
 - Edges: Plastics strip.
- Side panels, plinths and shelves:
 - Material: MDF Plastics laminate.
 - Finish and colour: Refer to supplier schedule.
 - Edges: Plastics strip.
- Accessories: Ironmongery, hinges, soft close mechanisms for doors and drawers, cutlery compartments,

340A WORKTOPS TO KITCHEN

- Standard: Not applicable.
- Manufacturer: Duropal Quadra – Torina Oak Nature Laminate Worktop or equal and approved
- Material: 38mm postformed laminate
- Exposed edges: Laminate type 2.
- Support: Refer to supplier schedule.

- Other requirements: Allow for matching HPL upstand where no existing tiles

350A SINKS, TAPS, TRAPS AND WASTES TO KITCHEN

- Main Sink:
 - Standard: To BS EN 13310.
 - Manufacturer: Pyramis
Product reference: Pyramis Vera 1.5 SS inset bowl sink.
 - Configuration: 1.5 sink with right hand drainer.
 - Overall size: Refer to supplier schedule. 1000*500
 - Material: Stainless steel.
 - Colour and finish: Brushed steel.
- Tap/ chainstay/ overflow holes: One tap hole
- Taps: Mixer.
 - Manufacturer: Easyflow
Product reference: Idaho square chrome mixer tap
 - Operation: Mixer
 - Material: Chromed steel.
- Wastes: Pop up.
 - Standard: To BS EN 274-1, -2 and -3.
 - Manufacturer: Contractor's choice.
Product reference: Contractor's choice.
 - Size: To fit sink.
 - Material: Chromed steel.
 - Tail: Slotted.
- Traps: Tubular, P type.
 - Standard: To BS EN 274-1, -2 and -3.
 - Manufacturer: Contractor's choice.
Product reference: Contractor's choice.
 - Size: To fit waste.
 - Material: Plastic.
 - Depth of seal (minimum): 75 mm.

350B SINKS, TAPS, TRAPS AND WASTES TO KITCHEN

- Circular Sink / Hand rinse:
 - Standard: To BS EN 13310.
 - Manufacturer: Pyramis
Product reference: Pyramis Royal Mini Round bowl stainless steel inset sink.
 - Configuration: Single circular sink.
 - Overall size: Refer to supplier schedule. 355mm outer rim diameter
 - Material: Stainless steel.
 - Colour and finish: Brushed steel.
- Tap/ chainstay/ overflow holes: One tap hole, centre.
- Taps: Mixer.
 - Manufacturer: Easyflow
Product reference: Top lever Tap.
 - Operation: Lever.
 - Material: Chromed steel.
- Wastes: Pop up.
 - Standard: To BS EN 274-1, -2 and -3.
 - Manufacturer: Contractor's choice.
Product reference: Contractor's choice.
 - Size: To fit sink.
 - Material: Chromed steel.
 - Tail: Slotted.
- Traps: Tubular, P type.
 - Standard: To BS EN 274-1, -2 and -3.
 - Manufacturer: Contractor's choice.
Product reference: Contractor's choice.
 - Size: To fit waste.

- Material: Plastic.
- Depth of seal (minimum): 75 mm.

360A APPLIANCES TO KITCHEN

Item: Built-in oven.

- Manufacturer: To be confirmed/supplied by client
- Colour and finish: Stainless steel.
- Service connections: Mains electricity.

360B APPLIANCES TO KITCHEN

Item: Inset hob unit.

- Manufacturer: To be confirmed/supplied by client
- Colour and finish: Stainless steel.
- Service connections: Mains electricity.

360D APPLIANCES TO KITCHEN

Item: Tall Fridge/Freezer.

- Manufacturer: To be confirmed/supplied by client
- Colour and finish: White
- Service connections: Mains electricity.

360H APPLIANCES TO KITCHEN

Item: Dishwasher

- Manufacturer: To be confirmed/supplied by client
- Colour and finish: White
- Service connections: Mains electricity.

390 SEALANT

- Standard: To BS EN ISO 11600, Class F20 HM
- Type: One-part silicone
 - Manufacturer: Submit proposals
 - Product reference: Submit proposals
- Colour: To match units/ worktop.

