

THOMAS
FORD
& PARTNERS
CHARTERED
ARCHITECTS
SURVEYORS



SPECIFICATION AND SCHEDULE OF WORK

For

TOWER REPAIRS

at

ST PETER'S CHURCH, SWINGFIELD

Job No 657408

Rev A, October 2020

177 KIRKDALE

LONDON

SE26 4QH

TEL 020 8659 3250

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Preliminary Ecological Appraisal in Respect of Proposed Repair Works, 30/09/20, by Philip Parker Associates

657408 Swingfield St Peter's Church, Tower Repairs, Prelims

12 October 2020

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A10 PROJECT PARTICULARS

I10 THE PROJECT

- Name: Swingfield, St Peter's Church..
- Nature: Masonry repairs and Conservation Work.
- Location: St Peter's Church, The Street, Swingfield Street, Kent, CT15 7HA..
- Length of contract: 12 weeks.

I20 EMPLOYER (CLIENT)

- Name: The Churches Conservation Trust..
- Address: Society Building, 8 All Saints Street, London, NI 9RL..
- Contact: Gabriella Misuriello.
- Telephone: 01865 554 809.
- E-mail: gmisuriello@thecct.org.uk.

I30 PRINCIPAL CONTRACTOR (CDM)

- Name: TBC.
- Address: _____.
- Contact: _____.
- Telephone: _____.
- E-mail: _____.

I40 ARCHITECT/ CONTRACT ADMINISTRATOR

- Name: Thomas Ford & Partners.
- Address: 177 Kirkdale, Sydenham, London SE26 4QH.
- Contact: Mr John Bailey.
- Telephone: 020 86590 3250.
- E-mail: john.bailey@thomasford.co.uk.

I50 PRINCIPAL DESIGNER

- Name: Pierce Hill Project Services Ltd.
- Address: Unit 1A Munday Works, Morley Road, Tonbridge TN9 1RA.
- Contact: Helena Joyce.
- Telephone: 01732 471 288.
- E-mail: helenajoyce@phproject.services.

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210 CONSULTANTS

- Description: Bat Ecologist.
- Name: Philip Parker Associates.
- Address: White Row Cottage
Leziate Drove
Pott Row
King's Lynn
Norfolk
PE32 1DB .
- Telephone: 01553 630842.
- E-mail:admin@philipparkerassociates.co.uk

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ALL TENDER AND CONTRACT DOCUMENTS

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110 TENDER DRAWINGS

- The tender drawings are:
 - 657408 EX-010 Location Map
 - 657408 EX-100 Site Plan
 - 657408 EX-110 Ground Plan
 - 657408 DET-100 East Elevation and Turret - Parapet to Ringing Chamber
 - 657408 DET-101 South Elevation and Turret - Parapet to Ringing Chamber
 - 657408 DET-102 West Elevation and Turret - Parapet to Ringing Chamber
 - 657408 DET-103 North Elevation and Turret - Parapet to Ringing Chamber
 - 657408 DET-110 South Elevation and Turret - Base and Plinth
 - 657408 DET-111 West Elevation and Turret - Base and Plinth
 - 657408 DET-112 North Elevation and Turret - Base and Plinth
 - 657408 DET-120 Tower Base - Internal South and West Wall
 - 657408 DET-121 Ringing Chamber - Internal West Wall
 - 657408 DET-122 Ringing Chamber - Internal South Wall
 - 657408 DET-123 Belfry - North and West Window Repairs
 - 657408 DET-124 Belfry - South and East Window Repairs
 - 657408 DET-125 Stair Turret - Interior Repairs
 - 657408 DET-126 Belfry - Internal Louvres .

120 CONTRACT DRAWINGS

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

161 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.
- Additional relevant information is described elsewhere in these preliminaries in Section A34, referring to additional information given elsewhere in the preliminaries, schedules, drawings.

180 OTHER DOCUMENTS

- Inspection: Drawings and other documents relating to the Contract but not included in the tender documents may be seen by appointment during normal office hours at the office of Thomas Ford and Partners Ltd.
- The documents include:
 - Bat survey report.
 - Employers Environmental policy..

A12 THE SITE/ EXISTING BUILDINGS

I 10 THE SITE

- Description: Swingfield is a small village approximately 5 miles north of Folkestone on the North Downs. The church and nearly all houses in the village are set along the main thoroughfare "The Street", which describes an approximately U-shaped curve. The church and church yard occupy a place near the centre of the curved road. The church sits in the southern half of an approximately square churchyard

The church building is vested to the Churches Conservation Trust. The church yard remains in the care of the PCC of Acringe with Swingfield (Elham Valley Group of parishes) and the Friends of St Peter's Church Swingfield.

I 20 EXISTING BUILDINGS ON/ ADJACENT TO THE SITE

- Description: The Church of St Peter, Lychgate, various monuments. The neighbouring plots are either occupied by single domestic dwellings, or are farmland..

I 40 EXISTING UTILITIES AND SERVICES

- Drawings: (Information shown is indicative only): None.
- Other information: The church has mains electricity and mains water, as well as a septic tank and soakaways in the church yard. The septic tank must not be used in conjunction with this work.

I 80 HEALTH AND SAFETY FILE

- Availability for inspection: The Health and Safety File for the site/ building may be seen by appointment during normal office hours at: The Churches Conservation Trust (Employer).
- Other documents: Asbestos survey.
- Arrangements for inspection: by arrangement with Employer.

200 ACCESS TO THE SITE

- Description: Via the lychgate and into the church via the South door.
- Limitations: no vehicular access to churchyard. No use of village green. The site is rural and the access lanes are narrow.

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210 PARKING

- Restrictions on parking of the Contractor's and employees' vehicles:
On street parking is permitted, but restricted by the width of the road. Contractors vehicles must not be parked on the path to the church which is in separate ownership to the site, or in such a way that access to adjoining houses is restricted. Roads in the village must not be blocked for passing farm vehicles. Possible parking on an adjacent field may be possible on the sole discretion of a local group; explicit permission for this needs to be obtained prior to the works. Parking for scaffold delivery and pickup in the yard of the former pub may be possible but only with the express permission of the property's owner.

220 USE OF THE SITE

- General: Do not use the site for any purpose other than carrying out the Works.
- Limitations:
The path from the street may be used for pedestrian access only to the church, but not for storage or any other purpose
The septic tank must not be used in conjunction with this work.

230 SURROUNDING LAND/ BUILDING USES

- General: Adjacent or nearby uses or activities are as follows:
- residential and agricultural.

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:
- Dangerous high-level masonry
- Overhead cables from street to Tower
- Possible burial voids beneath ground
- Unstable areas of tower flooring
- Loose elements of high level masonry
- Restricted site and access.
- Information: The accuracy and sufficiency of this information is not guaranteed. 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: As A10/I20.

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A13 DESCRIPTION OF THE WORK

I20 THE WORKS

- Description: Conservation and Repair to external andn internal tower masonry, localised internal repairs to tower flooring.

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A20 JCT MINOR WORK BUILDING CONTRACT (MW)

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JCT MINOR WORKS BUILDING CONTRACT

- The Contract: JCT Minor Works Building Contract 2016 Edition.
- Requirement: Allow for the obligations, liabilities and services described.

THE RECITALS

First - THE WORKS AND THE CONTRACT ADMINISTRATOR

- The work comprises: Repair and conservation to external and internal tower masonry, localised internal tower repairs.
- Architect/ Contract Administrator: See clause A10/140.

Second - CONTRACT DOCUMENTS

- Contract drawings: As listed in clause A11/120.
Contract documents: The following have been prepared which show and describe the work to be done Specification and drawings.

Third - PRICED DOCUMENTS

- Documents to be priced or provided by the Contractor: Contract specification.

ARTICLES

3 - ARCHITECT/ CONTRACT ADMINISTRATOR

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

4 and 5 - PRINCIPAL DESIGNER/ PRINCIPAL CONTRACTOR

- Principal Designer: See clause A10/150.
- Principal Contractor: See clause A10/130.

CONTRACT PARTICULARS

Fourth Recital and Schedule 2 - BASE DATE

- Base date: Ten days before tender return.

Fourth Recital and clause 4.2 - CONSTRUCTION INDUSTRY SCHEME (CIS)

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

Fifth Recital - CDM REGULATIONS

- The project is notifiable.

Sixth Recital - FRAMEWORK AGREEMENT

- Framework agreement: Does not apply.
- Details:
 - Date: .
 - Title: .
 - Parties: .

Seventh Recital and Schedule 3 - SUPPLEMENTAL PROVISIONS

- Collaborative working: Supplemental Provision 1 Applies.
- Health and safety: Supplemental Provision 2 Applies.
- Cost savings and value improvements: Supplemental Provision 3 Does not apply.
- Sustainable development and environmental considerations: Supplemental Provision 4 Does not apply.
- Performance indicators and monitoring: Supplemental Provision 5 Does not apply.
- Notification and negotiation of disputes: Supplemental Provision 6 Applies. Where Supplemental Provision 6 applies, the respective nominees of the parties are:
 - Employer's nominee: Architect.
 - Contractor's nominee: TO BE CONFIRMED .Or such replacement as each party may notify to the other from time to time.

Article 7 - ARBITRATION

- Article 7 and Schedule 1 Applies.

Clause 2.2 - COMMENCEMENT AND COMPLETION

- Works commencement date: November 2020.
- Date for Completion: before 31 March 2021.

Clause 2.8 - LIQUIDATED DAMAGES

- At the rate of £500 per calendar week or pro-rata thereto.

Clause 2.10 - RECTIFICATION PERIOD

- Period: 12 months from the date of practical completion.

Clause 4.3 - INTERIM PAYMENTS

- Interim Valuation Dates:
 - The first Interim Valuation Date is: 4 weeks from the commencement date on site.
 - Thereafter at intervals of: Every 4 weeks.
- Payments due prior to practical completion:
 - Percentage of total value of the work etc.: 95.
- Payments becoming due on or after practical completion:
 - Percentage of the total amount to be paid: 97.5.

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Clause 4.3 and 4.8 - FLUCTUATIONS PROVISION

- The following fluctuations provision applies: Does not apply.
- Where Schedule 2 applies, the percentage addition (paragraph 13) is Does not apply.

Clause 4.8.1 - SUPPLY OF DOCUMENTATION FOR
COMPUTATION OF AMOUNT TO BE FINALLY CERTIFIED

- Period: 3 months from the date of practical completion.

Clause 5.3 - CONTRACTOR'S PUBLIC LIABILITY INSURANCE -
INJURY TO PERSONS OR PROPERTY

- The required level of cover for any one occurrence or series of occurrences arising out of one event:
 - Not less than: £10,000,000.

Clauses 5.4A, 5.4B and 5.4C - INSURANCE OF THE WORKS, ETC. -
ALTERNATIVE PROVISIONS

- Clause 5.4B applies.
- Where clause 5.4A or 5.4B applies, percentage to cover professional fees: 15%.
- Where clause 5.4C applies, insurance arrangements - details of the required policy or policies: N/A.

CLAUSE 7.2 - ADJUDICATION

- Nominating body: RIBA.

Schedule 1 paragraph 2.1 - ARBITRATION

- Appointor of Arbitrator (and of any replacement): President or a Vice president of the: RIBA.

THE CONDITIONS

SECTION 1: DEFINITIONS AND INTERPRETATION

1.4 - RECKONING PERIODS OF DAYS

- Amendments: None.

1.8 - APPLICABLE LAW

- Amendments: None.

SECTION 2: CARRYING OUT THE WORKS

SECTION 3: CONTROL OF THE WORKS

SECTION 4: PAYMENT

SECTION 5: INJURY, DAMAGE AND INSURANCE

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SECTION 6: TERMINATION

SECTION 7: SETTLEMENT OF DISPUTES

JCT PUBLIC SECTOR SUPPLEMENT

- Will be deleted.

EXECUTION

- The Contract: Will be executed Underhand.

CONTRACT GUARANTEE BOND

- Contract Guarantee Bond: Will not be required.

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A30 TENDERING/ SUBLETTING/ SUPPLY

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MAIN CONTRACT TENDERING

I10 SCOPE

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

I45 TENDERING PROCEDURE

- General: In accordance with the principles of: JCT Practice note 5 (series 2).
- Arithmetical errors: Pricing document is dominant.

I60 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.

I70 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.

I90 PERIOD OF VALIDITY

- Period: After submission or lodgement, keep tender open for consideration (unless previously withdrawn) for not less than 26 weeks.
- Date for possession/ commencement: See section A20.

PRICING/ SUBMISSION OF DOCUMENTS

210 PRELIMINARIES IN THE SPECIFICATION

- The Preliminaries/ General conditions sections (A10-A56 inclusive) must not be relied on as complying with SMM7/ NRM2.

250 PRICED DOCUMENTS

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

310 TENDER

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

500 TENDER STAGE METHOD STATEMENTS

- Method statements: Prepare, describing how and when the following is to be carried out:
 - Access, parking, deliveries and site set-up
 - Contractor's Covid-19 Site Policy, with specific regard to this project.
- Statements: Submit with tender. Failure to submit could invalidate the tender.

510 ALTERNATIVE METHOD TENDERS

- General: In addition to and at the same time as tendering for the Works as defined in the tender documents, alternative methods of construction/ installation may be submitted for consideration. Alternatives, which would involve significant changes to other work, may not be considered.
- Alternative tenders: Such alternatives will be deemed to be alternative tenders and each must include a complete and precise statement of the effects on cost and programme.
- Safety method statement: Carry out a health and safety risk assessment for each alternative and where appropriate provide a safety method statement suitable for incorporation in the Health and Safety Plan.
- Full technical data: Submit for each alternative together with details of any consequential amendments to the design and/ or construction of other parts of the Works.
- Submit: with tender.

515 ALTERNATIVE TIME TENDERS

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

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.

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550 HEALTH AND SAFETY INFORMATION

- Content: Describe the organization 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 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: with tender.

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.

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599 FREEDOM OF INFORMATION

- Records: Retain, make available for inspection and supply on request information reasonably required to allow response to requests made under the provisions of the Freedom of Information Act.
- Determination: Submit requests received. Do not supply information to anyone other than the project participants without express written permission.
- Confidentiality: Maintain at all times.

