

2453 Ross Market House Repairs
Preliminaries, Materials and Specification
Schedule of Works

TENDER ISSUE

Jan 2018

A10 PROJECT PARTICULARS

110 THE PROJECT

- Name: Rock Market House Repairs.
- Nature: Repair Works.
- Location: Ross on Wye, Herefordshire.
- Length of contract: To be confirmed by main contractor.

120 EMPLOYER (CLIENT)

- Name: Ross Town Council.
- Address: The Corn Exchange, High St, Ross-on-Wye HR9 5HL.
- Contact: Town Clerk: Sarah Robson.
- Telephone: 01989 562 373.
- E-mail: clerk@rosstc-herefordshire.gov.uk

130 PRINCIPAL CONTRACTOR (CDM)

- Name: To be confirmed.
- Address: To be confirmed.
- Contact: To be confirmed.
- Telephone: To be confirmed.
- E-mail: To be confirmed - all above details to be inputted when appointed.

140 ARCHITECT/ CONTRACT ADMINISTRATOR

- Name: RRA Architects (Hereford) Ltd.
- Address: The Watershed, Wye Street, Hereford, HR2 7RB.
- Contact: Fred Hamer.
- Telephone: 01432 278 707.
- E-mail: fred@rraarchitects.com.

150 PRINCIPAL DESIGNER

- Name: RRA Architects (Hereford) Ltd.
- Address: The Watershed, Wye Street, Hereford, HR2 7RB.
- Contact: Fred Hamer.
- Telephone: 01432 278 707.
- E-mail: fred@rraarchitects.com.

160 STRUCTURAL ENGINEER

- Name: Sinclair Johnston and Partners.
- Address: 93 Great Suffolk Street, London, SE1 0BX.
- Contact: Sinclair Johnston.
- Telephone: 020 7593 1920.
- E-mail: sjohnston@sinclairjohnston.co.uk.

A11 TENDER AND CONTRACT DOCUMENTS

120 CONTRACT DRAWINGS

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

160 PRECONSTRUCTION INFORMATION

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

A12 THE SITE/ EXISTING BUILDINGS

THE SITE

- Description: Ross Market House dates from 1674 and replaces an earlier timber framed market house. The listed description (included at the back of this report) states that the building was erected by Frances, wife of the 2nd duke of Somerset.

The building is rectangular in plan with an open arcaded ground floor, six bays in length by two bays in width. It is orientated on an east-west axis. The bays are defined by rounded arches with doric columns and half columns between as responds. A further row of columns is set along the central axis. Above the ground floor is an enclosed upper floor with windows positioned to the centre of each bay. To the central bay on the north side, however, is an oak double door that sits within an enlarged opening.

- At the east and west ends of the first floor there are double gables with double pitched roofs between, running east-west. To the centre of the roofs is a later raised clock tower with four glazed faces, square on plan with a pyramidal roof capping. The tower is probably mid to late 18th Century in date.

120 EXISTING BUILDINGS ON/ ADJACENT TO THE SITE

- Description: The building is located within the centre of Ross on Wye with a road to the south of the building. To the north of the building, there is an open space which contains markets and public events during the summer months.
- To the ground floor, there is an open space which again has markets. During the works, the market will be suspended or housed adjacent to the site. During the works to the access steps, the first floor gallery space will be closed. Contractor to allow for adaptation of the scaffolding to facilitate reopening of the first floor and ensure that the closure time is at a minimum.

140 EXISTING UTILITIES AND SERVICES

- Drawings: (Information shown is indicative only): Contractor to carryout site investigations prior to setting up to determine utilities and necessary services for works.

170 SITE INVESTIGATION

- Report: Included in the tender documents.

180 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: RRA Architects.
- Arrangements for inspection: Contact contract administrator.

200 ACCESS TO THE SITE

- Description: Access to the exterior of the site is unrestricted as building is within the centre of Ross on Wye. Contractors will have to arrange access with Ross on Wye Town Clerk and Architect to first floor.

210 PARKING

- Restrictions on parking of the Contractor's and employees' vehicles: Parking is restricted to loading and unloading. There is no onsite parking however it is nearby. Licenses may obtainable from Herefordshire Council.

220 USE OF THE SITE

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

230 SURROUNDING LAND/ BUILDING USES

- General: Adjacent or nearby uses or activities are as follows:
 - Public space;
 - General shopping.

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:
 - Asbestos;
 - Fragile roof construction;
 - working with lime;
 - general dust.
- Information: The accuracy and sufficiency of this information is not guaranteed by the Employer or the Employer's representative. Ascertain if any additional information is required to ensure the safety of all persons and the Works.
- Site staff: Draw to the attention of all personnel working on the site the nature of any possible contamination and the need to take appropriate precautionary measures.

250 SITE VISIT

- Assessment: Ascertain the nature of the site, access thereto and all local conditions and restrictions likely to affect the execution of the Works.
- Arrangements for visit: Contact Fred Hamer for access as site is not open to general public.

A13 DESCRIPTION OF THE WORK

120 THE WORKS

- Description: Contractor to carry out the works described in the schedule of work and drawings attached.

130 WORK BY OTHERS CONCURRENT WITH THE CONTRACT

- Description: None.

A20 JCT MINOR WORK BUILDING CONTRACT (MW)

JCT MINOR WORKS BUILDING CONTRACT

- The Contract: JCT Minor Works Building Contract 2016 Edition

THE RECITALS

First - THE WORKS AND THE CONTRACT ADMINISTRATOR

- The work comprises: Repairs to roofs, walls, internal surfaces and new drainage works.
- 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 A specification of Works.

Third - PRICED DOCUMENTS

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

THE 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: TBC - See clause A10/130.

CONTRACT PARTICULARS

Fourth Recital and Schedule 2 - BASE DATE

- Base date: Tender invitation date.

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

- Employer at the Base Date is a 'contractor' for the purposes of the CIS.

Fifth Recital - CDM REGULATIONS

- The project is notifiable. Contractor to confirm once programme length is known.

Sixth Recital - FRAMEWORK AGREEMENT

- Framework agreement: Does not apply.

Seventh Recital and Schedule 3 - SUPPLEMENTAL PROVISIONS

- Collaborative working: Paragraph 1 applies.
- Health and safety: Paragraph 2 applies.
- Cost savings and value improvements: Paragraph 3 applies.
- Sustainable development and environmental considerations: Paragraph 4 applies.
- Performance indicators and monitoring: Paragraph 5 does not apply.
- Notification and negotiation of disputes: Paragraph 6 applies. Where paragraph 6 applies, the respective nominees of the parties are:
 - Employer's nominee: RIBA.
 - Contractor's nominee: TBC.

Or such replacement as each party may notify to the other from time to time.

Article 7 - ARBITRATION

- Article 7 and Schedule 1 apply.

Clause 2.2 - COMMENCEMENT AND COMPLETION

- Date for Commencement of the Works: TBC.
- Date for Completion: TBC.

Clause 2.8 - LIQUIDATED DAMAGES

- At the rate of £500.00 per calendar week or pro-rata thereto.

Clause 2.10 - RECTIFICATION PERIOD

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

Clause 4.3 - PERCENTAGE OF THE TOTAL VALUE OF THE WORK ETC.

- Percentage: 95 per cent.

Clause 4.4 - PERCENTAGE OF THE TOTAL AMOUNT TO BE PAID TO THE CONTRACTOR

- Percentage: 97½ per cent.

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

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

Clause 4.11 and Schedule 2 - CONTRIBUTION, LEVY AND TAX CHANGES

Clause 4.11 and Schedule 2 will be deleted.

Clause 5.3.2 - CONTRACTOR'S INSURANCE - INJURY TO PERSONS OR PROPERTY

- Insurance cover (for any one occurrence or series of occurrences arising out of one event): 5,000,000.00.

Clauses 5.4A.1 and 5.4B.1.2 - PERCENTAGE TO COVER PROFESSIONAL FEES

- Addition: 15 per cent.

Clause 7.2 - ADJUDICATION

- The Adjudicator is: TBC.
- Nominating body: Royal Institute of British Architects.
- Schedule 1 paragraph 2.1 - ARBITRATION
- Appointor of Arbitrator (and of any replacement): President or a Vice president of the Royal Institute of British Architects.

THE CONDITIONS

SECTION 1: DEFINITIONS AND INTERPRETATION

1.7 - APPLICABLE LAW

- Amendments: England.

SECTION 2: CARRYING OUT THE WORKS

SECTION 3: CONTROL OF THE WORKS

SECTION 4: PAYMENT

SECTION 5: INJURY, DAMAGE AND INSURANCE

SECTION 6: TERMINATION

SECTION 7: SETTLEMENT OF DISPUTES
EXECUTION

- The Contract: Will be executed under hand.

A30 TENDERING/ SUBLETTING/ SUPPLY

MAIN CONTRACT TENDERING

110 SCOPE

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

145 TENDERING PROCEDURE

- General: In accordance with NBS Guide to Tendering for Construction Projects.
- Errors: Alternative 1 is to apply.

160 EXCLUSIONS

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

170 ACCEPTANCE OF TENDER

- Acceptance: No guarantee is offered that any tender will be recommended for acceptance or be accepted, or that reasons for non acceptance will be given.
- Costs: No liability is accepted for any cost incurred in the preparation of any tender.

190 PERIOD OF VALIDITY

- Period: After submission or lodgement, keep tender open for consideration (unless previously withdrawn) for not less than 60 days.
- 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.

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.

550 HEALTH AND SAFETY INFORMATION

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

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.

590 SITE WASTE MANAGEMENT PLAN

- Person responsible for developing the Plan: The Contractor.
- Content: Include details of:
 - Principal Contractor for the purposes of the plan
 - Location of the site.
 - Description of the project.
 - Estimated project cost.
 - Types and quantities of waste that will be generated.
 - Resource management options for these wastes including proposals for minimization/ reuse/ recycling.
 - The use of appropriate and licensed waste management contractors.
 - Record keeping procedures.
 - Waste auditing protocols.
- Additional requirements: None.
- Submit within on week of request following tender submission.

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.

A31 PROVISION, CONTENT AND USE OF DOCUMENTS

DEFINITIONS AND INTERPRETATIONS

110 DEFINITIONS

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

120 COMMUNICATION

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

130 PRODUCTS

- Definition: Materials, both manufactured and naturally occurring, and goods, including components, equipment and accessories, intended for the permanent incorporation in the Works.

- Includes: Goods, plant, materials, site materials and things for incorporation into the Works.

135 SITE EQUIPMENT

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

145 CONTRACTOR'S CHOICE

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

155 SUBMIT PROPOSALS

- Meaning: Submit information in response to specified requirements.

160 TERMS USED IN SPECIFICATION

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

170 MANUFACTURER AND PRODUCT REFERENCE

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

200 SUBSTITUTION OF PRODUCTS

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

210 CROSS REFERENCES

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

220 REFERENCED DOCUMENTS

- Conflicts: Specification prevails over referenced documents.

