Donald Insall Associates
Chartered Architects and Historic Building Consultants

PHASE III PROJECT SPECIFICATION

Golden Chapel, South Porch, Entrance, North Transept & Monuments

Preliminaries, Materials & Workmanship and Schedule of Works

St Bartholomew's Church, Tong

February 2020

Date: February 2020

Prepared by: Sarah Butler

Checked by: Sarah Butler

Ref: TONG.13 & TONG.14

Revisions:

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Contents

Part I Preliminaries

Contents

A10 PROJECT PARTICULARS

110 THE PROJECT (ST BARTHOLOMEW'S CHURCH, TONG - PHASE III WORKS)

- Name: Golden Chapel, South Porch, Entrance, North Transept & Monuments
- Nature:

  i. South Porch & Golden Chapel – high level masonry and window repairs.

  ii. South Entrance Re-ordering – display and storage area and glazed entrance.

  iii. North Transept – storage wall and window cleaning.

  iv. Monuments – works variously include conserving, cleaning, dismantling and relocation, displaying.

  Note: to facilitate management of funding streams against different elements of work there are two project codes to the documents and the schedule to be priced is arranged to facilitate allocation of costs against the respective sub-projects.

  - TONG.13 – Covers works packages noted under items i and ii.
  - TONG.14 – Covers works packages noted under items iii and iv.

- Location: St Bartholomew Church, Tong.
- Length of contract: Contractor's programme to provide best value programme - time/cost.

120 EMPLOYER (CLIENT)

- Name: St Bartholomew PCC.
- Address: Manor Cottage, 21, High Street, Albrighton. WV7 3JB.
- Contact: Rev. Pippa Thorneycroft Minister-in-Charge of St. Bartholomew's, Tong.
- Telephone: 01902 375523 mob: 07970 869011.
- E-mail: pippa.thorneycroft@icloud.com.

130 PRINCIPAL CONTRACTOR (CDM)

- Name: The Contractor.
- Address: TBC.
- Contact: TBC.
- Telephone: TBC.
- E-mail: TBC.

140 ARCHITECT/ CONTRACT ADMINISTRATOR

- Name: Donald Insall Associates.
- Address: Chester Office, Bridgegate House, 5 Bridge Place, Chester, CH1 1SA.
- Contact: Sarah Butler.
- Telephone: 01244 350063.
- E-mail: sarah.butler@insall-architects.co.uk.

150 PRINCIPAL DESIGNER

- Name: Donald Insall Associates.
- Address: Chester Office, Bridgegate House, 5 Bridge Place, Chester, CH1 1SA.
- Contact: Sarah Butler.
- Telephone: 01244 350063.
- E-mail: sarah.butler@insall-architects.co.uk.

180 ARCHAEOLOGIST

- Name: Castlering Archaeology (Shrewsbury)
- Address: 33 Stallion Lane, Pontesbury, Nr Shrewsbury, Shropshire, SY5 0PN.
- Contact: Pat Frost
- Telephone: 01743 792297.

A11 TENDER AND CONTRACT DOCUMENTS

110 TENDER DRAWINGS

- The tender drawings are: As listed on the Document Issue Sheets.

120 CONTRACT DRAWINGS

- The Contract Drawings: The same as the tender drawings.

160 PRECONSTRUCTION INFORMATION

- Format: The Preconstruction information is described in these preliminaries in Section A34. It refers to information given elsewhere in the preliminaries and other tender documents.

A12 THE SITE/ EXISTING BUILDINGS

110 THE SITE

- Description: Grade I listed church set within a church yard with tombs, headstones and graves. Boundary walls are typically stone, with the north boundary forming a retaining wall to the adjacent field College Field - refer to dwg TONG.13-4001 for site set up and site constraints.

120 EXISTING BUILDINGS ON/ ADJACENT TO THE SITE

- Description: The Church owns the adjacent field to the north - College Field.

140 EXISTING UTILITIES AND SERVICES

- Drawings: Information shown is indicative only, the contractor is to familiarise themselves with the site and church to understand the constraints of existing services on the works. Location of existing services is assumed and as shown on drawings.
- Other information: Contractor to liaise and co-ordinate with the following parties, all of whom are currently appointed by the PCC and familiar with the relevant aspect for which they are engaged (contact details can be found in the Specification Appendix):
    - Church Electrician – has been involved with the church for a number of years and has recently completed a NICEIC Periodic Inspection for the Church electrics.
    - Church Security Firm – can assist with all camera, lighting and alarm connections required to the scaffolding to meet Ecclesiastical Insurance requirements. Please note the PCC have lighting and camera fittings which can be used for this purpose.

200 ACCESS TO THE SITE

- Description: Refer to dwg TONG.13-4001. Pedestrian access is via a timber gate with decorative iron arch and lamp over along a tarmac path.
- Limitations: There is no vehicular access to the site. The north adjacent College Field has an access point and limited vehicular access may be acceptable on to this field.

210 PARKING

- Restrictions on parking of the Contractor's and employees' vehicles: limited parking on the village road and clear of all junctions/access ways.
  Parking may be possible on College Field with agreement from the client.

220 USE OF THE SITE

- General: Do not use the site for any purpose other than carrying out the Works.
- Limitations:
    - Site compound set up to be limited to College Field – see dwg TONG.13-4001.

230 SURROUNDING LAND/ BUILDING USES

- General: Adjacent or nearby uses or activities are as follows: Tong is a small village with residents and farms nearby. Horse riding along the village road does occur.

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:

- Wasps/bees nest.
- Falling masonry.

- 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

- Assessment: Ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.
- Arrangements for visit: Contact the Architect.

A13 DESCRIPTION OF THE WORK

120 THE WORKS (GOLDEN CHAPEL, SOUTH PORCH, ENTRANCE, NORTH TRANSEPT & MONUMENTS)

- Description:

i. South Porch & Golden Chapel: Works comprise essential high level masonry repairs to the crenelated parapets with pinnacles, including two pinnacle repairs to Nave roof. Repairs to leaded light windows. Sundry internal repairs to localised flooring and steps.

ii. South Entrance Re-ordering: Works comprise rearrangement, removal and adaptation of pews, removal of pew platforms local to entrance and introducing solid level flooring, execution of high quality bespoke joinery for display and storage cabinets. Installation of new frameless glass entrance doors. Services – electrics/IT/Security in association with works

iii. North Transept – Works comprise the execution of high quality bespoke joinery providing a panelled screen storage wall adjacent to the organ. Liaising with Organ Specialist and co-ordinating works to assist in the locating of the organ pump. Conservation clean of two leaded light windows.

iv. Monuments – works variously include conserving, cleaning, dismantling and relocation, making good areas, displaying.

A20 JCT INTERMEDIATE BUILDING CONTRACT WITH CONTRACTOR'S DESIGN (ICD)

INTERMEDIATE BUILDING CONTRACT WITH CONTRACTOR'S DESIGN (ICD)

- The Contract: JCT Intermediate Building Contract with Contractor's Design 2016 Edition.
- Requirement: Allow for the obligations, liabilities and services described.

THE RECITALS

First - THE WORKS

- Comprise: Tower high level masonry repairs; selected window repairs; and vestry re-ordering
- Location: See clause A12/110.

Second - CONTRACTOR'S DESIGNED PORTION

- The Works - in accordance with specification, schedule and drawings - include the design and construction of:
  - All specialist South Aisle display and storage joinery based on the Insall drawings.
  - All specialist North Transept screen storage wall joinery based on the Insall drawings.
  - All services new and alterations to proposed areas of work.
  - Monuments - conservation reporting/recommendations, together with execution of works.
  - Full access and working scaffold with hoists to execute the works.

Third - CONTRACT DRAWINGS

- The Contract Drawings: As listed in clause A11/120.

Fourth - OTHER DOCUMENTS SUPPLIED BY THE EMPLOYER

- Comprise: The Specification which includes the Schedule of Works.
- Contacts for Co-ordination of Works: Liaise and co-ordinate with the following parties, all of whom are currently appointed by the PCC and familiar with the relevant aspect for which they are engaged (contact details can be found in the Specification Appendix):
    - **Church Electrician** – has been involved with the church for a number of years and has recently completed a NICEIC Periodic Inspection for the Church electrics.
    - **Church Security Firm** – can assist with all camera, lighting and alarm connections required to the scaffolding to meet Ecclesiastical Insurance requirements. Please note the PCC have lighting and camera fittings which can be used for this purpose.
    - **Organ Specialist** – a full conservation programme of repairs has just been completed to the organ located adjacent the North Transept. The final element which is to be located is the organ pump behind the proposed new screen storage wall.

Fifth - PRICING BY THE CONTRACTOR

- Option A will apply: Option B will be deleted.
- Priced document: Within Option A the following words will be deleted: Bills of Quantities.
- Priced Activity Schedule: The words 'and has provided the Employer with a priced schedule of activities annexed to this Contract (the Activity Schedule)' will be deleted.

Ninth - INFORMATION RELEASE SCHEDULE

- The Ninth Recital will be deleted.

Eleventh - DIVISION OF THE WORKS INTO SECTIONS

- The Eleventh Recital will be deleted.

THE ARTICLES

3 - ARCHITECT/ CONTRACT ADMINISTRATOR

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

5 - PRINCIPAL DESIGNER

- Principal Designer: See clause A10/150.

6 - PRINCIPAL CONTRACTOR

- Principal Contractor: See clause A10/130.

CONTRACT PARTICULARS

Fourth Recital - EMPLOYER'S REQUIREMENTS

- Comprise: Specification, Schedule of Works and Drawings.

Sixth Recital - CONTRACTOR'S PROPOSALS/ CDP ANALYSIS

- All South Aisle display and storage joinery - refer to Specification and Drawings.
- All North Transept screen storage wall joinery - refer to Specification and Drawings.
- All services new and alterations to proposed areas of work - refer to Specification and Drawings.
- Monuments - conservation reporting/recommendations, together with execution of works - refer to Specification and Drawings.
- Full access and working scaffold with hoists to execute the works - refer to Specification and Drawings.

Eighth Recital and Clause 4.6 - CONSTRUCTION INDUSTRY SCHEME

- Employer at Base Date is not a 'contractor' for the purposes of the CIS.

Tenth Recital - CDM REGULATIONS

- The project is not notifiable.

Twelfth Recital - FRAMEWORK AGREEMENT
- Framework agreement: Does not apply.
- Details:
  - Date: NA.
  - Title: NA.
  - Parties: NA.

Thirteenth Recital and Schedule 5 - SUPPLEMENTAL PROVISIONS
- Collaborative working: Supplemental Provision 1 applies.
- Health and safety: Supplemental Provision 2 applies.
- Cost savings and value improvements: Supplemental Provision 3 applies.
- Sustainable development and environmental considerations: Supplemental Provision 4 applies.
- Performance indicators and monitoring: Supplemental Provision 5 applies.
- Notification and negotiation of disputes: Supplemental Provision 6 applies.
- Where Supplemental Provision 6 applies, the respective nominees of the parties are:
  - Employer's nominee:TBC.
  - Contractor's nominee: TBC. Or such replacement as each party may notify to the other from time to time.

Article 8 - ARBITRATION
- Article 8 and clauses 9.3 to 9.8 (arbitration) apply.

Clause 1.1 - BASE DATE
- Base Date: March 2020.

Clause 1.1 - DATE FOR COMPLETION OF THE WORKS
- Date for completion of the Works (where completion by sections does not apply): To contractor's best value programme.

Clause 1.7 - ADDRESSES FOR SERVICE OF NOTICES
- Employer:
  - Address: See clause A10/120.
  - Fax number: NA.
- Contractor:
  - Address: TBC.
    Fax Number: NA

Clause 2.4 - DATE OF POSSESSION OF THE SITE
- Date of Possession of the site: To Contractor's best value programme.

Clause 2.5 - DEFERMENT OF POSSESSION OF THE SITE
- Clause 2.5 does not apply.

Clause 2.23.2 - LIQUIDATED DAMAGES
- Damages: At the rate of £50 per calendar day.

Clause 2.30 - RECTIFICATION PERIOD
- Period: Twelve months from the date of practical completion of the Works.

Clause 2.34.3 - CONTRACTOR'S DESIGNED PORTION
- Limit of Contractor's liability for loss of use: £25,000.

Clause 4.7 - ADVANCE PAYMENT AND ADVANCE PAYMENT BOND
- Advance payment: Clause 4.7 does not apply.

Clause 4.8.1 - INTERIM PAYMENTS - INTERIM VALUATION DATES

- The first Interim Valuation Date is: to be agreed, and thereafter the same date in each month or the nearest Business Day in that month.

Clause 4.9.1 - INTERIM PAYMENTS - PERCENTAGE OF VALUE

- Not achieved practical completion: Where the Works, or those works in a section, have not achieved practical completion, the percentage of total value in respect of the works that have not achieved practical completion is 95%.
- Completed works: Where the Works, or those works in a section, have achieved practical completion, the percentage in respect of the completed works is 97.5%.

Clause 4.10.4 - LISTED ITEMS - UNIQUELY IDENTIFIED

- The Contract Particulars item for clause 4.10.4 will be deleted.

Clause 4.10.5 - LISTED ITEMS - NOT UNIQUELY IDENTIFIED

- Listed items: The Contract Particulars entry for Clause 4.10.5 will be deleted.

Clause 6.4.1 - CONTRACTOR'S PUBLIC LIABILITY INSURANCE: INJURY TO PERSONS OR PROPERTY

- Insurance cover for any one occurrence or series of occurrences arising out of one event: £5 million.

Clause 6.5.1 - INSURANCE - LIABILITY OF EMPLOYER

- Insurance is not required.

Clause 6.7 and Schedule 1 - WORKS INSURANCE - INSURANCE OPTIONS

- Schedule 1: Insurance option C applies.
- Percentage to cover professional fees: 15 per cent.
- Where Insurance Option C applies, Paragraph C1: Existing structures and contents - Joint Names Policy for Specified Perils.

Clause 6.15 - JOINT FIRE CODE

- Joint Fire Code: Applies.
- Application: State whether the insurer under Insurance Option A, B or C (paragraph C.2) has specified that the Works are a 'Large Project': No.

Clause 6.19 - CONTRACTOR'S DESIGN PORTION - PROFESSIONAL INDEMNITY INSURANCE

- Level of cover: Amount of indemnity required:
  - relates to claims or series of claims arising out of one event; and is £ 50,000.
- Cover for pollution and contamination claims: Is not required.
- Expiry of required period of CDP Professional Indemnity Insurance: 5 years.

Clause 8.9.2 - PERIOD OF SUSPENSION (TERMINATION BY CONTRACTOR)

- Period of suspension: Two months.

Clauses 8.11.1.1 to 8.11.1.5 - PERIOD OF SUSPENSION (TERMINATION BY EITHER PARTY)

- Period of suspension: Two months.

Clause 9.2.1 - ADJUDICATION

- The Adjudicator is: Royal Institute of British Architects.
- Nominating body - where no Adjudicator is named or where the named Adjudicator is unwilling or unable to act (whenever that is established): The Royal Institute of British Architects.

Clause 9.4.1 - ARBITRATION

- Appointor of Arbitrator (and of any replacement): President or a Vice President of the Royal Institute of British Architects.

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 Tendering Practice Note 2012.
- Arithmetical errors: Alternative 2 correction of tender price is permitted.

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
- Acceptance: No guarantee is offered that any tender will be recommended for acceptance or be accepted, or that reasons for non acceptance will be given.
- Costs: No liability is accepted 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 2 month.
- Date for possession/ commencement: See section A20.

PRICING/ SUBMISSION OF DOCUMENTS

250 PRICED DOCUMENTS
- Alterations: Do not alter or qualify the priced documents without written consent. Tenders containing unauthorised alterations or qualifications may be rejected.
- Measurements: Where not stated, ascertain from the drawings.
- Deemed included: Costs relating to items, which are not priced, will be deemed to have been included elsewhere in the tender.
- Submit: Within 3 days of request.

300 QUANTITIES IN THE PRICED DOCUMENT
- Quantities: Where included in the priced document, these have been prepared in accordance with SMM7/ NRM2 only where and to the extent stated.
- Other items, descriptions and measurements not prepared in accordance with SMM7/ NRM2: Must be priced taking account of the information given elsewhere in the tender documents, including for all associated and ancillary work shown or clearly apparent as being necessary for the complete and proper execution of the work.

310 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.

440 SCHEDULE OF RATES
- Schedule of rates (unpriced): Included with the tender documents. The Contractor may insert additional items.
- Fully priced copy: Submit within one week of request.

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

500 TENDER STAGE METHOD STATEMENTS

- Method statements: Prepare, describing how and when the following is to be carried out:
- Statements: Submit with tender.

520 DESIGN DOCUMENTS

- Scope: Include the following in the Contractor's Proposals:
  - Design drawings: Purpose-made Built-in Furniture
  - Technical information: Allow for the preparation of detailed design drawings and for one revision for approval. Allow within the programme a period for design development with a minimum of two design meetings. Following detailed design sign off, prepare shop drawings (min 1:2 scale) for approval. All based on site dimensions taken by contractor and outline design shown in tender drawings. Fit for purpose. Materials as noted in specification and schedule. Final ironmongery selection based on performance requirements indicated in specification to achieve required loads, smooth and easy opening. Integrated lighting where specified.
  - Design drawings: Glass Entrance Doors
  - Technical information: Allow for the preparation of detailed design drawings and for one revision for approval. Allow within the programme a period for design development with a minimum of two design meetings. Following detailed design sign off, prepare shop drawings for approval. All based on site dimensions taken by contractor and outline design shown in tender drawings. Fit for purpose. Materials as noted in specification and schedule. Final ironmongery selection based on performance requirements indicated in specification to achieve required loads, smooth and easy opening.

- Submit: in accordance with clause A31-600.

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.

540 QUALITY CONTROL RESOURCES

- Statement: Describe the organisation and resources to control the quality of the Works, including the work of subcontractors.
- QA staff: Identify in the statement the number and type of staff responsible for quality control, with details of their qualifications and duties.
- Submit: Within one week of request .

550 HEALTH AND SAFETY INFORMATION

- Content: Describe the organisation and resources to safeguard the health and safety of operatives, including those of subcontractors, and of any person whom the Works may affect.
- Include:
  - A copy of the contractor's health and safety policy document, including risk assessment procedures.
  - Accident and sickness records for the past five years.
  - Records of previous Health and Safety Executive enforcement action.
  - Records of training and training policy.
  - The number and type of staff responsible for health and safety on this project with details of their qualifications and duties.
- Submit: Within one week of request.

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-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'.
- List: Provide details of all subcontractors and the work for which they will be responsible.
- Submit: Within 3 days of request.

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.

150 CONTRACTOR'S DESIGN
- Meaning: Design to be carried out or completed by the Contractor and supported by

appropriate contractual arrangements, to correspond with specified requirements.

155 SUBMIT PROPOSALS

- Meaning: Submit information in response to specified requirements.

160 TERMS USED IN SPECIFICATION

- Remove: Disconnect, dismantle as necessary and take out the designated products or work and associated accessories, fixings, supports, linings and bedding materials. Dispose of unwanted materials. Excludes taking out and disposing of associated pipework, wiring, ductwork or other services.
- Fix: Receive, unload, handle, store, protect, place and fasten in position and disposal of waste and surplus packaging including all labour, materials and site equipment for that purpose.
- Supply and fix: As above, but including supply of products to be fixed. All products to be supplied and fixed unless stated otherwise.
- Keep for reuse: Do not damage designated products or work. Clean off bedding and jointing materials. Stack neatly, adequately protect and store until required by the Employer/ Purchaser or for use in the Works as instructed.
- Make good: Execute local remedial work to 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.

170 MANUFACTURER AND PRODUCT REFERENCE

- Definition: When used in this combination:
  - Manufacturer: The firm under whose name the particular product is marketed.
  - Product reference: The proprietary brand name and/ or reference by which the particular product is identified.
- Currency: References are to the particular product as specified in the manufacturer's technical literature current on the date of the invitation to tender.

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.

240 SUBSTITUTION OF STANDARDS

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

250 CURRENCY OF DOCUMENTS AND INFORMATION

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

260 SIZES

- General dimensions: Products are specified by their 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 EMPLOYER

410 ADDITIONAL COPIES OF DRAWINGS/ DOCUMENTS

- Additional copies: Issued free of charge.

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.

DOCUMENTS PROVIDED BY CONTRACTOR/ SUBCONTRACTORS/ SUPPLIERS

600 CONTRACTOR'S DESIGN INFORMATION

- General: Complete the design and detailing of parts of the Works as specified in clause A30-520.
- Provide:

- Production information based on the drawings, specification and other information.
- Liaison to ensure coordination of the work with related building elements and services.

• Master programme: Make reasonable allowance for completing design/ production information, submission (including information relevant to the CDM Regulations), comment, inspection, amendment, resubmission and re-inspection.
• Information required: design layout on scaled drawings.
- Format: electronic dwg and pdf.
- Number of copies: NA.
• Submit: To suit contractor's programme and points noted above.

610 PRODUCTION INFORMATION
• Contractor/ Domestic subcontractor provide: Refer to Schedule of Works.
• Submit:
- For comment and make any necessary amendments.
- Sufficient copies of final version for distribution to all affected parties.

630 TECHNICAL LITERATURE
• Information: Keep on site for reference by all supervisory personnel:
- Manufacturers' current literature relating to all products to be used in the Works.
- Relevant British, EN or ISO Standards.

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.

115 CONSIDERATE CONSTRUCTORS SCHEME
• Registration: Before starting work, register the site and pay the appropriate fee:
• Contact:
- Address: Considerate Constructors Scheme Office, PO Box 75, Great Amwell, Ware, Hertfordshire, SG12 0YX.
- Tel. 01920 485959.
- Fax. 01920 485958.
- Free phone 0800 7831423
- Web. www.ccscheme.org.uk
- E mail. enquiries@ccscheme.org.uk
• Standard: Comply with the Scheme's Code of Considerate Practice.
- Minimum compliance level: Compliance.

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: When requested and before starting work on site, submit in an approved form master programme for the Works, which must include details of:
  - Design, production information and proposals provided by the Contractor/ Subcontractors/ Suppliers, including inspection and checking (see section A31).
  - Planning and mobilization by the Contractor.
  - Earliest and latest start and finish dates for each activity and identification of all critical activities.
  - 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 (see section A54).
  - Work by or on behalf of the Employer and concurrent with the Contract (see section A50). The nature and scope of which, the relationship with preceding and following work and any relevant limitations are suitably defined in the Contract Documents.
- Exclusions: Where and to the extent that the programme implications for work which is not so defined are impossible to assess, the Contractor should exclude it and confirm this when submitting the programme.
- Submit: one copy.

