EAST HATLEY ST DENIS CHURCH
PHASE 1 EXTERNAL & INTERNAL REPAIRS

FOR FRIENDS OF FRIENDLESS CHURCHES

SPECIFICATION

03 March 2017

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A10 PROJECT PARTICULARS

110 THE PROJECT
- Name: East Hatley St Denis Church Phase 1: external and internal repairs.
- Nature: Localised external masonry and roofing repairs, new windows to nave and internal floor repairs.
- Location: East Hatley, Cambridge.
- Length of contract: to be confirmed by contractor, however site operations to be complete within no more than 30 days and have no more than 20 workers on site at any time, or take more than 500 person-days to complete the works, therefore the project is not notifiable to the Health & Safety Executive.

120 EMPLOYER (CLIENT)
- Name: The Friends of Friendless Churches Co. Mr Matthew Saunders.
- Address: 2 Church Entry, London, EC4V 5HB.
- Telephone: 020 7236 3934.
- Email: office@friendsoffriendlesschurches.org.uk

130 PRINCIPAL CONTRACTOR
- Name: The Contractor.
- Address: TBA.
- Telephone: TBA.

140 CONTRACT ADMINISTRATOR (HEREIN REFERRED TO AS 'CA')
- Name: Purcell c/o Stephanie Norris and Colin Staff.
- Address: 1 Quayside, Bridge Street, Cambridge, CB5 8AB.
- Telephone: 01223 357057.
- Email: stephanie.norris@purcelluk.com or colin.staff@purcelluk.com

150 PRINCIPAL DESIGNER (PD)
- Name: Philip Waller Consulting Co. Philip Waller.
- Address: Meadow House, Longmeadow, Brundall, Norwich, NR13 5LY.
- Telephone: 01603 959788 or 07471 655642.

A11 TENDER AND CONTRACT DOCUMENTS

110 TENDER DOCUMENTATION
- The tender documents will consist of the drawings on teh drawing register and the specification along with appendix sections.

120 CONTRACT DRAWINGS
- The Contract Documents: The same as the tender documents, incorporating the main contractors priced schedule of works.

A12 THE SITE/ EXISTING BUILDINGS

110 THE SITE
- Description: Closed church. The main contractor is to give 7 days notice of when works are to be carried out. Where possible main contractor to be respectful of noise to neighbours.

140* EXISTING MAINS AND SERVICES
- Existing mains and services are present on the site and the Contractor must ascertain for himself the extent and the exact nature and location of these; agree connections with the client. The main contractor will need to provide chemical WC provision (including a hot water supply) for the duration of the contract; exact location to be agreed with the Architect and client, bearing in mind the restricted road access to site.
- The operation of services shall be maintained, altered and adapted to suit the works.

200 ACCESS TO THE SITE

- Description: The former parish church of St Denis, East Hatley stands in the middle of a square churchyard bounded by ditches to the north, west and south. The church lies to the west of the village and north of the former Manor House, set back from the road and is accessed by a grass track, with an avenue of trees and flanked by paddocks containing earthworks.
- Limitations:
  - The contractor is to assess access restrictions included within teh tender documentation and include for associated works/costs accordingly.

  - The church will remain closed for the duration of the contract with no public access. Public access is to be maintained to public footpaths at all times.

  - The client (known within this clause as the 'Grantee'), has negotiated a 'Deed of Easement' for a route through the adjacent garden/land (as demonstrated on the site layout plan), where contact details of the neighbour (known within this clause as the 'Grantor ') will be provided by the client upon appointment for the contractor to arrange and co-ordinate access requirements. The following requirements are to be met by the contractor.

    Extract from the First Schedule – The Rights
    1. The right, only in so far as access cannot reasonably be afforded over and along the track, common for the Grantee and its contractors and agents, but no other persons, in common with the Grantor and other persons having the same right to pass with or without vehicles over and along the Access Route to bring and remove plant, equipment, portable cabins, including lavatories/chemical WC's, machinery and materials to and from the Church in connection with the Permitted Use, but not for any other purpose.

    2. The right for the Grantee and its contractors and agents, but no other persons, to store plant, equipment, portable cabins, including lavatories/chemical WC's, machinery and materials on the Storage Area for the reasonable duration of and in connection with the Permitted Use, but not for any other purpose.

    Extract from the Second Schedule – Grantee's Covenants
    1. Notice
    Contractor to give not less than 28 days' written notice to the Grantor of the intention to start to exercise the Rights.

    2. Damage
    Not cause any unreasonable damage to the Grantor's Property, or to any property of the owners or occupiers of the Grantor's Property, and shall as soon as practicable make good any damage caused to the Grantor's reasonable satisfaction and pay full compensation to the Grantor or such owners of occupiers in respect of any damage caused that is not made good and any loss caused to them due to such damage provided that the obligation to make good damage to the Access Route and the Storage Area does not need to be complied with until the use of the Access Route and the Storage Area has ceased.
    The Contractor is to undertake a comprehensive set of pre-commencement/dilapidation photographs prior to the works and agree conditions direct with the Grantor, providing evidence of such to the Architect.

    3. Nuisance
    Not cause any nuisance, annoyance or disturbance to the Grantor or occupiers of the Grantor's Property, or of any neighbouring land, or to any other person entitled to the Rights in common with the Grantee provided that the proper exercise of the Rights in accordance with the terms of this Deed shall not constitute a breach of this covenant.

    4. Obstruction or Waste
    Not obstruct the Access Route or deposit any waste, rubbish, soil or other material on any part of the Grantor's Property other than in the Storage Area, or in any other way interfere with, or disturb, the exercise of the same Rights or similar rights by any other person authorised by the Grantor.

    5. Costs in the Event of Breach
    Contractor to pay to the Grantor on written demand all costs incurred by the Grantor in complying with any of the Grantee's Covenants if the Grantee has failed to comply with them, provided that the Grantor has first served on the Grantee written notice of the breach and the Grantee has failed to rectify the breach within 14 days of service of that notice.

210 PARKING

- Restrictions on parking of the Contractor's and employees' vehicles: Limited to the public highway - maintain pedestrian access and be considerate to locals/public and do not block accesses.

220 USE OF THE SITE

- General: Do not use the site for any purpose other than carrying out the Works.
- Limitations: None.

240 HEALTH AND SAFETY HAZARDS

- General: The nature and condition of the site/ building cannot be fully and certainly ascertained before it is opened up. However the following hazards are or may be present:
  - Location of asbestos; refer to the clients Refurbishment and Demolition Asbestos survey report contained within the Pre-Construction Information. Proceed with care and due diligence and if found, stop works in the area and seek advise from the PD and HSE.
  - Unknown existing above and below ground services to existing building. Undertake suitable survey as required by works operations.
  - Risk arising from unauthorised personnel accessing the site outside of operational hours/vandalism.
  - Poor internal lighting due to temporary protections to windows with unlevel/incomplete floors; provide temporary lighting.
  - Handling materials follow HSE guidelines; provide suitable lifting arrangements if necessary.
  - Falling from height; provide scaffolding to current standards.
  - Provide suitable warning signs at all access points into site compound.
  - Trip hazards/openings to existing floors, eliminate by providing temporary sheet flooring.
  - Deliveries and access to site is limited; turning space for vehicles is restricted. No reversing unless with a Banks-person.
- Information: The accuracy and sufficiency of this information is not guaranteed by the Employer or the Employer's representative. Ascertain if any additional information is required to ensure the safety of all persons and the Works.
- Site staff: Draw to the attention of all personnel working on the site the nature of any possible contamination and the need to take appropriate precautionary measures.

250 SITE VISIT

- Before tendering: Ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.
- Arrangements for visit: As A10/120.

A20 JCT MINOR WORKS BUILDING CONTRACT

FORM OF CONTRACT

- The form and conditions of contract will be those issued by the Joint Contracts Tribunal. A formal contract may not be signed for certain contracts, or indeed may not be signed prior to the works commencing on site. However, the Terms and Conditions of the formal contract will apply and the submission of a tender shall be deemed to be an acceptance of these conditions.

JCT MINOR WORKS BUILDING CONTRACT

- The Contract: JCT Minor Works Building Contract, 2011 Edition.
- Requirement: Allow for the obligations, liabilities and services described therein against the headings below:

THE RECITALS

First - THE WORKS AND THE CONTRACT ADMINISTRATOR

- The work comprises: Localised external masonry and roofing repairs, new windows to nave and internal floor repairs.
- Architect/ Contract Administrator: See clause A10/140.

Second - CONTRACT DOCUMENTS

- Contract documents: The following have not been prepared and will be deleted from the second recital: Bill of quantities.

Third - PRICED DOCUMENTS

- The references to Schedule of Rates will be deleted.

THE ARTICLES

3 - ARCHITECT/ CONTRACT ADMINISTRATOR

- Architect/ Contract Administrator: See clause A10/140.

4 AND 5 - PRINCIPAL DESIGNER (PD)
- Principal Designer: A10/150.
- Principal Contractor: See clause A10/130.

6 - ADJUDICATION
- Amendments: adjudication.

CONTRACT PARTICULARS

Fourth Recital - CDM REGULATIONS
- All the CDM regulations apply.

Article 7 - ARBITRATION
- Article 7 and Schedule 1 will not apply.

Clause 2.2 - COMMENCEMENT AND COMPLETION
- Date for Commencement of the Works: August 2017.
- Date for Completion: tbc / within 500 man hours; duration to be confirmed by main contractor at tender return.

Clause 2.8 - LIQUIDATED DAMAGES
- At the rate of: £200 per calendar week or pro-rata thereto.

Clause 2.10 - RECTIFICATION PERIOD
- Period: 12 months.

Clause 4.3 - PERCENTAGE OF THE TOTAL VALUE OF THE WORK ETC.
- Percentage: 95 per cent per cent.

Clause 4.5 - PERCENTAGE OF THE TOTAL AMOUNT TO BE PAID TO THE CONTRACTOR
- Percentage: 97½ per cent per cent.

Clause 4.8.1 - SUPPLY OF DOCUMENTATION
- Period: Three months.

Clause 4.11 and Schedule 2 - CONTRIBUTION, LEVY AND TAX CHANGES
- Clause 4.11 will be deleted.

Clause 5.3.2 - CONTRACTOR'S INSURANCE - INJURY TO PERSONS OR PROPERTY
- Insurance cover (for any one occurrence or series of occurrences arising out of one event): Not less than £5,000,000.

Clauses 5.4A and 5.4B - INSURANCE OF THE WORKS - ALTERNATIVE PROVISIONS
- Clause 5.4C (Existing structures insurance by Employer in own name) applies.

Clause 7.2 - ADJUDICATION
- The Adjudicator is: Royal Institute of British Architects.
- Nominator of Adjudicator: President or a Vice president or Chairman or Vice Chairman of the: Royal Institute of British Architects.

THE CONDITIONS

SECTION 1: DEFINITIONS AND INTERPRETATION

1.4 - RECKONING PERIODS OF DAYS
- Amendments: Excludes public and bank holidays.

1.7 - APPLICABLE LAW
- Amendments: the law of England shall be the law applicable to this agreement.

SECTION 2: CARRYING OUT THE WORKS
- The Works are to be commenced and completed as above and as agreed with the client.
- Defects liability period: 12 months

SECTION 3: CONTROL OF THE WORKS

SECTION 4: PAYMENT
" Period for payment by the employer: 14 days from the date of the Architect's certificate.
" Retention percentage: 5% interest on late payment of sums certified: 5% over base rate of the Bank of England.
" Penultimate certificate percentage: 2.5% of total tender sum Certification of part release of retention: Within 14 days after practical completion.
" Final Certificate: Period for supply of documentation: 3 months

SECTION 5: INJURY, DAMAGE AND INSURANCE
Insurance cover to be not less than £5,000,000

EXECUTION
- The Contract: Will be executed under hand.

A30 TENDERING/ SUBLETTING/ SUPPLY

MAIN CONTRACT TENDERING

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

145 TENDERING PROCEDURE
- General: In accordance with JCT Practice Note 6 (Series 2) 'Main Contract Tendering'.
- Errors: Alternative 1 is to apply.

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

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

190 PERIOD OF VALIDITY
- Period: After submission or lodgement, keep tender open for consideration (unless previously withdrawn) for not less than 13 calender weeks.
- Date for possession/ commencement: See section A20.

PRICING/ SUBMISSION OF DOCUMENTS

210 PRELIMINARIES IN THE SPECIFICATION
- The Preliminaries/ General conditions sections (A10-A56 inclusive) must not be relied on as complying with SMM7.

250* PRICED DOCUMENTS (SUBMIT WITH TENDER A PRICED COPY OF THE SCHEDULE OF WORKS)
- Alterations: Do not alter or qualify the priced documents without written consent. Tenders containing unauthorised alterations or qualifications may be rejected.
- Measurements: Where not stated, ascertain from the drawings.
- Deemed included: Costs relating to items, which are not priced, will be deemed to have been included elsewhere in the tender.
- Submit: With tender.

310 TENDER

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

530 SUBSTITUTE PRODUCTS

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

570 OUTLINE CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

- Content: Submit the following information within one week of request:
  - Method statements on how risks from hazards identified in the pre-tender health and safety plan and other hazards identified by the contractor will be addressed.
  - Details of the management structure and responsibilities.
  - Arrangements for issuing health and safety directions.
  - 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 cooperation and coordination between contractors.
  - 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 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.
  - Monitoring procedures to ensure compliance with site rules, selection and management procedures, health and safety standards and statutory requirements.
  - Review procedures to obtain feedback.

570 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

- Content: Submit the following information within one week of request:
  - Method statements on how risks from hazards identified in the pre-construction information and other hazards identified by the contractor will be addressed.
  - Details of the management structure and responsibilities.
  - Arrangements for issuing health and safety directions.
  - 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 cooperation and coordination between contractors.
  - 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 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.
  - 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

630 DOMESTIC SUBCONTRACTS

- General: Comply with the Construction Industry Board 'Code of Practice for the selection of subcontractors'.

640 'LISTED' DOMESTIC SUBCONTRACTORS
All glazing works to be carried out by one of the following, who will become a domestic subcontractor and the contractor will remain responsible for their performance; within tender return confirm your preferred specialist glazier.

M.C. Lead Glaziers Ltd,
Unit 2, 251 Holt Road, Horsford, Norfolk, NR10 3EB
For the attention of: Mr. Peter Campling

Devlin Plummer Stained Glass,
Orchard Farm, Old Road, Great Moulton, Norwich, Norfolk, NR15 2HA
For the attention of: Mr Terry Devlin

Chapel Studio Stained Glass Ltd,
14 Bridge Road, Kings Langley, Hertfordshire, WD4 8RE
For the attention of: Mr. Robert Holloway

The Norfolk Stained Glass Company,
Park House, Alburgh Road, Shelton, Norwich, Norfolk, NR15 2SF
For the attention of: Mr. Michael Wiley

Barley Studios Ltd,
Church Balk, Dunnington, York, YO19 5LH
For the attention of Mr. Keith Barley

645 'LISTED' DOMESTIC SUBCONTRACTORS
- General: Contract Documents provide that certain work must be carried out by a person of the Contractor's choice selected from a list of not less than three persons given therein.
- The selected person: Will become a subcontractor as provided for in the Contract Condition for Subletting.
- Additions to lists:
  - The Employer or Employer's representative may, but only with the consent of the Contractor which shall not be unreasonably withheld, add additional person(s) to the list at any time prior to the execution of a binding subcontract agreement.
  - The Contractor may, but only with consent, which will not be unreasonably withheld, add additional persons to the list and must, if requested, submit (in an approved form) evidence of the suitability of such additional person(s). Wherever possible, submissions for addition of person(s) must be made, and consent obtained, before return of the tender. When any submission for addition of person(s) is made with the tender the consequences, if any, to the tender price compared to the use of the listed persons are to be made clear or the tender will be treated as qualified.
- Shortage of names: If at any time prior to execution of a binding subcontract agreement less than three persons named in the list (including any persons added as provided above) are able and willing to carry out the relevant work, give notice without delay. The Employer will then forthwith add the names of other persons as provided above so that the list comprises not less than three such persons, or confirm that no names will be added. If the Employer fails to do either within one week of the Contractor's notification the Contractor, who may subcontract in accordance with the Contract, must carry out the work.
  Agreement: Before the start of work to which the list relates enter into a binding subcontract agreement and confirm that this has been done, giving the name of the selected subcontractor.

A31 PROVISION, CONTENT AND USE OF DOCUMENTS

DEFINITIONS AND INTERPRETATIONS

110 DEFINITIONS
- Meaning: Terms, derived terms and synonyms used in the preliminaries/ general conditions and specification are as stated therein or in the appropriate British Standard or British Standard glossary.

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

130 PRODUCTS

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

135 SITE EQUIPMENT

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

160 TERMS USED IN SPECIFICATION

- Remove: Disconnect, dismantle as necessary and take out the designated products or work and associated accessories, fixings, supports, linings and bedding materials. Dispose of unwanted materials. Excludes taking out and disposing of associated pipework, wiring, ductwork or other services.
- Fix: Unload, handle, store, place and fasten in position including all labours and use of site equipment.
- Supply and fix: Includes all labour and site equipment for unloading, handling, storing and execution. All products to be supplied and fixed unless stated otherwise.
- Keep for reuse: Do not damage designated products or work. Clean off bedding and jointing materials. Stack neatly, adequately protect and store until required by the Employer or for use in the Works as instructed.
- Make good: Execute local remedial work to designated work. Make secure, sound and neat. Excludes redecoration and/ or replacement.
- Replace: Supply and fix new products matching those removed. Execute work to match original new state of that removed.
- Repair: Execute remedial work to designated products. Make secure, sound and neat. Excludes redecoration and/ or replacement.
- Refix: Fix removed products.
- Ease: Adjust moving parts of designated products or work to achieve free movement and good fit in open and closed positions.
- Match existing: Provide products and work of the same appearance and features as the original, excluding ageing and weathering. Make joints between existing and new work as inconspicuous as possible.
- System: Equipment, accessories, controls, supports and ancillary items, including installation, necessary for that section of the work to function.

200 SUBSTITUTION OF PRODUCTS

- Products: If an alternative product to that specified is proposed, obtain approval before ordering the product.
- Reasons: Submit reasons for the proposed substitution.
- Documentation: Submit relevant information, including:
  - manufacturer and product reference;
  - cost;
  - availability;
  - relevant standards;
  - performance;
  - function;
  - compatibility of accessories;
  - proposed revisions to drawings and specification;
  - compatibility with adjacent work;
  - appearance;
  - copy of warranty/ guarantee.
- Alterations to adjacent work: If needed, advise scope, nature and cost.
- Manufacturers' guarantees: If substitution is accepted, submit before ordering products.

210 CROSS REFERENCES

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

220 REFERENCED DOCUMENTS

- Conflicts: Specification prevails over referenced documents.

230 EQUIVALENT PRODUCTS
- Inadvertent omission: Wherever products are specified by proprietary name the phrase 'or equivalent' is to be deemed included.

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

DOCUMENTS PROVIDED ON BEHALF OF THE EMPLOYER

410 ADDITIONAL COPIES OF DRAWINGS/ DOCUMENTS
- Additional copies: Issued on request and charged to the Contractor.

440 DIMENSIONS
- Scaled dimensions: Do not rely on.

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

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

A32 MANAGEMENT OF THE WORKS

GENERALLY

110 SUPERVISION
- General: Accept responsibility for coordination, supervision and administration of the Works, including subcontracts.
- Coordination: Arrange and monitor a programme with each subcontractor, supplier, local authority and statutory undertaker, and obtain and supply information as necessary for coordination of the work.