230 EQUIVALENT PRODUCTS

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

240 SUBSTITUTION OF STANDARDS

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

250 CURRENCY OF DOCUMENTS AND INFORMATION

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

260 SIZES

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

-
- Finished sizes for non-structural softwood or hardwood sawn and further processed sections.

DOCUMENTS PROVIDED ON BEHALF OF 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. Always check onsite dimensions

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/ drawings. – report any error or inconsistency to Architect immediately.

480 TECHNICAL DOCUMENTS

- Reference documents: Available for inspection by appointment during the normal office hours at the office of 09:00 - 17:30.
- Document titles:
 - See tender/ contract documents.

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.

A32 MANAGEMENT OF THE WORKS

GENERALLY

110 SUPERVISION

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

118 FREIGHT VEHICLE SAFETY REQUIREMENTS

- Vehicle equipment: Ensure that all freight 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.
- Registration Scheme membership: Submit evidence of registration with and accreditation to the Freight Operator Registration Scheme (FORS)
- Level of accreditation: Silver.
- Submittal date: Within one week of request.

120 INSURANCE

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

130 INSURANCE CLAIMS

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

140 CLIMATIC CONDITIONS

- See Spec for limitations on working with lime.
- 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.
- Any furniture items to be removed, as part of the protection measures are to remain in the employers ownership and safety stored until it can be reinstalled.

PROGRAMME/ PROGRESS

210 PROGRAMME

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

-
- Liaising with ecologist and archaeologist.
 - Submit one copy.

245 START OF WORK ON SITE

- Notice: Before the proposed date for start of work on site give minimum notice of two weeks.
- This to be co-ordinated with ecologist and mitigation measures for protected species.

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: TBC.
 - Record progress against each of the KPIs. If performance against KPI falls short of target, submit proposals for remediation.

260 SITE MEETINGS

- General: Site meetings will be held to review progress and other matters arising from administration of the Contract.
- Frequency: Every two weeks.
- Location: On site.
- 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.

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): Two 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.

440 MEASUREMENT

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

470 PRODUCTS NOT INCORPORATED INTO THE WORKS

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

A33 QUALITY STANDARDS/ CONTROL STANDARDS OF PRODUCTS AND EXECUTIONS

110 INCOMPLETE DOCUMENTATION

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

120 WORKMANSHIP SKILLS

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

130 QUALITY OF PRODUCTS

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

135 QUALITY OF EXECUTION

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

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.
- Agréent certified products: Comply with limitations, recommendations and requirements of relevant valid certificates.

180 WATER FOR THE WORKS

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

SAMPLES/ APPROVALS

210 SAMPLES

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

220 APPROVAL OF PRODUCTS

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

230 APPROVAL OF EXECUTION

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

ACCURACY/ SETTING OUT GENERALLY

320 SETTING OUT

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

330 APPEARANCE AND FIT

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

340 CRITICAL DIMENSIONS

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

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.

435 ELECTRICAL INSTALLATION CERTIFICATE

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

445 SERVICE RUNS

- General: Provide adequate space and support for services, including unobstructed routes and fixings.
- Ducts, chases and holes: Form during construction rather than cut.

- Coordination with other works: Submit details of locations, types/ methods of fixing of services to fabric and identification of runs and fittings.

450 MECHANICAL AND ELECTRICAL SERVICES

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

SUPERVISION/ INSPECTION/ DEFECTIVE WORK

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: Two days.
- Concealed work: If executed during overtime for which notice has not been given, it may be required to be opened up for inspection and reinstated at the Contractor's expense.

540 DEFECTS IN EXISTING WORK

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

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.

WORK AT OR AFTER COMPLETION

710 WORK BEFORE COMPLETION

- General: Make good all damage consequent upon the Works. Temporary markings, coverings and protective wrappings: Remove unless otherwise instructed.
- Cleaning: Clean the Works thoroughly inside and out, including all accessible ducts and voids. Remove all splashes, deposits, efflorescence, rubbish and surplus materials.
- Cleaning materials and methods: As recommended by manufacturers of products being cleaned, and must not damage or disfigure other materials or construction.

- COSHH dated data sheets: Obtain for all materials used for cleaning and ensure they are used only as recommended by their manufacturers.
- Minor faults: Touch up in newly painted work, carefully matching colour and brushing out edges. Repaint badly marked areas back to suitable breaks or junctions.
- Moving parts of new work: Adjust, ease and lubricate as necessary to ensure easy and efficient operation, including doors, windows, drawers, ironmongery, appliances, valves and controls.

720 SECURITY AT COMPLETION

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

730 MAKING GOOD DEFECTS

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

A34 SECURITY/ SAFETY/ PROTECTION SECURITY, HEALTH AND SAFETY

120 EXECUTION HAZARDS

- Common hazards: Not listed. Control by good management and site practice.
- Significant hazards: The design of the project includes the following:
 - Hazard: The following has been identified:
 - Fragile roof construction
 - Working at height
 - Dust and debris
 - Possible bat/ bird droppings
 - Working with lead
 - Working with lime
- Precautions assumed: Experienced contractor and method statement.
- Specification reference: N/A.
- Drawing reference: Tender issue.

130 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: toxic materials working with lead.
 - Material: lead.
 - Specification reference: TBC.

130A 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: toxic materials working with lime.
 - Material: hydraulic lime.

- Specification reference: TBC.

140 CONSTRUCTION PHASE HEALTH AND SAFETY PLAN

- Submission: Present to the Employer/ Client no later than two weeks before onsite works.
- 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: Contractor to ensure protection is provided throughout the works and existing public right of ways are maintained from debris and obstruction.

160 STABILITY

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

170 OCCUPIED PREMISES

- Extent: Existing buildings will be occupied and/ or used during the Contract as follows: The church will remain closed for the duration of the works. However, the church yard will remain open.
- Works: Carry out without undue inconvenience and nuisance and without danger to occupants and users.
- Overtime: If compliance with this clause requires certain operations to be carried out during overtime, and such overtime is not required for any other reason, the extra cost will be allowed, provided that such overtime is authorized in advance.

210 EMPLOYER'S REPRESENTATIVES SITE VISITS

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

220 WORKING PRECAUTIONS/ RESTRICTIONS

- Hazardous areas: Operatives must take precautions as follows:
 - Work area: working at height on fragile roof.
 - Precautions: contractor to submit proposals and method statement to Architect for approval prior to any onsite works.
- Permit to work: Operatives must comply with procedures in the following areas:
 - Work area: Roof.
 - Procedures: fully comply with method statement and safe working practice.

PROTECT AGAINST THE FOLLOWING

-
- 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: on discovery of such an artefact, report to Architect immediately.
- 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').
 - Contractor to submit a method statement for any hot works and approved by the architects prior to any works being carried out on site.
- 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.

440 ELECTROMAGNETIC INTERFERENCE

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

460 POWER 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: remove any plant species from work areas. If bats are discovered, halt works and bring attention to licensed ecologist who will be onsite during the roof stripping works.
- 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

500 EXISTING FIXED AND UNFIXED FURNITURE

- Provide details of protection/ storage provision within on week of request following tender submission for approval.

501 PROTECTION TO EXTERIOR TOMBS/ GRAVES

- Provide details of protection to tombs/ grave stones within on week of request following tender submission for approval.

510 EXISTING SERVICES

- Confirmation: Notify all service authorities, statutory undertakers and/ or adjacent owners of proposed works not less than one week before commencing site operations.
- Identification: Before starting work, check and mark positions of utilities/ services. Where positions are not shown on drawings obtain relevant details from service authorities, statutory undertakers or other owners.
- Work adjacent to services:

- Comply with service authority's/ statutory undertaker's recommendations.
- Adequately protect, and prevent damage to services: Do not interfere with their operation without consent of service authorities/ statutory undertakers or other owners.
- Identifying services:
 - Below ground: Use signboards, giving type and depth;
 - Overhead: Use headroom markers.
- Damage to services: If any results from execution of the Works:
 - Immediately give notice and notify appropriate service authority/ statutory undertaker.
 - Make arrangements for the work to be made good without delay to the satisfaction of service authority/ statutory undertaker or other owner as appropriate.
 - Any measures taken to deal with an emergency will not affect the extent of the Contractor's liability.
- Marker tapes or protective covers: Replace, if disturbed during site operations, to service authority's/ statutory undertakers recommendations.

520 ROADS AND FOOTPATHS

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

530 EXISTING TOPSOIL/ SUBSOIL

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

540 RETAINED TREES/ SHRUBS/ GRASSED AREAS

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

550 RETAINED TREES

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

555 WILDLIFE SPECIES AND HABITATS

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

560 EXISTING FEATURES

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

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.

600 EXISTING FURNITURE, FITTINGS AND EQUIPMENT

- Protection: Prevent damage or move as necessary to enable the Works to be executed. Reinstatement in original positions.
- Extent: Before work in each room starts the Employer will remove all items other than the following:
 - contractor to ensure that no debris falls to ground level.

610 ESPECIALLY VALUABLE/ VULNERABLE ITEMS

- Protection: Ensure provision and maintenance of special protective measures to prevent damage to the following:
 - Glass windows and feature rainwater goods.
- Method statement: Submit within one week of request describing special protection to be provided.

640 MATERIALS FOR RECYCLING/ REUSE

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

A35 SPECIFIC LIMITATIONS ON METHOD/ SEQUENCE/ TIMING

130 METHOD/ SEQUENCE OF WORK

- Specific Limitations: Include the following in the programme:
 - Timetable for University calendar. Works should be completed in Summer.

170 WORKING HOURS

- Specific limitations: No work onsite prior to 8am and post 6pm weekdays, 9am until 1pm Saturdays and no work to be carried out on Sundays.

A36 FACILITIES/ TEMPORARY WORK/ SERVICES

GENERALLY ACCOMMODATION

230 ROOM FOR MEETINGS

- Facilities: Meeting room will be available within the Council Chambers at Ross Town Council.

-
- Furniture and Equipment: Provide table and chairs will be provided.
 - Other Information: Ensure attendees have clean footwear as meeting is in constant use.

230 TEMPORARY ACCOMMODATION

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

TEMPORARY WORKS

310 ROADS

- Permanent roads, hard standings and footpaths on the site: The following may be used,
 - subject to clause A34/520:
 - Details: Access to the site is limited to large vehicles. To the west of the site there is an unloading bay however traffic wardens are in the area. Contractor to ensure that delivery vehicles do not block roads and access to neighbouring properties.
 - Restrictions on use: There are parking restrictions in affect.
 - Protective or remedial measures: none.

320 TEMPORARY WORKS

- Employer's specific requirements: Provide: Contractor to ensure that fencing is provided to protect materials and prevent access onto scaffolding during the course of the works. See A12/230.

340A NAME BOARDS/ ADVERTISEMENTS

- Name boards/ advertisements: Permitted - location and sizes to be agreed with client and architect prior to any onsite works. Contractor to make allowance for boards to be printed with artwork being prepared by Architect.

SERVICES AND FACILITIES

420 LIGHTING AND POWER

- Supply: Electricity from the Employer's mains may be used for the Works as follows:
 - Metering: Free of charge.
 - Point of supply: To be confirmed by client.
 - Available capacity: To be confirmed.
 - Frequency: To be confirmed.
 - Phase: Single.
 - Current: Alternating.
- Continuity: The Employer will not be responsible for the consequences of failure or restriction in supply.