230 SUBMISSION OF PROGRAMME

- Further information: Submission of the programme will not relieve the Contractor of the responsibility to advise of the need for further drawings or details or instructions in accordance with the Contract.

250 MONITORING

- Progress: Record on a copy of the programme kept on site.
- Avoiding delays: If any circumstances arise which may affect the progress of the Works submit proposals or take other action as appropriate to minimize any delay and to recover any lost time.
- Key Performance Indicators:
  - Details: NA.
  - Record progress against each of the KPIs. If performance against KPI falls short of target, submit proposals for remediation.

260 SITE MEETINGS

- General: Site meetings will be held to review progress and other matters arising from administration of the Contract.
- Frequency: Every month.
- Location: Church.
- Accommodation: Ensure availability at the time of such meetings.
- Attendees: Attend meetings and inform subcontractors and suppliers when their presence is required.
- Chairperson (who will also take and distribute minutes): Architect.

265 CONTRACTOR'S PROGRESS REPORT

- General: Submit a progress report at least 2 days before the site meeting.
- Content: Notwithstanding the Contractor's obligations under the Contract the report must include:

- A progress statement by reference to the master programme for the Works.
- Details of any matters materially affecting the regular progress of the Works.
- Subcontractors' and suppliers' progress reports.
- Any requirements for further drawings or details or instructions to fulfil any obligations under the Conditions of Contract.

270 CONTRACTOR'S SITE MEETINGS

- General: Hold meetings with appropriate subcontractors and suppliers shortly before main site meetings to facilitate accurate reporting of progress.

280 PHOTOGRAPHS

- Number of locations: record photos before commencing works; progress photo during relevant works; record photos after completion of works.
- Frequency of intervals: Weekly.
- Image format: digital.
- Number of images from each location: TBC.
- Other requirements: NA

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

410 CASH FLOW FORECAST

- Submission: Before starting work on site, submit a forecast showing the gross valuation of the Works at the date of each Interim Certificate throughout the Contract period. Base on the programme for the Works.

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.
- Include:
  - A detailed breakdown of the cost, including any allowance for direct loss and expense.
  - Details of any additional resources required.
  - Details of any adjustments to be made to the programme for the Works.
  - Any other information as is reasonably necessary to fully assess the implications of issuing such an instruction.
- Inability to comply: Inform immediately if it is not possible to comply with any of the above requirements.

440 MEASUREMENT

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

470 PRODUCTS NOT INCORPORATED INTO THE WORKS

- Ownership: At the time of each valuation, supply details of those products not incorporated into the Works which are subject to any reservation of title inconsistent with passing of property as required by the Conditions of Contract, together with their respective values.

- Evidence: When requested, provide evidence of freedom of reservation of title.

475 LISTED PRODUCTS STORED OFF SITE

- Evidence of Title: Submit reasonable proof that the property in 'listed items' is vested in the Contractor.
- Include for products purchased from a supplier:
  - A copy of the contract of sale and a written statement from the supplier that any conditions of the sale relating to the passing of property have been fulfilled and the products are not subject to any encumbrance or charge.

- Include for products purchased from a supplier by a subcontractor or manufactured or assembled by any subcontractor:
  - Copies of the subcontract with the subcontractor and a written statement from the subcontractor that any conditions relating to the passing of property have been fulfilled.

480 LABOUR AND EQUIPMENT RETURNS

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

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: Not defective, e.g. not damaged, disfigured, dirty, faulty, or out of tolerance.
- Location and fixing of products: Adjust joints open to view so they are even and regular.

140 COMPLIANCE

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

150 INSPECTIONS

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

160 RELATED WORK

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

170 MANUFACTURER'S RECOMMENDATIONS/ INSTRUCTIONS

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

SAMPLES/ APPROVALS

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.

ACCURACY/ SETTING OUT GENERALLY

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

330 APPEARANCE AND FIT
- Tolerances and dimensions: If likely to be critical to execution or difficult to achieve, as early as possible either:
  - Submit proposals; or
  - Arrange for inspection of appearance of relevant aspects of partially finished work.
- General tolerances (maximum): To BS 5606, tables 1 and 2.

SERVICES GENERALLY

410 SERVICES REGULATIONS
- New or existing services: Comply with the Byelaws or Regulations of the relevant Statutory Authority

420 WATER REGULATIONS/ BYELAWS NOTIFICATION
- Requirements: Notify Water Undertaker of any work carried out to or which affects new or existing services and submit any required plans, diagrams and details.
- Consent: Allow adequate time to receive Undertaker's consent before starting work. Inform immediately if consent is withheld or is granted subject to significant conditions.

430 WATER REGULATIONS/ BYELAWS CONTRACTOR'S CERTIFICATE
- On completion of the work: Submit (copy where also required to the Water Undertaker) a certificate including:

- The address of the premises.
- A brief description of the new installation and/ or work carried out to an existing installation.
- The Contractor's name and address.
- A statement that the installation complies with the relevant Water Regulations or Byelaws.
- The name and signature of the individual responsible for checking compliance.
- The date on which the installation was checked.

435 ELECTRICAL INSTALLATION CERTIFICATE
- Submit: When relevant electrical work is completed.
- Original certificate: To be lodged in the Building Manual.

445 SERVICE RUNS
- General: Provide adequate space and support for services, including unobstructed routes and

fixings.
- Ducts, chases and holes: Form during construction rather than cut.
- Coordination with other works: Submit details of locations, types/ methods of fixing of services to fabric and identification of runs and fittings.

450 MECHANICAL AND ELECTRICAL SERVICES
- Final tests and commissioning: Carry out so that services are in full working order at completion of the Works.
- Building Regulations notice: Copy to be lodged in the Building Manual.

SUPERVISION/ INSPECTION/ DEFECTIVE WORK

510 SUPERVISION
- General: In addition to the constant management and supervision of the Works provided by the Contractor's person in charge, all significant types of work must be under the close control of competent trade supervisors to ensure maintenance of satisfactory quality and progress.
- Replacement: Give maximum possible notice before changing person in charge or site agent.

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.

550 ACCESS FOR INSPECTION
- Removal: Before removing scaffolding or other facilities for access, give notice of not less than three days.

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

610 PROPOSALS FOR RECTIFICATION OF 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.

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

630 QUALITY CONTROL
- Procedures: Establish and maintain to ensure that the Works, including the work of subcontractors, comply with specified requirements.
- Records: Maintain full records, keep copies on site for inspection, submit copies on request.
- Content of records:
  - Identification of the element, item, batch or lot including location in the Works.
  - Nature and dates of inspections, tests and approvals.

- Nature and extent of nonconforming work found.
- Details of corrective action.

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 Architect.
- 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

- Location: Integral with the project Preliminaries, including but not restricted to the following sections:
  - Description of project: Sections A10 and A11.
  - Client's consideration and management requirements: Sections A12, A13 and A36.
  - Environmental restrictions and on-site risks: Section A12 and A34.
  - Significant design and construction hazards: Section A34.
  - The Health and Safety File: Section A37.

140 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

- Submission: Present to the Employer/ Client no later than two weeks before commencement of work on site.
- 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: to comply with the church insurance requirements – see appendix A of the

Schedule of Work.

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

170 OCCUPIED PREMISES
- Extent: Existing buildings will be occupied and/ or used during the Contract as follows: the church will remain in use throughout the contract period.
- Works: Carry out without undue inconvenience and nuisance and without danger to occupants and users.
- Overtime: If compliance with this clause requires certain operations to be carried out during overtime, and such overtime is not required for any other reason, the extra cost will be allowed, provided that such overtime is authorized in advance.

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

PROTECT AGAINST THE FOLLOWING

350 PESTICIDES
- Use: Not permitted.

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

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: notification to allow archaeological assessment.

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 Construction Industry Publications and The Fire Protection Association (The 'Joint Fire Code').

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

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

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

420 INFECTED TIMBER/ CONTAMINATED MATERIALS

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

430 WASTE

- Includes: Rubbish, debris, spoil, surplus material, containers and packaging.
- General: Minimize production. Prevent accumulations. Keep the site and Works clean and tidy.
- Handling: Collect and store in suitable containers. 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.
- Recyclable material: Sort and dispose at a Materials Recycling Facility approved by the Waste Regulation Authority.
- Voids and cavities in the construction: Remove rubbish, dirt and residues before closing in.
- Waste transfer documentation: Retain on site.

460 POWER ACTUATED FIXING SYSTEMS

- Use: Not permitted.

470 INVASIVE SPECIES

- Use: General: Prevent the spread of species (e.g. plants or animals) that may adversely affect the site or Works economically, environmentally or ecologically.
- Duty: Report immediately any suspected invasive species discovered during execution of the Works.

- Do not disturb.
- Agree methods for safe eradication or removal, including obtaining competitive quotes of specialist and implementing the works under the contracts.

PROTECT THE FOLLOWING

510 EXISTING SERVICES

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

520 ROADS AND FOOTPATHS

- Duty: Maintain roads and footpaths within and adjacent to the site and keep clear of mud

and debris.
- Damage caused by site traffic or otherwise consequent upon the Works: Make good to the satisfaction of the Employer, Local Authority or other owner.

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.

550 RETAINED TREES
- Protected area: Unless agreed otherwise do not:
  - Dump spoil or rubbish, excavate or disturb topsoil, park vehicles or plant, store materials or place temporary accommodation within an area which is the larger of the branch spread of the tree or an area with a radius of half the tree's height, measured from the trunk.
  - Sever roots exceeding 25 mm in diameter. If unintentionally severed give notice and seek advice.
  - Change level of ground within an area 3 m beyond branch spread.

555 WILDLIFE SPECIES AND HABITATS
- General: Safeguard the following: bats.
- Protected habitats and species: Upon discovery immediately advise. Do not proceed until instruction is received.

- Education: Ensure employees and visitors to the site receive suitable instruction and awareness training.

560 EXISTING FEATURES
- Protection: Prevent damage to existing buildings, fences, gates, walls, roads, paved areas and other site features, which are to remain in position during execution of the Works.
  Protection should be designed and set up in a way that allows a safe and secure environment for the workers and any other allowed visitor.
- Special requirements:
  High Level Repairs:
  Stained glass and leaded light windows, roofs, rainwater goods and outlets, tombs, monuments, gravestones, fixtures and fittings, planting all in the vicinity of the works. Protection to be at an appropriate level for the works to ensure avoidance of damage:
  - Elements under threat of impact - plywood sheeting
  - Elements under threat of dust – plastic sheeting

  South Entrance Re-Ordering:
  Leaded light windows, pews, tombs, monuments, services, fixtures and fittings all in the vicinity of the works. Protection to be at an appropriate level for the works to ensure avoidance of damage:
  - Elements under threat of impact - plywood sheeting
  - Elements under threat of dust – plastic and cloth sheeting

  North Transept Re-Ordering & Monuments:
  Organ, leaded light windows, tombs, monuments, services, fixtures and fittings all in the vicinity of the works. Protection to be at an appropriate level for the works to ensure avoidance of damage:
  - Elements under threat of impact - plywood sheeting
  - Elements under threat of dust – plastic and cloth sheeting
  - Organ – liaise with Organ specialist to agree the extent of protection. Assume full screening

and dust protection.

570 EXISTING WORK

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

580 BUILDING INTERIORS

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

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.

640 MATERIALS FOR RECYCLING/ REUSE

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

A35 SPECIFIC LIMITATIONS ON METHOD/ SEQUENCE/TIMING

170 WORKING HOURS

- Specific limitations: The Church will remain in use as a place of worship throughout the Works:
  - Construction works will only be permitted between the hours of 8am and 5.30pm.
  - Contractors are to liaise with the Church and plan their operations to ensure that services are not disrupted.
  - The Contractor will be required to temporarily vacate the Works and cease work in the event of a funeral, wedding, special services and selected regular services occurring.
  - The Contractor is to allow for the anticipated cessation of work based on:
    - 3 Nr funeral services per week at 2 hours duration each.
    - Regular weekly service at 11am on Wednesdays between 10.30 am and 12 noon.
    - Regular weekly service at 8am on Friday - work cannot therefore start before 9am.
    - Calendar dates at time of tender are as noted below:
      - Wedding - Friday 27th March
      - Wedding - Sunday 24th May
      - Wedding - Wednesday 8th July
      - Wedding - Saturday 15th August
      - Organ Concert - Sunday 19th April

A36 FACILITIES/ TEMPORARY WORK/ SERVICES

GENERALLY

110 SPOIL HEAPS, TEMPORARY WORKS AND SERVICES
- Location: Give notice and details of intended siting.
- Maintenance: Alter, adapt and move as necessary. Remove when no longer required and make good.

ACCOMMODATION

230 TEMPORARY ACCOMMODATION
- Proposals for temporary accommodation and storage for the Works: Submit two weeks prior to starting on site.
- Details to be included: Type of accommodation and storage, its siting and the programme for site installation and removal.

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

TEMPORARY WORKS

340 NAME BOARDS/ ADVERTISEMENTS
- General: Obtain approval, including statutory consents, and provide a temporary name board displaying:
  - Title of project: Yes.
  - Name of Employer: Yes.
  - Names of Consultants: Yes.
  - Names of Contractor and Subcontractors: Contractor's choice.
  - Special requirements: Funding body.

SERVICES AND FACILITIES

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

420 LIGHTING AND POWER
- Supply: Electricity from the Employer's mains may be used for the Works as follows:
  - Metering: Free of charge.
  - Point of supply: to be agreed.
  - Available capacity: to be confirmed.
  - Frequency: 50 Hz.
  - Phase: to be confirmed.
  - Current: Alternating.
- Continuity: The Employer will not be responsible for the consequences of failure or restriction in supply.

430 WATER
- Supply: The Employer's mains may be used for the Works as follows:
  - Metering: Free of charge.
  - Source: mains.
  - Location of supply point: outside tap.
  - Conditions/ Restrictions: to be agreed.
- Continuity: The Employer will not be responsible for the consequences of failure or restriction in supply.

440 MOBILE TELEPHONES

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

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.

A37 OPERATION/ MAINTENANCE OF THE FINISHED WORKS

GENERALLY

115 THE HEALTH AND SAFETY FILE
- Responsibility: the contractor.
- Content: Obtain and provide the following information: in accordance with HSE Guidance L 153.
- Format: electronic
- Delivery to: Principal Designer By (date): within two weeks of practical completion.

A54* PROVISIONAL WORK/ ITEMS

105+ PROVISIONAL SUMS: Provisional Sums – where indicated the contractor is to include an extra over provisional sum related to increased masonry repair requirements – should they prove necessary – items 3.6.4 and 3.8.3. These sums are to be used only as directed by the CA, and are to be offset, in whole or in part, against the costs of works carried out under corresponding 'Architects Instructions', as required.

A55 DAYWORKS - on next page

A55 DAYWORKS

110A LABOUR

- State below the adjusted total hourly rates for labour which will be charged in connection with works carried out on day works basis:

Foreman:	£	per hour (submit proposal)
Craftsman:	£	per hour (submit proposal)
Labourer:	£	per hour (submit proposal)

120A MATERIALS AND GOODS

- State the percentage adjustment that will be added to prime costs of materials and goods in connection with works carried out on a day works basis:

"submit proposals" %

130A EQUIPMENT

- State the percentage adjustment that will be added to prime costs of plant in connection with works carried out on a day works basis:

"submit proposals" %

140A SUBCONTRACTORS

- State the percentage adjustment for profit and attendance that will be added to amounts invoiced by any subcontractors who may be nominated during the course of this contract:

"submit proposals" %

150A DAYWORKS GENERALLY

- No work will be allowed as day works unless previously authorised by the CA in writing.

- No day work sheets will be accepted unless they have been signed by the Clerk of Works or other authorised signatory agreed in writing in advance, and have been submitted to the CA within the calendar month next after the work has been carried out.

Part II Materials and Workmanship

Contents

C31 ACCESS AND WORKING SCAFFOLDING

130 PROVIDE MAINTAIN AND ADAPT as necessary all platforms, ladders, hoists, scaffolding, etc., for the proper execution of the works including such equipment required for sub-contractors. Fixings into masonry WILL NOT BE PERMITTED.

150 DRAWINGS
Submit in duplicate drawings of proposals for scaffolding for approval, of an extent and detail commensurate with the complexity of the proposals and with the degree to which they are critical.
Indicate wherever the scaffold is to touch the building.
Indicate loads from scaffolding and ensure that the existing building is capable of resisting such loads.
Submit in duplicate drawings of any proposals to vary approved details.

200 BASIC WORKMANSHIP: Comply with the clauses of BS 5973 that are relevant to this section, unless otherwise specified or shown on drawings.

210 SETTING OUT: Do not block:
Access to services.
Rainwater channels or drains.
Access to or escape from the building.
Access to security monitoring devices.
Areas identified for repair/replacement.

230 INSPECTIONS BY CA:
Allow boarded scaffold to remain in position for inspections to be made.
Obtain approval before taking down any section of the scaffolding.

240 SCAFFOLD BOARDS to BS 2482.

260 LADDERS to BS 1129.

270 PLYWOOD SHEETING to BS 6566, or other equal and approved national standard, WBP bonding.

280 TIMBER FOR NON-STRUCTURAL USE to be softwood graded to minimum stress grade.

300 BOARD OUT:
Ensure boards are fully supported to prevent traps.
Cut boards around ladder openings so that they lie flush, and secure boards.
Arrange boards at corners so that they lie flush.

320 BEARING PRESSURE
Set metal base plate at the foot of all standards and support plate on scaffold board sole plate, other than where base plate is set on level concrete of adequate thickness or where more substantial sole is required.
Ensure that the bearing pressure of the ground or structure below the scaffold is not exceeded.
Where standards are founded on soil or loose fill, level and consolidate ground and set uprights on treated railway sleepers or similarly sized treated timbers as sole plates.
Wherever is possible sole plates are to be long enough to receive at least two standards.

330 PROTECTION TO BUILDING FABRIC:
Where standards are to be mounted on stonework or leadwork set 19mm ply sheet on 50mm thick extruded polystyrene pad to receive base plate.
Fit 10mm thick sw packers to receive reveal ties which rely on friction.
Place sw packers between poles and structure to other ties made to building.

331 PROTECTION FROM WORK DEBRIS:
Allow for screening/netting scaffold to protect church fabric against falling debris.

335 PUTLOG SCAFFOLDING
- Usage: Not permitted.

350 TUBE ENDS: Cover with plastic caps wherever:
- Touching or closer to the building than 100mm.
- Exposed along walkways or ladder routes.

370 HOARDINGS:
Erect hoardings to prevent unauthorised access to scaffold and to site.
Every night remove the bottom lift of all ladders set on public footpath/pavement and keep them behind a locked hoarding.
To be in accordance with Ecclesiastical Insurance requirements – see Appendix A.

390 CLEAR ALL LOOSE ITEMS: e.g., tubes, fittings, poles, boards, from the scaffolding as it is constructed and on completion.

400 TRANSFER SCAFFOLDING COMPONENTS by hand, pulley or hoist. The dropping or throwing of components is forbidden.

410 UNAUTHORISED ACCESS:
Provide protection to the scaffold to prevent improper access from the street and from adjoining buildings.
Every night remove the bottom lift of all ladders and keep them behind a locked hoarding.
To be in accordance with Ecclesiastical Insurance requirements – see Appendix A.

420 TAKE ADEQUATE PRECAUTIONS to protect workers and the public from any material that may fall from the scaffold. Also, allow for protecting church fabric from falling debris - allow for scaffold netting/screening.

460 EARTH all scaffolds.

470 ON COMPLETION clear away all scaffolding and leave the site and any working areas beyond the site boundary in a tidy condition.

C41 REPAIRING/ RENOVATING/ CONSERVING MASONRY

GENERALLY/ PREPARATION

110 SCOPE OF WORK
- As Schedule and drawings: repair/replacement of parapet walls, pinnacles and stone walling; local stone repairs to windows – see Photographic Schedule Appendix G.

120 SITE INSPECTION
- Purpose: To confirm type and extent of repair/ renovation/conservation work shown on drawings and described in survey reports and schedules of work.
- Parties involved:
  - Contract administrator;
  - Foreman mason;
  - Structural engineer;
  - Window Conservator.
- Timing: Immediately upon completion of all access scaffolding and with minimum three days' notice.
- Provide artificial lighting to all areas where stone repair is to be made to enable the CA to make a close inspection.
- Instructions issued during inspection: strategy of repair, agreement of contractors undertaking

121 RECORDING TO THE APPROVAL OF THE CA

- Records of masonry to be repaired: Before starting work, use measurements and photographs as appropriate to record bonding patterns, joint widths, special features, etc.
- Identification of masonry units to be removed, replaced or repaired: Mark clearly, but not indelibly, on face of masonry units or parts of units to be cut out and replaced. Transcribe markings to drawings/photographs.
- General: Record work carried out to masonry clearly and accurately using written descriptions, sketches, drawings and photographs, as necessary.
- Documentation: Submit on completion of the work.
  Number of sets: Two.

125 REMOVAL OF FITTINGS/FIXTURES

- Items to be removed, and reinstated on completion of repair work:
  - Clock face from North Elevation works to be carried out by named specialist contractor
  - Lighting conductor to enable works to be carried out.
  - Weather vane to be fully overhauled.
  - Leaded lights - works to be carried out by named specialist contractor
  - Ferramenta - works to be carried out by named specialist contractor
  - Identification: Ensure all elements have labels attached or otherwise mark items using durable, non-permanent means, to identify location and describe refixing instructions, where applicable.
  - Treatment following removal: As schedule.
  - Storage: Protect against damage, and store until required.
    Storage location: to be agreed.
  - Reinstatement: Refit in original locations using original installation methods.
- Masonry fabric and surfaces: Do not damage during removal and replacement of fittings/ fixtures.

130 REMOVAL OF PLANT GROWTHS FROM MASONRY

- Plants, root systems and associated soil/ debris: Carefully remove from joints, voids and face work.
- Removal of roots: Where growths cannot be removed completely without disturbing masonry seek instructions.
- Unwanted plants close to masonry: Where removal of root system is not possible or desirable, cut through stem as close to the ground as possible. Remove bark from stump and apply herbicide paste. Leave stump to wither.