120 INSURANCE
- Documentary evidence: Before starting work on site submit details, and/ or policies and receipts for the insurances required by the Conditions of Contract.

130 INSURANCE CLAIMS
- Notice: If any event occurs which may give rise to any claim or proceeding in respect of loss or damage to the Works or injury or damage to persons or property arising out of the Works, immediately give notice to the Employer, the person named in clause A10/140 and the Insurers.
- Failure to notify: Indemnify the Employer against any loss, which may be caused by failure to give such notice.

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

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

PROGRAMME/ PROGRESS

210 PROGRAMME
- Master programme: Immediately when requested and before starting work on site submit in an approved form a master programme for the Works, which must include details of:
  - Planning and mobilisation by the Contractor
  - Subcontractor's work.
  - Running in, adjustment, commissioning and testing of all engineering services and installations.
  - Work resulting from instructions issued in regard to the expenditure of provisional sums.
  - Work by others concurrent with the Contract.
- Submit two copies.

245 START OF WORK ON SITE
- Notice: Before the proposed date for start of work on site give minimum notice of one week.

250 MONITORING
- Progress: Record on a copy of the programme kept on site.
- Avoiding delays: If any circumstances arise which may affect the progress of the Works submit proposals or take other action as appropriate to minimize any delay and to recover any lost time.

260 SITE INSPECTIONS
- General: Site inspections will be held to review progress and other matters arising on site and from administration of the Contract.
- Frequency: Every two weeks.
- Location: On site.
- Accommodation: Not required.
- Attendees: Site foreman to attend meetings and inform subcontractors and suppliers when their presence is required.

280 PHOTOGRAPHS
- Number of locations: site.
- Frequency of intervals: Weekly.
- Image format: digital.
- Number of images from each location: min 15.
- Other requirements: include compact disk and hard copies within the Operations & Maintenance File

290 NOTICE OF COMPLETION
- Requirement: Give notice of the anticipated dates of completion of the whole or parts of the Works.
- Associated works: Ensure necessary access, services and facilities are complete.
- Period of notice (minimum): 1 week.

310 EXTENSIONS OF TIME
- Notice: When a notice of the cause of any delay or likely delay in the progress of the works is given under the contract, written notice must also be given of all other causes which apply concurrently.
- Details: As soon as possible submit:
  - Relevant particulars of the expected effects, if appropriate, related to the concurrent causes.
  - An estimate of the extent, if any, of the expected delay in the completion of the Works beyond the date for completion.
  - All other relevant information required.

CONTROL OF COST

420 REMOVAL/ REPLACEMENT OF EXISTING WORK
- Extent and location: Agree before commencement.
- Execution: Carry out in ways that minimize the extent of work.

430 PROPOSED INSTRUCTIONS
- Estimates: If a proposed instruction requests an estimate of cost, submit without delay and in any case within seven days.

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

450 DAYWORK VOUCHERS
- Before commencing work: Give reasonable notice to person countersigning daywork vouchers.
- Content: Before delivery each voucher must be:
  - Referenced to the instruction under which the work is authorised.
  - Signed by the Contractor's person in charge as evidence that the operatives' names, the time daily spent by each and the equipment and products employed are correct.
- Submit: By the end of the week in which the work has been executed.

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

470 PRODUCTS NOT INCORPORATED INTO THE WORKS
- Ownership: At the time of each valuation, supply details of those products not incorporated into the Works which are subject to any reservation of title inconsistent with passing of property as required by the Conditions of Contract, together with their respective values.
- Evidence: When requested, provide evidence of freedom of reservation of title.

A33 QUALITY STANDARDS/ CONTROL

STANDARDS OF PRODUCTS AND EXECUTIONS

110 INCOMPLETE DOCUMENTATION
- General: Where and to the extent that products or work are not fully documented, they are to be:
  - Of a kind and standard appropriate to the nature and character of that part of the Works where they will be used.
  - Suitable for the purposes stated or reasonably to be inferred from the project documents.
    Contract documents: Omissions or errors in description and/ or quantity shall not vitiate the Contract nor release the Contractor from any obligations or liabilities under the Contract.

120 WORKMANSHIP SKILLS
- Operatives: Appropriately skilled and experienced for the type and quality of work.
- Registration: With Construction Skills Certification Scheme.
- Evidence: Operatives must produce evidence of skills/ qualifications when requested.

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

135 QUALITY OF EXECUTION
- Generally: Fix, apply, install or lay products securely, accurately, plumb, neatly and in alignment.
- Colour batching: Do not use different colour batches where they can be seen together.
- Dimensions: Check on-site dimensions.
- Finished work: Without defects, e.g. not damaged, disfigured, dirty, faulty, or out of tolerance.
- Location and fixing of products: Adjust joints open to view so they are even and regular.

170 MANUFACTURER'S RECOMMENDATIONS/ INSTRUCTIONS
- General: Comply with manufacturer's printed recommendations and instructions current on the date of the Invitation to tender.
- Changes to recommendations or instructions: Submit details.
- Ancillary products and accessories: Use those supplied or recommended by main product manufacturer.
- Agrément certified products: Comply with limitations, recommendations and requirements of relevant valid certificates.

180 WATER FOR THE WORKS

- Mains supply: Clean and uncontaminated.
- Other: Do not use until:
  - Evidence of suitability is provided.
  - Tested to BS EN 1008 if instructed.

210 SAMPLES

- Products or executions: Comply with all other specification requirements and in respect of the stated or implied characteristics either:
  - To an express approval.
  - To match a sample expressly approved as a standard for the purpose.

220 APPROVAL OF PRODUCTS

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

230 APPROVAL OF EXECUTION

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

SUPERVISION / INSPECTION / DEFECTIVE WORK

525 ACCESS

- Extent: Provide at all reasonable times access to the Works and to other places of the Contractor or subcontractors where work is being prepared for the Contract.
- Designate: Contract Administrator.

530 OVERTIME WORKING

- Notice: Prior to overtime being worked, submit details of times, types and locations of work to be done.
  - Minimum period of notice: Three days.
- Concealed work: If executed during overtime for which notice has not been given, it may be required to be opened up for inspection and reinstated at the Contractor's expense.

540 DEFECTS IN EXISTING WORK

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

610 DEFECTIVE PRODUCTS/ EXECUTIONS

- Proposals: Immediately any work or product is known, or appears, to be not in accordance with the Contract, submit proposals for opening up, inspection, testing, making good, adjustment of the Contract Sum, or removal and re-execution.
- Acceptability: Such proposals may be unacceptable and contrary instructions may be issued.

WORK AT OR AFTER COMPLETION

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

720 SECURITY AT COMPLETION
- General: Leave the Works secure with, where appropriate, all accesses closed and locked.
- Keys: Account for and adequately label all keys and hand over to Employer with itemized schedule, retaining duplicate schedule signed by Employer as a receipt.

730 MAKING GOOD DEFECTS
- Remedial work: Arrange access with Employer.
- Rectification: Give reasonable notice for access to the various parts of the Works.
- Completion: Notify when remedial works have been completed.

A34 SECURITY/ SAFETY/ PROTECTION

SECURITY, HEALTH AND SAFETY

110 PRECONSTRUCTION INFORMATION
- Refer to teh Principal Designers information which is issued seperate to this specification.

120 EXECUTION HAZARDS
- Common hazards: Not listed. Control by good management and site practice. Main contractor to develop a Construction Phase Health and Safety Plan to include site specific method statements.

140 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN
- Submission: Present to the Employer/ Client no later than two weeks.
- Confirmation: Do not start construction work until the Employer has confirmed in writing that the Construction Phase Health and Safety Plan includes the procedures and arrangements required by the CDM Regulations.
- Content: Develop the plan from and draw on the Outline Construction Phase Health and Safety Plan, clause A30/570, and the Pre-tender Health and Safety Plan/ Preconstruction information.

150 SECURITY
- Protection: Safeguard the site, the Works, products, materials, and any existing buildings affected by the Works from damage and theft.
- Access: Take all reasonable precautions to prevent unauthorized access to the site, the Works and adjoining property.
- Special requirements: Access to be maintained into church for visitors and services.

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

PROTECT AGAINST THE FOLLOWING

330* NOISE CONTROL
- Standard: Comply generally with the recommendations of BS 5228-1, clause 9.3 to minimize noise levels during the execution of the Works.
- Equipment: Fit compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
- Restrictions: Do not use:
  - Pneumatic drills and other noisy appliances without consent during the hours of 9am - 5pm.
  - Radios or other audio equipment or permit employees to use in ways or at times that may cause nuisance.

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

350 PESTICIDES
- Use: Not permitted.

360 NUISANCE
- Duty: Prevent nuisance from smoke, dust, rubbish, vermin and other causes.
- Surface water: Prevent hazardous build-up on site, in excavations and to surrounding areas and roads.

370 ASBESTOS CONTAINING MATERIALS
- Duty: Report immediately any suspected materials discovered during execution of the Works.
  - Do not disturb.
  - Agree methods for safe removal or encapsulation.

371 LEAD CONTAINING PAINTS
- Duty: Within exisyting decorations, prior to preparing/disturbing, undertake testing to establish if lead based paints are present.
  - If present undertake works in accordance with HSE guidelines.
  - Report immediately any suspected materials discovered during execution of the Works and include reference within the Health & Safety file.

375 ANTIQUITIES
- Duty: Report immediately any fossils, antiquities and other objects of interest or value discovered during execution of the works.
- Preservation: Keep objects in the exact position and condition in which they were found.
- Special requirements: notify the CA immediately and await instruction.

380 FIRE PREVENTION
- Duty: Prevent personal injury or death, and damage to the Works or other property from fire.
- Standard: Comply with Joint Code of Practice 'Fire Prevention on Construction Sites', published by the Construction Confederation and The Fire Protection Association (The 'Joint Fire Code').

390 SMOKING ON SITE
- Smoking on site: Not permitted.

400 BURNING ON SITE
- Burning on site: Not permitted.

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

420 INFECTED TIMBER
- Removal: Where instructed to remove timber affected by fungal/ insect attack from the building, minimize the risk of infecting other parts of the building.

430 WASTE
- Includes: Rubbish, debris, spoil, containers and surplus material.
- Minimize: Keep the site and Works clean and tidy.
- Remove: Frequently and dispose off site in a safe and competent manner:
  - Non-hazardous material: In a manner approved by the Waste Regulation Authority.
  - Hazardous material: As directed by the Waste Regulation Authority and in accordance with relevant regulations.
- Voids and cavities in the construction: Remove rubbish, dirt and residues before closing in.
- Waste transfer documentation: Retain on site.

PROTECT THE FOLLOWING

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

530 EXISTING TOPSOIL/ SUBSOIL
- Duty: Prevent over compaction of existing topsoil and subsoil in those areas which may be damaged by construction traffic, parking of vehicles, temporary site accommodation or storage of materials and which will require reinstatement prior to completion of the Works.
- Protection: Before starting work submit proposals for protective measures.

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

560 EXISTING FEATURES
- Protection: Prevent damage to existing buildings, fences, gates, walls, roads, paved areas and other site features, which are to remain in position during execution of the Works.
- Special requirements: headstones/tombs within 5 metres of the church/scaffolding.

570 EXISTING WORK
- Protection: Prevent damage to existing property undergoing alteration or extension.
- Removal: Minimum amount necessary.
- Replacement work: To match existing.

580 BUILDING INTERIORS
- Protection: Prevent exposure to weather during course of alteration work.

625 ADJOINING PROPERTY RESTRICTIONS
- Precautions:
  - Prevent trespass of workpeople and take precautions to prevent damage to adjoining property.
  - Pay all charges.
  - Remove and make good on completion or when directed.
- Damage: Bear cost of repairing damage arising from execution of the Works.

630 EXISTING STRUCTURES
- Duty: Check proposed methods of work for effects on adjacent structures inside and outside the site boundary.
- Supports: During execution of the Works:
  - Provide and maintain all incidental shoring, strutting, needling and other supports as may be necessary to preserve stability of existing structures on the site or adjoining, that may be endangered or affected by the Works.
  - Do not remove until new work is strong enough to support existing structure.
  - Prevent overstressing of completed work when removing supports.
- Adjacent structures: Monitor and immediately report excessive movement.
- Standard: Comply with BS 5975 and BS EN 12812.

660 ANTIQUITIES, CHURCHES

Two weeks written notice is required to be given to the county archaeologist of the intention to execute excavations in churchyards. A minimum of 48 hours notice is required of the proposed firm date for carrying out excavation work. Any fossils, antiquities and other objects of interest or value which may be found on the site or in excavating the site during the progress of the works will become the property of the Employer. Do not disturb the object. Take all steps which may be necessary to preserve the object in the exact position and condition in which it was found and inform the Architect immediately.If any bones are found during excavations the contractor is to cease work and contact the incumbent before proceeding further

670 PROTECTION OF BATS

- All species of bats and their breeding/resting places are protected under the current Conservation (Natural Habitats) Regulations and the Wildlife & Countryside Act.
  The presence of bats is known at the church and if the presense of bats is discovered, or their presence suspected, the CA should be notified without delay. Should a bat be discovered in the course of an operation which is likely to be detrimental to the bat, the work should cease immediately in that area and the CA informed.
  In all cases no work is to take place which in any way can be shown to be detrimental to bats or their habitat without written instruction. A DEFRA licence has not been obtained. When access is in place invite the local bat warden to inspect the works to ascertain how repairs to nave eaves are to be undertaken.

A36 FACILITIES/ TEMPORARY WORK/ SERVICES

GENERALLY

ACCOMMODATION

230* TEMPORARY ACCOMMODATION

- Facilities: Main contractor to provide site storage as necessary / if required for the duration of the Contract as follows:
  - Within the churchyard; exact location to be agreed.
  - Chemical WC with hot water supply; exact location to be agreed.

TEMPORARY WORKS

340 NAME BOARDS/ ADVERTISEMENTS

- Name boards/ advertisements: Permitted and displayed on site hoardings; details to be confirmed.

345 ACCESS AND WORKING SCAFFOLDING

- Contractors must comply with the Health & Safety at Work Act 1974 and the specific requirements of the Construction (Working Places) Regulations 1966 and the Construction (Design Management) (CDM) Regulations 2007.
- Access and working scaffolds should be designed, constructed and used in accordance with BS EN 12811-1: 2003 Parts 1,2 & 3; BS EN 12811-2: 2004; BS 1139-1-2:1990; NASC and all other relevant British Standards or statutory instuments.
- Unless otherwise indicated the Main Contractor shall be responsible for the design of all scaffolding and for safety standards during erecting and dismantling of scaffolds to allow safe undertaking of the works (including storage of any materials) and not cause damage/defect to the existing building; any such damage/defects must be repaired to match existing at the main contractors cost.
- Standard Scaffolds: Putlog scaffolds are not permitted
- Unsheeted independent scaffolds, where no loading rating is specified, may be constructed up to a height of 50m without calculations providing they are constructed in accordance with BS EN 12811-1:2003.
- Use of water-filled drums for kentledge not permitted.
- Ties and anchorages to external walls not permitted. The Contractor shall confirm with the CA and employer the method by which scaffolding is tied back to existing supporting structures before a scaffold design is agreed. Fixings are to be kept to a minimum and if required are to be made good by the contractor to match existing finish.
- The Main Contractor shall be responsible for obtaining a documented design with calculations for the erection, use and dismantling of scaffold structures and for the integration of these activities within the overall work programme. It is the duty of the main contractor to check the design and to satisfy himself that it complies with all current legislation and any specific employer requirements.
- In certain cases, before work starts, the CA may wish to authorise an independent check by a competent person.
- Designers of special scaffolds shall, under the terms of contract, be required to attend site on the first day of erection to liaise and brief the Scaffolding Supervisor on the requirements of the design.
- Any variations to a scaffold design will not be permitted, without the designer's written authority. Any agreed variations must be clearly documented and must go through the Main Contractor and CDM Co-ordinator to be checked by a competent person.
- All scaffolds and structures should be inspected at least every seven days (and after weather conditions likely to have affected their strength or stability) by a competent person. Records of such inspections together with necessary action must be made in register F91 and signed by the person making the inspection.
- Notices warning 'incomplete scaffold' should be secured as necessary in an appropriate place.
- During erection, modification or dismantling, care must be taken to exclude the public and staff from a clearly defined area around the work.
- Ladders must not be left unattended when accessible to the public.
- Mobile scaffold towers shall be designed and used in accordance with HFC Guidance Notes GS42. The Contractor is to satisfy himself that any tower scaffold provided complies with this Guidance Note and all current legislation together with any specific employer requirement.

FIXINGS/TIES: None permitted.

SERVICES AND FACILITIES

420* POWER

- There is no electrical supply to the building/site; Contractor to provide suitable power requirements for the works.

430 WATER

- There is no water supply to the building/site; Contractor to provide potable (drinking) water for the works and welfare requirements.

440 TELEPHONES

- Direct communication: As soon as practicable after the Date of Possession provide the Contractor's person in charge with a mobile telephone.

550 THERMOMETERS

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

A54 PROVISIONAL WORK/ ITEMS

110 PROVISIONAL SUMS FOR DEFINED WORK
- Item: Additional stone repairs.
- Description of work: Additional masonry repairs to include cutting out and replacement of decayed stone.
- Provisional Sums: Include £500.00 for materials, installation and associated labour.
- Allow for general attendance.

115 PROVISIONAL SUMS FOR DEFINED WORK
- Item: Additional lime pointing repairs.
- Description of work: Additional masonry repairs to include raking out and lime repointing.
- Provisional Sums: Include £500.00 for materials, installation and associated labour.
- Allow for general attendance.

120 PROVISIONAL SUMS FOR DEFINED WORK
- Item: Additional repair of historic nave timber floor structure.
- Description of work: Following opening up, defrass and Architects inspection, proceed with splice repairs.
- Provisional Sums: Include £500.00 for materials and associated labour.
- Allow for general attendance.

125 PROVISIONAL SUMS FOR DEFINED WORK
- Item: Additional replacement of tiled floor finishes.
- Description of work: Additional replacement of floor tiling to match existing.
- Provisional Sums: Include £500.00 for materials and associated labour.
- Allow for general attendance.

590 CONTINGENCIES
- Provisional sum: Include: £5,000.00.

A55 DAYWORKS

50 DAYWORKS
- INCLUDE THE FOLLOWING DAWORKS ITEMS WITHIN TENDER SUM UNLESS OTHERWISE STATED.

100* PRIME COST DAYWORKS
- Prime Cost of Dayworks to be calculated in accordance with the 'DEFINITION OF PRIME COST OF DAYWORK CARRIED OUT UNDER A BUILDING CONTRACT' (refer to the contract clause 3.7.6) published by the RICS and BEC applies, subject to any amendments stated below

101* HOURLY BASE RATES
- 'Hourly Base Rates' for labour are to be computed in accordance with Item 3.2 of the above 'Definitions' and are to be inclusive of all incidental costs, overheads and profit as defined in Section 6 of the above 'Definitions'. They will be subject to no further adjustment.

103* MATERIALS AND GOODS
- Materials and goods as defined in Section 4 of the 'Definition', except that cash discounts allowable under Item 4.1 shall not exceed 2½%.

104* PLANT
- Plant as defined in Section 5 of the above 'Definition' calculated in accordance with the'Schedule of basic Plant Charges for Use in Connection with Daywork under a Building Contract, Fifth Revision, May 2001' published by the RICS.

105* INCIDENTAL COSTS
- Incidental costs, overheads and profit as defined in Section 6 of the Definition. Note: hourly base rates for labour will be deemed to include all items referred to in Section 6 of the Definitio.

106* RATES AND PERCENTAGES
- The Contractor shall insert rates and/or percentages as appropriate in accordance with Section No. 1 of the Specification and shall include the total within the tender sum. The inserted rates and percentages shall remain fixed for the duration of the contract.