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A3I PROVISION, CONTENT AND USE OF DOCUMENTS

DEFINITIONS AND INTERPRETATIONS

I 10 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.

I 20 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/I40 unless specified otherwise.
- Response: Do not proceed until response has been received.

I 30 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.

I 35 SITE EQUIPMENT

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

I 45 CONTRACTOR'S CHOICE

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

I 55 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 person or legal entity under whose name or trademark the particular product, component or system is marketed
 - Product reference: the proprietary brand name and/ or identifier by which the particular product, component or system is described.
- Currency: References are to the particular product as specified in the manufacturer's technical literature current on the date of the invitation to tender.

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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.

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.

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260 SIZES

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

DOCUMENTS PROVIDED ON BEHALF OF THE EMPLOYER

410 ADDITIONAL COPIES OF DRAWINGS/ DOCUMENTS

- Additional copies: Issued on request and charged to the Contractor.

440 DIMENSIONS

- Scaled dimensions: Do not rely on.

450 MEASURED QUANTITIES

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

460 THE SPECIFICATION

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

DOCUMENTS PROVIDED BY CONTRACTOR/
SUBCONTRACTORS/ SUPPLIERS

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.

640 MAINTENANCE INSTRUCTIONS AND GUARANTEES

- Components and equipment: Obtain or retain copies, register with manufacturer and hand over on or before completion of the Works.
- Information location: In Building Manual.
- Emergency call out services: Provide telephone numbers for use after completion. Extent of cover: office hours only.

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A32 MANAGEMENT OF THE WORKS

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GENERALLY

I 10 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.

I 19 VEHICLE SAFETY REQUIREMENTS

- Vehicle equipment: Ensure that all vehicles have the following:
 - Audible alert to other road users to the planned movement of the vehicle when the vehicle's indicators are in operation.
 - Prominent signage at the rear of the vehicle to warn cyclists of the dangers of passing the vehicle on the inside.
 - Properly adjusted class VI mirror/s or Fresnel lens to eliminate the near side blind spot.
 - Side under run guards.
- Driver training:
 - Drivers must be trained on vulnerable road user safety through an approved course and hold a current valid Certificate of Competence.
 - Drivers must have a valid driving licence and be legally able to drive the vehicle.
- Scheme membership: Submit evidence of registration with and accreditation to the Fleet Operator Recognition Scheme (FORS) .

I 20 INSURANCE

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

I 30 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/I40 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

211 PROGRAMME

- Master programme: Immediately when requested and before starting work on site submit in an approved form a master programme for the Works, which must include details of:
 - Planning and mobilisation by the Contractor
 - Scaffolding installation and dismantling by separate scaffolding contractor
 - Installation and removal of protection, incl clearing up at completion
 - Samples for types of repairs
 - Stonework repairs
 - Subcontractor's work..
 - Work resulting from instructions issued in regard to the expenditure of provisional sums.
 - Work by others concurrent with the Contract.
- Submit one electronic copy on request within 2 days.

245 START OF WORK ON SITE

- Notice: Before the proposed date for start of work on site give minimum notice of two weeks.

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:
 - Date of installation and removal of scaffolding and protection
 - Completion of the repairs.
 - Performance: Record progress against each KPI.
 - Corrective action: If performance falls below target, submit proposals as soon as possible.

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260 SITE MEETINGS

- General: Site meetings will be held to review progress and other matters arising from administration of the Contract.
- Frequency: Monthly.
- Location: St Peter's 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.

280 PHOTOGRAPHS

- Number of locations: all working areas where work is progressing.
- Frequency of intervals: Twice a week, and in shorter intervals to document progress of the work if necessary.
- Image format: JPEG.
- Number of images from each location: Sufficient to show progress.
- Other requirements: Take record photographs before, during and after the works are completed

290 NOTICE OF COMPLETION

- Requirement: Give notice of the anticipated dates of completion of the whole or parts of the Works.
- Associated works: Ensure necessary access, services and facilities are complete.
- Period of notice (minimum): 2 weeks.

310 EXTENSIONS OF TIME

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

CONTROL OF COST

420 REMOVAL/ REPLACEMENT OF EXISTING WORK

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

430 PROPOSED INSTRUCTIONS

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

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440 MEASUREMENT

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

450 DAYWORK VOUCHERS

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

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.

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A33 QUALITY STANDARDS/ CONTROL

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STANDARDS OF PRODUCTS AND EXECUTIONS

I 10 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.

I 20 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.

I 30 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.

I 35 QUALITY OF EXECUTION

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

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.

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SAMPLES/ APPROVALS

211 SAMPLES

- Products or executions: Comply with all other specification requirements and in respect of the stated or implied characteristics either:
 - 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.

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360 RECORD DRAWINGS

- Site setting out drawing: Record details of all grid lines, setting-out stations, benchmarks and profiles. Retain on site throughout the Contract and hand over on completion.

SERVICES GENERALLY

410 SERVICES REGULATIONS

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

SUPERVISION/ INSPECTION/ DEFECTIVE WORK

525 ACCESS

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

530 OVERTIME WORKING

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

540 DEFECTS IN EXISTING WORK

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

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 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.

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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 together with an itemized schedule, retaining duplicate schedule signed as a receipt.

730 MAKING GOOD DEFECTS

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

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A34 SECURITY/ SAFETY/ PROTECTION

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SECURITY, HEALTH AND SAFETY

121 EXECUTION HAZARDS

- Common hazards: Not listed. Control by good management and site practice.
- Significant hazards: The design of the project includes the following:
 - Hazard: Falling from height.
 - Precautions assumed: All necessary access and safety equipment .
 - Hazard: Lightning strike.
 - Precautions assumed: Do not work on the scaffolding during electrical storms. Link scaffolding to existing lightning protection system.
 - Hazard: Working under loose and dangerous masonry.
 - Precautions assumed: Undertake full risk assessment and protection to working area below.
 - Hazard: Lifting objects over 15kgs.
 - Precautions assumed: All necessary lifting equipment, labour and risk assessments.
 - Hazard: Working with cutting and vibrating equipment and tools.
 - Precautions assumed: Ensure all equipment operated within safe limits to avoid injury such as white finger.
 - Hazard: Working above roofs
 - Precautions assumed: All necessary temporary support, load distribution and protection.
 - Hazard: Working over public areas.
 - Precautions assumed: All necessary temporary protection and signage, separation of public areas and work areas.
 - Hazard: Deliveries and vehicle movements within areas also used by the public.
 - Precautions assumed: All necessary temporary road and path closures, banksmen and warning signs.
 - Hazard: Working in confined spaces with restricted access.
 - Precautions assumed: No single person working. Agree access and escape routes, agree emergency extraction procedures.
 - Hazard: Fire

- Precautions assumed: No hot works on site unless authorised by Architect. Full hot works procedures in place for works.

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131 PRODUCT HAZARDS

- Hazardous substances: Site personnel levels must not exceed occupational exposure standards and maximum exposure limits stated in the current version of HSE document EH40: Workplace Exposure Limits.
- Common hazards: Not listed. Control by good management and site practice.
- Significant hazards: Specified construction materials include the following:

Hazard: Caustic burns.

Material: All lime-based products.

Hazard: Poisoning.

Material: All lead-based products.

140 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

- Submission: Present to the Employer/ Client no later than 3 weeks before commencement 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:
 - Work closely with the CCT Staff on access and security of the Church. Do not enter any areas not authorised
 - External and internal gates and doors to non-public areas: Keep locked at all times.
 - No ladders or materials left on site out of working hours
 - Hoarding to have lockable doors, and be securely fixed.
 - Site compound to be inaccessible for unauthorized persons at all times..

- 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.
- 171 OCCUPIED PREMISES
- Extent: Existing buildings will be occupied and/ or used during the Contract as follows:
The church building will be open to the public throughout the contract, access to the graveyard will be required at all times. The surrounding domestic dwellings will be occupied throughout the contract period.
 - Works: Carry out without undue inconvenience and nuisance and without danger to occupants and users.
- 172 STOPPAGES
- Allow for up to 5, two-hour stoppages during the contract period. All work to cease on site.
- 200 MOBILE TELEPHONES AND PORTABLE ELECTRONIC EQUIPMENT
- Restrictions on use:
 - Reception is poor in some parts of the church. Do not use mobile phones in the chancel (east end).
- 210 SAFETY PROVISIONS FOR SITE VISITS
- Safety: Submit details in advance 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 visitors to the site.
- 221 WORKING PRECAUTIONS/ RESTRICTIONS
- Hazardous areas: Operatives must take precautions as follows:
 - Work area: The site.
 - Precautions: No single person working.

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PROTECT AGAINST THE FOLLOWING

- 331 NOISE AND VIBRATION
- Standard: Comply with the recommendations of BS 5228-1, in particular clause 7.3, to minimize noise levels during the execution of the Works.
 - Equipment: Fit compressors, percussion tools and vehicles with effective silencers of a type recommended by manufacturers of the compressors, tools or vehicles.
 - Restrictions: Do not use:
 - Percussion tools and other noisy appliances without consent during the hours of 6pm to 9am.
 - Radios or other audio equipment are not permitted.
- 340 POLLUTION
- Prevention: Protect the site, the Works and the general environment including the atmosphere, land, streams and waterways against pollution.
 - Contamination: If pollution occurs inform immediately, including to the appropriate Authorities and provide relevant information.
- 350 PESTICIDES
- Use: Not permitted.
- 360 NUISANCE
- Duty: Prevent nuisance from smoke, dust, rubbish, vermin and other causes.
 - Surface water: Prevent hazardous build-up on site, in excavations and to surrounding areas and roads.
- 370 ASBESTOS CONTAINING MATERIALS
- Duty: Report immediately any suspected materials discovered during execution of the Works.
 - Do not disturb.
 - Agree methods for safe removal or encapsulation.
- 371 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: Report to Architect and Cathedral Archaeologist, as A10.

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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.

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440 ELECTROMAGNETIC INTERFERENCE

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

460 POWDER ACTUATED FIXING SYSTEMS

- Use: Not permitted.

470 INVASIVE SPECIES

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

PROTECT THE FOLLOWING

510 EXISTING SERVICES

- Confirmation: Notify all service 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.

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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 have been previously sighted at the junction of the Nave roof and Tower.
- 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.

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560 EXISTING FEATURES

- Protection: Prevent damage to existing buildings, fences, gates, walls, roads, paved areas and other site features, which are to remain in position during execution of the Works.
- Special requirements:
 - Protect engineering brick foot path and Lychgate against impact and staining, remove on completion
 - Protect tombs and headstones in the vicinity of the access route and the site against impact, remove on completion
 - No scaffolding to be installed or removed until relevant protection is in place
 - No work to be carried out until relevant protection is in place.

570 EXISTING WORK

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

580 BUILDING INTERIORS

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

620 ADJOINING PROPERTY

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

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.

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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 overstraining 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.

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**A35 SPECIFIC LIMITATIONS ON METHOD/
SEQUENCE/ TIMING**

I70 WORKING HOURS

Specific limitations: 8-6 Monday-Friday. Working outside these times
by arrangement only.

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A36 FACILITIES/ TEMPORARY WORK/ SERVICES

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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

- Accommodation made available by the Employer: The following may be used for the duration of the Contract without charge provided that:
 - It is used solely for the purposes of carrying out the Works.
 - The use to which it is put does not involve undue risk of damage.
 - Any temporary adaptations are approved by or on behalf of the Employer before being carried out.
 - It is vacated on completion of the Works or determination of the Contract.
 - When vacated, its condition is at least equivalent to its condition at the start of the Contract.
- Description: Contractors' Compound, incl welfare facilities, outside the church building.
- Available services and facilities:
 - There is no sanitary accommodation or hot water available. Cold water is available from the standpipe at the east end of the North Aisle
 - Contractor to provide portable WC, which is to be Covid-19 compliant
 - Contractor to provide covid-19 compliant Hygiene and Sanitation facilities, incl PPE for the workforce as required
 - Contractor to provide Contractor's Compound, enclosed with Heras fencing.

TEMPORARY WORKS

320 TEMPORARY WORKS

- Employer's specific requirements: Provide:
 - Public safety screens/ hoardings externally: As described in work schedule.
 - Responsibility: Accept responsibility for all temporary works.

325 SCAFFOLDING

- Type: Fully independent self-supporting works and access scaffold. Do not support scaffolding off any element of the existing structure
- Responsibility: Accept responsibility for the design, adequacy, stability, integrity and rigidity of scaffold and access structures for the duration of the works.
- Drawings and calculations: Prepare and submit to architect and engineer for comment
Scaffolding and accessories: TBS EN 12811-1 and -2.
 - Ends of tubes: Protect with plastic caps and wadding all ends of scaffold tubes within 25mm of the permanent work.
 - Protective coating for carbon steel tubes and fittings: Protect steelwork and prevent rust staining of façade and other permanent or retained
- Timber scaffold boards: TBS 2482.
- Fans and working platforms above pedestrian areas and means of escape routes: Double boarded with sandwiched tarpaulin material in accordance with the Code of Practice.
- Enclose works levels in reinforced debris netting
- Fit protection and hazard warning markings to base of scaffold in all areas.
- Programme: Erect scaffolds immediately at commencement of the works and dismantle prior to practical completion.
- Erection, alterations and dismantling:
 - Standard of workmanship: Of the highest. The building is Grade II* listed and special care is to be taken in the erection, maintenance, alteration and dismantling of scaffolding.
 - Dismantle: Strike scaffolding prior to practical completion in a careful and orderly manner to avoid any nuisance and obstruction of the public.
- Make the scaffold unclimbable at all times when there's no work going on.
- Scaffold and hoarding to be made secure against intruders at the end of the first day of installation.
Temporary works coordinator: All temporary works must be under the close control of a competent trade supervisor.
- Contractor's representative: To be in attendance at all times during erection and dismantling of scaffolding.
- Lightning protection/ earthing:
 - Method: Bond scaffold to existing lightning conductor system.
 - Testing and certificates: Test temporary installation and submit copy of the test certificate the architect.
 - Retest permanent installation at practical completion after removal of temporary works.
- Other requirements
 - Side sheeting/ debris netting: Where required, to be fire resistant.
 - Ties to existing structure: Not permitted
 - Hoarding to base of scaffold: See A34/150
 - Scaffold must not rest on Nave roof

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327 SCAFFOLD ALARM

- Provide: Scaffold alarm with a remote link to 24 hour security monitoring service.
- Installation and monitoring service: Contractor's choice.
- Guard response call-outs: Submit proposals.
- Other requirements: Prior to commencement notify the church's own alarm monitoring service with the name of the scaffold alarm company and monitoring service.