WORKMANSHIP GENERALLY

150 POWER TOOLS

- Usage for removal of mortar: Not permitted.

160 PROTECTION OF MASONRY UNITS AND MASONRY

- Masonry units: Prevent overstressing during transit, storage, handling and fixing. Store on level bearers clear of the ground, separated with resilient spacers. Protect from adverse weather and keep dry. Prevent soiling, chipping and contamination. Lift units at designed lifting points, where provided.
- Masonry: Prevent damage, particularly to arises, projecting features and delicate, friable surfaces. Prevent mortar/ grout splashes and other staining and marking on facework. Protect using suitable non-staining slats, boards, tarpaulins, etc. Remove protection on completion of the work.

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. 180A WORKMANSHIP
- Skill and experience of site operatives: Appropriate for types of work on which they are employed.
  - Documentary evidence: Submit on request.
- Cutting, dressing, laying and jointing of stone to be carried out by masons skilled in the work required.
  Provide evidence of previous experience and details of works previously carried out.
  Documentary evidence: Submit prior to commencement of works.

185 ADVERSE WEATHER

- General: Do not use frozen materials or lay masonry units on frozen surfaces.
- Air temperature: Do not bed masonry units or repoint:
  - In cement gauged mortars when ambient air temperature is at or below 3°C and falling or unless it is at least 1°C and rising, unless mortar has a minimum temperature of 4°C when laid and the masonry is adequately protected.
  - In hydraulic lime:sand mortars when ambient air temperature is at or below 5°C and falling or unless it is at least 3°C and rising.
  - In non-hydraulic lime:sand mortars in cold weather, unless approval is given.
- Temperature of the work: Maintain above freezing until mortar has fully set.
- Rain, snow and dew: 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 rapidly.
- New mortar damaged by frost: Rake out and replace.

190 CONTROL SAMPLES

- General: Complete an area/item of each of the following types of work, and arrange for inspection before proceeding with the remainder:
  - re-pointing of walling masonry – in accordance with C41-809A
  - local. 'plastic' mortar repair – location to be agreed with CA – mix based on approved mortars – for making good to damaged stone from removed fixings.

MATERIAL/PRODUCTION/ACCESSORIES

211 ORDERING OF STONE

Calculate the quantities required, agree delivery dates and place a firm order for stone from the supplier to meet contractors programme.

215 MATERIAL SAMPLES

- Representative samples of designated materials: Submit before placing orders.
  - Designated materials:

    Stone in accordance with clause C41-240A.
    Note: stone selection will be determined upon matching the stone to be replaced and adjacent stones, as such the range of stone colours, texture and block size is to be allowed for – in the Red Hollington, Cream Hollington and Mottled Hollington.

    Sands – for bedding, pointing and mortar repairs to stone in accordance with Section Z21-320A.

    Mortar samples – for stone walling, for window repairs in accordance with Section Z21-500A.

- Retention of samples: Unless instructed otherwise, retain samples on site for reference. Protect from damage and contamination.
- At time of works, prior to placing any orders and in good time to meet contractor's programme, obtain several representative block samples of sandstone on site and inform architect of source. Exact stone to be used will be subject to Architect's approval.

220 RECORDING PROFILES

- Profiles: Take measurements from existing masonry units, as instructed, to allow accurate matching of replacements.
- Recording in situ: If there are no suitable joints to allow use of inserts, seek instructions.
- Drawings and templates: Full size drawings of decorative carved stones are to be prepared and approved by CA before commencement of works:
  - Pinnacle
  - Crenellation
  - Window sections
  - Gargoyle

  Templates are to be specific to each location where replacement is required – a generic template will not be acceptable.
  Templates must be clearly and indelibly marked to identify specific use and location.

240A STONE

- Supplier: Staffordshire Stone
  Staffordshire Stone, Quarry Bank, Hollington, Staffordshire ST10 4HQ
  Tel. 01889507435
- Type: Red/Cream/Mottled Hollington Sandstone - Triassic Keuper.
- Quality: Free from vents, cracks, fissures, discolouration, or other defects that may adversely affect strength, durability or appearance. Thoroughly seasoned, dressed and worked in accordance with shop drawings (item 230).
- Finish: Smooth to match existing sound stone adjacent.

243 APPEARANCE OF STONE

Make arrangements for the CA to inspect samples of dressed and/or rubble stone which re-present the range of variation in appearance.
Obtain approval of appearance before placing orders with suppliers or proceeding with production.

245 REPLACEMENT STONE UNITS

- Sizes and profiles: To match existing masonry. Maintain existing joint widths.
- Sinkings for fixings, joggles and lifting devices: Accurately aligned and positioned in relation to existing masonry.
- Marking: Mark each block/dressing clearly and indelibly on a concealed face to indicate the natural bed and position in the finished work.

247 RE-USE OF STONE

Agree extent to which existing stone is to be retained for re-use in other than its existing location. Remove all such stone; clean, overhaul, protect and store on site until required.

250 STONE ORIENTATION

- Orientation of natural bed:
  - In plain walling: Horizontal.
  - In projecting stones and copings: Vertical and perpendicular to wall face.
    In arches: Perpendicular to line of thrust.

255 ASHLAR BLOCKS/DRESSINGS

- Cutting and dressing stone: To true and regular surfaces, free from hollow or rough areas.

DISMANTLING/ REBUILDING

310 DISMANTLING MASONRY FOR REUSE

- Masonry units to be reused: Remove carefully and in one piece.
  - Treatment: Clean off old mortar, organic growths and dirt, and leave units in a suitable condition for rebuilding.
  - Identification: Mark each unit clearly and indelibly on a concealed face, indicating its original position in the construction. Transcribe makings to drawings/photographs.

REPLACEMENTS AND INSERTIONS

320 REBUILDING OF PINNACLES, CRENELLATION AND WINDOW REPAIRS

- Replacement materials: Stone as clause 240A.
- Bedding depths: To face of glass and/or 150 mm – whichever is the greater.
- Mortar: As section Z21.
- Fixings: Allow for locating stainless steel pins/cramps to match existing found.
- Rebuilding: To match previous face and joint lines, joint widths and bonding. Adequately bonded to retained work/backing masonry, as appropriate.
- Joint surfaces: Dampen, as necessary, to control suction.
- Laying masonry units: On a full bed of mortar; perpend joints filled.
- Exposed faces: Remove mortar and grout splashes immediately.
- Joints: Fine
- Tooling: The external stone appears to be a smooth weathered face – however there is clear evidence internally that the surface is tooled. Allowance is to be made for tooling the face of all new work.
- Other requirements: Adjacent stone is not to be cut or adjusted in any way to accommodate new or re-used masonry, except with prior approval of the CA.

330 PREPARATION FOR REPLACEMENT MASONRY

- Defective material: Carefully remove to the extent agreed. Do not disturb, damage or mark adjacent retained masonry.
- Existing metal fixings, frame members, etc: Report when exposed.
- Redundant metal fixings: Remove.
- Recesses: Remove projections and loose material; leave joint surfaces in a suitable condition to receive replacement units. Protect from adverse weather if units are not to be placed immediately.

340 REPLACEMENT OF STONE WHOLE BLOCK REPLACEMENT (INDENT)

- Stone: as clause 240A.
- Bedding depths: To face of glass and/or 150 mm – whichever is the greater.
- Mortar: As section Z21.
- Fixings: Bonded dowels as clause 405.
- Joints: Flush and batted with bristle brush, when mortar is stiff to reveal aggregate.
- Other requirements: Adjacent stone is not to be cut or adjusted in any way to accommodate new or re-used masonry, except with prior approval of the CA.

385 LAYING REPLACEMENT MASONRY UNITS

- Exposed faces of new material: Keep to agreed face lines.
- Faces, angles and features: Align accurately. Set out carefully to ensure satisfactory junctions with existing masonry and maintain existing joint widths.
- Joint surfaces: Dampen to control suction as necessary.
- Laying units: On a full bed of mortar, all joints filled.
- Exposed faces: Keep clear of mortar and grout.

395 STONE INSERTS

- Pockets to receive inserts:
  - Cut out accurately. Undercut sides of pocket where necessary to provide space for bonding material.
  - Adjust depth so that insert stands proud of existing stone for finishing in situ.

- Clean out thoroughly.
- Inserts: Cut to the smallest rectangular shape necessary to replace the defective area and provide a firm seating. Install accurately and securely.
  - Exposed faces: Keep clear of bonding material.
- Existing joint widths: Maintain. Do not bridge joints.

405 BONDED DOWELS:
- Dowels: Austenitic stainless steel.
- Adhesive: Epoxy resin.
- Holes for dowels: Suitably sized and accurately aligned in masonry background and in rear of replacement/ insert stone; clean and dry.
- Other requirements: Do not use adhesive to bond stones at joints unless instructed.

410 CORRODED FIXINGS
- Removal: Cut out carefully, causing the least possible disturbance to surrounding masonry. Remove associated rust debris.
- Replacement: Compatible fixings as clause 640.

420 TEMPORARY DISTANCE PIECES FOR JOINTS IN ASHLAR STONEWORK
- Material: Lead or stainless steel.
- Removal: When mortar/grout is sufficiently strong to take loading without compression.

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.

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

MORTAR REPAIRS

510 PREPARATION FOR MORTAR REPAIRS
- Repair area: Scribe area of masonry to be removed using straight horizontal and vertical lines parallel to joints. Where repair area abuts joints, maintain existing joint widths and do not bridge joints.
- Decayed masonry: Cut back carefully to a minimum depth of 20 mm to a sound background. Where the depth of removal exceeds 50 mm, seek instructions.
- Precautions: Do not weaken masonry by removing excessive material. Do not damage adjacent masonry.
- Top and vertical reveals of repair area: Undercut.

CRACK REPAIRS/TIES/ REINFORCEMENT

610 MORTAR REPAIR OF CRACKS
- Mortar: to be agreed with architect
  - Mix: to be agreed with architect.
  - Sand source/ type: to be agreed with architect.
- Preparation: Clean out cracks to remove debris, dust and dirt. Dampen recesses, as necessary, to control suction.
- Applying mortar: Press well into cracks so that they are fully filled. Ensure that mortar does not encroach upon exposed faces. Finish mortar flush with masonry face.

620 RESIN INJECTION REPAIR OF CRACKS
- Resin injection system manufacturer: to be agreed with architect.
  - Product reference: to be confirmed.

- Preparation: Clean out cracks to remove debris, dust and dirt. Secure loose masonry units.
- Exposed faces: Keep clean and free from stains.
- Resin application: Use methods recommended by system manufacturer to fully bond masonry.
- Completion: After resin has cured, remove temporary crack plugging material and protective coatings.
- Pointing to cracks and injection holes: as clause 610.

640 PINNING Pinnacles, merlons, crenels and stone decorations

- Dowels/Pins/cramps:
  - Type: Austenitic stainless steel threaded rods.
  - Diameter: 6 mm.
  - Additional requirements: None.
- Resin: Low viscosity resin to approval.
- Holes: Drill carefully, sloping downwards into background. Remove drilling dust and debris and keep dry.
- Filling holes:
  - Check that dowel lengths are correct before filling with resin
  - Use sufficient resin so that when the dowel is inserted the resin is dispersed to achieve an effective repair.
- Exposed faces: Keep clean and free from resin stains. Use temporary plugging material and/or isolating membranes as necessary.
- Clearances: Keep ends of ties and resin back from face of masonry.
- Making good after resin has cured: Either mortar as clause 690 or stone plugs as clause 692.

690 MAKING GOOD TO INJECTION AND INSERTION HOLES

- Preparation: Clean out holes thoroughly.
- Repair mortar: To match existing masonry units/joints in colour and texture. Fill holes and finish mortar neatly and flush with surrounding masonry.
- Finished appearance: Obtain approval for first three holes before commencing work

692 MAKING GOOD TO TIE AND DOWEL INSERTION HOLES USING CORE DRILLED PLUGS:
Plugs: Cut plug from masonry face before drilling hole for each tie/ dowel. Where resulting plug is unusable, prepare plug from matching material.
- Plug diameter: Smallest practicable.

Holes: Clean.
Method of securing plug: [A spot of epoxy resin and non-hydraulic lime:sand mortar].
Joints: Fine and flush.
Finished appearance: Obtain approval for first sample hole before completing remainder.

POINTING/ REPOINTING

809A SAMPLE PANELS

- Allow for providing up to four different sample panels of re-pointing on the host fabric, for each type of pointing mix required.
- Allow for altering the mortar mix for each sample and for each panel to dry out completely; so that the sample is representative of the finished work.
- Proceed with approved samples upon receipt of Architect's Instruction.
- Retain and protect samples until Practical Completion and ensure the executed work matches.

810A PREPARATION FOR REPOINTING

- Existing mortar: Working from top of wall downwards, remove mortar carefully, without damaging adjacent masonry or widening joints, to a minimum depth of 2.5 width of joint.
  - Loose or friable mortar: Seek instructions when mortar beyond specified recess depth is loose or friable and/or if cavities are found.
- Raked joints: Remove dust and debris.
- Fine joints in dressed stones: gently work a fine hacksaw blade along joints and remove loose material to a minimum depth of 13mm
- Dampen down joints to control suction of water from mix to surrounding stone.

811 REMOVAL OF HARD POINTING / PLASTIC SMOOTH DRESSINGS

Remove a sample section of hard mortar pointing in each area scheduled for removal in agreed location.

Carefully cut out hard mortar by picking with chisel to reveal original mortar joint. Drill fine holes along centreline of especially hard mortar joint to loosen mortar, then pick out pointing with chisel.

821 POINTING STONEWORK GENERALLY

- Preparation of joints: As per clause 810.
- Mortar: As section Z21.
- Joints profile/ finish: Flush, when mortar is stiff but not hardened, batt with a bristle brush to reveal the aggregate.
- Other requirements: See clause 835.

835A POINTING PROCESS

Begin from top of wall. Immediately before re-pointing flush out joints with water to remove all dust and to control suction.

Dampen surface to control suction, while damp fill joint with specified mortar.

Thoroughly compact mortar to fill all voids and to ensure it adheres firmly to each side of joint, but do not overwork.

Iron mortar in with appropriate pointing tool (not trowel) of width to suit joint width, keeping finished mortar face back from damaged and weathered arises and to width of original joint.

Allow sufficient time for the re-pointing to be done without hurry.

To control rate of curing according to atmospheric and weather conditions, allow for supply and hanging of hessian, separated from the pointing and dampened down if necessary.

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.

851A CLEANLINESS

Keep face of sandstone clean during pointing.

Wash and brush down surface to remove light staining as soon as it occurs.

Turn back scaffold boards at night and during heavy rain to prevent splashing.

860 BRUSHED FINISH TO JOINTS

- Timing: After initial mortar set has taken place remove laitance and excess fines by brushing, to give a coarse texture. Do not compact mortar.

C51 REPAIRING/ RENOVATING/ CONSERVING TIMBER

To be read with Preliminaries/ General conditions

GENERAL

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: Contract administrator and Contractor's representative.
- Timing: At least 1 week 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 (that 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: UK Timber Procurement Policy Category A evidence certification scheme..
  - Other evidence: None.

160 TIMBER SUPPLIER
- Supplier: Submit proposals.

PRODUCTS

360 SOFTWOOD FOR JOINERY REPAIRS TO PEW PLATFORM FLOOR BOARDS
- Species: To match existing.
- Quality: Generally to BS EN 942; free from decay and insect attack (except pinhole borers).
  - Appearance class: Class J2.
- Treatment: To match existing.
- Moisture content on delivery: 12-16%.

370 HARDWOOD FOR JOINERY REPAIRS TO PEWS
- Species: To match existing - European Oak.
- Quality: Generally to BS EN 942; free from decay and insect attack (except pinhole borers).
  - Appearance class: Class J2.
- Treatment: To match existing.
- Moisture content on delivery: 12-16%.

470 NAILS FOR FURNITURE JOINERY - PEWS
- Standard: As section Z20.
- Type: To suit use.
- Material: Steel.
  - Strength (minimum): Ultimate tensile strength 600 N/mm².
- Finish as delivered: Stainless steel.

480 SCREWS FOR FURNITURE JOINERY - PEWS
- Standard: As section Z20.
- Material: Stainless steel.
- Tensile strength (minimum): Not applicable.
- 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.

610 TEMPORARY SUPPORTS/ PROPPING
- General: Provide adequate temporary support at each stage of repair work to prevent damage, overstressing or uncontrolled collapse of any part of the structure.
- Bearings for temporary supports/ propping: Suitable to carry loads throughout repair operations.

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: Timbers to match existing.

650 DIMENSIONS GENERALLY

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

720 TEMPORARY REMOVAL AND REINSTATEMENT OF FITTINGS/ FIXTURES

- Items to be removed, and reinstated on completion of repair work:
  - Identification: Attach labels or otherwise mark items using durable, non-permanent means, to identify location and refixing instructions, where applicable.
  - Treatment following removal: Not required.
  - Storage: Protect against damage, and store until required.
    Storage location: In church - to be agreed.
  - Reinstatement: Refit in original locations using original installation methods.
- Items unsuitable or not required for reuse: Obtain instructions regarding disposal.

750 CLEANING DIRTY OR STAINED WOOD

- Generally: Scrub with neutral pH soap and clean, warm water.
- Old varnish: Remove using mixture of turpentine (not turpentine substitute) and acetone in proportions determined by experiment, followed by washing down.

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.

D20 EXCAVATING AND FILLING

CLEARANCE/EXCAVATING

245 EXCAVATIONS ADJACENT TO EXISTING FOUNDATIONS

- Prior to commencing excavation: Excavate internal trial pits adjacent to all existing wall foundations to determine extent and formation levels and base of wall bearing.
- Submit proposals: For ensuring the safety of the existing foundations if the formation level for the new excavation will be below the formation level of the existing foundation.
- **Note:** Excavations to be carried out by hand.

330A UNRECORDED FEATURES

- Give notice: If unrecorded foundations, beds, voids, basements, filling, tanks, pipes, cables, drains, manholes, watercourses, ditches, etc. not shown on the drawings are encountered.
- A vaulted tomb exists under the floor level as indicated in drawings. The excavation works shouldn't be deep enough to reach the top of the structure but, in case this happens or the location of the tomb differs from what shown in the drawings, refer immediately to the architect and suspend the works.

DISPOSAL OF MATERIALS

450 WATER
- Generally: Keep all excavations free from water until:
  - Formations are covered.

454 GROUND WATER LEVEL, SPRINGS OR RUNNING WATER
- Give notice: If it is considered that the excavations are below the water table.
- Springs/ Running water: Give notice immediately if encountered.

FILLING

500 PROPOSED FILL MATERIALS
- Details: see spec clause E10-185

530 PLACING FILL
- Surfaces of excavations and areas to be filled: Free from loose soil, topsoil, organic material, rubbish and standing water.
- Freezing conditions: Do not place fill on frozen surfaces. Remove material affected by frost. Replace and recompact if not damaged after thawing.
- Adjacent structures, membranes and buried services:
  - Do not overload, destabilise or damage.
  - Submit proposals for temporary support necessary to ensure stability during filling.
  - Allow 14 days (minimum) before backfilling against in situ concrete structures.
- Layers: Place so that only one type of material occurs in each layer.
- Earthmoving equipment: Not permitted - hand work only.

E10 MIXING/CASTING/CURING IN SITU CONCRETE

CONCRETE MIXES

101 SPECIFICATION
- Concrete generally: To BS 8500-2.
- Exchange of information: Provide concrete producer with information required by BS 8500-1, clauses 4 and 5.

185 PRE-BLENDED CONCRETE – SOUTH AISLE ENTRANCE FLOOR
- Manufacturer: Ty-Mawr.
  - Product reference: SubLime Full Slab Build-up - Refer to data sheet in Schedule of Work Appendix F.
- Storage: In unopened bags clear of the ground in cool dry conditions. Use consignments in order of delivery.
  - Shelf life: Do not use if more than 6 months old.
- Mixing: To Manufacturer's instructions.
  - Quantity of water (maximum): To Manufacturer's instructions.
- Other requirements: To Manufacturer's instructions: include for geotextile membrane, Ty-Mawr insulating hardcore, geotextile membrane, Ty-Mawr Lime Screed.

MATERIALS, BATCHING AND MIXING

650 SURFACES TO RECEIVE CONCRETE
- Cleanliness of surfaces immediately before placing concrete: Clean with no debris, tying wire clippings, fastenings or free water.

680 PLACING
- Records: Maintain for time, date and location of all pours.
- Timing: Place as soon as practicable after mixing and while sufficiently plastic for full compaction.
- Temperature limitations for concrete: 30°C (maximum) and 5°C (minimum), unless

otherwise specified. Do not place against frozen or frost covered surfaces.
- Continuity of pours: Place in final position in one continuous operation up to construction joints. Avoid formation of cold joints.
- Discharging concrete: Prevent uneven dispersal, segregation or loss of ingredients or any adverse effect on the formwork or formed finishes.
- Thickness of layers: To suit methods of compaction and achieve efficient amalgamation during compaction.
- Poker vibrators: Do not use to make concrete flow horizontally into position, except where necessary to achieve full compaction under void formers and cast-in accessories and at vertical joints.

690 COMPACTING
- General: Fully compact concrete to full depth to remove entrapped air. Continue until air bubbles cease to appear on the top surface.
  - Areas for particular attention: Around reinforcement, under void formers, cast-in accessories, into corners of formwork and at joints.
- Consecutive batches of concrete: Amalgamate without damaging adjacent partly hardened concrete.
- Methods of compaction: To suit consistence class and use of concrete.

810 CURING GENERALLY
- Evaporation from surfaces of concrete: Prevent, including from perimeters and abutments, throughout curing period.
  - Surfaces covered by formwork: Retain formwork in position and, where necessary to satisfy curing period, cover surfaces immediately after striking.
  - Top surfaces: Cover immediately after placing and compacting. If covering is removed for finishing operations, replace it immediately afterwards.
- Surface temperature: Maintain above 5°C throughout the specified curing period or four days, whichever is longer.
- Records: Maintain details of location and timing of casting of individual batches, removal of formwork and removal of coverings. Keep records on site, available for inspection.