110* LABOUR

	No. Hours		Hourly Rate	
A. Building labour (unskilled)	10	x		=
B. Building labour (skilled) 10		x		=

Note: The Contractor must complete both (A) & (B) above

120* MATERIAL & GOODS

- C. Include this sum for materials and goods £100.00

D. ADD percentage for incidental costs, overheads and profit %

130* PLANT

- E. Include this sum for plant where calculated in accordance with the 'Schedule of Basic Plant Charges for Use in Connection with Daywork under a Building Contract' £100.00

160 SPECIALIST TRADES

- Include Provisional Sums for dayworks within the province of (DO NOT include costs within tender return):

- Carpenter:
  Prime cost of labour: The sum of £ / hour
  Add for percentage addition to cover incidental costs, overheads and profit: _____%

- Stone Mason:
  Prime cost of labour: The sum of £ / hour
  Add for percentage addition to cover incidental costs, overheads and profit: _____%

- Specialist Glazier:
  Prime cost of labour: The sum of £ / hour
  Add for percentage addition to cover incidental costs, overheads and profit: %

Table of Contents

C40 Cleaning masonry

To be read with Preliminaries/ General conditions.

GENERAL/ PREPARATION

160 PROTECTION

- Surfaces not designated for cleaning: Prevent damage, including marking and staining.
- Openings: Prevent ingress of water, cleaning agents and detritus.
  - Vents and grilles: Seek instructions before sealing up.
- Temporary mechanical fastenings:
  - In masonry: Locate in joints.
  - In other surfaces: Seek instructions.
- Additional protection: Submit proposals .

180 COLD WEATHER

- Cleaning procedures using water: Do not use when air temperature is at or below 5°C. Protect damp surfaces from frost.
- Chemical cleaning agents: Do not use when surface temperatures are below those recommended by manufacturer.

190 CLEANING GENERALLY

- Operatives: Appropriately trained and experienced for each type of cleaning work.
  - Evidence of training: Submit on request.
- Control of cleaning: Confine cleaning processes and materials to designated areas. Prevent wind drift.
- Detritus: Remove regularly. Dispose of safely.
- Monitoring: Frequently check results of cleaning compared to approved trial samples. If results established by trials are not achieved, seek instructions.
- Modifications to cleaning methods and materials: Seek instructions.

PRODUCTS/ EQUIPMENT

312 SURFACE BIOCIDES

- Types: Registered by the Health and Safety Executive (HSE) and listed on the HSE website under non-agricultural pesticides.
- Compatibility with surface: Free from staining or other harmful effects.

315 SHELTERCOAT

NOTE: Works to be completed by a Conservator to the approval of the Architect.

- Mix:
  1 part Lime Putty
  3 parts Gritting Stones Fines (clunch) <1000 micron
  ½ part Ham Stone Fines <1000 micron
  1/5 part or less finely ground Charcoal
  1/14 of a part of Caesin
  Fungicide (Caesin-compatible) - to be obtained from Rose of Jericho (or another CA approved at tender stage) and to be added to shelter coat mix the direction of the CA.
- This basis will have to be slightly modified on site according to natural variations in stone colour and aggregates.
- Premixed Shelter coat shall be obtained from:
  Rose of Jericho, Westhill Barn, Evershot, Dorset, DT2 OLD - Tel: 01935-83676/83662 or, another approved by the Architect.
- Inspection: Following defrassing/descaling and application of water inspect with the Architect and receive further instructions on any further repair required.
- Treatment - application of water:
  - Spray 10 applications on to surface of masonry.
  - Use hand sprays on a fine mist setting.
  - Saturate stones but avoid run off.
  - Allow lime to dry between applications.
- Application:
  - Agree colour of shelter coat with Architect.
  - Brush on to a well wetted surface, and rub-in using hessian.

332 WATER SPRAY (MOUNTED NOZZLES)

- Equipment:
  - Spray/ Nozzle types: Fine and subject to site trials .
  - Nozzles: Position and direction adjustable, relative to surfaces and profiles.
  - Controls: Submit proposals .

APPLICATION

410 TREATMENT WATER WASHING - GENERALLY

Use fine water spray nozzles at least 300mm away from the wall face to provide intermittent (or pulsed), nebulous (or atomised) sprays of water playing on the masonry surface.

- The sprays shall be controlled by hand pumps.
- The washing interval will be initially established during the trial and may be varied as the washing is monitored but allow for ten second spraying times interspersed by four minute drying periods until the deposits are loosened.
- Monitor the washing closely and commence scrubbing as soon as the dirt becomes responsive to brushing.
- Brush with a soft bristle or phosphor bronze wire brushes making sure that masonry surface is notmarked or scored.
- Continue the washing and brushing until the agreed level of cleanliness is achieved or the agreed cycle is complete.
- When water washing is complete contact the CA to make inspection to agree level of clean has been achieved and to confirm scope of repairs.

412 REMOVAL OF LOOSELY ADHERED DEPOSITS

- Timing: Before commencement of other cleaning methods.
- Surfaces: Prevent damage, including abrasion.

422 BIOCIDE APPLICATION TREATMENT OF MOSS AND ALGAE

- Preparation:
  - tear or disturb thick growths
  - dampen dry growths
  - clean down as C40/410.
- Surfaces: Prevent damage, including abrasion.
- Biocide treatment: Apply appropriate solutions to kill growths and inhibit further growths to Contractor's choice and CA approval.
  - Dead growths: Remove.
- Where rooted plants are present apply weedkiller as C40/423.

423 APPLICATION OF WEEDKILLER

- Plants, root systems and associated soil/ debris: Treat with Roundup Pro-Biactive 450 (or similar to approval) and allow to die off for minimum of 2 weeks.
- Health & Safety: WEAR PROTECTIVE CLOTHING, RUBBER BOOTS AND SUITABLE PROTECTIVE GLOVES & GOGGLES as recommended by the manufacturer and implement barriers/protections as necessary to protect the public and site operatives. Contractor to provide method statement for Principal Designers review/comment.
- Removal of growths:
  - Allow to carefully open up finishes as necessary to access root; if there is a danger to damage the finishes notify CA and await instruction.
  - Carefully remove dead growths from joints, voids and facework.
  - 2nd application: Apply following removal of dead growths to inhibit further growth.
  - Removal of roots: Use dampened temporary wood wedges or other approved method to assist removal. Where growths cannot be removed completely without disturbing masonry seek instructions.
  - Reinstate finishes to match existing.

442 ABRASIVE BLOCKS

- Types: Suitable grades of carborundum or gritstone.
- Application: Lubricate with water. Remove detritus.
- Abrasive power tools: Prohibited.

452 ABRASIVES CLEANING

- Surfaces: Minimize abrasion.
  - Ingrained deposits: Seek instructions.
- Equipment settings (including nozzle type and distance from surface): Adjust regularly to achieve optimum cleaning performance for each surface.
- Detritus: Remove with clean water.

462 WATER SPRAY CLEANING (MOUNTED NOZZLES)

- Surfaces: Minimize water run-off. Prevent damage.
- Adjustment of washing cycle and nozzle positions: Regularly to achieve optimum cleaning performance.

515 PLAIN POULTICING

- System: As recommended by Conservator to Architects review/approval.
- Surfaces: Prevent damage, including abrasion.
- Application: To wetted surfaces. Maintain contact with surfaces as poultice dries out.
- Poultice reinforcement: Hessian or plastic mesh / to suit manufacturers recommendation.
- Drying: Prevent excessively rapid or localized drying out.
- Spent poultice material: Do not reuse.

C41* Repairing/ renovating/ conserving masonry (Historic Buildings)

To be read with Preliminaries/ General conditions

101* APPROVED STONEMASONS

- The work described in this section should be carried out by qualified stonemasons working for an approved stonemasonry sub-contractor whose name shall be supplied to the CA for approval before putting the work in hand.

102* GENERAL SEQUENCE OF REPAIRS TO ASHLAR STONE

- 1. Agree repair type with CA and photograph areas to be cut out.
  2. Defrass stone if to be retained as required and cut out renewals.
  3. Remove cramps if not to be retained.
  4. Treat cramps to be retained.
  5. Deep point open joints to face of defrassed stone.
  6. Water clean retained stone.
  7. Carry out consolidation as required.
  8. Carry out repairs: Photograph areas to be repaired. Choose colour of mortar.
  9. Deep point joints for depth of repair and grout voids.
  10. Apply colour wash to repairs and retained stone as required and carry out final cleaning.

115 DESCALE/DEFRASS ASHLAR STONEWORK DRESSINGS AND WALLING: NO MORTAR REPAIR

- This is to be carried out to all areas where indicated on the drawings.
  - Archaeological Attendance C41/301
  - Recording: C41/306
  - Descaling: C41/455
  - Weathering ledges: C41/450
  - Redressing stone: C41/458
  - Mortar: Included elsewhere.
  - Mortar repairs: Included elsewhere.

116* DESCALE/DEFRASS/CONSOLIDATE DEFECTIVE ASHLAR STONEWORK DRESSINGS AND WALLING: PREPARE: SHALLOW MORTAR REPAIR

- This is to be carried out to all areas of plain ashlar face where indicated on the drawings.
  - Archaeological Attendance C41/301
  - Recording: C41/306
  - Preparation: C41/411,416,421,426, 455
  - Mortar: Slurry mix: C41/223
  - Mortar: Repair mix: C41/224
  - Mortar repairs: C41/431,436,461,466
  - Average repair depth: 20mm (5mm-35mm range)
  - Repair tending: C41/446
  - Repair texturing: C41/451
  - Joint treatment finish: C41/456

120 REVIEWING SCOPE OF THE WORK

- Inspection: Arrange before starting work. Confirm type and extent of work required.
- Marking: Mark clearly, but not indelibly, on face of masonry units or parts of units to be cut out and replaced.
- Identification of masonry units to be removed, replaced or repaired: Code number cross-referenced to drawings/ photographs.
- Records of masonry to be repaired: Before starting work, use measurements and photographs as appropriate to record bonding patterns, joint widths, special features, etc.

125 REDUNDANT FITTINGS/ FIXINGS

- Items to be removed: Remove all redundant fixtures and fixings and make good with lime mortar; unless otherwise specified .
- Removal: Minimize disturbance to surfaces.

126* RAKE OUT: PREPARE: DEEP/REPOINTING/GROUTING OF ASHLAR STONEWORK/ JOINTS/CRACKS

- This is to be carried out to all stonework joints or fractures where indicated on the drawings.
  - Preparation: C41/411,416,421,426, 455
  - Rake out lime mortar: C41/401
  - Remove cement mortar: C41/406
  - Mortar: Deep pointing: C41/221 and C41/222 when pointing clunch stonework.
  - Joint treatment/finish: (Placing Mortar): C41/456
  - Grouting of voids: C41/356.

130 REMOVAL OF PLANT GROWTHS FROM MASONRY

- Plants, root systems and associated soil/ debris: Carefully remove from joints, voids and facework.
- Removal of roots: Use dampened temporary wood wedges or other approved method to assist removal. Where growths cannot be removed completely without disturbing masonry seek instructions.
- Plants to remain in the ground: Cut out a section of stem as close to the ground as possible. Peel bark back from stump and apply herbicide paste. Leave stump to wither.

136* REMOVE FIXED ITEMS/REPAIR HOLE WITH LIME MORTAR

- This is to be carried out where noted on drawings.
  - Recording:C41/306
  - Removal from walling: Generally as C41/125.
  - Fill hole with lime mortar as C41/221; for apertures larger than 50x50mm piece in stone to match adjacent.

140 RECORD DRAWINGS

- General: Maintain accurate records of work carried out to masonry as follows: Mark up elevational drawings to include all repairs along with a schedule of replacement stones .
- Submission: At completion.
  - Copies: 2 paper copies and PDF .

141* TREAT FIXED ITEMS INSITU

- Wire brush, treat with 2 coats Fertan Rust converter
  Fertan UK, King & Queen House, High Street, Hamble, SO31 4HATel 02380 456600, Email info@fertan.co.uk, Facsimile:01903 539595

146* RESIN PINNING SPALLING/FRACTURED ASHLAR STONEWORK

- This is to be carried out where indicated on the drawings
  - Resin: C41/251
  - Pins: C41/256
  - Sizes: to suit lengths of pins required.
  - Drilling and fixing generally as C41/456

WORKMANSHIP GENERALLY

150 POWER TOOLS FOR REMOVAL OF MORTAR

- Usage: Not permitted .

155 PUTLOG SCAFFOLDING

- Usage: Not permitted .

155* TREATMENT OF EXISTING CRAMPS BETWEEN STONES

- If old cramps cannot easily be removed without damaging adjacent stonework, they are treated as C41/141

160 PROTECTION

- Handling of masonry units: Prevent overstressing during transit, storage and fixing. Lift units at designed lifting points where provided.
- Storage of masonry units: On level bearers clear of the ground, separated with resilient spacers. Protect from adverse weather and keep dry. Prevent soiling, chipping and contamination by salts and other deleterious substances.
- Protection of masonry: Suitable nonstaining slats, boards, etc. Remove at completion.
  - Prevent damage, particularly to arrises, projecting features and delicate, friable surfaces.
  - Prevent mortar/ grout splashes and other staining and marking.

165 STRUCTURAL STABILITY

- General: Maintain stability of masonry. Report defects, including signs of movement, that are exposed or become apparent during the removal of masonry units.

170 DISTURBANCE TO RETAINED MASONRY

- Retained masonry in the vicinity of repair works: Disturb as little as possible.
- Existing retained masonry: Do not cut or adjust to accommodate new or reused units.
- Retained loose masonry units and those vulnerable to movement during repair works: Prop or wedge so as to be firmly and correctly positioned.

185 ADVERSE WEATHER

- Frozen materials: Do not use. Do not lay masonry units on frozen surfaces.
- Air temperature: Do not bed masonry units or repoint.
  - In cement gauged mortars when at or below 3°C and falling or unless it is at least 1°C and rising (unless mortar has a temperature of not less than 4°C when laid and the masonry is thoroughly protected).
  - In hydraulic lime:sand mortars when at or below 5°C and falling or unless it is at least 3°C and rising.
  - In nonhydraulic lime:sand mortars in cold weather without approval.
- Temperature of the work: Maintain above freezing until mortar has fully set.
- Rain and snow: Protect masonry by covering during precipitation and at all times when work is not proceeding.
- Hot conditions and drying winds: Prevent masonry from drying out too rapidly.
- New mortar damaged by frost: Rake out and replace.

195 SAMPLES

- Approval: Before placing order, submit for approval representative samples of: Sands for bedding and pointing from local quarry .

MATERIALS/ PRODUCTION/ ACCESSORIES

221* MORTAR Deep/pointing/Bedding for Ashlar Walling and Dressings.

- Mix: Hydraulic Lime: Sand (1:3).
- Gauging:
  - 1 part pit sand sieved to <2.36mm.
  - ½ part fine yellow sand sieved to <600 microns
  - 1½ parts silica quartz sand sieved to <1000 microns
- Source:
  Lime: St Astier, NHL 2.0. Obtained from Setra Marketing Ltd: 01372-465779, (fax: 01372-801302).
  Sands: Pit sand: obtained from local source approved by CA.

222 MORTAR Pointing of clunch and carstone stonework generally.
- Mix: Non Hydraulic Lime: Sand (1:3).
- Gauging:
  - 1 part pit sand sieved to <2.36mm.
  - ½ part fine yellow sand sieved to <600 microns
  - 1½ parts silica quartz sand sieved to <1000 microns
- Source:
  Lime: Lime putty obtained from a source approved by CA.
  Sands: Pit sand: obtained from local source approved by CA.

223* MORTAR Repair mortar slurry coat/grouting of voids.
- Mix: Hydraulic Lime : Sand (1: 2.5)
- Gauging: Stone Fines sieved to <1000 microns.
- Source:
  Lime: St Astier, NHL 2.0. Obtained from Setra Marketing Ltd: 01372-465779, (fax: 01372-801302).
  Sands: Local stone dust to be approved by CA.

224* MORTAR Repair Mortar, Pointing of plinth (also bedding of quarry tiles).
- Mix: Hydraulic Lime: Sand (1:2.5). To be confirmed by investigation works.
- Gauging:
  1 part pit sand sieved to <2.36mm.
  ½ part fine yellow sand sieved to <600 microns
  1½ parts silica quartz sand sieved to <1000 microns
- Source:
  Lime: St Astier, NHL 3.5. Obtained from Setra Marketing Ltd: 01372-465779, (fax: 01372-801302).
  Sands: Pit sand: obtained from local source approved by CA.

251* RESIN For piecing in and fixing cramps, bar reinforcement, armatures etc.
- Type: Acrylic resin
- Manufacturer and reference: Sebralit Solid

256* PINS
- Stairib 460 Deformed Round Bar 6mm diameter in Grade 18/8 Austenitic Stainless Steel 460 Nmm² complies with BS6744:1986. Spec 304531 - By George Clark (Sheffield) Ltd or similar supplier approved by the CA.

WORKMANSHIP

301* ARCHAEOLOGICAL ATTENDANCE
- The Contractor is to be aware at all times that any particular operation involving stonework (or brickwork) especially during taking down, opening up, or removal of vegetation operations, may be of interest to the site archaeologist or someone appointed by him to watch operations. Every facility is to be given to this person, to provide access and information upon request.
- Any object or anything at all that may be of interest to the archaeologist that is found/uncovered during such operations listed in a) above must immediately be advised to the CA or the archaeologist, and further works in the immediate location of the find must be ceased for 2 days or less if the site is investigated and the 'all clear' given to proceed.
- In scheduled items noting the need for archaeological attendance, the Contractor is to give said person sufficient advance notice, minimum 24 hours, prior to carrying out that item.
- Certain objects, carved stones, etc. are to be taken out/detached and taken down and delivered to the archaeologist, all under his advice and attention. The object is to be labelled and logged, recording exact location and condition when found/taken out.

306* RECORDING STONEWORK
- All areas of repair to be recorded by the contractor using photography and marked up on record drawings.
- Following inspection with the CA mark out area to be treated on site and transfer onto record drawing. Photograph areas to be treated and cross refer photo to record drawing.

316* PREPARING BEDS/BACKINGS Generally to receive new work

- Thoroughly clear out void using hand tools and brushes.
- Treat voids with biocide
- Temporarily support surrounding work.
- Cut out and remove, label and set aside in store existing corroded cramp/cramps from stone and bed.
- Provide new stainless steel cramps to match those removed and fix.

REPLACEMENTS AND INSERTIONS

331* JOINT TREATMENT / FINISH

- Finish joints ensuring consistency of colour, texture, profile, and overall appearance to match the existing surrounding mortar.
- Set joint face flush with the face of stonework unless:
  - i) this is at difference with the existing surrounding mortar, and/or
  - ii) the joints are very wide or arises are broken; and/or
  - iii) the CA instructs otherwise.
- Where masonry arises are eroded, set joint face further back, but avoiding the creation of ledges, which may trap or hold water.
- In order to match the existing texture:
  a) Carry out such surface treatments as water spraying and bristle brush stippling after the mortar has achieved an appropriate surface set (this may vary according to season from to 30 hours)
  b) Bristle brush stippling should be carried out by tapping the brush into the mortar.

356 GROUTING OF VOIDS IN MASONRY : GRAVITY SYSTEM

- Excluded, however if voids become apparent during the works notify the Architect and await instruction.

MORTAR REPAIRS GENERALLY

401* RAKE OUT LIME MORTAR JOINTS

- Rake out well to a depth of 35mm min. using chisels or hacksaw blades of appropriate width so as not to damage existing arises and flush out with water.