340 NAME BOARDS/ ADVERTISEMENTS

- Name boards/ advertisements: Not permitted.

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 existing mains may be used for the Works as follows:
 - Metering: Metered by the Contractor and charged to the Contractor.
 - Point of supply: Tower.
 - Available capacity: Not known.
 - Frequency: 50 Hz.
 - Phase: Single.
 - Current: Alternating.
- Continuity: No responsibility will be accepted for the consequences of failure or restriction in supply.

430 WATER

- Supply: The existing mains may be used for the Works as follows:
 - Metering: N/A.
 - Source: Mains.
 - Location of supply point: East End of North Aisle.
 - Conditions/ Restrictions: Maintain a supply point for visitors to the churchyard tending graves.
- Continuity: No responsibility will be accepted for the consequences of failure or restriction in supply.

440 TELEPHONES

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

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540 METER READINGS

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

550 THERMOMETERS

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

570 PERSONAL PROTECTIVE EQUIPMENT

- General: Provide for the sole use of those acting on behalf of the Employer/ Client, in sizes to be specified:
 - Safety helmets to BS EN 397, neither damaged nor time expired.
Number required: 10 hard hats.
 - High visibility waistcoats to BS EN ISO 20471 Class 2. Number required: 10 waist coats.
 - Safety boots with steel insole and toecap to BS EN ISO 20345. Pairs required: 10 pairs.
 - Disposable respirators to BS EN 149.FFP1S.
 - Eye protection to BS EN 166.
 - Ear protection - muffs to BS EN 352-1, plugs to BS EN 352-2
 - Hand protection - to BS EN 388, 407, 420 or 511 as appropriate.

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A37 OPERATION/ MAINTENANCE OF THE FINISHED WORKS

GENERALLY

I 15 THE HEALTH AND SAFETY FILE

- Responsibility: the contractor.
- Content: Obtain and provide the following information: See Pre-Construction Plan.
- Format: AK Ringbinder and also in electronic PDF
- Delivery to: Churches Conservation Trustl By (date): one week before Practical Completion.

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657408 Swingfield St Peter's Church - Tower Repairs W&M

11 October 2020

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C4I Repairing/ Renovating/ Conserving masonry

To be read with Preliminaries/ General conditions

GENERALLY/ PREPARATION

I 10 SCOPE OF WORK

- Schedule: Masonry repairs to the tower:
Removal of vegetation from masonry
Rebuilding unstable areas of masonry
Crack repairs
Grouting
Localised timber repairs
Repointing areas of flint, brick, rubble and ashlar,
Renewal of individual stones and bricks
Mortar repairs to weathered stones.
- 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.

I 20 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: Contractor and Architect.
- Timing: As soon as scaffold access is in place, and from thereon in regular intervals.
- Instructions issued during inspection: by the Architect.

I 30 REMOVAL OF PLANT GROWTHS FROM MASONRY

- Plants, root systems and associated soil/ debris: Carefully remove from joints, voids and facework.
- 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.

I39 REMOVAL OF HARD CEMENT MORTAR

- Remove inappropriate hard cement mortar with great care and as follows:
 - Avoid damage to adjacent/ underlying stonework including arrises.
 - Wherever possible limit techniques to careful prizing off of loose mortar.
 - Bring to the architect's attention any areas of work where it becomes apparent that removal of hard mortars is causing unavoidable damage to stonework.

I40 RECORD OF WORK

- General: Record work carried out to masonry clearly and accurately using written descriptions, sketches, drawings and photographs, as necessary.
- Specific records: Digital photos in JPEG format.
- Documentation: Submit on completion of the work.
 - Number of sets: One.

WORKMANSHIP GENERALLY

I50 POWER TOOLS

- Usage for removal of mortar: Not permitted.

I55 PUTLOG SCAFFOLDING

- Usage: Not permitted.

I60 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 arrises, projecting features and delicate, friable surfaces. Prevent mortar/ grout splashes and other staining and marking on facework. Protect using suitable nonstaining slats, boards, tarpaulins, etc. Remove protection on completion of the work.

I65 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.

180 WORKMANSHIP

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

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 nonhydraulic 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 of each of the following types of work, and arrange for inspection before proceeding with the remainder:
 - Repointing of flintwork fully: 4 x 0.5 m2
 - Repointing of buttresses: 2x 0.5m2
 - Mortar removal and repointing in hot mix mortar: 4 No samples, each 0.5 sqm
 - Mortar repair of Rag Stone up to 4 No. 250x250 x 25 mm samples, two containing repairs to window stonework
 - Mortar repair of Caen Stone: 4 No. 250x250 x 25 mm samples, two containing repairs to window stonework
 - Grouting of voides: 2x 5.0 ltrs of grout - Report: Submit proposals including method statements, proposed mortar mixes, aggregate sources and the like prior to commencing samples .

MATERIAL/ PRODUCTION/ ACCESSORIES

215 MATERIAL SAMPLES

- Representative samples of designated materials: Submit before placing orders.
 - Designated materials: Caen Stone, Bath Stone, Kentish Rag Stone, sands for pointing and mortar repairs.
- Retention of samples: Unless instructed otherwise, retain samples on site for reference. Protect from damage and contamination.

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: Prepare as necessary. Templates must be clearly and indelibly marked to identify use and location.

230 INSPECTION OF DRAWINGS, TEMPLATES, CASTS, ETC

- Timing: Before starting production of masonry units associated with the following items: All new dressed and ashlar works.
- Period of notice (minimum): 2 weeks.

242 STONE: BATH STONE

- Supplier: Monks Park, Stoke ground or similar approved.
- Type: Bath Stone.
- 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 prepared by the supplier.
- Finish: Tooled to match existing unweathered work.

243 STONE: KENTISH RAG STONE

- Supplier: Gallagher Group, Leitrim House, Little Preston, Aylesford, Kent, ME20 7NS, Telephone: 01622 716543 .
- Type: Kentish Rag Stone.
- 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 prepared by the supplier.
- Finish: Tooled to match existing unweathered work.

244 STONE: FLINT

- Supplier: Contractor's choice .
- Type: Halved or knapped grey or roughly squared knapped grey to match colour range and type of adjacent work..
- 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 prepared by the supplier.
- Finish: Halved or knapped to match adjacent work.

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.

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.

281 FIXINGS to dressed stone to substrate

- Type: Submit proposals.
- Material: Stainless steel cramps as necessary.
- Size, strength and number: As necessary to resist loads likely to occur during the life of the building, and to prevent lateral displacement or pulling apart of the construction.

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 markings to drawings/ photographs.

32I REBUILDING OF FLINT AND RUBBLE WORK USING NHL MORTAR

- Replacement materials: [Existing salvaged dressed rubble stonework and flint walling and new stone and flint to match].
- Mortar: As section Z2I.
 - Mix: 1:3, St Astier NHL 3.5 hydraulic lime:sand.
 - Sand source/ type: Well graded sharp sand and stone dust to approved (no marine)
(6mm-150 microns [80%]) <150mm microns [20%] to approval .
- Fixings: Ties, cramps and dowels for replacement/ additional fixings used to tie units to backgrounds and/ or to each other; as clause 28I.
- 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:
 - Ashlar work: Slightly recessed, with brushed finish as clause 860.
 - Rubble work: Slightly recessed and stippled as clause 86I.
- Other requirements:
 - Grout deep voids as clause 720
 - Stonepinnings as clause 415
 - Preparation as clause 330
 - Dismantling as clause 310.
 - Reinstate flint gallets where found

322 REBUILDING OF FLINT AND RUBBLE WORK WITH HOT MIX LIME MORTAR

- Replacement materials: [Existing salvaged dressed rubble stonework and flint walling and new stone and flint to match].
- Mortar: Hot mixed mortar internally as 930 and externally as 935
 - Sand source/ type: Well graded crush stone and washed river sand (no marine) to approval].
- Fixings: Ties, cramps and dowels for replacement/ additional fixings used to tie units to backgrounds and/ or to each other; as clause 281.
- 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:
 - Ashlar work: Slightly recessed, with stippled finish as clause 861
 - Rubble work: Slightly recessed and stippled as clause 861.
- Other requirements:
 - Grout deep voids as clause 720
 - Stonepinnings as clause 415
 - Preparation as clause 330
 - Dismantling as clause 310.

REPLACEMENTS AND INSERTIONS

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.

342 REPLACEMENT OF STONE TO DRESSED WORK

- Stone: To match existings as clauses 241 - 243, and as approved sample.
- Bedding depths: Minimum 250mm or to match existing whichever is the greater.
Mortar:
 - Hot mixed mortar with fine aggregate
 - Sand source/ type: [Stone dust (1.18 mesh), well graded sharp sand and soft staining sand (quarry or river, no marine), washed, to approval.Fixings: Bonded dowels as clause 405.
Joints: To match existing but typically 2mm.
Other requirements: Stainless steel cramps where necessary to replace existing metal ones.

351 STONE INSERTS TO EXISTING MASONRY

- Stone: As Clauses 241, 242, 243.
- Finish: Flush and to match existing.
- Preparation and insertion: As clause 395.
- Mortar:
 - Mix: hot mixed lime as 935.
 - Sand source/ type: River washed or quarry non-marine.
- Joints: Very fine.

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 FOR REPAIRS TO WINDOW DRESSINGS AND DRESSED STONE GENERALLY

- 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 281 .

415 STONE PINNINGS FOR RUBBLE STONework

- Material for pinnings: stone to match existing in type, size and shape, closely spaced .
- Placing: Tamp pinnings firmly into fresh mortar. Ensure mortar is thoroughly compacted into voids and that levelling and load distribution functions of pinnings are retained.

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.

458 REDRESSING STONE

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

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.

515 REINFORCEMENT FOR MORTAR REPAIRS

- Material: Austenitic stainless steel, phosphor bronze or copper alloy wire, 3mm diameter.
- Armatures: Form to suit profiles of mortar repair and provide effective reinforcement.
- Cover to reinforcement: Not less than 18 mm.
- Installation: Drill holes into background to receive reinforcement, and bond firmly with a suitable epoxy resin.

517 MORTAR REPAIRS SAMPLES

- Prepare mortar samples (mortar biscuits) for the following repairs:
 - Window stonework repairs
 - Mortar repairs to Caen Stone
 - Mortar repair of Rag Stone
 - Repairs to ashlar stonework
- Prepare 'biscuits' on a board and make adjustments following comments by Architect for each repair type.
- Allow for 2 No adjustments to each board (i.e. 3 No presentations for each type of repair)
- Prepare biscuits to show colour and texture to match each type of repair.

518 AGGREGATES FOR MORTAR REPAIRS

- Select aggregates in both, colour and grain size so that when mixed with the binder, applied to the surface and totally dried out, they resemble the weather surface of the stone. Use a variety of strong coloured sands and stone dusts to match the colour of the stones to be repaired.
 - Mortar colour is to be 'through' colour, throughout the depth of the repairs

521 MORTAR REPAIRS To dressed/ carved limestone

- Preparation:
 - Generally as clause 510 and for joints to window stonework as clause 566
 - Repair area: Scribe area of masonry to be removed using straight horizontal and vertical lines parallel to joints.
 - Removal of hard cement mortar repairs as 135, with prior approval of trial patches by architect
 - Repair to areas abutting window glass as 566
- Where repair area abuts joints, maintain existing joint widths and do not bridge joints.
- Reinforcement as clause 515. Colour and texture for each location to be agreed on site with Architect and will vary.
Must match surrounding masonry and time must be taken to ensure this.

Undercoats:

- Mix: 1:2.5 St Astier NHL 3.5 hydraulic lime and sand. Slurry the undercoat mix with mortar and use to paint all the surfaces on the cavity. Allow the slurry to partly dry out into the stone. Apply the first undercoat before final set is received.
- Sand source/type: Well graded sharp sand or crushed stone dust (1.4mm).
- Building up: In layers where necessary, each layer not exceeding 12mm.
- Finishing Coat: To match approved samples.
- Mix: 1:3 St Astier NHL3.5 hydraulic lime:sand.
- Sand source/type: Well graded sharp sand non-marine (1-2mm).
- Finished thickness: 6-8mm
- Finish: Scrape back to finished lime and further compact using a coarse hessian pad.
- Reinforcement: As required and as clause 516

524 MORTAR REPAIRS TO DRESSED KENTISH RAGSTONE Kentish Ragstone

- Preparation:
 - Generally as clause 510 and for joints to window stonework as clause 566
 - Repair area: Scribe area of masonry to be removed using straight horizontal and vertical lines parallel to joints.
 - Removal of hard cement mortar repairs as 135, with prior approval of trial patches by architect
 - Repair to areas abutting window glass as 566
- Where repair area abuts joints, maintain existing joint widths and do not bridge joints.
- Reinforcement as clause 515. Colour and texture for each location to be agreed on site with Architect and will vary.
Must match surrounding masonry and time must be taken to ensure this.