811 COVERINGS FOR CURING
- Sheet coverings: Suitable impervious material.
- Curing compounds: Selection criteria:
  - Curing efficiency: Not less than 75% or for surfaces exposed to abrasion 90%.
  - Colouring: Fugitive dye.
  - Application to concrete exposed in the finished work: Readily removable without disfiguring the surface.
  - Application to concrete to receive bonded construction/ finish: No impediment to subsequent bonding.
- Interim covering to top surfaces of concrete: Until surfaces are in a suitable state to receive coverings in direct contact, cover with impervious sheeting held clear of the surface and sealed against draughts at perimeters and junctions.

818 CURING PERIODS GENERALLY
- Minimum periods: When not otherwise indicated, to manufacturer's instructions.

840 PROTECTION
- Prevent damage to concrete, including:
  - Surfaces generally: From rain, indentation and other physical damage.
  - Surfaces to exposed visual concrete: From dirt, staining, rust marks and other disfiguration.
  - Immature concrete: From thermal shock, physical shock, overloading, movement and vibration
  - In cold weather: From entrapment and freezing expansion of water in pockets, etc.

G20 CARPENTRY/ TIMBER FRAMING/ FIRST FIXING

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.

150 STRENGTH GRADING OF TIMBER

- Grader: A company currently registered under a third party quality assurance scheme operated by a certification body approved by the UK Timber Grading Committee.

160 GRADING AND MARKING OF SOFTWOOD

- Timber of a target/ finished thickness less than 100 mm and not specified for wet exposure: Graded at an average moisture content not exceeding 20% with no reading being in excess of 24% and clearly marked as 'DRY' or 'KD' (kiln dried).
- Timber graded undried (green) and specified for installation at higher moisture contents: Clearly marked as 'WET' or 'GRN'.
- Structural timber members cut from large graded sections: Regraded to approval and marked accordingly.

PRODUCTS

270 UNGRADED SOFTWOOD - For internal non-structural use

- Quality of timber: Free from decay, insect attack (except pinhole borers) and with no knots wider than half the width of the section.
- Surface finish: [Regularized].
- Treatment:
  - Preservative treatment: [Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8].Design service life: [40 years].

311 NON-STRUCTURAL PLYWOOD - For furniture and joinery, as per drawings

- Standard: To an approved national standard.
- Thickness: 19mm.
- Appearance class to BS EN 635: I.
- Use class to BS EN 335: Internal.
- Bond quality to BS EN 314-2: Class 1.
- Finish: Sanded.
- Edges: Square and fully sanded.
- Treatment:
  - Preservative treatment: [Organic solvent impregnation to NBS section Z12 and Wood Protection Association Commodity Specification C8].Design service life: [40 years].

WORKMANSHIP GENERALLY

402 CROSS SECTION DIMENSIONS OF NON-STRUCTURAL 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.

403 CROSS SECTION DIMENSIONS OF NON-STRUCTURAL 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:
  - General: Avoid if possible.
  - Sizes: Minimum needed to accommodate services.
  - Position: Do not locate near knots or other defects.
  - In same joist: Minimum 100 mm apart horizontally.
  - Notches in joists:

    Position: Locate at top. Form by sawing down to a drilled hole.
    Depth (maximum): 0.15 x joist depth.
    Distance from supports: Between 0.1 and 0.2 x span.
  - Holes in joists:

    Position: Locate on neutral axis.
    Diameter (maximum): 0.25 x joist depth.
    Centres (minimum): 3 x diameter of largest hole.
    Distance from supports: Between 0.25 and 0.4 of span.
  - Notches in roof rafters, struts and truss members: Not permitted.
  - Holes in struts and columns: Locate on neutral axis.

    Diameter (maximum): 0.25 x minimum width of member.
    Centres (minimum): 3 x diameter of largest hole.
    Distance from ends: Between 0.25 and 0.4 of span.
- Scarf joints, finger joints and splice plates: Do not use without approval.

450 MOISTURE CONTENT

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

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.

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.

630 BOLTED JOINTS

- Bolt spacings (minimum): To BS EN 1995-1-1, section 8.5.
- Holes for bolts: Located accurately and drilled to diameters as close as practical to the nominal bolt diameter and not more than 2 mm larger.
- Washers: Placed under bolt heads and nuts that would otherwise bear directly on timber. Use spring washers in locations which will be hidden or inaccessible in the completed

building.

- Bolt tightening: So that washers just bite the surface of the timber. Ensure that at least one complete thread protrudes from the nut.

  Checking: At agreed regular intervals up to Completion. Tighten as necessary.

L20 DOORS/ SHUTTERS/ HATCHES

GENERAL

110 EVIDENCE OF PERFORMANCE

- Certification: Provide independently certified evidence that all incorporated components comply with specified performance requirements.

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: UK Timber procurement policy Category A evidence certification scheme..
  - Other evidence: None.

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:

- Glass entrance doors
- Pews and pew plinth alterations.
- South aisle display and storage units
- North transept storage screen wall

PRODUCTS

270 WOOD DOORS NORTH TRANSEPT STORAGE SCREEN WALL

- Materials: Generally to BS EN 942.
  - Species: Pitch Pine to match adjacent Organ Casing.
  - Appearance class: J10.
- Panels: Not applicable.
- Assembly:
  - Adhesive: Contractors choice.
  - 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: 12-16%.
- Finish as delivered: Full stain system, as section M60.
- Glazing/ Infill details: Not applicable.
  - Manifestation: Not applicable.
  - Beading: Specialist joinery - see drawings.

- Thermal performance (U-value maximum): Not applicable.
- Other requirements:
  - Bespoke specialist joinery set in bespoke support posts and cornice rail
  - Bespoke steel cross members for fixing back to church wall and provide rigidity and support
  - Ironmongery as P21

280 DOORS SOUTH ENTRANCE DOORS

- Manufacturer: Submit proposals.
  - Product reference: Submit proposals.
- Finish as delivered: Frameless glass arched double doors as shown on dwg Tong.13-3201.
- Glazing/ Infill details: Clear single glazing - 12mm low iron glass (manufacturer to confirm).
  - Manifestation: As L40-630.
  - Beading: Not required.
- Ironmongery: To manufacturers detail:
  - minimal patch/pivot hinges
  - bespoke oak rod bar handles on brushed stainless steel round fixing bars through glass
- Thermal performance (U-value maximum): Manufacturer's standard.
- Other requirements:
  - European oak sub frame to stone arch
  - Draft proof weather seals to approved detail

330 WOOD DOOR FRAMES NORTH TRANSEPT STORAGE SCREEN WALL

- Materials: Generally to BS EN 942.
  - Species: Pitch Pine to match adjacent Organ Casing.
  - Appearance class: J10.
- Assembly:
  - Adhesive: Contractors choice.
  - 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: 12-16%.
- Finish as delivered: Full stain system, as section M60.
- Perimeter seals: Not required..
- Thermal performance: Not applicable.
- Fixing: Bespoke posts/frames fix over stainless steel dowel in church floor and cornice rail over.

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.

730 PRIMING/ SEALING

- Wood surfaces inaccessible after installation: Primed or sealed as specified before fixing components.

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: Where not specified otherwise, positioned with centre lines 250 mm from top and bottom of door leaf.
- Third hinge: Where specified, positioned on centre line of door leaf .
- Hinges for fire resisting doors: Positioned in accordance with door leaf manufacturer's recommendations.

L40 GENERAL GLAZING

GENERAL REQUIREMENTS

150 WORKMANSHIP AND POSITIONING GENERALLY

- Glazing generally: In accordance with BS 6262 series.
- Integrity: Glazing must be wind and watertight under all conditions with full allowance made for deflections and other movements.
- Dimensional tolerances: Panes/ sheets to be within ± 2 mm of specified dimensions.
- Materials:
  - Compatibility: Glass/ plastics, surround materials, sealers, primers and paints/ clear finishes to be used together to be compatible. Avoid contact between glazing panes/ units and alkaline materials such as cement and lime.
  - Protection: Keep materials dry until fixed. Protect insulating glass units and plastics glazing sheets from the sun and other heat sources.

152 PREPARATION

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

155 GLASS GENERALLY

- Standards: To BS 952 and relevant parts of:
  - BS EN 572 for basic soda lime silicate glass.
  - BS EN 1096 for coated glass.
  - BS EN 1748-1 for borosilicate glass.
  - BS EN 1748-2 for ceramic glass.
  - BS EN 1863 for heat strengthened soda lime silicate glass.
  - BS EN 12150 for thermally toughened soda lime silicate safety glass
  - BS EN 12337 for chemically strengthened soda lime silicate glass.
  - BS EN 13024 for thermally toughened borosilicate safety glass.
  - BS EN ISO 12543 for laminated glass and laminated safety glass.
- Panes/ sheets: Clean and free from obvious scratches, bubbles, cracks, rippling, dimples and other defects.
  - Edges: Generally undamaged. Shells and chips not more than 2 mm deep and extending not more than 5 mm across the surface are acceptable if ground out.

165 HEAT SOAKING OF THERMALLY TOUGHENED GLASS

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

  - Holding period (minimum): To manufacturers recommendations - see clause 530.
- Certified evidence of treatment: Submit.
- Designated locations: Display units.

180 BEAD FIXING WITH PINS

- Pin spacing: Regular at maximum 150 mm centres, and within 50 mm of each corner.
- Exposed pin heads: Punched just below wood surface.

181 BEAD FIXING WITH SCREWS

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

TYPES OF GLAZING

530 INTERNAL TAPE GLAZING SOUTH AISLE DISPLAY UNITS

- Pane material: 6mm low iron toughened glass.
- Surround/ bead: Hardwood - European Oak.
  - Bead fixing: To be agreed with specialist joiner - not visible.
- Tape/ Section: To be agreed with specialist joiner.
- Glazing installation: Beads bedded dry to rebate and glazing tape/ section and fixed securely. Tape trimmed flush with sight line on both sides.

630 MANIFESTATION FRAMELESS GLASS ENTRANCE DOORS

- Design: As drawing Tong.13-3201.
  - Art work: To be prepared by contractor and submitted for approval.
  - Media: Full size drawing.
- Technique: Acid etched.

L50+ LEADED LIGHTS GENERALLY

20+ LEADED LIGHTS

- Protection: As clause 40.
- Work to ferramenta: Remove to workshop, clean and repair as clause 60. Reinstate as clause 120.
- Work to glazing: Remove to workshop, clean and repair as clauses 50, 70, 80, and 90. Reinstate as clauses 110 and 130.

25+ REVIEW OF SCOPE OF REPAIR WORK UPON CLOSE INSPECTION:

- Provide access scaffolding and artificial lighting to all areas of leaded lights to enable the CA to make a close inspection.
- Provide attendance and inspect the work with the CA to confirm the nature and extent of the repairs.
- Make a record of instructions given during inspections, which may either confirm or vary scope of work, and measure and record relevant details, as clause 30.
- Prepare and submit details of instructions for confirmation.
- Prepare schedules and drawings for use as basis of implementation of work.

30+ RECORD GLAZING:

- Before any glazing is removed prepare drawing(s) on which to mark the extent of the work on completion. Take colour photographs from both inside and out to record pattern of cames and supports and all features of design.
- Make lead rubbing of panels before they are dismantled.
- Record details of any inscribed cames and hand inscribed cames to CA if they are not to be reincorporated, together with 25mm long sample lengths of each section replaced.
- On completion make record drawing(s) to show extent of repairs, new glass and painting.
- Hand CA copies of all records on completion.

40+ TEMPORARY PROTECTION:

- Protect the scheduled windows with boarding, both inside and out, until the glass is to be removed to the workshop, and re-protect immediately following its reinstatement.
- Support protection independently of the window and keep it to a minimum of 50mm away from the face of the glass. While maintaining protection, ventilate the space between the outer boarding and the face of the glass.
- Protect temporary opening(s) from weather and draught, and make building secure.
- Do not make fixings into building fabric. As far as possible, support temporary protection by means of existing grooves, fixing to ironwork or with 12mm shuttering plywood fixed to internal horizontal 75x50mm timbers.

41+ TEMPORARY WORKING ENCLOSURE:

- Form a temporary boarded enclosure around the scheduled window.
- Provide lockable doors to give access to both sides of the window.
- Provide temporary boarded protection as clause 40 should the working enclosure be removed before completion of the contract.

50+ INSURANCE:

- Provide adequate insurance for the glass when unfixed, and submit evidence of this before removing glass.

51+ REMOVING GLAZED PANELS:

- Carefully cut out putty/mortar around glazing and clean glazing grooves of all mortar. Note this may be very hard material. Do not damage stone arrises. Use tungsten chisels for carrying out this work, but, where the glass and/or stonework is of great value, use diamond grinders by person skilled in handling a power tool in this sensitive location in such a way as to avoid loss of historic fabric from both stone and glass.
- Stabilise collapsing panels with water soluble masking tape applied to external faces only. Mark and identify each panel, so that the window can be reinstated to its original form at completion of the repair works.
- Remove glazed panels and take to workshop for cleaning and restoration. Remove individual panels from top to bottom, cutting remaining ties to ferramenta panel by panel.
- Allow for removal of the extracted window elements from site to workshops in individual trays, correctly stored and protected by thin plywood & plastic foam sheets.

60+ WORK TO FERRAMENTA:

- Remove sections of ferramenta and take to workshop to assess those sections that are to be repaired or modified, together with all loose beads and pegs.
- Number and record positions of all sections that are to be reinstated before their removal.
- Introduce new wrought ironwork to replace missing elements to match existing sections.
- Remove all existing paint, by wire brushing. De-rust ironwork with phosphoric acid and promptly apply 2no.coats of black zinc chromate paint. Paint those sections that are removed before they are reinstated. Upon reinstatement, but before refitting glazing panels, paint top coat of black zinc chromate paint (flat (not gloss) finish). Touch-in after re-instatement and pointing-up.

65+ NON-FERROUS TIPS:

- Cut iron where built into masonry and braze on Delta bronze/stainless steel tips of similar section for refixing into masonry. Remove any old iron tips/remnants from stonework

66+ VENTILATORS:

- Remove ventilator and frame and take to workshop to assess those sections that are to be repaired or modified, together with all loose fittings.
- Carefully dismantle elements, remove all existing paint, by wire brushing. De-rust ironwork with phosphoric acid and promptly apply 2no.coats of black zinc chromate paint. Upon reinstatement, but before refitting glazing panels, paint top coat of black zinc chromate paint (flat (not gloss) finish). Touch-in after re-instatement and pointing-up.

- Re-instatement to full operative order. Supply and fix new pull cords.

69+ RE-PUTTYING:

- Where there is missing or brittle ‘puttying’ allow for replacing with glazing 'cement' (blackened) to make leaded light waterproof. If paint to stained glass is friable, cement by finger only, to avoid loss of paint.
- Store panels in a vertical plane – allowing panels to firm up prior to reinstallation.

70+ WASHING GLASS:

- Cleaning is only to be undertaken by an approved specialist.
- Take care with painted glass, if there is evidence of paint detaching. Use a minimal amount of water, to avoid ‘washing’ off the paint.
- Clean both sides of glass with either distilled or deionized water. Use as little water as necessary at a temperature not exceeding 70□F (21□C).

80+ REPAIRING GLASS:

- Repair cracks in glass to be retained by one of the following methods - agree method appropriate for each location with CA:
- To large sheets, where design is not critical, insert new slim lead cames on line of cracks.
- To small sheets, where wide lead cames would be objectionable, insert copper foil cames on line of cracks.
- To sheets, where critical to design, butt and bond glass edges with chemical adhesive. Fit new clear glass, with slightly matt outer face and moulded to match surface of existing glass, to outer face of existing and bond at perimeter with silicone sealant. This technique is to be used externally, and for large pieces of glass, only.

90+ NEW GLASS

- As far as possible reinstate existing historic glass. Insert new glass only with approval of CA.
- Replace missing or damaged ‘modern’ glasses with new handmade glasses matched to surviving historic glass.
- Replacement glass to match original in shape, colour, texture, translucency and thickness. Seek approval of new glass before fitting.
- All new glass to be signed and dated handmade English cylinder glass, Lamberts genuine antique glass or similar approved. The use of machine-made glass will not be permitted.

110+ REINSTATING GLASS:

- Review with CA requirement for full re-leading before commencing dismantling.
- Allow for selective stripping down of panels only where the lead cames require replacement owing to fatigue.
- Re-fit cleaned and repaired glass, together with new glass, in new lead cames.
- Unless otherwise agreed, use lead cames of the same size and profile as those existing. If for structural or aesthetic reasons a change is desirable, agree type of came to be used with CA before re-assembling glass.
- Fit new copper tying wires, and solder joints. (If the original tying wires were of lead, the new tying wires may be of lead.)
- On completion waterproof with glazing 'cement'. If paint to stained glass is friable, cement by finger only, to avoid loss of paint.

120+ REINSTATING FERRAMENTA:

- Re-set bar ends into stonework and point with 1:3 hydraulic lime:sand mortar.
- Chemical/mechanical anchors may be used by prior agreement with the CA.

130+ REINSTATING PANELS IN MASONRY:

- Return all panels to site, remove temporary boards, and soak stonework and stone reveals to accept lime mortar.
- Carefully position panels in their original locations. Secure them to the ferramenta with copper/lead ties. Introduce a leadwork sill tray at the foot of each light to allow exit of water and entry of air. Do not seal at bases. Mask borders of glass with 50mm paper masking tape,

and point up. Use hydraulic lime, rather than lime putty, in the pointing mix. Remove tape after pointing is complete.
- Lightly tape window with water soluble masking tape to protect glazed panels from mortar splashes. Re-point in approved mortar. Point up, clean down and touch up ferramenta paintwork where necessary.

135+ REINSTATING PANELS IN SUBFRAMES:
- Re-set cleaned and repaired glazed panels in putty within rebates.
- Within wrought iron sections, tie panels to support bars with copper wires and retain with wrought iron pegs.
- Within manganese bronze sections, fix panels to support bars with manganese bronze beads screw-fixed with matching screws.

M40 STONE/ CONCRETE/ QUARRY/ CERAMIC TILING/ MOSAIC

TYPES OF TILING/ MOSAIC

110 TILING TO SOUTH AISLE DISPLAY AREAS EITHER SIDE ENTRANCE

- Tiles: To match existing: Main red square tile, thin black margin tile.
  - Manufacturer/ Supplier: Contractor's choice - reclaimed will be considered.
    Product reference: Contractor's choice.
  - Colour: To match existing.
  - Finish: To match existing.
  - Size: To match existing.
  - Thickness: To match existing.
  - Slip potential:
    Slip resistance value (SRV) (minimum)/ Pendulum test value (PTV) (minimum) to BS 7976-1, -2 and -3: Not applicable.
    Surface roughness (Rz) (minimum) BS 1134: Not applicable.
    Ramp test class: Not applicable.
  - Recycled content: Not applicable.
- Background/ Base: M13.
  - Preparation: To match existing.
- Intermediate substrate: Not required.
- Bedding: Semidry bed, as clause 730.
  - Reinforcement: Not applicable.
  - Adhesive to BS EN 12004: Contractor's choice.
- Joint width: To match existing.
- Grout: To match existing.
  - Type/ classification: Not applicable.
  - Admixture: None.
- Movement joints: NA.
- Accessories: None.

GENERAL

210 SUITABILITY OF BACKGROUNDS/ BASES

- Background/ base tolerances: To permit specified flatness/ regularity of finished surfaces given the permissible minimum and maximum thickness of bedding.
- New background drying times (minimum):
  - Concrete walls: 6 weeks.
  - Brick/ block walls: 6 weeks.
  - Rendering: 2 weeks.
  - Gypsum plaster: 4 weeks.

- New base drying times (minimum):
  - Concrete slabs: 6 weeks.
  - Cement:sand screeds: 3 weeks.

215 FALLS IN THE BASES

- General: Give notice if falls are inadequate.

250 SAMPLES

- General: Submit representative samples of the following: Red Square and Black Margin tiles to match existing.

260 CONTROL SAMPLES

- General: Complete sample areas, being part of finished work, in locations as follows: approx 300mm x300mm behind west entrance door by unit plinth - to include main and margin tiles.
  - Approval of appearance: Obtain before proceeding.
- Floor covering slip resistance testing: Not required.

PREPARATION

370 NEW IN SITU CONCRETE

- Backgrounds/ bases to be tiled: Remove mould oil, surface retarders and other materials incompatible with bedding.

450 PREPARING CONCRETE BASES FOR UNBONDED BEDDING - WITHOUT SEPARATING LAYER

- Surface finish: Smooth.
- Surface preparation: Before laying mortar bed, dampen lightly.

FIXING

510 FIXING GENERALLY

- Colour/ shade: Unintended variations within tiles for use in each area/ room are not permitted.
  - Variegated tiles: Mix thoroughly.
- Adhesive: Compatible with background/ base. Prime if recommended by adhesive manufacturer.
- Use of admixtures with cementitious adhesives: Only admixtures approved by adhesive manufacturer.
- Cut tiles: Neat and accurate.
- Fixing: Provide adhesion over entire background/ base and tile backs.
- Final appearance: Before bedding material sets, make adjustments necessary to give true, regular appearance to tiles and joints when viewed under final lighting conditions.
- Surplus bedding material: Clean from joints and face of tiles without disturbing tiles.

530A SETTING OUT

- Joints: True to line, continuous and without steps.
  - Joints on walls: Horizontal, vertical and aligned round corners.
  - Joints in floors: Parallel to the main axis of the space or specified features.
- Cut tiles: Minimise number, maximise size and locate unobtrusively.
- Joints in adjoining floors and walls: Align.
- Joints in adjoining floors and skirtings: Align.
- Movement joints: Where locations are not indicated, submit proposals.
- Setting out of Floor Tiles : Submit proposals.

550 FLATNESS/ REGULARITY OF TILING/ MOSAICS

- Sudden irregularities: Not permitted.
- Deviation of surface: Measure from underside of a 2 m straightedge with 3 mm thick feet placed anywhere on surface. The straightedge should not be obstructed by the tiles and no gap should be greater than 6 mm, i.e. a tolerance of + 3 mm.

560 LEVEL OF TILING ACROSS JOINTS

- Deviation (maximum) between tile surfaces either side of any type of joint:
  - 1 mm for joints less than 6 mm wide.
  - 2 mm for joints 6 mm or greater in width.