EXECUTION

610 MOISTURE CONTENT OF WOOD AND WOOD-BASED BOARDS

- Control and monitoring
 - Method statement: Submit.

620 INSTALLATION GENERALLY

- Fixings and adhesives: As section Z22.
- Services: As section S90 and section V90. As Engineering Services specification.

630 INSTALLING UNITS AND WORKTOPS

- General: To manufacturer's recommendations

640 INSTALLING APPLIANCES

- Connections: To manufacturer's recommendations. Well fitting, stable and secure.

650 INSTALLING SINKS, TAPS AND WASTES

- Water supply: To BS EN 806-2 and BS EN 806-4.
- Taps
 - Fixing: Secure, watertight seal with the appliance.
 - Positioning: Hot tap to left of cold tap as viewed by the user of the appliance.
- Wastes:
 - Bedding: Waterproof jointing compound - do not use silicone sealant.
 - Fixing: With resilient washer between appliance and backnut.

660 SEALANT BEDDING AND POINTING

- Application: As section Z22.
- Bedding: Inset hob unit & Sink to underside of worktop
- Pointing: Between units and floor & Between worktop and splashbacks

670 INSTALLING TRIMS AND MOULDINGS

- Lengths: Unjointed between angles or ends of runs.
- Angle joints: Mitred.

COMPLETION

910 GENERAL

- Doors and drawers: Accurately aligned, not binding. Adjusted to ensure smooth operation.
- Ironmongery: Checked and adjusted to ensure correct functioning.

920 APPLIANCE COMMISSIONING

- Appliance operation, functions and controls: Verify.
- Documentation: Submit guarantees, instruction manuals, etc.

P10 SUNDRY INSULATION/ PROOFING WORK

10 LOFT INSULATION

- Manufacturer: Contractor's choice and as approved by architect.
 - Product reference: Submit proposals
- Material: Glass mineral wool roll with bio-based binder technology .
- Depth/ Thickness: 150+150mm/ 100+200mm – depending on joist depth
- Thermal Conductivity: 0.04W/mK
- Installation: Between and over joists to manufacturer's instructions.
- Electrical cables to be carried on trays above insulation

20 FLOOR INSULATION

- Manufacturer: Contractor's choice and as approved by architect..
 - Product reference: Submit proposals
- Material: Extruded polystyrene (XPS) with 300kPa compressive strength
- Depth/ Thickness: 100mm
- Thermal Conductivity: 0.033W/mK
- Installation: As shown on drawings

40 INSULATION FITTED BETWEEN STUDS : INTERNAL PARTITIONS

- Manufacturer: Contractor's choice and as approved by architect.
 - Product reference: Glass mineral wool acoustic quilt.
- Thickness: 50mm.
- Min. Density: 10kg/m³
- Installation requirements:
 - Joints: Butted, no gaps.
 - Fasteners: Used to prevent slumping.

50 CAVITY WALL INSULATION

- Manufacturer: Unilin
 - Product reference: CavityTherm Full Fill Built-In
- Thermal Conductivity: 0.02W/mK
- Thickness: 100mm.
- Installation requirements:
 - Joints: Engineered edges. Cut boards sealed with waterproof tape.
 - Fasteners: Used to prevent slumping.

- 60 VAPOUR CONTROL LAYER FIXED TO FLAT ROOF JOISTS
- Manufacturer: Contractor's choice and as approved by architect.
 - Product reference: Air tight and humidity-variable vapour check membrane.
 - Material: Polyethylene copolymer; Fleece and reinforcement layer: polypropylene.
 - Water Vapour Transmission Resistance:
 - sd: <0.25 m to >10.5 m (humidity variable)
 - Humidity variable range: < 1.28 MNs/g > 51 MNs/g resistance
 - Moisture content of timber at time of fixing (maximum): 20%.
 - Installation requirements:
 - Setting out: Joints minimized.
 - Fixing: 10mm wide x 8mm staples at 50-100mm centres along all supports. Membrane not sagging.
 - Joints: At supports only, lapped 150 mm minimum.
 - Openings: Membrane fixed to reveals.
 - Joints and edges: Taped using tapes recommended by VCL manufacturer.
 - Penetrations: Sealed.