430 WATER

- Supply: The Employer's mains may be used for the Works as follows:
 - Metering: Free of charge.
 - Source: To be confirmed by client.
 - Location of supply point: To be confirmed.
 - Conditions/ Restrictions: To be confirmed.
- Continuity: The Employer will not be responsible 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. Ensure the mobile telephone works onsite as reception in rural areas can be difficult.

530 BENEFICIAL USE OF INSTALLED SYSTEMS

- Permanent systems: Do not use for the Works.

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.

570 PERSONAL PROTECTIVE EQUIPMENT

- General: Provide for the sole use of those acting on behalf of the Employer, in sizes to be specified:
 - Safety helmets to BS EN 397, neither damaged nor time expired. Number required: 4.
 - High visibility waistcoats to BS EN ISO 20471 Class 2. Number required: 4.
 - Safety boots with steel insole and toecap to BS EN ISO 20345. Pairs required: 0.
 - 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.

A37 OPERATION/ MAINTENANCE OF THE FINISHED WORKS

GENERALLY

110 THE BUILDING MANUAL

- Responsibility: The Contractor
- Content: Obtain and provide comprehensive information for owners and users of the completed Works. Include an overview of the main design principles and describe key components and systems within the finished Works, so affording a complete understanding of the Works, including all buildings and their systems to enable efficient and safe operation and maintenance.
- Specific requirements: To be bound in a plaster lever arch folder.
- Format: printed and bound.
- Number of copies: 1.
- Delivery to: RRA Architects. by (date) Completion of the works.

115 THE HEALTH AND SAFETY FILE

- Responsibility: the contractor.
- Content: Obtain and provide the following information: Appropriate training to all using ladders and scaffold erection.
- Format: digital
- Delivery to: RRA Architects By (date): one week prior to starting on site.

155 CONTENT OF THE BUILDING MANUAL

- General: Details of the property, the parties, fire safety strategy, operational requirements and constraints of a general nature.
- Building fabric: Design criteria, maintenance details, product details, and environmental and trafficking conditions.

-
- Building services: Description and operation of systems, diagrammatic drawings, record drawings, identification of services, product details, equipment settings, maintenance schedules, consumable items, spares and emergency procedures.
 - Documentation: Guarantees, warranties, maintenance agreements, test certificates and reports.

160 PRESENTATION OF BUILDING MANUAL

- Format: A4 size, plastics covered, loose leaf, four ring binders with hard covers, each indexed, divided and appropriately cover titled.
- Selected drawings needed to illustrate or locate items mentioned in the Manual: Where larger than A4, to be folded and accommodated in the binders so that they may be unfolded without being detached from the rings.
- As-built drawings: The main sets may form annexes to the Manual.

A44 CONTRACTOR'S GENERAL COST ITEMS: TEMPORARY WORKS

110 TEMPORARY WORKS

- Details: Temporary works required or made/ not made available by the Employer: See section A36.
- Cost significant items: Contractor to ensure protection to interior fixtures and fittings.

A54 PROVISIONAL WORK/ ITEMS

100 FOAMEX BOARDS

- To be fixed to exterior of contractor's compound.
- Provisional sum: £500.00.

590 CONTINGENCIES

- Provisional sum: Include: £10,000 + VAT or 10% of contract value whichever is greater.

MATERIALS AND WORKMANSHIP

2453 Ross Market House
Ross on Wye, Hereford

July 2018

C20 Demolition

To be read with Preliminaries/ General conditions

GENERAL REQUIREMENTS

120 EXTENT OF DECONSTRUCTION/ DEMOLITION

- General: Subject to retention requirements specified elsewhere, deconstruct/ demolish structures down to as minimum as possible to allow for works to proceed.
- As removals drawings.

130 GROUNDWORKS

- Old foundations, slabs and the like: Break out in locations and to the extents stated.
- Contaminated material: Remove and carry out remediation required by the Enforcing Authority.

140 BENCH MARKS

- Unrecorded bench marks and other survey information: Give notice when found. Do not remove marks or destroy the fabric on which they are found.

150 FEATURES TO BE RETAINED

- General: Keep in place and protect the following: glazing, Decorative cast iron work, soft red rubber bricks.

SERVICES AFFECTED BY DECONSTRUCTION/ DEMOLITION

270 SERVICES TO BE RETAINED

- Damage to services: Give notice, and notify relevant service authorities and/ or owner/ occupier regarding damage arising from deconstruction/ demolition.
- Repairs to services: Complete as directed, and to the satisfaction of the service authority or owner.

DECONSTRUCTION/ DEMOLITION WORK

310 WORKMANSHIP

- Standard: Demolish structures in accordance with BS 6187.
- Operatives:
 - Appropriately skilled and experienced for the type of work.
 - Holding, or in training to obtain, relevant CITB Certificates of Competence.
- Site staff responsible for supervision and control of work: Experienced in the assessment of risks involved and methods of deconstruction/ demolition to be used.

320 GAS OR VAPOUR RISKS

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

330 DUST CONTROL

- General: Reduce airborne dust by periodically spraying deconstruction/ demolition works with an appropriate wetting agent. Keep public roadways and footpaths clear of mud and debris.
- Lead dust: Submit method statement for control, containment and clean-up regimes.

340 HEALTH HAZARDS

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

350 ADJOINING PROPERTY

- Temporary support and protection: Provide. Maintain and alter, as necessary, as work proceeds. Do not leave unnecessary or unstable projections.
- Defects: Report immediately on discovery.
- Damage: Minimize. Repair promptly to ensure safety, stability, weather protection and security.
- Support to foundations: Do not disturb.

360 STRUCTURES TO BE RETAINED

- Extent: all necessary structures and facades to allow work to proceed. Contractor to discuss with architect prior to take down.
- Parts which are to be kept in place: Protect.
- Interface between retained structures and deconstruction/ demolition: Cut away and strip out with care to minimize making good.

370 PARTLY DEMOLISHED STRUCTURES

- General: Leave in a stable condition, with adequate temporary support at each stage to prevent risk of uncontrolled collapse. Make secure outside working hours.
- Temporary works: Prevent overloading due to debris.
- Access: Prevent access by unauthorized persons.

380 DANGEROUS OPENINGS

- General: Provide guarding at all times, including outside of working hours. Illuminate during hours of darkness.
- Access: Prevent access by unauthorized persons.

391 ASBESTOS-CONTAINING MATERIALS – UNKNOWN OCCURRENCES

- Discovery: Give notice immediately of suspected asbestos-containing materials when discovered during deconstruction/ demolition work. Avoid disturbing such materials.
- Removal: Submit statutory risk assessments and details of proposed methods for safe removal.

410 UNFORESEEN HAZARDS

- Discovery: Give notice immediately when hazards such as unrecorded voids, tanks, chemicals, are discovered during deconstruction/ demolition.
- Removal: Submit details of proposed methods for filling, removal, etc.

450 SITE CONDITION AT COMPLETION

- Debris: Clear away and leave the site in a tidy condition.
- Other requirements: fully sweep car park and ground levels to ensure no debris affect parking vehicles.

MATERIALS ARISING

510 CONTRACTOR'S PROPERTY

- Components and materials arising from the deconstruction/ demolition work: Property of the Contractor except where otherwise provided.
- Action: Remove from site as work proceeds where not to be reused or recycled for site use.

520 RECYCLED MATERIALS

- Materials arising from deconstruction/ demolition work: Can be recycled or reused elsewhere in the project, subject to compliance with the appropriate specification and in accordance with any site waste management plan.
- Evidence of compliance: Submit full details and supporting documentation.
 - Verification: Allow adequate time in programme for verification of compliance.

C90 Alterations - spot items

GENERAL

110 DESCRIPTIONS

- Location of spot item descriptions: see drawings.

120 EMPLOYER'S PROPERTY

- Components and materials arising from alterations that are to remain the property of the
 - Employer: Cast iron decorative rainwater goods.
 - Protection: Maintain until items listed above are removed by the Employer or reused in
 - the Works, or until the end of the Contract.
- Special requirements: None.

130 RECYCLED MATERIALS

- Materials arising from alterations: May be recycled or reused elsewhere in the project,
- subject to compliance with the appropriate specification and in accordance with any site waste management plan.
- Evidence of compliance: Submit full details and supporting documentation.
 - Verification: Allow adequate time in programme for verification of compliance.

C41 Repairing/ Renovating/ Conserving masonry

GENERALLY/ PREPARATION

110 SCOPE OF WORK

- Schedule: see drawings
- 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.

120 SITE INSPECTION

- Purpose: To confirm type and extent of repair/ renovation/ conservation work shown on drawings and described in survey reports and schedules of work.
- Parties involved: Site foreman and Architect
- Timing: at least 10 days prior to starting each section of work.
- Instructions issued during inspection: to be confirmed in writing by architect.

125 REMOVAL OF FITTINGS/ FIXTURES

- Items to be removed, and reinstated on completion of repair work: protect existing timberwork. Remove existing railings and cart away from site.
- Identification: Attach labels or otherwise mark items using durable, non-permanent means, to identify location and describe refixing instructions, where applicable.
 - Treatment following removal: Biocide to Cleaning spec
- Storage: Protect against damage, and store until required.
- Storage location: Contractors secure compound.
- Reinstatement: Refit in original locations using original installation methods.
- Items unsuitable or not required for reuse: existing bird spikes and defective leadwork.
- Disposal: submit proposals
- Masonry fabric and surfaces: Do not damage during removal and replacement of fittings/ fixtures.

140 RECORD OF WORK

- General: Record work carried out to masonry clearly and accurately using written descriptions, sketches, drawings and photographs, as necessary.
- Specific records: record condition before, during and after works.
- Documentation: Submit on completion of the work.
- Number of sets: one

WORKMANSHIP GENERALLY

150 POWER TOOLS

- Usage for removal of mortar: None permitted.
- See Z21 for mortar specification and method

155 PUTLOG SCAFFOLDING

- Usage: None permitted.

160 PROTECTION OF MASONRY UNITS AND MASONRY

- Masonry units: Prevent overstressing during transit, storage, handling and fixing. Store on level bearers clear of the ground, separated with resilient spacers. Protect from adverse weather and keep dry. Prevent soiling, chipping and contamination. Lift units at designed lifting points, where provided.
- Masonry: Prevent damage, particularly to 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.
- 165 STRUCTURAL STABILITY
- General: Maintain stability of masonry. Report defects, including signs of movement that are exposed or become apparent during the removal of masonry units.
- 170 DISTURBANCE TO RETAINED MASONRY
- Retained masonry in the vicinity of repair works: Disturb as little as possible.
 - Existing retained masonry: Do not cut or adjust to accommodate new or reused units. Retained loose masonry units and those vulnerable to movement during repair works: Prop or wedge so as to be firmly and correctly positioned.
- 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: Provide a sample of construction to ensure matching with existing. Sample size 1m².