406* CEMENT REMOVAL

- Remove cement patch repairs using hand tools. This is best achieved by continual gentle tapping with a hammer at the centre of the repair until the different mechanical properties between the stone and the cementitious mix causes the two to part without damage. The process is lengthy and time should be allowed for it. Care is to be taken to avoid damage to the stone substrate, particularly where the repairs are deep and well-adhered. Avoid damage to edges of sound stone. Remove cement pointing by using hand tools such as quirks or narrow chisels. Clean out joints using dry air sprays and non ferrous or stiff bristle brushes.

410 CORRODED METAL FIXINGS

- Requirement: Cut out carefully, causing the least possible disturbance to surrounding masonry. Remove associated rust debris.
- Replacement: Compatible fixings as clause C41/351 .

411* SURFACE CLEANING READ IN CONJUNCTION WITH C40/111, C40/211

- Pre-clean all retained work revealed to such standard to match surrounding cleaned work.
- Carry out consolidation as C40/300 and inspect with CA to agree exact areas to be repaired.
- Friable stone faces to be descaled and defrassed and a key cut where necessary using hand tools. Undercut top edges to protect feather edges from weather.

416* REPAIRS

- The area to be repaired should be well wetted and particularly friable stone should be treated with 3 coats of slurry mix.
- Water is added to this mix to achieve a thin creamy consistency.
- Brush on the slurry coat and work well into the stone. Allow to tack dry before applying second and third slightly thicker coats

421* DEEP POINTING
- Carry out deep pointing as clause C41/126 before and during mortar repairs

426* SLURRY MIX
- A coat of slurry mix is to be applied immediately prior to mortar repair and allowed to dry to tack

431* APPLICATION OF MORTAR REPAIR
- Repair mortar should be as dry as possible. Repair mortar to be applied using small trowels and spatulas to a depth of no more than 12mm per application.
- Repairs to be tended between applications, and each stage allowed to go off to a leathery consistency but still green before application of the next coat
- Repairs to be tapped by hand to establish any areas of failure. Each stage must be sound before work can continue.
- Repairs to be kept damp and protected from frost, wind and direct sunlight to prevent rapid drying out and subsequent cracking, shrinking, and failure. Use damp hessian as protection. Particular attention needs to be paid to overnight protection.

436 APPEARANCE
- modelling, finish and texture of repairs: Care to be taken over final tending and finishing off. Texture repairs to match adjacent stonework by working over with hessian, spatulas, plaster modelling and sculpture tools to the approval of the CA.

441* MORTAR REPAIRS: ARMATURES
- Drill at 50mm centres, vertically and horizontally, 5mm. diameter holes and insert stiff stainless steel wire (C40G:M035) twisted to a spiral up 25mm in diameter. Ensure the surface of the armature is 10-13mm below the final surface. Do not use armatures on single coat work. Increase the gauge of the wire and if necessary the whole size of the armature for deeper repairs such that the armature remains moderately rigid.

446* MORTAR REPAIRS: TENDING (If necessary depending on time of year works undertaken)
- Tending is the key to successful mortar repairs.
- Lime mortars only carbonate successfully in the presence of water.
- This should happen over a period of at least 10 days. It is imperative to control the rate of drying out and adjust it to the ambient environment to ensure consistency.
- Allow for programme implications, especially for deep mortar repairs, of the time required.
- Tend By: Protecting each mortar repair with damp hessian and polythene in warm drying conditions and damp hessian and bubble wrap in winter. Ensure that mortar repairs are fully protected for four months after application in winter working conditions. Check repairs at regular intervals and spray with clear limewater to keep damp. Avoid and take care not to allow run off as lime mortar causes stains which are invisible until they have dried out.
- Carry out any texturing or keying on deep coats before final set or 'turn'.

TOOLING/ DRESSING STONE IN SITU

450 WEATHERING LEDGES AT JOINTS
- Locations: Where stones project or are recessed.
- Requirement: Carefully weather the ledge, to approval.
- Method: Suitably graded carborundum blocks or tooling as appropriate.

451* MORTAR REPAIRS: TEXTURING
- Unless otherwise directed texture mortar repairs to match the general level of decay of surrounding stone.
- A mortar repair should blend into the stonework when viewed from more than 1.5m. The degree of texturing will be determined in conjunction with the architect.

455 DESCALING STONE
- Requirement: Carefully remove loose scaling and powdering from masonry to the extent agreed.
- Method: Suitable bristle brushes or carborundum blocks. Do not use wire brushes.

456* JOINT REINFORCEMENT/FINISH: ASHLAR REPAIRS

- All original joint lines are to be maintained.
- Deep pointing mortar to be applied with a mortar gun, and packed well in to the joints, leaving a square face 20mm from final surface.
- Apply final pointing using fine pointing tools. Take great care to avoid lime staining to the ashlar. Joint lines to ashlar repairs should be kept, and pointed as for sound stone. Other joints, e.g. window architraves, to be drawn in to match existing joints.
- Protect pointing and tend as for mortar repairs. Ensure ashlar arises are crisp and sharp matching the original quality.
- Pointing Across Mortar Repairs:
  It is impractical to cut joints out after mortar repair has been completed. Insert the steel rule the width the joint requires wedge into the surrounding existing stone joints. Rub oil onto both sides and mortar repair up to the steel rule. Remove carefully by sliding away whilst green hard. Inject pointing mix with suitable veterinary syringe into false joint taking care not to stain surrounding mortar repaired stone. Wash off any stains and check that your pointing corresponds with degree of texture on surrounding mortar repair.

458 REDRESSING STONE

- Requirement: Carefully dress back stones to the extent agreed.
- Method: Suitably graded carborundum blocks or tooling as appropriate.

461* MORTAR GENERALLY

- A palette of mortars shall be prepared from the base mixes. Colours should be adjusted as necessary using more or less strongly pigmented aggregate and charcoal. Artificial pigments must not be used.

466* MORTAR REPAIRSMixing and Storing

- To be confirmed by investigation works but generally as Z21

POINTING/ REPOINTING

840 POINTING WITH TOOLS/ IRONS

- General: Press mortar well into joints using pointing tools/ irons that fit into the joints, so that they are fully filled.
- Face of masonry: Keep clear of mortar. Use suitable temporary adhesive tape on each side of joints where necessary. Finish joints neatly.

860 BRUSHED FINISH TO JOINTS

- General: After the initial set has taken place, brush joints to remove laitance/ excess fines and give a coarse texture. Do not compact mortar.

C51 Repairing/ Renovating/ Conserving timber

To be read with Preliminaries/ General conditions

110 INSPECTION

- Purpose: To confirm nature and extent of repair/ renovation/ conservation work shown on drawings and described in survey reports and schedules of work.
- Parties involved: Following removal of temporary protections and provision of enhanced lighting:
  - Contract administrator (Architect);
  - Contractor's representative;
  - Foreman carpenter.
- Timing: At least 5 days before starting each section of work.
- Instructions issued during inspection: Confirm in writing, with drawings and schedules as required, before commencing work.

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:
  - 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.

STRUCTURAL REPAIRS/ ALTERATIONS

240 END REPAIRS - LAP

- Location/method: Locations to be confirmed on site following opening up. Method to conserve existing and strengthen/repair existing timber joists by fixing new joists to both sides.
- Defective timber: Treat in situ with preservative.
- Lap member: Timber and extend 1m beyond decay.
  - Size: To match existing.
- Fixing to existing timber: Single row of 10mm diameter stainless steel coach screws at 300mm centres.

250 TIMBER SECTION REPAIRS - EXTERNAL SPLICE

- Defective timber: Cut out to clean, regular profile.
- Replacement timber: Oak/to match existing; notify Architect if existing timber is a different type.
- Splice plates:
  - Material: Timber to match existing.
  - Size: to match that is being repaired.
- Fixing to existing timber: M10 bolts, 2no. each side of joint.

PRODUCTS

310 STRUCTURAL SOFTWOOD (GRADED DIRECT TO STRENGTH CLASS) FOR PAIRING UP REPAIR OF FLOOR JOISTS

- Grading standard: To BS 4978, BS EN 519, BS EN 14081-1 or other national equivalent and so marked.
- Strength class to BS EN 338: C24.
- Treatment: Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8.
- Moisture content (maximum) at time of installation: 20%
- Other requirements:
  - Regularized
  - Exclude boxed heart
  - Wane not permitted.

490 COACH SCREWS securing floor joists

- Standard: To DIN 571.
- Material: Stainless steel.
- Tensile strength (minimum): 550 N/mm².
- Finish as delivered: None.

EXECUTION

600 WORKMANSHIP

- Skill and experience of site operatives: Appropriate for types of work on which they are employed.
  - Documentary evidence: Submit on request.

620 PROTECTION OF TIMBER AND WOOD COMPONENTS BEFORE AND DURING INSTALLATION

- Storage: Keep dry, under cover, clear of the ground and with good ventilation. Support sections/ components on regularly spaced, level bearers on a dry, firm base.
- Handling: Do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.

630 MATERIAL SAMPLES

- Representative samples of designated materials: Submit before placing orders.
  - Designated materials: For hardwood and softwood repairs.

650 DIMENSIONS GENERALLY

- Site dimensions: Take as necessary before starting fabrication.
  - Discrepancies with drawings: Report without delay and obtain instructions before proceeding.

670 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL SOFTWOOD AND HARDWOOD

- General: Dimensions given on drawings and in schedules of work are finished sizes.
- Maximum permitted deviations from finished sizes:
  - Sawn surfaces:
    Thickness and widths < 100 mm: -1, +3 mm.
    Thickness and widths > 100 mm: -2, +4 mm.
  - Further processed surfaces: -0, +1.

680 WARPING OF TIMBER

- Bow, spring, twist and cup: Not greater than the limits set down in BS 4978, BS EN 519 or BS EN 14081-1 for softwood, or BS 5756 for hardwood.

690 PROCESSING TREATED TIMBER

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

760 REPAIR OF MEMBERS - CUTTING OUT MEMBERS

- Extent of timber removal: Cut out full cross section of member where wood is defective or decayed, plus 100 mm of sound wood. This will depend on the nature of the defect and/ or decay and will be assessed on site on a case-by-case basis with the timber specialist and CA.
- Distance from face of support to cut end of existing timber: Obtain instructions if dimension exceeds maximum shown on schedule.
- Joint profile: Scarf joint at 1 in 12 to grain with single 40 mm step.

770 REPAIR OF COMPRESSION MEMBERS - PIECING IN

- Defective wood: Remove only decayed or defective wood. Finish cut-outs to clean, regular profiles.
- Timber inserts: Cut accurately to fit. Glue and pin in place. Lie of grain to match as closely as possible that of parent timber.
- Joint profile: Scarf joint at 1 in 12 to grain with single 40 mm step.

780 REPAIR OF DISTORTED TIMBER MEMBERS

- Generally: Repair to shape that member has assumed.

860 MOISTURE CONTENT CHECKING

- Procedure: When instructed, check moisture content of timber sections with an approved electrical moisture meter.
- Test results: Keep records of all tests. If moisture content falls outside specified range obtain instructions.

COMPLETION

920 DATING TIMBERS USED IN STRUCTURAL REPAIRS

- Principal replacement members: Mark by carving or branding with date of repair and, when appropriate, initials of carpenter, in characters 20-25 mm high.
- Location of marks: Unobtrusive, to be agreed.

C52 Fungus/ beetle eradication

To be read with Preliminaries/ General conditions.

100* HEALTH AND SAFETY GENERALLY

- Comply with the Health and Safety Executive Guide, 'Remedial Timber Treatment in Buildings: A guide to good practice and the safe use of wood preservatives' current at the time of tendering.
- Preservatives to be approved and registered by the Health and Safety Executive (HSE) and listed in "The Pesticides Register" or "Reference Book 500" current at the time of tendering.
- No product containing Lindane or TBTO is to be used. Ensure that all unused chemicals and materials are disposed of strictly in accordance with section A34. Protection of Bats: Where there is a presence of bats, only those chemicals endorsed by English Nature may be used.
- Chemicals containing Permethrin should be used with extreme caution as Permethrin is highly toxic and fatal to aquatic life at 1 part per 20 million, and bees (kills olfactory organs - they die of asphyxiation).
- Note: Buildings that have been previously treated may well be highly toxic (eg: zinc / arsenic could have been used). Therefore operatives / employees working on previously treated areas should be suitably sufficiently protected (masks, gloves etc.)

115 SURVEY AND REPORT

- Survey generally:
  - Purpose: To ascertain nature and extent of fungal/ beetle attack and sources/extent of dampness.
  - Timing: Before starting eradication work, carry out survey and submit survey report to Architect.
- Survey report content:
  - Locations marked up on drawings to include type of decay re. wet, dry, fungal, beetle infestation.
  - Specialists/manufacturers proposals for eradication treatments and procedures, including measures to halt damp penetration and promote drying out.
  - Measurements of wood moisture content, with identification of instances above 20%.
  - Associated work: Nature and extent of repair/ replacement work required to load bearing constructions and to the building fabric in general.

121* ASSOCIATED WORK

- Replacement of timber and other builder's work are to be carried out by main contractor; all repair to be completed prior to treatment.

130* ADDITIONAL TREATMENT WORK

As work proceeds, agree with CA the nature and amount of additional work to be carried out.

140 OPENING UP/ CUTTING OUT/ REMOVAL OF BUILDING FABRIC

- Extent: Submit proposals.
- Retained building fabric: Maintain stability and do not damage.

162 PREPARATION GENERALLY FOR PRESERVATIVE/ FUNGICIDE TREATMENTS TO TIMBERS/ MASONRY

- Structural frame/ components within treated areas: Prevent staining and other adverse effects.
- Water supplies: Do not contaminate.
- Electrical equipment and supplies: Isolate circuits as required and prevent ingress of treatment fluids.
- Cleanliness: Remove loose material, dust and debris from surfaces to be treated.

210 DRY ROT

- Fruiting bodies: Do not disturb. If heat treatment is not employed, spray with fungicide.
  - Removal: Remove carefully. Clean surfaces.
- Infected material to be removed: Remove carefully, causing minimum disturbance and damage to adjacent building fabric; dispose of safely at a tip approved by a waste regulation authority. Prevent contamination of other parts of the building.
- Infected material to be retained: Treat with penetrative preservative.

211 DRY AND WET ROT

- Upon discovery of previously undiscovered dry or wet rot, notify the architect and provide an amended method statement for the works including associated builderswork in connection.

215 DECAYED STRUCTURAL TIMBER

Upon discovery of decay in structural timber notify the architect and provide an amended method statement for the works including associated builderswork in connection. Refer to the Project Preliminaries and schedule of works for Provisional Sums.

220 WET ROT

- Decayed timber to be removed: Cut out until sound timber is reached.
  - Disposal of previously treated timber: At a tip approved by a waste regulation authority.
- Decayed timber to be retained: Treat with penetrative preservative.

230 BEETLE INFESTATION

- Infected timber: Cut, scrape and trim back to sound timber where heat treatment is not employed. Remove debris immediately and dispose of safely at a tip approved by a waste regulation authority. Prevent contamination of other parts of the building.

240 SALVAGED MATERIALS

- Sound, uninfected materials: Give notice before reusing/ recycling.

250* CLEANING

- Thoroughly clean down all surfaces in affected areas. Carefully remove all loose material, dust and debris and remove from site without delay.

310 TIMBER PRESERVATIVES/ MASONRY FUNGICIDES GENERALLY

- Products: Registered by the Health and Safety Executive (HSE) and listed on the HSE website under non-agricultural pesticides.
- Application: In accordance with statutory conditions of approval given on product labels and as manufacturers' recommendations.

318 TIMBER PRESERVATIVE TREATMENT PROVISIONAL PROPOSAL FOR DECAYED TIIMBER GENERALLY

- Preservative type: Glycol boron formulation.
- Product details: Wykabor 20 by Wykamol; spray or brush applied to suit location, applied in accordance with manufacturers recommendations
- Tint: Not required.
- Treatment method: To suit type, scale and location of fungal/ beetle attack.

338 MASONRY FUNGICIDE TREATMENT

- Fungicide type: Glycol boron formulation.
- Product details: Wykabor 10 by Wykamol; spray or brush applied to suit location, applied in accordance with manufacturers recommendations
- Tint: Not required.
- Treatment method: To suit type, scale and location of fungal attack.

E06 In situ Limecrete construction generally

10 LIMECRETE SLAB - SUBLIME FLOOR SYSTEM

Within tender return, confirm which specialist sub-contractor you have selected to complete the following works:

- Archaeologist: to be present during removal of existing slabs and removal of soils to required formation levels.
- Prior to slab being poured Architect and structural engineer to inspect - await instruction to proceed.
- Manufacturer/supplier: Ty-Mawr, Unit 12, Brecon Enterprise Park, Brecon, Powys LD3 8BT
  Tel: 01874 611350 Fax: 01874 658502
- Preparation: Lift existing floor finishes where they exist and set aside for storage/reuse and break out existing slab and sub layers to desired formation levels.
- Excavation: Minimal to incorporate minimum of 150mm of compacted Recycled Foam Glass (RFG); hand dig with care so not to undermine foundations. Level and compact the surface. If sudden irregularities within + - 5mm of formation level use sharp sand to build up levels.
  - If ground water is evident inform architect/engineer and await suitable drainage if required.
- Membrane: Lay geotextile membrane as E06/11 over the soil overlapping joints by 1 metre. Run the geotextile up the walls far enough to fold back onto the RFG layer.
- Markers: Put in marker posts to indicate final level of loose fill after compaction, as per the specification for the floor.
- RFG: Install RFG to 150mm depth using a rake or shovel, ensuring that an even fill depth is achieved over the whole installation area. For deep fill areas the installation and compaction must take place in layers of maximum depth 300mm.
  - Manufacturer/supplier: as E06/12.
- Compaction: Execute using a plate vibrator (~80 - 120kg, approx frequency 100 Hz). Compaction is complete when the target level is achieved. Further compacting increases the material wear and brings no advantage in load bearing capacity.
  - Fold back excess geotextile around the edges over the compacted RFG.
- Membrane: Lay second layer of geotextile as E06/11; fold back excess geotextile around the edges over the compacted RFG.
- Installation of screed:
  - Perimeter insulation: At abutments install 40mm cork board to depth of screed; also used as a screeding board and allows for expansion.
  - Shuttering: Provide as necessary to achieve floor and remove upon completion/prior to closing in of floor.
  - Screed: Mix 3 parts of the Ty-Mawr Screeding aggregate to 1 part of the recommended hydraulic lime binder (by volume) and polypropylene synthetic fibres (at a ratio of 1kg per tonne dry screed mix), add sufficient water to make a stiff but pourable mix.
  - Lay and tamp to the shuttering level, float the floor to an appropriate/approved finish for floor coverings where specified; if left exposed provide sample of smooth float finish for Architects approval.
  - After 24 hrs brush the surface of the floor using a stiff brush to remove any sinter skin; this is particularly important if laying tiles or slabs onto the screed.
  - Flatness/ Surface regularity: 5mm maximum permissible deviation, sudden irregularities are not permitted.
- Protecting the floor; the following is offered for guidance purposes only, seek specialists recommendations:
  - Ensure the floor does not dry/cure too quickly or too slowly. As with all lime products ensure the room is well ventilated with ambient temperatures between 10 and 18 degrees, while at the same time making sure that no direct heat/ventilation is applied to avoid spot drying.
  - In warm dry weather you will need to wet down the lime screed (do not saturate) to help prevent the product drying too quickly. Wetted hessian can be laid over the surface with plastic sheeting over the top; this will assist with keeping moisture in.
  - Between the months of October and March lime work should be carried out with caution, especially externally. The chemical reactions with hydraulic lime products slow down as the temperature falls, and will stop below 5 degrees. At around 2 degrees the lime will start to become irrevocably damaged.