570 MORTAR BEDDING

- Bedding mix:
  - Cement: Portland to BS EN 197-1, type CEM I/42.5.
  - Sand for walls: Fine aggregate to BS EN 13139.
    Grading designation: 0/2 (CP or MP) category 2 fines.
  - Sand for floors: Fine aggregate to BS EN 13139.
    Grading designation: 0/4 (MP) category 1 fines and between 20%-66% passing a 0.5 sieve.
- Batching: Select from:
  - Batch by weight.
  - Batch by volume: Permitted on the basis of previously established weight:volume relationships of the particular materials. Use accurate gauge boxes. Allow for bulking of damp sand.
- Mixing: Mix materials thoroughly to uniform consistence. Use a suitable forced action mechanical mixer. Do not use a free fall type mixer.
- Application: At normal temperatures use within two hours. Do not use after initial set. Do not retemper.

730A SEMIDRY LIME: SAND BEDDING (FLOORS)

- Mortar bedding mix: 1:3.5-4 NHL3.5 Lime:sand.
  - Water content: A film of water must not form on surface of bed when fully compacted.
- Preparation: Dampen base.
- Laying: Lay suitably small working areas of screeded bed. Compact thoroughly to level.
  - Finished bed thickness (minimum): 40 mm .
  - Finished bed thickness (maximum): 70 mm .
- Tiling: Within two hours and before bedding sets, evenly coat backs of tiles with neat cement slurry. Beat tiles firmly into position.

MOVEMENT JOINTS/ GROUTING/ COMPLETION

875 GROUTING

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

885 COLOURED GROUT

- Staining of tiles: Not permitted.
- Evaluating risk of staining: Apply grout to a few tiles in a small trial area. If discoloration occurs apply a protective sealer to tiles and repeat trial.

M60 PAINTING/ CLEAR FINISHING

COATING SYSTEMS

175 FURNITURE AND INTERIOR WOODWORK

- South Aisle - Existing Pews – making good existing finishes where furniture has been altered.
- South Aisle - New oak joinery – matching in to existing oak pews
- South Porch - New oak sub frame to glass door
- South Porch - door handles
- South Aisle - New pew platform floor boards – matching in to existing boards
- North Transept - New pitch pine joinery matching in with existing organ casing

- Manufacturer: Liberon
  - Product reference: Furniture and Interior Woodwork
  - Adopting a blend of the Liberon products to arrive at a good match with existing.
  - Application in accordance with manufacturer's recommendations.

- Other Requirements
  - For each of the elements noted above - allow for three samples for each progressive finish – stain on its own, stain with wax, stain with varnish etc.
  - North Transept – allow for picking out the door and post chamfers with a highlighting stain/colour – to be agreed.

GENERAL

215B HANDLING AND STORAGE

- Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number to show -
  - Maker's name, initials or recognised trade mark.
  - Title and specification number.
  - Whether primer, undercoat or finishing coat.
  - Whether for internal or external use, where appropriate.
  - Colour reference, from BS 4800 or BS 3811 where appropriate.
  - Method of application.
  - Batch number and date of despatch or re-test.
  - Detailed instruction for storage and use if highly flammable or toxic.
  - Statutory markings

Wherever possible materials must be from one manufacturing batch. Inform the CA if materials from more than one batch are to be used, store separately and allocate to distinct parts or areas of the work.

Store materials in accordance with manufacturer's recommendations. Use in order of delivery and before expiry of any shelf life date.

280A PROTECTION

- 'Wet paint' signs and barriers: Provide where necessary to protect other operatives and general public, and to prevent damage to freshly applied coatings.
- Adequately protect internal and external surfaces, fixtures and fittings which are not to be coated, by covering with dust sheets, masking or other suitable materials.

PREPARATION

400 PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Refer to any pre-existing CDM Health and Safety File.
- Refer to CDM Construction Phase Plan where applicable.
- Suspected existing hazardous materials: Prepare risk assessments and method

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

420A FIXTURES AND FITTINGS

- Removal: Before commencing work remove: weather vane and door ironmongery.
- Replacement: Overhaul existing and decorate, refit when coating is dry.

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.
- Suspected existing hazardous materials: Prepare risk assessments and method statements covering operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Significant rot, corrosion or other degradation of substrates.
- 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.

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.

740 CONCEALED METAL SURFACES

- General: Apply additional coatings to surfaces that will be concealed when component is fixed in place.
  - Components: Back of gutters and downpipes.
  - Additional coatings: As clause 175.

N10 GENERAL FIXTURES/ FURNISHINGS/ EQUIPMENT

PRODUCTS

110 PURPOSE MADE SOUTH AISLE DISPLAY AND STORAGE UNITS

- Manufacturer: Submit proposals.
- Standard: NA.
- Timber: To BS EN 942.
  - Species: Eurpoean Oak.
  - Appearance class: J2.
  - Moisture content on delivery: 12 to 16% - unheated church.
- Wood-based boards: Backing boards only - European oak veneer faced plywood manufactured to an approved national standard, class 1 bonding quality to BS EN 314-2, appearance class E to BS EN 635-2 with sanded grade surface finish, 24mm thick.
- Metal: NA.
  - Grade: NA.
- Other materials: Glass for display cases - clause L40-530.
- Finishes: To match adjacent dark oak pews.
- Adhesive: To BS EN 204 durability class D1.
- Fixings: Submit proposals.
  - Fasteners: Submit proposals.
- Joinery workmanship: As section Z10.
- Metalwork materials and workmanship: As section Z11.
- Other requirements: Ironmongery - refer to spec section P21.

EXECUTION

710 MOISTURE CONTENT OF WOOD AND WOOD-BASED BOARDS

- Standard: To BS EN 942.
- Moisture content on delivery: 12-16%.
- Temperature and humidity: During delivery, storage, fixing and to handover maintain conditions to suit specified moisture contents of timber components.

720 INSTALLATION GENERALLY

- General: As Preliminaries section A33.
- Fixing and fasteners: As section Z20.
- Services: As section V90.

770 TRIMS

- Lengths: Wherever possible, unjointed between angles or ends of runs.
- Running joints: Where unavoidable, obtain approval of location and method of jointing.
- Angle joints: Mitred.

COMPLETION

910 GENERAL

- Doors and drawers: Accurately aligned, not binding. Adjusted to ensure smooth operation.

- Ironmongery: Checked, adjusted and lubricated to ensure correct functioning.

P21 DOOR/ WINDOW IRONMONGERY

PRE-TENDER

10A QUANTITIES AND LOCATIONS

- Quantities and locations of ironmongery are:
  - Glass Entrance Doors - See L20 - manufacturers to approval - handle will be bespoke.
  - Built-in Furniture - See N10 and Schedule of Work Appendix G
  - Screen Storage Wall - See L20 and Schedule of Work Appendix G
- Fixing: As sections L20 and N10.

GENERAL

120A IRONMONGERY RANGE SELECTED BY CONTRACTOR

- Source: Single coordinated range from Croft Ironmongery or similar approved.
- Notification: Submit details of selected range, manufacturer and/ or supplier.
- Principal material/ finish: Antique Brass.
- Items unavailable within selected range: Submit proposals.

140 SAMPLES

- General: Before placing orders with suppliers submit labelled samples of the following: see Schedule of Work Appendix G .
  - Conformity: Retain samples on site for the duration of the Contract. Ensure conformity of ironmongery as delivered with labelled samples.

180 STRENGTH CLASS OR CATEGORY OF DUTY FOR DOOR IRONMONGERY

- Requirement: As follows:
  - Glass Entrance Doors - See L20 - manufacturers to approval - To BS EN 1192 Table A1 Class 3-4.
  - Built-in Furniture - To BS EN 1192 Table A1 Class 2-3
  - Screen Storage Wall - To BS EN 1192 Table A1 Class 2-3
- General: Durability of ironmongery components to be compatible with stated category of duty of each door leaf.
  - Exclusions: Ironmongery with specific duty or 'category of use' defined elsewhere.
  - Documentation: Before placing orders with suppliers submit documentation showing product compliance with stated category of duty.

V90 ELECTRICAL SYSTEMS – CONTRACTOR'S DESIGN

SYSTEM PERFORMANCE

210 DESIGN OF LOW VOLTAGE ELECTRICAL INSTALLATION GENERALLY

- Design and detailing: Complete for the electrical installation.
- Standards: In accordance with BS 7671 and the requirements of the electricity distributor.
- Proposals: Submit drawings, technical information, calculations and manufacturers' literature.

220 DESIGN OF LOW VOLTAGE INCOMING SUPPLY

- Design and detailing: Complete for the low voltage incoming supply.
- Capacity: Determine the anticipated maximum demand of the installation.
- Proposals: Submit drawings showing equipment positions and routes, technical information and calculations.
- Evidence of agreement with Electricity Distributor: Submit.

- General: Manage and liaise with the Electricity Distributor and determine:
  - Maximum demand of the installation.
  - Nature of the supply, its suitability for the installation and type of earthing arrangement.
  - Location of the incoming supply.
  - Space requirements and location of the switches, fuses and meters.
- Electricity supplier: TBC .
  - Coordination: Liaise with the electricity supplier, complete an application for supply of electricity and manage installation of metering equipment

PRODUCTS

310 PRODUCTS GENERALLY
- Standard: In accordance with BS 7671.
- CE Marking: Required.

410 CABLES GENERALLY
- Approval: British Approvals Service for Cables (BASEC) certified.
- Cable sizes not stated: Submit proposals and calculations.

420 PROTECTIVE CONDUCTORS
- Type: Cable conductors with yellow/ green sheath.

511 LAMPS GENERALLY
- Standards:
  - Compact fluorescent lamps: To BS EN 60901 and BS EN 61199.
  - High pressure mercury lamps: To BS EN 60188 and BS EN 62035.
  - High pressure sodium lamps: To BS EN 62035.
  - Light emitting diodes (LEDs): To BS EN 62031.
  - Metal halide lamps: To BS EN 62035.
  - Tubular fluorescent lamps:
    Single-capped lamps: To BS EN 60901 and BS EN 61199.
    Double-capped lamps: To BS EN 60081 and BS EN 61195.
  - Tungsten halogen lamps: To BS EN 60432-2 and BS EN 60357.
- Manufacturer: Client's decision.
  Lamps of the same type and rating: Same manufacturer.

EXECUTION

610 ELECTRICAL INSTALLATION GENERALLY
- Standard: In accordance with BS 7671.

615 INSTALLING CONNECTION TO INCOMING SUPPLY
- Main switchboard/ distribution board: Connect to main incoming metering equipment.

640 INSTALLING CABLES ENTERING BUILDINGS FROM BELOW GROUND
- Pipeducts: Seal at both ends.
- Proposals: Submit drawings.

645 INSTALLING CABLE TRAY
- Support: Submit proposals.
- Access: Provide space encompassing cable trays to permit access for installing and maintaining cables.
- Supports and fasteners: Avoid contact between dissimilar metals. Use corrosion resistant components in locations where moisture may occur.
- Cutting: Along an unperforated line. Minimize. Make good edges. Treat surface as the tray.

650 INSTALLING CABLE BASKET
- Support: Submit proposals.
- Access: Provide space encompassing cable basket to permit access for installing and

maintaining cables.
- Supports and fasteners: Avoid contact between dissimilar metals. Use corrosion resistant components in locations where moisture may occur.

680 CABLE ROUTES
- Cables generally: Conceal wherever possible.
  - Concealed cable runs to wall switches and outlets: Align vertically with the accessory.
- Exposed cable runs: Submit proposals.
  - Orientation: Straight, vertical and/ or horizontal and parallel to walls.
- Distance from other services running parallel: 150 mm minimum.
  - Heating pipes: Position cables below.

685 INSTALLING CABLES
- General: Install cables neatly and securely. Protect against accidental damage, adverse environmental conditions, mechanical stress and deleterious substances.
- Timing: Do not start internal cabling until building enclosure provides permanently dry conditions.
- Jointing: At equipment and terminal fittings only.
- Cables passing through walls: Sleeve with conduit bushed at both ends.
- Cables surrounded or covered by insulation: Derate.

725 FINAL CONNECTIONS
- Size: Determine.
- Cable: Heat resisting white flex.
- Length: Allow for equipment removal and maintenance.

730 INSTALLING MULTIGANG SWITCHES
- General: Connect switches so that there is a logical relationship with luminaire positions. Fit blanks to unused switch spaces.
- Segregation: Internally segregate each phase with phase barriers and warning plates.

760 EQUIPMENT LABELLING
- Electrical equipment: Install labels indicating purpose.
- Voltage warning notices:
  - Location: Apply to equipment when the voltage exceeds 230 V.
  - Format: To BS EN ISO 7010 W012, include warnings of the voltage present.
- Distribution boards and consumer units: Card circuit chart within a reusable clear plastic cover. Fit to the inside of each unit. Include typed information identifying the outgoing circuit references, their device rating, cable type, size, circuit location and details. Label each outgoing way corresponding to the circuit chart.
- Sub-main cables: Label at both ends with circuit reference using proprietary cable marker sleeves.

765 ENGRAVING
- Metal and plastic accessories: Engrave, indicating their purpose.
- Emergency lighting test key switches: Describe their function.
- Multigang light switches: Describe the luminaire arrangement.

COMPLETION

810 FINAL FIX
- Accessory faceplates, luminaires and other equipment: Fit after completion of building painting.

820 CLEANING
- Electrical equipment: Clean immediately before handover.
- Equipment not supplied but installed and electrically connected: Clean immediately before handover.

830 INSPECTION AND TESTING GENERALLY

- Standard: In accordance with BS 7671.
- Notice before commencing tests (minimum): 24 hours.
- Labels and signs: Fix securely before system is tested.
- Certificates: Submit.
  - Number of copies: Submit proposals .

880 DOCUMENTATION

- Timing: Submit at practical completion.
- Contents:
  - Full technical description of each system installed.
  - Manufacturers' operating and maintenance instructions for fittings and apparatus including re-lamping instructions for luminaire types. Identify hazardous lamps that require specialist disposal.
  - Recommended frequency of testing and inspection, both for electrical safety and for matters such as the corrosion and security of lighting columns and luminaire fixings.
  - Manufacturers' guarantees and warranties.
  - As-installed drawings showing circuits and their ratings and locations of fittings and apparatus.

    List of normal consumable items.

890 MAINTENANCE

- Servicing and maintenance: Undertake.

  Duration: Until 12 months after Practical Completion.

Z10 PURPOSE MADE JOINERY

REFER TO SECTION N10

110 FABRICATION

- Standard: To BS 1186-2.
- Sections: Accurate in profile and length, and free from twist and bowing. Formed out of solid unless shown otherwise.
  - Machined surfaces: Smooth and free from tearing, wooliness, chip bruising and other machining defects.
- Joints: Tight and close fitting.
- Assembled components: Rigid. Free from distortion.
- Screws: Provide pilot holes.
  - Screws of 8 gauge (4 mm diameter) or more and screws into hardwood: Provide clearance holes.
  - Countersink screws: Heads sunk at least 2 mm below surfaces visible in completed work.

    Adhesives: Compatible with wood preservatives applied and end uses of timber.

120 CROSS SECTION DIMENSIONS OF TIMBER

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

    Clause 6 for sawn sections.
  - Hardwood sections: To BS EN 1313-2:-

    Clause 6 for sawn sections.

    Clause NA.3 for further processed sections.

130 PRESERVATIVE TREATED WOOD

- Cutting and machining: Completed as far as possible before treatment.
- Extensively processed timber: Retreat timber sawn lengthways, thicknessed, planed, ploughed, etc.
- Surfaces exposed by minor cutting and/ or drilling: Treat as recommended by main treatment solution manufacturer.

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

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

Z20 FIXINGS AND ADHESIVES

PRODUCTS

310 FASTENERS GENERALLY
- Materials: To have:
  - Bimetallic corrosion resistance appropriate to items being fixed.
  - Atmospheric corrosion resistance appropriate to fixing location.
- Appearance: Submit samples on request.

340 MASONRY FIXINGS
- Light duty: Plugs and screws.
- Heavy duty: Expansion anchors or chemical anchors.

390 ADHESIVES GENERALLY
- Standards:
  - Hot-setting phenolic and aminoplastic: To BS 1203.
  - Thermosetting wood adhesives: To BS EN 12765.
  - Thermoplastic adhesives: To BS EN 204.

EXECUTION

610 FIXING GENERALLY
- Integrity of supported components: Select types, sizes, quantities and spacings of fixings, fasteners and packings to retain supported components without distortion or loss of support.
- Components, substrates, fixings and fasteners of dissimilar metals: Isolate with washers/ sleeves to avoid bimetallic corrosion.
- Appearance: Fixings to be in straight lines at regular centres.

620 FIXING THROUGH FINISHES
- Penetration of fasteners and plugs into substrate: To achieve a secure fixing.

630 FIXING PACKINGS
- Function: To take up tolerances and prevent distortion of materials and components.
- Limits: Do not use packings beyond thicknesses recommended by fixings and fasteners manufacturer.
- Locations: Not within zones to be filled with sealant.

670 PELLETED COUNTERSUNK SCREW FIXING
- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Pellets: Cut from matching timber, match grain and glue in to full depth of hole.
- Finished level of pellets: Flush with surface.

680 PLUGGED COUNTERSUNK SCREW FIXING
- Finished level of countersunk screw heads: Minimum 6 mm below timber surface.
- Plugs: Glue in to full depth of hole.
- Finished level of plugs: Projecting above surface.

690 USING POWDER ACTUATED FIXING SYSTEMS
- Powder actuated fixing tools: To BS 4078-2 and Kitemark certified.
- Operatives: Trained and certified as competent by tool manufacturer.

700 APPLYING ADHESIVES
- Surfaces: Clean. Adjust regularity and texture to suit bonding and gap filling characteristics of adhesive.
- Support and clamping during setting: Provide as necessary. Do not mark surfaces of or distort components being fixed.
- Finished adhesive joints: Fully bonded. Free of surplus adhesive.

Z22 SEALANTS

PRODUCTS

310 JOINTS: Application to be agreed by CA before order and use.
- Primer, backing strip, bond breaker: Types recommended by sealant manufacturer.

EXECUTION

610 SUITABILITY OF JOINTS
- Pre-sealing checks:
  - Joint dimensions: Within limits specified for the sealant.
  - Substrate quality: Surfaces regular, undamaged and stable.
- Joints not fit to receive sealant: Submit proposals for rectification.

620 PREPARING JOINTS
- Surfaces to which sealant must adhere:
  - Remove temporary coatings, tapes, loosely adhering material, dust, oil, grease, surface water and contaminants that may affect bond.
  - Clean using materials and methods recommended by sealant manufacturer.
- Vulnerable surfaces adjacent to joints: Mask to prevent staining or smearing with primer or sealant.
- Backing strip and/ or bond breaker installation: Insert into joint to correct depth, without stretching or twisting, leaving no gaps.
- Protection: Keep joints clean and protect from damage until sealant is applied.

630 APPLYING SEALANTS
- Substrate: Dry (unless recommended otherwise) and unaffected by frost, ice or snow.
- Environmental conditions: Do not dry or raise temperature of joints by heating.
- Sealant application: Fill joints completely and neatly, ensuring firm adhesion to substrates.
- Sealant profiles:
  - Butt and lap joints: Slightly concave.
  - Fillet joints: Flat or slightly convex.
- Protection: Protect finished joints from contamination or damage until sealant has cured.

Z21 MORTARS

LIME:SAND MORTARS

310 LIME:SAND MORTAR MIXES
- Manufacturer: Building and Conservation lime products – Singleton Birch Limited, Melton Ross Quarries, Barnetby, North Lincolnshire, DN38 6AE. Tel: 01652 686000.
  Local distributors as listed on http://www.singletonbirch.co.uk/naturalhydrauliclime/stockists

- Tower walling and parapets - bedding and re-pointing:
  - Mix: 1:2 NHL 2 Singleton Birch.
  - Sand source/ type: see 320A.

- Tower walling and parapets – mortar repairs:
  - Mix: 1:2 Singleton Birch Lime Putty:sand
  - Sand source/ type: see 320A.
  - Pozzolan: see 340A. Blend to be reviewed during preparation of mortar samples.

- Windows – tracery stone to stone and stone to glass joints - re-pointing:
  - Mix: 1:2 Singleton Birch Lime Putty:sand
  - Sand source/ type: see 320A.
  - Pozzolan: see 340A. Blend to be reviewed during preparation of mortar samples.

  Observe existing stone and pointing (sample areas to be agreed with CA) that is in good condition and replicate colour and texture.

320A SAND FOR LIME:SAND MASONRY MORTARS

- Generally:
  - Well graded specifically for lime mortars, clean, sharp, free from loam, salts, organic matter and other impurities. Select sand so that the largest particle size is 1/3 joint height, adjust according the thickness of joint.
  - Purchase from specialist suppliers for lime mortars. Ordinary 'builders sand' / 'sharp sand' and the like normally sold for cement mortars and renders etc. will not be accepted.
  - Sand is to be selected for colour, texture and grading, suitable for its purpose and to blend with existing stone and/or pointing.
- Sands unless otherwise specified:
  - Nosterfield sharp grit sand with softer Leighton Buzzard sand added for workability.

340A POZZOLANIC ADDITIVES FOR NONHYDRAULIC LIME:SAND MORTARS

- Type option 1:
  - Burnt / calcined clay pozzolan.
  - Manufacturer/ Supplier: Argical.
  - Product reference: M-1000 Metakaolin (or similar approved.
- Type option 2:
  - Brick dust: freshly ground brick dust, particle sizes between 38 and 600 microns well graded. Bricks must be low fired (below 950dC).
  - Manufacturer / Supplier: Contractor's choice from specialist lime mortar supplier.
- Mixing: Mix thoroughly into mortar during knocking up, shortly before use.
- Proportions:
  - Burnt clay: No more than 5%.
  - Brick dust 1 part to 9 parts freshly prepared mortar or more as approved for work at exposed and ground level locations.

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 non-hydraulic lime putty: Prevent drying out and protect from frost.
- Non-hydraulic 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.

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.

500A MORTAR SAMPLES

- Provide up to 5 biscuit mortars samples for each type of mortar mix required. The approved mortar samples will be subject to dried mortar samples on the basis of a) broken biscuit samples, and b) wall samples showing the completed finish / joint treatment. Notify the architect of the mix components and ratios for all samples.
- Give one week's notice for the availability of mortar samples for inspection and allow a further two weeks in the programme for any adjustments of the samples and obtaining approval via an Architect's Instruction.
- Allow for two samples for each type of mortar mix to be taken forward as sample areas of re-pointing to each elevation; allow for two types of mortar mix in re-pointing the elevations.