MATERIAL/ PRODUCTION/ ACCESSORIES

- 215 MATERIAL SAMPLES
- Representative samples of designated materials: Submit before placing orders.
 - Designated materials: sand for mortar repairs and bricks for each type.
 - 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: each type of brick repair.
- Period of notice (minimum): two weeks

DISMANTLING/ REBUILDING

DISMANTLING MASONRY FOR REUSE

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

320 REBUILDING STONE STEPS

- Replacement materials: Herefordshire grey and red sandstone.
- Mortar: As section Z21.
- Mix: 1:3 lime-sand mixture.
- Sand source/ type: Well graded sharp sand
- Fixings: None.
- 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: struck.
 - Other requirements: number masonry units in a discrete location for resetting back into position.

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.

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.

410 CORRODED FIXINGS

- Removal: Cut out carefully, causing the least possible disturbance to surrounding masonry.
- Remove associated rust debris.
- Replacement: Compatible fixings stainless steel. Contractor to seek authorisation by Architect.

POINTING/ REPOINTING

810 PREPARATION FOR REPOINTING

- Existing mortar: Working from top of wall downwards, remove mortar carefully, without damaging adjacent masonry or widening joints, to a minimum depth of 25mm.
- 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.

820 POINTING GENERALLY

- Mortar: As section Z21.

840 POINTING WITH TOOLS/ IRONS

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

860 BRUSHED FINISH TO JOINTS

- Timing: After initial mortar set has taken place remove laitance and excess fines by brushing, to give a coarse texture. Do not compact mortar.
- Exceptions: do not brush putty joints unless otherwise instructed.

G20 Carpentry/ timber framing/ first fixing

2 TIMBER PROCUREMENT

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

5 STRUCTURAL SOFTWOOD FOR STRUCTURAL USE GENERALLY

- Grading standard: To BS 4978, BS EN 14081-1, or other national equivalent and so marked.
 - Timber of a target thickness less than 100 mm and not specified for wet exposure:
 - Graded at an average moisture content not exceeding 20% with no reading being in excess of 24% and clearly marked as 'DRY' or 'KD' (kiln dried).
 - Timber graded undried (green) and specified for installation at higher moisture contents:
 - Clearly marked as 'WET' or 'GRN'.
- Strength class to BS EN 338: C16.
- Treatment: As section Z12 and British Wood Preserving and Damp Proofing Association Commodity Specification C8.

-
- 7 STRUCTURAL HARDWOOD FOR STRUCTURAL USE GENERALLY
- Species: European oak.
 - Grading standard: To the appropriate standard or rules for the specified grade and so marked.
 - Surface finish: sawn.
 - Treatment: None required.
- 10 NON-STRUCTURAL SOFTWOOD TO LEAD VALLEY BOARDS
- Species: European oak.
 - Grading standard: To the appropriate standard or rules for the specified grade and so marked.
 - Surface finish: Planed all round.
 - Treatment: None.
 - Jointing: laid with penny gaps to allow for ventilation.
- 30 SELECTION AND USE OF TIMBER
- Timber members damaged, crushed or split beyond the limits permitted by their grading:
 - Do not use.
- 32 NOTCHES, HOLES AND JOINTS IN TIMBER
- Notches and holes:
 - General: Avoid if possible.
 - Sizes: Minimum needed to accommodate services.
 - Position: Do not locate near knots or other defects.
 - In same joist: Minimum 100 mm apart horizontally.
 - Notches in joists:
 - Position: Locate at top. Form by sawing down to a drilled hole.
 - Depth (maximum): 0.15 x joist depth.
 - Distance from supports: Between 0.1 and 0.2 x span.
 - Holes in joists:
 - Position: Locate on neutral axis.
 - Diameter (maximum): 0.25 x joist depth.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from supports: Between 0.25 and 0.4 of span.
 - Notches in roof rafters, struts and truss members: Not permitted.
 - Holes in struts and columns: Locate on neutral axis.
 - Diameter (maximum): 0.25 x minimum width of member.
 - Centres (minimum): 3 x diameter of largest hole.
 - Distance from ends: Between 0.25 and 0.4 of span.
 - Scarf joints, finger joints and splice plates: Do not use without approval.
- 35 PROCESSING TREATED TIMBER
- Cutting and machining: Carry out as much as possible before treatment.
 - Extensively processed timber: Retreat timber sawn lengthways, thickened, planed, ploughed, etc. All such re-treatment to be carried out prior to site delivery.
 - Surfaces exposed by minor cutting/ drilling: Treat with two flood coats of a solution taken from the list within Natural England guidance for treatment within areas of bat activity.
- 40 MOISTURE CONTENT
- Moisture content of wood and wood based products at time of installation: Not more than:
 - Covered in generally unheated spaces: 24%.
 - Covered in generally heated spaces: 20%.

WORKMANSHIP GENERALLY

- 401 CROSS SECTION DIMENSIONS OF STRUCTURAL SOFTWOOD AND HARDWOOD
- Dimensions: Dimensions in this specification and shown on drawings are target sizes as
 - defined in BS EN 336.
 - Tolerances: The tolerance indicators (T1) and (T2) specify the maximum permitted
 - deviations from target sizes as stated in BS EN 336, clause 4.3:
 - Tolerance class 1 (T1) for sawn surfaces.
 - Tolerance class 2 (T2) for further processed surfaces.
- 402 CROSS SECTION DIMENSIONS OF NON-STRUCTURAL SOFTWOOD
- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
 - Maximum permitted deviations from finished sizes: As stated in BS EN 1313-1:
 - Clause 6 for sawn sections.
- 403 CROSS SECTION DIMENSIONS OF NON-STRUCTURAL HARDWOOD
- Dimensions: Dimensions in this specification and shown on drawings are finished sizes.
 - Maximum permitted deviations from finished sizes: As stated in BS EN 1313-2:
 - Clause 6 for sawn sections.
 - Clause NA.3 for further processed sections.
- 430 SELECTION AND USE OF TIMBER
- Timber members damaged, crushed or split beyond the limits permitted by their grading: Do not use.
- 510 PROTECTION
- Generally: Keep timber dry and do not overstress, distort or disfigure sections or components during transit, storage, lifting, erection or fixing.
 - Timber and components: Store under cover, clear of the ground and with good ventilation.
 - Support on regularly spaced, level bearers on a dry, firm base. Open pile to ensure free movement of air through the stack.
 - Trussed rafters: Keep vertical during handling and storage.
- 550 EXPOSED TIMBER
- Planed structural timber exposed to view in completed work: Prevent damage to and marking of surfaces and arrises.

JOINTING TIMBER

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

ERECTION AND INSTALLATION

- 760 TEMPORARY BRACING
- Provision: As necessary to maintain structural timber components in position and to ensure complete stability during construction.
- 770 ADDITIONAL SUPPORTS
- Provision: Position and fix additional studs, noggings and/ or battens to support edges of sheet materials, and wall/ floor/ ceiling mounted appliances, fixtures, etc. shown on drawings.
 - Material properties: Additional studs, noggings and battens to be of adequate size and

have the same treatment, if any, as adjacent timber supports.

784 JOISTS GENERALLY

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

H60 Plain roof tiling

To be read with Preliminaries/General conditions.

TYPES OF TILING

105 CLAY ROOF TILING REPLACEMENTS FOR DAMAGED TILES

- Substrate: New sw treated tiling battens.
- Pitch: as existing.
- Underlay: Bitumen based reinforced felt to BS8747 Type 1F.
 - Recycled content: Contractors Choice.
 - Head-lap (minimum): 150mm as manufacturers instruction.
- Battens:
 - Size: assume 25x38mm. Battens to match existing to ensure even roof covering.
 - Fixing: Stainless steel ringshank nails.
- Product reference: None.
 - Pattern: To match existing.
 - Colour: To match existing.
 - Size: To match existing.

TILING GENERALLY

20 REMOVE EXISTING TILING

- General: Carefully remove tiles, battens, underlay, etc. with minimum disturbance of adjacent retained tiling.
- Undamaged tiles: Set aside for reuse.

25 UNDERLAY

- Laying: Maintain consistent tautness.
- Vertical laps (minimum): 100 mm wide, coinciding with supports.
- Fixing: stainless steel, copper or aluminum 20 x 3 mm extra large clout head nails.
- Eaves: Where exposed, use an external grade (UV resistant) underlay or a proprietary eaves support product.
- Penetrations: Use proprietary underlay seals or cut underlay neatly.

30 BATTENS/ COUNTERBATTENS

- Timber: Sawn softwood.
 - Standard: In accordance with BS 5534, Annex D.
 - Moisture content at time of fixing and covering (maximum): 22%.
- Preservative treatment: As section Z12 Wood Protection Association Commodity Specification C8.
- Type: Contractor's choice.

32 BATTEN FIXING

- Batten length (minimum): Sufficient to span over three supports.

- Joints in length: Butt centrally on supports. Joints must not occur more than once in any group of four battens on one support.
- Additional battens: Provide where unsupported laps in underlay occur between battens.

35 TILE FIXING

- General: Fix tiling and accessories to make the whole sound and weathertight at earliest opportunity.
- Exposed fittings and accessories: To match tile colour and finish.
- Setting out: To true lines and regular appearance. Lay tiles to a half lap bond with joints slightly open. Align tails.
- Cut tiles: Cut only where necessary, to give straight, clean edges.
- Ends of courses: Use tile and a half tiles to maintain bond and to ensure that cut tiles are as large as possible.
- Top and bottom courses: Use eaves/ tops tiles to maintain gauge.
- Perimeter tiles: Twice nail end tile in every course. Twice nail or clip two courses of tiles at eaves and top edges.
- Fixings: Nails as recommended by tile manufacturer.

37 LOCAL AND GENERAL FIXING AREAS

- Definitions:
- Local areas: Bands of tiling around all edges or obstructions of each plane of the roof. Calculate extent of each band in accordance with BS 5534, section 5.
- General areas: Remaining areas of roof tiling.

40 MORTAR BEDDING/ POINTING

- Mortar: As section Z21.
 - Mix: 1:3 hydraulic lime.
- Weather: Do not use in wet or frosty conditions or when imminent.
- Appearance: Finish neatly and remove residue.

52 BEDDED VERGES WITH BEDDED UNDERCLOAK

- Underlay: Carry 50 mm onto outer leaf of gable wall and bed on mortar.
- Undercloak: Matching plain tiles, sloping towards verge and projecting 38-50 mm beyond face of wall.
- Bedding: On mortar identical to that used in gable walling.
- Tiling battens: Carry onto undercloak and finish 100 mm from verge edge.
- Verge tiles: Bed flush with undercloak on 75 mm wide bed of mortar.

70 SIDE ABUTMENTS

- Underlay: Turn up not less than 100 mm at abutments.
- Abutment tiles: Cut as necessary. Fix close to abutments.
- Soakers: Interleave and turn down over head of abutment tiles.