STORAGE OF HYDRAULIC LIME

Hydraulic Lime shall be kept in its original waterproof wrapper off the ground. Once opened it must be kept in a dry store and used within 48hours. Thereafter it should be discarded.

MIXING/ CASTING/ CURING LIMECRETE
- Use the mix within about two hours of mixing at normal temperatures. Do not use after the initial set has taken place and do not re-temper.
- Keep plant, gauge boxes and banker boards clean at all times.

PLACING AND COMPACTING:
- At time of placing ensure that all surfaces on which lime concrete/lime screed is to be placed are clean, with no debris, tying wire clippings, fastenings or free water.
- Fix day work shuttering boards to required depth.
- Place while sufficiently plastic for full compaction. Do not add water or re-temper mixes. The ambient temperature and temperature of the lime concrete at time of placing must be not less than 10°C. Fully compact to full depth, by tamping, especially into corners of formwork and at joints.

CURING AND PROTECTING:
- Ensure the floor does not dry/cure too quickly or too slowly. If in direct sunlight or high temperatures prevent rapid surface evaporation by covering with damp hessian clear of limecrete surfaces. As with all lime products ensure the room is well ventilated while at the same time making sure that no direct heat/ dehumidifiers are used to avoid spot drying. Ensure slab/screed material is exposed to natural air ventilation.

Note: The following times are provided for guidance purposes only, the contractor must allow sufficient time for curing and sequencing of the works within their programme.

- Prevent access of any kind over the slab for a minimum 48 hours.
- Remove any protections 48 hours after placing and dampen the surface of the slabs. If in direct sunlight, drying winds or high temperatures re-lay Hessian and dampen the slab four times on non-consecutive days during the following 2 weeks.
- All surfaces are to be adequately protected from shock, indentation and physical damage during the initial set.
- Do not undertake any heavy work on the floor until it is thoroughly set and dry as recommended by specialist slab and screed sub-contractor. Allow slab material to cure/set for 2-4 weeks before laying floor finishes.

11 GEOTEXTILE MEMBRANE

- Manufacturer: Fiberweb Geosynthetics Ltd, A PGI Business, Blackwater Trading Estate, The Causeway, Maldon, Essex, CM9 4GG
  Tel: +44(0) 1621 874200 Fax: +44(0) 1621 874299
  email: info@terram.com
  - Product: Terram T1000

12 RECYCLED FOAM GLASS

- Manufacturer: GLAPOR Werk Mitterteich, GmbH, Hüblteichstraße 17, D-95666 Mitterteich.
  Tel. +49 - (0) 96 33 - 40 07 69 - 0
  Fax +49 - (0) 96 33 - 40 07 69 - 19
  info@glapor.de
  - UK supplier: Ty-Mawr
  - Product: Glapor Foam Glass (gravel)

G20 Carpentry/ timber framing/ first fixing

TO BE READ WITH PRELIMINARIES/ GENERAL CONDITIONS

GENERAL

105 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.

PRODUCTS

281 UNGRADED OAK (PLANED) - EXTERNAL Generally

- Species: European oak.
- Treatment: None required.
- Strips/ Boards: Free from decay, through splits and insect attack (including ambrosia beetle damage, unless permitted in the appearance class specified). Planed to a smooth surface free from rippling.
  - Manufacturer/ Supplier: Contractors choice.
  - Appearance class/ Grade: To BS 1186-3, Class 1 (quarter cut).
  - Profile: Refer to drawings / to match existing.
  - Finished face width: Refer to drawings / to match existing.
  - Finished thickness: Refer to drawings / to match existing.
  - Fire retardant impregnation treatment: Not required.
  - Moisture content at time of fixing: 20%or where piecing in/repairing content to match existing; take moisture readings of existing and new timber and keep a record and hand to CA at completion.
- Fixing: Stainless steel screws at centres to suit type, exact setting out to be agreed on site. Contractor to set out for comment unless otherwise stated on drawings. Oak pellet all fixings prior to final finishing to follow grain and to finish flush.
- Other requirements:
  - Finish to match adjacent proposed finish as M60 (unless otherwise stated)
  - Where existing profiles are to be replicated, the contractor is to undertake a paint scrape back to bare timber in a location agreed with the Architect to determine the original profile.

WORKMANSHIP GENERALLY

402 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL SOFTWOOD

- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
- Maximum permitted deviations from finished sizes: As stated in BS EN 1313-1:
  - Clause 6 for sawn sections.
  - Clause NA.2 for further processed sections.

403 CROSS SECTION DIMENSIONS OF NONSTRUCTURAL HARDWOOD

- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
- Maximum permitted deviations from finished sizes: As stated in BS EN 1313-2:
  - Clause 6 for sawn sections.
  - Clause NA.3 for further processed sections.

420 WARPING OF TIMBER

- Bow, spring, twist and cup: Not greater than the limits set down in BS 4978 or BS EN 14081-1 for softwood, or BS 5756 for hardwood.

430 SELECTION AND USE OF TIMBER

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

435 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.
- Scarf joints, finger joints and splice plates: Do not use without approval.

440 PROCESSING TREATED TIMBER

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

450 MOISTURE CONTENT

- Where piecing in/repairing: moisture content at time of fixing to match existing; take moisture readings of existing and new timber and keep a record and hand to CA at completion.
- Other timbers: 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%

451 MOISTURE CONTENT TESTING

- Procedure: When instructed, test timber sections with an approved electrical moisture meter.
- Test sample: Test 5% but not less than 10 lengths of each cross-section in the centre of the length.
- Test results: 90% of values obtained to be within the specified range. Provide records of all tests.

510 PROTECTION

- Generally: Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.
- Timber and components: Store under cover, clear of the ground and with good ventilation. Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack.
- Trussed rafters: Keep vertical during handling and storage.

520 EXPOSED END GRAIN

- Components: Seal exposed end grain of the following before delivery to site:
  External timbers where treatment has been applied.
- Sealer: Clear end grain sealer.

JOINTING TIMBER

570 JOINTING/FIXING GENERALLY

- Generally: Where not specified precisely, select methods of jointing and fixing and types, sizes and spacings of fasteners in compliance with section Z20.

670 ANTI-CORROSION FINISHES FOR FASTENERS

- Galvanizing: To BS 7371-6, with internal threads tapped and lightly oiled following treatment.
- Sherardizing: To BS 7371-8, Class 1.
- Zinc plating: To BS EN ISO 4042 and passivated.

750 MODIFICATIONS/REPAIRS

- Defects due to detailing or fabrication errors: Report without delay.
- Methods of rectification: Obtain approval of proposals before starting modification or remedial work.
- Defective/damaged components: Timber members/ components may be rejected if the nature and/or number of defects would result in an excessive amount of site repair.

780 WALL PLATE REPAIRS

- Position and alignment: To give the correct span and level for trusses, joists, etc.
- Bedding: Fully in fresh mortar.
- Joints: At corners and elsewhere where joints are unavoidable use nailed half lap joints. Do not use short lengths of timber.

784 JOISTS GENERALLY

- Centres: Equal, and not exceeding designed spacing.
- Bowed joists: Installed with positive camber.
- End joists: Positioned approximately 50 mm from masonry walls.

786 JOISTS ON HANGERS

- Hangers: Bedded directly on and hard against supporting construction. Do not use packs or bed on mortar.
- Joists: Cut to leave not more than 6 mm gap between ends of joists and back of hanger. Rebated to lie flush with underside of hangers.
- Fixing to hangers: A nail in every hole.

790 STANDARD JOIST HANGERS TO NEW FLOOR JOISTS.

- Standard: To BS EN 845-1.
- Size and type: Heavy duty to suit joist, design load and crushing strength of supporting construction.
- Material/ finish: Stainless steel.

795 TRIMMING OPENINGS

- Trimmers and trimming joists: When not specified otherwise, not less than 25 mm wider than general joists.

H60 Plain roof tiling

To be read with Preliminaries/ General conditions

4 ROOF TLIES LOCALISED REPAIRS ONLY

- Use reclaimed tiles to closely match existing. Provide Architect with 3no. different samples for approval.

20 REMOVE EXISTING TILING

- General:
  - Carefully remove defective tiles where instructed by the CA with minimum disturbance of adjacent retained tiling.
  - Carefully remove tiles to allow installation of access enhancements and reinstate on completion or reuse elsewhere.
- Undamaged tiles: Set aside for reuse.

35 TILE FIXING

- General: Fix tiling and accessories to make the whole sound and weathertight at earliest opportunity.
- Cut tiles: Cut only where necessary, to give straight, clean edges.
- Ends of courses: Use tile and a half tiles to maintain bond and to ensure that cut tiles are as large as possible.
- Top and bottom courses: Use eaves/ tops tiles to maintain gauge.
- Fixings: Nails/ clips as recommended by tile manufacturer.

K20 Timber board flooring/ sarking/ linings/ casings

To be read with Preliminaries/ General conditions.

110 TIMBER BOARD FLOORING NEW - GENERALLY

- Substrate: Existing/new suspended timber joists at varying centres.
- Boards:
  - Wood species: Douglas fir.
  - Quality: Blue stain, fissures, knot holes and loose or unsound knots not permitted on face side of flooring.
  - Finished face width (exposed width after fixing): nominal 180mm.
  - Finished thickness: 25mm.
  - Edge profile: Tongue and grooved.
  - Moisture content at time of fixing: 12-16%
- Fixing: 50 mm oval brad stainless steel head nails, two per board into each joist.
  - Nail length to be two and a half times thickness of board at point of fixing.

WORKMANSHIP

310 WORKMANSHIP GENERALLY

- Protection during and after installation: Keep boards dry. Protect from dirt, stain and damage until Completion.
- Boards to be used internally: Do not install until building is watertight.
- Methods of fixing, and fasteners: As section Z20.
- Moisture content of timber supports at time of fixing boards: Not more than 18%

330 MOISTURE CONTENT OF TIMBER

- Conditions during and after installation: Control ambient temperature and humidity conditions to maintain moisture content at average level specified in BS EN 942, table B.1 for the relevant service condition until Completion and in accordance with boarding manufacturers recommendations.
- Test for moisture content: When instructed, using an approved moisture meter.

360 ACCESS PANELS

- Size and position: Agree before fixing boards.
- Additional noggings/ dwangs, battens, etc: Provide as necessary.

370 FIXING BOARDS

- Environmental conditions: Do not fix boards when ambient temperature is at or below 0°C, or above 30°C.
- Generally: Fix boards securely to each support to give flat, true surfaces free from undulations, lipping, splits and protruding fasteners.
- Timber movement: Position boards and fixings to prevent cupping, springing, excessive opening of joints and other defects.
- Heading joints: Tightly butted, central over supports and at least two board widths apart on any one support.
- Edges: Plane off proud edges.
- Exposed nail heads: Neatly punch below surface.

L20 Doors/ shutters/ hatches

TO BE READ WITH PRELIMINARIES/ GENERAL CONDITIONS

112 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.
- Certification scheme: Sustainable Forestry Initiative (SFI), with Chain of Custody/ Programme for the Endorsement of Forest Certification (PEFC).
  - Other evidence: CPET Category B evidence: Completed supply chain information.

150 SITE DIMENSIONS

- Procedure: Before starting work on designated items take site dimensions, record on shop drawings and use to ensure accurate fabrication.
- Designated items: New door to north porch.

210 PURPOSE MADE EXTERNAL DOOR TO NORTH PORCH

- Materials: Generally to BS EN 942.
  - Species: European oak.
  - Appearance class: J10.
- Panels: Not applicable.
- Assembly:
  - Adhesive: Thermosetting resin to BS EN 12765, class C4.
  - Joinery workmanship: As section Z10.
  - Accuracy: To BS 4787-1.
- Preservative treatment: Organic solvent as section Z12 and WPA Commodity Specification C5; Desired service life: 30 years.
- Moisture content on delivery: 13-19%
- Finish: Bees wax as section M60.
- Glazing/ Infill details: Not applicable.
- Other requirements:
  - Joinery workmanship generally as section Z10.
  - Refer to detail drawing for sizes, profiles and weather seals.
  - Provide workshop drawings for comment prior to manufacture.

330 PURPOSE MADE EXTERNAL OAK DOOR FRAME

- Materials: Generally to BS EN 942.
  - Species: European oak.
  - Appearance class: J10.
- Profile:
  - New: as detail drawings.
- Perimeter seals: Refer to detail drawing..
- Joinery workmanship: As section Z10.
- Preservative treatment: Organic solvent as section Z12 and WPA Commodity Specification C5; Desired service life: 30 years.
- Moisture content on delivery: 13-19%
- Finish: Bees wax as M60.
- Fixing: Stainless steel screws as section Z20 and oak pelletted.
- Other requirements:
  - Seal at perimeter as M60/541.
  - Joinery workmanship: As section Z10.
  - Provide workshop drawings for comment prior to manufacture.

EXECUTION

710 PROTECTION OF COMPONENTS

- General: Do not deliver to site components that cannot be installed immediately or placed in clean, dry, floored and covered storage.
- Stored components: Stacked on level bearers, separated with spacers to prevent damage by and to projecting ironmongery, beads, etc.

790 FIXING OF WOOD FRAMES

- Spacing of fixings (frames not predrilled): Maximum 150 mm from ends of each jamb and at 600 mm maximum centres.

830 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.

850 LOCATION OF HINGES

- Primary hinges: Positioned with centre lines 250mm from top and bottom of door leaf; exact location to be agreed on site to suit existing surround.
- Third hinge: Where specified, positioned on centre line of door leaf .

L40 General glazing

TO BE READ WITH PRELIMINARIES/ GENERAL CONDITIONS

For Leaded Light Glazing refer to section L41 of the specification.

140 MATERIAL SAMPLES

- Representative samples of designated materials: Submit before cutting panes.
  - Sample size (minimum): 200x200mm.
  - Designated materials: for each specified glazing type.

150 WORKMANSHIP GENERALLY

- Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
- Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.
- Materials:
  - Compatibility: Glass/ plastics, surround materials, sealers, primers and paints/ clear finishes to be used together to be compatible. Avoid contact between glazing panes/ units and alkaline materials such as cement and lime.
  - Protection: Keep materials dry until fixed.

152 PREPARATION

- Surrounds, rebates, grooves and beads: Clean and prepare before installing glazing.

TYPES OF GLAZING

210 REPAIR CARE SYSTEM - PUTTY FRONTED GLAZING (TO NEW CASEMENTS ONLY)

- Pane material: As specified elsewhere .
- Surround: Primed metal frames as specified elsewhere .
- Putty:
  - Manufacturer: Repair Care International, Unit 19, Darwell Park, Mica Close, Amington, Tamworth, Staffordshire, B77 4DR
  Tel: 01827 302 517 salesuk@repair-care.com
  - Product: Dry Seal MP .
- Glass installation:
  - Glass: Located centrally in surround using setting and location blocks, and secured with glazing sprigs/ cleats/ clips at 300 mm centres.
  - Finished thickness of back bedding after inserting glazing (minimum): 1.5 mm.
  - Front putty: Finished to a smooth, neat triangular profile stopping 2 mm short of sight line and left smooth with no brush marks.
- Finishing: Prime and decorate to match adjacent finish.
- Application:
  - By an approved Repair Care trained contractor.
  - Generally as manufacturers recommendations.

215 CLEAR SINGLE GLAZING - CYLINDER GLASS GENERALLY

- Pane material: 4mm clear cylinder glass .
- Size: Refer to drawings for nominal typical sizes.
- Surround: New leaded lights as specified elsewhere .

L41* Leaded Light Glazing (Historic Buildings)

TO BE READ IN CONJUNCTION WITH PRELIMINARIES AND SCHEDULES

100* WORKMANSHIP GENERALLY

- Handmade Glass to be free from cracks.
- All surfaces to receive glazing to be clean, dry and free from grease at time of priming/sealing and glazing. Prime/seal if recommended by glazing compound manufacturer.
- Ensure that glazing materials, surrounds, primers, etc, which are to be used together are compatible.
- Comply with and glass and sealant manufacturers' recommendations for dimensions of edge cover and clearance, positions and materials of distance pieces, setting and location blocks.
- Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.

125 NEW LEADED LIGHT GLAZING (NON STAINED GLASS) - COMPLETE WINDOW/BAY

- General:
  - Leaded light glazing to be carried out by an approved specialist glazier.
  - Glazier to take site dimensions, template as necessary and provide workshop drawings for Architects approval.
- Glass: New 4mm clear cylinder glass.
- Cames: New cames shall be of lead, milled to section matching existing (to be replicated) in size, section and weight.
- Ties: 1/16" copper, soldered at nominal 100mm centres to lead cames and decorate to match saddlebars.
- Saddlebars: New as L41/151 and redecorate as M60/193.
- Refix: Deliver to site, fix and lime point in position.
  - Pointing mortar: Generally as Z21; using crushed stone sand, colour to match adjacent dressed stone.
    - Mix; 1:2:1; lime putty: silver sand: stone dust.
- Completion: Clean to remove mortar, paint splashes and residue from glass.

151 NEW SADDLE BARS

- Preparation:
  - Prior to the removal of the ferramenta (if existing), record and label and sawn off 8mm from the wall line.
  - The tips of the ferramenta are to be carefully drilled out from the wall (removing iron and not stonework), ensuring that the surrounding stonework is not damaged in anyway.
- New saddlebars:
  Solid phosphor bronze with section size to match existing (if known), otherwise 10mm square bar, set a minimum 25mm into sound stonework. Location of saddlebars to be agreed with Architect and re-adjusted on site before fixing of glazing ties and bars.
- Finishing: As M60/193.
- Re-fixing:
  Following completion of decorations, fix into (provisionally new) pockets with a small quantity of resin and repoint in lime mortar in accordance with the NBS specification.
  All pointing of windows and ferramenta in approved lime mortar mix by main contractor unless otherwise agreed with the Architect.

157 NEW LEADED LIGHT CASEMENTS

- Operation: Inward opening bottom hung hopper casement.
- Framing: Mild steel extrusions with minimal sight-lines to closely match existing unfixed casements stored on site.
- System/details:
  - Suggested supplier/manufacturer: Metwin Limited, Unit 14 Stort Mill, River Way, Harlow, Essex. CM20 2SN C/O Mr Andy Wittridge
  - Profiles: As detail drawing; Crittall or former Darlington & Simpson Rolling Mills Ltd profiles F4 outer section (with leg machined off) and F5A inner section.
  - Final details: Submit details for Architects comment.
- Glazing: Leaded and single glazed to match adjacent window by glazing specialist.
- Ironmongery: casement fastener, 2no. stays in a black Japanned finish with white nylon waxed sash cord/rope.
  - Samples: Provide samples of proposed ironmongery for Architects approval..
- Fixing: Fix frames using stainless steel fixings with security heads to exposed screws.
- Decoration: As M60/193 prior to glazing.
- Other requirements:
  - Provide heavy duty black, stainless steel insect mesh to stays so insects do not enter when the window is open.
  - Prior to manufacture provide workshop drawings for Architects approval.

160 LEADED LIGHTS - CONDENSATION TRAYS

- Provide at each window cill bay in code 5 sand cast lead, dressing neatly into junctions with horizontal and vertical surfaces.
  - Provisionally allow to dress 150mm down external cill; exact setting out to be agreed on site with the Architect.
- Provide 2 no. lead wedges to each light below the bottom came edge to hold glazing panel above condensation groove.