510A WEATHER AND PROTECTION

- Tend to all freshly laid mortars to ensure slow, proper and complete curing.
- Protection materials: Hessian, dampened down if necessary to help control evaporation of moisture in the mortar. Mist spray mortars if necessary to ensure controlled drying, curing and carbonation.

MORTAR MIXES

605 GENERALLY

- Proposals or adapting the mortar mixes as specified from masons and conservators experienced in lime mortars are welcomed. Good conservation work often includes team work.
- Do not adapt mortars without first seeking the approval and Instruction from the Architect and CA.

607 PERFORMANCE

- Mortar mixes are intended to be designed to be either feebly hydraulic for sheltered locations moderately hydraulic for exposed locations and eminently hydraulic for flaunchings.

620A MIX FOR ASHLAR

- Bedding: 1:2 Quicklime to Sand (1 Nosterfield : 1 Leighton Buzzard or other sands conforming to this specification, subject to sample approval, submit proposals).
- Pointing: As per bedding mix in ratio 2:5 (1:2.5).
- Pozzolan:
  - Brick dust in proportion as specified for sheltered locations, subject to approval.
  - Calcined clay in proportion as specified for exposed locations.
  - Mix of both brick dust and calcined clay subject to approval of agreed ratios.

Part III - Schedule of Work

Contents

This Schedule of works is to be read in conjunction with:

- **Preliminaries**
- **Materials and Workmanship**
- **Appendix Documents**
- **Drawings as specified on the Document Issue Sheets**

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
A.0	**PREPARATORY WORKS**				
A.1	Allow for installing name board complete: support, framing and backing - approx. sizing 1.5mx2.0m. Allow for obtaining Project sign with name of church, project works and contact details. Allow for funding signage, contractor sign board and three no. consultant sign boards. Location to be adjacent church notice board as indicated on drawing 4001.				
A.2	Allow for samples to be approved by architect on site in accordance with clauses C41/190 for control samples and C41/215 for material samples.				
A.3	Carry out a full photographic record of all areas of the contract works and provide electronic copies of referenced and dated photos to the PCC and CA before commencement of works. This is to include all adjacent elements that could be affected by damage.				
	SECTION TOTAL:				
1.0	**HIGH LEVEL REPAIR WORKS**				
1.1	**Preparatory Works**				
1.1.1	Security: In accordance with Spec clause A34-150, C31-410. Scaffolding, hoarding and security to be in accordance with the Church insurance requirements and conditions - See the completed Ecclesiastical Insurance Form – Scaffolding Checklist in the Appendix A. The contractor is to include for all works identified in Appendix A to ensure compliance and to enable the necessary insurance cover to be put in place prior to commencement of works. The form will be signed and submitted to the insurers once the contractor has satisfied the contract administrator that the requirements have been fully met at the pre-contract meeting. The contractor is to include all costs associated with lighting and alarm requirements and as noted in the 'comments' of the relevant questions on the form (see Appendix A).				
1.1.2	Protection: In accordance with Spec Section A34, together with special attention to A34-560 and clauses C31/330, C31/331, C41/160; Section L50 – clauses 40 and 41. Protect building interiors from weather where windows are removed to the studio for conservation work. Allow full well fitting plywood sheeting – no physical fixing into masonry permitted. Fire: in accordance with A34-380. No hot works permitted without prior approval from CA and with a Hot Works Permit in place.				
1.1.3	Scaffold: Access and working scaffold required to carry out				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
	works to Golden Chapel parapets and windows, South Porch parapets and Nave easterly pinnacles. Areas have been indicated on drawing TONG.13-4001 to show possible location for scaffold access point. In accordance with Spec Section C31 with special note to clause C31-130, 210.				
1.1.4	Services: Prior to the commencement of any masonry works allow for the careful protection/isolation and localised removal of external light and security fittings and cabling in the proximity of the works. Allow for reinstatement, cleaning and testing upon completion of the masonry works.				
1.1.5	Upon completion of access scaffold and before commencing work allow for detailed inspection of all high level masonry with architect to agree final scope.				
1.1.6	Allow for samples to be approved by architect on site in accordance with clauses C41/190 for control samples and C41/215 for material samples.				
1.1.7	Pinning of Masonry: In accordance with clause C41/640. Do not use adhesive to bond stones at joints unless agreed otherwise. During the removal of masonry units, any areas where embedded with – iron, lead, copper, slate is identified, record the area and report to the Architect prior to undertaking further removal works. On discovering embedded iron, all such items are to be removed with minimum disturbance to surfaces. When fixing new dowels into pinnacles and merlons, drill out existing fixings and re-bed with SS dowels fixed in resin on bottom, lime on top. Dowels are to be 10mm diameter stainless steel, Grade 316L, 150mm in length, unless otherwise specified.				
1.2	**Golden Chapel Masonry Repairs**				
	Refer to *Drawing Tong.13-3001 - Golden Chapel - High Level Masonry Repairs, Appendix C – Photographic Schedule and specification sections C41 and Z21.*				
1.2.1	Allow for removing stone and cleaning of pointing mortar to bedding joint, realigning and resetting of South East Pinnacle in its original position in accordance with SofW item 1.1.7.				
1.2.2	Allow for removing stone, cleaning of pointing mortar to bedding joint and resetting Central West Merlon in its original position in accordance with SofW item 1.1.7.				
1.2.3	Allow for investigations to Central South Pinnacle (refer to drawing 3001 for further details). Allow for careful removal of pinnacle to assess state of fixing. Allow for pinning fracture/crack to pinnacle base and reinstatement.				
1.2.4	Allow for raking out and re-pointing all joints affected by replacement stone work. Note appearance of pointing from areas of sound masonry as reference for new pointing.				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
	To rest of stonework, where pointing has weathered away beyond 10mm and joints are open, allow for preparing joint and re-pointing using a lime mortar mix as agreed with architect. Refer to item A.13 for required samples and Z21 for specified mortars. For pricing purposes, please allow for repointing: all joints above top buttress string course on external face and above lead flashing on inner face.				
1.3	**South Porch Masonry Repairs**				
	Refer to *Drawing Tong.13-3002 - South Porch - High Level Masonry Repairs, Appendix C – Photographic Schedule and specification sections C41 and Z21.*				
1.3.1	Allow for removing stone and cleaning of pointing mortar to bedding joint, realigning and resetting of North Merlon (on East side) in its original position in accordance with SofW item 1.1.7.				
1.3.2	Allow for filling pocket with lime mortar on the South Merlon (on West side)				
1.3.3	Allow for new South West pinnacle in single piece as original. Record and measure existing pinnacle with photographs and sketches in order to produce shop drawings of its original shape (clause C41/121). Working drawings to be approved by architect prior to dismantling of pinnacle. Provide shop drawings for approval by architect. Allow to carefully dismantling fractured pinnacle and setting new pinnacle to existing base and original position in accordance with SofW item 1.1.7.				
1.3.4	Allow for local plastic repair and new mortar bed at the base of Cross on Central South Merlon. Provide Mortar samples and refer to Section Z21.				
1.3.5	Allow for full indent at base stone of South East pinnacle, refer to clause C41/340.				
1.3.6	Allow for raking out and re-pointing all joints affected by replacement stone work. Note appearance of pointing from areas of sound masonry as reference for new pointing. To rest of stonework, where pointing has weathered away beyond 10mm and joints are open, allow for preparing joint and re-pointing using a lime mortar mix as agreed with architect. Refer to item A.13 for required samples and Z21 for specified mortars. For pricing purposes, please allow for repointing: all joints above top buttress string course on external face and above lead flashing on inner face.				
1.4	**Miscellaneous Fabric Repairs**				
	Refer to *Appendix C – Photographic Schedule and specification sections C41 and Z21.*				
1.4.1	Nave north east pinnacle - Apex stone of pinnacle loose and able to rock. Allow for removing stone and cleaning of pointing mortar to bedding joint, realigning and resetting in its original position with stainless steel dowels (clause C41/640).				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
1.4.2	Nave south east pinnacle - Apex stone of pinnacle fallen on to south aisle roof following recent heavy winds. Allow for removing stone and cleaning of pointing mortar to bedding joint, realigning and resetting in its original position with stainless steel dowels (clause C41/640).				
1.4.3	Golden Chapel Sanctuary Step - the northern-most stone has deteriorated quite badly, it has cracked/split horizontally and is beginning to break down. Allow for consolidating and pinning (clause C41/640), together with re-pointing all step joints.				
1.4.4	Golden Chapel Door Threshold – the raised stone threshold presents as a trip hazard to church users. Allow for forming oak cover step stained dark to match chapel door. Allow for adding a 25mm oak tread scribed around the profiled stone door reveals with oak risers front and back. The whole to drop snuggly over the existing stone threshold. Allow for a chamfered stop edge detail to the two nosings and allow for picking out the chamfer in red stain. Allow for insetting brass studs at 200mm centres along both nosing edges. Allow cover step dimensions – 1000mm length x 300mm depth x 250mm high				
1.4.5	South Aisle Screen Threshold – the raised timber threshold presents as a trip hazard to church users. Allow for forming oak cover step stained dark to match screen. Allow for adding a 25mm oak tread scribed around the profiled screen reveals with oak risers front and back. The whole to drop snuggly over the existing oak threshold. Allow for a chamfered stop edge detail to the two nosings and allow for picking out the chamfer in red stain. Allow for insetting brass studs at 200mm centres along both nosing edges. Allow cover step dimensions – 800mm length x 150mm depth x 150mm high				
	SECTION TOTAL:				
2.0	**SOUTH ENTRANCE RE-ORDERING**				
	Refer to *South Porch and Aisle Re-ordering Schedule of Fixtures and Pews, Proposals and Impact Assessment, Drawings referenced Tong.13 and Appendix F, G and H.*				
2.1	**Preparatory Works**				
2.1.1	Protection: In accordance with Spec Section A34, together with special attention to A34-560.				
2.1.2	Pulpit Fall – (pages 6 and 7 of the fixtures schedule) the conservation works and display of the pulpit fall are completed – it is located on the south wall of the south aisle as shown on the drawings.				
2.2	**Glass Entrance Doors - Contractor's Design**				
2.2.1	Supply and install oak sub-frame and glass doors in accordance with spec cause L20-280, drawings 2200,2201, 2202 and 3201.				
2.2.2	Allow for preparing design and shop drawings in accordance with A30-520.				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
2.3	**Existing Church Fixtures, Fittings, Joinery**				
2.3.1	All existing loose furniture and fittings currently present in the works area that are not involved in the re-ordering are to be removed by the PCC prior to commencement of works.				
2.3.2	Existing Notice Boards - see page 3 of Fixtures Schedule; Relocate notice board A1 as shown on drawing Tong.13-2201. Remove notice board A2 and hand to client. Make good fixing damage to stone walling.				
2.3.3	Existing Hymn Book Shelving Unit – Currently located to east of door built in to existing pew seat – see page 3 of Fixtures Schedule; Allow for carefully separating from existing pew seat; Allow for adapting shelf unit to be freestanding and stable including all levelling, backing etc. To be located elsewhere in church. NB: New shelving to accommodate hymn books – same number and size in similar stacking arrangement.				
2.3.4	Existing Coin Box – see page 3 of Fixtures Schedule - allow for removing from wall and handing to client. Make good stone walling with new stone indent carefully tooled to match existing. New secure coin box to be incorporated into west base storage unit – to underside of unit with coin slot cut into display top – Dwg Tong.13-3200. Allow for supply and fitting My Charity Boxes – MEL-08.				
2.3.5	Entrance Curtain and Pelmet – see page 3 of Fixtures Schedule - allow for carefully removing complete and handing to client. Make good fixing damage to stone walling.				
2.3.6	Brass Plaques - see page 5 of Fixtures Schedule – allow for relocating brass plaques I and J between plaques K and L. Make good fixing damage to stone walling.				
2.3.7	Existing Arcade Display Shelf – see page 5 of Fixtures Schedule - Allow for carefully removing two octagonal shelfs and handing to client. Make good fixing damage to stone arcade.				
2.3.8	Pews – carry out all specialist joinery works in accordance with spec section C51 and to traditional methods associated with removal, relocation and adaptation of pews as described in Section 2 (pages 9 to 14) of the Schedule of Fixtures.				
2.3.9	Pew Platform – allow for removing pew platform locally to proposed display and storage areas and finish to new kerb detail to match existing around proposed display and storage units. As shown on dwgs Tong.13-2200 and 3200.				
2.4	**Flooring**				
2.4.1	Excavation - To be read in conjunction with spec section D20. Arrange attendance of archaeologist during excavations for new slabs to proposed display and storage areas. Hand dig only.				
2.4.2	Sub-Floor and Screed: To be read in conjunction with spec section E10 and spec clause E10-185 (manufacturer's instructions – see appendix F).				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
2.4.3	Finished Floor: Quarry Tiles - To be read in conjunction with spec section M40 and spec clause M40-110.				
2.5	**Display and Storage Joinery - Contractor's Design**				
	To be read in conjunction with spec sections A30-520,G20,L40, N10,P21				
2.5.1	Allow for design, supply and fitting new built-in display and storage cupboards and shelving as shown on drawings Tong.13-2202 and 3200 and Appendix H.				
2.5.2	Allow for preparing design and shop drawings in accordance with A30-520.				
2.5.3	Provide samples of specified timber and stained and waxed finished samples to match existing as Spec Section M60.				
2.5.4	Select, supply and fit ironmongery in accordance with Spec Section P21 and Appendix G. Submit samples for approval.				
2.5.5	Allow for developing display case layouts to include provision for flexibility of display with option for shelving/ledges. Display case interior is to be of a pin board type with neutral colour linen canvas cover.				
2.5.6	Display cabinet for canon ball to be developed based on sketch in Appendix H				
2.5.7	Base storage cupboards to have provision for two shelves in each on a flexible spacing support system.				
2.6	**Services - Contractor's Design**				
	To be read in conjunction with spec section V90.				
2.6.1	Include for the provision of all necessary power and control wiring to complete the proposed south aisle display area. This is to include all items of equipment detailed in this specification. It is the responsibility of the tenderer to ensure that all costs are included for all associated electrical work.				
2.6.2	All service routes are to be agreed with architect before commencement of works.				
2.6.3	All services are to be concealed where ever possible – beneath pew platforms, behind cupboards, within floor void on top of high level cupboards etc. Where exposed cabling is to be simply sheathed and painted to match background to be as discrete as possible.				
2.6.4	Allow for installing services and fittings as noted below and on drawing Tong.13-3200.				
2.6.5	Church light switch plate – see page 4 of the Fixtures Schedule – allow for incorporating in to new display.				
2.6.6	Concealed lighting strip at high level to both tall display cases.				
2.6.7	Picture light – supplied by client over Pulpit Fall.				
2.6.8	Double sockets to side of each display unit.				
2.6.9	Socket located in base cupboard with cable access grommet (sample to approval) set in counter top to service Card Reader.				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
2.6.10	Supply to touch screen and associated kit for heritage display inset into base cupboard counter.				
2.6.11	Electrical switch and socket plates: Heritage Electrical Studio Range Flat Plate Screwless by SDS London Architectural Ironmongery – Antique Brass. Or similar approved.				
	SECTION TOTAL:				
3.0	**NORTH TRANSEPT RE-ORDERING – TONG.14**				
	Refer to *North Transept Re-ordering Schedule of Fixtures, Proposals and Impact Assessment, Drawings referenced Tong.14 and Appendix F and G.*				
3.1	**Preparatory Works**				
3.1.1	Protection: In accordance with Spec Section A34, together with special attention to A34-560.				
3.1.2	Organ – see page 4 of Fixtures Schedule - liaise with organ specialist to ensure full dust proof protection of organ is in place – appendix E				
3.1.3	There is a narrow access route into the North Transept. Ensure all memorials and tombs are well protected before commencing works.				
3.2	**Existing Church Fixtures, Fittings, Joinery**				
3.2.1	All existing loose furniture and fittings currently present in the works area that are not involved in the re-ordering are to be removed by the PCC prior to commencement of works.				
3.2.2	Tombs – The Humphrey Vernon Tomb is to have been dismantled and relocated – see section 5.				
3.2.3	Floor Memorials - see page 2 of Fixtures Schedule; protect throughout works. No fixings allowed into memorials.				
3.2.4	Wall Memorials - see page 3 of Fixtures Schedule – allow for relocating the two war memorials as shown on Tong.14-2201. Make good fixing damage to stone walling.				
3.2.5	Pictures 1,23 and 6 - see page 3 of Fixtures Schedule – remove from wall and hand to client.				
3.2.6	Cleaners Cupboard – see page 3 of Fixtures Schedule – assist Client in emptying and removing from church.				
3.2.7	Organ – liaise with organ specialist to agree location for organ pump behind proposed screen wall – see page 3 of Impact Assessment and appendix E.				
3.2.8	Sound System – carefully disconnect and move out of area to temporary agreed location with client – see page 3 of Impact Assessment.				
3.2.9	Electrical intake + switch gear - see page 3 of Fixtures Schedule – to be protected and maintained throughout works.				
3.3	**Flooring**				
3.3.1	Excavation - To be read in conjunction with spec section D20. Arrange attendance of archaeologist during excavations for new slab where the Humphrey Vernon Tomb has been				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
	removed. Hand dig only.				
3.3.2	Sub-Floor and Screed: To be read in conjunction with spec section E10 and spec clause E10-185 (manufacturer's instructions – see appendix F).				
3.3.3	Finished Floor: Quarry Tiles - To be read in conjunction with spec section M40 and spec clause M40-110.				
3.4	**Storage Screen Wall Joinery - Contractor's Design**				
	To be read in conjunction with spec sections A30-520,G20, L20, P21				
3.4.1	Allow for design, supply and fitting new storage screen wall joinery as shown on drawings Tong.14-2001, 2200, 2201, 2202, 3200 and 3201.				
3.4.2	Allow for preparing design and shop drawings in accordance with A30-520.				
3.4.3	Provide samples of specified timber and stained and waxed finished samples to match existing as Spec Section M60.				
3.4.4	Select, supply and fit ironmongery in accordance with Spec Section P21 and Appendix G. Submit samples for approval.				
4.0	**SELECTED WINDOWS**				
	Refer to specification C41 and L50				
4.1	The windows requiring conservation repair to the leaded lights, ferramenta and stone under the Phase III Project are referenced on The key plan in Appendix B and Photographic Schedule in Appendix C and are as follows:				
	• Window Ref No. 6 – Golden Chapel Window (Easternmost)				
	• Window Ref No. 6A – Golden Chapel Window (Overlooking Chapel roof)				
	• Window Ref No. 7 – Golden Chapel Window (Westernmost)				
	• Window Ref No. 9 – South Porch East Window				
	• Window Ref No. 10 – South Porch West Window				
	• Window Ref No. 17 – North Transept North Window				
	• Window Ref No. 18 – North Transept East Window				
4.2	A description and condition survey for these windows has been undertaken by Norgrove Studios in 2017 and this can be found in Appendix D.				
4.3	Golden Chapel and South Porch Windows - Protection, Scaffolding and Security - Allow provision in accordance with SofW items 1.1.1, 1.1.2, and 1.1.3 – to be costed here separately for funding purposes.				
4.4	North Transept Windows - Protection, Scaffolding and Security - Allow provision in accordance with SofW items 1.1.1, 1.1.2, and 1.1.3 – to be costed here separately for funding purposes.				
4.5	Inspection – allow for carrying out an inspection with CA in				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
	accordance with specification clauses C41 – 120, L50 - 25 to agree final scope of repair works once full access is made available internally and externally and before proceeding with the removal of any building fabric or repairs.				
4.6	Recording and removal of leaded light windows – by window conservator in accordance with clauses L50-30, 40, 50, 51.				
4.7	After removal of leaded lights allow for removing any loose hard cement, where necessary, from stone reveals – agree extent with CA.				
4.8	Carry out masonry repairs in accordance with specification section C41 and agreed samples.				
4.9	Window Ref No. 6 – Golden Chapel Window (Easternmost): Allow for removal to workshop and full conservator repairs to leaded lights – aim is to allow for addressing the corroding saddle bars, fractured stone and bedding into stone: • Protection – L50-40 • Stone indents – allow for 1 no. internal full depth mullion indent at base –300mm length – see appendix C – photo schedule. • Allow for re-leading – L50-110 • Allow Prov Sum for repairing/replacing localised cracked diamond (5no.) and margin (10no.) glass – L50-80 and L50-90 • Allow for full cleaning of glass – L50-70 • Overhaul ferramenta, allow for cropping and tipping – L50-60, 65, 120 • Reinstate panels and supply and fix new lead cill trays – L50-130				
4.10	Window Ref No. 6A – Golden Chapel Window (Overlooking Chapel roof): Allow for removal to workshop and full conservator repairs to leaded lights – aim is to allow for addressing the corroding saddle bars and bedding into stone: • Protection – L50-40 • Allow for re-leading – L50-110 • Important early plain rectangular glass to be retained and repaired – L50-80 • Allow for full cleaning of glass – L50-70 • Overhaul ferramenta, allow for cropping and tipping – L50-60, 65, 120 • Reinstate panels and supply and fix new lead cill trays – L50-130				
4.11	Window Ref No. 7 – Golden Chapel Window (Westernmost): Allow for removal to workshop and full conservator repairs to leaded lights – aim is to allow for addressing the corroding saddle bars and bedding into stone: • Protection – L50-40 • Allow for re-leading – L50-110				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
	• Allow Prov Sum for repairing/replacing localised cracked diamond (5no.) and margin (10no.) glass – L50-80 and L50-90 • Allow for full cleaning of glass – L50-70 • Overhaul ferramenta, allow for cropping and tipping – L50-60, 65, 120 • Overhaul vertically sliding opening ventilator – L50-66 • Reinstate panels and supply and fix new lead cill trays – L50-130				
4.12	Window Ref No. 9 – South Porch East Window: Allow for removal to workshop for minimal conservator repairs to leaded lights – aim is to allow for addressing the corroding saddle bars and bedding into stone: • Protection – L50-40 • Allow for replacing perimeter/boundary lead came only – L50-110 • Allow for localised re-puttying – L50-69 • All for full cleaning of glass – L50-70 • Overhaul ferramenta, allow for cropping and tipping – L50-60, 65, 120 • Reinstate panels and supply and fix new lead cill trays – L50-130				
4.13	Window Ref No. 10 – South Porch West Window: Allow for removal to workshop for minimal conservator repairs to leaded lights – aim is to allow for addressing the corroding saddle bars and bedding into stone: • Protection – L50-40 • Allow for replacing perimeter/boundary lead came only – L50-110 • Allow for localised re-puttying – L50-69 • All for full cleaning of glass – L50-70 • Overhaul ferramenta, allow for cropping and tipping – L50-60, 65, 120 • Reinstate panels and supply and fix new lead cill trays – L50-130				
4.14	Window Ref No. 17 – North Transept North Window: The current scope of works is for a full internal and external clean of the leaded light panels insitu in accordance with L50-70.				
4.15	Option – costed separately: Allow for removal to workshop and full conservator repairs to main leaded lights only, not tracery eyes – aim is to allow for addressing the corroding saddle bars, fractured stone and bedding into stone: • Protection – L50-40				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
	• Stone indents – allow for 1 no. internal full depth mullion indent at ventilator location –300mm length. 1 no stone indent to cill – 300 x 200 x 500. • Allow for re-leading – L50-110 • Allow Prov Sum for repairing/replacing localised cracked diamond (5no.) and margin (10no.) glass – L50-80 and L50-90 • Allow for full cleaning of glass – L50-70 • Overhaul ferramenta, allow for cropping and tipping – L50-60, 65, 120 • Overhaul vertically sliding opening ventilator – L50-66 • Reinstate panels and supply and fix new lead cill trays – L50-130 £ _____				
4.16	Window Ref No. 18 – East Transept North Window: The current scope of works is for a full internal and external clean of the leaded light panels insitu in accordance with L50-70.				
4.17	Option – costed separately: Allow for removal to workshop and full conservator repairs to main leaded lights only, not tracery eyes – aim is to allow for addressing the corroding saddle bars, fractured stone and bedding into stone: • Protection – L50-40 • Allow for re-leading – L50-110 • Allow Prov Sum for repairing/replacing localised cracked diamond (5no.) and margin (10no.) glass – L50-80 and L50-90 • Allow for full cleaning of glass – L50-70 • Overhaul ferramenta, allow for cropping and tipping – L50-60, 65, 120 • Overhaul vertically sliding opening ventilator – L50-66 • Reinstate panels and supply and fix new lead cill trays – L50-130 £ _____				
	SECTION TOTAL:				
5.0	**MONUMENTS**				
	Refer to *Monument Schedule, North Transept Fixtures Schedule, North Transept Proposals and Impact Assessment, Drawings Tong.13-1000, 2000, 2201*				
5.1	In the first instance we require a specialist conservator to provide a report on the methodology for cleaning and carrying out the works to each of the monuments, together with proposals for dismantling, mounting, fixing and display. • This should include undertaking trial cleaning samples where necessary to inform methodology and specification. • This report will be used to obtain both Faculty approval				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
	and seek funding.				
5.2	Tomb monument for Humphrey Vernon (M7): • Arrange attendance of archaeologist during dismantling as part of a watching brief. • A geo-physical radar survey – see North Transept Proposals and Impact Assessment appendix has established that there are no bones likely to be disturbed. • Dismantle the tomb monument in north transept and set aside the alabaster carved tomb top. • Undertake cleaning and minor repairs to the stone top identified following completion of report noted above. • Prepare it for relocation and display in the south porch (west wall) – to approved mounting detail.				
5.3	Tong Castle Relief Stone (M9): • To prepare the relief stone for permanent display in the south porch (east wall) to involve cutting the back and some cleaning. • To mount the relief stone on the south porch (east wall) – to approved mounting detail.				
5.4	Royal Coat of Arms (M8): • To carry out a full conservation clean on the coade stone, which will involve using a tower scaffold to access it.				
6.0	**COMPLETION OF WORKS**				
6.1	On completion of works, carefully dismantle and cart away the scaffolding, replace all fixtures and fittings, path gravel, turf, etc. affected by works. Carefully remove and cart away all temporary protection, plant, machinery, builder's debris and so forth, and leave the site clean and tidy.				
6.2	On completion of works, flush through the entire disposal systems, and ensure that all is running freely and is free of blockages.				
	SECTION TOTAL:				
7.0	**CONTINGENCY**				
7.1	Golden Chapel, South Porch & South Aisle: Provide the sum of £5,000.00				
7.2	North Transept: Provide the sum of £2,000.00				
	SECTION TOTAL:				
8.0	**PRELIMINARIES**				
8.1	General overheads including staff and management				
8.2	Access Scaffold				
8.3	Accommodation				
8.4	General Facilities				