M20 Plastered/ Rendered/ Roughcast coatings

20 LIME RENDER

- Product Name: Lime base coat plaster for scratch and float coats
- Manufacturer: Ty-Mawr Ltd. Units 5&12, Brecon Enterprise Park, Brecon, Powys, LD3 8BT
- Telephone: 01874 611 350
- Product description: Ty-Mawr Premixed Lime Base Coat plaster is premixed and ready-to-use, it simply requires 'knocking-up' prior to use.

-
- 65 MIXING
- Render mortars (site-made):
 - Batching: By volume using gauge boxes or buckets.
 - Mix proportions: Based on damp sand. Adjust for dry sand.
 - Mixes: Of uniform consistence and free from lumps.
- 67 COLD WEATHER
- Internal work: Take precautions to prevent damage to internal coatings when air temperature is below 3°.
 - External work: Avoid when air temperature is at or below 5° and falling or below 3° and rising.
- 71 SUITABILITY OF SUBSTRATES
- General: Suitable to receive coatings. Sound, free from contamination and loose areas.
- 74 EXISTING DAMP AFFECTED PLASTER/ RENDER
- Plaster affected by rising damp: Remove to a height of 300 mm above highest point reached by damp or 1 m above dpc, whichever is higher.
 - Perished and salt contaminated masonry:
 - Mortar joints: Rake out.
 - Masonry units: Submit proposals.
 - Drying out substrates: Establish drying conditions.
- 76 REMOVING DEFECTIVE EXISTING PLASTER
- Plaster for removal: Loose, hollow, soft, friable, badly cracked, affected by efflorescence or otherwise damaged.
 - Removing plaster: Cut back to a square, sound edge.
- 87 APPLICATION OF COATINGS
- General: Apply coatings firmly and achieve good adhesion.
 - Appearance of finished surfaces: Even and consistent. Free from rippling, hollows, ridges, cracks and crazing.
 - Accuracy: Finish to a true plane with walls and reveals plumb and square.
 - Drying out: Prevent excessively rapid or localized drying out.
 - Keying undercoats: Cross scratch (plaster coatings) and comb (render coatings). Do not penetrate undercoat.

M60 Painting/ clear finishing

- 10 CHALK EMULSION PAINT See section H71: Lead sheet coverings
- 15 BREATHABLE LIME WASH
- Manufacturer: Ty-Mawr.
 - Product reference: Limewash.
 - Surfaces: New rendered walls east and west of clock tower – see drawing.
 - Preparation: with a stiff brush remove loose and flaking paint. Make good open joints with hydraulic lime mortar. Dampen the surface before applying the limewash to ensure moisture isn't sucked out too rapidly.
 - Coats: At least 5 thin coats to ensure total and even coverage. Allow a minimum of 12 hours between coats.

18 EXTERIOR METAL PAINT

- Manufacturer: Hammerite, Ako Nobel, Slough
Tel: 0333 22 7171
Email: hammerite.it@akconobes.com
 - Product reference: Direct to rust satin finish.
- Surfaces: Existing metal vents, internal/ external gutter surfaces and downpipe external surfaces.
- Preparation: clean down and de-rust existing vents with a wire brush.
- Coats: At least 2 coats to ensure total and even coverage. Allow a minimum of 4 hours between coats.

19 EXTERIOR WOOD PAINT

- Manufacturer: Sandtex, Crown House, Hollins Road, Darwen, Lancashire, BB3 0BG
Tel: 0330 024 0303
 - Product reference: 1- year exterior stain: Black sating wood and metal paint.
- Surfaces: New woodwork fascia boards and patch repaired timber to main access stairs.
- Preparation: clean down and remove any flaking paintwork. Rub sow area back to timber and prepare for priming.
- Coats: Apply a minimum of x2 coats to give an even surface throughout. Allow a minimum of 15 hours between coats.

25 SURFACES NOT TO BE COATED

- Faced and decorative stonework.

30 PREPARATION GENERALLY

- Standard: In accordance with BS 6150.
- Refer to any pre-existing CDM Health and Safety File and CDM Construction Phase Plan where applicable.
- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Preparation materials: Types recommended by their manufacturers and the coating manufacturer for the situation and surfaces being prepared.
- Substrates: Sufficiently dry in depth to suit coating.
- Efflorescence salts, dirt, grease and oil: Remove.
- Surface irregularities: Provide smooth finish.
- Organic growths and infected coatings:
 - Remove with assistance of biocidal solution.
 - Apply residual effect biocidal solution to inhibit regrowth.
- Joints, cracks, holes and other depressions: Fill with stoppers/ fillers. Provide smooth finish.
- Dust, particles and residues from preparation: Remove and dispose of safely.
- Doors, opening windows and other moving parts:
 - Ease, if necessary, before coating.
 - Prime resulting bare areas.

32 PREVIOUSLY COATED SURFACES GENERALLY

- Preparation: In accordance with BS 6150, clause 11.5.
- Contaminated or hazardous surfaces: Give notice of:
 - Coatings suspected of containing lead.
 - Substrates suspected of containing asbestos or other hazardous materials.
 - Significant rot, corrosion or other degradation of substrates.

- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Removing coatings: Do not damage substrate and adjacent surfaces or adversely affect subsequent coatings.
- Loose, flaking or otherwise defective areas: Carefully remove to a firm edge.
- Alkali affected coatings: Completely remove.
- Retained coatings:
 - Thoroughly clean.
 - Gloss coated surfaces: Provide key.
- Partly removed coatings: Apply additional preparatory coats.
- Completely stripped surfaces: Prepare as for uncoated surfaces.

35 FIXTURES AND FITTINGS

- Risk assessment and method statement for hazardous materials: Prepare for operations, disposal of waste, containment and reoccupation, and obtain approval before commencing work.
- Removal: Before commencing work: All internal areas to protect them from falling materials and paint splashes. Contractor to submit method statement prior to onsite works.
- Replacement: Refurbish as necessary, refit when coating is dry.

37 WOOD PREPARATION

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

41A MASONRY AND RENDERING PREPARATION

- Loose and flaking material: Remove.
- Water damaged or stained plasterwork: Remove.

43 PLASTER PREPARATION

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

61 COATING GENERALLY

- Application standard: In accordance with BS 6150, clause 9.
- Conditions: Maintain suitable temperature, humidity and air quality.
- Surfaces: Clean and dry at time of application.
- Thinning and intermixing: Not permitted unless recommended by manufacturer.
- Priming coats: Apply as soon as possible on same day as preparation is completed.
- Finish:
 - Even, smooth and of uniform colour.
 - Free from brush marks, sags, runs and other defects.
 - Cut in neatly.
- Doors, opening windows and other moving parts: Ease before coating and between coats.

65 CONCEALED JOINERY SURFACES

- General: After priming, apply additional coatings to surfaces that will be concealed when component is fixed in place.
 - Components: new timbers to roof work areas.
 - Additional coatings: One undercoat.

-
- 66 CONCEALED METAL SURFACES
- General: See lead Section H71: Lead sheet coverings

H71 Lead sheet coverings/ flashings

1 GENERAL

- All leadwork to comply with BS6915 and current good practice as described in the latest editions of 'The Lead Sheet Manual' published by the Lead Sheet Association, unless otherwise agreed.

30 APRON FLASHINGS: GENERALLY

- Lead:
 - Thickness: 2.24 mm (Code 6).
 - Dimensions:
 - Lengths: Not more than 1500 mm.
 - End to end joints: Laps not less than 100 mm.
 - Upstand not less than 75 mm.
 - Cover to abutment: Not less than 150 mm.
- Fixing:
 - Top edge: Lead wedges into bed joint.
 - Bottom edge: Clips.
 - Material: Lead.
 - Spacing: At laps and 500 mm centres.

35A SOAKERS AND COVER FLASHINGS

- Lead:
 - Thickness: 2.24 mm (Code 5).
 - Dimensions:
 - Lengths: Not more than 1500 mm.
 - End to end joints: Laps of not less than 100 mm.
 - Cover: Overlap to upstand not less than 75 mm.
- Fixing:
 - Top edge: Lead wedges into bed joint.
 - Bottom edge: lead wedges into joints

60 MATERIALS AND WORKMANSHIP GENERALLY

- Lead production method:
 - Rolled, to BS EN 12588.
 - Machine cast: BBA certified.
- Identification: Colour marked for thickness/ code, weight and type.
- Workmanship standard: To BS 6915 and latest editions of 'Rolled lead sheet. The complete manual' published by the Lead Sheet Association.
- Fabrication and fixing: To provide a secure, free draining and weathertight installation.
- Marking out: Do not use scribes or other sharp instruments to mark out lead without approval.
- Solder: Use only where specified.
- Finished leadwork: Fully supported, adequately fixed to resist wind uplift but also able to accommodate thermal movement without distortion or stress.
- Patination oil: Apply smear coating to all visible lead, evenly in one direction and in dry conditions.

75 TIMBER FOR USE WITH LEADWORK

- Quality: Planed, free from wane, pitch pockets, decay and insect attack (ambrosia beetle excepted).
- Moisture content: Not more than 22% at time of fixing and covering. Give notice if greater than 16%.
- Preservative treatment: Organic solvent as section Z12 and Wood Protection Association Commodity Specification C8.

76 UNDERLAY

- Handling: Prevent tears and punctures.
- Laying: Butt or overlap jointed onto a dry substrate.
 - Fixing edges: to be held in place by lead flashing.
 - Do not lay over roof edges.
 - Turn up at abutments.
- Wood core rolls: Fixed over underlay.
- Protection: Keep dry and cover with lead at the earliest opportunity.

77 BUILDING PAPER

- Provide building paper between timber gutter boards and geotextile membrane
- Manufacturer: Novia Ltd. Unit 12, Heronden Road, Parkwood Industrial Estate, Maidstone, Kent, ME15 9YR
Tel: 01622 678 952
E: Sales@novia.co.uk
- Product Reference: Novia BS 1521 Grade A1F building paper or similar approved.

78 FIXING LEAD SHEET

- Top edge: Secured with two rows of fixings, 25 and 50 mm from edge.
- Fixings:
 - Nails to timber substrates: Copper clout nails to BS1202-2 , or stainless steel (austenitic) clout nails to BS 1202-1.
Shank type: Annular ringed, helical threaded or serrated.
Length: Not less than 20 mm or equal to substrate thickness.
 - Screws to concrete or masonry substrates: Brass or stainless steel to BS 1210.
Diameter: Not less than 3.35 mm.
Length: Not less than 19 mm.
Washers and plastics plugs: Compatible with screws.

80 CLIPS

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

83 WEDGE FIXING INTO JOINTS/ CHASES

- Joint/ chase: Rake out to a depth of not less than 25 mm.

- Lead: Dress into joint/ chase.
 - Fixing: Lead wedges at not more than 450 mm centres, at every change of direction and with at least two for each piece of lead.
- Sealant: Lead sealant everflex lead sealant.
 - Application: As section Z22.

85 LEAD SEALANT TO LEAD WEDGES

- Product Name: Everflex Leadmate Silicon or similar approved.
- Manufacturer: Everbuild Building Products Ltd. Leeds
- Telephone: 0113 240 3456
- Product Reference: LEAD
- Product description: EVERFLEX LEADMATE is a low modulus, neutral cure sealant specifically designed to give exceptional adhesion to soft metals such as lead, brass etc. The product is specially formulated as an alternative to mortaring Lead Flashing and Sheet into Brick, Stone and Concrete.
- Conforms to ISO11600 G/F25 LM.