Undercoats:

- Mix: 1:2.5 St Astier NHL 3.5 hydraulic lime and sand. Slurry the undercoat mix with mortar and use to paint all the surfaces on the cavity. Allow the slurry to partly dry out into the stone. Apply the first undercoat before final set is received.
- Sand source/type: Well graded sharp sand or crushed stone dust (1.4mm).
- Building up: In layers where necessary, each layer not exceeding 12mm.
- Finishing Coat: To match approved samples.
- Mix: 1:3 St Astier NHL 3.5 hydraulic lime:sand.
- Sand source/type: limestone dust (1.18 mesh), sharp sand, (400 micron mesh), buff soft sand (300 micron mesh)
- Finished thickness: 6-8mm
- Finish: Scrape back to finished lime and further compact using a coarse hessian pad.
- Reinforcement: As required and as clause 516

525 MORTAR REPAIRS TO KENTISH RAGSTONE RUBBLE Kentish
Ragstone

- Preparation:
 - Generally as clause 510
 - Repair area: Fill missing or recessed areas of the stone to be level with unweathered surfaces of adjacent stones. Texture of repaired surface to resemble rubble work, but allow for water shedding.
 - Removal of hard cement mortar repairs as 135, with prior approval of trial patches by architect
- Where repair area abuts joints, maintain existing joint widths and do not bridge joints.
- Reinforcement as clause 515. Colour and texture for each location to be agreed on site with Architect and will vary.
Must match surrounding masonry and time must be taken to ensure this.

Undercoats:

- Mix: 1:2.5 St Astier NHL 3.5 hydraulic lime and sand. Slurry the undercoat mix with mortar and use to paint all the surfaces on the cavity. Allow the slurry to partly dry out into the stone. Apply the first undercoat before final set is received.
- Sand source/type: Well graded sharp sand or crushed stone dust (1.4mm).
- Building up: In layers where necessary, each layer not exceeding 12mm.
- Finishing Coat: To match approved samples.
- Mix: 1:3 St Astier NHL 3.5 hydraulic lime:sand.
- Sand source/type: Well graded sharp sand non-marine (1-2mm).
- Finished thickness: 6-8mm
- Finish: Scrape back to finished lime and further compact using a coarse hessian pad.
- Reinforcement: As required and as clause 516

540 APPLYING MORTAR

- Surfaces to receive mortar: Clean, and free from dust and debris.
Dampen to control suction.
- Applying coats: Build up in layers to specified thickness. Apply mortar firmly, ensuring good adhesion with no voids. Form a mechanical key to undercoats by combing or scratching to produce evenly spaced lines. Allow each layer to achieve an initial set before applying subsequent coats. Prevent each layer from drying out rapidly by covering immediately with plastics sheeting and/ or dampening intermittently with clean water.
- Finishing mortar coat: Form accurately to required planes/ profiles, and finish flush with adjacent masonry.
- Protection: Protect completed repairs from adverse weather until mortar has set.

550 SCRAPED FINISH TO MORTAR REPAIRS

- Procedure: Finish final coat of repair mortar proud of existing masonry face. When mortar is set, but not too hard, scrape back to required face line using fine saw blade or other suitable means, to achieve required finish.

555 FLOAT FINISH TO MORTAR REPAIRS

- Finish: Use a wood float and/ or a felt faced float to give an even overall texture. Do not use steel floats.

632 TIES TO MASONRY

- Tie system manufacturer: Helifix Limited.
 - Type/ Diameter: 6mm Ø twisted stainless steel bar.
 - Resin: Hilti HIT HY or similar approval
- Holes: Drill carefully and accurately, to suit types and lengths of tie. Remove drilling dust and debris.
- Adjacent masonry: Do not damage during drilling. Keep cavities behind facings free from debris.
Tie installation:
 - Bonded ties: Resined
 - Ends of ties: Keep back from face of masonry to allow for making good.
- Exposed masonry faces: Clean and free from resin/ mortar stains.
- Making good: Use mortar as clause 320.

640 PINNING OF FRACTURED QUOINS

- Dowels/ Pins:
 - Type: Austenitic stainless steel threaded rods.
 - Diameter: 12 mm.
 - Additional requirements: Penetration into background not less than 100 mm.
- 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: Mortar repairs as clause 690.

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 five holes before completing the remainder.

GROUTING RUBBLE FILLED CORES

710 PREPARATION FOR GROUTING

- Grouting holes: Drill in joints at horizontal and vertical centres to suit coursing and to achieve an effective distribution of grout so that, on completion, all voids in masonry are filled.
- Maximum height of each grout pour: Regulate to prevent disruption to masonry.
- Open joints in masonry: Seal with an approved temporary material to prevent leaking of grout. Leave weep holes every two or three courses to assist in flushing out dust and debris, and to prove effectiveness of grouting. Locate temporary seal back from facework to allow for specified repointing. Seek instructions if repointing precedes grouting.

712 FLUSHING OUT

- Timing: Before grouting.
- Requirement: Flush out core of masonry walls using clean water delivered under moderate pressure through grouting holes.

721 HAND GROUTING TO VOIDS

- Grout mix: Limelite St Pauls Heritage Grout,
by Limelite - Tarmac Building Products Ltd
Swains Park Industrial Estate
Park Road
Overseal
Derbyshire
DE12 6J
Tel 03444 630046.
- Method: Direct grout into open joints using clay cups formed against masonry surface. Pour grout to refusal; allow to set; break off excess mortar and brush down masonry face.
- Preparation as 710 and 712 above
- Spacing of grouting holes to be at 450 mm centres, staggered

740 APPLICATION OF GROUTING

- Grouting: Continuous operation during each lift. Allow grout to set before commencing subsequent lifts.
- Monitoring: Monitor grouting carefully and continuously at each delivery point (flow and delivery pressure), and at adjacent/ opposite wall faces, to ensure that there is an effective distribution of grout with no leaking, staining, or disruption to the masonry.
- Temporary seals: Remove on completion of grouting and leave joints in a suitable condition for repointing.

POINTING/ REPOINTING

811 PREPARATION OF REPOINTING

- Existing masonry: Brush down surfaces of all areas specified for repointing to remove dust, loose dirt and dead organic matter.
- Existing mortar:
 - Removing hard cement mortar: as clause 139.
 - Removing plants, roots and vegetation as clause 130
 - Leave sound areas of existing lime pointing in place.
 - Working from top of wall downwards, remove mortar carefully, without damaging adjacent masonry, arrises or widening joints, to a minimum depth of [50mm]
, using toothed masonry plugging and jointing chisels.
 - 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.
- Recess for repointing: Form a neat recess of depth not less than 25mm or the width of the joint, whichever is the greatest. When mortar beyond depth is lose or friable and / or cavities are found, seek instructions.
 - Remove dust and loose debris using a bristle brush or low pressure water wash. Work from the top to the bottom of the wall. Dampen joints to control suction as necessary.
 - Carefully cut out the joints using a fine-toothed saw blade or hooked knife to a depth of 25mm.
- Use inserted blades to gauge when an adequate depth has been cut out.
 - Flush the joints using a large hypodermic syringe and clean until the water runs clear.

821 HOT MIX LIME POINTING TO TOWER WALLS

- Preparation of joints: As clause 811.
- Mortar: As section Z21.
 - Mix: Hot mixed lime mortar externally as 935.
 - Sand source/ type: River washed, or quarry, non marine, well graded.
- Joints profile/ finish: Fully pointed to match historic mortar on Nave South Wall, east of Porch.
- Other requirements:
 - Dampen surrounding stones to prevent excessive absorption, maintain until construction. .

822 HOT MIX LIME POINTING TO BUTTRESSES

- Preparation of joints: As clause 811.
- Mortar: As section Z21.
 - Mix: Hot mixed lime mortar as 935.
 - Sand source/ type: River washed, or quarry, non marine, well graded.
- Joints profile/ finish: Flush with brick quoins to match existing pointing style on buttresses.
- Other requirements:
 - Dampen surrounding stones to prevent excessive absorption, maintain until construction
 - Collect existing gallets and reuse. Make up lost gallets with new flint gallets to match.

823 HOT MIX LIME POINTING WINDOW STONEWORK

- Preparation of joints: As clause 811.
- Mortar: As section Z21.
 - Mix: Hot mixed lime mortar as 935.
 - Sand source/ type: River washed, or quarry, non marine, well graded, size of aggregates to suit joint width.
- Joints profile/ finish: Flush, with aggregate exposed.
- Other requirements:
 - Dampen surrounding stones to prevent excessive absorption, maintain until construction.

824 HOT MIX LIME POINTING FOR INTERNAL WALLS

- Preparation of joints: As clause 811.
- Mortar: As section Z21.
 - Mix: Hot mixed lime mortar as 930.
 - Sand source/ type: River washed, or quarry, non marine, well graded, size of aggregates to suit joint width.
- Joints profile/ finish: Flush, with aggregate exposed.
- Other requirements:
 - Dampen surrounding stones to prevent excessive absorption, maintain until construction.

- 825 NHL POINTING TO TOWER WALLS FLINT AND KENTISH RAGSTONE RUBBLE
- Preparation of joints: As clause 81 I.
 - Mortar: As section Z2I.
 - Mix: 1:3 St Astier hydraulic lime NHL 3.5 and aggregate.
 - Sand source/ type: Well graded sharp sand and stone dust to approved colour (6mm-150 microns 80%) <150mm microns 20%) Sand to be river washed, or quarry, non marine. .
 - Joints profile/ finish: Fully pointed to match historic mortar on Nave South Wall, east of Porch. .
 - Other requirements:
 - Dampen surrounding stones to prevent excessive absorption, maintain until construction
 - Collect existing gallets and reuse. Make up lost gallets with new flint gallets to match..
- 825 NHL POINTING TO BUTTRESSES
- Preparation of joints: As clause 81 I.
 - Mortar: As section Z2I.
 - Mix: 1:3 lime putty as Z2I and aggregate.
 - Sand source/ type: River washed, or quarry, non marine, well graded.
 - Joints profile/ finish: Up to 10mm finish flush with churn brush.
 - Other requirements: Dampen surrounding stones to prevent excessive absorption, maintain until construction.
- 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.
- 861 STIPPLED FINISH TO JOINTS
- Timing: After initial mortar set has taken place, expose the aggregate to produce a roughened texture that matches existing weathered pointing by light spraying and stiff bristle stippling or by dabbing with coarse sacking. Do not compact mortar.

920 LIME SHELTERCOATING

- Lime shelter coat:
 - Product reference: Lime Sheltercoat
 - Manufacturer/supplier: Contractor's to choose from one of the following:
 - Rose of Jericho, tel. 01935 83676.
 - Womersley's Ltd. Tel.01924 400651.
 - Hirst Conservation Ltd. Tel.01529 497449..
 - Ty Mawr Lime Ltd 01874 611350
- Appearance/colour: To match historic stonework on which it is to be applied.
- Stored under seal until use. Cloudy water to be rejected.
- Application:
 - Spray surfaces with limewater prior to shelter coating.
 - Application to be determined by carrying out control samples as clause 190 and to suit the porosity of the material to be treated and the intended result.
 - Number of coats: 3.
 - First coat: dilute with clean water for very porous surfaces.
 - Second and third coats: can be applied prior to the carbonation of previous coats.
 - Apply using a soft bristle brush, then using a second short-bristle brush to work the shelter coat into the texture of the render.
 - Compact onto render surface by rubbing with cleaned Hessian padding.
 - Dampen surfaces with a mist spray between coats.

925 HOT MIX LIME SHELTERCOATING

- Lime shelter coat:
 - Product reference: CL 90 quicklime powder as Z21
- Appearance/colour: To match historic stonework on which it is to be applied.
- Mix:
 - 1 powdered quicklime
 - 1.5 Sand (40s)
 - 1.5 Stonedust (varying dusts within 40s to 80s range to suit substrate)
 - 5% casein as part of aggregates
- Wet slake into a stiff paste, thin out with water into a slurry after slaking
- Application:
 - Immediately whilst still warm
 - Spray surfaces with limewater prior to shelter coating.
 - Application to be determined by carrying out control samples as clause 190 and to suit the porosity of the material to be treated and the intended result.
 - Number of coats: 3.
 - Second and third coats: can be applied prior to the carbonation of previous coats.
 - Apply using a soft bristle brush,
 - Burnish each coat with a soft bristle brush 5 minutes after application.
 - Compact onto render surface by rubbing with cleaned Hessian padding.
 - Close any surface crazing during the drying out period

930 HOT MIXED MORTAR FOR INTERNAL POINTING AND
REBUILDING

- Substrate: Existing Rubble walling
 - Preparation: As 811
 - All loose material removed prior to application of render, mortar joints raked out to aid key, substrate wetted to aid key prior to first application.
- Mix:
 - 1.5 well graded sharp sand
 - 1.0 well graded fine sharp sand
 - 1 quicklime powder as Z21, for Hot Mix Lime Mortars.
 - 0.5 crushed chalk as Z21, for Hot Mix Lime Mortars.
 - 2 parts volume of clean water to one part volume of lime powder, added incrementally whilst mixing
- Thickness: Apply in layers, push into crack with suitable wooden tool
- Sand: Well graded sharp sand and crushed limestone 4.0 mm down.
Sand source/ type: washed pit sand (non marine) to approval.
- Sizes of crushed chalk nodules between 0-4mm, evenly distributed
- Mixes and thicknesses shown are nominal and may be varied to match existing or following mortar trials.