	Part III - Schedule of Work	Qty.	Unit	Rate £	Total £
8.5	Mechanical Plant				
8.6	Protection hoarding				
8.7	Shoring and temporary works				
	SECTION TOTAL:				

	SUMMARY				
A	PREPARATORY WORKS				
1.0	HIGH LEVEL REPAIR WORKS				
2.0	SOUTH ENTRANCE RE-ORDERING				
3.0	NORTH TRANSEPT RE-ORDERING				
4.0	SELECTED WINDOWS				
5.0	MONUMENTS				
6.0	COMPLETION WORKS				
7.0	CONTINGENCY				
8.0	PRELIMINARIES				
	TOTAL:				

Part IV Appendix

Contents

Appendix A: Ecclesiastical Insurance Form – scaffolding checklist

Church scaffolding questionnaire

Cover for theft of external metal when scaffolding is in place

The presence of scaffolding on a building can seriously compromise security, so our insurance policies generally exclude theft of metal (usually on roofs) when scaffolding is in place. However, we can provide cover against theft of external metal if you implement additional security requirements.

We can provide cover up to the sum insured, as detailed in the property damage section of your policy document, for theft of **external** metal and any subsequent damage.

Our minimum requirements while scaffolding is in place

All churches with scaffolding in place need to meet the requirements below for their church insurance to be valid.

- Make sure that any low level ladders, including access ladders, are removed from the site, or made inaccessible at the end of each working day.
- Enclose the base of the scaffolding in metal or timber sheeting, to a minimum height of 3.0 metres.

Our requirements if your church would like cover for theft of metal while scaffolding is in place

For theft of metal cover to be granted you will need to comply with all the requirements detailed in the questionnaire overleaf and:

- Enclose the base of the scaffolding in metal or timber sheeting, to a **minimum height of 4.0 metres**.
- You must also have applied SmartWater® (or an alternative forensic marker approved by Ecclesiastical), put up the warning signage in a prominent position and registered the product.
- If your church has a metal roof covering you must have a roof protection system installed to a specification approved by Ecclesiastical, which is linked to a monitoring service and is regularly maintained.

Due to the technical nature of the requirements in the checklist, we recommend that your Project, Inspecting Architect or Surveyor should complete this questionnaire. We also recommend that this is done in the planning stages of any building work to ensure required security requirements are in place before works commence.

Ecclesiastical

Questionnaire (check and tick as appropriate)

Any church seeking cover for external metal theft, while scaffolding is erected, must complete, sign and return this questionnaire to Ecclesiastical before work commences. We will then advise you if we are able to provide any cover for your church.

Scaffolding Specification

(a) The scaffolding will be fully enclosed by minimum 18mm exterior grade plywood sheeting or steel sheeting hoarding to a minimum height of 4.0 metres.
Please note oriented strand board (OSB) is not an acceptable form of hoarding.

Yes ✔ No ☐

Comments

By Main Contractor

(b) All joints of the plywood or steel sheeting facing will be tightly butted to prevent tools being used to prise them apart.

Yes ✔ No ☐

Comments

By Main Contractor

Fixing

(c) 100mm annular ring shank nails at 150mm centres will be used to fix the plywood boards to the timber frame. Tamper proof screws may be used as an alternative.

Yes ✔ No ☐

Comments

By Main Contractor

(d) The bottom of the hoarding will follow the contour of the ground leaving no gaps between the hoarding and the ground.

Yes ✔ No ☐

Comments

By Main Contractor

(e) Where the hoarding abuts a building, the plywood or steel sheeting will be cut to match closely the contours of the building to prevent any gaps being formed.

Yes ✔ No ☐

Comments

By Main Contractor

Questionnaire (check and tick as appropriate)

Doors and access

(f) All lower level ladders including access ladders to any scaffolding will be removed from the site, or, rendered inaccessible at the end of each working day. Yes ✔ No ☐

Comments

By Main Contractor

(g) Any doors let into the hoarding will be of exterior grade solid wood type fitted in a purpose built frame. The door and frame must be flush with the exterior face of the hoarding. Heavy duty 75mm x 100mm steel butt hinges will be used to hang the door, the hinge pin being burred over to prevent it being driven out. A minimum of 3 hinges are to be fitted to any door. Yes ✔ No ☐

Comments

By Main Contractor

(h) A 'Yale' latch type lock will be fitted to all doors. When the site is not attended doors must be secured by a heavy duty locking bar, secured to the door and frame by bolts bolted through. The locking bar must conceal the bolt heads. A heavy duty close shackled padlock conforming to at least BS EN 12320 security grade 4 and designed for external use will be used to secure the locking bar. Yes ✔ No ☐

Comments

By Main Contractor

(i) The inside of the scaffold will be adequately floodlit with floodlights angled inwards and up through the scaffold illuminating its entire height. These lights must be switched by photo-electric cell for illumination at night only. Yes ✔ No ☐

Comments

By Main Contractor - to install system utilising existing lighting equipment obtained from the Church PCC which has been purchased to service previous high level church works with scaffolding requirements. Liaising with Church Electrician - Peter Booth Electrical Contractors Ltd. - where required.

Questionnaire (check and tick as appropriate)

Intruder detection

(j) The scaffolding will be protected by a scaffolding alarm system in accordance with NSI (NCP115) or SSAIB (SS2006) codes of practice for the design, installation and maintenance of scaffolding alarm systems. **If you currently have an approved roof protection scheme installed, this may be temporarily extended to protect the scaffolding as an alternative to installing a separate scaffolding alarm system. If you decide to do so, simply ask your alarm installer to confirm to us directly in writing quoting your policy number and go to section (n) below.**

Yes ✔ No ☐

Comments

Main Contractor to liaise with PCC and Church Security, Custom Technology Solutions Ltd, to ensure this requirement is met and costed.

(k) The system will be installed and maintained by a company on the official list of recognised firms of the NSI or SSAIB Inspectorate bodies and must also appear on the local police force list of compliant companies.

Yes ✔ No ☐

Comments

Main Contractor as part of contract requirements to liaise and co-ordinate with the Church Security, Custom Technology Solutions Ltd, to provide the required level of security cover to the scaffolded areas to meet the insurance requirements.

(l) The system will combine notification locally by an instantaneous audible device activation together with notification to a permanently manned alarm receiving centre conforming to BS 5979 or BS EN 50518 via a minimum Grade 2 alarm transmission system under BS EN 50136. The system must be designed to utilise combined PIR detectors and cameras to detect unauthorised movement. Images from devices must be reviewed by the manned alarm receiving centre and action taken if unlawful activity is identified.

Yes ✔ No ☐

Comments

Co-ordinated by Main Contractor - utilising existing camera equipment obtained from the Church PCC which has been purchased to service previous high level church works with scaffolding requirements. Liaising with Church Security, Custom Technology Solutions Ltd, for installation support.

(m) A copy of the scaffolding alarm system design proposal will be sent to Ecclesiastical for approval. The specification must include confirmation by the alarm company that, either sub-contractors will not be used, or specify the extent to which sub-contractors will be used where appropriate.

Yes ✔ No ☐

Comments

Co-ordinated and administered by Main Contractor - Custom Technology Solutions Ltd, Church Security is to allow necessary information to meet this requirement. Main Contractor to allow for all costs.

(n) The scaffolding will be protected by extending our approved roof protection system.

Yes ✔ No ☐ N/A ☐

If yes, please name your roof protection system installer:

To be completed by your Project or Inspecting Architect or Surveyor

Company name:

Custom Technology Solutions Ltd.

Address:

Belfont House, Mucklow Hill

Your name:

Sarah Butler

Role:

Church Architect

I confirm as the Project or Inspecting Architect or Surveyor for this project that we have completed this questionnaire.

Signature

To be completed by a member of the PCC

I confirm that this questionnaire has been completed by our Project or Inspecting Architect or Surveyor

Church or Church Hall name:

St Bartholomew Church, Tong

Policy Number:

Signed:

Print name:

Your role (e.g. Church Warden)

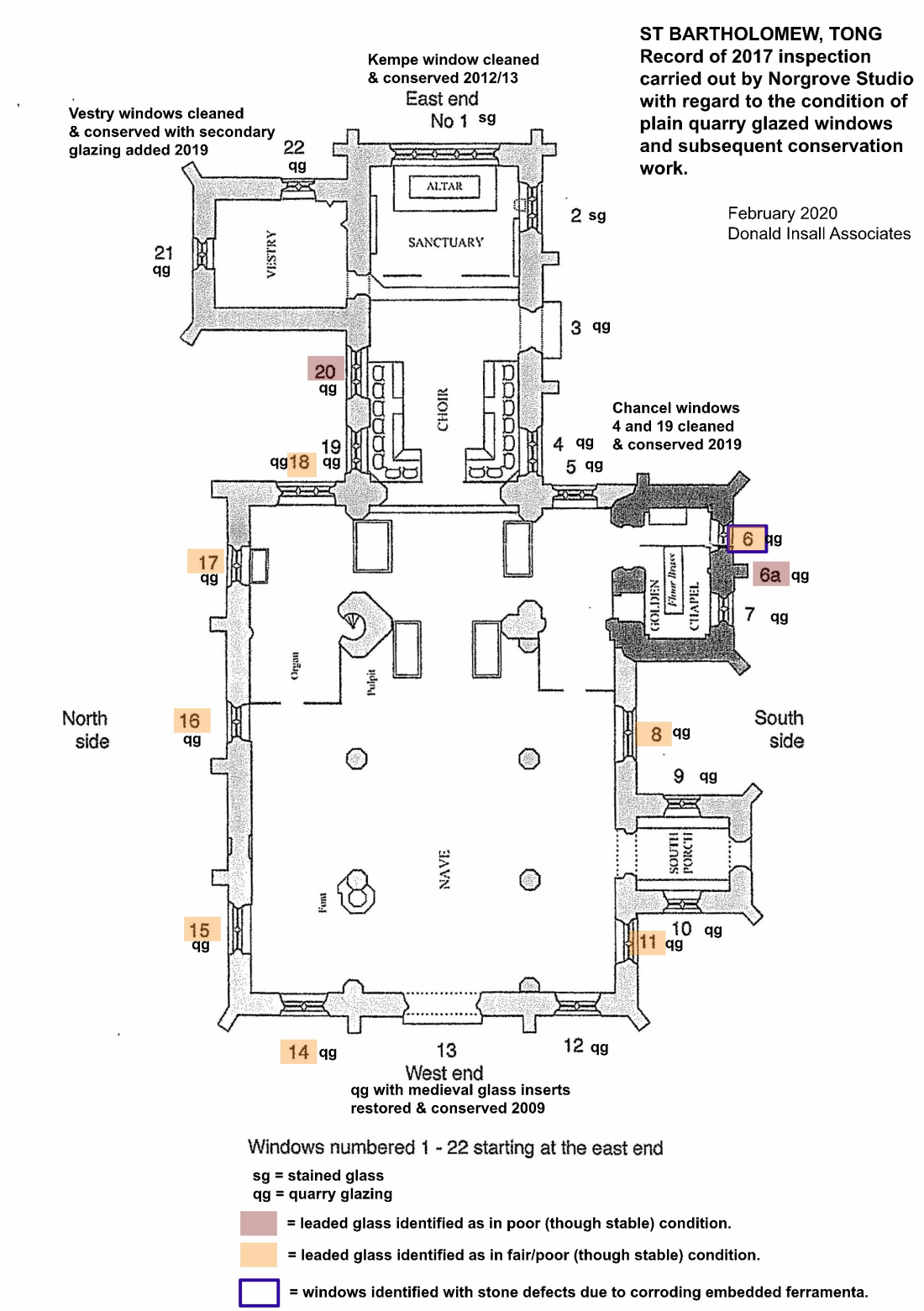
The information provided in this form will be used to determine if we can continue to provide theft of metal cover whilst scaffolding is in place. By signing this form you are confirming that the information is correct to the best of your knowledge.

This checklist should be returned to Church Operations, Ecclesiastical Insurance, Beaufort House, Brunswick Road, Gloucester GL1 1JZ

Should you need any help with the completion of this form please call us on **0345 777 3322** or email **churches@ecclesiastical.com**

PD2237 2 10/19

Appendix B – Key Plan - Windows



Appendix C – Photographic Schedule

GOLDEN CHAPEL

Roof and Parapet

South Elevation and Window Ref Nos. 6 and 7

East Elevation

Window Ref No. 6 - corroded embedded ironwork causing cracking and failure of stone

Failing stone to Sanctuary step

Raised stone threshold to chapel viewed from south transept – trip hazard

Raised stone threshold to chapel viewed from chapel – trip hazard

Raised timber threshold to South Aisle screen – trip hazard

SOUTH PORCH

Roof and Parapet

East Elevation and Window Ref No. 9

West Elevation and Window Ref No. 10

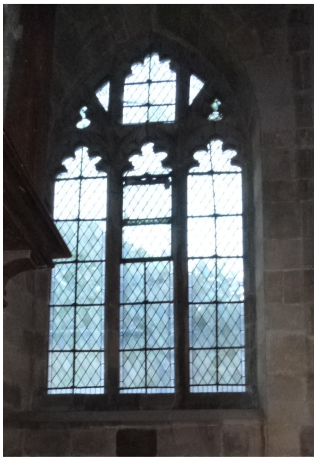
Window Ref No. 10

NORTH TRANSEPT

North Window Ref No. 17

North Window Ref No. 17

East Window Ref No. 18



East Window Ref No. 18

NAVE PINNACLES

Easterly nave pinnacles – both north and south

Both pinnacles are loose, the southerly one recently falling during Storm Dennis.

Appendix D – Windows Condition Survey

By: TBR SINCLAIR

Norgrove Studios Ltd, Bentley, Redditch, Worcestershire

Site surveyed 18th July 2017

SOUTH CHAPEL SOUTH WINDOW (Easternmost) (No. 6 – key plan)

GENERAL
A late 19th C plain glazed window, of 2 lights with arched heads, each approx 73" by 15", suspended on internal wrought iron saddle bars interlinked with single vertical stanchions, set direct to stone.
Window embrasure dating from the erection of the Chapel.
This window retains original leading and glass.

Leaded panels are stable, though bowed and buckled, pointed direct to stone in a very hard grey cement mortar, with no lead cill trays, resulting in staining, water ingress, and damage to the internal face of the stone cills.
Internal supporting saddle bars are rusted.
The window is internally dirty.
The window is unprotected.

GLASS
Plain glazed, this window consists of diamonds of late 19th C rolled cathedral obscured glass, of straw tint, with a border of clear white handmade glass.

CONDITION OF GLAZING.
Two glass leaded panels per light, each supported on 6 horizontal saddle bars & an interlinked vertical stanchion.

Glazing to the main lights fair condition, stable, secured to supporting bars with copper ties.
Slightly bowed and buckled, tight and stable.

Installed in the mid/late 19th C, the glazing to this window retains its original lead profile of ¼" flat leads.
There are no lead cill trays. The absence of lead cill trays prevents the evacuation of any internal moisture (condensation and any rain ingress) & fails to allow the window to breathe.
Evidence of internal moisture penetration indicated by staining & evidence of water damage to the sloping surface of the internal cill.
The window is dirty internally with organic matter & iron oxide.

FERRAMENTA.
Internal, the leaded glazed panels to each main light supported on a single vertical stanchion, interconnected to 6 horizontal bars, square 1/2" by 1/2" wrought iron, secured with copper ties.
The saddle bars appear to be individual and not continuous through the stone.
There is damage to the central mullion caused by rust expansion of bars to the easternmost light.
The ironwork is rusted.

MORTAR.
The window is pointed direct to stone with a very hard dark grey cement mortar.

STONEWORK.
Stonework appears in generally sound condition, disfigured by the application of hard grey mortar.
There is minor stone damage to the internal mullion due to rust expansion of bar ends.
Evidence of moisture penetration is indicated by staining & water damage to the surface of the internal cill.
The hard cement fillet at the foot of each light has been crudely cut away, with a drainage hole created, to permit water evacuation.

ACCESS.
Minor scaffold access would be required for any works to this window.
External & internal access is unimpeded.

SUMMARY.
The leaded glass to the main lights of this window is in fair & stable condition.
The absence of cill trays prevents the evacuation of internal moisture.
Suitably treated, the existing ferramenta can be retained.
The window is internally dirty.

SOUTH TRANSEPT CLERESTORY SOUTH WINDOW (overlooking the Golden Chapel roof) (No. 6A – key plan)

GENERAL
A utilitarian early/mid 19th C two light window of rectangular glazing set to wrought iron frames with internal horizontal saddle bars embedded in the stonework above the south transept south wall, overlooking the Golden Chapel roof.

GLASS
Plain glazed, this window consists of fine handmade mouth blown 18th C broad glass, with occasional poor quality replacement repairs.

CONDITION OF GLAZING.
Single panels per light, each supported on two horizontal saddle bars.

Poor condition, leads failing, several cracks to important glasses.

There are no lead cill trays, but as this window is deeply recessed beneath the eaves of the roof it rarely faces exposure to rain.
The window is dirty internally & externally, with organic matter.

FERRAMENTA.
Internal, the leaded glazed panels to each light are supported on horizontal square section wrought iron saddle bars of 14" square section, as part of a wrought iron subframe, set direct to stone. The glazed panels are secured to the iron frames with lead ties and edge fixtures.
The ironwork is rusted.

MORTAR.
The window is pointed from without with a mortar of unknown make up.

STONEWORK.
Stonework appears in generally sound condition.

ACCESS.
External access is possible from the flat roof to the Golden Chapel
Internal Scaffold access would be required for any works to this window.
Internal access is impeded by the monuments below and the decorative vaulting immediately below and in front of this window.

SUMMARY.
This small window of important early plain glass is in poor condition.
Suitably treated, the existing ferramenta can be retained.
The window is internally & externally dirty.