96 DRIPS WITH SPLASH LAPS

- Underlap: Dress up full height of drip upstand.
- Fixing: Two rows of nails to lower level substrate. Seal over nails with a soldered.
- Overlap: Dress over drip and form a 75 mm splash lap.
 - Fixing: Lead clips leadwelded to underlap at bay centres.

98 WELTED JOINTS

- Joint allowance: 50 mm overlap, 25 mm underlap.
- Copper or stainless steel clips: Fix to substrate at 450 mm centres.
- Overlap: Welt around underlap and clips and lightly dress down.

110 LEAD SHEET CHALK COATING

- Pre treatment:
 - Remove any deposits from lead sheet with a nylon scourer to expose a bright and shiny surface.
- Chalk Treatment
 - Manufacturer: Plaspertex Paint Co Ltd. Ely, Cambridgeshire,
 - Tel: 01353 720796
 - Email: plaspertex@btconnect.com
 - Product Reference: PP72, chault emulsion paint or similar approved.
 - Product Description: A water borne coating formulated with very high chalk levels designed to act as a passivating layer on lead sheeting used for Coating the underside of lead roofing sheets to combat erosion from acidic condensation

Application:

Stir chalk emulsion thoroughly prior to application to ensure the mixture is well mixed. Using paintbrush or spray, apply uniform coating of slurry to underside of lead sheet.

Leave for at least two hours, preferably over night, then brush off any remaining chalk.

In-situ. treatment

Prepare paste of chalk powder in twice its volume of water, to give a consistency similar to emulsion paint.

After bossing each lead sheet into shape, turn it over and paint the paste to a sufficient thickness and uniformity that the surface of the lead can no longer be seen.

In order to avoid possible capillary attraction of rainwater, do not apply chalk to the bottom 50mm of a lap, the flat part of a slap lap or the bottom 15mm of the adjacent step or roll. Wipe off any chalk inadvertently applied to these areas.

Apply chalk paste to the top face of the underlay

After a few minutes, when chalk is touch dry lower the sheet carefully and fix into place.

847 HOLLOW ROLL JOINTS

- Joint allowance: 125 mm overcloak and 100 mm undercloak.
- Copper or stainless steel clips: Fix to substrate at not more than 450 mm centres.
- Overcloak: Welt with clips around undercloak to form a roll of consistent cross section.

970 PATINATION OIL

- Manufacturer: British Lead or similar approved
 - Peartree Lane, Welweyn Garden City, Hertfordshire, AL7 3UB
 - Phone: 01707 324 595
 - Email: sales@britishlead.co.uk
- Product reference: Patination Oil.
- Location: to new lead work generally.
- Application: As soon as practical, apply a smear coating to lead, evenly in one direction and in dry conditions.

P10 Sundry insulation/ proofing work

15 SMOKE HOODS OVER ALL CEILING LIGHTING

- Manufacturer: Envirograf,
Intumescent Systems Ltd. Envirograf House, Bardrestone, Dover, Kent, CT15 7JG
Tel: 01304 842 555
Email: sales@envirograf.com
 - Product reference: Intumescent Downlighter Cover – product 32.
- Installation requirements:
 - Lead the cable from the transformer through the pre-cut downlight aperture in the ceiling
Pierce the cable entry point in the top of the cover with a sharp object, creating an opening large enough to suit the cable size
Feed sufficient cable through the opening for the connection
Compress the cover and pass it through the aperture in the ceiling
Open out the cover once inside the ceiling, away from the light fitting
Using the two supplied pins, fasten opposite inner flanges of the cover to the plasterboard
Insert the light fitting and fasten the closing mechanism over the inner flaps of the downlighter cover to seal the opening
Downlighter covers require a minimum of 40mm horizontal clearance and 15mm vertical clearance
Cages are rigid and require no clearance, meaning that insulation can be packed around them as long as it does not cover the ventilation holes
 - NB: Downlighter cages cannot be compressed to fit through the light fitting aperture from below and must therefore be positioned from above

R10 Rainwater drainage systems

GENERALLY

Re-use existing cast iron rainwater goods and new cast iron rainwater good as drawings.

11 CAST IRON RAINWATER GOODS

- Standard: Agréent certified.
- Manufacturer: Alumasc or similar approved
- White House Works, Bold Road, Sutton, St Helens, Merseyside, WA9 4JG
Tel: 01744648400

12 CAST IRON GUTTERS

- Product reference: Apex cast iron gutter half round gutter.
- Product code: HG40/6FT
- Type/ Grade: Cast.
 - Profile: Half round.
 - Size: 125mm
 - Finish: Painted.
 - Colour: Black.
- Accessories to include:
 - External stop ends
 - Union clips
 - Running outlets
- Jointing: Aluminum screws, nuts and washers sealed with silicone sealant.
- Fixing: Rafter type brackets at 600 mm centres - contractor to submit proposals prior to any onsite works.

13 GUTTER BRACKETS

- Product reference: Apex cast iron gutter half round gutter or similar approved.
- Product code: HG40/RB/SF
- Type/ Grade: Mild steel.
 - Finish: Painted.
 - Colour: Black.

14 CAST IRON DOWNPIPE

- Product reference: Apex cast iron downpipes
- Size: 75mm cast iron downpipe rainwater diverter black.
- Type/ Grade: Cast.
 - Finish: Painted.
 - Colour: Black.

16 LEAF GUTTER GUARD

- Standard: Agréent certified.
- Manufacturer: Rainclear – South or similar approved
- Unit 34A, Techno Trading Estate, Ganton Way, Swindon, Wiltshire, SN2 8ES
- Tel: 01793 43 53 93
 - Product reference: 100mm gutter guard – 4m lengths.
 - Colour: Black.

26 RAINWATER HOPPER GENERALLY

- Contractor to clean down, de-rust and redecorate with metal paint in black.

50 INSTALLATION GENERALLY

- Discharge of rainwater: Complete, and without leakage or noise nuisance.
- Components: Obtain from same manufacturer for each type of pipework and guttering.
- Allowance for thermal and building movement: Provide and maintain clearance as fixing and jointing proceeds.
- Fixings and fasteners: As section Z20.

60 GUTTERS LAID TO FALL

- Setting out: To true line and even gradient to prevent ponding or backfall. Position high points of gutters as close as practical to the roof and low points not more than 50 mm below the roof.
- Joints: Watertight.
- Roofing underlay: Dressed into gutter.

70 PIPEWORK

- Fixing: Securely, plumb and/ or true to line with additional supports as necessary to support pipe collars, particularly at changes in direction.
- Cut ends of pipes and gutters: Clean and square with burrs and swarf removed.

80 INTERNAL PIPEWORK TEST - ENGLAND, WALES, IRELAND AND NORTHERN IRELAND

- Preparation: Temporarily seal open ends of pipework with plugs.
- Testing: Connect a 'U' tube water gauge and pump air into pipework until gauge registers 38 mm.
- Required performance:
 - Allow a period for temperature stabilization, after which the pressure of 38 mm is to be maintained without loss for not less than 3 minutes.

V90 Electrical systems**GENERAL**

See preliminaries for provisional sum allowance.

5 LOW VOLTAGE SUPPLY

- Nature of current: Alternating.
- Phase: three phase.
- Voltage: 230 V.

20 DESIGN OF LOW VOLTAGE ELECTRICAL INSTALLATION GENERALLY

- Design and detailing: Complete for the electrical installation.
- Standards: In accordance with BS 7671 and the requirements of the electricity distributor.
- Design information: Submit calculations, manufacturer's literature and drawings showing equipment positions and routes.

27 SMALL POWER SYSTEM DESIGN

- Purpose: plug socket, night storage heaters and lighting throughout.
- Small power outlets: Provide to serve the building and its equipment.
- Room: Nave/ Chancel and Vestry.
- Outlets: as shown on M&E Layout.
- Fixed equipment: Provide supplies.

PRODUCTS

30 PRODUCTS GENERALLY

- Standard: To BS 7671.
- CE Marking: Required.

39 CABLES

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

46 LED TAPE LUMINAIRES

- Standards: To BS EN 60598-1 and BS EN 55015.
- Manufacturer: Collinwood or similar approved.
- Product reference: LED.
- Mounting: to underside of handrail in profile SM7.
- Lamp: LED.
- Wattage: 26W.

47 LAMPS GENERALLY

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

EXECUTION

60 GENERAL EXECUTION

- Standard: In accordance with BS 7671.

64 INSTALLING TRUNKING AND DUCTING

- Positioning: Accurate with respect to equipment served, and parallel with other services and, where relevant, floor level and other building lines.
- Access: Provide space encompassing cable trunking to permit access for installing and maintaining cables.
- Jointing:
 - Number of joints: Minimize.
 - Lengths of trunking: Maximise.
- Steel systems: Mechanical couplings. Do not weld. Fit a copper link at each joint to ensure electrical continuity.
- Junctions and changes of direction: Proprietary jointing units.
- Cable entries: Fit grommets, bushes or liners.
- Internal fire barriers: Provide to maintain integrity of fire compartment.
- Protection: Fit temporary blanking plates. Prevent ingress of screed and other extraneous materials.
- Service outlet units: Fit when cables are installed.

66 CABLE ROUTES

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

68 INSTALLING ELECTRICAL ACCESSORIES AND EQUIPMENT

- Location: as shown on drawings.
- Arrangement: Coordinate with other wall or ceiling mounted equipment.
- Positioning: Accurately and square to vertical and horizontal axes.
- Alignment: Align adjacent accessories on the same vertical or horizontal axis.
- Mounting: positions noted on drawings - final positions to be agreed on site with Architect.
- Mounting heights (finished floor level to underside of equipment or accessory): positions noted on drawings - final positions to be agreed on site with Architect.

70 INSTALLING FINAL CONNECTIONS

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

72 INSTALLING LUMINAIRES

- Location: As per M&E layout plan – final location to be agreed onsite with Architect.

74 EQUIPMENT LABELLING

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

76 ENGRAVING

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

78 FINAL FIX

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

79 CLEANING

- Electrical equipment: Clean immediately before handover.
- Equipment not supplied but installed under the electrical works: Clean immediately before handover.

COMPLETION

85 INSPECTION AND TESTING GENERALLY

- Standard: In accordance with BS 7671.
- Notice before commencing tests (minimum): 24 hours.
- Labels and signs: Fix securely before system is tested.
- Certificates: Submit.
- Number of copies: 3.

Z10 Purpose made joinery

10 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. Heads of countersunk screws sunk at least 2 mm below
 - surfaces visible in completed work.
- Adhesives: Compatible with wood preservatives applied and end uses of timber.