935 HOT MIXED MORTAR WITH POZZOLANS FOR EXTERNAL POINTING

- Substrate: Existing Rubble walling
 - Preparation: As 811
 - All loose material removed prior to application of render, mortar joints raked out to aid key, substrate wetted to aid key prior to first application.
 - Mix:
 - 2.0 well graded sharp sand
 - 1.0 well graded fine sharp sand
 - 5% of volume of fine sharp sand to consist of 'Metastar' pozzolanic additive as Z21/340
 - 1 quicklime powder as Z21, for Hot Mix Lime Mortars.
 - 2 parts volume of clean water to one part volume of lime powder, added incrementally whilst mixing
 - Thickness: Apply in layers, push into crack with suitable wooden tool
 - Mix thoroughly and use while hot
 - Sand: Well graded sharp sand and crushed limestone 4.0 mm down. Sand source/ type: washed pit sand (non marine) to approval.
 - S sizes of crushed chalk nodules between 0-4mm, evenly distributed
 - Mixes and thicknesses shown are nominal and may be varied to match existing or following mortar trials

940 HOT MIXED MORTAR WITH NHL GAUGING FOR POINTING

- Substrate: Existing Rubble walling
 - Preparation: As 811
 - All loose material removed prior to application of render, mortar joints raked out to aid key, substrate wetted to aid key prior to first application.
 - Mix:
 - 2.0 well graded sharp sand
 - 1.0 well graded fine sharp sand
 - 0.5 powdered NHL 3.5
 - 0.5 quicklime powder as Z21, for Hot Mix Lime Mortars.
 - 2 parts volume of clean water to one part volume of lime powder, added incrementally whilst mixing
 - Thickness: Apply in layers, push into crack with suitable wooden tool
 - Mix thoroughly and use while hot
 - Sand: Well graded sharp sand and crushed limestone 4.0 mm down. Sand source/ type: washed pit sand (non marine) to approval.
 - S sizes of crushed chalk nodules between 0-4mm, evenly distributed
 - Mixes and thicknesses shown are nominal and may be varied to match existing or following mortar trials

950 PREPARATION OF HOT MIXED LIME MORTAR

- Equipment: Mixing pan or roller pan, materials to be heat resistant. Drum mixers are not suitable.
- PPE, eye protection and dust masks must be worn at all times during the mixing process
- Batch aggregates by volume and mix. Proportions are based on naturally damp sand and aggregate.
- Mix powdered quicklime into aggregate mix.
- Leave to dry slake for 3-5 minutes until very fine powder rises from the surface
- Then add the water incrementally whilst mixing until desired consistency is reached
- Bank up into a neat heap, smooth with a trowel, cover with hessian and leave to slake for 2 days
- Before usage, thoroughly mix the mortar until lime mortar has a creamy, but fairly stiff consistency ("knocking up")
- Do not add water at this stage. Only minimal amounts of water are permitted to be added if mortar is has not the desired consistency after prolonged knocking up.
- Ready prepared mortar must not be left unused for longer than 7 days, pozzolan gauged mortar must be used immediately after mixing.

955 APPLICATION

- " Pre-wet the substrate as for putty lime mortar
- " Application with the same tools as for lime putty mortar
- " Push mortar into joints and leave joints slightly full.
- " Do not overwork or tidy up mortar
- " Use stiff bristle brush (non-ferrous) or plastering laths to scrape away laitance and expose aggregate when mortar is approaching leather-hardness
- " Protect with hessian sheeting for one week
- " Do not spray with water when it is curing
- " Close small shrinkage cracks by careful trowelling

M60 Painting/ clear finishing

To be read with Preliminaries/ General conditions.

COATING SYSTEMS

I24 LIMEWASH TO INTERNAL TOWER WALLS

- Manufacturer:
As 210 below.
 - Product reference: Limewash, untinted.
- Surfaces: Existing internal lime wash.
 - Preparation: Remove existing loose lime wash from previously coated surfaces. Prepare existing limewash as per manufacturer's recommendations.
- Initial coats: as per manufacturers requirements.
 - Number of coats as per manufacturers requirement.
- Finishing coats: Limewash, as per manufacturers requirements.
 - Number of coats: 5 coats.
- Other requirements:
 - Tint of limewash to match existing tower walls, carry out 1 m2 sample in 5 coats for approval

I31 TREATMENT OF EXTERIOR METALWORK

- Manufacturer: [
Picreator Enterprises Ltd
44 Park View Gardens
London, NW4 2PN
England, UK
Phone: +44 (0)208 202 8972
Fax: +44 (0)208 202 3435
Email: info@picreator.co.uk].
 - Product reference: [Renaissance De-corroder and Renaissance Microcrystalline Wax].
- Surfaces: [Existing wrought iron strap hinges].
 - Preparation: [As clauses 400, 440 490 and Renaissance De-corroder as recommended by manufacturer].
- Initial coats: [As recommended by manufacturer].
 - Number of coats: [As recommended by manufacturer].
- Undercoats: [As recommended by manufacturerr].
 - Number of coats: [As recommended by manufacturer].
- Finishing coats: [Renaissance Wax].
 - Number of coats: [3 coats, applied as per manufacturer's recommendation].

140 TREATMENT OF TIMBER OF WEST DOOR GENUINE TURPENTINE,
BEESWAX AND BOILD LINSEED OIL MIX

- Material: Beeswax, genuine, pure turpentine and boiled linseed oil
- Mixing ratio: 1lb. pure beeswax to 1 pint of pure turpentine (no substitute) and 1 gallon of boiled linseed oil.
- Method:
 - Shred beeswax into cold turpentine, dissolve, and leave to stand for twenty four hours.
 - Add 1 gallon of boiled linseed oil, thoroughly mix and strain through hessian.
- Surface preparation: Brush off dirt, moss and algae.
- Undercoat: Apply with a soft brush. One coat of mixture, allow to dry for twenty four hours. Take care to work the treatment into the wood.
- Top coats: Apply with a soft brush, work into the wood. Apply second coat, leave for eight hours, then rub with smooth cloth to remove surplus.

GENERAL

210 COATING MATERIALS

- Manufacturer: Obtain materials from any of the following:
For lime wash:
 - (i) Hirst Conservation Materials Ltd, Tel: -1529 497517
Sleaford, Loughton, Lincolnshire NG34 0HE
 - (ii) The Lime Centre , Tel: 01962 713636
Long Barn, Morestead, Winchester SO21 1LZ
 - (iii) Limebase Ltd, tel. 01460 281921
Walronds Park, Isle Brewers, Taunton, Somerset TA3 6QP
 - (iv) Ty-Mawr Lime Products, Units 5 & 12, Brecon Enterprise Park,
Brecon, Powys LD3 8BT, UK,
Telephone: 01874 611350

For timber treatment: Submit proposals.

- Selected manufacturers: Submit names before commencement of any coating work.

215 HANDLING AND STORAGE

- Coating materials: Deliver in sealed containers, labelled clearly with brand name, type of material and manufacturer's batch number.
- Materials from more than one batch: Store separately.

280 PROTECTION

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

PREPARATION

400 PREPARATION GENERALLY

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

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.

481 UNCOATED WOOD

- General: Provide smooth, even finish with arrises and moulding edges lightly rounded or eased.
- Heads of fasteners: Countersink sufficient to hold stoppers/fillers.
- Resinous areas and knots: Apply two coats of knotting.

490 PREVIOUSLY COATED STEEL

- Defective paintwork: Remove to leave a firm edge and clean bright metal.
- Sound paintwork: Provide key for subsequent coats.
- Corrosion and loose scale: Take back to bare metal.
- Residual rust: Treat with a proprietary removal solution.
- Bare metal: Apply primer as soon as possible.
- Remaining areas: Degrease.

500 PREPRIMED STEEL

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

521 UNCOATED STEEL - MANUAL CLEANING

- Oil and grease: Remove.
- Corrosion, loose scale, welding slag and spatter: Remove.
- Residual rust: Treat with a proprietary removal solution.
- Primer: Apply as soon as possible.

622 ORGANIC GROWTHS

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

APPLICATION

711 COATING GENERALLY

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

Z10 Purpose made joinery

To be read with Preliminaries/ General conditions.

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, thickened, 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

To be read with Preliminaries/ General conditions.

PRODUCTS

310 FASTENERS GENERALLY

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

320 PACKINGS

- Materials: Noncompressible, corrosion proof.
- Area of packings: Sufficient to transfer loads.

340 MASONRY FIXINGS

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

350 PLUGS

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

390 ADHESIVES GENERALLY

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

EXECUTION

610 FIXING GENERALLY

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

620 FIXING THROUGH FINISHES

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

630 **FIXING PACKINGS**

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

640 **FIXING CRAMPS**

- Cramp positions: Maximum 150 mm from each end of frame sections and at 600 mm maximum centres.
- Fasteners: Fix cramps to frames with screws of same material as cramps.
- Fixings in masonry work: Fully bed in mortar.

670 **PELLETED COUNTERSUNK SCREW FIXING**

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

680 **PLUGGED COUNTERSUNK SCREW FIXING**

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

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.

Z2I Mortars

To be read with Preliminaries/ General conditions.

CEMENT GAUGED MORTARS

I 10 CEMENT GAUGED MORTAR MIXES

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

I 20 SAND FOR SITE MADE CEMENT GAUGED MASONRY MORTARS

- Standard: To BS EN 13139.
- Grading: 0/2 (FP or MP).
 - Fines content where the proportion of sand in a mortar mix is specified as a range (e.g. 1:1: 5-6):
Lower proportion of sand: Use category 3 fines.
Higher proportion of sand: Use category 2 fines.
- Sand for facework mortar: Maintain consistent colour and texture. Obtain from one source.

I 31 READY-MIXED LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS

- Standard: To BS EN 998-2.
- Lime: Nonhydraulic to BS EN 459-1.
 - Type: CL 90S.
- Pigments for coloured mortars: To BS EN 12878.

I 35 SITE MADE LIME:SAND FOR CEMENT GAUGED MASONRY MORTARS

- Permitted use: Where a special colour is not required and in lieu of factory made ready-mixed material.
- Lime: Nonhydraulic to BS EN 459-1.
 - Type: CL 90S.
- Mixing: Thoroughly mix lime with sand, in the dry state. Add water and mix again. Allow to stand, without drying out, for at least 16 hours before using.

160 CEMENTS FOR MORTARS

- Cement: To BS EN 197-1 and CE marked.
 - Types: Portland cement, CEM I.
Portland limestone cement, CEM II/A-L or CEM II/A-LL.
Portland slag cement, CEM II/B-S.
Portland fly ash cement, CEM II/B-V.
 - Strength class: 32.5, 42.5 or 52.5.
- White cement: To BS EN 197-1 and CE marked.
 - Type: Portland cement, CEM I.
 - Strength class: 52.5.
- Sulfate resisting Portland cement:
 - Types: To BS EN 197-1 Sulfate resisting Portland cement, CEM I/SR and CE marked.
To BS EN 197-1 fly ash cement, CEM II/B-V and CE marked.
 - Strength class: 32.5, 42.5 or 52.5.
- Masonry cement: To BS EN 413-1 and CE marked.
 - Class: MC 12.5.

210 MAKING CEMENT GAUGED MORTARS

- Batching: By volume. Use clean and accurate gauge boxes or buckets.
 - Mix proportions: Based on dry sand. Allow for bulking of damp sand.
- Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
 - Mortars containing air entraining admixtures: Mix mechanically. Do not overmix.
- Working time (maximum): Two hours at normal temperatures.
- Contamination: Prevent intermixing with other materials.

LIME:SAND MORTARS

310 LIME:SAND MORTAR MIXES

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

320 SAND FOR LIME:SAND MASONRY MORTARS

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

330 READY PREPARED LIME PUTTY

- Type: Slaked directly from CL 90 quicklime to BS EN 459-1, using an excess of water.
 - Maturation: In pits/ containers that allow excess water to drain away.
 - Density of matured lime putty: 1.3-1.4 kg/litre.
- Maturation period before use (minimum): 90 days.

- 335 READY PREPARED LIME PUTTY
- Manufacturer: Submit proposal.
 - Product reference: Submit proposal.
 - Maturation period before use (minimum): 90 days.
- 340 POZZOLANIC ADDITIVES FOR NONHYDRAULIC LIME:SAND MORTARS
- Manufacturer/ Supplier: Submit proposal.
 - Product reference: 'Metastar' calcined china clay.
 - Mixing: Mix thoroughly into mortar during knocking up.
- 342 HYDRAULIC LIME
- Manufacturer: St Astier
 - St. Astier moderately hydraulic St Astier NHL 3.5 or NL 2.5 to the architect's instruction obtainable from:
The Lime Centre Tel: 01962 713636
Long Barn, Morestead, Winchester SO21 1LZL.
 - Product reference: St. Astier moderately hydraulic St Astier NHL 3.5 or NL 2.5 to the architect's instruction obtainable from:
The Lime Centre Tel: 01962 713636
Long Barn, Morestead, Winchester SO21 1LZL.
 - Maturation period before use (minimum): N/A.
- 360 MAKING LIME:SAND MORTARS GENERALLY
- Batching: By volume. Use clean and accurate gauge boxes or buckets.
 - Mixing: Mix materials thoroughly to uniform consistency, free from lumps.
 - Contamination: Prevent intermixing with other materials, including cement.
- 370 SITE PREPARED NONHYDRAULIC LIME:SAND MORTARS
- Mixing: Mix materials thoroughly by compressing, beating and chopping. Do not add water.
 - Equipment: Roller pan mixer or submit proposals.
 - Maturation period before use (maximum): Five days.
- 380 READY TO USE NONHYDRAULIC LIME:SAND MORTARS
- Manufacturer: Submit proposal.
 - Product reference: Submit proposal.
 - Materials: Select from:
 - Lime putty slaked directly from quicklime to BS EN 459-1 and mixed thoroughly with sand.
 - Quicklime to BS EN 459-1 slaked directly with sand.
 - Maturation period before use (maximum): Five days.

390 KNOCKING UP NONHYDRAULIC LIME:SAND MORTARS

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

400 MAKING HYDRAULIC LIME:SAND MORTARS

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

HOT MIX MORTAR MATERIALS

510 LIME FOR HOTMIX MORTAR

- " Manufacturer: [Tarmac Ltd, Portland House, Bickenhill Lane, Solihull, West Midlands, B37 7BQ, 01298 768444, buxton.enquiry@tarmac.com].
 - Product reference: [Calbux 90 quicklime].

515 CRUSHED CHALK FOR POINTING

- " Manufacturer: [Contractor's choice].
 - Product reference: [crushed chalk dia 2mm].

I Generally

I.1 Location

- I.1.1 For the purpose of describing items within this schedule the west end is assumed to be due west, although the geographical orientation diverges approx. 10 degrees to the north-east.
- I.1.2 The building is in a rural hamlet with narrow lanes.

I.2 Scope of Works

- I.2.1 The building is Listed Grade II*. Agree the extent of removal of existing fabric with the architect prior to any works. Do not cut out material without approval.
- I.2.2 The scope and purpose of the works are mainly external stonework repairs to the west tower, with some work to the tower's internal south and west walls and belfry windows. The document also describes the protection for the works.
- I.2.3 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.