P20 UNFRAMED ISOLATED TRIMS/ SKIRTINGS/ SUNDRY ITEMS

- 10 SOFTWOOD - WINDOW BOARDS
- Quality of wood and fixing: To BS 1186-3.
 - Species: European Redwood
 - Class: 2.
 - Moisture content at time of fixing: 9 -13%.
 - Preservative treatment: Not required.
 - Profile: Bullnosed - as shown on drawing D06
 - Finished size: 19 mm x to suit wall depth.
 - Finish as delivered: Prepared and primed as section M60.
 - Fixing: Plugged, and screwed at 450 centres.
- 20 SOFTWOOD - SKIRTINGS AND ARCHITRAVES GENERALLY
- Quality of wood and fixing: To BS 1186-3.
 - Species: European Redwood
 - Class: 2.
 - Moisture content at time of fixing: 9 -13% .
 - Preservative treatment: Not required.
 - Profile: As shown on drawing D06
 - Finished size: Skirting 119x19mm; Architrave 94x19mm.
 - Finish as delivered: Prepared and primed as M60.
 - Fixing: Screwed at 400 centres.
- 80 INSTALLATION GENERALLY
- Joinery workmanship: As section Z10.
 - Metal workmanship: As section Z11.
 - Methods of fixing and fasteners: As section Z20.
 - 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.

P31 HOLES/CHASES/COVERS/SUPPORTS FOR SERVICES

- 150 HOLES AND CHASES IN IN-SITU CONCRETE to be cast in. Do not cut hardened concrete or drill holes larger than 10 mm diameter without permission.
- 185 HOLES, RECESSES AND CHASES IN MASONRY:

- Holes, recesses and chases to be in locations which will least affect the strength, stability and sound resistance of the construction, and to be of the smallest practicable size.
- Holes must not exceed 300 mm square.
- Do not cut chases in walls of hollow or cellular blocks without approval.
- In walls of other materials:
 - Vertical chases must be not deeper than one third of the single leaf thickness.
 - Horizontal or raking chases must be not longer than 1 m and not deeper than one sixth of the single leaf thickness.
- Do not set chases or recesses back to back; offset by a clear distance not less than the wall thickness. Where sockets, etc. are shown on drawings as nominally back to back, obtain instructions.
- Do not cut until mortar is fully set. Cut carefully and neatly, avoiding spalling, cracking or other damage to surrounding structure. Do not cut chases with mechanical or hand impact tools.

230 NOTCHES AND HOLES IN STRUCTURAL TIMBER:

- To be avoided wherever possible and to be the minimum sizes needed to accommodate services.
- Do not position near knots or other defects in the same cross section which would significantly affect strength of timber.
- Notches and holes in the same joist to be at least 100 mm apart horizontally.
- Notches in joists to be at the top, located between 0.07 and 0.25 of span from support, not deeper than 0.125 x depth of joist and to be formed by sawing down to a drilled hole.
- Holes in joists to be on the neutral axis, with diameter not more than 0.25 x depth of joist, spaced at centres not less than 3 x diameter of largest hole and located between 0.25 and 0.4 of span from support.
- Notches in roof rafters, struts and columns will not be permitted.
- Holes in struts and columns to be on the neutral axis, with diameters not exceeding 0.25 x minimum width of member, located between 0.25 and 0.4 of length from end and spaced at centres not less than 3 x diameter of largest hole.

Q10 KERBS/ EDGINGS/ PAVING

40 LAYING KERBS, EDGINGS AND CHANNELS

- Cutting: Neat and accurate and without spalling. Form neat junctions.
- Bedding and backing of units: Either of the following: Bedded on mortar laid on hardened concrete base. Bedding mortar allowed to set and units secured with a continuous haunching of concrete.
 - Bedded on fresh concrete races to BS 7533-6, secured with backing concrete cast monolithically with concrete race.
- Concrete for foundations and haunching:
 - Standard: To BS 8500-2.
 - Designated mix: Not less than GEN0 or Standard mix ST1 or better, low workability.
- Mortar bedding: 1:3 cement:sand as section Z21.
Bed thickness: 12-40 mm.