170 EXTERNAL WINDOW GUARDS

- Location: refer to drawings/schedule of works; contractor to take site dimensions and template existing openings.
- Type / material: stainless steel wire guards (as approved by English Heritage)
- Size / gauge: 12 gauge with a 75 (vertical) x 12mm (horizontal) pitch with a 6mm frame all round.
- Finish: powder coated black
- Fixing: Black powder coated stainless steel clips fixed into mortar joints with black coated / Japanned stainless steel screws.
- Other requirements:
  - Maintain a continuous 5mm gap between stonework and guards; template as necessary.
  - Protections to be located between mullions / tracery ie. to each bay, not in front of frame.
  - Provide a sample panel for Architect's approval prior to works commencing on site, if approved this may be incorporated as part of the works.

M23* Repairing/Renovating: Plaster/Render (Historic Buildings)

TO BE READ IN CONJUNCTION WITH SCHEDULE OF WORKS AND PRELIMINARIES

MATERIALS

200* LIME PUTTY FOR PLASTERING

- Best mature lime putty ready prepared by slaking high calcium quicklime (CL90) to BS890. Lime putty shall have been sieved through a fine BS sieve to remove all unslaked material and shall be at least three months old at time of delivery. Wet and sloppy batches of lime putty failing to come out cleanly when tipped from the container are to be rejected. Do not use lime putty prepared from magnesian (Dolomitic) lime.
- Maturation period before use: (minimum) 90 days.

1. H J Chard & Sons, Feeder Road, Bristol, BS2 0TJ (Tel: 01272-777681)
2. Hirst Conservation Materials Limited, Laughton, Sleaford, Lincs, NG34 0HE (Tel: 01529-497449)
3. Potmolen Paint, 27 Woodcock Industrial Estate, Warminster, Wilts BA12 9DX (Tel: 01985-213960)

or other source to be agreed prior to submitting the tender.

- Obtain and store in air tight containers until ready for use. Protect from frost.
  Handle containers with care to avoid mixing water seals with lime putty.
  Drain off water seals before using lime putty.

210* SAND FOR PLASTERING

- Clean washed sand complying with BS1199 type A, substantially dried before use.

220* HAIR

- Clean long animal hair, undamaged and free from grease and dirt. Minimum length of hair 75mm. Thoroughly separate hair before use.
- Obtain hair from:
  1. Lawrence Long Ltd, Vaughton Street South, Birmingham B12 0YN (Tel: 0121-6223114, Fax: 0121-6281994)
  2. Hairco Ltd, 23 Dollis Hill Estate, 105 Brook Rd, London, NW2 7BZ (Tel: 020-8830-7344, Fax: 0180-8307355)
  3. IJP Building Products, Hampstead Farm, Binfield Heath, Henley-on-Thames, Oxfordshire, RG9 4LG (Tel: 01189-696949, Fax: 01189-697771)

  or other approved by the Architect.

225* WATER

- Mains supply kept free from impurities. Do not add water to plasters/mortars prepared with lime putty.

230* ADMIXTURES

- DO NOT USE

TYPES OF LATHING

250* RIVEN/SPLIT LATH

- Produced from oak / chestnut / softwood (Pinus Silvestris - European Scots Pine) / or an approved equal, free from knots and defect.
- Obtained from:
  1. Carpenter, Oak and Woodland Limited, Wilts. (Tel: 01225-743089)
  2. I.J.P. Building Products (Tel: 01189-696949, Fax: 01189-697771)
  3. G&N Marsham (Tel: 01798 342427) (For chestnut lath)
  4. Hendry's of Foulsham (Tel: 01362-683249)

  or other source to be agreed prior to submitting the tender.

260* TIMBER FIRRINGS

- Where specified in the Schedule of Works, firrings to correct line and level to be of treated softwood, 25mm wide, tacked in position before fixing timber lathing. Where fixing timber lathing to thin firrings on ceilings increase length of lath fixings by thickness of firring, unless firrings are more than 16mm in thickness and securely fixed to supporting timber with st nails at 300mm c/c.

265* TIMBER LATHING FOR CEILINGS

- Supports (not included in this section): Timber joists/firrings at 330mm nominal centres.
- Lathing: Riven/split laths nominal ¼ (6-7mm) thick, 32mm wide and in length enough to cover 3 or 4 supports. Laths must be straight and evenly spaced 6-10mm apart, fixed at every support with 35mm stainless steel ring shank nails.

TYPES OF COATING

300 LIME AND HAIR PLASTER FOR LATH CEILINGS

- Background: See drawings/Schedule of Works.
- Pricking-up coat: 1:2.5-3 lime : sand with 5-10kg/ M3 hair
  Lime: Best mature lime putty (M23/200).
  Sand: Washed plastering sand graded up to 1mm (M23/210).
  Hair: Clean long coarse ox, horse or goat hair (M23/220).
  Thickness: 8-10mm from face of lath.
- Floating coat:As pricking-up coat.
  Thickness: 8-10mm excluding dubbing-out.
- Setting (final) coat: 1:2.5 lime : Sand (Fine Stuff) with 5-10kg/M3 Hair.
  Lime: Best mature lime putty (M23/200).
  Sand: Washed plastering sand graded up to ½mm (M23/210).
  Hair: Clean long fine white goat hair (M23/220).
  Thickness: 3mm.

310 LIME AND HAIR PLASTER FOR WALLS MASONRY

- Background: See drawings/Schedule of Works.
- Floating coat: 1:3 Lime : Sand with 5-10kg/M3 Hair.
  Lime: Best mature lime putty (M23/200).
  Sand: Washed plastering sand graded up to 1mm (M23/210).
  Hair: Clean long coarse ox, horse or goat hair (M23/220).
  Thickness: 8-10mm excluding dubbing-out.
- Setting (final) coat: 1:2.5 or 1:3 Lime : Sand.
  Lime: Best mature lime putty (M23/200).
  Sand: Washed sand graded up to 1mm (M23/210).
  Hair: Clean long fine white goat hair (M23/220).
  Thickness: 3mm.

WORKMANSHIP GENERALLY

GENERAL REQUIREMENTS FOR PLASTERING

400* PROTECT AREAS

- In addition to general protection adequately protect any areas adjacent to the working area against water during cleaning, plaster droppings during plastering, or, any other damage which might reasonably result from the carrying out of the works described in this section. In particular carefully protect any decorative plaster, polished or varnished joinery, and ledger stones.

405 GENERAL REQUIREMENTS FOR WORKMANSHIP

- ADMIXTURES:
  - Do not use unless specified or approved.
  - Do not use admixtures of any type with proprietary mixes.
  - Do not use calcium chloride or any admixtures containing calcium chloride.
- MIXING:
  - Measure materials accurately by volume using clean gauge boxes. Proportions of specified mortar mixes are for damp sand. Adjust proportions if dry sand is used.
  - Mix materials thoroughly to a uniform consistency and appearance using suitable mechanical or manual means or, for proprietary mixes, as recommended by the manufacturer.
  - Do not overmix gypsum plasters or cement gauged mixes containing air entraining admixtures.
  - Do not use mortar-mill mixers for mixing gypsum plaster.
- CONTAMINATION: Do not allow contamination of one type of material by another, or by any set material.
- INITIAL SET: Do not use mixes after initial set has taken place. Do not retemper or reconstitute mixes, unless permitted by the manufacturer of proprietary mixes.
- SCAFFOLDING: Use independent scaffolding to avoid putlog holes and other breaks in coatings.
- CLEANLINESS: Protect thoroughly all existing work and approaches using suitable boards, sheets, etc. Clean off all droppings on to finished work immediately.
- WORK TO HISTORIC PLASTER/RENDERS GENERALLY:
  - Materials, and methods of working for the repair and replacement of plasterwork (decorative and plain) must match that of the original work as closely as possible, unless specified otherwise.
  - Before commencing work, agree mixes, preparation and application methods with the CA.
  - Use plasterers who are skilled and experienced in the repair and replacement of historic plasterwork including moulded work to cornices, skirtings and the like.

410 DISSIMILAR SOLID BACKGROUNDS FOR PLASTERING/ RENDERING

Where coating is to be continued without break across joints between dissimilar solid backgrounds which are in the same plane and rigidly bonded or tied together, cover joints with a 150 mm wide strip of building paper to BS 1521 and overlay with 300mm wide heavy duty expanded stainless steel lathing. Orientate lathing in accordance with manufacturer's recommendations and fix securely at 300 mm staggered centres along both edges using stainless steel screws and washers.

WORKMANSHIP : PREPARATION

PREPARING BACKGROUNDS

415* WALL PAINTINGS

- Notify the Architect immediately if evidence of existing wall paintings is found whilst carrying out preparation work. No further work should be carried out until it has been confirmed by the Architect..

425* REPAIRING/RENOVATING EXISTING LATH AND PLASTER

- Advise CA if any built-in timbers, structural deficiencies or sources of damp are revealed during the repair/renovation works.

430* TREATMENT OF ORGANIC GROWTHS

- Use only biocides recommended for the purpose and cleared under the Pesticides Safety Precautions Scheme.
- Any partially decayed timbers to be retained should be brush treated with a paste preservative. Remtox K9 (Remtox (Chemicals) Ltd, Tel: 0121-5252299) where rapid and deep penetration is required, or Permatreat Paste (Permaguard Products Ltd, Tel: 01179-381596) where there is a risk that adjacent plaster may be stained. (All pastes may carry dirt through to the surface of plaster if they come into contact with it and must be used with caution).

432 EXISTING PLASTER/RENDER

The extent and location of renewal of existing coatings (plain and decorative work) must be agreed with the CA before the work is started. Remove existing coatings in ways that will reasonably minimise the amount of removal and renewal.

455* MIXING HAIR AND LIME PLASTER

- Proportions of specified mixes are by volume and for damp sand.
  Adjust proportions if dry sand is used. Dry out wet sand before use.
  Use mortar-mill or paddle type mixers for mixing lime plasters. Do not use a barrel mixer.
  Keep plant and banker boards clean at all times.
  Accurately measure constituents using a clean gauge box, ideally an empty lime putty container.
  Mix ingredients thoroughly together and add the hair only at the last minute to avoid breaking or tearing into short pieces.
  Check that sufficient hair has been added to the pricking-up coat for ceilings by taking up an amount on a trowel. The plaster should hang down from the edges without dropping off.

BACKINGS/BEADS/JOINTS/FEATURES

460* BEADS/STOPS

- Do not use metal angle beads. Form external angles with straight, square and plumb screeding rails in floating coat plaster. Ease the arris and finish in setting coat plaster to match existing radius (nominally 1mm). Use timber plaster stops/grounds (not included in this section) at junctions with joinery unless specified otherwise.

500* PREPARE OLD PLASTER

- Carefully cut back loose and friable plaster to sound square edges either perpendicular to or parallel with lathing. Align perpendicular edges just behind supporting timber to expose lath fixings. Slightly under-cut plaster edges to key in new work. Remove dust by dry brushing.

507 ACCEPTANCE OF BACKGROUNDS

Before preparation or application of coatings ensure that:

- Backgrounds are secure, adequately true and level to achieve specified tolerances, free from contamination and loose areas, reasonably dry and in a suitable condition to receive specified coatings.
- All cutting, chasing, fixing of concealed conduits, service outlets and the like, and making good of the background, is completed.

510* PREPARE OLD PLASTER (PRICKING-UP COAT INTACT)

- Carefully cut back loose and friable plaster to sound edge. Slightly under-cut plaster edges to key in new work.

511 PREPARATION GENERALLY

- Remove efflorescence, dust and other loose material by thoroughly dry brushing.
- Remove all traces of paint, grease, dirt and other materials incompatible with coating by scrubbing with water containing detergent and washing off with plenty of clean water. Allow to dry before applying coatings unless specified otherwise.
- Apply clay pack if specified elsewhere.

512 KEYING/BONDING

Prepare backgrounds as specified for the type of coating to be applied. Where not specified , comply with BS 8000:Part 10 Clause2.2.2.2. Methods other than those specified may be submitted for approval.

513 RAKING OUT FOR KEY

Rake out soft joints in old masonry to a depth of not less than 10 mm. Brush out joints to remove dust. DO NOT SCABBLE SURFACE OF BRICKS/STONEWORK.

515* REFIXING EXPOSED OLD LATH

- Where directed by the CA, carefully clean out old plaster from between existing lath which is to be reused.
  Retain sound lath and trim damaged lath to nearest support.
  Refix every second exposed lath along perpendicular edges of adjoining plaster, replacing existing nails with brass screws and washers.
  Treat remaining iron lath nails with rust inhibitor, allow to dry and further treat with stopping.

520* TREAT EXPOSED LATH NAILS

- Treat iron lath nails with rust inhibitor, allow to dry and further treat with stopping.

525* REPAIR LATHING

- Retain sound lath and repair broken lengths with splints cut from new timber lath. Fit splint behind damaged section, overlapping each end by at least 50mm. Bind the two laths together tightly with copper wire

530* REFIX CUT ENDS

- Trim remaining ground to nearest support, preservative treat cut ends and refix by skew nailing.

PLASTERING GENERALLY

544 APPLICATION GENERALLY

- Apply each coating firmly to achieve good adhesion and in one continuous operation between angles and joints.
  All coatings to be not less than the thickness specified, firmly bonded, of even and consistent appearance, free from rippling, hollows, ridges, cracks and crazing.
  Finish surfaces to a true plane, to correct line and level, with all angles and corners to right angle unless specified otherwise, and with walls and reveals plumb and square.
  Prevent excessively rapid or localised drying out.

545 DUBBING OUT

- If necessary to correct background inaccuracies, dub out in thicknesses of not more than 10mm in same mix as first coat. Allow each coat to set but not dry before the next is applied. Cross scratch surface of each dubbing out coat immediately after set.

546* SETTING / DRYING

- Leave each coat for at least 2 days in summer and 7 days in winter to ensure that initial shrinkage is over before applying subsequent coats. Test for adhesion and strength before applying a second coat.

547* CONTROL OF SUCTION

- Lightly dampen dry work with clean water using a small garden spray to control suction and prevent rapid removal of moisture from new plaster

COMPLETION GENERALLY

549* COMPLETION

- On completion remove guide rails and make good wall and ceiling plaster

550* APPLY PRICKING OUT COAT

- Roughly lay on the plaster with the sole object of forming a strong and complete key that will support the finished plasterwork as a whole.
- The plaster should squeeze readily between each lath and bend over under its own weight.
  It should be stiff enough not to fall apart if pressed through too far.
  Apply an even force over the whole extent of the work keeping the pricking-up coat of equal thickness throughout.
- When finished and while still moist, cross scratch or score all over with a sharpened lath or scratcher.
  Scoring should be as deep as possible without baring the lath and with edges left rough to provide a key for the next layers of plaster.
  Allow the pricking-up coat to set such that it does not yield to pressure, before proceeding to apply floating work.
- Do not attempt to accelerate setting by forced drying. Allow up to 4 weeks in cool weather for an adequate set to develop.

555* APPLY FLOATING COAT

- Form screeding rails to the required finished line and thickness with plaster in bands about 150mm wide to the angles and borders of the work and at intervals of 1200mm across the whole breadth of ceilings, or height of walls/partitions.
- Screeding rails must be straight with one another and proved in every way with a straight-edge, with allowance for inaccuracies and deformation in existing work where new work is a continuation of line and plane.
- Lay on the plaster and firmly spread and press in to form a solid bond with the scoring of the first coat.
- Where dubbing out is required score and allow each layer to set before applying the next.
- Use a darby float or long straight-edge traversing the screeding rails to strike off excess plaster and bring the whole to straight and perfectly even surface.
  When nearly set brush over the surface with a stiff bristle brush to roughen it for the finishing coat.

560* APPLY SETTING (FINAL) COAT

- Apply the plaster in 3 operations:
  - lay on the plaster with a trowel
  - press in and smooth over with a trowel
  - compact and avoid over working and shrink-crazing by scouring the surface with a cross-grained wood float lubricated with a little water.

M60 Painting/clear finishing

TO BE READ WITH PRELIMINARIES/GENERAL CONDITIONS

HEALTH & SAFETY NOTE:
Special precautions are to be taken during surface preparation of pre-1960s paint surfaces as they may contain harmful lead. Test all areas of paints for the presence of lead. Complete preparations in accordance with the Health and Safety Executives guidelines.

COATING SYSTEMS

158 CLEANING QUARRY TILED FLOORS

- Manufacturer: Tile Doctor (or similar) Dryades House, Sylvan Close, Oxted, Surrey, RH8 0DX
  - Tel / fax: 0845 652 4652 web: www.tiledoctor.co.uk
- Surface: existing/newly installed quarry floor tiles.
- Application:
  - Remove excess sealer before cleaning using Tile Doctor Remove &Go Sealer remover.
  - Mix use of Pro-Clean with Nanotech Ultra Clean for cleaning solution and apply to floor as recommended by manufacturer.
  - Remove any cleaning solution using a wet-dry vac machine.
  - Extract the soiled cleaning solution using a wet vacuum.
  - Neutralise the floor by rinsing with water again using a wet vacuum to remove as much water was possible.
  - Generally in accordance with manufacturers recommendations.
- Other requirements: prior to proceeding provide sample of finish for CA approval in an agreed area.

160 FINISHING OF FLOOR BOARDING

- Scope: Prepare/clean floor boarding and apply a clear oil to protect the timber.
- Manufacturer: Osmo UK, Unit 24, Anglo Business Park, Smeaton Close, Aylesbury, Buckinghamshire, HP19 8UP
  info@osmouk.com Tel: 01296 481220
  - Product reference: POLYX-OIL ORIGINAL.
- Surfaces: New timber floor boarding.
- Preparation: As clauses 400, 440 and in accordance with manufacturers recommendations.
  - Professional floor sanding using P120-150 grit sandpaper to obtain a smooth finish across the floor surface.
  - Before oiling the surface, remove sanding dust with a vacuum.
  - Wood surface must be clean, dry and frost-free with a maximum moisture content of 18%.
  - Clean microporous stains thoroughly.
  - Wear a dust mask during sanding works.
  - Fill small cracks, larger joints or holes in wood with Osmo Wood Filler or Brummer wood filler.
- Application:
  - Do not thin the product and stir well before use.
  - Apply thinly to the clean and dry wood along the wood grain with natural bristle brush, microfibre roller or floor brush and spread well.
  - Allow to dry for approx. 8-10 hours with good ventilation.
  - After drying, quickly apply a second coat also thinly.
- Coverage: 1 litre covers approx. 24 m² with one coat.
- Initial coats:
- Other requirements:
  - Prepare samples for approval.

163 LINSEED OIL, BEESWAX & TURPENTINE FINISH TO EXTERNAL OAK JOINERY

- Manufacturer/Supplier: Contractors choice to CA's approval.
- Surface(s): Existing stripped/particularly stripped external oak.
- Preparation: Generally as M60/400, M60/440 and wash down the timber and allow to completely dry.
  - Prepare the beeswax and turpentine mix by shredding the beeswax and dissolving it in turpentine, 1lb (1/2kg) wax to 1 pint (1/2 litre) turpentine.
  - Allow to stand overnight and mix thoroughly with 3.8 litres of boiled linseed oil and strain through a piece of hessian.
- Coating: Apply one coat of the mixture by brush and allow it to soak in. Rub with a smooth cloth to remove surplus. Repeat operation a second time.

192 DECORATION OF EXISTING EXTERNAL METALWORK Generally

NOTE: For decoration of new external metalwork refer to M60/193.