I.3 Schedule of Condition

- I.3.1 Provide a photographic/video record of the condition of the building internally and externally, including churchyard, surrounding walls, entrance gates, footpaths and pavings, roofs, bollards, Lychgate, windows and walls, rainwater goods, doors, internal historic oil pendant lamps and other site features. etc., which may be affected by the works, before commencement of site operations.
- I.3.2 Provide one annotated set of records to the architect.

I.4 Scaffolding Access and Hoarding

- I.4.1 Install a fixed scaffold to all four sides of the west tower and stair turret to access the works as A36/325. Scaffold must not rest on the Nave roof. Include for erection, alteration and adaptation as necessary and dismantling at completion. Include for a 4 metres high hoarding at the base of the scaffold. Hoarding to have securely lockable access door, all as described in A34/150. Ensure the scaffold is unclimbable at the end of the first day of installation.

Scaffold in place for _____ weeks, extra charge for each additional week's hire £ _____

- I.4.2 Price here for scaffold alarm for the external scaffold as A36/327.

Scaffold alarm operating for _____ weeks, extra charge for each additional week's hire £ _____

Tower Repairs

£

- I.4.3 Connect the scaffolding to the existing lightning conductor and test. Provide testing certificate. On completion remove connection to lightning conductor, test conductor and supply certificate in Health and Safety File. All testing and certifying work to be undertaken by Lightning Conductor Specialist.
- I.4.4 Arrange for shrouding of the incoming electricity cables at high level on the tower south side. Arrange for removal of shrouding after the scaffold has been struck.
- I.4.5 Provide and install a fixed internal access scaffold to the tower base level and Ringing Chamber level for accessing the south and west walls over their full height for masonry repairs.
- Scaffold in place for _____ weeks, extra charge for each additional week's hire £ _____
- I.4.6 Provide and install a fixed internal access scaffold to the Belfry for accessing all four walls over their full height for masonry repairs.
- Scaffold in place for _____ weeks, extra charge for each additional week's hire £ _____
- I.4.7 Enclose site with Heras fencing, allowing for Contractor's compound and storage facilities inside the fencing.

I.5 Preparation and Protection

- I.5.1 Protect all windows under scaffolding against dust and impact damage, maintain during construction, clear away on completion.
- I.5.2 Protect any churchyard features, access steps at the side of the porch and all gravestones/ tombs under or in a radius of 5 metres around the scaffold and along access route to tower against impact damage, maintain during construction, remove on completion.
- I.5.3 Protect doors, eaves and sides of Lychgate as well as the metal benches and concrete bollards along the access path against impact damage during deliveries and removals, maintain during construction as required, remove on completion.
- I.5.4 Protect the timber boarded porch entrance, the metal gate into the porch and the door into the church against impact damage during deliveries and removals, maintain as required during construction, remove on completion. This to include all of the Porch floor.
- I.5.5 Protect the floor in the Nave along the route into the tower against dust and impact with hardboard laid over geotextile, maintain during construction, remove on completion. Hoover Nave floor after removal of protection.
- I.5.6 Protect the font against dust and impact with plywood boxing, maintain during construction, remove on completion.

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- I.5.7 Protect the pews along the route into the tower against dust and impact, maintain during construction, remove on completion. Hoover pews and platform on completion.
- I.5.8 Protect the electrical installation on the internal tower south wall against dust and impact, maintain during construction, remove on completion.
- I.5.9 Under the supervision of the volunteers/CCT Staff carefully remove the four westernmost oil pendant lamps, label with their location, and wrap in 2 layers of bubble wrap. Store each lamp in a sturdy box in the Vestry, rehang on completion in their original location.
- I.5.10 Provide temporary hoarding at tower arch to keep the public out of the tower base.
- I.5.11 Clear out all gutters, downpipes and gullies around the church on completion.
- I.5.12 Install a dust screen in the tower arch over its full height, maintain it and remove on completion.
- I.5.13 Provide work lights for the internal work to the tower as required, including leads to existing power supply.
- I.5.14 Protect bell and belfry against dust and impact damage, maintain during the works, remove on completion.
- I.5.15 Prior to the installation of scaffolding in the Ringing Chamber provide 15mm plywood and 35 x 35mm softwood battens and construct 2 No boxes to house the oil lamps and glass shades. All fixings to be stainless steel. With extreme care, wrap the glass lampshades and all metal parts in 2 layers of bubblewrap and store carefully in the timber boxes under the direction of the volunteers. Fit fixed lid. Place the boxes in an area of flooring not affected by the scaffolding. Ensure the boxes and their contents remain undamaged throughout the whole contract.
- I.5.16 Protect flooring in Belfry and Ringing Chamber and Tower base against impact and dirt during the works, maintain during the works, remove on completion. Ensure any water for flushing out cracks is caught as it arises, and does not stain existing walls and floors below.
- I.5.17 On completion Hoover the floors in the Belfry, Ringing Chamber and Tower Base, as well as the steps in the stair turret. Brush debris of window cills and ledges prior to hoovering. Hoover door into tower staircase on both sides.
- I.5.18 Hoover belfry and bell on completion.
- I.5.19 Price here for the provision and maintenance of a portable WC for the duration of the works. Facility to be Covid-19 rules compliant.
- I.5.20 Price here for hygiene and sanitation measures on site to comply with Covid-19 requirements. This to include PPE as required for the workforce and visitors.

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1.5.21 Provide mess facilities outside the church building, and inside the contractor's compound. Exact siting to be confirmed prior to start on site.

1.5.22 Protect ground in external site compound and preparation area against staining. Reseed grass in bare areas on completion.

2 Protection/ Investigation/ Site Set-up

2.1 Samples

2.1.1 At the beginning of the works undertake 3 No 0.5 m² sample panels of cement removal, raking out to 50mm depth and preparation for repointing as C41/811, for approval by architect. Sample areas to be 1 panel of flintwork, 1 panel of brick quoins on buttresses and 1 panel of galletted buttress side.

2.1.2 At the beginning of the works undertake 4 No different 0.5 m² sample panels of repointing with hot mix mortar as C41/821, to match existing historic mortar at the Nave south and west wall, in colour and texture, as well as fullness of covering. Allow for adjusting the mix as agreed on site. Include for appropriate curing times in the programme.

2.1.3 At the beginning of the works undertake 3 No different 0.5 m² sample panels of repointing the buttresses and brickquoins with hot mix mortar as C41/822, to match existing mortar on the buttresses in its fullness of covering. Sample areas to be 1 panel of flintwork, 1 panel of brick quoins on buttresses and 1 panel to be agreed on site. Allow for adjusting the mix as agreed on site. Include for appropriate curing times in the programme.

2.1.4 At the beginning of the works undertake 2 No different 0.5 m² sample panels of repointing with hot mix mortar as C41/821, to match existing historic mortar at the Nave south and west wall, in colour and texture, as well as fullness of covering. Allow for adjusting the mix as agreed on site. Include for appropriate curing times in the programme.

2.1.5 At the beginning of the works undertake 3 No different 0.5 m² sample panels of repointing with NHL 3.5 lime mortar as C41/825, to match existing historic mortar at the Nave south and west wall, in colour and texture, as well as fullness of covering. Sample areas to be 1 panel of flintwork, 1 panel of brick quoins on buttresses and 1 panel to be agreed on site. Allow for adjusting the mix as agreed on site.

2.1.6 At the beginning of the works undertake 2 No different 0.5 m² sample panels of repointing internal walls with hot mix lime mortar as C41/824, to match existing mortar on Ringing Chamber wall. Allow for adjusting the mix as agreed on site. Include for appropriate curing times in the programme.

2.1.7 At the beginning of the works undertake 3 No 0.3 m² samples of mortar repairs to three different types of stone as C41/524 and 525, allowing for one adjustment per sample as agreed on site. Include for one curved sample.

2.1.8 Allow for a toolbox talk by the Bat Ecologist.

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- 2.1.9 Price here for 4 No half day stoppages in case bats are found in the working area.

2.2 Completion

- 2.2.1 Collate information and submit Health and Safety File to the Principal Designer for CDM.
- 2.2.2 Hand keys to the Employer on completion

3 Repairs to Tower Walls

3.1 East Elevation

- 3.1.1 Rake out pointing to depth of 50mm from Parapet as C41/811.
- 3.1.2 Rake out pointing to depth of 50mm from Belfry as C41/811.
- 3.1.3 Rake out pointing to depth of 50mm from Ringing Chamber down to roof level as C41/811.
- 3.1.4 Extra over for 3.1.1 – 3.1.3 for raking out to depth of 75mm.
- 3.1.5 Fully point parapet wall to depth of 50mm with hot mix lime mortar as C41/821.
- 3.1.6 Fully point Belfry wall to depth of 50mm with hot mix lime mortar as C41/821.
- 3.1.7 Fully point Ringing Chamber wall to depth of 50mm with hot mix lime mortar as C41/821.
- 3.1.8 Extra over to repoint items 3.1.5-3.1.7 to depth of 75mm with hot mix lime mortar as C41/821.
- 3.1.9 Over the full height of the elevation allow to temporarily remove and refix the lightning conductor in sections as the work progresses to carry out the work. All new fixings to match existing, if in doubt consult lightning conductor specialist.
- 3.1.10 Not to be carried forward: Cost difference for fully pointing Parapet in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.1.11 Not to be carried forward: Cost difference for fully pointing Belfry in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.1.12 Not to be carried forward: Cost difference for fully pointing Ringing Chamber in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.1.13 Provisional Item: Extra over for repointing of 10 m² of flintwork to depth of 75mm with NHL 3.5 mortar as C41/825.

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- 3.1.14 Grout 100 % of external wall surface as C41/721 in the Parapet, Belfry and Ringing Chamber stages. Grouting points to be at 450mm c/c and staggered. Allow for 3 m³ of grout. Provide breakdown into the three stages.
- 3.2 South Elevation Stairturret
- 3.2.1 Rake out pointing to depth of 50mm from Parapet/ Belfry stage as C41/811. This to include section extending into east wall to the junction with the tower.
- 3.2.2 Rake out pointing to depth of 50mm from Ringing Chamber stage as C41/811. This to include section extending into east wall to the junction with the tower.
- 3.2.3 Rake out pointing to depth of 50mm from Base stage as C41/811.
- 3.2.4 Rake out pointing to depth of 50mm from Plinth stage as C41/811.
- 3.2.5 Extra over for 3.2.1 – 3.2.4 for raking out to depth of 75mm.
- 3.2.6 Fully point complete Belfry/ Parapet stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.2.7 Fully point complete Ringing Chamber stage wall to depth of 50mm with hot mix lime mortar as C41/821.
- 3.2.8 Fully point complete Base stage wall to depth of 50mm with hot mix lime mortar as C41/821.
- 3.2.9 Fully point complete Plinth stage wall to depth of 50mm with hot mix lime mortar as C41/821.
- 3.2.10 Extra over to repoint items 3.2.6-3.2.9 to depth of 75mm with hot mix lime mortar as C41/821.
- 3.2.11 Not to be carried forward: Cost difference for fully pointing Parapet/ Belfry stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.2.12 Not to be carried forward: Cost difference for fully pointing Ringing Chamber stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.2.13 Not to be carried forward: Cost difference for fully pointing Base stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.2.14 Not to be carried forward: Cost difference for fully pointing Plinth stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.2.15 Grout south-west facing external wall, i.e. curved surface between centre line of stair case and junction with south wall, as C41/721 in the Belfry/ Parapet, Ringing Chamber, Base and Plinth stages as shown on the drawing. Allow for 2.5 m³ of grout.
- 3.2.16 Carefully remove broken glass from top most south facing window. Provide and fit clear toughened glass pane, 12mm thick. Contractor to make proposal on bedding and sealing mortar for glass.

657408/ For Approval

To Collection:

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- 3.2.17 Provisional Item: Take down 3 No 0.75 m² of external flint face to depth of 125mm and rebuild as C41/322. Repointing taken above.
- 3.2.18 Provisional item: Rake out a vertical crack 5 metres long, 150mm deep and 25 mm wide. Deep pack with lime mortar as C41/322. Repointing taken above.
- 3.2.19 Price here to temporarily remove and refix the electrical cable underneath the drip course. All fixings to be stainless steel.
- 3.3 South Elevation**
- 3.3.1 Rake out pointing to depth of 50mm from Parapet stage as C41/811.
- 3.3.2 Rake out pointing to depth of 50mm from Belfry Chamber stage as C41/811.
- 3.3.3 Rake out pointing to depth of 50mm from Ringing Chamber stage as C41/811.
- 3.3.4 Rake out pointing to depth of 50mm from Base stage as C41/811.
- 3.3.5 Rake out pointing to depth of 50mm from Plinth stage as C41/811.
- 3.3.6 Extra over for 3.3.1 – 3.3.5 for raking out to depth of 75mm.
- 3.3.7 Fully point Parapet stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.3.8 Fully point Belfry stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.3.9 Fully point Ringing Chamber stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.3.10 Fully point Base stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.3.11 Fully point Plinth stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.3.12 Extra over to repoint items 3.3.8 – 3.3.11 to depth of 75mm with hot mix lime mortar as C41/821.
- 3.3.13 Not to be carried forward: Cost difference for fully pointing Parapet stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.3.14 Not to be carried forward: Cost difference for fully pointing Belfry stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.3.15 Not to be carried forward: Cost difference for fully pointing Ringing Chamber stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.3.16 Not to be carried forward: Cost difference for fully pointing Base stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.

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- 3.3.17 Not to be carried forward: Cost difference for fully pointing Plinth stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.3.18 Provisional Item: Take down 3 No 0.75 m² of external flint face to depth of 125mm and rebuild as C41/322. Repointing taken above
- 3.3.19 Remove 30 No patches, each dia of 250mm, of external flint face to depth of 100 mm and rebuild as C41/322, removing any deep seated plant roots. Repointing taken above.
- 3.3.20 Grout 100 % of external wall surface as C41/721 in the Parapet, Belfry, Ringing Chamber, Base and Plinth stages. Grouting points to be at 450mm c/c and staggered. Allow for 5 m³ of grout. Provide breakdown into the five stages.
- 3.3.21 Grout in a 600mm wide strip around sides and top of belfry opening as C41/721. Grouting points to be at 450mm c/c and staggered. Allow for 1 m³ of grout.
- 3.3.22 Rake out and point joints between flintwork and window stonework and C41/823. This to include pointing the joints in the window stonework.
- 3.3.23 Remove cement repair and replace a 200 x 200 x 250mm of plinth stonework with a mortar repair as C41/524, shaped to match existing.