45 ACCURACY

- Deviations (maximum):
 - Level: ± 6 mm.
 - Horizontal and vertical alignment: 3mm in 3m.

50 TOOLED MORTAR JOINTS

- Jointing: Ends of units buttered with bedding mortar as laying proceeds. Joints completely filled and tooled to a neat flush profile.
Joint width: 6 mm.

55 SEALANT MOVEMENT JOINTS

- Joint filler: Compressible cellular rubber or plastics, built in as work proceeds, extending

through haunching and foundation and positioned to support correct depth of sealant.

- Joint width: 10 mm.
- Sealant: Silicone.
 - Colour: Colour match to kerbs .
- Sealant application: As section Z22.

60 REGULARITY OF PAVED SURFACES

- Maximum undulation of (non-tactile) paving surface: 3mm.
 - Method of measurement: Under a 1m straight edge placed anywhere on the surface (where appropriate in relation to the geometry of the surface).
- Difference in level between adjacent units (maximum):
 - Joints flush with the surface: Twice the joint width (with 5 mm max difference in level).
 - Recessed, filled joints: 2 mm.
 - Recess depth (maximum): 5 mm.
 - Unfilled joints: 2 mm.
- Sudden irregularities: Not permitted.

65 ACCURACY OF SUB-BASE

- Permissible deviation from required levels, falls and cambers (maximum):
 - Subgrade: ± 20 mm.
 - Sub-base: ± 12 mm.

70 PAVING

- Manufacturer: Tobermore
- Product: Silver Mayfair 600x400x50mm, granite aggregate paving slabs
- Substrate: 150mm reinforced concrete slab - cast to fall away from building and finished level with steel trowel or as required to receive bedding system.
- Bedding: full 25-40mm bedding of SBR-modified cementitious mortar or proprietary bedding system suitable for external use, applied to ensure full, void-free support. Spot bedding not permitted.
- Joints: polymer-modified jointing compound e.g. Rompox Ecofine or Drain.
- Paving slabs to be specified proprietary units, uniform in thickness and finish, laid true to line, level and falls, with consistent joint widths.
- Joints to be filled with flexible external jointing compound or polymeric jointing system, compatible with paving type and exposure conditions. Rigid cement grout not permitted unless specifically detailed.
- Provide perimeter restraint and edge detailing to prevent lateral movement. Allow for expansion/movement joints in paving and alignment with structural movement joints in slab below.
- Finished surface to be even, free from lipping, ponding or rocking units, and laid to falls for positive drainage away from buildings.

R12 DRAINAGE BELOW GROUND

GENERALLY

100 EXISTING SERVICES:

- Check positions and levels of underground services before commencing excavation. Hand dig carefully within 3 m of any known or suspected service run.
- Notify service undertakers of service runs exposed by excavation or if drainage work is to cross the line of a service. Follow service undertakers' instructions concerning work near service runs.
- Replace any service marker tapes or protective covers disturbed by drainage work, in accordance with service undertaker's instructions.

106 IN SITU CONCRETE:

- Unless specified otherwise, in situ concrete for use in drainage below ground to be to BS 5328
- Different mixes may be used for different parts of the drainage work.

TYPE(S) OF PIPELINE

- PLASTICS PIPELINES – Solid Wall

- Pipes, bends and junctions: PVC-U to BS EN 1401:Part 1, class SN4, Kitemark certified.