- Manufacturer: Andrews Coatings Limited, Carver Buildings, Littles Lane, Wolverhampton, West Midlands, WV1 1JY,
  Tel. 01902 429190/426479, Fax. 01902 426574, sales@andrewscoatings.co.uk
  - Colour: Black (to match existing)
  - Finish: Gloss.
- Surface(s): Refer to drawings/schedules.
- Preparation: As clause M60/400 and 440 and to manufacturer's recommendations. Thoroughly clean with water containing suitable detergent and rinse with clean water. Any areas showing rust or corrosion should be abraded to remove any loose deposits, feathering into sound paintwork.
- Initial coat(s): Patch prime with Rustoleum Recoatable metal primer (769), lapping at least 50mm onto sound existing paintwork which should be feathered to ensure smoothness of finish. Followed by 1 coat Rustoleum Heavy duty orange primer (1060). All applied in strict accordance with the manufacturers instructions.
- Finishing coat(s): Rustoleum Alkythane 7500 applied in strict accordance with the manufacturers instructions.

193 DECORATION OF NEW EXTERNAL METALWORK Generally

- Manufacturer: Andrews Coatings Limited, Carver Buildings, Littles Lane, Wolverhampton, West Midlands, WV1 1JY,
  Tel. 01902 429190/426479, Fax. 01902 426574, sales@andrewscoatings.co.uk
  - Colour: Black (to match existing).
  - Finish: Gloss.
- Surface(s): Refer to drawings/schedules.
- Preparation: As clause M60/400 and to manufacturer's recommendations. Degrease as necessary, wire brush to remove loose rust and any deposits likely to cause poor adhesion of subsequent coatings.
- Initial coat(s): Apply Rustoleum Recoatable metal primer (569), in strict accordance with the manufacturers recommendations. Followed by 1 coat Rustoleum Heavy duty orange primer (1060). All applied in strict accordance with the manufacturers instructions.
- Finishing coat(s): Rustoleum Alkythane 7500 applied in strict accordance with the manufacturers instructions.

198 LIMEWASHING

- Manufacture: To 12.5 kg lime putty from slaked high calcium lime as available from reputable source (eg: Bleaklow Industries Limited, Hassop Avenue, Hassop, Bakewell, Derbyshire, DE4 1NS (Tel: 01246 582284, Fax: 01246 583192) add 11 litres of water (with any pigment) and stir thoroughly. Thin resulting paste with fresh water to consistency of milk. The contractor shall ensure that the limewash does not become contaminated with salt, alum or other additives (other than pigments).
  - Manufacturers: (Refer to M60/210*)
    1. Hirst Conservation Material,
    2. Potmolen Paint
    3. Cy-Pres
    4. Rose of Jericho
    5. Other supplier approved at tender stage.
- Surface(s): new lime render
- Preparation: As clause M60/400; see also Manufacturer's details
  - Brush down with stiff bristle brush (wire brushes not to be used) to remove dust and loose particles.
- Initial coat(s): New untreated surfaces to receive 1 coat thinned 10% with clean water.
- Finishing coat(s): 4 coats using 150mm block fibre (grass) brush, brushing in all directions
- Colour: to be agreed; for each area provide 3no. different colour samples using natural pigments only.
- Application of limewash: painters should wear protective clothing and eye goggles.

GENERALLY

215 HANDLING AND STORAGE

- Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.
- Materials from more than one batch: Store separately. Allocate to distinct parts or areas of the work.

220 COMPATIBILITY

- Coating materials:
  - Recommended by their manufacturers for the particular surface and conditions of exposure.
  - Compatible with each other.
  - Compatible with and not inhibiting performance of preservative/fire retardant pretreatments.

PREPARATION

400 PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
- Substrates: Sufficiently dry in depth to suit coating.
- Efflorescence salts: Remove.
- Dirt, grease and oil: Remove. Give notice if contamination of surfaces/ substrates has occurred.
- Surface irregularities: Remove.
- Joints, cracks, holes and other depressions: Fill flush with surface, to provide smooth finish.
- Dust, particles and residues from preparation: Remove and dispose of safely.
- Water based stoppers and fillers:
  - Apply before priming unless recommended otherwise by manufacturer.
  - If applied after priming: Patch prime.
- Oil based stoppers and fillers: Apply after priming.
- Doors, opening windows and other moving parts:
  - Ease, if necessary, before coating.
  - Prime resulting bare areas.

405 RETAINED DISTEMPERS AND LEAD BASED PAINT

- Remove all loose or flaking paint and ensure underlying layers remain soundly adhered to the substrate.
- Remove build up of paint in detail and internal angles to original profiles.
  - Feather off edges of retained surfaces.
  - For work with lead based paint surfaces, comply with M60/525*

425 IRONMONGERY

- Removal: Before commencing work: Remove ironmongery from surfaces to be coated.
- Hinges: Remove unless otherwise instructed.
- Replacement: Refurbishment as necessary; refit when coating is dry.

430 EXISTING IRONMONGERY

- Refurbishment: Remove old coating marks. Clean and polish.

440 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.
- Suspected existing hazardous materials: Prepare risk assessments and method statements covering 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 to remove dirt, grease and contaminants.
  - Gloss coated surfaces: Provide key.
- Partly removed coatings:
  - Additional preparatory coats: Apply to restore original coating thicknesses.
  - Junctions: Provide flush surface.
- Completely stripped surfaces: Prepare as for uncoated surfaces.
- For preparation of previously decorated/new joinery for painting: Refer to clause M60/460.

541 EXTERNAL POINTING OF EXTERNAL DOOR FRAMES

- Preparation: Remove existing sealant pointing (where existing), thoroughly clean the joint recess, remove all dust and seal joint surfaces.
- Sealant type: Burnt sand mastic.
  - Manufacturer: Masons Mortar, 77 Salamander Street, Leith, Edinburgh, EH6 7JZ, Tel: 0131 555 0503,
    Fax: 0131 553 7158 web: www.masonsmortar.co.uk (or similar to CA approval).
- Colour: Provide material samples for Architects approval.
- Application:
  - 15mm fillet, ensure that mastic does not bridge any drips.
  - Do not overpaint.
  - Apply in accordance with manufacturers recommendations.
  - Provide sample of finished pointing to match existing pointing for Architects approval prior to proceeding with remainder.

622 ORGANIC GROWTHS

- Dead and loose growths and infected coatings: Scrape off and remove from site.
- Treatment biocide: Apply appropriate solution to growth areas and surrounding surfaces.
- Residual effect biocide: Apply appropriate solution to inhibit re-establishment of growths.

APPLICATION

711 COATING GENERALLY

- Application standard: In accordance with BS 6150, clause 9.
- Conditions: Maintain suitable temperature, humidity and air quality during application and drying.
- Surfaces: Clean and dry at time of application.
- Thinning and intermixing of coatings: Not permitted unless recommended by manufacturer.
- Overpainting: Do not paint over intumescent strips or silicone mastics.
- Priming coats:
  - Thickness: To suit surface porosity.
  - Application: As soon as possible on same day as preparation is completed.
- Finish:
  - Even, smooth and of uniform colour.
  - Free from brush marks, sags, runs and other defects.
  - Cut in neatly.
- Doors, opening windows and other moving parts: Ease before coating and between coats.

770 EXTERNAL DOORS

- Bottom edges: Prime and coat before hanging doors.

Z11 Purpose made metalwork

To be read with Preliminaries/ General conditions.

310 MATERIALS GENERALLY

- Grades of metals, section dimensions and properties: To appropriate British Standards. When not specified, select grades and sections appropriate for the purpose.
- Prefinished metal: May be used if methods of fabrication do not damage or alter appearance of finish, and finish is adequately protected.
- Fasteners: To appropriate British Standards and, unless specified otherwise, of same metal as component being fastened, with matching coating or finish.

400 STAINLESS STEEL PRODUCTS

- Chemical composition and physical properties: To BS EN 10088-1.
- Sheet, strip and plate: To BS EN 10088-2.
- Semi-finished products bars, rods and sections: To BS EN 10088-3.
- Wire: To BS EN 1088-3.
- Tubes:
  - Welded circular: To BS EN 10296-2.
  - Seamless circular: To BS EN 10297-2.

FABRICATION

515 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.

520 COLD FORMED WORK

- Profiles: Accurate, with straight arrises.

527 WELDING STAINLESS STEEL COMPONENTS

Note: Site welding to be kept to a minimum and when undertaken on site, the Hot Works Permit Procedures are to be in place.

- Welding procedures:
  - Method and standard:
    Metal arc welding to BS EN 1011-1 and -2 for welding steel.
    TIG welding to BS EN 1011-3 for welding stainless steel.
    TIG or MIG welding to BS EN 1011-4 for welding aluminium alloys.
  - Welding Procedure Specification (WPS): Joint preparation: Joints to be cleaned using appropriate chemical, mechanical or heat treatments. Shot or grit blasting, and chemical pickling are typical methods. Submit proposals prior to commencement of welding.
- Preparation:
  - Joint preparation: Clean thoroughly.
  - Surfaces of materials that will be self-finished and visible in the completed work: protect from weld splatter.
- Jointing:
  - Joints: Fully bond parent and filler metal throughout with no inclusions, holes, porosity or cracks.
  - Dissimilar metals: not permitted.
  - Strength requirements: Welds to achieve design loads.
  - Heat straightening: Not permitted.
  - Complex assemblies: Agree priority for welding members to minimize distortion caused by subsequent welds.
  - Tack welds: Use only for temporary attachment.
  - Jigs: Provide to support and restrain members during welding.
  - Filler plates: Submit proposals.
  - Lap joints: Minimum 5 x metal thickness or 25 mm, whichever is greater.
  - Weld terminations: Clean and sound.

530 STAINLESS STEEL FABRICATION

- Guillotining or punching: Do not use for metal thicknesses greater that 10 mm.
- Thermal cutting:
  - Carbonation in the heat affected zone: Remove, after cutting.
- Bending:
  - Plates or bars: Cold bending radius not less than material thickness.
  - Tubes: Cold bending radius not less than 2 x tube diameter.
- Welding: In addition to general welding requirements:
  - Protect adjacent surfaces from weld spatter.
  - Pickle all welds before post fabrication treatments.
- Protection: Provide protection to fabricated components during transit and on site.

FINISHING

710 FINISHING WELDED AND BRAZED JOINTS VISIBLE IN COMPLETE WORK

- Standard: To BS EN ISO 8501-3.
  - Preparation grade: P1.
- Butt joints: Smooth, and flush with adjacent surfaces.
- Fillet joints: Neat.
- Grinding: Grind smooth where indicated on drawings.

745 PREPARATION FOR APPLICATION OF COATINGS

- General: Complete fabrication, and drill fixing holes before applying coatings.
- Paint, grease, flux, rust, burrs and sharp arrises: Remove.

COMPLETION

920 COMPLETION

- Protection: Remove.
- Cleaning and maintenance: Carry out in accordance with procedures detailed in fabricators' guarantees.

Z21 Mortars

To be read with Preliminaries/ General conditions.

LIME:SAND MORTARS

310 LIME:SAND MORTAR MIXES

- Specification: Proportions and additional requirements for mortar materials are specified elsewhere.

320 SAND FOR LIME:SAND MASONRY MORTARS

- Type: Sharp, well graded.
  - Quality, sampling and testing: To BS EN 13139.
  - Grading/ Source: As specified elsewhere in relevant mortar mix items.

330 READY PREPARED LIME PUTTY

- Type: Slaked directly from CL 90 quicklime to BS 890, using an excess of water.
  - Maturation: In pits/ containers that allow excess water to drain away.
  - Density of matured lime putty: 1.3 - 1.4 kg/litre.
- Maturation period before use (minimum): 30 days.

335 READY PREPARED LIME PUTTY

- Manufacturer: Contractor's choice.
  - Product reference: Submit proposals.
- Maturation period before use (minimum): 30 days.

350 STORAGE OF LIME:SAND MORTAR MATERIALS

- Sands and aggregates: Keep different types/ grades in separate stockpiles on hard, clean, free-draining bases.
- Ready prepared nonhydraulic lime putty: Prevent drying out and protect from frost.
- Nonhydraulic lime:sand mortar: Store on clean bases or in clean containers that allow free drainage. Prevent drying out or wetting and protect from frost.
- Bagged hydrated hydraulic lime: Store off the ground in dry conditions.

360 MAKING LIME:SAND MORTARS GENERALLY

- Batching: By volume. Use clean and accurate gauge boxes or buckets.
- Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
- Contamination: Prevent intermixing with other materials, including cement.

370 SITE PREPARED NONHYDRAULIC LIME:SAND MORTARS

- Mixing: Mix materials thoroughly by compressing, beating and chopping. Do not add water.
  - Equipment: Roller pan mixer or submit proposals.
- Maturation period before use (maximum): Seven days.

380 READY TO USE NONHYDRAULIC LIME:SAND MORTARS

- Manufacturer: Contractor's choice.
  - Product reference: Submit proposals.
- Materials: Select from:
  - Lime putty slaked directly from quicklime to BS EN 459-1 and mixed thoroughly with sand.
  - Quicklime to BS EN 459-1 slaked directly with sand.
- Maturation period before use (maximum): Seven days.

390 KNOCKING UP NONHYDRAULIC LIME:SAND MORTARS

- Knocking up before and during use: Achieve and maintain a workable consistency by compressing, beating and chopping. Do not add water.
  - Equipment: Roller pan mixer or submit proposals.

400 MAKING HYDRAULIC LIME:SAND MORTARS

- Mixing hydrated hydraulic lime:sand: Follow the lime manufacturer's recommendations for each stage of the mix.
  - Water quantity: Only sufficient to produce a workable mix.
- Working time: Within limits recommended by the hydraulic lime manufacturer.

Z31 Powder coatings

To be read with Preliminaries/ General conditions.

120 POWDER COATING MATERIALS

- Manufacturer: Obtain from one only of the following: Submit proposals.
- Selected manufacturer: Submit details before commencement of powder coating including:
  - Name and contact details.
  - Details of accreditation schemes.
  - Technical data of product including current Agrément certificates.

210 WORKING PROCEDURES

- Comply with the follow following standards.
  - Aluminium components: To BS 6496 or BS EN 12206-1.
  - Steel components: To BS EN 13438.
  - Safety standards: To British Coatings Federation 'Code of safe practice - Application of thermosetting powder coatings by electrostatic spraying'.

220 POWDER COATING APPLICATORS

- Applicator requirements:
  - Approved by powder coating manufacturer.
  - Currently certified to BS EN ISO 9001.
  - Comply with quality procedures, guarantee conditions, standards and tests required by powder coating manufacturer.
  - Applicator to use only one plant.
  - Selected applicator: Submit details before commencement of powder coating including:
    Name and contact details.
    Details of accreditation schemes.

225 GUARANTEES

- Powder coating manufacturer and applicator guarantees:
  - Submit sample copies before commencement of powder coating.
  - Submit signed project specific copies on completion of work.

230 CONTROL SAMPLES

- Sequence: Prior to ordering materials for the works, obtain approval of appearance for:
  - Powder coated samples: Of various grades and forms of background metal to be used, showing any colour, texture and gloss variation.
  - Fabrication samples: Showing joint assembly, how powder coating is affected and how any cut metal edges are finished and protected.
- Samples to include the following information:
  - Product reference.
  - Colour.
  - Reference number.
  - Name.
  - Gloss level.

320 PRETREATMENT OF STEEL COMPONENTS

- Condition of components to be pretreated:
  - Free from corrosion and damage.
  - All welding and jointing completed and finish off as specified.
  - Free from impurities including soil, grease, oil.
  - Suitable for and compatible with the pretreatment process.
- Conversion coating requirements: To BS EN 13438.
- Rinsing requirements: Use demineralized water. Drain and dry.

430 EXTENT OF POWDER COATINGS

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

435 APPLICATION OF POWDER COATINGS

- Surfaces to receive powder coatings: Free from dust or powder deposits.
- Powder colours: Obtain from one batch of one manufacturer.
- Commencement of powder coating: To be continuous from pretreatment.
- Jig points: Not visible on coated components.
- Curing: Controlled to attain metal temperatures and hold periods recommended by powder coating manufacturer.
- Stripping and recoating of components: Only acceptable by prior agreement of powder coating manufacturer. Stripping, pretreatment and powder coating are to be in accordance with manufacturer's requirements.
- Overcoating of components: Not acceptable.

460 STEEL FABRICATIONS

- Unit assembly: Wherever practical, before powder coating.
- Exposure of uncoated background metal: Not acceptable.
- Assembly sealants: Compatible with powder coatings. Obtain approval of colour if sealants are visible after fabrication.

470 FIXINGS

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

480 DAMAGED COMPONENTS - REPAIR/ REPLACEMENT

- Before delivery to site: Check all components for damage to powder coatings. Replace damaged components.
- Site damage: Submit proposals for repair or replacement.

510 PROTECTION

- Powder coated surfaces of components: Protect from damage during handling and installation, or by subsequent site operations.
- Protective coverings: Must be:
  - Resistant to weather conditions.
  - Partially removable to suit building in and access to fixing points.
- Protective tapes in contact with powder coatings: Must be:
  - Low tack, self adhesive and light in colour.
  - Applied and removed in accordance with tape and powder coating manufacturers' recommendations. Do not use solvents to remove residues as these are detrimental to the coating.
- Inspection of protection: Carry out monthly. Promptly repair any deterioration or deficiency.

540 COMPLETION

- Protection: Remove.
- Cleaning and maintenance of powder coatings: Carry out in accordance with procedures detailed in powder coating manufacturer and applicator guarantees.
- Within the Health & Safety file provide documentation of...the supplier; trade name; colour; type of powder; method of application; batch and reference number; test certificates; maintenance instructions and guarantees.

SECTION 3
SCHEDULE OF WORKS:

EAST HATLEY ST DENIS CHURCH
INTERNAL & EXTERNAL REPAIRS

PROJECT PREAMBLES:

- Please provide a cost adjacent to each of the scheduled items of work.
- The works are to be priced based on completing the works within a single Building Contract.
- The contractor is to provide method statements and risk assessments to safeguard the public against harm from falling debris, cleaning and other site operations.
- The contractor is to agree restrictions and potential closure of footpaths with the Authorities.
- Hotworks will be subject to the Hot Works Permit Procedures (within the appendices of the specification) along with all associated precautionary requirements.
- Safe access to survey has not been possible due to the nature of the works therefore some of the works are provisional. The scope of works is to be confirmed with the Architect following opening up and erection of the scaffolding.
- The main contractor is to provide temporary protections to prevent damage of the existing building fabric; any damage(s) are to be rectified at the main contractors cost.
- The clients archaeologist is to be in attendance during opening up of the floors and undertake recording.
- ***To assist with review of tender returns, please input sub total costs at the end of each section and complete the collection page(s).***

Schedule of Work	£	p

A.0 Preliminaries

A.1 The main Contractor's parking is restricted to the public highways.

A.2 Provide nominal 2.4m high Heras fencing to enclose the site compound, provided with a secure access door (kept locked shut with override from site at all times) which is to be padlocked each night.

A.3 Allow for a chemical WC; exact location to be agreed.

A.4 Provide 3m high metal sheeting to base of scaffolding to close off the site/working areas and provide with a secure access door (kept shut at all times) which is padlocked each night.

Note: Works not required if implementing the use of tower scaffolding, which will need to be taken down when not in use/overnight, either removed from site or stored within the church.

A.5 Provide security measures at access points into the church to prevent trespassers entering.

A.6 Provide access scaffolding to complete the specified works, in accordance with the requirements set out within the Project Preliminaries, current Health & Safety and British Standards, ensuring the scaffold is earthed for the duration of the contract. The design will remain the responsibility of the contractor.

A.6.1 Indicate here weekly hire cost for scaffold and associated protections £_____p *(do not include within tender sum)*.

NOTE: The use of tower scaffolding will be acceptable subject to the contractors review of ground conditions, production of method statements and risk assessments against the specified scope of works.

A.7 Following erection of the scaffolding and prior to undertaking any works, allow to inspect the building fabric with the Architect to confirm/agree the scope of works.