South-SouthWest Face of SW Buttress

- 3.3.24 Rake out pointing in flintwork to depth of 50mm in the top 3 stages as C41/811. Retain gallets for reinstatement.
- 3.3.25 Rake out any loose or cementitious pointing in the brickwork joints in the top 3 stages as C41/811 to a depth of 35mm.
- 3.3.26 Rake out pointing in flintwork to depth of 50mm in the two bottom stages as C41/811. Retain gallets for reinstatement.
- 3.3.27 Rake out any loose or cementitious pointing in the brickwork joints in the two bottom stages as C41/811 to a depth of 35mm.
- 3.3.28 Rake out pointing in flintwork to depth of 50mm in the plinth stage as C41/811. Retain gallets for reinstatement.
- 3.3.29 Rake out any loose or cementitious pointing in the brickwork joints in the plinth stage as C41/811 to a depth of 35mm.
- 3.3.30 Repoint flintwork areas in the top three stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinststate gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.3.31 Repoint open joints in brickwork in the top three stages with hot mix lime mortar as C41/823.

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- 3.3.32 Repoint flintwork areas in the two bottom stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinstate gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.3.33 Repoint open joints in brickwork in the two bottom stages with hot mix lime mortar as C41/823.
- 3.3.34 Repoint flintwork areas in the plinth stage to a depth of 50mm with hot mix lime mortar as C41/822. Reinstate gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.3.35 Repoint open joints in brickwork in the plinth stage with hot mix lime mortar as C41/823.
- 3.3.36 Not to be carried forward: Cost difference for carrying out items 3.3.30 – 3.3.35 in NHLF 3.5 lime mortar as C41/825.
- 3.4 West Elevation
 - 3.4.1 Rake out pointing to depth of 50mm from Parapet stage as C41/811.
 - 3.4.2 Rake out pointing to depth of 50mm from Belfry Chamber stage as C41/811.
 - 3.4.3 Rake out pointing to depth of 50mm from Ringing Chamber stage as C41/811.
 - 3.4.4 Rake out pointing to depth of 50mm from Base stage as C41/811.
 - 3.4.5 Rake out pointing to depth of 50mm from Plinth stage as C41/811.
 - 3.4.6 Extra over for 3.4.1 – 3.4.5 for raking out to depth of 75mm.
 - 3.4.7 Fully point Parapet stage to depth of 50mm with hot mix lime mortar as C41/821.
 - 3.4.8 Fully point Belfry stage to depth of 50mm with hot mix lime mortar as C41/821.
 - 3.4.9 Fully point Ringing Chamber stage to depth of 50mm with hot mix lime mortar as C41/821.
 - 3.4.10 Fully point Base stage to depth of 50mm with hot mix lime mortar as C41/821.
 - 3.4.11 Fully point Plinth stage to depth of 50mm with hot mix lime mortar as C41/821.
 - 3.4.12 Extra over to repoint items 3.4.8 – 3.4.11 to depth of 75mm with hot mix lime mortar as C41/821.
 - 3.4.13 Not to be carried forward: Cost difference for fully pointing Parapet stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.

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- 3.4.14 Not to be carried forward: Cost difference for fully pointing Belfry stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.4.15 Not to be carried forward: Cost difference for fully pointing Ringing Chamber stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.4.16 Not to be carried forward: Cost difference for fully pointing Base stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.4.17 Not to be carried forward: Cost difference for fully pointing Plinth stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.4.18 Provisional Item: Take down 3 No 0.75 m² of external flint face to depth of 125mm and rebuild as C41/322. Repointing taken above
- 3.4.19 Remove 20 No patches, each dia of 250mm, of external flint face to depth of 100 mm and rebuild as C41/322, removing any deep seated plant roots. Repointing taken above.
- 3.4.20 Grout 100 % of external wall surface as C41/721 in the Parapet, Belfry Ringing Chamber, Base and Plinth stages. Grouting points to be at 450mm c/c and staggered. Allow for 5 m³ of grout. Provide breakdown into the five stages.
- 3.4.21 Grout around sides and top of belfry opening, Ringing Chamber window and stained glass west window as C41/721. Grouting points to be at 450mm c/c and staggered. Allow for 1 m³ of grout. Provide breakdown into the three windows.
- 3.4.22 Rake out and point joints between flintwork and Belfry window stonework and C41/823. This to include pointing the joints in the Belfry window stonework.
- 3.4.23 Over the full height of the elevation allow to temporarily remove and refix the lightning conductor in sections as the work progresses to carry out the work. All new fixings to match existing, if in doubt consult lightning conductor specialist.
- 3.4.24 Provisional Item. Cut out 4 No decayed ends of the stringcourse each 200 mm long and replace with new Kentish Ragstone as C41/ 243, shaped to match unweathered existing worked in situ. Allow 1 No st/stl pin per section as C41. For pricing allow each section to be 200 x 200 x 250 mm.
- 3.4.25 Provide and fit 1 offset brick next to lightning conductor, type of brick, colour and shape to match existing.
- 3.4.26 Open west door, brush down and Hoover timber and metal work straps.
- 3.4.27 Treat the external timber incl the cut surfaces with beeswax turpentine mix as M60/140.
- 3.4.28 Treat the wrought iron strap hinges with Renaissance Decorroder and Renaissance Wax as M60/131.

3.4.29 Grease the hinge and pintles.

3.5 South- West Face of SW Buttress

3.5.1 Rake out pointing in flintwork to depth of 50mm in the top 3 stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.

3.5.2 Rake out any loose or cementitious pointing in the brickwork joints in the top 3 stages as C41/811 to a depth of 35mm. Leave sound lime mortar pointing in place.

3.5.3 Rake out pointing in flintwork to depth of 50mm in the two bottom stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.

3.5.4 Rake out any loose or cementitious pointing in the brickwork joints in the two bottom stages as C41/811 to a depth of 35mm. Leave sound lime mortar pointing in place.

3.5.5 Rake out pointing in flintwork to depth of 50mm in the plinth stage as C41/811. Retain gallets for reinstatement.

3.5.6 Rake out any loose or cementitious pointing in the brickwork joints in the plinth stage as C41/811 to a depth of 35mm.

3.5.7 Repoint flintwork areas in the top three stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinststate gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.

3.5.8 Repoint open joints in brickwork in the top three stages with hot mix lime mortar as C41/823.

3.5.9 Repoint flintwork areas in the two bottom stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinststate gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.

3.5.10 Repoint open joints in brickwork in the two bottom stages with hot mix lime mortar as C41/823.

3.5.11 Repoint flintwork areas in the plinth stage to a depth of 50mm with hot mix lime mortar as C41/822. Reinststate gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.

3.5.12 Repoint open joints in brickwork in the plinth stage with hot mix lime mortar as C41/823.

3.5.13 Not to be carried forward: Cost difference for carrying out items 3.5.7 – 3.5.12 in NHLF 3.5 lime mortar as C41/825.

3.6 West- SouthWest Face of SW Buttress

- 3.6.1 Rake out pointing in flintwork to depth of 50mm in the top 3 stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.
- 3.6.2 Rake out any loose or cementitious pointing in the brickwork joints in the top 3 stages as C41/811 to a depth of 35mm. Leave sound lime mortar pointing in place.
- 3.6.3 Rake out pointing in flintwork to depth of 50mm in the two bottom stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.
- 3.6.4 Rake out any loose or cementitious pointing in the brickwork joints in the two bottom stages as C41/811 to a depth of 35mm. Leave sound lime mortar pointing in place.
- 3.6.5 Rake out pointing in flintwork to depth of 50mm in the plinth stage as C41/811. Retain gallets for reinstatement.
- 3.6.6 Rake out any loose or cementitious pointing in the brickwork joints in the plinth stage as C41/811 to a depth of 35mm.
- 3.6.7 Repoint flintwork areas in the top three stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.6.8 Repoint open joints in brickwork in the top three stages with hot mix lime mortar as C41/823.
- 3.6.9 Repoint flintwork areas in the two bottom stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.6.10 Repoint open joints in brickwork in the two bottom stages with hot mix lime mortar as C41/823.
- 3.6.11 Repoint flintwork areas in the plinth stage to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.6.12 Repoint open joints in brickwork in the plinth stage with hot mix lime mortar as C41/823.
- 3.6.13 Not to be carried forward: Cost difference for carrying out items 3.6.7 – 3.6.13 in NHLF 3.5 lime mortar as C41/825.

3.7 West- NorthWest Face of NW Buttress

- 3.7.1 Rake out pointing in flintwork to depth of 50mm in the top 3 stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.
- 3.7.2 Rake out any loose or cementitious pointing in the quoin joints in the top 3 stages as C41/811. Leave sound lime mortar pointing in place.
- 3.7.3 Rake out pointing in flintwork to depth of 50mm in the two bottom stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.
- 3.7.4 Rake out any loose or cementitious pointing in the quoin joints in the two bottom stages as C41/811 to a depth of 35mm. Leave sound lime mortar pointing in place.
- 3.7.5 Rake out pointing in flintwork to depth of 50mm in the plinth stage as C41/811. Retain gallets for reinstatement.
- 3.7.6 Rake out any loose or cementitious pointing in the quoin joints in the plinth stage as C41/811 to a depth of 35mm.
- 3.7.7 Repoint flintwork areas in the top three stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.7.8 Repoint open quoin joints in the top three stages with hot mix lime mortar as C41/823.
- 3.7.9 Repoint flintwork areas in the two bottom stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.7.10 Repoint open quoin joints in the two bottom stages with hot mix lime mortar as C41/823.
- 3.7.11 Repoint flintwork areas in the plinth stage to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.7.12 Repoint open quoin joints in brickwork in the plinth stage with hot mix lime mortar as C41/823.
- 3.7.13 Not to be carried forward: Cost difference for carrying out items 3.7.7 – 3.7.12 in NHLF 3.5 lime mortar as C41/825.

3.8 North- West Face of NW Buttress

- 3.8.1 Rake out pointing in flintwork to depth of 50mm in the top 3 stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.
- 3.8.2 Rake out any loose or cementitious pointing in the quoin joints in the top 3 stages as C41/811. Leave sound lime mortar pointing in place.
- 3.8.3 Rake out pointing in flintwork to depth of 50mm in the two bottom stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.
- 3.8.4 Rake out any loose or cementitious pointing in the quoin joints in the two bottom stages as C41/811 to a depth of 35mm. Leave sound lime mortar pointing in place.
- 3.8.5 Rake out pointing in flintwork to depth of 50mm in the plinth stage as C41/811. Retain gallets for reinstatement.
- 3.8.6 Rake out any loose or cementitious pointing in the quoin joints in the plinth stage as C41/811 to a depth of 35mm.
- 3.8.7 Repoint flintwork areas in the top three stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.8.8 Repoint open quoin joints in the top three stages with hot mix lime mortar as C41/823.
- 3.8.9 Repoint flintwork areas in the two bottom stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.8.10 Repoint open quoin joints in the two bottom stages with hot mix lime mortar as C41/823.
- 3.8.11 Repoint flintwork areas in the plinth stage to a depth of 50mm with hot mix lime mortar as C41/822. Reinstatement gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.8.12 Repoint open quoin joints in the plinth stage with hot mix lime mortar as C41/823.
- 3.8.13 Not to be carried forward: Cost difference for carrying out items 3.8.7 – 3.8.12 in NHLF 3.5 lime mortar as C41/825

3.9 North Elevation

- 3.9.1 Rake out pointing to depth of 50mm from Parapet stage as C41/811.

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- 3.9.2 Rake out pointing to depth of 50mm from Belfry Chamber stage as C41/811.
- 3.9.3 Rake out pointing to depth of 50mm from Ringing Chamber stage as C41/811.
- 3.9.4 Rake out pointing to depth of 50mm from Base stage as C41/811.
- 3.9.5 Rake out pointing to depth of 50mm from Plinth stage as C41/811.
- 3.9.6 Extra over for 3.9.1 – 3.9.5 for raking out to depth of 75mm.
- 3.9.7 Fully point Parapet stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.9.8 Fully point Belfry stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.9.9 Fully point Ringing Chamber stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.9.10 Fully point Base stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.9.11 Fully point Plinth stage to depth of 50mm with hot mix lime mortar as C41/821.
- 3.9.12 Extra over to repoint items 3.9.8 – 3.9.11 to depth of 75mm with hot mix lime mortar as C41/821.
- 3.9.13 Not to be carried forward: Cost difference for fully pointing Parapet stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.9.14 Not to be carried forward: Cost difference for fully pointing Belfry stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.9.15 Not to be carried forward: Cost difference for fully pointing Ringing Chamber stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.9.16 Not to be carried forward: Cost difference for fully pointing Base stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.9.17 Not to be carried forward: Cost difference for fully pointing Plinth stage in NHLF 3.5 lime mortar to a depth of 50mm as C41/825.
- 3.9.18 Grout 100 % of external wall surface as C41/721 in the Parapet, Belfry Ringing Chamber, Base and Plinth stages. Grouting points to be at 450mm c/c and staggered. Allow for 3 m³ of grout. Provide breakdown into the five stages.
- 3.9.19 Grout around sides and top of the belfry opening as C41/721. Grouting points to be at 450mm c/c and staggered. Allow for 1 m³ of grout.
- 3.9.20 Rake out and point joints between flintwork and Belfry window stonework as C41/823. This to include pointing the joints in the Belfry window stonework.