SOUTH CHAPEL SOUTH WINDOW (Westernmost) (No. 7 – key plan)

GENERAL
A late 19th C plain glazed window, of 2 lights with arched heads, each approx 73" by 15", suspended on internal wrought iron saddle bars interlinked with single vertical stanchions, set direct to stone.
Window embrasure dating from the erection of the Chapel.
This window retains original leading and glass.
Leaded panels are stable, though slightly bowed and buckled, pointed direct to stone in a very hard grey cement mortar, with no lead cill trays, resulting in staining, water ingress, and damage to the internal face of the stone cills.
Internal supporting saddle bars are rusted.
There is a fragile though operational vertically sliding opening ventilator to top of the easternmost light.
The window is internally dirty.
The window is unprotected.

GLASS
Plain glazed, this window consists of diamonds of late 19th C rolled cathedral obscured glass, of straw tint, with a border of clear white handmade glass.

Glazing to the main lights fair condition, stable, slightly bowed and buckled, with occasional fracture of individual glasses caused by deformation.

CONDITION OF GLAZING.
Two glass leaded panels per light, each supported on 6 horizontal saddle bars & an interlinked vertical stanchion.

Glazing to the main lights fair condition, stable, secured to supporting bars with copper ties.
Slightly bowed and buckled, tight and stable, with occasional fracture of individual glasses caused by deformation.

Installed in the mid/late 19th C, the glazing to this window retains its original lead profile of ¼" flat leads.
There are no lead cill trays. The absence of lead cill trays prevents the evacuation of any internal moisture (condensation and any rain ingress) & fails to allow the window to breathe.
Evidence of internal moisture penetration indicated by staining & evidence of water damage to the sloping surface of the internal cill.
The window is dirty internally with organic matter & iron oxide.

FERRAMENTA.
Internal, the leaded glazed panels to each main light supported on a single vertical stanchion, interconnected to 6 horizontal bars, square 1/2" by 1/2" wrought iron, secured with copper ties.
The saddle bars appear to be individual and not continuous through the stone.
There is damage to the cill caused by rust expansion of the vertical stanchion to the easternmost light.
The ironwork is rusted.

MORTAR.
The window is pointed direct to stone with a very hard dark grey cement mortar.

STONEWORK.
Stonework appears in generally sound condition, disfigured by the application of hard grey mortar.
There is minor stone damage to the internal mullion due to rust expansion of bar ends.
Evidence of moisture penetration is indicated by staining & water damage to the surface of the internal cill.
The easternmost cill has been cracked & damaged by rust expansion of the vertical stanchion to the easternmost light, and a poor quality cement mortar repair.

ACCESS.
Minor scaffold access would be required for any works to this window.
External & internal access is unimpeded.

SUMMARY.
The leaded glass to the main lights of this window is in fair & stable condition.
The absence of cill trays prevents the evacuation of internal moisture.
Suitably treated, the existing ferramenta can be retained.
The window is internally dirty.

PORCH EAST WINDOW (No. 9 – key plan)

GENERAL
A late 19th C plain glazed window, of 2 main lights with cusped heads, & one quatrefoil tracery.
Main lights each approx 50" by 12" set direct to stone.
Original perpendicular stone embrasure probably dating from circa 15th C.
The two lights of this window retain their original leading and glass.

Leaded panels are stable, slightly bowed and buckled, pointed direct to stone in a very hard grey cement mortar, with no lead cill trays, resulting in staining, water ingress, and damage to the internal face of the stone cills, with crude hard mortar repair.
External wrought iron supporting saddle bars & vertical stanchion are rusted.
The window is internally & externally dirty.
The window is unprotected.

GLASS
Plain glazed, this window consists of late 19th C clear white handmade cylinder glass, diamonds and border.

CONDITION OF GLAZING.
Single panels per light, each supported on one horizontal saddle bars & an interlinked vertical stanchion.

Glazing to the main lights good/fair condition, stable, secured to supporting bars with copper ties.
Slightly bowed and buckled.

Installed in the mid/late 19th C, the glazing to this window retains its original lead profile of 3/16" lead.
There are no lead cill trays.
The absence of lead cill trays prevents the evacuation of any internal moisture (condensation and any rain ingress) & fails to allow the window to breathe.
Evidence of internal moisture penetration indicated by staining & evidence of past water damage to the sloping surface of the internal cill.
The window is dirty internally & externally, with organic matter, and externally with iron oxide run off from the ferramenta.

FERRAMENTA.
External, the leaded glazed panels to each main light supported on a single stanchion, interconnected to one horizontal bar, of 1/2" square section wrought iron, secured with copper ties.
The saddle bars appear to be individual and not continuous through the stone.
The ironwork is rusted.

MORTAR.
The window is pointed direct to stone with a very hard dark grey cement mortar.

STONEWORK.
Stonework appears in generally sound condition, disfigured by the application of hard grey mortar.
There is some minor stone damage at the foot of each light where vertical stanchions meet stone.
Evidence of internal moisture penetration is indicated by staining & water damage to the surface of the internal cill.

ACCESS.
Scaffold access would not be required for any works to this window.
External & internal access is unimpeded.

SUMMARY.
The leaded glass to the main lights of this window is in fair, stable condition.
The absence of cill trays prevents the evacuation of internal moisture.
Suitably treated, the existing ferramenta can be retained.
The window is internally & externally dirty.

PORCH WEST WINDOW (No. 10 – key plan)

GENERAL
A late 19th C plain glazed window, of 2 main lights with cusped heads, & one quatrefoil tracery.
Main lights each approx 50" by 12" set direct to stone.
Perpendicular stone embrasure probably dating from circa 15th C.
Originally a fine mid/late 19th C plain glazed window, the two lights of this window have lost their original leading and glass, having been replaced entirely within the last 20 – 30 years..

Leaded panels are stable, pointed direct to stone in a very hard grey cement mortar, with no lead cill trays, resulting in staining, water ingress, and damage to the internal face of the stone cills, with crude hard mortar repair.
External wrought iron supporting saddle bars & vertical stanchion are rusted.
The window is internally & externally dirty.
The window is unprotected.

GLASS
Plain glazed, this window consists of modern 20th C dead flat machine made float glass, to diamonds and border.

CONDITION OF GLAZING.
Single panels per light, each supported on one horizontal saddle bars & an interlinked vertical stanchion.

Glazing to the main lights good condition, stable, secured to supporting bars with copper ties.

Installed approx. 20 – 30 years ago, the glazing to this window was built with a heavier lead profile of 1/4" lead.
There are no lead cill trays.
The absence of lead cill trays prevents the evacuation of any internal moisture (condensation and any rain ingress) & fails to allow the window to breathe.

Evidence of internal moisture penetration indicated by staining & evidence of past water damage to the sloping surface of the internal cill.
The window is dirty internally & externally, with organic matter.

FERRAMENTA.
External, the leaded glazed panels to each main light supported on a single stanchion, interconnected to one horizontal bar, of 1/2" square section wrought iron, secured with copper ties.
The saddle bars appear to be individual and not continuous through the stone.
The ironwork is rusted.

MORTAR.
The window is pointed direct to stone with a hard pink building sand cement mortar.

STONEWORK.
Stonework appears in generally sound condition, disfigured by the application of hard pink mortar.
There is some minor stone damage at the foot of each light where vertical stanchions meet stone.
Evidence of internal moisture penetration is indicated by staining & water damage to the surface of the internal cill.

ACCESS.
Scaffold access would not be required for any works to this window.
External & internal access is unimpeded.

SUMMARY.
The leaded glass to the main lights of this window is in fair, stable condition.
The absence of cill trays prevents the evacuation of internal moisture.
Suitably treated, the existing ferramenta can be retained.
The window is internally & externally dirty.

NORTH TRANSEPT NORTH WINDOW (No. 17 – key plan)

GENERAL
A fine mid/late 19th C plain glazed window, of 2 main lights with cusped heads, each approx 82" by 18", with 2 traceries, 3 eyes, suspended on internal wrought iron saddle bars interlinked with single vertical stanchions, set direct to stone.
This window retains its original leading and glass.
Original perpendicular stone embrasure probably dating from circa 15th C.
Generally stable, though bowed and buckled, the main lights are pointed direct to stone in a hard grey cement based mortar, with no lead cill trays, resulting in staining & water ingress to the internal face of the stone cills.
Internal supporting saddle bars are rusted.
There is damage to the cills caused by rust expansion of the vertical stanchions.
There is a fragile vertically sliding opening ventilator to top of the southernmost light, which does not operate.
The window is internally dirty.
The window is unprotected.

GLASS
Plain glazed, this window consists of diamonds of late 19th C decorative art glass, of straw and pastel colouring, with a border of clear white handmade glass.

CONDITION OF GLAZING.
Three glass leaded panels to the westernmost fixed light, supported on 6 horizontal saddle bars & an interlinked vertical stanchion, 4 panels to the easternmost light, supported on 3 horizontal saddle bars & an interlinked vertical stanchion,

Glazing to the main lights fair/poor condition, stable, secured to supporting bars with copper ties.
Bowed and buckled, with occasional fracture of individual glasses caused by deformation, and impact from small stones thrown by strimmer.
Tracery & eyes appear to be in good/fair condition, tight and stable.
Installed in the mid/late 19th C, the glazing to this window retains its original lead profile of ¼" flat leads.
There are no lead cill trays.
The absence of lead cill trays prevents the evacuation of any internal moisture (condensation and any rain ingress) & fails to allow the window to breathe.
Evidence of internal moisture penetration indicated by staining & evidence of water damage to the sloping surface of the internal cill.
The window is dirty internally with organic matter & iron oxide.

FERRAMENTA.
Internal, the leaded glazed panels to each main light supported on a single vertical stanchion, interconnected to 6 horizontal bars, square 1/2" by 1/2" wrought iron, secured with copper ties.
The saddle bars appear to be individual and not continuous through the stone.
The ironwork is rusted.

MORTAR.
The window is pointed direct to stone with a very hard dark grey cement mortar.

STONEWORK.
Stonework appears in generally sound condition, disfigured by the application of hard grey mortar.
The mullion appears to have laminated (split) at the level of the ventilator.
Evidence of moisture penetration is indicated by staining to the surface of the internal cill.
Rust damage at cill level from the vertical stanchions, splitting stone cill to westernmost light.

ACCESS.
Scaffold access would be required for any works to this window.
External access is unimpeded.
Internal access is compromised by the narrow fixed pews immediately in front.

SUMMARY.
The leaded glass to the main lights of this window is in fair/poor condition, (though stable).
The glass to the traceries is in good/fair condition.
There are occasional cracked glasses caused by deformation.
The absence of cill trays prevents the evacuation of internal moisture, though this has been alleviated by alteration of the mortar fillets at cill level.
Suitably treated, the existing ferramenta can be retained.
The window is internally dirty.

NORTH TRANSEPT EAST WINDOW (No. 18 – key plan)

GENERAL
A fine mid/late 19th C plain glazed window, of 3 main lights with cusped heads, each approx 96" by 19", with 1 large tracery, 2 eyes, 2 grenades, suspended on internal wrought iron saddle bars interlinked with single vertical stanchions, set direct to stone.
Perpendicular stone embrasure probably dating from circa 15th C.
The main lights to this window and traceries retain their original leading and glass.

Leaded panels are stable, though slightly bowed and buckled, pointed direct to stone in a very hard grey cement mortar, with no lead cill trays, resulting in staining, water ingress, and damage to the internal face of the stone cills.
Internal supporting saddle bars are rusted.
There appears to be no evidence of damage to the mullions caused by rust expansion.
There is a fragile vertically sliding opening ventilator to top of the southernmost light, which does not operate.
The window is internally dirty.
The window is unprotected.

GLASS
Plain glazed, this window consists of diamonds of late 19th C decorative art glass, of straw and pastel colouring, with a border of clear white handmade glass.
The traceries above are similarly plain glazed.

CONDITION OF GLAZING.
Three glass leaded panels per light, each supported on 6 horizontal saddle bars & an interlinked vertical stanchion, with 4 panels to the centre light, supported on 3 horizontal saddle bars & an interlinked vertical stanchion,
The single tracery is supported on 2 horizontal saddle bars & an interlinked vertical stanchion.

Glazing to the main lights fair/poor condition, though stable, secured to supporting bars with copper ties.
Slightly bowed and buckled, with occasional fracture of individual glasses caused by deformation.
Tracery & eyes appear to be in good/fair condition, tight and stable.

Installed in the mid/late 19th C, the glazing to this window retains its original lead profile of ¼" flat leads.
There are no lead cill trays.

The absence of lead cill trays prevents the evacuation of any internal moisture (condensation and any rain ingress) & fails to allow the window to breathe.
Evidence of internal moisture penetration indicated by staining & evidence of water damage to the sloping surface of the internal cill.
The window is dirty internally with organic matter.

FERRAMENTA.
Internal, the leaded glazed panels to each main light supported on a single vertical stanchion, interconnected to 6 horizontal bars, square 1/2" by 1/2" wrought iron, secured with copper ties.
The saddle bars appear to be individual and not continuous through the stone.
The single tracery is similarly configured, with a single vertical wrought iron stanchion, interconnected to 2 horizontal bars,
The ironwork is rusted.

MORTAR.
The window is pointed direct to stone with a very hard dark grey cement mortar.

STONEWORK.
Stonework appears in generally sound condition, disfigured by the application of hard grey mortar.
There is little indication of stone damage to the internal mullions due to rust expansion of bar ends.
Evidence of moisture penetration is indicated by staining & water damage to the surface of the internal cill, with loss of mortar to open joints of the cill stonework.

ACCESS.
Scaffold access would be required for any works to this window.
External access is unimpeded.
Internal access is compromised by the monument immediately in front.

SUMMARY.
The leaded glass to the main lights of this window is in fair/poor (though stable), condition.
The glass to the traceries is in good/fair condition.
There are occasional cracked glasses caused by deformation.
The absence of cill trays prevents the evacuation of internal moisture, though this has been alleviated by alteration of the mortar fillets at cill level.
Suitably treated, the existing ferramenta can be retained.
The window is internally dirty.

Appendix E – St Bartholomew Church Specialists/Contractors

Main Contractor to liaise and co-ordinate with the following parties, all of whom are currently appointed by the PCC and familiar with the relevant aspect for which they are engaged:

Church Security:

- Church Security Firm – can assist with all camera and alarm connections required to the scaffolding to meet Ecclesiastical Insurance requirements. Please note the PCC have camera fittings which can be used for this purpose.

  Custom Technology Solutions Ltd.
  Belfont House, Mucklow Hill
  Halesowen, West Midlands, B62 8DD.

  Contact: Adrian Luckman
  Email: adrian.luckman@custom-technology.co.uk

Church Electrics:

- Church Electrician – has been involved with the church for a number of years and has recently completed a NICEIC Periodic Inspection for the Church electrics. Can assist with the scaffolding security lighting to meet Ecclesiastical Insurance requirements. Please note the PCC have light fittings which can be used for this purpose.

  Peter Booth Electrical Contractors Ltd.
  Vantage House, Stafford Road
  Newport, Shropshire, TF10 7LZ.

  Contact: Peter Booth
  Email: info@pboothelectrical.com

Church Organ:

- Organ Specialist – a full conservation programme of repairs has just been completed to the organ located adjacent the North Transept. The final element which is to be located is the organ pump behind the proposed new screen storage wall.

  To be consulted with reference to protection to organ during the works and final location of organ pump behind storage wall.

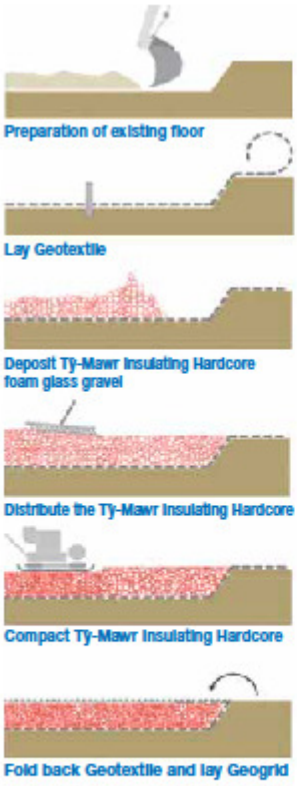
  JW Walker & Sons, Ltd.
  2 Hopton Court, Hopton Park Ind. Estate
  Devizes, Wiltshire, SN10 2EU

  Contact: Sebastian Meakin
  Email: sebastianmeakin@walkerorgans.com

Appendix F – Ty-Mawr SubLime

Tŷ-Mawr
sublime

LABC



- Remove the existing floor, excavate to required depth (as calculated by Tŷ-Mawr) with care, do not undermine foundations, level and compact the surface. This should be done as accurately and consistently as possible for best results plus even small variations over a large floor area will significantly effect the amount of material ultimately required.
- Assess ground water issues consult architect/engineer to provide suitable drainage if required.
- Lay the geotextile membrane over the soil, overlapping the joints by 1 metre. Run the geotextile up the walls far enough to fold back onto the Tŷ-Mawr Insulating Hardcore foam glass gravel layer.
- Put in marker posts to indicate the final level of Tŷ-Mawr Insulating Hardcore foam glass gravel after compaction, as per the specification for your floor.
- Bags can be emptied manually or with the help of crane, telescopic handler etc.
- It is best to deposit Tŷ-Mawr Insulating Hardcore glass foam gravel from the back to the front so that the already distributed material no longer needs to be manipulated.
- The material is normally distributed with a rake or shovel. It is important to ensure 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.
- Compaction is executed with a plate vibrator (~80 - 120kg, approx frequency 100 Hz), or a steamroller (static, ~5t - ~6.5t).
- Compaction is finished when the target level is reached. Further compacting increases the material wear and brings no advantage in load bearing capacity and will reduce thermal performance.
- Fold back the excess Geotextile around the edges over the compacted Tŷ-Mawr Insulating Hardcore.
- Lay the second layer of geotextile and the Geogrid over the surface of the compacted Tŷ-Mawr Insulating Hardcore ready for the fixing of the underfloor heating clip rails.
- Fold back the excess Geotextile around the edges 'before' laying the Geogrid, i.e. Fold back the excess of the second Geotextile.
- If required, screed can be used to weigh down geogrid to prevent rucking.

Tŷ-Mawr sustainable building materials for healthier homes

version 06/2014

Appendix G – Ironmongery

SOUTH AISLE BUILT-IN FURNITURE

2 x Glass fronted display cases:

Hinges – each door to have 11/2 pairs concealed soss type cupboard hinges

Soss Door Hardware

Lock - each door to have 2 x traditional mortice showcase lock

A&E Squire

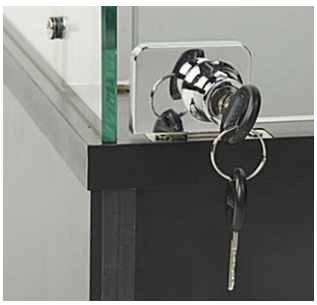
Escutcheon - each door to have 2 x inset Cabinet Key type escutcheon

Horton Brasses

1 x Frameless glass display case for canon ball:

Lock – Glass display case lock

FJM Security



2 x Storage cupboard doors – paired:

Hinges – each door to have 11/2 pairs concealed soss type cupboard hinges

Soss Door Hardware

Lock - each door to have a traditional mortice cupboard lock securing into counter over.

A&E Squire

Escutcheon - Inset Cabinet Key type

Horton Brasses

Cupboard knob – each door to have a 27mm knob – style shown 'planet'

Croft Ironmongery

NORTH TRANSEPT SCREEN STORAGE WALL

Doors D1, D2 rebated pair of doors*, D3, D4, D5 rebated pair of doors*, D6 to have:

Hinges – each door to have 11/2 pairs concealed soss type hinges to suit weight, thickness and width of stiles.

Soss Door Hardware

Door Catch - Adjustable Roller Catch – 5mm

A & H Brass

* paired doors require rebated strike

Door Handle - Flush Ring Handle – 75mm x 75mm

Croft Ironmongery

* paired doors require only one handle

Bolts* – for second leaf of paired doors only – top and bottom

Appendix H – South Aisle Built-In Joinery

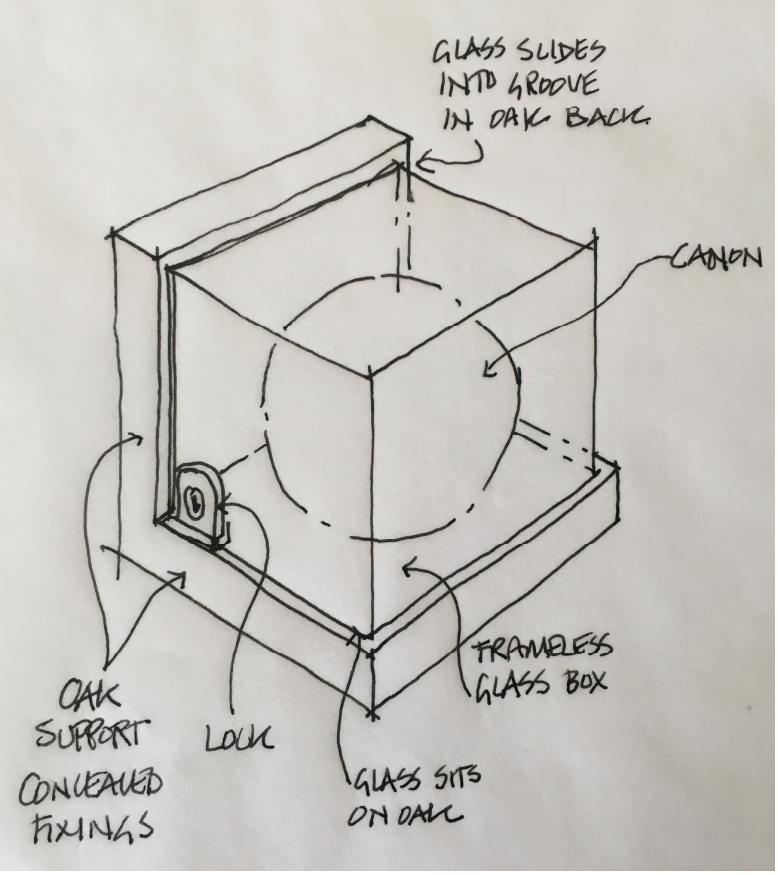
The built in furniture is to draw upon the language of the pew joinery – thickness of pew shelf, bead capping detail, moulded panels etc without slavishly copying.

Capping bead detail carried into display cases as framing detail.

Counter and shelf front edge to have flush beaded detail picking up lines of pew capping.

Display units to capture traditional construction detailing.

Cupboards to have moulded inset panels picking up a combination of scotia, flush bead and chamfers.



Canon Ball Display Cabinet:

See Drawings Tong.13-2202 and 3200