A.8 Provide temporary artificial lighting to the nave and chancel to allow inspection of the floors/structures.

A.9 Allow to prepare 2no. sample panels of each specified mortar mix at the commencement of the works in a selected area of existing masonry, in accordance with the specification for Architects approval. Sample is to test colour and texture and each sample is to be allowed to dry for at least 5 days prior to a decision being taken. Approved sample may be undertaken prior to commencing on site and/or retained as part of the works.

A.10 Provide roof tile samples to match existing for Architects approval.

A.11 Conservator to provide 3no. shelter coat samples for Architects approval.

A.12 Allow a Provisional Cost of £200.00 to undertake protections in addition to those specified elsewhere, with extent to be agreed on site prior to commencement of the works. 200 00

Schedule of Work	£	p

A.13 Undertake a pre-commencement photographic survey, cross referenced to drawings.

A.14 Contractor to include allowance for 2no. days in connection with unexpected circumstances.

A.15 Indicate Main Contractor's % rate for profit and attendance on sub-contractors _____%.

A.16 Indicate extra over cost for 1m^2 of lime repointing £_____p

A.17 Confirm here details of the contractors preferred conservator for Architects review/approval.

_____

_____

Subtotal for Section A: £_____p

Schedule of Work	£	p

1.0 External Repairs:

1.1 Treat areas of plant growth from base of external walls to the perimeter of the church and allow to die off prior to removal.

1.1.1 Allow to carryout localised 4m^2 lime repointing.

1.2 Allow to inspect rainwater gullies with Architect and clear debris.

1.3 Lime repoint cracking (as a tell-tale) to flint wall on west elevation of north porch; for pricing purposes allow 2m length.

1.4 Treat north slope of chancel with biocide, allow to die off and brush remove moss.

1.4.1 Allow to replace 10no. localised roof tiles to north roof slope of chancel/sanctuary.

1.5 Allow to replace 5no. localised roof tiles to south roof slope of chancel/sanctuary.

1.6 Allow to replace 5no. roof tiles to north porch roof slopes.

1.7 Allow to replace 10no. localised roof tiles to north roof slope of nave.

1.8 Allow to replace 5no. localised roof tiles to south roof slope of nave.

1.9 Provisionally allow to remove 4 rows of tiles from north slope of chancel/sanctuary roof, replace eaves roofing membrane and refix existing tiles.

1.10 Treat all buttress weatherings to north elevation with biocide, allow to die off and brush remove moss.

1.11 Treat all parapet copings to chancel/sanctuary and nave roof slopes with biocide, allow to die off and brush remove moss.

1.12 To the following clunch windows/door surrounds, externally allow for a conservator to undertake a gentle defrass of stonework and the application of shelter coats:

1.12.1 Window W04

1.12.2 Window W05

1.12.3 Window W06

1.12.4 Window W07

1.12.5 Window W08

1.12.6 Window W09

1.12.7 Blind door to north nave

1.12.8 Window W10

1.12.9 Window W11

1.13 To the following clunch windows/door surrounds, externally provisionally allow for a conservator to complete consolidation mortar repairs to stone dressings:

1.13.1 0.50 day to window W04

1.13.2 0.25 day to window W05

1.13.3 0.25 day to window W06

1.13.4 0.25 day to window W07

1.13.5 0.50 day to window W08

1.13.6 0.25 day to window W09

1.13.7 0.50 day to blind door to north nave

1.13.8 0.25 day to window W10

1.13.9 0.50 day to window W11

1.14 To the following clunch windows/door surrounds, externally allow to carryout localised lime putty repointing with the following provisional allowances:

1.14.1 25% to window W04

1.14.2 25% to window W05

1.14.3 25% to window W06

1.14.4 25% to window W07

1.14.5 25% to window W08

1.14.6 25% to window W09

1.14.7 50% to blind door to north nave

1.14.8 25% to window W10

1.14.9 25% to window W11

1.15 To buttress on west elevation, lime repoint cracking through stone weathering.

1.16 To stonework on nave south west buttress, lime repoint open joints; for pricing purposes allow 2m length.

1.17 To left hand side of window W04, lime repoint open joints to stonework; for pricing purposes allow 2.5m length.

1.18 To the south porch floor allow to…

1.18.1 Record and take up existing quarry tiles, clean and set aside for reuse.

1.18.2 Provisionally allow to break up existing slab and provide 150mm thick limecrete slab.

1.18.3 Allow to make up shortfall in quarry tiles to match existing; for pricing purposes allow to replace 50% of floor area.

1.18.4 Lay quarry tile floor to existing arrangements.

1.19 To the south porch walls provisionally allow to…

1.19.1 Remove all existing plaster from walls.

1.19.2 Allow a Provisional Sum of £200.00 to dub out/piece in stone to prepare the background.

1.19.3 Provide new lime plaster.

1.19.4 On completion allow to apply 5no. coats of limewash to approved sample.

1.20 To the south porch ceiling provisionally allow to…

1.20.1 Record and take down existing lath and plaster ceiling.

1.20.2 Provide 100% new laths and and lime plaster.

1.20.3 On completion allow to apply 5no. coats of limewash to approved sample.

1.21 To high level cartouche within the south porch, allow 1 day for conservator to complete water and brush cleaning and consolidation/mortar repairs.

1.22 At high level to south, at junction between chancel and nave, provide tower scaffold access for Architect to inspect.

1.22.1 Clean to remove bird droppings and remove debris from eaves.

1.23 To door DG03 surround, bed and lime point loose stone to east side of door surround and provide lime mortar weathering to encourage surface water runoff.

Subtotal for Section 1: £_____p

2.0 Windows & Doors

NOTE: Window replacement only to nave, chancel to follow by client outside of the contract.

2.1 Remove existing guarding/temporary protections/infills from external nave windows along with all associated fixings and brackets, minimising damage to the stonework.

2.1.1 Make good at redundant fixings with lime mortar.

2.2 Prepare chase (on line of former glazing) to stonework to receive new glazing.

2.2.1 Include a provisional sum of £200.00 for lime mortar/masonry repairs to each window surround.

2.3 Provide clear diamond leaded glazing to nave windows in a Butterfield design within existing stone window surrounds, to include opening casements.

2.3.1 Provide workshop drawings for Architects approval.

2.3.2 Provide lead condensate trays to all windows.

2.3.3 Internally and externally lime repoint perimeter of windows.

2.4 To all nave windows provide black powder coated external metal guards between the stonework surrounds, with black Japanned fixings into mortar joints where possible.

2.5 Overhaul and adjust hanging of external pair of doors D01 to south porch.

2.5.1 Prepare and clear finish external doors with bees wax.

2.5.2 Prepare and decorate ironmongery.

2.6 Include a provisional sum of £500.00 for the contractors prime cost to remove the existing lockcase and keep from the south porch doors, make good at abutments and to supply and install a reclaimed lockcase to closely match the existing; *the existing key cannot be located.*

2.7 Removal modern lockcase arrangement from south porch gates D03 and make good.

2.8 Prepare and decorate south porch metal gates D03.

2.9 Provide new external oak door D02 along with associated frames to north porch entrance as detailed drawing.

2.9.1 Prepare and clear finish external doors with bees wax.

2.9.2 Point perimeter of frame with burnt sand mastic.

2.9.3 Include supply and installation of ironmongery.

2.10 Allow to provide new timber support and refixing of temporary protections to window W06 to basement steps.

Subtotal for Section 2: £_____p

3.0 Internal Floor Structure and Finishes to Nave

NOTE: Existing floor joists to be retained and where decayed are to be paired up with new joists.

3.1 Allow to remove temporary floor protections along with all associated fixings, record and take up existing floor boards.

3.2 Remove debris from floor void ensuring ventilators are clear.

3.3 In consultation with the Architect allow to schedule timber repairs and treatment and await instruction.

3.4 Provisionally allow for localised targeted timber treatment to floor structure, allowing a prime cost of £200.00 for timber treatment materials. *See below for provisional labour allowances.*

3.5 Allow 1 person-days labour to apply targeted timber treatment in accordance with manufacturer's guidelines and specification. Allow for COSH and protections to carry out the works.

3.6 Provisionally allow to splice repair 10no. floor joists along its mid length. For pricing purposes allow for an overall length of 1.5m with a section size to match existing.

3.7 Provisionally allow to refix 25no. existing floor joists into wall plate with M10 coach screws, extending minimum 75mm into substrate.

3.8 Provisionally allow to provide 50no. new C24 150x50mm joists to pair up existing decayed floor joists, fixing to substrate with heavy duty 50x50mm stainless steel angles and fixings.

3.9 Provide new Douglas fir tongue and grooved floor boarding, fixing with stainless steel nails to suspended timber floors.

3.10 Provide 3no. nominal 450x900mm floor access hatches parallel with existing joists (one within each zone of floor boarding), to allow maintenance/inspection of floor void. Provide joists to openings with finish to match floor, with exact location to be agreed on site to avoid disturbance existing historic timbers.

3.11 Clear finish nave floor boarding.

3.12 To area of floor tiling to nave central aisle, allow to relay site reclaimed quarry tiles on existing substrate.

3.12.1 Upon completion deep clean floor tiling to include ledger stones.

3.13 To area of floor tiling from south door D01 to nave central aisle allow to…

3.13.1 Record and take up existing quarry tiles, clean and set aside for reuse.

3.13.2 Provisionally allow to break up existing slab and provide 150mm thick limecrete slab to include associated formwork.

3.13.3 Allow to make up shortfall in quarry tiles to match existing; for pricing purposes allow to replace 50% of floor area.

3.13.4 Lay quarry tile floor to existing arrangements.

3.13.5 Upon completion deep clean floor tiling.

3.14 To area of floor tiling surrounding the font, allow to relay site reclaimed quarry tiles on existing substrate.

3.14.1 Upon completion deep clean floor tiling to include ledger stones.

3.15 To area of floor tiling to stove allow to relay site reclaimed quarry tiles on existing substrate.

3.15.1 Upon completion deep clean floor tiling to include ledger stones.

3.16 Allow 1 day for conservator to complete cleaning and conservation repairs to floor ledger stones.

3.17 Allow a Provisional Cost of £200.00 to reinstate cast iron grill to central heating trench.

Subtotal for Section 3: £_____p

4.0 Internal Floor Structure and Finishes to Chancel

4.1 Allow to remove temporary floor protections along with all associated fixings and remove reclaimed materials (including stone) from voids and set aside elsewhere within the church; locations to be agreed on site with Architect/Client.

4.2 Clean out floor voids ensuring ventilators are clear.

4.3 To both north and south choir stalls, provide new 150x50mm C24 wall plates to support new floor joists, bolted to masonry at 400mm staggered centres with Hilti M12 stainless steel rods, fixing into pre-drilled holes with HIT-HY50 injection mortar.

4.4 Provide new 150x50mm C24 joists at 400mm centres, supported on proprietary heavy duty stainless steel joist hangers fixed with stainless steel fixings into wall plate.

4.4 Provide new Douglas fir tongue and grooved floor boarding, fixing with stainless steel nails to suspended timber floors.

4.5 Provide 2no. nominal 450x600mm floor access hatches parallel with new joists (one within each zone of floor boarding), to allow maintenance/inspection of floor void. Provide joists to openings with finish to match floor, with exact location to be agreed on site.

4.6 Clear finish chancel floor boarding.

4.7 To area of floor tiling to width of chancel arch, allow to relay site reclaimed quarry tiles on existing substrate.

4.7.1 Upon completion deep clean floor tiling up to altar rail.

Subtotal for Section 4: £_____p

5.0 Completion

5.1 Upon completion leave the site clean and tidy ensuring all debris is removed from site.

5.2 Make good ground within site and compound to match existing adjacent finishes.

Subtotal for Section 5: £_____p

6.0 Risks to Health and Safety (Generally)

General Risks to Health and Safety:

The nature and condition of the building site cannot be fully ascertained before it is opened up. The contractor must ascertain for himself further information he may require to enable the safety of all persons and the works.

Commonplace hazards which should be controlled by good management and good site practices are not listed within these documents.

Subtotal for Section 6: £_____p

Schedule of Work	£	p

COLLECTION Page No.

£ p

SECTION NO. 4:

NOTE: Ensure that all Dayworks and Contingency costs contained within sections A54 and A55 of the specification (Section 1) are included within your tender and include reference so that it can be identified where they have been included.

1. Section 1 – Preliminaries, Dayworks, Contingencies

2. Section No. 3 - Schedule of Works

3. Profit and Attendance

4. Any Works or Items not included within items above

Total of tender (exclusive of VAT) =

APPENDIX A

HOT WORKS PERMIT PROCEDURES

HOT WORK PERMIT

ISSUING COMPANY / CONTRACTOR _____ PERMIT NO. _____

[A] PROPOSAL *(To be completed by the person responsible for carrying out the work)*

BUILDING _____

EXACT LOCATION OF PROPOSED WORK _____

NATURE OF HOT WORK TO BE UNDERTAKEN _____

The above location has been examined and the precautions listed on the reverse side of this form have been complied with as indicated.

SIGNED _____ NAME (block capitals) _____

CONTRACTOR (where applicable) _____

[B] AGREEMENT *(To be completed by the Company Fire Officer or other nominated person/contractor)*

This Hot Work Permit is issued subject to the following conditions:

TIME OF ISSUE OF PERMIT: _____ TIME OF EXPIRY OF PERMIT* _____

A FINAL FIRE CHECK OF THE WORK AREA SHALL BE MADE, NOT BEFORE _____

ADDITIONAL CONDITIONS REQUIRED _____

_____

SIGNED _____ NAME (block capitals) _____

DATE _____ POSITION _____

[C] FIRE WATCH *(To be completed by member if staff or contractor responsible for the work before returning this permit to the issuer)*

TIME INSPECTION COMPLETED _____ *(This must be at least 1 hour after work was completed)*

SIGNED _____ NAME (block capitals) _____

DATE _____ POSITION _____

CONTRACTOR (where applicable) _____

* It is not desirable to issue permits for protracted periods. Fresh permits should be issued, for example, where work extends from morning to afternoon.

NB: Where work is being carried out by a contractor, the issuer of the permit should ensure that the contractor has complied with the requirements prior to work being carried out, and should be satisfied that the area is free of fire when work is completed.

PROCEDURE FOR HOT WORK PERMITS

The person nominated to authorise hot work, normally the fire or safety officer, must have experience or training in the problems associated with hot work and be of suitable status to ensure compliance with the procedures.

Prior to the commencement of work a hot work permit should be obtained from the authorised person. This should be done on every occasion that hot work of any type is undertaken within or upon the fabric of established buildings or any structures or plant in the open. This procedure should also apply to construction sites once fitting out has commenced, and to all buildings which are being refurbished.

A hot work permit should not be issued without considering the significance of any other permits to work in the vicinity, or adjacent manufacturing processes which may involve the use of flammable liquids or gases.

A hot work permit should be issued for a specific task that is to be undertaken in a clearly identified area. Hot work permits should not be issued for protracted periods. Separate hot work permits should be issued for work which extends from morning to afternoon periods.

Before completing the first part of the hot work permit, the person responsible for carrying out the work should complete the check-list shown below to indicate that fire protection methods are adequate, suitable precautions have been taken and the equipment to be used is safe.

If the person authorised to issue the hot work permit is not satisfied with the arrangements, further measures may be requested, an any additional conditions should be entered in the space provided. The earliest time at which a final fire-check should be made will also be specified. This will normally be at least one hour after the time of expiry of the hot work permit, when work must be complete. If trained personnel will not be available to make this Check (for example in the case of a permit issued late in the day) work must not be commenced.

The hot work permit should be completed in duplicate, with the top copy being handed to the person responsible for carrying out the work. The second copy should be retained by the issuer who may wish to inspect the site of the work or instigate spot checks to ensure that conditions have been met and that work is complete before the hot work permit expires.

The completed form should be returned to the issuer and retained for future reference.

HOT WORK PERMIT CHECK-LIST

CAN THIS JOB BE AVOIDED? IS THERE A SAFER WAY?

FIRE PROTECTION

(1)	Where sprinklers are installed they are operative.	☐
(2)	A trained person not directly involved with the work will provide a continuous fire watch during the period of hot work and for at least one hour after it ceases, in the work area and those adjoining areas to which sparks and heat may spread.	☐
(3)	At least two suitable extinguishers or a hose reel are immediately available. Both the personnel undertaking the work and providing the fire watch are trained in their use.	☐
(4)	Personnel involved with the work and providing the fire watch are familiar with the means of escape and method of raising the alarm/calling the fire brigade.	☐

PRECAUTIONS WITHIN 10 METRES (MINIMUM) OF THE WORK

(5)	Combustible materials have been cleared from the area. Where materials cannot be removed, protection has been provided by non-combustible or purpose made blankets, drapes or screens.	☐
(6)	Flammable liquids have been removed from the area.	☐
(7)	Floors have been swept clean.	☐
(8)	Combustible floors have been covered with overlapping sheets of non-combustible material or wetted and liberally covered with sand. All openings and gaps (combustible floors or otherwise) are adequately covered.	☐
(9)	Protection (non-combustible or purpose made blankets, drapes or screens) has been provided for: • Walls, partitions, and ceilings of combustible construction or surface finish • All holes and other openings in walls, partitions and ceilings through which sparks could pass	☐
(10)	Combustible materials have been moved away from the far side of walls or partitions where heat could be conducted, especially where these incorporate metal.	☐
(11)	Enclosed equipment (tanks, containers, dust collectors etc) has been emptied and tested, or is known to be free of flammable concentrations of vapour or dust.	☐

EQUIPMENT

(12)	Equipment for hot work has been checked and found in good repair	☐
(13)	Gas cylinders have been properly secured.	☐

(The person carrying out this check should tick the appropriate boxes)

APPENDIX B

FORM OF TENDER

FORM OF TENDER

Job Name: 237162 East Hatley St Denis Church (Phase 1) Internal & External Repairs

This tender is to be delivered to the Cambridge office of Purcell within a sealed envelope and must arrive by noon on *TBC*.

Facsimile copies will not be accepted.

I/We having read the Conditions Of Contract, Specification and drawings delivered to us and having visited the site and inspected the proposed works, do hereby offer to execute the whole of the works in accordance with those Documents including Provisional Sums and Contingencies for the sum of:

_____

_____ (£ p) exclusive of VAT

I/We undertake, in the event of your acceptance, to execute with your client a form of contract embodying all the conditions and terms contained in the offer to the reasonable satisfaction of the Architects, Purcell, 1 Quayside, Bridge Street, Cambridge CB5 8AB.

I/We agree that should obvious errors in pricing or arithmetical errors be discovered in the specification submitted by me/us before acceptance of this offer, that these errors will be dealt with in accordance with the Alternative 1, contained in Section 6 of the NJCC 'Code of Procedure for Single Stage Selective Tendering' 1996.

I/We understand that I am/we are tendering at my/our expense and that neither the lowest, nor any other tender will necessarily be accepted.

Alternative contract period if requested in the Specification: _____

Alternative start date if requested in the Specification: _____

Date this _____ day of _____ 20_____

Signed: _____ Role in Company: _____

For an on behalf of: _____

Address: _____

_____

_____

Telephone No: _____ Fax No: _____

E-mail Address: _____

FORM OF TENDER

Guidance Notes

Architects

The following items will be completed by the Architect prior to issuing the form to the contractor tendering for the project:

- Job name
- Job number
- Date of return
- Office address

Contractor

The following items will be completed by the Contractor prior to returning the form to the offices of Purcell:

- Tender sum in words and figures
- Alternative contract period if requested in the Specification
- Alternative start date if requested in the Specification
- Date
- Signed
- Role in Company
- Contractor
- Address
- Telephone/Fax/E-mail information