20 CROSS SECTION DIMENSIONS OF TIMBER

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

30 PRESERVATIVE TREATED WOOD

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

40 MOISTURE CONTENT

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

50 FINISHING

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

Z11 Purpose made metalwork

- 11 NEW BRONZE STEP INLAY
- Standard: Agréent certified.
 - Manufacturer: Contractors choice
 - Material: bronze strip to be laid in cut grove to stonework.
 - Size: 30 x 2mm. Assumed length 1500mm – one to each step
 - Fixing: Carefully cut a grove along the top edge of each stone step, 40mm away from the edge. Resin bronze strip into position and allow bronze strip to sit a maximum of 2mm out of the grove. Point open joint with hydraulic lime mortar.
- 15 CAST IRON AIR BRICK
- Standard: Agréent certified.
 - Manufacturer: Castironairbrick.co.uk or similar approved.
 - Address: Down Farm, Little Bray Lane, Brayford, Devon, EX32 7QQ
 - Telephone: 01598 711999
 - Email: sales@castironbricks.co.uk
 - Material: Cast iron.
 - External Product reference: L3 Air Brick – painted black
 - Internal Product reference: Slot 73 with mesh grill – painted black
 - Size: 230x80mm (9"x3")
 - Fixing: Form new opening within timber work to east and west elevations. One high and one at low levels, to external face. Gills to be level with newly finished rendered surface. Set into position new internal grills complete with insect mesh.
- 31 METAL PRODUCTS
- Grades of metals, section dimensions and properties: To the appropriate British Standards
 - and suitable for the purpose.
 - Fasteners: Generally, same metal as component, with matching coating and finish.
- 50 PREPARATION FOR APPLICATION OF COATINGS
- General: Fabrication complete, and fixing holes drilled before applying coatings.
 - Paint, grease, flux, rust, burrs and sharp arrises: Removed.
- 51 FABRICATION GENERALLY
- Contact between dissimilar metals in components: Avoid.
 - Finished components: Rigid and free from distortion, cracks, burrs and sharp arrises.
 - Moving parts: Free moving without binding.
 - Corner junctions of identical sections: Mitre.
 - Prefinished metals: Do not damage or alter appearance of finish.
- 52 COLD FORMED WORK
- Profiles: Accurate, with straight arises.

Z20 Fixings and adhesives

10 FIXINGS AND FASTENERS GENERALLY

- Integrity of supported components: Select types, sizes, quantities and spacing's 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 or sleeves to avoid bimetallic corrosion.
- General usage: To recommendations of fastener manufacturers and/ or manufacturers of components, products or materials fixed and fixed to.
- Fixings: To be in straight lines, at regular centres.

25 FASTENER DURABILITY

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

30 FIXINGS THROUGH FINISHES

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

35 PACKINGS

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

60 APPLYING ADHESIVES

- Surfaces: Clean. 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
 - o distort components being fixed.
- Finished adhesive joints: Fully bonded. Free of surplus adhesive.

PRODUCTS

310 FASTENERS GENERALLY

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

320 PACKINGS

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

340 MASONRY FIXINGS

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

350 PLUGS

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

390 ADHESIVES GENERALLY

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

-
- Thermoplastic adhesives: To BS EN 204.

410 POWDER ACTUATED FIXING SYSTEMS

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

EXECUTION

610 FIXING GENERALLY

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

620 FIXING THROUGH FINISHES

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

630 FIXING PACKINGS

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

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.

Z21 Mortars

- 10 HYDRAULIC LIME MORTAR TO AREAS OF REPOINTING
- Lime: Hydraulic lime singleton Birch (Secil) NHL3.5
 - Manufacturer: Ty-Mawr Ltd. Units 5&12, Brecon Enterprise Park, Brecon, Powys, LD3 8BT
 - Telephone: 01874 611 350
 - Sand: Well graded sharp sand as clause 25.
 - Mix: 1:3 lime-sand mixture
- 11 LIME PUTTY
- Lime: Lime putty
 - Manufacturer: Ty-Mawr Ltd. Units 5&12, Brecon Enterprise Park, Brecon, Powys, LD3 8BT
 - Telephone: 01874 611 350
 - Sand: Well graded sharp sand as clause 25.
 - Mix: 1:2 lime-sand mixture, measured with a bucket or gauging box.
 - Directions: Mixing of small quantities can be carried out by shovel on a board or with a drill mixing attachment in a bucket. Larger quantities can be done in conventional mixers or preferably in a roller/pan/forced action mixer. Place the sand and putty in the mixer and allow to mix. Do not at this point add water. The mix will become smooth and very 'fatty' when ready. If making haired plasters, the hair should be teased in towards the end of the mixing process.
 - Description: This lime is regarded as the most appropriate lime for old buildings where maximum permeability and flexibility is required especially suitable for pointing brick and soft stone work and is highly suitable for nearly all internal plastering and rendering onto cob, straw etc. See the Documentation section for application guides, coshh sheets and our winter weather warning.
- 15 MORTAR MIXES
- Specification: Proportions and additional requirements for mortar materials are specified above.
- 25 SAND FOR LIME: SAND MASONRY MORTARS
- Type: Sharp, well graded.
 - Quality, sampling and testing: To BS EN 13139.
 - Grading/ Source: As specified elsewhere.
- 30 SAND FOR LIME PUTTY
- Type: Sharp, well graded.
 - Quality, sampling and testing: To BS EN 13139.
 - Grading/ Source: As specified elsewhere.
 - Description: Sands for lime mortars/plasters must be washed, wellgraded, sharp and with the largest particles being just under 1/3 the thickness of the joint bed (sharp, well graded sands will crunch when rolled in the hand). To effect a good colour match use sands from the locality. However, be aware of the grading and clay contamination.
- 60 MAKING MORTARS GENERALLY
- 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.
 - Contamination: Prevent intermixing with other materials.

70 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.

80 HYDRAULIC LIME SAND REPOINTING WORKS

- Ensure that the mortar is mixed thoroughly to avoid balling.
- Keep mortar stiff in order to compress into the joint without smearing. Taking care not to get mortar onto the face of stonework.
- Mortar must not be allowed to dry out too quickly and dampened for 7 day's duration. Provide protection to lime mortar once in situ from low temperatures, frost, excessive sunlight and drying winds.
- New mortar to form flush finish with edge of joint with excess mortar brushed or scraped back when firm with a bristle brush to compress and achieve finish.

Schedule of Works

2453: Repairs to Ross Market House
Ross on Wye, Herefordshire

July 2018

SCHEDULE OF WORKS

To be read in conjunction with Preliminaries and Materials and Workmanship

100 Preparatory Work Items

101 CLEANING OUT

Remove leaf debris and general dirt from within gutters and flat roof; remove all debris from site.

Carry out cleaning work using wood paddles and soft bristle brushed only; do NOT use metal edged equipment.

103 SCAFFOLDING

Erect scaffolding to provide access to the areas of work described in this section; ensure scaffold is designed for loading of removed materials and clay tiles if to used for temporary storage.

Provide protective barriers around and below scaffolding in accordance with all relevant and current safety regulations.

Include for forming painted plywood screens to contractors compound and perimeter of scaffolding; Ensure that all access screens sections are locked into position at end of each working day.

Paint plywood hoarding with black paint to be confirmed by architect; ensure no paint splashes onto neighbouring stonework or flooring. Allow for provision of interpretation boards fixed to hoarding and formation of mesh vision panels within hoarding.

Lift all first stage ladders to lowest stage of scaffolding at the end of each working day.

Including for any other scaffolding or ladder access required to carry out the works over and above the specifically scheduled above.

Maintain and adapt the scaffolding as work proceeds as drawings; clear away on completion of works.

104 MORTAR AND STONE SAMPLES

As early as practical; prepare differing mortar samples for each mortar pointing, using different sand/ aggregates to allow for mortar matching existing to be determined.

As early as practical; prepare stone samples for inspection by Architect.

Prepare 3 no. samples, approximate size 200mm x 35mm thick; allow to dry and break open to reveal core colour and texture; ensure mix proportions of 1 part hydraulic lime: 3 parts sand/ aggregate is maintained for each mix.

105 PROTECTION DURING WORKS

Provide protection to area where repair works are to be carried out. Ensure no water ingress to the building during the works.

Provide details prior to any works being carried out.

200 ROOF REPAIRS

201 ROOF REMOVALS

Carefully strip existing roof coverings to areas shown on removals plan to allow adequate access to lead soakers; set aside tiles for re-laying. Clean down tiles, removing any lichen/ moss growth.

Set protective covering as tiles are removed to ensure building remains water tight.

Allow for inspection on condition of tiling battens and make allowance for replacement battens to match existing size.

Strip lead gutter and outlets where shown; cart away from site.

Allow for inspection of existing timber substrate and remove any decayed timberwork.

Carefully remove lead cover flashings and soakers abutments with parapet walls and cart away from site.

Carefully remove existing ridge tiles to both roof slopes and set aside for relaying. Take off ridge tiles to same bay widths. Clean down ridge tiles, removing any mortar and lichen growths.

Remove lead hips to roof/ clock tower upstand and make allowance for inspection of timber rolls with Architect.

202 INSPECTIONS

Allow for inspection of existing rafter feet and wall plates with Architect.

203 ROOF REMEDIAL WORKS

Include for making good defective or decayed timbers with piecing in sections of air dried oak in discrete locations.

Allow 10 linear meters; size 150x75mm; glue into position and fix with stainless steel screws countersunk.

204 NEW LEAD WORK GUTTER AND CATCHPIT

Form new catch pit between existing rafter locations to the centre of the lead sheet. Form box with sawn non preservative treated boards 18mm thick. Lay with penny gapped joints to allow ventilation of underside of leadwork. Make allowance for variance in location to suite rafter positions and wall plate locations.

Form new gutter with 18mm thick sawn non preservative treated softwood board to 1:80 falls back to catch pit.

Allow for lead overflow hopper to existing outlet. Project lead outlet past facework of stone by 200mm with the overflow to be a maximum of 50mm above the top of the catchpit. Make allowance for lowering the stone outlet to outflow to allow for catchpit. If required, redress stone forming a clean surface.

Lay geotextile membrane over boards; dress up abutting walls. Treat surface of new leadwork with chalk emulsion paint.

Dress new code 6 lead gutters and catch pit. Dress gutter over tilting fillet minimum of 150mm above gutter line in accordance with LSA.

Over sail leadwork to form new overflow outlet to detail.

205 NEW LEAD FLASHINGS

Dress new code 6 lead soakers. Turn up abutments with gable walls; dress and set code 5 lead flashings over upstands; wedge in position and point with sealant.

Dress new code 6 lead hip flashings over existing timber rolls to central roof upstand. Set stainless steel clips at 300mm centres. Dress leadwork neatly at eaves and form drip to new gutter.

206 ROOF RETILING

Relay previously set aside tiles, new tiles are required. Allow for 50no. replacement tiles.

Relay previously set aside ridge tiles to vestry roof with hydraulic lime mortar. Allow for 6 no. new ridge tiles to match existing to Vestry roof.

300 PROPOSED RAINWATER GOODS & DRAINAGE WORKS

301 REMOVALS

Carefully remove existing cast iron rainwater gutters. Set aside any sound rainwater pipes, cart away any decayed and rusted pipes and gutters from site.