EXCAVATING/BACKFILLING

- 205 EXCAVATED MATERIAL: Unless otherwise specified, set aside turf, topsoil, hardcore, etc. for use in reinstatement.
- 210 LOWER PART OF TRENCH: From bottom up to 300 mm above crown of pipe the trench must have vertical sides and be of a width as small as practicable but not less than external diameter of pipe plus 300 mm or larger dimension if specified.
- 240 FORMATION FOR BEDS GENERALLY:
- Excavate to formation immediately before laying beds or pipes.
 - Remove mud, rock projections, boulders and hard spots and replace with consolidated bedding material.
 - Harden local soft spots by tamping in bedding material.
 - Inform CA in advance to give him reasonable opportunity to inspect excavated formation for each section of the work.
- 270 BACKFILLING TO PIPELINES GENERALLY: Unless specified otherwise, backfill from top of specified surround or protective cushion with material excavated from the trench, compacted in layers not exceeding 300 mm thick. Do not use heavy compactors before there is 600 mm of material over pipes.
- 280 BACKFILLING UNDER ROADS AND PAVINGS: Backfill from top of specified surround or protective cushion up to formation level with Granular Subbase Material Type 1 to DOT Specification for Highway Works, Clause 803, laid and compacted in 150 mm layers.
- 295 WARNING MARKER TAPES:
- Lay during backfilling in a continuous line over pipelines, 300 to 400 mm below the level of the finished surface.
 - For pipelines at a depth greater lay an additional marker 600 mm above the top of the pipeline.

BEDDING/JOINTING

- 310 INSTALLATION GENERALLY:
- Obtain pipes and fittings for each pipeline from the same manufacturer unless otherwise specified. Joint differing pipes and fittings with adaptors recommended by pipe manufacturer.
 - Lay pipes to true line and regular gradient on an even bed for the full length of the barrel with sockets (if any) facing up the gradient.
 - Joint using recommended lubricants, leaving recommended gaps at ends of spigots to allow for movement.
 - Adequately protect pipelines from damage and ingress of debris. Seal all exposed ends during construction.
 - Arrange the work to minimise time between laying and testing. Backfill after successful testing.
- 380 CLASS O FULL DEPTH GRANULAR SUPPORT:
- Granular material: To BS 882:

Pipe size (DN)	Nominal single size (mm)
100 & 150	10
225 & 300	10 or 20
 - Lay and compact to a thickness not less than 100 mm over full width of trench. Scoop out locally at couplings/sockets and lay pipes digging slightly into bed and resting uniformly on their barrels. Adjust to line and gradient.
 - After initial testing, lay and compact by hand more granular material to slightly above crown of pipe.
 - Backfill with a protective cushion of selected fill, free from vegetable matter, rubbish, frozen soil and material retained on a 40 mm sieve. Compact by hand in 100 mm layers to 300 mm above crown of pipe. (100 mm of granular material may be used in lieu).

441 CLASS X GRANULAR SURROUND FOR GROUND WATER:

- Excavate 450mm wide trench and line with geotextile material
- Lay 75 mm deep bed with 10 mm single size material to I.S. EN 13242
- Lay 150mm dia. perforated pipes and adjust to line and gradient.
- Complete surround with single size material compacted to 150 mm above crown of pipe.
- Fold fabric over the top before adding soil or turf layer
-

512 PIPELINES PASSING THROUGH STRUCTURES:

- Where pipelines must be cast in or fixed to structures (including manholes, catchpits and inspection chambers) provide short length or rocker pipes near each external face, with flexible joint at each end:
- | Pipe size (DN) | Distance to first joint from structure (mm) | Short length (mm) |
|----------------|---|-------------------|
| 100 & 150 | 150 | 600 |
| 225 | 225 | 600 |
- Where pipelines need not be cast in or fixed to structures (e.g. walls to footings) provide either:
 - short length or rocker pipes as specified above, or
 - openings in the structures to give 50 mm minimum clearance around the pipeline and closely fit a rigid sheet to each side of opening to prevent ingress of fill or vermin.

TERMINAL/ACCESS FITTINGS

690 INSTALLATION OF FITTINGS:

- Set fittings square with and tightly jointed to adjacent construction as appropriate. If open to doubt obtain instructions.
- Bed and surround fittings, traps, etc. in concrete
- Permissible deviation in level of gully gratings to be +0 to - 10 mm,
- Fit purpose made temporary caps over exposed openings in fittings and protect from site traffic.

CLEANING/TESTING/INSPECTION

900 CLEANING:

- Flush out the whole of the installation with water to remove all silt and debris before final testing and immediately before handover.
- Safely dispose of washings and any detritus without discharging them into sewers or watercourses.