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- 3.9.21 Over the full height of the elevation allow to temporarily remove and refix the lightning conductor in sections as the work progresses to carry out the work. All new fixings to match existing, if in doubt consult lightning conductor specialist.
- 3.9.22 Provisional Item: Remove end section of parapet stringcourse, incl return and replace with new Kentish Ragstone as C41/ 243, shaped to match unweathered existing, worked in situ. Allow 2No st/stl pins per section as C41. For pricing allow depth of bedding into wall 200mm.
- 3.9.23 Rake out and repoint 10 joints in plinth course as C41/823.

3.10 North-NorthWest Face of NW Buttress

- 3.10.1 Rake out pointing in flintwork to depth of 50mm in the top 3 stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.
- 3.10.2 Rake out any loose or cementitious pointing in the quoin joints in the top 3 stages as C41/811. Leave sound lime mortar pointing in place.
- 3.10.3 Rake out pointing in flintwork to depth of 50mm in the two bottom stages as C41/811. Retain gallets for reinstatement. Leave sound lime mortar pointing in place.
- 3.10.4 Rake out any loose or cementitious pointing in the quoin joints in the two bottom stages as C41/811 to a depth of 35mm. Leave sound lime mortar pointing in place.
- 3.10.5 Rake out pointing in flintwork to depth of 50mm in the plinth stage as C41/811. Retain gallets for reinstatement.
- 3.10.6 Rake out any loose or cementitious pointing in the quoin joints in the plinth stage as C41/811 to a depth of 35mm.
- 3.10.7 Repoint flintwork areas in the top three stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinststate gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.10.8 Repoint open quoin joints in the top three stages with hot mix lime mortar as C41/823.
- 3.10.9 Repoint flintwork areas in the two bottom stages to a depth of 50mm with hot mix lime mortar as C41/822. Reinststate gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.10.10 Repoint open quoin joints in the two bottom stages with hot mix lime mortar as C41/823.

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- 3.10.11 Repoint flintwork areas in the plinth stage to a depth of 50mm with hot mix lime mortar as C41/822. Reinstall gallets, make up lost gallets with new to match existing. Pointing of flintwork to match fullness of existing pointing.
- 3.10.12 Repoint open quoin joints in the plinth stage with hot mix lime mortar as C41/823.
- 3.10.13 Not to be carried forward: Cost difference for carrying out items 3.10.7 – 3.10.12 in NHLF 3.5 lime mortar as C41/825.

4 Internal Repairs

4.1 Tower Base Stage

- 4.1.1 Grout whole west wall, incl window and door reveals as C41/721. Grouting points to be at 450mm c/c and staggered. Allow for 1 m³ of grout.
- 4.1.2 Repoint grouting points as C41/824. Let wall dry out and relime wash whole wall with 5 coats of limewash as M60/124. Include for preparation of wall as per manufacturer's recommendation. Door and window reveals to be included into limewashing.
- 4.1.3 Grout whole south wall as C41/721. Grouting points to be at 450mm c/c and staggered. Allow for 1 m³ of grout. Prior to grouting remove plastic gutter, bucket downpipe and fascia and store in the church.
- 4.1.4 Repoint grouting points as C41/824. Let wall dry out and relime wash whole wall with 5 coats of limewash as M60/124. Include for preparation of wall as per manufacturer's recommendation.
- 4.1.5 Remove the two timber straps and the boarding in the area shown on the drawing. Reset on completion, all fixings to be stainless steel as Z20. Allow provisionally for replacement of 50% of tongue and groove boarding with new softwood boarding to match. New boarding to be stained and finished to match existing, contractor to make proposals. Contractor to provide sample of finish for approval prior to undertaking this work.
- 4.1.6 Allow provisionally for 3 No tanalised timbers 3,300mm long x 125 x 75mm, to be installed into ceiling above t+g boards. Include for removal of decayed existing timbers. All fixings to be st/stl as Z20.

4.2 Ringing Chamber

- 4.2.1 Internal West Wall: Rake out as 90% of existing pointing as C41/811 and repoint 90% of internal wall as C41/824. Leave sound pointing mortar in place.
- 4.2.2 Internal West Wall: Rake out all vertical cracks as C41/824 and deep point as C41/824. For pricing allow for 40 metres of cracks, 25mm wide and 100mm deep, in approx. 15 locations of various length.

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- 4.2.3 Internal West Wall: Grout whole wall as C41/721. Grouting points to be at 450mm c/c and staggered. Allow for 1 m³ of grout.
- 4.2.4 Internal West Window: Take down and rebuild to a depth of 100mm the flintwork in all four sides of the window reveal as C41/322. Repoint these areas as C41/824. Remove all plants and their roots in the process.
- 4.2.5 Internal West Window: Allow provisionally to grout the sides and window cill inside the reveal as C41/721. Allow provisionally 4 grouting holes and for 0.05m³ of grout.
- 4.2.6 Internal West Window: Allow provisionally to replace a jamb stone with new Kentish Rag stone as C41/524. For pricing allow a stone 250 x 250 x 350mm. Include for removal of existing stone. Set in hot mix mortar as C41/824. Exact size and location to be clarified on site.
- 4.2.7 Internal West Window: Rake out and repoint the jamb stones to both sides of the window opening and the cill stones as C41/ 824.
- 4.2.8 Internal South Wall: Rake out as 30% of existing pointing as C41/811 and repoint 30% of internal wall as C41/ 824. Leave sound pointing mortar in place.
- 4.2.9 Internal South Wall: Rake out all vertical cracks as C41/824 and deep point as C41/824. For pricing allow for 10 metres of cracks, 25mm wide and 100mm deep, in approx. 5 locations of various length.
- 4.2.10 Internal South Wall: Grout whole wall as C41/721. Grouting points to be at 450mm c/c and staggered. Allow for 1 m³ of grout.

4.3 Belfry

EAST WALL/ WINDOW

- 4.3.1 Take down and rebuild to a depth of 100mm the flintwork in both window reveals as C41/322. Repoint these areas as C41/824.
- 4.3.2 Rake out and repoint the joints in the jambstones and window cill and soffit as C41/824.
- 4.3.3 Remove loose mortar pointing around glass line on all 4 sides and repoint as C41/ 821.
- 4.3.4 Internal East Wall: Rake out 2 No vertical cracks as C41/824 and deep point as C41/824. For pricing allow for 8 metres of cracks, 25mm wide and 100mm deep, in approx. 2 locations of various length.
- 4.3.5 Remove birds nest and debris from wall plate level on all four sides of the tower.

SOUTH WALL/ WINDOW

- 4.3.6 Take down and rebuild to a depth of 100mm the flintwork in both window reveals as C41/322. Repoint these areas as C41/824.
- 4.3.7 Rake out and repoint the joints in the jambstones and window cill as C41/824.
- 4.3.8 Check pointing in window soffit and allow provisionally to rake out and repoint these joints as C42/824. Sound pointing to be left in place.
- 4.3.9 Rake out and repoint the joint between window stone work and flintwork on all sides, as well as all joints in the window stonework itself as C41/ 823.
- 4.3.10 Grout around the jambs and window head in a 600mm wide strip as C41/721. Allow for 8 grouting holes and 0.05m³ of grout.
- 4.3.11 Remove existing bird netting. Provide and fit an internal louvred frame wall as DET 126. Fix to wall with st/stl fixings as Z20, resin fixings into place. Provide 20mm wide st/stl plyable packing tape, bend and wrap around each slate louvre and fix to timber louvres with st/stl fixings as Z20. St/stl tape to fit louvres closely, pre-bend tape before fitting. Base of frame to be level with top of stone window cill. Include for mortar repairs as C41 to make cill level. Provide and fit a code 5 lead cill to each light as shown on the detail, note upstand at back and at jambs and mullions. Refix existing bird netting to the back of the new frame with tanalised battens as Z20.
- 4.3.12 Internal South Wall: Rake out 1 No vertical cracks as C41/824 and deep point as C41/824. For pricing allow for 6 metres of crack, 25mm wide and 100mm deep.

WEST WALL/ WINDOW

- 4.3.13 Take down and rebuild to a depth of 100mm the flintwork in both window reveals as C41/322. Repoint these areas as C41/824.
- 4.3.14 Rake out and repoint the joints in the jambstones and window cill as C41/824.
- 4.3.15 Check pointing in window soffit and allow provisionally to rake out and repoint these joints as C42/824. Sound pointing to be left in place.
- 4.3.16 Rake out and repoint the joint between window stone work and flintwork on all sides, as well as all joints in the window stonework itself as C41/ 823. This to include a hole in the tracery.
- 4.3.17 Grout around the jambs and window head in a 600mm wide strip as C41/721. Allow for 8 grouting holes and 0.05m³ of grout.

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- 4.3.18 Remove existing bird netting. Provide and fit an internal louvred frame wall as DET 126. Fix to wall with st/stl fixings as Z20, resin fixings into place. Provide 20mm wide st/stl plyable packing tape, bend and wrap around each slate louvre and fix to timber louvres with st/stl fixings as Z20. St/stl tape to fit louvres closely, pre-bend tape before fitting. Base of frame to be level with top of stone window cill. Include for mortar repairs as C41 to make cill level. Provide and fit a code 5 lead cill to each light as shown on the detail, note upstand at back and at jambs and mullions. Refix existing bird netting to the back of the new frame with tanalised battens as Z20.
- 4.3.19 Internal West Wall: Rake out 2 No vertical cracks as C41/824 and deep point as C41/824. For pricing allow for 8 metres of crack, 25mm wide and 100mm deep in approx. 3 locations of different length.
- 4.3.20 Internal West Wall: Price here to take down and rebuild the flintwork under the window cill to a depth of 100mm as C41/322. Repoint this area as C41/824. Area of rebuilding to be full width of wall and up to the level of the window cill. Check soundness of whole area prior to rebuilding.

NORTH WALL/ WINDOW

- 4.3.21 Take down and rebuild to a depth of 100mm the flintwork in both window reveals as C41/322. Repoint these areas as C41/824.
- 4.3.22 Rake out and repoint the joints in the jambstones and window cill as C41/824.
- 4.3.23 Check pointing in window soffit and allow provisionally to rake out and repoint these joints as C42/824. Sound pointing to be left in place.
- 4.3.24 Deep pack two holes in the window soffit.
- 4.3.25 Rake out and repoint the joint between window stone work and flintwork on all sides, as well as all joints in the window stonework itself as C41/ 823.
- 4.3.26 Grout around the jambs and window head in a 600mm wide strip as C41/721. Allow for 8 grouting holes and 0.05m³ of grout.
- 4.3.27 Provisional Item: Remove existing mullion and replace with new mullion in Kentish Rag Stone as C41/ 243. Profile to match unweathered existing. Allow to shape new mullion in situ. This work to include taking down and resetting the slate louvres.
- 4.3.28 Provisional Item: Price here for 6 No mortar repairs to Kentish Rag window stonework as C41/ 524. For pricing allow for each area to be 300 x 150mm and 30mm thick.

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- 4.3.29 Remove existing bird netting. Provide and fit an internal louvred frame wall as DET 126. Fix to wall with st/stl fixings as Z20, resin fixings into place. Provide 20mm wide st/stl plyable packing tape, bend and wrap around each slate louvre and fix to timber louvres with st/stl fixings as Z20. St/stl tape to fit louvres closely, pre-bend tape before fitting. Base of frame to be level with top of stone window cill. Include for mortar repairs as C41 to make cill level. Provide and fit a code 5 lead cill to each light as shown on the detail, note upstand at back and at jambs and mullions. Refix existing bird netting to the back of the new frame with tanalised battens as Z20.
- 4.3.30 Internal North Wall: Rake out 2 No vertical cracks as C41/824 and deep point as C41/824. For pricing allow for 8 metres of crack, 25mm wide and 100mm deep in approx. 3 locations of different length.
- 4.3.31 Allow provisionally for pinning and gluing head and jambs to the reveals. For pricing allow 8 No 6mm dia threaded rod each 450mm long,

4.4 Stair Turret Internal Repairs

- 4.4.1 At the junction with the tower south wall rake out the vertical movement crack over the full internal height of the turret to a depth of 75mm and a width of 25 mm. Deep point as C41/ 824. For pricing allow for 16 metres of crack.
- 4.4.2 Grout crack over its full height as C41/721. Allow for 0.075m³ of grout.
- 4.4.3 At the junction with the tower east wall rake out the vertical movement crack over the full internal height of the turret to a depth of 75mm and a width of 25 mm. Deep point as C41/ 824. For pricing allow for 16 metres of crack.
- 4.4.4 Grout crack over its full height as C41/721. Allow for 0.075m³ of grout.
- 4.4.5 Rake out as C41/ 811 up to 4 areas of internal, damp flintwork, totalling to 12m². Repoint these areas as C41/ 824.
- 4.4.6 Rake out the jambs and soffit of the topmost window, looking west, and repoint as C41/824.
- 4.4.7 Price here to provide 60 No flints as C41/244, exact location to be confirmed on site. Sizes 20No 75 mm dia, 20No 125 mm dia. 20 No 200mm dia.

4.5 Door onto Tower Roof

- 4.5.1 Provide and fit a weather bar to the outside of the tower door. For pricing allow for an oak weather bar, 750mm long, 75 mm wide and 50mm high, with a drip groove. Exact dimensions and type of wood to be confirmed on site. All fixings to be st/stl as Z20.
- 4.5.2 Around all 4 sides of the door opening provide and fit an outward slanted oak fillet to create a rebate. For pricing allow for a planed section size of 50mm wide and 38 mm high, tapering to 25mm at outside edge. Fillet at lintel to have 38 x 50mm cross section without a slant. Exact size to be confirmed on site. All fixings to be st/stl as Z20.

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To Collection:

4.6 Bat Mitigation Measures

- 4.6.1 Provide 6 No Kent Type bat boxes, available from <https://www.nhbs.com/eco-kent-bat-box>. Fit 3 No bat boxes on 2 No trees in 4-6 metres height, as advised by the Bat Ecologist.

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Swingfield, St Peter's Church

Summary

Tower Repairs

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Summary

Total from Preliminaries Collection

Total from Workmanship and Materials Collection

Total from The Works Collection

Ref: 657408/JB/BS

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To Summary:

Rev A

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