Where internal rainwater pipes and soil pipes are at high level, allow for an upclose inspection with Architect. Clean down metalwork and prepare for decoration.

Remove any existing gutter brackets and set aside sound ironwork for resetting.

Rake out mortar to gully upstands and prepare for repointing.

302 REMEDIAL WORKS

Clean down and de-rust cast iron hoppers and retained down pipe sections and prepare for redecoration. Redecorate with black exterior metal paint to match new cast iron rainwater goods.

Redecorate high level rainwater and SVP pipes. Apply minimum of x2 coats to provide a clean and even surface.

Install new 125mm cast iron gutters and 75mm diameter down pipes in locations shown on drawings. Fix gutters to new side rafter fixed brackets.

Set new rainwater pipes on air dried oak spacing brackets. Allow timber size 135x60x35mm. Secure spacers to walls using existing fixing holes where possible. Resin anchor 125mm cross head screws to be painted black.

Fill any unused previous fixing holes with hydraulic lime mortar.

Repoint gully upstands with hydraulic lime mortar.

400 PROPOSED EAST ELEVATION REPAIRS

401 REMOVALS

Carefully remove existing pentice boards and brackets; cart away from site.

Clean down and derust existing flag pole and stays; prepare for redecoration.

Carefully remove existing coping stones to the south slope, leaving the ridge and kneeler stones in situ. and set aside for relaying. Make allowance to provide temporary support to neighbouring coping stones if required.

Remove existing ridge coping stones formed from two sections and stonework below to allow for a new coping stone in one section.

402 REMEDIAL WORKS

Fix 2 no. air dried sawn oak boards above each east window, W1.16 & W1.15. Allow for new board size 2500x250x38mm each.

Support on 3no. brackets per board, 50mm thick air dried sawn oak; Fix of boards with countersunk stainless steel screws 2 no. to each support and each end.

Dress new code 5 lead over new pentice boards and dress up face of the wall to stone jointing, wedge into position and seal.

Allow for new ridge stone replacement in one piece. Allow stone size 800x400x350mm. dress new stonework to match each parapet slopes. Drill and dowel into position with stainless dowels and epoxy resin. Point joints with hydraulic lime mortar.

410 EAST AND WEST ACCESS HATCH TO CLOCK TOWER

411 REMOVALS

Hack off cement based render from either side of access window; cart away from site. Make allowance for inspection of timbers with Architect.

Remove existing timber laths and cart away.

Clean down access window for redecoration and ease operation. Removing broken glass and clean down rebate for new glass installation.

Remove existing fascia board and cart away.

412 INSPECTIONS

Provide high level access to clock tower for inspection with Architect. Note, access should be able to reach eaves boards.

412 REMEDIAL WORK

Form new timber support for new cast iron grill at low level with sawn oak battens. Allow section size 100x100mm. form new lead flashing substrate with sawn oak boards to detail.

Set new code 6 lead soakers with code 5 lead cover flashings as per lead works above.

Repoint cracks to render of clock tower with hydraulic lime mortar.

Set new air dried oak fascia board in position and decorate with black exterior paint.

Set new gutter along fascia board with 200mm rainwater pipe and offset shoe.

Set new galvanized render bead over cover flashing. Set new split hazel laths into position over existing timber framing and render cheeks with lime render. Decorate new render with x3 no. coats of

limewash.

Redecorate access window with paint to spec. Reset existing lock to allow easier movement.

450 PROPOSED NORTH ELEVATION REPAIRS

451 REMOVALS

Rake out joints to north steps, removing any dirt and plant growth in preparation for repointing.

Clean down x3no. openable windows to the first floor and stays. Derust and easy operation.

Make allowance for minor repairs to windows to facilitate opening.

Clean down double door to first floor and balustrading.

452 REMEDIAL WORKS

Repoint open joints to north steps with hydraulic lime mortar.

Redecorate eased openable windows and stays with exterior metal paint in black.

Reoil double door and ballustrading with x2 no. coats.

460 PROPOSED SOUTH ELEVATION REPAIRS

461 REMOVALS

Clean down x3no. openable windows to the first floor and stays. Derust and easy operation.

Make allowance for minor repairs to windows to facilitate opening.

462 REMEDIAL WORKS

Redecorate eased openable windows and stays with exterior metal paint in black.

470 PROPOSED WEST ELEVATION REPAIRS

471 REMOVALS

Clean down 1 openable windows to the first floor and stays. De-rust and easy operation.

Make allowance for minor repairs to windows to facilitate opening.

Remove existing ridge coping stones formed from two sections and stonework below to allow for a new coping stone in one section.

Clean down ageal growth to south west corner with a stiff brush.

472 REMEDIAL WORKS

Redecorate eased openable windows and stays with exterior metal paint in black.

Re-secure telecoms lines into existing opening.

Allow for new ridge stone replacement in one piece. Allow stone size 800x400x350mm. dress new stonework to match each parapet slopes. Drill and dowel into position with stainless dowels and

exposy resin. Point joints with hydraulic lime mortar.

500 PROPOSED MAIN STEPS REPAIRS

501 REMOVALS

Carefully remove existing handrails; cart away from site.

Carefully lift stone steps. Discard decayed stones as per drawing. Set aside stone steps for relaying.

Cut away outer face of stonework to underside of steps to south elevation. Prepare stone for new outer face to full depth, provide a clean and even surface for new stonework.

Cut out decayed cobble stones between columns GFC.S05 & GFC.S06.

Investigate redundant pipework and remove if possible.

Throughoutly clean down surviving steps, removing any paintwork.

502 REMEDIAL WORK

Provide new Herefordshire red sandstone in various stone section sizes to replicate existing stone coursing. Bed new stonework on hydraulic lime mortar. Allow mortar to cure before commencing works on steps.

Provide new Herefordshire grey sandstone steps to replace decayed stone. Bed into position with hydraulic lime mortar.

Make good previous fixing holes from former handrail to timber with new air dried oak sections wedged into and glued in position. Redecorate neighbouring timberwork with exterior grade timber paint.

Provide new bronze hand rails with LED lighting to underside.

Cut a channel 40mm away from the edge front face and inlay a bronze strip as nosing. Set bronze strip with resin and point open joint with hydraulic lime mortar. Ensure resin does not overflow and affect the face of the stonework.

550 PROPOSED INTERIOR REPAIRS

551 REMOVALS

Clean down and de-rust gallows brackets to attic area. Prepare for painting.

552 REMEDIAL WORKS

Decorate with black metal paint, existing gallows brackets.

Lift existing insulation above each spot light and install Envirograf intumescent downlighter covers and cages.

Provide new 100x5mm mild steel diagonal brace fixed to existing gallows bracket on column ARP.02. Bolt brace to the base of ARP.03 as per structural engineer's report.

600 COMPLETION OF THE WORKS

601 PROTECTION

Remove water ingress preventative measures and equipment.

Strike scaffolding following approval of works by Architect.

Remove all protection works.

Check roof and walls for any damage and provide a report of findings.

602 CLEANING

Thoroughly clean all areas of the repair works, removing any lichen growth to tile surfaces.

Check parapet wall surfaces to east double gable for any damage caused during the course of the works and provide report of findings.

603 REMOVALS

Clear away all site equipment, fencing, non-used materials etc.; leave site clean and tidy condition. Include for making good to any grass and tarmac surfaces damaged during the course of the works.

A	PRELIMINARIES:	
	Attendance and profit	£
	Contingencies and provisional sum items	£
	WORKS ON SITE	
100	Preparatory Work Items	£
101	Cleaning Out	£
102	Scaffolding	£
104	Mortar and stone samples	£
105	Protection works	£
200	Roof Repairs	£
201	Roof removals	£
202	Inspections	£
203	Roof remedial works	£
204	New lead work gutter and catchpits	£
205	New lead flashings	£
206	Roof retiling	£
300	Proposed Rainwater and Drainage Works	
301	Removals	£
302	Remedial Works	£
400	Proposed east elevation repairs	
401	Removals	£
402	Remedial works	£
410	East and west access hatch to clock tower	
411	Removals	£
412	Inspections	£
413	Remedial works	£
450	Proposed North elevation repairs	
451	Removals	£
452	Remedial works	£
460	Proposed south elevation repairs	
461	Removals	£
462	Remedial works	£
470	Proposed west elevation repairs	
471	Removals	£
472	Remedial works	£
500	Proposed main steps repairs	
501	Removals	£
502	Remedial works	£
550	Proposed internal repairs	
551	Removals	£
552	Remedial works	£

600	Completion of the works	
601	Protections	£
602	Cleaning	£
603	Removals	£
	TENDER SUM	£
	VAT	£
	TOTAL CONTRACT SUM	£

Appendix

2453 Ross Market House Repairs
Ross on Wye, Herefordshire

July 2018

Guidance for Protecting Lime work

As with all good building practice using any mortars, plasters/renders and paints, protection should be provided against frosts, wind, rain and direct sunlight.

Please note, it is not recommended to use lime products (lime mortars, renders and limewashes) when temperatures are liable to fall below 5°C (41°F) for several weeks/months after the product has been used, this is especially true for Non Hydraulic/Fat Limes/Air Limes and the weaker Natural Hydraulic limes (NHL's).

In practice this means that unless adequate weather protection is provided Non-Hydraulic/Fat Limes/Air Limes and the weaker Natural Hydraulic Limes (NHL's) should not be used externally until spring.

If work must continue, then please note:

- Damp walls must be allowed to dry out prior to the application of mortars, renders or plasters.
- **Protection is vital** – see product specific application guides – but note tarpaulins and/or bubble wrap (available from Ty-Mawr) are often better at vulnerable times of the year than hessian as they can prevent excess moisture from entering the render/plaster/mortar/limewash (excess moisture will make the products more vulnerable to frost damage) but air must still be able to circulate between the protection and the render/mortar/limewash. If there is a good drying, sunny day, the protection should be taken down during the day to help the carbonation. Please note - protection may need to be left up throughout the vulnerable time until the danger of frosts is over. We also sell mortar fleece for protecting work to the tops of unroofed walls.
- Be aware that too much moisture can retard carbonation/setting so if your substrate is already wet (e.g. if a cement render has just been removed or if it is very exposed or if it has just rained), you will not need to dampen down the background, you will need to allow the background to dry out;
- Different elevations and applications need to be treated differently as they will get different weather – know your site, know which way the weather comes from, know which parts do not get any sun/remain in shade and give them as much help as possible – extra protection, extra damping down – don't expect that the same product will behave the same throughout different elevations and applications on the site. Even internally, different substrates may need to be treated differently e.g. one wall may be particularly wet for some reason, this will slow carbonation down and may impede it altogether;
- Record the temperature (using a min/max thermometer) – prolonged periods of less than below 5°C (41°F) may cause problems in the future – it is advisable to keep records;
- With external renders it may be necessary to introduce heat into the space between the covers and the render if the temperature is around or below 5°C (41°F) for prolonged periods.
- Work can carry on indoors if *minimal heat* is provided to keep the building above 5°C (41°F) – however direct heat can also cause failures. Always ensure adequate ventilation is maintained at all times.