Z10 PURPOSE MADE JOINERY

10 FABRICATION

- Standard: In accordance with BS EN 942 and principles of workmanship to BS 1186-2.
- Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
 - Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
- Joints: Tight and close fitting.
- Assembled components: Rigid. Free from distortion.
- Screws: Provide pilot holes. Heads of countersunk screws sunk at least 2 mm below surfaces visible in completed work.
- Adhesives: Compatible with wood preservatives applied and end uses of timber.

20 CROSS SECTION DIMENSIONS OF TIMBER

- General: Dimensions on drawings are finished sizes.
- Maximum permitted deviations from finished sizes:
 - Softwood sections: To BS EN 1313-1.
 - Hardwood sections: To BS EN 1313-2.

30 PRESERVATIVE TREATED WOOD

- Cutting and machining: Completed as far as possible before treatment.

- Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc.
- Surfaces exposed by minor cutting and/ or drilling: Treat as recommended by main treatment solution manufacturer.

40 MOISTURE CONTENT

- Wood and wood based products: Maintained within range specified for the component during manufacture and storage.

50 FINISHING

- Surfaces: Smooth, even and suitable to receive finishes.
 - Arrises: Eased unless shown otherwise on drawings.
- End grain in external components: Sealed with primer or sealer as section M60 and allowed to dry before assembly.

Z11 PURPOSE MADE METALWORK

31 METAL PRODUCTS

- Grades of metals, section dimensions and properties: To the appropriate EN Standards and suitable for the purpose.
- Fasteners: Generally, same metal as component, with matching coating and finish.

50 PREPARATION FOR APPLICATION OF COATINGS

- General: Fabrication complete, and fixing holes drilled before applying coatings.
- Paint, grease, flux, rust, burrs and sharp arrises: Removed.

51 FABRICATION GENERALLY

- Contact between dissimilar metals in components: Avoid.
- Finished components: Rigid and free from distortion, cracks, burrs and sharp arrises.
 - Moving parts: Free moving without binding.
- Corner junctions of identical sections: Mitre.
- Prefinished metals: Do not damage or alter appearance of finish.

52 COLD FORMED WORK

- Profiles: Accurate, with straight arrises.

53 WELDING AND BRAZING GENERALLY

- Surfaces to be joined: Clean thoroughly.
- Tack welds: Use only for temporary attachment.
- Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks.
- Surfaces of materials that will be self-finished and visible in completed work: Protect from weld spatter.
- Flux residue, slag and weld spatter: Remove.

54 WELDING OF STEEL

- Method: Metal arc welding to BS EN 1011-1 and -2.

56 FINISHING WELDED AND BRAZED JOINTS VISIBLE IN COMPLETE WORK

- Butt joints: Smooth, and flush with adjacent surfaces.
- Fillet joints: Neat.
- Grinding: Grind smooth.

58 GALVANIZING

- Standard: To BS EN ISO 1461.
- Vent and drain holes:
 - Location: Submit proposals.
 - Sealing after galvanizing: Required. Submit proposals.

Z12 PRESERVATIVE TREATMENT

See also C52/323

10 TREATMENT APPLICATION

- Timing: After cutting and machining timber, and before assembling components.
- Processor: Licensed by manufacturer of specified treatment solution.
- Certification: For each batch of timber provide a certificate of assurance that treatment has been carried out as specified.

20 COMMODITY SPECIFICATIONS

- Standard: Current edition of the Wood Protection Association (WPA) publication 'Industrial wood preservation specification and practice'.

25 PRESERVATIVE TREATMENT SOLUTION STRENGTHS/ TREATMENT CYCLES

- General: Select to achieve specified service life and to suit treatability of specified wood species.
- Moisture content of wood:
 - At time of treatment: Not more than 28%.
 - After treatment: Timber to be surface dry before using.

70 MAKING GOOD TO PROTECTION TREATMENT ON-SITE

- Fire retardant/ preservative solution: Compatible with off-site treatment.
- Application: In accordance with preservative manufacturer's recommendations.

Z20 FIXINGS AND ADHESIVES

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.
 - Polyvinyl acetate thermoplastic adhesive: To BS 4071.

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 – stainless steel.
- 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.

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

31 JOINTS

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

EXECUTION

61 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.

62 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.

63 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.